

## How the Forest Practices Rules Apply to Biomass Harvest

The listed rules below summarize how the forest practices rules apply to the harvest of biomass. All of the chapters are hyperlinked for the reader's convenience to review rules in their entirety if desired.

### Chapter 222-10 WAC, State Environmental Policy Act Guidelines

#### **WAC 222-10-010 Policies and authorities.**

- A forest practices application or notification that requires a threshold determination will be conditioned when necessary to mitigate specific adverse impacts identified in environmental documents prepared under SEPA.
- An application or notification will be disapproved when the proposal would result in significant adverse impacts identified in a final or supplemental environmental impact statement prepared under SEPA, and reasonable mitigation measures are insufficient to mitigate the identified impacts and denial is consistent with all provisions of (the authority granted in RCW 76.09.010 and the SEPA law and rules.)

### Chapter 222-12 WAC, Policy and Organization

The policies in this section all apply to biomass harvest. These may be of particular interest:

**WAC 222-12-010 Authority:** Promulgation of all forest practices rules shall be accomplished so that compliance with such forest practices rules will achieve compliance with the water quality laws.

**WAC 222-12-040 Alternate plans—Policy:** All forest practice operations must comply with both the act and the rules promulgated pursuant to the act, unless an alternate plan has been approved by the department.

**WAC 222-12-045 Adaptive Management Program:** (1) **Purpose:** The purpose of the program is to provide science-based recommendations and technical information to assist the board in determining if and when it is necessary or advisable to adjust rules and guidance for aquatic resources to achieve resource goals and objectives. The board may also use this program to adjust other rules and guidance. The goal of the program is to affect change when it is necessary or advisable to adjust rules and guidance to achieve the goals of the forests and fish report or other goals identified by the board. There are three desired outcomes: Certainty of change as needed to protect targeted resources; predictability and stability of the process of change so that landowners, regulators and interested members of the public can anticipate and prepare for change; and application of quality controls to study design and execution and to the interpreted results.

**WAC 222-12-050 Notices to comply—stop work orders and WAC 222-12-070 Enforcement policies** *These WACs explain enforcement policies – see detail under Chapter 222-46 WAC in this document.*

### Chapter 222-16 WAC, Definitions

#### **WAC 222-16-010 General definitions**

Unless otherwise required by context, as used in these rules:

**"Act"** means the Forest Practices Act, chapter 76.09 RCW.

**"Alluvial fan"** see "sensitive sites" definition.

**"Aquatic resources"** means water quality, fish, the Columbia torrent salamander (*Rhyacotriton kezeri*), the Cascade torrent salamander (*Rhyacotriton cascadae*), the Olympic torrent salamander (*Rhyacotriton olympian*), the Dunn's salamander (*Plethodon dunni*), the Van Dyke's salamander (*Plethodon vandyke*), the tailed frog (*Ascaphus truei*) and their respective habitats.

**"Area of resource sensitivity"** means areas identified in accordance with WAC 222-22-050 (2)(d), 222-22-060(2), or 222-22-090.

**"Bankfull depth"** means the average vertical distance between the channel bed and the estimated water surface elevation required to completely fill the channel to a point above which water would enter the flood plain or intersect a terrace or hillslope. In cases where multiple channels exist, the bankfull depth is the average depth of all channels along the cross-section. (See board manual section 2.)

**"Bankfull width"** means: (a) For streams - The measurement of the lateral extent of the water surface elevation perpendicular to the channel at bankfull depth. In cases where multiple channels exist, bankfull width is the sum of the individual channel widths along the cross-section (see board manual section 2).

(b) For lakes, ponds, and impoundments - Line of mean high water.

(c) For tidal water - Line of mean high tide.

(d) For periodically inundated areas of associated wetlands - Line of periodic inundation, which will be found by examining the edge of inundation to ascertain where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland.

**"Basal area"** means the area in square feet of the cross section of a tree bole measured at 4 1/2 feet above the ground.

**"Bedrock hollows"** (colluvium-filled bedrock hollows, or hollows; also referred to as zero-order basins, swales, or bedrock depressions) means landforms that are commonly spoon-shaped areas of convergent topography within unchannelled valleys on hillslopes. (See board manual section 16 for identification criteria.)

**"Bog"** means wetlands which have the following characteristics: Hydric organic soils (peat and/or muck) typically 16 inches or more in depth (except over bedrock or hardpan); and vegetation such as sphagnum moss, Labrador tea, bog laurel, bog rosemary, sundews, and sedges; bogs may have an overstory of spruce, western hemlock, lodgepole pine, western red cedar, western white pine, Oregon crabapple, or quaking aspen, and may be associated with open water. This includes nutrient-poor fens. (See board manual section 8.)

**"Bull trout habitat overlay"** means those portions of Eastern Washington streams containing bull trout habitat as identified on the department of fish and wildlife's bull trout map. Prior to the development of a bull trout field protocol and the habitat-based predictive model, the "bull trout habitat overlay" map may be modified to allow for locally based corrections using current data, field knowledge, and best professional judgment. A landowner may meet with the departments of natural resources, fish and wildlife and, in consultation with affected tribes and federal biologists, determine whether certain stream reaches have habitat conditions that are unsuitable for supporting bull trout. If such a determination is mutually agreed upon, documentation submitted to the department will result in the applicable stream reaches no longer being included within the definition of bull trout habitat overlay. Conversely, if suitable bull trout habitat is

discovered outside the current mapped range, those waters will be included within the definition of "bull trout habitat overlay" by a similar process.

**"Channel migration zone (CMZ)"** means the area where the active channel of a stream is prone to move and this results in a potential near-term loss of riparian function and associated habitat adjacent to the stream, except as modified by a permanent levee or dike. For this purpose, near-term means the time scale required to grow a mature forest. (See board manual section 2 for descriptions and illustrations of CMZs and delineation guidelines.)

**"Clearcut"** means a harvest method in which the entire stand of trees is removed in one timber harvesting operation. Except as provided in WAC 222-30-110, an area remains clearcut until: It meets the minimum stocking requirements under WAC 222-34-010(2) or 222-34-020(2); and The largest trees qualifying for the minimum stocking levels have survived on the area for five growing seasons or, if not, they have reached an average height of four feet.

**"Columbia River Gorge National Scenic Area or CRGNSA"** means the area established pursuant to the Columbia River Gorge National Scenic Area Act, 16 U.S.C. § 544b(a).

**"CRGNSA special management area"** means the areas designated in the Columbia River Gorge National Scenic Area Act, 16 U.S.C. § 544b(b) or revised pursuant to 16 U.S.C. § 544b(c). For purposes of this rule, the special management area shall not include any parcels excluded by 16 U.S.C. § 544f(o).

**"CRGNSA special management area guidelines"** means the guidelines and land use designations for forest practices developed pursuant to 16 U.S.C. § 544f contained in the CRGNSA management plan developed pursuant to 15 U.S.C. § 544d.

