Blue Mountains Forest Plan Revision—2014

Malheur, Umatilla, and Wallowa-Whitman National Forests

Forested Vegetation

In a Nutshell

1) The preferred alternative would create healthier forests. Healthy forests are resilient. When forests experience disturbance from wildfire, insects, or disease, they are able to recover and retain their same basic structure and function. When disturbances do occur, they occur within a range of severities and frequencies similar to what occurred historically. Healthy forests have the capacity to adapt to stress and change, such as climate change. The preferred alternative would utilize a combination of mechanical harvest treatments, planting, thinning, and prescribed burning to restore the health and resiliency of our forests. The desired conditions are based on what the forest looked like historically (Historic Range of Variability or HRV). The preferred alternative would also reintroduce fire to the ecosystem so that fire can play its natural role in ecosystem processes.
2) The preferred alternative would contribute to healthier communities by providing a sustained flow of products from national forest lands, jobs, income, and by reducing the risk of wildfire to communities located within the Wildland-Urban Interface. The amount of timber volume harvested from national forest lands is limited by the number of acres treatable using timber harvest activities, requirements to provide a sustained, non-declining flow of timber volume, budgets, and current forest structure (too much of the understory reinitiation stage and not enough of the old forest stage).
3) The preferred alternative would create and/or maintain healthier old forest. Thinning and burning within old forest would focus on improving ecological resiliency, tree health, forest structure, and reducing the risk of mortality due to fire, insects, and disease. Old forest would not be considered suitable for timber production but could be harvested to meet the desired conditions for old forest. Within dry forest, where most of the harvest treatments would occur, treatments would convert multi-storied stands to single-story stands by removing smaller diameter trees and retaining old trees.

Definitions

Board foot - A specialized unit of measure for timber. It is the volume of a one-foot length of a board one foot wide and one inch thick. MMBF is the abbreviation for million board feet.

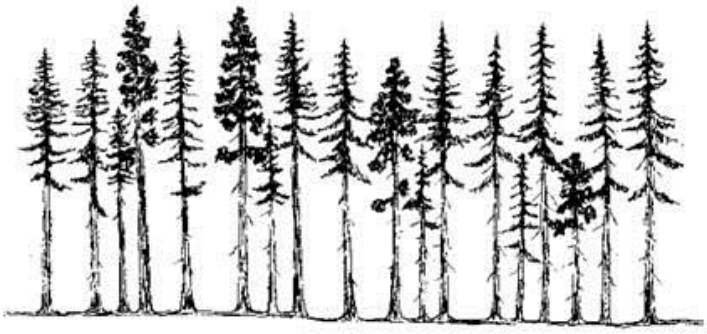
Dry Forest – Forests dominated by ponderosa pine, Douglas-fir, or grand fir. These forests are located at low to moderate elevations and are warmer and drier than other forest types. Historically, dry forests were characterized by frequent, low severity fire.

Forested Structural Stage - A stage of development of a forested vegetation community that is classified on the dominant processes of growth, development, competition, and mortality. See figure on the following page for a description of each stage.

for the greatest good

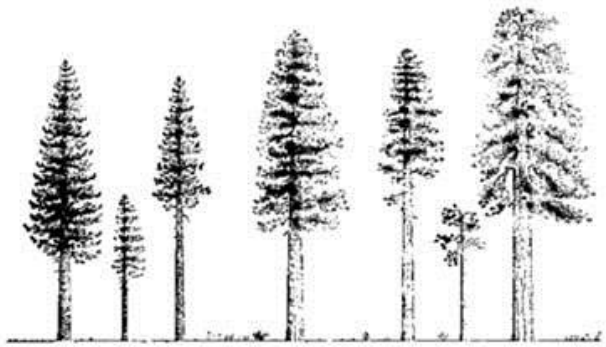
Forested Structural Stages

Stand Initiation (SI): Following a stand-replacing disturbance such as wildfire or tree harvest, growing space is occupied rapidly by vegetation that either survives the disturbance, or colonizes the area afterward. Survivors survive the disturbance above ground or they initiate new growth from underground organs or from seeds on the site. Colonizers disperse seed into disturbed areas, it germinates, and then new plants establish and develop. A single canopy stratum of tree seedlings and saplings is present in this stage. This stage generally includes trees less than 5 inches DBH.



Stem Exclusion (SE): In this single-cohort stand structure, trees initially grow fast and quickly occupy all of their growing space, competing strongly for sunlight and moisture. Because trees are tall and reduce subcanopy light levels, understory plants (including smaller trees) are shaded and grow more slowly. Species needing sunlight usually die; shrubs and herbs may go dormant. In this stage, establishment of new trees is precluded by a lack of sunlight (stem exclusion closed canopy) or soil moisture (stem exclusion open canopy). This stage generally consists of a continuous single layer of trees and can vary from small trees up to those approaching 21 inches DBH.

Understory Re-initiation (UR): As the forest develops, a new age class of trees (cohort) eventually gets established after overstory trees begin to die, or because they no longer fully occupy their growing space. Regrowth of understory seedlings and other vegetation then occurs and trees begin to stratify into vertical layers. This stage consists of overstory trees at a low to moderate density, with small trees underneath. Trees can range in size from 5 – 21 inches DBH.



Old Forest Single-story (OFSS) and Multi-story (OFMS): Many age classes and vegetation layers mark these structural stages containing a predominance of old trees generally larger in diameter. The definition of a large tree varies, depending on the productive potential of the site. Snags and decayed fallen trees may also be present, leaving a discontinuous overstory canopy. The drawing shows a single-layer stand of ponderosa pine, reflecting the influence of frequent surface fire on dry-forest sites (old forest single story OFSS). Surface fire is not common on cold or moist sites, so these environments generally have multi-layer stands (2 or more layers) with large trees in the uppermost stratum (old forest multi-story OFMS).

