WAC 222-30-022 *Eastern Washington riparian management zones. For eastside forests, riparian management is intended to provide stand conditions that vary over time. It is designed to mimic eastside disturbance regimes within a range that meets functional conditions and maintains general forest health. These desired future conditions are a reference point on the pathway to restoration of riparian functions, not an end point of riparian stand development. These rules apply to all typed waters on forest land in Eastern Washington, except as provided in WAC 222-30-023. RMZs are measured horizontally from the outer edge of the bankfull width or channel migration zone, whichever is greater, and extend to the limits as described in the following section.

Eastern Washington RMZ for streams with bankfull width of less than or equal to 15 feet wide

Site Class	Total RMZ Width	Core Zone Width From outer edge of bankfull width or outer edge of CMZ, whichever is greater	Inner Zone Width	Outer Zone Width
I	130'	30'	45'	55'
II	110'	30'	45'	35'
III	90'	30'	45'	15'
IV	75'	30'	45'	0'
V	75'	30'	45'	0'

Eastern Washington RMZ for streams with bankfull width of greater than 15 feet wide

Site Class	Total RMZ Width	Core Zone Width From outer edge of bankfull width or outer edge of CMZ, whichever is greater	Inner Zone Width	Outer Zone Width
I	130'	30'	70'	30'
II	110'	30'	70'	10'
III	100'	30'	70'	0'
IV	100'	30'	70'	0'
V	100'	30'	70'	0'

*(1) **Eastern Washington RMZs on Type S and F Waters** have three zones: The core zone is nearest to the edge of the bankfull width or outer edge of the CMZ, whichever is greater. The inner zone is the middle zone, and the outer zone is furthest from the water. Permitted forest practices vary by timber habitat type and site class.

None of the limitations on harvest in each of the three zones listed below will preclude or limit the construction and maintenance of roads for the purpose of crossing streams in accordance with WAC 222-24-030 and 222-24-050, or the creation and use of yarding corridors in accordance with WAC 222-30-060(1).

The shade requirements in WAC 222-30-040 must be met regardless of harvest opportunities provided in the inner zone RMZ rules. See board manual section 1.

(a) **Core zones.** The core zone extends thirty feet measured horizontally from the edge of the bankfull width or outer edge of the CMZ, whichever is greater, for all timber habitat types. No harvest or construction is allowed in the core zone except as detailed in subsection (1) of this section. Any trees cut for or damaged by yarding corridors must be left on site. Any trees cut as a result of road construction to cross a stream may be removed from the site unless used as part of a large woody debris replacement strategy.

(b) **Inner zones.** Width and leave tree requirements of the inner zone vary by timber habitat type as outlined below.

(i) **Ponderosa pine timber habitat type.**

(A) The width of the inner zone is seventy feet measured horizontally from the outer edge of the core zone on streams greater than fifteen feet bankfull width or forty-five feet measured horizontally from the outer edge of the core zone on streams with a bankfull width of fifteen feet or less.

(B) No harvest is allowed in the inner zone except as described in (b)(i)(C) or (D) of this subsection, and as allowed for stream crossings and yarding corridors as described in this subsection (1).

(C) **Stands with a high basal area:** Harvest is permitted in the inner zone if the basal area in the inner zone is greater than one hundred ten square feet per acre for conifer and hardwood trees equal to or greater than six inches dbh. The harvest must leave at least fifty trees per acre AND subject to (b)(i)(C)(III) of this subsection, a minimum leave tree basal area of at least sixty square feet per acre. The trees to be left shall be selected as follows:

(I) The twenty-one largest trees per acre must be left; and

(II) An additional twenty-nine trees per acre that are 10-inch dbh or greater must be left. If there are less than twenty-nine ten-inch dbh or greater trees per acre, leave the twenty-nine largest trees. If there are more than twenty-nine ten-inch dbh or greater trees per acre, leave twenty-nine ten-inch dbh or greater trees per acre based on the following priority order:

- Trees that provide shade to water;
- Trees that lean towards the water;
- Trees of the preferred species, as defined in WAC 222-16-010;
- Trees that are evenly distributed across the inner zone.

(III) If more than fifty trees per acre are needed to meet the minimum leave tree basal area of sixty square feet per acre, then additional trees greater than six-inch dbh must be left. If the minimum basal area cannot be met with fewer than one hundred trees of at least six inches dbh, then no more than one hundred trees per acre of the largest remaining trees will be required to be left regardless of the basal area.