**"Commercial tree species"** means any species which is capable of producing a merchantable stand of timber on the particular site, or which is being grown as part of a Christmas tree or ornamental tree-growing operation.

**"Completion of harvest"** means the latest of:

Completion of removal of timber from the portions of forest lands harvested in the smallest logical unit that will not be disturbed by continued logging or an approved slash disposal plan for adjacent areas; or

Scheduled completion of any slash disposal operations where the department and the applicant agree within 6 months of completion of yarding that slash disposal is necessary or desirable to facilitate reforestation and agree to a time schedule for such slash disposal; or

Scheduled completion of any site preparation or rehabilitation of adjoining lands approved at the time of approval of the application or receipt of a notification: Provided, That delay of reforestation under this paragraph is permitted only to the extent reforestation would prevent or unreasonably hinder such site preparation or rehabilitation of adjoining lands.

**"Constructed wetlands"** means those wetlands voluntarily developed by the landowner.

Constructed wetlands do not include wetlands created, restored, or enhanced as part of a mitigation procedure or wetlands inadvertently created as a result of current or past practices including, but not limited to: Road construction, landing construction, railroad construction, or surface mining.

**"Contamination"** means introducing into the atmosphere, soil, or water, sufficient quantities of substances as may be injurious to public health, safety or welfare, or to domestic, commercial, industrial, agriculture or recreational uses, or to livestock, wildlife, fish or other aquatic life.

**"Convergent headwalls"** (or headwalls) means teardrop-shaped landforms, broad at the ridgetop and terminating where headwaters converge into a single channel; they are broadly

concave both longitudinally and across the slope, but may contain sharp ridges separating the headwater channels. (See board manual section 16 for identification criteria.)

**"Conversion activities"** means activities associated with conversions of forest land to land uses other than commercial timber operation. These activities may be occurring during or after timber harvest on forest land. They may include but are not limited to the following:

- Preparation for, or installation of, utilities on the forest practices activity site. The development or maintenance of existing rights of way providing utilities exclusively for other ownerships shall not be considered conversions of forest land (see WAC 222-20-010(5)).
- Any of, or any combination of, the following activities in preparation for nonforestry use of the land: Grading, filling, or stump removal.
- Preparation for, or construction of, any structure requiring local government approval.
- Construction of, or improvement of, roads to a standard greater than needed to conduct forest practices activities.
- Clearing for, or expansion of, rock pits for nonforest practices uses or developing surface mines.

**"Conversion option harvest plan"** means a voluntary plan developed by the landowner and approved by the local governmental entity indicating the limits of harvest areas, road locations, and open space.

**"Conversion to a use other than commercial timber operation"** means a bona fide conversion to an active use which is incompatible with timber growing.

**"Critical habitat (state)"** means those habitats designated by the board in accordance with WAC 222-16-080.

**"Critical nesting season"** means for marbled murrelets - April 1 to August 31.

**"Cultural resources"** means archaeological and historic sites and artifacts, and traditional religious, ceremonial and social uses and activities of affected Indian tribes.

**"Cumulative effects"** means the changes to the environment caused by the interaction of natural ecosystem processes with the effects of two or more forest practices.

**"Debris"** means woody vegetative residue less than 3 cubic feet in size resulting from forest practices activities which would reasonably be expected to cause significant damage to a public resource.

**"Deep-seated landslides"** means landslides in which most of the area of the slide plane or zone lies below the maximum rooting depth of forest trees, to depths of tens to hundreds of feet. (See board manual section 16 for identification criteria.)

**"Demographic support"** means providing sufficient suitable spotted owl habitat within the SOSEA to maintain the viability of northern spotted owl sites identified as necessary to meet the SOSEA goals.

**"Department"** means the department of natural resources.

**"Desired future condition (DFC)"** is a reference point on a pathway and not an endpoint for stands. DFC means the stand conditions of a mature riparian forest at 140 years of age, the midpoint between 80 and 200 years. Where basal area is the only stand attribute used to describe 140-year old stands, these are referred to as the "Target Basal Area."

**"Diameter at breast height (dbh)"** means the diameter of a tree at 4 1/2 feet above the ground measured from the uphill side.

**"Eastern Washington"** means the geographic area in Washington east of the crest of the Cascade Mountains from the international border to the top of Mt. Adams, then east of the ridge

line dividing the White Salmon River drainage from the Lewis River drainage and east of the ridge line dividing the Little White Salmon River drainage from the Wind River drainage to the Washington-Oregon state line.

**"Eastern Washington timber habitat types"** means elevation ranges associated with tree species assigned for the purpose of riparian management according to the following:

Timber Habitat Types	Elevation Ranges
ponderosa pine	0 - 2500 feet
mixed conifer	2501 - 5000 feet
high elevation	above 5000 feet

**"Edge"** of any water means the outer edge of the water's bankfull width or, where applicable, the outer edge of the associated channel migration zone.

**"Equipment limitation zone"** means a 30-foot wide zone measured horizontally from the outer edge of the bankfull width of a Type Np or Ns Water. It applies to all perennial and seasonal nonfish bearing streams.

**"Erodible soils"** means those soils that, when exposed or displaced by a forest practices operation, would be readily moved by water.

**"Even-aged harvest methods"** means the following harvest methods:

- Clearcuts;
- Seed tree harvests in which twenty or fewer trees per acre remain after harvest;
- Shelterwood regeneration harvests in which twenty or fewer trees per acre remain after harvest;
- Group or strip shelterwood harvests creating openings wider than two tree heights, based on dominant trees;
- Shelterwood removal harvests which leave fewer than one hundred fifty trees per acre which are at least five years old or four feet in average height;
- Partial cutting in which fewer than fifty trees per acre remain after harvest;
- Overstory removal when more than five thousand board feet per acre is removed and fewer than fifty trees per acre at least ten feet in height remain after harvest; and
- Other harvesting methods designed to manage for multiple age classes in which six or fewer trees per acre remain after harvest.

Except as provided above for shelterwood removal harvests and overstory removal, trees counted as remaining after harvest shall be at least ten inches in diameter at breast height and have at least the top one-third of the stem supporting green, live crowns. Except as provided in WAC 222-30-110, an area remains harvested by even-aged methods until it meets the minimum stocking requirements under WAC 222-34-010(2) or 222-34-020(2) and the largest trees qualifying for the minimum stocking levels have survived on the area for five growing seasons or, if not, they have reached an average height of four feet.

**"Fen"** means wetlands which have the following characteristics: Peat soils 16 inches or more in depth (except over bedrock); and vegetation such as certain sedges, hardstem bulrush and cattails; fens may have an overstory of spruce and may be associated with open water.

**"Fish"** means for purposes of these rules, species of the vertebrate taxonomic groups of *Cephalospidomorphi* and *Osteichthyes*.

**"Fish habitat"** means habitat, which is used by fish at any life stage at any time of the year including potential habitat likely to be used by fish, which could be recovered by restoration or management and includes off-channel habitat.

