



Management and Conservation of Pinyon and Juniper Woodlands Public Workshop Hosted by the Bureau of Land Management and Forest Service

These definitions are being provided to support information sharing at the workshop by defining key terms and concepts that will be discussed. These definitions are borrowed from existing agency regulations, policies, and management documents.

Aboveground biomass: The total mass of living organisms (such as trees, shrubs, and herbs) present above the soil surface in a given area, often expressed in terms of weight per unit area. ([BLM, Forest Service, 2023](#))

Adaptive management: Adaptive management is the general framework encompassing the three phases of planning: assessment, plan development, and monitoring. This framework supports decision-making that meets management objectives while simultaneously accruing information to improve future management by adjusting the plan or plan implementation. ([Forest Service, 2012](#))

Climate resilience: The ability of an ecosystem and its component parts to absorb, or recover from, the effects of climate-related disturbances and chronic stress through preservation, restoration, or improvement of its essential structures and functions and redundancy of ecological patterns across the landscape. ([BLM, Forest Service, 2023](#))

Climate-informed interventions: Management actions designed to address climate-related risks and disturbances in forest ecosystems, informed by scientific understanding of climate change impacts. ([BLM, Forest Service, 2023](#))

Common stand exam: A standard field protocol used by resource managers to assess forest stand conditions. ([BLM, Forest Service, 2023](#))

Connectivity. Ecological conditions that exist at several spatial and temporal scales that provide landscape linkages that permit the exchange of flow, sediments, and nutrients; the daily and seasonal movements of animals within home ranges; the dispersal and genetic interchange between populations; and the long-distance range shifts of species, such as in response to climate change. ([36 CFR 219.19](#))

Desired condition framework: A management approach that aims to restore or maintain ecosystems in a desired state or condition, often based on ecological principles, historical reference conditions, and stakeholder input. ([BLM, Forest Service, 2023](#))

Ecological Integrity: The quality or condition of an ecosystem when its dominant ecological characteristics (for example, composition, structure, function, connectivity, and species composition and diversity) occur within the natural range of variation and can withstand and recover from most perturbations imposed by natural environmental dynamics or human influence. ([36 CFR § 219.19](#))

Ecological Site: A conceptual division of the landscape that is defined as a distinctive kind of land based on recurring soil, landform, geological, and climate characteristics that differs from other kinds of land in its ability to produce distinctive kinds and amounts of vegetation and in its ability to respond similarly to management actions and natural disturbances. ([USGS, 2009](#))

Ecological, social, and economic sustainability: Ecological sustainability refers to the capability of ecosystems to maintain ecological integrity; economic sustainability refers to the capability of society to produce and consume or otherwise benefit from goods and services including contributions to jobs and market and nonmarket benefits; and social sustainability refers to the capability of society to support the network of relationships, traditions, culture, and activities that connect people to the land and to one another, and support vibrant communities. ([36 CFR 219.19](#))

Ecosystem services: The benefits that ecosystems provide to humans, including provisioning services (such as food and water), regulating services (such as climate and disease control), cultural services (such as recreational and spiritual benefits), and supporting services (such as nutrient cycling and soil formation). ([36 CFR 219.19](#))

Estimation methods: The initial inventory relied on the Forest Inventory and Analysis (FIA) program, a systematic sampling protocol covering all ownerships in the United States. Data from the most recent FIA cycle for each state were used. Estimates were computed using standard FIA estimation procedures. ([BLM, Forest Service, 2023](#))

Forest Inventory and Analysis (FIA): A program that collects, analyzes, and reports data on the status and trends of forests in the United States, including information on forest extent, composition, and health. ([BLM, Forest Service, 2023](#))

Indigenous Knowledge: Indigenous Knowledge is a body of observations, oral and written knowledge, innovations, technologies, practices, and beliefs developed by Indigenous Peoples through interaction and experience with the environment. It is applied to phenomena across biological, physical, social, cultural, and spiritual systems. IK can be developed over millennia, continues to develop, and includes understanding based on evidence acquired through direct contact with the environment and long-term experiences, as well as



extensive observations, lessons, and skills passed from generation to generation. IK is developed, held, and stewarded by Indigenous Peoples and is often intrinsic within Indigenous legal traditions, including customary law or traditional governance structures and decision-making processes. Other terms such as Traditional Knowledge(s), Traditional Ecological Knowledge, Genetic Resources associated with Traditional Knowledge, Traditional Cultural Expression, Tribal Ecological Knowledge, Native Science, Indigenous Applied Science, Indigenous Science, and others, are sometimes used to describe this knowledge system. ([DOI Departmental Manual 301 DM 7](#))