(D) **Stands with low basal areas and high density:** Thinning is permitted if the basal area of all species is less than sixty square feet per acre AND there are more than one hundred trees per acre. The thinning must leave a minimum of one hundred trees per acre. The trees to be left must be selected as follows:

(I) The fifty largest trees per acre must be left; and

(II) An additional fifty trees per acre that are greater than six inches dbh must be left. If there are not fifty six-inch dbh or greater trees per acre, then all six-inch dbh or greater trees per acre must be left plus the largest remaining trees to equal fifty trees per acre. Select the additional fifty trees based on the following priority order:

- Trees that provide shade to water;

• Trees that lean towards the water;
• Trees of the preferred species, as defined in WAC 222-16-010;
• Trees that are evenly distributed across the inner zone.

(E) To the extent down wood is available on site prior to harvest, at least twelve tons of down wood per acre must be left following harvest as follows:

(I) Six pieces greater than sixteen inches diameter and twenty feet in length; and

(II) Four pieces greater than six inches in diameter and twenty feet in length.

(III) Landowner/operator is not required to create down wood.

(F) See **stream-adjacent parallel roads for all timber habitat types** in (iv) of this subsection if there is a stream-adjacent parallel road in this zone.

(ii) **Mixed conifer timber habitat type.**

(A) The width of the inner zone is seventy feet measured horizontally from the outer edge of the core zone on streams greater than fifteen feet bankfull width or forty-five feet measured horizontally from the outer edge of the core zone on streams with a bankfull width of fifteen feet or less.

(B) No harvest is allowed in the inner zone except as described in (b)(ii)(C) or (D) of this subsection, and as allowed for stream crossings and yarding corridors as described in subsection (1).

(C) **Stands with a high basal area:**

(I) Harvest is permitted in the inner zone if the combined conifer and hardwood basal area for trees greater than six inches dbh is:

• Greater than one hundred ten square feet per acre on low site indexes (site index less than ninety); or

• Greater than one hundred thirty square feet per acre on medium site indexes (site index between ninety and one hundred ten); or

• Greater than one hundred fifty square feet per acre on high site indexes (site index greater than one hundred ten).

(II) The harvest must leave at least fifty trees per acre AND a minimum leave tree basal area of at least:

• Seventy square feet per acre on low site indexes; or
• Ninety square feet per acre on medium site indexes; or
• One hundred ten square feet per acre on high site indexes.

(III) The trees to be left shall be selected as follows:

• The twenty-one largest trees per acre must be left; and

• An additional twenty-nine trees per acre that are ten-inch dbh or greater must be left. If there are less than twenty-nine ten-inch dbh or greater trees per acre, leave the twenty-nine largest trees. If there are more than twenty-nine ten-inch dbh or greater trees per acre, leave twenty-nine ten-inch dbh trees per acre based on the following priority order:

• Trees that provide shade to water;
• Trees that lean towards the water;
• Trees of the preferred species, as defined in WAC 222-16-010; or
• Trees that are evenly distributed across the inner zone.

• If more than fifty trees per acre are needed to meet the minimum leave tree basal area for the site index in (b)(ii)(C)(II) of this subsection, then additional trees greater than six inches dbh must be left. If the minimum basal area cannot be met with fewer than one hundred trees at least six inches dbh, then no more than one hundred trees per acre of the largest remaining trees will be required to be left regardless of the basal area.

(D) **Stands with low basal areas and high density:** Thinning is permitted if the basal area of all species is less than the minimum requirements for the site index in (b)(ii)(C)(II) of this subsection AND there are more than one hundred twenty trees per acre. The thinning must leave a minimum of one hundred twenty trees per acre. The trees to be left shall be selected as follows:

(I) The fifty largest trees per acre must be left; and

(II) An additional seventy trees per acre greater than six inches dbh must be left. If there are not seventy six-inch dbh or greater trees per acre, then all six-inch dbh or greater trees per acre must be left plus the largest remaining trees to equal seventy trees per acre. Select the additional seventy trees based on the following priority order:

• Trees that provide shade to water;

• Trees that lean towards the water;

• Trees of the preferred species, as defined in WAC 222-16-010; or

• Trees that are evenly distributed across the inner zone.

(E) To the extent down wood is available on site prior to harvest, twenty tons of down wood per acre is required to be left following harvest as follows:

(I) Eight pieces greater than sixteen inches diameter and twenty feet in length; and

(II) Eight pieces greater than six inches in diameter and twenty feet in length.

(III) Landowner/operator is not required to create down wood.

(F) **See stream-adjacent parallel roads for all timber habitat types** in (b)(iv) of this subsection if there is a parallel road in this zone.

(iii) **High elevation timber habitat type.**

(A) The width of the inner zone is forty-five feet measured horizontally from the outer edge of the core zone on streams equal to or less than fifteen feet bankfull width or seventy feet measured horizontally from the outer edge of the core zone on streams with a bankfull width of greater than fifteen feet.

(B) Follow stand requirements for Western Washington riparian management zones, WAC 222-30-021 (1)(b).

Note: Option 2 is not permitted for eastside use, because of the minimum floor (100') constraint.