**"Flood level - 100 year"** means a calculated flood event flow based on an engineering computation of flood magnitude that has a 1 percent chance of occurring in any given year. For purposes of field interpretation, landowners may use the following methods:

- Flow information from gauging stations;
- Field estimate of water level based on guidance for "Determining the 100-Year Flood Level" in the forest practices board manual section 2.

The 100-year flood level shall not include those lands that can reasonably be expected to be protected from flood waters by flood control devices maintained by or under license from the federal government, the state, or a political subdivision of the state.

**"Forest land"** means all land which is capable of supporting a merchantable stand of timber and is not being actively used for a use which is incompatible with timber growing. Forest land does not include agricultural land that is or was enrolled in the conservation reserve enhancement program by contract if such agricultural land was historically used for agricultural purposes and the landowner intends to continue to use the land for agricultural purposes in the future. For small forest landowner road maintenance and abandonment planning only, the term "forest land" excludes the following:

- (a) Residential home sites. A residential home site may be up to five acres in size, and must have an existing structure in use as a residence;
- (b) Cropfields, orchards, vineyards, pastures, feedlots, fish pens, and the land on which appurtenances necessary to the production, preparation, or sale of crops, fruit, dairy products, fish, and livestock exist.

**"Forest landowner"** means any person in actual control of forest land, whether such control is based either on legal or equitable title, or on any other interest entitling the holder to sell or otherwise dispose of any or all of the timber on such land in any manner. However, any lessee or other person in possession of forest land without legal or equitable title to such land shall be excluded from the definition of "forest landowner" unless such lessee or other person has the right to sell or otherwise dispose of any or all of the timber located on such forest land. The following definitions apply only to road maintenance and abandonment planning:

- (1) "Large forest landowner" is a forest landowner who is not a small forest landowner.
- (2) "Small forest landowner" is a forest landowner who at the time of submitting a forest practices application or notification meets all of the following conditions:
  - Has an average annual timber harvest level of two million board feet or less from their own forest lands in Washington state;
  - Did not exceed this annual average harvest level in the three year period before submitting a forest practices application or notification;
  - Certifies to the department that they will not exceed this annual harvest level in the ten years after submitting the forest practices application or notification.

However, the department will agree that an applicant is a small forest landowner if the landowner can demonstrate that the harvest levels were exceeded in order to raise funds to pay estate taxes or to meet equally compelling and unexpected obligations such as court-ordered judgments and extraordinary medical expenses.

**"Forest practice"** means any activity conducted on or directly pertaining to forest land and relating to growing, harvesting, or processing timber or forest biomass, including but not limited to:

- Road and trail construction;
- Harvesting, final and intermediate;
- Precommercial thinning;
- Reforestation;
- Fertilization;
- Prevention and suppression of diseases and insects;
- Salvage of trees; and
- Brush control.

**"Forest practice"** shall not include: Forest species seed orchard operations and intensive forest nursery operations; or preparatory work such as tree marking, surveying and road flagging; or removal or harvest of incidental vegetation from forest lands such as berries, ferns, greenery, mistletoe, herbs, mushrooms, and other products which cannot normally be expected to result in damage to forest soils, timber or public resources.

**"Forest road"** means ways, lanes, roads, or driveways on forest land used since 1974 for forest practices. "Forest road" does not include skid trails, highways, or local government roads except where the local governmental entity is a forest landowner. For road maintenance and abandonment planning purposes only, "forest road" does not include forest roads used exclusively for residential access located on a small forest landowner's forest land.

**"Forest trees"** does not include hardwood trees cultivated by agricultural methods in growing cycles shorter than 15 years if the trees were planted on land that was not in forest use immediately before the trees were planted and before the land was prepared for planting the trees. "Forest trees" includes Christmas trees but does not include Christmas trees that are cultivated by agricultural methods, as that term is defined in RCW 84.33.035.

**"Full bench road"** means a road constructed on a side hill without using any of the material removed from the hillside as a part of the road. This construction technique is usually used on steep or unstable slopes.

**"Green recruitment trees"** means those trees left after harvest for the purpose of becoming future wildlife reserve trees under WAC 222-30-020(11).

**"Ground water recharge areas for glacial deep-seated slides"** means the area upgradient that can contribute water to the landslide, assuming that there is an impermeable perching layer in or under a deep-seated landslide in glacial deposits. (See board manual section 16 for identification criteria.)

**"Headwater spring"** means a permanent spring at the head of a perennial channel. Where a headwater spring can be found, it will coincide with the uppermost extent of Type Np Water.

**"Horizontal distance"** means the distance between two points measured at a zero percent slope.

**"Identified watershed processes"** means the following components of natural ecological processes that may in some instances be altered by forest practices in a watershed:

- Mass wasting;
- Surface and road erosion;
- Seasonal flows including hydrologic peak and low flows and annual yields (volume and timing);
- Large organic debris;
- Shading; and

-Stream bank and bed stability.

**"Inner gorges"** means canyons created by a combination of the downcutting action of a stream and mass movement on the slope walls; they commonly show evidence of recent movement, such as obvious landslides, vertical tracks of disturbance vegetation, or areas that are concave in contour and/or profile. (See board manual section 16 for identification criteria.)

**"Interdisciplinary team"** (ID Team) means a group of varying size comprised of individuals having specialized expertise, assembled by the department to respond to technical questions associated with a proposed forest practices activity.

**"Islands"** means any island surrounded by salt water in Kitsap, Mason, Jefferson, Pierce, King, Snohomish, Skagit, Whatcom, Island, or San Juan counties.

**"Limits of construction"** means the area occupied by the completed roadway or landing, including the cut bank, fill slope, and the area cleared for the purpose of constructing the roadway or landing.

**"Load bearing portion"** means that part of the road, landing, etc., which is supportive soil, earth, rock or other material directly below the working surface and only the associated earth structure necessary for support.

**"Local governmental entity"** means the governments of counties and the governments of cities and towns as defined in chapter 35.01 RCW.

**"Low impact harvest"** means use of any logging equipment, methods, or systems that minimize compaction or disturbance of soils and vegetation during the yarding process. The department shall determine such equipment, methods or systems in consultation with the department of ecology.

**"Marbled murrelet detection area"** means an area of land associated with a visual or audible detection of a marbled murrelet, made by a qualified surveyor which is documented and recorded in the department of fish and wildlife data base. The marbled murrelet detection area shall be comprised of the section of land in which the marbled murrelet detection was made and the eight sections of land immediately adjacent to that section.

**"Median home range circle"** means a circle, with a specified radius, centered on a spotted owl site center. The radius for the median home range circle in the Hoh-Clearwater/Coastal Link SOSEA is 2.7 miles; for all other SOSEAs the radius is 1.8 miles.

**"Merchantable stand of timber"** means a stand of trees that will yield logs and/or fiber: Suitable in size and quality for the production of lumber, plywood, pulp or other forest products; Of sufficient value at least to cover all the costs of harvest and transportation to available markets.

