

Riparian Rulemaking Clarification Topic – “Well-Distributed”
Advisory Committee Meeting
March 22, 2016

Background

The concept of tree distribution within the riparian management area (RMA) was previously addressed by the Board of Forestry (Board) but not captured in rule language. The 1994 “Water Protection” rule adoption process compared the new Division 635 (water classification) and 640 (stream vegetation) to the existing Division 645 (significant wetlands). The guidance for significant wetland rules added the Board’s intent to distribute the trees all across the 100 foot wetland RMA. It reads, “The Board intended that live trees be retained in a pattern of generally even distribution over forested portions of the wetland and RMA, ... (emphasis added). Operators are encouraged to meet the Board’s intent but not required by rule.

The current rules require a minimum basal area density and number of live conifers within the RMA. There was no specific expectation how the density or tree count is distributed within the RMA as you moved along the stream or *away* from the stream. Likely because of operational considerations, a common outcome was hard-edged harvests up to the point where minimum basal area and conifer requirements were met as opposed to a thinning throughout the riparian area. FPA guidance encourages operators to leave trees in the stream RMA in a way that will be most beneficial to fish and wildlife. The November 2015 Board decision was purposeful to add the term **well-distributed** to the variable retention prescription, to encourage thinning and active management throughout the RMA to meet the desired future condition for riparian areas as opposed to hard-edged, narrower bands of retained trees adjacent to streams.

The November 2015 Board decision specifically directed rulemaking for Option B – Variable Retention (Active Management), by designating two zones within the RMA: a no cut 20 foot zone and a **well-distributed** zone beyond 20 feet that has the minimum basal area and conifer tree count. The Board included language for both small and medium streams that retained trees “...must come from trees **well-distributed** [emphasis added] throughout the...” zone from 20 feet of the active channel to the edge of the riparian management area (20-60 feet for small and 20-80 feet for medium streams).

The term **well-distributed** will need further clarification before it can be captured in rule language. Trees well-distributed in the RMA does not mean uniform spacing or even distribution of trees. It does mean that the riparian stand is on a pathway toward desired future conditions similar to mature streamside stands.

Regulatory Examples of “Well-distributed”, “Well-stock”, and “Each Acre” Terms

The Forest Practices Act and rules already uses these terms, which are provided to help the committee consider how the Board’s intent could be clearly conveyed in rule and administered in the field.

Forest Practices Act - Reforestation of certain harvest types, ORS 527.745(1)

The State Board of Forestry shall adopt standards for the reforestation of harvest type 1 and harvest type 3. ... standards for the reforestation of harvest type 1 and harvest type 3 shall include the following:

(a) By the end of the fifth growing season after planting or seeding, at least 200 healthy conifer or suitable hardwood seedlings or lesser number as permitted by the board by rule, shall be established per acre, **well-distributed** [emphasis added] over the area, which are “free to grow” as defined by the board.

Scenic highways; visually sensitive corridors; ORS 527.755(4)(a)

For harvest operations within a visually sensitive corridor, at least 50 healthy trees of at least 11 inches DBH, or that measure at least 40 square feet in basal area, shall be temporarily left on **each acre** [emphasis added].

Definitions – Associated with reforestation rules, OAR 629-600-0100(29)

"Free to grow" means the State Forester's determination that a tree or a stand of **well distributed** [emphasis added] trees, of acceptable species and good form, has a high probability of remaining or becoming vigorous, healthy, and dominant over undesired competing vegetation. For the purpose of this definition, trees are considered **well distributed** [emphasis added] if 80 percent or more of the portion of the operation area subject to the reforestation requirements of the rules contains at least the minimum per acre tree stocking required by the rules for the site and not more than ten percent contains less than one-half of the minimum per acre tree stocking required by the rules for the site.

Note: FPA Guidance clarifies that “An operator must have made an effort to reforest the entire area suitable for reforestation before being able to qualify for the “well-distributed” free to grow definition.

Alternative Vegetation Retention Prescriptions (Hardwood Dominated Sites), OAR 629-640-300

(4) Alternative Vegetation Retention Prescription 2 ...The operator shall:

(4)(a) Evaluate the stand within the riparian management area and, where they exist, segregate segments (200 feet or more in length) that are **well-stocked** [emphasis added] with conifer, as identified from an aerial photograph, from the ground or through other appropriate means.