(C) To the extent down wood is available prior to harvest, thirty tons per acre of down wood per acre must be left following harvest as follows:

(I) Eight pieces greater than sixteen inches diameter and twenty feet in length; and

(II) Eight pieces greater than six inches in diameter and twenty feet in length.

(III) Landowner/operator is not required to create down wood.

(D) See **stream-adjacent parallel roads for all timber habitat types** in (b)(iv) of this subsection if there is a parallel road in this zone.

(iv) **Stream-adjacent parallel roads for all timber habitat types in the inner zone.** The shade rule, WAC 222-30-040, must be met whether or not the inner zone includes a stream-adjacent parallel road. Where a stream-adjacent parallel road exists in the inner zone and the minimum required basal area cannot be met due to the presence of the road, then the location of the road determines the allowable operations as follows:

(A) For streams with a bankfull width that is greater than fifteen feet:

(I) If the edge of the road closest to the stream is seventy-five feet or more from the outer edge of bankfull width of the stream or outer edge of CMZ, whichever is greater, **no harvest is permitted in the inner zone.** This includes trees within the inner zone on the uphill side of the road.

(II) No harvest is permitted within the inner zone on the stream-side of the road. If the edge of the road closest to the stream is less than seventy-five feet from the outer edge of bankfull width of the stream or outer edge of CMZ, whichever is greater then:

• Additional leave trees equal in total basal area to the trees lost due to the road must be left near the streams in or adjacent to the unit to be harvested; (See board manual section 7.)

• Where the additional leave trees providing fish habitat for water quality function are determined to be not available or not practical by the department, landowners and operators will employ site specific management activities to replace lost riparian functions that may include placement of large woody debris in streams. (See board manual section 7.)

(B) For streams with a bankfull width less than fifteen feet:

(I) If the edge of the road closest to the stream is fifty feet or more from the outer edge of bankfull width or outer edge of CMZ, whichever is greater, no harvest is permitted in the inner zone. This includes trees within the inner zone on the uphill side of the road.

(II) No harvest is permitted within the inner zone on the stream side of the road. If the edge of the road closest to the stream is less than fifty feet from the bankfull width or CMZ, whichever is greater then:

• Additional leave trees equal in total basal area to the trees lost due to the road must be left near the streams in or adjacent to the unit to be harvested. (See board manual section 7.)

• Where the additional leave trees providing fish habitat for water quality function are determined to be not available or not practical by the department, landowners and operators will employ site specific management activities to replace lost riparian functions that may include placement of large woody debris in streams. (See board manual section 7.)

(C) **Wildlife reserve trees.** Leave all wildlife reserve trees within the inner zone of the riparian management zone where operations in the vicinity do not violate the safety regulations (chapter 296-54 WAC and chapter 49.17 RCW administered by the department of labor and industries, safety division). Live wildlife reserve trees will contribute to the basal area requirements for inner zone leave trees and to leave tree counts if they are among the twenty-one largest trees per acre; or meet the requirement of an additional twenty-nine leave trees per acre as per (b)(ii)(E) of this subsection.

(c) **Outer zones.** This zone has three categories based on timber habitat type: Ponderosa pine, mixed conifer and high elevation. The width of this zone is zero to fifty-five feet measured horizontally from the outer edge of the inner zone depending on the site class and stream width. (See WAC 222-16-010 definition of "RMZ outer zone.")

(i) Tree counts that must be left per acre, regardless of the presence of an existing stream-adjacent parallel road in the zone, are:

(A) Ponderosa pine habitat type - Ten dominant or codominant trees.

(B) Mixed conifer habitat type - Fifteen dominant or codominant trees.

(C) High elevation habitat type - See requirements for Western Washington RMZs in WAC 222-30-021 (1)(c).

(ii) Outer zone leave tree requirements in (c)(i) of this subsection may be reduced to five trees per acre in the ponderosa pine zone, eight trees per acre in the mixed forest habitat type and ten trees per acre in the high elevation habitat type, if the landowner voluntarily implements a LWD placement plan consistent with board manual sections 5 and 26. Landowners are encouraged to consult with the department and the department of fish and wildlife while designing the plan and prior to submitting a forest practices application. If this strategy is chosen, a complete forest practices application must include the LWD placement plan.

*(2) **Eastern Washington protection along Type Np and Ns Waters.**

(a) An **equipment limitation zone** is a thirty-foot wide zone measured horizontally from the outer edge of bankfull width of a Type Np or Ns Water where equipment is limited. It applies to all perennial and seasonal streams.

(i) On-site mitigation is required if any of the following activities exposes the soil more than ten percent of the surface area of the zone:

(A) Ground based equipment;

(B) Skid trails;

(C) Stream crossings (other than existing roads); or

(D) Cabled logs that are partially suspended.