Sources: Based on O'Hara and others (1996), Oliver and Larson (1996), and Spies (1997).

Historic Range of Variability (HRV) - A means to define the boundaries of ecosystem behavior and patterns that have remained relatively consistent over long periods. HRV is usually defined for centuries to millennia before the period of widespread human population increases and associated ecosystem changes that began in roughly the early to middle 1800s for many regions of western North America.

Non-declining flow – On lands considered suitable for timber production, the timber volume produced in the first decade would not be greater than the timber volume produced in subsequent decades.

Resiliency –The ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organization, and the capacity to adapt to stress and change.

Suitability - The appropriateness of applying certain resource management practices to a particular area of land, as determined by an analysis of the economic and environmental consequences and the alternative uses foregone.

Timber Production – The purposeful growing, tending, harvesting, and regeneration of regulated crops of trees to be cut into logs, bolts, or other round sections for industrial or consumer use.

Timber Harvest – The removal of trees for wood fiber use and other multiple-use purposes. A stand that is considered unsuitable for timber production but is available for timber harvest could be managed to achieve the desired conditions within that specific area (such as old forest) by harvesting trees at a single entry or at irregular time intervals. Producing timber volume would not be the overriding goal within these stands.

Document Sections

Old Forest Significant Issue #4 – Volume 1, page 159
Forested Vegetation, Timber Resources, and wildland Fire – Volume 2, page 69
Historic Range of Variability (HRV) analysis - Volume 2, page 75
Management area suitability table – Volume 3, page 236, table A-47
Timber suitability methodology – Volume 3, page 342
Economic Analysis – Volume 1, page 81
Estimated Timber Volumes Harvested - Volume 2, page 169

FAQs

1) What is Historic Range of Variability (HRV) and why is it important?
The historical range of variability has become a common reference condition for assessing landscapes because it provides a context for understanding the conditions under which plants and animals evolved. The HRV concept is used to characterize fluctuations in ecosystem conditions and processes over a period of time as the result of disturbance processes. When disturbance processes occur with characteristic frequency and intensity, ecosystems respond by exhibiting predictable behavior and complexity. Ecosystems within the Blue Mountains evolved with disturbances, including wildfire, insects, disease, landslides, human uses, changing weather patterns, and other factors. The HRV was designed to characterize the range of vegetation composition, structure, and density produced by these disturbance agents. The type and frequency of presettlement disturbances can serve as a management template for

maintaining sites within their historical range of plant composition and vegetation structures – if landscapes can be maintained within their HRV, then they stand a good chance of maintaining their biological diversity and ecological integrity through time. It is typically assumed that presettlement conditions represent optimum habitats for native plants and animals, and that the best way to recover an endangered or threatened species is to restore its habitat to some semblance of presettlement conditions. Since a key premise of HRV is that native species have evolved with, and are adapted to, the historical disturbance regimes of an area, ecosystem components occurring within their historical range are believed to represent sustainable conditions.

2) How would old forest be managed under the preferred alternative?
The preferred alternative would not include a specific land management area allocation for old forest but would manage old forest where it exists on the landscape. Many older forest stands that do not yet meet the definition of old forest would become old forest over time. Some old forest stands would be affected by disturbances and would no longer meet the definition of old forest or provide old forest habitat requirements. The management direction under the preferred alternative would contain flexibility which would allow forest stands to be managed for their structural stage, regardless of whether they are allocated to an old forest management area. Old forest would not be considered suitable for timber production. However, harvesting could occur in old forest stands to meet the desired conditions. Within the dry forest, where most of the harvest treatments would occur, treatments would convert multi-storied stands to single story stands by removing smaller diameter trees and retaining old trees. The amount of single story old forest would increase while the amount of multi-storied old forest would decrease.

3) How would individual old trees be managed under the preferred alternative?
Rather than using a guideline based on diameter, the preferred alternative would contain a guideline that emphasizes retaining live trees with certain old tree characteristics. Using physical tree characteristics (bark appearance, branches, knots, and tree crown) to infer old age would be an easier approach to managing individual old trees, would ease project implementation, and would be less expensive and time-consuming, in comparison to an alternative that utilized a more strict age guideline. For most tree species, certain tree characteristics can be used as a fairly reliable indicator of older age (generally greater than 150 years old, but varies by species and site). Using tree age rather than a diameter limit would better enable forest managers to achieve other desired conditions (such as species composition) because it would allow the removal of larger diameter, mid-aged trees of more shade tolerant/fire intolerant species, such as grand fir.

4) How would fire (planned and unplanned ignitions) be used as a tool under the preferred alternative?
The level of prescribed burning (planned ignitions) outside of harvest units would continue at the current rate of approximately 30,000 acres per year within the three national forests. Within harvest units, prescribed burning and/or fuel treatments using ground-based equipment would increase to approximately 32,450 acres. The majority of the fuels treatments within the harvest units would be accomplished using fire. In addition, unplanned ignitions (wildfires) may also be managed to achieve desired conditions for forested vegetation. The use of unplanned ignitions as a tool to meet resource objectives could occur on all acres, as long as those fires are moving the landscape towards, or helping maintain, the desired conditions for the area.

Contact Information:
Sabrina Stadler, Team Leader: 541-523-1264
Jodi Kramer, Public Affairs Officer: 541-523-1246

Email: bluemtnplanrevision@fs.fed.us
Web site: http://www.fs.usda.gov/goto/BlueMtnsPlanRevision

Would YOU like to be on the Mailing List:

Email:
bluemtnplanrevision@fs.fed.us

Call: Jodi Kramer, Public Affairs Officer: 541-523-1246 or 523-1302