Other States Agencies Riparian Protection Using “Shade” and “Well-Distributed” Terms

Washington State Department of Natural Resources

The Washington State Department of Natural Resources (WADNR) uses a Forest Practices Habitat Conservation Plan to establish protection of Type F (fish habitat) streams. The width of the riparian management zone (RMZ) for Type F streams varies from 90 feet for a Site Class V to 200 feet for Site Class I. The RMZ for Type F streams in western Washington comprise three sub-zones: the “core zone,” the “inner zone” and the “outer zone.” The core zone is a 50 foot no harvest zone. Timber harvest is allowed within the inner zone if the combined core and inner zones meet minimum standards: 1) the number of trees per acre, 2) the basal area per acre, 3) and the proportion of conifer.

Harvesting in the inner zone must be either by: 1) thinning from below, or 2) leaving trees closest to the water. Thinning From Below focuses on those trees that occupy subordinate canopy positions. Also, the harvest must: not decrease the proportion of conifers in the stand; retain at least 57 conifer trees per acre; and meet minimum shade requirements within 75 feet, as determined from water quality temperature classification, elevation, and a densiometer.

Timber harvest in the outer zone must retain 20 riparian leave trees per acre. Outer zone riparian leave trees must be retained either by the “dispersal” strategy or the “clumping” strategy. Under the dispersal strategy, leave trees must be distributed approximately evenly throughout the outer zone. Leave trees

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must be conifer at least 12" DBH. If conifers at least 12" DBH are not available, then the next largest conifers must be retained. If conifers are not present, use the clumping strategy.

Under the clumping strategy, leave trees must be grouped around sensitive features to the extent the features are present in the outer zone. Sensitive features include seeps and springs; forested wetlands; areas where the leave trees may provide windthrow protection; unstable slopes; and cultural resource sites. When clumping trees around sensitive features, leave trees must be at least 8" DBH and representative of the overstory canopy in or around the sensitive feature. If sensitive features are not present, then clumps must be distributed throughout the outer zone and the leave trees must be conifers at least 12" DBH.

WADNR offers landowner compensation for the value of the timber found within a permanent RMA easement and in some circumstances may include a land value, when funding is available.

Idaho Department of Lands

In 2014, the Idaho Department of Lands established the streamside tree retention rule or "shade rule" with the intention to allow active management along Class I streams while maintaining essential riparian functions. Landowners may harvest within an inner and outer stream protection zones (SPZ), if the minimum relative stocking of basal area is met within the 75 foot SPZ. Both live conifer and hardwoods are measured, using either 100% tally or fixed plot sampling of 20% of the stream segments over 1000 feet. Landowners are encouraged when harvesting trees in the SPZ to "Space trees evenly within the SPZ to provide consistent shade and large woody debris recruitment." The forest practices regulations state: "Landowners are strongly encouraged to retain all trees immediately adjacent to the stream."

Key Questions for Committee Consideration:

- How can the "well distributed" rule language encourage active riparian management, to move the riparian stand toward desired future conditions (DFC) similar to mature streamside stands?
- How well do the riparian trees need to be "well-distributed" beyond 20 feet of the stream?
- What harvest practices move the riparian stand toward DFC?
- What harvest practices will encourage the residual trees to be resilient to windthrow?
- What harvest practices will encourage reforestation success, if reforestation is required?
- How would the outer edge of the RMA be measured? Average distance (current rule) or fixed distance?
 - If average, what maximum distance is allowed to move inside or outside the RMA boundary?
- What attributes would meet the Board's intent for "well-distributed"?
 - Minimum basal area and tree count per 1000 feet?
 - Trees distributed throughout the RMA, both longitudinal and transversely, but not uniformly.
 - Minimum allowance for gaps, created by the operation?
 - Minimum allowance for hard-edges, compacted bands of retained trees adjacent to the final harvest within the RMA.
- How would measurements be made to determine "well-distributed" density and tree count?
 - Conduct variable or fixed plots to determine basal area per acre?
 - Conduct 100% tally of the basal area and tree count by linear segments of the RMA?
 - Measure the size and number of managed gaps, excluding natural gaps?
 - Measure distance and number of hard-edges within the RMA beyond 20 feet?
- How does "well-distributed" acknowledge cable logging corridors in the RMA?

- How does “well-distributed” allow for clumps of trees near sensitive areas, e.g., springs, wetlands, and unstable soils?
- How does “well-distributed” acknowledge protected resource sites, e.g., bird sites or significant wetlands?
- What conditions might trigger the need for a Plan for Alternate Practice?
 - Canopy closure?
 - High or low stand variability?
 - Harvest methods?
 - Presence of roads in the RMA?
 - Presence of other protected resources sites, e.g., protected birds or wetlands?
 - Adjacent harvest prescription?
- What financial incentives could be used to encourage landowners to actively manage the RMA and create “well-distributed” trees in the RMA?
- Should the metrics for determining well-distributed be described in a technical note or in described in rule?
- Other?