(ii) Mitigation must be designed to replace the equivalent of lost functions, especially prevention of sediment delivery. Examples include water bars, grass seeding, mulching, etc.

(iii) Nothing in this subsection reduces or eliminates the department's authority to prevent actual or potential material damage to public resources under WAC 222-46-030 or 222-46-040 or any related authority to condition forest practices notifications or applications.

(b) **Type Np Waters.**

Within fifty horizontal feet of the outer edge of bankfull width of the stream, the landowner must identify either a partial cut and/or clearcut strategy for each unit to be harvested:

Once approved by the department, the selected strategy will remain in effect until July 1, 2051. If a landowner transfers title of the harvest unit, the landowner must provide written notice of this continuing obligation to the new owner and send a copy to the department. See WAC 222-20-055.

(i) **For partial cuts:**

(A) Basal areas requirements are the same as those specified for the timber habitat type in the Eastern Washington RMZ inner zone.

(B) Where a stream-adjacent parallel road exists, the basal area required in (b)(i)(A) of this subsection is required to be left. (See stream-adjacent parallel roads for Type Np Waters in (c) of this subsection.)

(C) The trees to be included in the basal area determination and left after harvest must include:

(I) The ten largest trees per acre;

(II) Up to an additional forty trees per acre greater than or equal to ten inches dbh must be left. If all or some of the trees are not at least ten inches dbh, then the largest of the remaining trees must be left. Select trees based on the following priority order:

• Provide streambank stability;

• Provide shade to water;
• Lean towards the water;
• Preferred species, as defined in WAC 222-16-010; or
• Evenly distributed; and

If the basal area target has not been met with the trees required above, up to an additional fifty trees are required greater than six inches in dbh based on the above priority order.

(D) Side slope seeps must be protected with a fifty-foot partial cut buffer that meets the basal area and leave tree requirements of (b)(i)(A), (B), and (C) of this subsection. The buffer shall be measured from the outer perimeter of the perennially saturated soil zone.

(ii) **For clearcuts:**

When the clearcut strategy in this subsection is selected, the landowner must simultaneously designate a two-sided no-harvest fifty-foot buffer along the stream reach in the harvest unit that:

(A) Is equal in total length to the clearcut portion of the stream reach in the harvest unit; and

(B) Meets the upper end of basal area requirements for each respective timber habitat type in the Eastern Washington RMZ inner zone. See WAC 222-30-022 (1)(b)(i), (ii) or (iii).

(C) The streamside boundary of all clearcuts must:

(I) Not exceed in total thirty percent of the length of the stream reach in the harvest unit;

(II) Not exceed three hundred continuous feet in length;

(III) Not be located within five hundred feet of the intersection of a Type S or F Water; and

(IV) Not occur within fifty feet of the following sensitive sites as defined in WAC 222-16-010:

• The outer perimeter of a soil zone perennially saturated from a headwall seep;
• The outer perimeter of a soil zone perennially saturated from a side-slope seep;
• The center of a headwater spring;
• An alluvial fan;
• The center point of intersection of two or more Type Np Waters.

(c) **Stream-adjacent parallel roads for Type Np Waters.** If a road exists in a Type Np RMZ and the basal area required to be left cannot be met within fifty feet of the outer edge of bankfull width of the stream measured horizontally due to the presence of the road, then the distance of the road to the stream determines the allowable operations as follows:

(i) A road that is within thirty to forty-nine feet measured horizontally from the outer edge of bankfull width of the stream requires:

(A) A total of one hundred feet of riparian management zone measured horizontally (both sides of the stream count towards the total) must be left in a manner to provide maximum functions for nonfish use streams. If harvest is taking place on only one side of the stream, then fifty feet of RMZ width must be left, regardless of presence of a stream-adjacent parallel road. The width of the road is not counted as part of the total width of the RMZ.

(B) The location of the riparian management zone required in (A) of this subsection shall be based on the following priority order:

(I) Preferred: The area between the stream and the stream side edge of the road.

(II) The area that provides the most shade to the channel.

(III) The area that is most likely to deliver large woody debris to the channel.

(ii) A road that is within less than thirty feet from the outer edge of bankfull width of the stream measured horizontally requires, in addition to (c)(i)(A) and (B) of this subsection, that all trees between the stream and the streamside edge of the road must be left.

[Statutory Authority: RCW 76.09.040(3). WSR 13-21-032, § 222-30-022, filed 10/8/13, effective 12/30/13. Statutory Authority: RCW 76.09.040. WSR 05-12-119, § 222-30-022, filed 5/31/05, effective 7/1/05. Statutory Authority: Chapter 34.05 RCW, RCW 76.09.040, [76.09.]050, [76.09.]370, 76.13.120(9). WSR 01-12-042, § 222-30-022, filed 5/30/01, effective 7/1/01.]