**"Multiyear permit"** means a permit to conduct forest practices which is effective for longer than two years but no longer than five years.

**"Northern spotted owl site center"** means the location of status 1, 2 or 3 northern spotted owls based on the following definitions:

Status Pair or reproductive - A male and female heard and/or observed in close proximity to

1: each other on the same visit, a female detected on a nest, or one or both adults observed with young.

Status Two birds, pair status unknown - The presence or response of two birds of opposite sex

2: where pair status cannot be determined and where at least one member meets the resident territorial single requirements.

Status Resident territorial single - The presence or response of a single owl within the same

3: general area on three or more occasions within a breeding season with no response by an



owl of the opposite sex after a complete survey; or three or more responses over several years (i.e., two responses in year one and one response in year two, for the same general area).

In determining the existence, location, and status of northern spotted owl site centers, the department shall consult with the department of fish and wildlife and use only those sites documented in substantial compliance with guidelines or protocols and quality control methods established by and available from the department of fish and wildlife.

**"Notice of a conversion to a nonforestry use"** means a notice issued by the department pursuant to RCW 76.09.060 (3)(b). A landowner who receives such notice is subject to the actions and requirements described in RCW 76.09.460 and 76.09.470.

**"Notice to comply"** means a notice issued by the department pursuant to RCW 76.09.090 of the act and may require initiation and/or completion of action necessary to prevent, correct and/or compensate for material damage to public resources which resulted from forest practices.

"Occupied marbled murrelet site" means:

(1) A contiguous area of suitable marbled murrelet habitat where at least one of the following marbled murrelet behaviors or conditions occur:

- (a) A nest is located; or
- (b) Downy chicks or eggs or egg shells are found; or
- (c) Marbled murrelets are detected flying below, through, into or out of the forest canopy; or
- (d) Birds calling from a stationary location within the area; or
- (e) Birds circling above a timber stand within one tree height of the top of the canopy; or

(2) A contiguous forested area, which does not meet the definition of suitable marbled murrelet habitat, in which any of the behaviors or conditions listed above has been documented by the department of fish and wildlife and which is distinguishable from the adjacent forest based on vegetative characteristics important to nesting marbled murrelets.

(3) For sites defined in (1) and (2) above, the sites will be presumed to be occupied based upon observation of circling described in (1)(e), unless a two-year survey following the 2003 Pacific Seabird Group (PSG) protocol has been completed and an additional third-year of survey following a method listed below is completed and none of the behaviors or conditions listed in (1)(a) through (d) of this definition are observed. The landowner may choose one of the following methods for the third-year survey:

- (a) Conduct a third-year survey with a minimum of nine visits conducted in compliance with 2003 PSG protocol. If one or more marbled murrelets are detected during any of these nine visits, three additional visits conducted in compliance with the protocol of the first nine visits shall be added to the third-year survey. Department of fish and wildlife shall be consulted prior to initiating third-year surveys; or
- (b) Conduct a third-year survey designed in consultation with the department of fish and wildlife to meet site specific conditions.

(4) For sites defined in (1) above, the outer perimeter of the occupied site shall be presumed to be the closer, measured from the point where the observed behaviors or conditions listed in (1) above occurred, of the following:

- (a) 1.5 miles from the point where the observed behaviors or conditions listed in (1) above occurred; or
  - (b) The beginning of any gap greater than 300 feet wide lacking one or more of the vegetative characteristics listed under "suitable marbled murrelet habitat"; or
  - (c) The beginning of any narrow area of "suitable marbled murrelet habitat" less than 300 feet in width and more than 300 feet in length.
- (5) For sites defined under (2) above, the outer perimeter of the occupied site shall be presumed to be the closer, measured from the point where the observed behaviors or conditions listed in (1) above occurred, of the following:
- (a) 1.5 miles from the point where the observed behaviors or conditions listed in (1) above occurred; or
  - (b) The beginning of any gap greater than 300 feet wide lacking one or more of the distinguishing vegetative characteristics important to murrelets; or
  - (c) The beginning of any narrow area of suitable marbled murrelet habitat, comparable to the area where the observed behaviors or conditions listed in (1) above occurred, less than 300 feet in width and more than 300 feet in length.
- (6) In determining the existence, location and status of occupied marbled murrelet sites, the department shall consult with the department of fish and wildlife and use only those sites documented in substantial compliance with guidelines or protocols and quality control methods established by and available from the department of fish and wildlife.

**"Operator"** means any person engaging in forest practices except an employee with wages as his/her sole compensation.

**"Ordinary high-water mark"** means the mark on the shores of all waters, which will be found by examining the beds and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland, in respect to vegetation: Provided, That in any area where the ordinary high-water mark cannot be found, the ordinary high-water mark adjoining saltwater shall be the line of mean high tide and the ordinary high-water mark adjoining freshwater shall be the line of mean high-water.

**"Park"** means any park included on the parks register maintained by the department pursuant to WAC 222-20-100(2). Developed park recreation area means any park area developed for high density outdoor recreation use.

**"Partial cutting"** means the removal of a portion of the merchantable volume in a stand of timber so as to leave an uneven-aged stand of well-distributed residual, healthy trees that will reasonably utilize the productivity of the soil. Partial cutting does not include seedtree or shelterwood or other types of regeneration cutting.

**"Plantable area"** is an area capable of supporting a commercial stand of timber excluding lands devoted to permanent roads, utility rights of way, that portion of riparian management zones where scarification is not permitted, and any other area devoted to a use incompatible with commercial timber growing.

**"Power equipment"** means all machinery operated with fuel burning or electrical motors, including heavy machinery, chain saws, portable generators, pumps, and powered backpack devices.

**"Preferred tree species"** means the following species listed in descending order of priority for each timber habitat type:

Ponderosa pine                      Mixed conifer

habitat type	habitat type
all hardwoods	all hardwoods
ponderosa pine	western larch
western larch	ponderosa pine
Douglas-fir	western red cedar
western red cedar	western white pine
	Douglas-fir
	lodgepole pine

**"Public resources"** means water, fish, and wildlife and in addition means capital improvements of the state or its political subdivisions.

**"Rehabilitation"** means the act of renewing, or making usable and reforesting forest land which was poorly stocked or previously nonstocked with commercial species.

**"Resource characteristics"** means the following specific measurable characteristics of fish, water, and capital improvements of the state or its political subdivisions:

-For fish and water:

-Physical fish habitat, including temperature and turbidity;

-Turbidity in hatchery water supplies; and

-Turbidity and volume for areas of water supply.

For capital improvements of the state or its political subdivisions:

-Physical or structural integrity.

If the methodology is developed and added to the manual to analyze the cumulative effects of forest practices on other characteristics of fish, water, and capital improvements of the state or its subdivisions, the board shall amend this list to include these characteristics.

**"Riparian function"** includes bank stability, the recruitment of woody debris, leaf litter fall, nutrients, sediment filtering, shade, and other riparian features that are important to both riparian forest and aquatic system conditions.

