

Silviculture

Sierra Club/Alliance for the Wild Rockies
American Forest Resource Council
Stevens County Cattleman's Association

OBJECTIONS

- **The LMP provides guidelines instead of mandatory standards for selecting trees for logging. This can result in “loopholes” where essentially any tree could be justified for logging.**
- **Setting the maximum DBH limit for harvestable trees to 20" is an arbitrary decision with little or no scientific backing. This diameter limit—which is lower and more restrictive than the Eastside Screens—will decrease management opportunities, further reduce volume outputs, decrease forest health, and increase the likelihood of litigation.**
- **To inform grazing allowances, vegetation management requirements in the plan need to be more explicit and there should be maps of which areas are affected by the > 500 stems per acre management constraint.**
- **More information is needed about which areas would be precluded from permitted grazing activities because of restrictions to protect lynx habitat. The objector also objected to the exclusion of public usage in lynx habitat because (1) excluded areas were not identified, (2) the US Fish and Wildlife Service did not designate the areas as critical habitat because there was not sufficient information about usage or distribution of the species. The FS is therefore creating a standard without justifying documentation.**

RESPONSE:

In 1994, the Forest Service Pacific Northwest Region Regional Forester issued “Interim Direction Establishing Riparian, Ecosystem, and Wildlife Standards for Timber Sales on Eastside Forests” commonly referred to as the Eastside Screens. It amended the 1990 Forest Plans by establishing riparian, ecosystem, and wildlife standards for timber sales. The Eastside Screens amendment emphasized retaining and developing late old forest structures and patch sizes within the historic range of variability; maintaining or developing linkages between old forests; meeting requirements for snags, downed logs, and green tree replacements; and retaining trees 21-inches or greater in diameter. The “No Action” alternative discussed in the FEIS, Vol. 1, pp. 45-46, states, “*Vegetation management on all other lands follows the Eastside Screen amendment, designed to maintain habitat components for species associated with eastside late-successional forests including retention of live trees over 21 inches d.b.h. (diameter at breast height). The intent of the screens was to retain key habitat features, promote vigor and health of the forests, and preserve management options until replaced by a landscape-scale analysis process.*”

In the revised LMP the Eastside Screens are addressed with desired conditions to be within the historic range of variability by stand size class. The 21” diameter limit is replaced by structural stage and wildlife habitat directions, and a guideline for large tree management (FEIS, Volume 1, pp 29). Structural stage identifies large trees as 20” or greater DBH. The FEIS, Volume 1, pp 91-92 describes the Forest Structure and provides a detailed description:

Forest structure is the horizontal and vertical arrangement of trees and includes size (diameter) and canopy (crown) cover. Forest structure information comes from the Landscape Ecology, Modeling, Mapping, and Analysis Gradient Nearest Neighbor (GNN) data. The GNN data is a consistently interpreted vegetation data set based on an imputation processes utilizing a 2012 Landsat image (GNN 2012). Forest Inventory and Analysis plots, Continuous Vegetation Survey plots, ecology plots, and other established vegetation plots were utilized as source data in the imputation process. For this

analysis, forest structure is classified into five general classes based on diameter and canopy cover as shown in table 24. Barrett et al. (2010) and Haugo et al. (2015) used a similar approach to defining structure classes, and the GNN data (2012) lends itself well to easily analyzing forest structure at multiple scales using these definitions. It is important to note that the structure class definitions in table 24 are easily analyzed using GNN and many other data sources, but for measurements in the field further analysis will be required to determine conversion factors between canopy cover and trees per acre or basal area per acre.