Late successional: A stage in ecological succession characterized by relatively stable and diverse ecosystems dominated by mature or old-growth vegetation. ([BLM, Forest Service, 2023](#))

Management unit: An area of land defined by boundaries where a management strategy is to be applied. The land area may be composed of one or more ecological sites, and the entire area may or may not be treated. ([USGS, 2009](#))

Mature forest: Forests that have progressed beyond the early stages of succession but have not yet reached the advanced characteristics of old-growth forests. ([BLM, Forest Service, 2023](#))

Multicohort: A forest stand composed of multiple age classes or cohorts of trees, reflecting a range of ages and sizes resulting from past disturbance events and regeneration processes. ([BLM, Forest Service, 2023](#))

Old-growth: Forests that have reached an advanced stage of ecological succession characterized by large trees, complex canopy structure, and high biodiversity, often exhibiting natural patterns of disturbance and regeneration. ([BLM, Forest Service, 2023](#))

Self-thinning: The natural process by which trees within a forest stand compete for resources (such as sunlight, water, and nutrients), leading to the death or suppression of some individuals and the overall reduction in tree density. ([BLM, Forest Service, 2023](#))

Seral: A stage in ecological succession representing the transitional phase between one community of organisms and another, typically following a disturbance event such as fire or logging. ([BLM, Forest Service, 2023](#))

Species of concern: Species that require special consideration in restoration. These include species that may increase following treatment (that is, noxious weeds) or species that are declining or appear to need concentrated conservation actions, including State Endangered, State Threatened, State Sensitive, or State Candidate species. ([USGS, 2009](#))

Stand initiation: The initial stage of forest stand development following a disturbance event, characterized by the establishment of new tree seedlings and the formation of a young, dense canopy. ([BLM, Forest Service, 2023](#))

Stem exclusion: The phase of forest stand development where competition for light leads to the growth of dominant trees, resulting in the suppression and mortality of understory vegetation. ([BLM, Forest Service, 2023](#))

Stocking: Fully stocked site is one with enough trees that does or will eventually fully occupy a site (that is, at maturity, interspecific competition limits the expansion or addition of new leaf canopy). Stocking density varies across ecological sites and with tree size. ([USGS, 2009](#))

Stressors: Factors that may directly or indirectly degrade or impair ecosystem composition, structure or ecological process in a manner that may impair its ecological integrity, such as an invasive species, loss of connectivity, or the disruption of a natural disturbance regime. ([36 CFR 219.19](#))

Structural characteristics approach: A method for defining old-growth and mature forests based on measurable structural attributes such as tree size, presence of snags, canopy cover, and distribution of vegetation layers. ([BLM, Forest Service, 2023](#))

Understory reinitiation: The stage of forest stand development where suppressed understory vegetation begins to regenerate due to increased light availability resulting from canopy gaps or thinning of the overstory. ([BLM, Forest Service, 2023](#))

Woodland: An area of smaller statured trees usually with canopy cover >10%; open 10-20%, intermediate 20-40%, dense >40%. ([USGS, 2009](#))

For further reading, and to obtain reference material cited in each definition used in this handout, please visit the websites at the URLs below to access the reference material.

(36 CFR 219.19): <https://www.ecfr.gov/current/title-36/chapter-II/part-219/subpart-A/section-219.19>

(BLM, Forest Service, 2023): <https://www.fs.usda.gov/sites/default/files/mature-and-old-growth-forests-tech.pdf>

(DOI 2023): <https://www.doi.gov/document-library/departmental-manual/301-dm-7-departmental-responsibilities-consideration-and>

(Forest Service, 2012): https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5409973.pdf

(USGS, 2009): <https://pubs.usgs.gov/circ/1335/circ1335.pdf>