**"Riparian management zone (RMZ)"** means:

(1) For Western Washington

(a) The area protected on each side of a Type S or F Water measured horizontally from the outer edge of the bankfull width or the outer edge of the CMZ, whichever is greater (see table below); and

Site Class	Western Washington Total RMZ Width
I	200'
II	170'
III	140'
IV	110'
V	90'

(b) The area protected on each side of Type Np Waters, measured horizontally from the outer edge of the bankfull width. (See WAC 222-30-021(2).)

(2) For Eastern Washington

(a) The area protected on each side of a Type S or F Water measured horizontally from the outer edge of the bankfull width or the outer edge of the CMZ, whichever is greater (see table below); and

Site Class	Eastern Washington Total RMZ Width
I	130'
II	110'
III	90' or 100'*
IV	75' or 100'*
V	75' or 100'*

\* Dependent upon stream size. (See WAC 222-30-022.)

(b) The area protected on each side of Type Np Waters, measured horizontally from the outer edge of the bankfull width. (See WAC 222-30-022(2).)

(3) For exempt 20 acre parcels, a specified area alongside Type S and F Waters where specific measures are taken to protect water quality and fish and wildlife habitat.

**"RMZ core zone"** means:

(1) For Western Washington, the 50 foot buffer of a Type S or F Water, measured horizontally from the outer edge of the bankfull width or the outer edge of the channel migration zone, whichever is greater. (See WAC 222-30-021.)

(2) For Eastern Washington, the thirty foot buffer of a Type S or F Water, measured horizontally from the outer edge of the bankfull width or the outer edge of the channel migration zone, whichever is greater. (See WAC 222-30-022.)

**"RMZ inner zone"** means:

(1) For Western Washington, the area measured horizontally from the outer boundary of the core zone of a Type S or F Water to the outer limit of the inner zone. The outer limit of the inner zone is determined based on the width of the affected water, site class and the management option chosen for timber harvest within the inner zone. (See WAC 222-30-021.)

(2) For Eastern Washington, the area measured horizontally from the outer boundary of the core zone 45 feet (for streams less than 15 feet wide) or 70 feet (for streams more than 15 feet wide) from the outer boundary of the core zone. (See WAC 222-30-022.)

**"RMZ outer zone"** means the area measured horizontally between the outer boundary of the inner zone and the RMZ width as specified in the riparian management zone definition above. RMZ width is measured from the outer edge of the bankfull width or the outer edge of the channel migration zone, whichever is greater. (See WAC 222-30-021 and 222-30-022.)

**"Road construction"** means either of the following:

(a) Establishing any new forest road;

(b) Road work located outside an existing forest road prism, except for road maintenance.

**"Road maintenance"** means either of the following:

- (a) All road work located within an existing forest road prism;
- (b) Road work located outside an existing forest road prism specifically related to maintaining water control, road safety, or visibility, such as:
  - Maintaining, replacing, and installing drainage structures;
  - Controlling road-side vegetation;
  - Abandoning forest roads according to the process outlined in WAC 222-24-052(3).

**"Salvage"** means the removal of snags, down logs, windthrow, or dead and dying material.

**"Scarification"** means loosening the topsoil and/or disrupting the forest floor in preparation for regeneration.

**"Sensitive sites"** are areas near or adjacent to Type Np Water and have one or more of the following:

- (1) Headwall seep is a seep located at the toe of a cliff or other steep topographical feature and at the head of a Type Np Water which connects to the stream channel network via overland flow, and is characterized by loose substrate and/or fractured bedrock with perennial water at or near the surface throughout the year.
- (2) Side-slope seep is a seep within 100 feet of a Type Np Water located on side-slopes which are greater than 20 percent, connected to the stream channel network via overland flow, and characterized by loose substrate and fractured bedrock, excluding muck with perennial water at or near the surface throughout the year. Water delivery to the Type Np channel is visible by someone standing in or near the stream.
- (3) Type Np intersection is the intersection of two or more Type Np Waters.
- (4) Headwater spring means a permanent spring at the head of a perennial channel. Where a headwater spring can be found, it will coincide with the uppermost extent of Type Np Water.
- (5) Alluvial fan means a depositional land form consisting of cone-shaped deposit of water-borne, often coarse-sized sediments.
  - (a) The upstream end of the fan (cone apex) is typically characterized by a distinct increase in channel width where a stream emerges from a narrow valley;
  - (b) The downstream edge of the fan is defined as the sediment confluence with a higher order channel; and
  - (c) The lateral margins of a fan are characterized by distinct local changes in sediment elevation and often show disturbed vegetation.

Alluvial fan does not include features that were formed under climatic or geologic conditions which are not currently present or that are no longer dynamic.

**"Shorelines of the state"** shall have the same meaning as in RCW 90.58.030 (Shoreline Management Act).

**"Side casting"** means the act of moving excavated material to the side and depositing such material within the limits of construction or dumping over the side and outside the limits of construction.

**"Site class"** means a grouping of site indices that are used to determine the 50-year or 100-year site class. In order to determine site class, the landowner will obtain the site class index from the state soil survey, place it in the correct index range shown in the two tables provided in this definition, and select the corresponding site class. The site class will then drive the RMZ width. (See WAC 222-30-021 and 222-30-022.)

(1) For Western Washington

50-year site index range

Site class	(state soil survey)
I	137+
II	119-136
III	97-118
IV	76-96
V	<75

(2) For Eastern Washington

Site class	100-year site index range	50-year site index range
	(state soil survey)	(state soil survey)
I	120+	86+
II	101-120	72-85
III	81-100	58-71
IV	61-80	44-57
V	≤60	<44

(3) For purposes of this definition, the site index at any location will be the site index reported by the *Washington State Department of Natural Resources State Soil Survey*, (soil survey) and detailed in the associated forest soil summary sheets. If the soil survey does not report a site index for the location or indicates noncommercial or marginal forest land, or the major species table indicates red alder, the following apply:

(a) If the site index in the soil survey is for red alder, and the whole RMZ width is within that site index, then use site class V. If the red alder site index is only for a portion of the RMZ width, or there is on-site evidence that the site has historically supported conifer, then use the site class for conifer in the most physiographically similar adjacent soil polygon.

(b) In Western Washington, if no site index is reported in the soil survey, use the site class for conifer in the most physiographically similar adjacent soil polygon.

(c) In Eastern Washington, if no site index is reported in the soil survey, assume site class III, unless site specific information indicates otherwise.

(d) If the site index is noncommercial or marginally commercial, then use site class V.

See also section 7 of the board manual.

**"Site preparation"** means those activities associated with the removal of slash in preparing a site for planting and shall include scarification and/or slash burning.

**"Skid trail"** means a route used by tracked or wheeled skidders to move logs to a landing or road.

**"Slash"** means pieces of woody material containing more than 3 cubic feet resulting from forest practices activities.

**"Small forest landowner long-term application"** means a proposal from a small forest landowner to conduct forest practices activities for terms of three to fifteen years. Small forest landowners as defined in WAC 222-21-010(13) are eligible to submit long-term applications.