Table 24. Structure class definitions based on canopy cover diameter

Structure Class	Definition
Early	Trees less than 10 inches d.b.h. or canopy cover less than 10 percent
Mid Open	Trees 10 to less than 20 inches d.b.h. or canopy cover 10 percent or greater and less than 40 percent
Mid Closed	Trees 10 to less than 20 inches d.b.h., canopy cover 40 percent or greater
Late Open	Trees 20 inches or greater d.b.h., canopy cover 10 percent or greater and less than 40 percent
Late Closed	Trees 20 inches or greater d.b.h., canopy cover 40 percent or greater

The 20" DBH or greater description of a large trees that shouldn't be harvested is a 5% reduction in DBH from 21" DBH. The above description provides an explanation why the preferred alternative shifted from the Eastside Screens to a structure based definition of a large tree. The revised Forest Plan includes a large tree management guideline that allows for exceptions to the harvesting of trees greater than 20" DBH (FW-GDL-VEG-03, revised Forest Plan, page 42). This approach avoids numerous site specific forest plan amendments to permit individual projects to harvest limited numbers of trees ≥ 20 " DBH. The exceptions also provide land managers flexibility to deal with land management objectives, within the overall desired condition regarding Forest Structure (FW-DC-VEG-03, revised Forest Plan, pp. 34).

The FEIS, Volume 1, pp. 122 describe the selected alternative (Alternative P) effects on old forest management:

This alternative proposes to use a landscape approach to forest structure management that allows structure classes to shift around the landscape in response to disturbance. Instead of fixed reserves intended to contain late forest structure, this alternative would have late structure contained throughout the landscape and all actions that affect forest vegetation would be assessed and compared to HRV, with the goal of moving the overall landscape toward HRV.

Alternative P replaces Eastside Screens with a series of desired HRV conditions, desired wildlife habitat conditions, and a guideline for large tree retention which emphasizes retention and recruitment of large trees across the landscape, but allows cutting of individual large trees when needed to meet desired conditions for structural stages, along with several other exceptions.

Alternative P, along with the proposed action, moves late structure classes in the Douglas-fir dry type (the largest vegetation type on the Forest) to the midpoint of HRV and has the least amount of departure in this type. More importantly, this alternative, along with the proposed action, produces a higher percentage of total late structure in late open structure (40 percent of total late structure)

compared to other alternatives. This would decrease fire severity and insect risk, while increasing resiliency in the face of climate change and other disturbances (Franklin et al. 2007, Graham et al. 2007, Puettmann et al. 2009, Franklin and Johnson 2012, DeRose and Long 2014).

The 20" diameter limit is being viewed by industry as being more restrictive and will decrease management opportunities, and further reduce volume outputs. Others view the Large Tree Management guideline as allowing too many reasons to harvest trees over 20.

Alternative P (the selected alternative) implements a landscape approach to managing forest structures by using active management to improve adaptability and resilience and move the landscape toward HRV. This alternative replaces Eastside Screens with a series of desired HRV conditions, desired wildlife habitat conditions, and a guideline for large tree retention. (FEIS, Vol. I, page 119)

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Alternative P, along with the proposed action, moves late structure classes in the Douglas-fir dry type (the largest vegetation type on the Forest) to the midpoint of HRV and has the least amount of departure in this type. More importantly, this alternative, along with the proposed action, produces a higher percentage of total late structure in late open structure (40 percent of total late structure) compared to other alternatives. This would decrease fire severity and insect risk, while increasing resiliency in the face of climate change and other disturbances. (FEIS, Vol. I, pages 113-114)

With continuation of the Eastside Screens, management options differ between vegetation types depending on the amount of late structure. In vegetation types that are below HRV for late closed or late open structure, no trees 21" DBH or greater can be harvested and no timber harvest activities can occur within late structure classes, unless it is moving one late structure class to another late structure class. In vegetation types that are within HRV in both late open and late closed structure, trees 21" DBH or greater can be harvested and timber harvest activities can occur within these late structure stands as long as late structure does not fall below HRV. This means that under the no action alternative there would be no harvesting of trees 21" DBH or greater in any vegetation type for approximately the first 50 years due to late structure being below HRV. The mid closed structure class could be managed to create early or move toward late open, but no harvest activities could occur within late structure stands. The one exception to this could occur in Douglas-fir dry late closed stands that are currently within HRV. In these stands, management could move structure toward late open, but without the ability to remove trees 21" DBH or greater, it can be difficult to reduce canopy cover enough to qualify as late open structure. Modeling results show that all alternatives eventually create enough late open in the Douglas-fir dry to be within HRV; however, the no action alternative gets there more slowly and produces less than the proposed action (alternative P). (FEIS, Vol.I, pp. 109)