**"SOSEA goals"** means the goals specified for a spotted owl special emphasis area as identified on the SOSEA maps (see WAC 222-16-086). SOSEA goals provide for demographic and/or dispersal support as necessary to complement the northern spotted owl protection strategies on federal land within or adjacent to the SOSEA.

**"Spoil"** means excess material removed as overburden or generated during road or landing construction which is not used within limits of construction.

**"Spotted owl special emphasis areas (SOSEA)"** means the geographic areas as mapped in WAC 222-16-086. Detailed maps of the SOSEAs indicating the boundaries and goals are available from the department at its regional offices.

**"Stop work order"** means the "stop work order" defined in RCW 76.09.080 of the act and may be issued by the department to stop violations of the forest practices chapter or to prevent damage and/or to correct and/or compensate for damages to public resources resulting from forest practices.

**"Stream-adjacent parallel roads"** means roads (including associated right of way clearing) in a riparian management zone on a property that have an alignment that is parallel to the general alignment of the stream, including roads used by others under easements or cooperative road agreements. Also included are stream crossings where the alignment of the road continues to parallel the stream for more than 250 feet on either side of the stream. Not included are federal, state, county or municipal roads that are not subject to forest practices rules, or roads of another adjacent landowner.

**"Suitable marbled murrelet habitat"** means a contiguous forested area containing trees capable of providing nesting opportunities:

(1) With all of the following indicators unless the department, in consultation with the department of fish and wildlife, has determined that the habitat is not likely to be occupied by marbled murrelets:

(a) Within 50 miles of marine waters;

(b) At least forty percent of the dominant and codominant trees are Douglas-fir, western hemlock, western red cedar or sitka spruce;

(c) Two or more nesting platforms per acre;

(d) At least 7 acres in size, including the contiguous forested area within 300 feet of nesting platforms, with similar forest stand characteristics (age, species composition, forest structure) to the forested area in which the nesting platforms occur.

**"Temporary road"** means a forest road that is constructed and intended for use during the life of an approved forest practices application/notification. All temporary roads must be abandoned in accordance to WAC 222-24-052(3).

**"Threaten public safety"** means to increase the risk to the public at large from snow avalanches, identified in consultation with the department of transportation or a local government, or landslides or debris torrents caused or triggered by forest practices.

**"Threatened or endangered species"** means all species of wildlife listed as "threatened" or "endangered" by the United States Secretary of the Interior or Commerce, and all species of wildlife designated as "threatened" or "endangered" by the Washington fish and wildlife commission.

**"Timber"** means forest trees, standing or down, of a commercial species, including Christmas trees. However, timber does not include Christmas trees that are cultivated by agricultural methods, as that term is defined in RCW 84.33.035.

**"Unconfined stream"** see WAC 222-23-010(2).

**"Validation,"** as used in WAC 222-20-016, means the department's agreement that a small forest landowner has correctly identified and classified resources, and satisfactorily completed a roads assessment for the geographic area described in Step 1 of a long-term application.

**"Water bar"** means a diversion ditch and/or hump in a trail or road for the purpose of carrying surface water runoff into the vegetation duff, ditch, or other dispersion area so that it does not gain the volume and velocity which causes soil movement and erosion.

**"Watershed administrative unit (WAU)"** means an area shown on the map specified in WAC 222-22-020(1).

**"Watershed analysis"** means, for a given WAU, the resource assessment completed under WAC 222-22-050 or 222-22-060 together with the prescriptions selected under WAC 222-22-080 and shall include resource assessments completed under WAC 222-22-050 where there are no areas of resource sensitivity and the ongoing reviews and reanalyses completed under WAC 222-22-090.

**"Weed"** is any plant which tends to overgrow or choke out more desirable vegetation.

**"Western Washington"** means the geographic area of Washington west of the Cascade crest and the drainages defined in Eastern Washington.

**"Wetland"** means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, such as swamps, bogs, fens, and similar areas. This includes wetlands created, restored, or enhanced as part of a mitigation procedure. This does not include constructed wetlands or the following surface waters of the state intentionally constructed from wetland sites: Irrigation and drainage ditches, grass lined swales, canals, agricultural detention facilities, farm ponds, and landscape amenities.

**"Wetland functions"** include the protection of water quality and quantity, providing fish and wildlife habitat, and the production of timber.

**"Wetland management zone"** means a specified area adjacent to Type A and B Wetlands where specific measures are taken to protect the wetland functions.

**"Wildlife"** means all species of the animal kingdom whose members exist in Washington in a wild state. The term "wildlife" includes, but is not limited to, any mammal, bird, reptile, amphibian, fish, or invertebrate, at any stage of development. The term "wildlife" does not include feral domestic mammals or the family Muridae of the order Rodentia (old world rats and mice).

**"Wildlife reserve trees"** means those defective, dead, damaged, or dying trees which provide or have the potential to provide habitat for those wildlife species dependent on standing trees.

Wildlife reserve trees are categorized as follows:

Type 1 wildlife reserve trees are defective or deformed live trees that have observably sound tops, limbs, trunks, and roots. They may have part of the top broken out or have evidence of other severe defects that include: "Cat face," animal chewing, old logging wounds, weather



injury, insect attack, or lightning strike. Unless approved by the landowner, only green trees with visible cavities, nests, or obvious severe defects capable of supporting cavity dependent species shall be considered as Type 1 wildlife reserve trees. These trees must be stable and pose the least hazard for workers.

Type 2 wildlife reserve trees are dead Type 1 trees with sound tops, limbs, trunks, and roots.

Type 3 wildlife reserve trees are live or dead trees with unstable tops or upper portions. Unless approved by the landowner, only green trees with visible cavities, nests, or obvious severe defects capable of supporting cavity dependent species shall be considered as Type 3 wildlife reserve trees. Although the roots and main portion of the trunk are sound, these reserve trees pose high hazard because of the defect in live or dead wood higher up in the tree.

Type 4 wildlife reserve trees are live or dead trees with unstable trunks or roots, with or without bark. This includes "soft snags" as well as live trees with unstable roots caused by root rot or fire. These trees are unstable and pose a high hazard to workers.

**"Windthrow"** means a natural process by which trees are uprooted or sustain severe trunk damage by the wind.

**"Yarding corridor"** means a narrow, linear path through a riparian management zone to allow suspended cables necessary to support cable logging methods or suspended or partially suspended logs to be transported through these areas by cable logging methods.

#### **WAC 222-16-050 Classes of Forest Practices**

Proposed harvest activities are classified according to their environmental impacts. The following portions of this rule are pertinent to biomass harvest:

- **Class IV-special** (requires environmental checklist).
  - Harvest on lands designated as critical habitat (state) of threatened or endangered species
  - Harvest within the boundaries of any national park, state park, or any park of a local governmental entity, except harvest of less than five MBF within any developed park recreation area and park managed salvage of merchantable forest products.
  - Harvest on potentially unstable slopes or landforms (listed in the rule) that has the potential to deliver sediment or debris to a public resource or that has the potential to threaten public safety, and which has been field verified by the department.
  - Harvest in a watershed administrative unit not subject to an approved watershed analysis under chapter 222-22 WAC, snow avalanche slopes within those areas designated by the department, in consultation with department of transportation and local government, as high avalanche hazard where there is the potential to deliver sediment or debris to a public resource, or the potential to threaten public safety.
  - Harvest on:
    - (i) Archaeological sites or historic archaeological resources as defined in RCW 27.53.030; or
    - (ii) Historic sites eligible for listing on the National Register of Historic Places or the Washington Heritage Register as determined by the Washington state department of archaeology and historic preservation; or
    - (iii) Sites containing evidence of Native American cairns, graves, or glyptic records as provided for in chapters 27.44 and 27.53 RCW.
- **Class IV-general** (requires environmental checklist).

- Harvest (other than Class I) on lands that have been or are being converted to another use;
- Harvest that would otherwise be Class III, but is taking place on lands which are not to be reforested because of likelihood of future conversion to urban development (see WAC 222-16-060 and 222-34-050);
- Harvest on lands that are contained within urban growth areas, designated pursuant to chapter 36.70A RCW, except where the forest landowner provides written intent not to convert, or a conversion option harvest plan approved by the local governmental entity.
- **Class I**
  - Slash control and site preparation not involving either off-road use of tractors on slopes exceeding forty percent or off-road use of tractors within the shorelines of a Type S Water, the riparian management zone of any Type F Water, or the bankfull width of a Type Np Water, a wetland management zone, a wetland, or the CRGNSA special management area.
  - Any of the following if not within the shoreline area of a Type S Water or the riparian management zone of a Type F Water, the bankfull width of a Type Np Water or flowing Type Ns Water, or within the CRGNSA special management area and the operation does not involve off-road use of tractor or wheeled skidding systems on a sideslope of greater than forty percent:
    - (i) Harvest within the boundaries of existing golf courses.
    - (ii) Harvest within the boundaries of existing cemeteries which are approved by the cemetery board.
    - (iii) Harvest involving a single landowner where contiguous ownership is less than two acres in size.
- **Class II**
  - Renewals.
  - Salvage of logging residue if none of the operation or limits of construction takes place within the riparian management zone of a Type F Water, within the bankfull width of a Type Np Water, within a wetland management zone or within a wetland; and if none of the operations involve off-road use of tractor or wheeled skidding systems on a sideslope of greater than forty percent.
- **Class III**
  - Harvest not listed under Class IV, I, or II.

**WAC 222-16-080 Critical habitats (state) of threatened and endangered species.**

(1) Critical habitats (state) of threatened or endangered species and specific forest practices designated as Class IV-Special are as follows:

- **Bald eagle** – harvesting or site preparation within 0.5 mile of a known active nest site between January 1 and August 15 or 0.25 mile at other times of the year; and within 0.25 mile of a communal roosting site. Communal roosting sites shall not include refuse or garbage dumping sites.
- **Gray wolf** - harvesting or site preparation within 1 mile of a known active den site between March 15 and July 30 or 0.25 mile from the den site at other times of the year.
- **Grizzly bear** - harvesting or site preparation within 1 mile of a known active den site between the dates of October 1 and May 30 or 0.25 mile at other times of the year.

- **Mountain (woodland) caribou** – harvesting or site preparation within 0.25 mile of a known active breeding area.
- **Oregon silverspot butterfly** - harvesting or site preparation within 0.25 mile of an individual occurrence.
- Peregrine falcon - harvesting, road construction, aerial application of pesticides, or site preparation within 0.5 mile of a known active nest site, documented by the department of fish and wildlife, between the dates of March 1 and July 30; or harvesting, road construction, or aerial application of pesticides within 0.25 mile of the nest site at other times of the year.
- **Sandhill crane** - harvesting, road construction, aerial application of pesticides, or site preparation within 0.25 mile of a known active nesting area, documented by the department of fish and wildlife.
- Northern spotted owl (*Strix occidentalis caurina*).
  - Within a SOSEA boundary harvesting on suitable spotted owl habitat within a median home range circle that is centered within the SOSEA or on adjacent federal lands (except in the Entiat SOSEA areas indicated for demographic support on suitable spotted owl habitat located within a median home range circle that is centered within the demographic support area).
  - Outside of a SOSEA, harvesting between March 1 and August 31 on the seventy acres of highest quality suitable spotted owl habitat surrounding a northern spotted owl site center located outside a SOSEA. The highest quality suitable habitat shall be determined by the department in cooperation with the department of fish and wildlife. Consideration shall be given to habitat quality, proximity to the activity center and contiguity.  
(Note: there is a small forest landowner exemption.)
- Western pond turtle – harvesting or site preparation within 0.25 mile of a known individual occurrence.
- Marbled murrelet
  - Harvesting, other than removal of down trees outside of the critical nesting season, or road construction within an occupied marbled murrelet site.
  - Harvesting, other than removal of down trees outside of the critical nesting season, or road construction within suitable marbled murrelet habitat within a marbled murrelet detection area.
  - Harvesting, other than removal of down trees outside of the critical nesting season, or road construction within suitable marbled murrelet habitat containing 7 platforms per acre outside a marbled murrelet detection area.
  - Harvesting, other than removal of down trees outside of the critical nesting season, or road construction outside a marbled murrelet detection area within a marbled murrelet special landscape and within suitable marbled murrelet habitat with 5 or more platforms per acre.
  - Harvesting within a 300 foot managed buffer zone adjacent to an occupied marbled murrelet site that results in less than a residual stand stem density of 75 trees per acre greater than 6 inches in dbh; provided that 25 of which shall be greater than 12 inches dbh including 5 trees greater than 20 inches in dbh, where they exist. The primary consideration for the design of managed buffer zone widths and leave tree retention patterns shall be to mediate edge effects. The width of the buffer zone may be

- reduced in some areas to a minimum of 200 feet and extended to a maximum of 400 feet as long as the average of 300 feet is maintained.
- Except that the following shall not be critical habitat (state):
    - (A) Where a landowner owns less than 500 acres of forest land within 50 miles of saltwater and the land does not contain an occupied marbled murrelet site; or
    - (B) Where a protocol survey (see WAC 222-12-090(14)) has been conducted and no murrelets were detected. The landowner is then relieved from further survey requirements. However, if an occupied marbled murrelet site is established, this exemption is void.

## **Chapter 222-20 WAC, Application and Notification**

### **WAC 222-20-040 Approval Conditions**

- (1) Whenever an approved application authorizes a forest practice which, because of soil condition, proximity to a water course or other unusual factor, has a potential for causing material damage to a public resource, as determined by the department, the applicant shall, when requested on the approved application, notify the department two business days before the commencement of actual operations.