In the response to comments the Forest also discussed the shift from 21" to 20" to describe large trees (FEIS, Volume 3, pp. 1029):

Alternatives R, B, O, and the no action alternative all include a 21" diameter limit. Additionally, the proposed revised forest plan contains a guideline (FW-GDL-VEG-03. Large Tree Management) that directs management activities to retain and generally emphasize recruitment of individual large trees across the landscape, and provides direction for the circumstances under which large trees (defined as larger than 20 inches DBH) may be removed. The effects analysis described in the FEIS shows that maintaining a 21" diameter limit reduces the ability to attain the desired future condition of having a majority of most vegetation types in late structure.

CONCLUSION:

This plan replaces the Eastside Screens through desired conditions, which is appropriate. The proposed approach provides the Forest with more flexible strategies to allow forest managers to better integrate old forest conservation goals with other land management objectives. The 20" diameter or larger definition of a large tree is not arbitrary, but based on specific well thought out reasons as described above.

The plan decision is compliant with law, regulation and policy.

RESOLUTION OPTIONS PROPOSED BY OBJECTORS:

- 1) The Forest Service could leave out any reference to diameter limits and effectively manage using the third exception which states: "*Trees need to be removed to meet, promote, or maintain desired conditions for structural stages.*" This would help drive the forest more quickly toward the Historic Range of Variability (HRV). [*American Forest Resource Council*]

Response: We want to give the public some assurance that large trees will be protected. The proposed approach provides the Forest with more flexible strategies to allow forest managers to better integrate old forest conservation goals with other land management objectives.

- 2) At minimum, the final LMP should make any retention standards or guidelines more flexible. The current language could require extensive tree-by-tree analysis to go above 20 inches when needed for important silvicultural goals. More flexibility can be achieved by (1) deleting any reference to a specific diameter limit and (2) changing the detailed "exception" list to a statement that larger/older trees may be removed, at the discretion of the responsible official, when appropriate to land management goals. [*American Forest Resource Council*]

Response: Deleting any reference to a specific diameter limit would not give the public assurance large trees will be protected. The proposed approach provides the Forest with more flexible strategies to allow forest managers to better integrate old forest conservation goals with other land management objectives.

- 3) To resolve the issues raised above, the following actions will need to occur:
The Colville National Forest needs to drop the maximum 20" DBH limit for harvest. Setting the diameter limit to 20" is an arbitrary and capricious decision made with little or no scientific backing. This diameter limit, which is lower and more restrictive than that found in the Eastside Screens, will decrease management opportunities, further reduce volume outputs, decrease forest health, and increase the likelihood of litigation.

Response: The FEIS, Vol. III, pp. 1029 - Alternatives R, B, O, and the no action alternative all include a 21" diameter limit. Additionally, the proposed revised forest plan contains a guideline (FW-GDL-VEG-03. Large Tree Management) that directs management activities to retain and generally emphasize recruitment of individual large trees across the landscape, and provides direction for the circumstances under which large trees (defined as larger than 20 inches dbh) may be removed.

The effects analysis described in the FEIS shows that maintaining a 21" diameter limit reduces the ability to attain the desired future condition of having a majority of most vegetation types in late structure.

Modeling results described in the FEIS (chapter 3 Forest Vegetation, pp. 90-132) indicate time is required to develop late structure across the landscape. This is consistent with other recent scientific articles (Haugo et al. 2015). The forest structure desired condition (FW-DC-VEG-03) includes an evaluation of the historical range of variability (HRV) and vegetation treatments at the project level will need to show movement toward this desired condition. This means until the desired condition is reached, existing late structure would need to be maintained on the landscape. There is nothing in the plan prohibiting tree thinning or other methods that may increase the development of late structure.

- 4) The Colville National Forest could leave out any reference to diameter limits and manage using the broad exception, which states that larger/older trees may be removed, at the discretion of the responsible official, when appropriate to land management goals.

Response: This would not provide the public with any assurance that large, old trees would be protected.