## **Chapter 222-24 WAC, Road Construction and Maintenance**

### **WAC 222-24-030 Road construction**

- (1) **Right of way timber** shall be removed or decked in suitable locations where the decks will not be covered by fill material or act as support for the fill or embankment.
- (9) **Waste disposal.** When spoil, waste and/or other debris is generated during construction, this material shall be deposited or wasted in suitable areas or locations and be governed by the following:
  - (a) Spoil or other debris shall be deposited above the 100-year flood level of any typed waters or in other suitable locations to prevent damage to public resources. The material shall be stabilized using the recommended schedule and procedures found in the board manual, section 3.
  - (b) All spoils shall be located outside of Type A and Type B Wetlands and their wetland management zones. Spoils shall not be located within the boundaries of forested wetlands without written approval of the department and unless a less environmentally damaging location is unavailable. No spoil area greater than 0.5 acre in size shall be allowed within wetlands. (See WAC 222-24-015, Construction in wetlands.)

## **Chapter 222-30 WAC, Timber Harvesting**

Per WAC 222-30-010, "This chapter covers all removal of timber for commercial operations, commercial thinning, salvage of timber, relogging merchantable material left after prior harvests, postharvest cleanup, clearing of merchantable timber from lands being converted to another use. It does not cover removal of incidental vegetation or removal of firewood for personal use."

### **WAC 222-30-020 Harvest unit planning and design.**

- Logging systems should be appropriate for terrain, soils, and timber type so that yarding or skidding can be economically accomplished and achieve the ecological goals of WAC 222-30-010 (2), (3) and (4) in compliance with these rules.

- Landing location should be located to prevent damage to public resources. Avoid excessive excavation and filling.
- RMZs and riparian leave tree areas are detailed in WAC 222-30-021 and -022.
- Forested wetlands:
  - Harvest methods shall be limited to low impact harvest or cable systems. Where feasible, at least one end of the log shall be suspended during yarding. (Note: “low impact harvest” is defined in WAC 222-16-010: “... means use of any logging equipment, methods, or systems that minimize compaction or disturbance of soils and vegetation during the yarding process. The department shall determine such equipment, methods or systems in consultation with the department of ecology.”)
  - When forested wetlands are included within the harvest area, landowners are encouraged to leave a portion (30 to 70%) of the wildlife reserve tree requirement for the harvest area within a wetland. In order to retain undisturbed habitat within forested wetlands, these trees should be left in clumps. Leave tree areas should be clumped adjacent to streams, riparian management zones, or wetland management zones where possible and they exist within forested wetlands. Green recruitment trees should be representative of the size and species found within the wetland. Leave nonmerchantable trees standing where feasible.
  - If an RMZ or WMZ lies within a forested wetland, the leave tree requirement associated with those areas may be counted toward the percentages in (a) of this subsection.
  - Where riparian associated wetlands are present in the outer zone of a RMZ, trees may be left in the zone to maximize wetland function. See WAC 222-30-021 \*(1)(c)(ii).
  - When forested wetlands are included within the harvest area, or if an RMZ or WMZ lies within a forested wetland, the distribution requirements for wildlife reserve trees and green recruitment trees are modified as follows: For purposes of distribution, no point within the harvest unit shall be more than 1000 feet from a wildlife reserve tree and green recruitment tree retention area.
  - Approximate determination of the boundaries of forested wetlands greater than 3 acres shall be required. Approximate boundaries and areas shall be deemed to be sufficient for harvest operations.
  - DNR shall consult with the department of fish and wildlife and affected Indian tribes about site specific impacts of forest practices on wetland-sensitive species in forested wetlands.
- Wetland management zones (WMZs): dependent on whether wetland includes bogs, and size (acres) of wetland.
  - Leave trees 75 trees per acre greater than 6 inches (W. WA) and greater the 4 inches dbh (E. WA)
  - Leave wildlife reserve trees where feasible.
  - Leave all cull logs on site.
  - Max width of openings not to exceed 100 feet.
  - Openings shall be no closer than 200 feet.
  - No tractor, wheeled skidders, other ground based harvesting systems in WMZ without DNR approval.
- Type A and B Wetlands:

- Leave individual trees in Type A or B wetland, or trees of forested wetlands areas less than 0.5 acre; can be counted toward WMZ requirement.
- DNR-approved plan required for harvest of upland areas or forested wetlands surrounded by Type A or B wetlands.
- No harvest allow within Type A or B wetland which meets the definition of a bog.
- Future productivity:
  - Harvesting must leave land in condition conducive to future timber production, except:
    - to the degree required by RMZs
    - where lands being converted to another use or classified as urban
- Wildlife habitat.
  - Applicants should make reasonable effort to identify critical habitats (state), as identified in WAC 222-16-080) with WDFW.
  - Harvesting methods and patterns in establishing big game winter ranges should be designed to ensure adequate access routes and escape cover where practical.
- Wildlife reserve management (leave tree requirements)
  - Western Washington:
    - 3 wildlife reserve trees ( $\geq 10$  feet and  $\geq 12$  inches dbh)
    - 2 green recruitment trees ( $\geq 30$  feet and  $\geq 10$  inches dbh)
    - 2 down logs per acre ( $\geq 20$  feet and  $\geq 12$  inches dbh at small end)
  - Eastern Washington:
    - 2 wildlife reserve trees ( $\geq 10$  feet and  $\geq 10$  inches dbh)
    - 2 green recruitment trees ( $\geq 30$  feet and  $\geq 10$  inches dbh)
    - 2 down logs per acre ( $\geq 20$  feet and  $\geq 12$  inches dbh at small end)
- Channel migration zones. No harvest, construction or salvage within CMZ, except road crossings and creation and use of yarding corridors.
- Bankfull width. No harvest, construction or salvage within the bankfull width of any Type S or F Water or any buffered length of Type Np Water, except for the construction and maintenance of road crossings in accordance with applicable rules and creation and use of yarding corridors.

## **WAC 222-30-021 Western Washington riparian management zones.**

### Type S and F Waters

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

RMZs are 90-200 feet wide depending on site class and stream width.

- Core zone: 50 foot no harvest.
- Inner zone 10-100 feet wide depending on site class and stream width. Harvest must meet stand requirement to "...protect aquatic resources and related habitat to achieve restoration of riparian function, and the maintenance of these resources once they are restored" (WAC 222-30-010(2))
  - Option 1, Thinning from below.
    - Must retain  $\geq 57$  trees per acre

- Option 2, Leaving trees closest to the water.
  - Streams  $\leq$  10 feet bankfull width. No harvest permitted within 30 feet of core zone.
  - Streams  $>$  10 feet bankfull width. No harvest permitted within 50 feet of core zone. for large streams.
- Outer zone:
  - 22-67 feet wide depending on site class and streams width;
  - Must leave 20 trees per acre.
  - Leave trees must be left uncut throughout all future harvests.
  - One of three strategies
    - dispersal
    - clumping
    - large woody debris in-channel placement – number of leave trees may be reduced up to 10 trees per acre if approved LWD placement plan.

#### Type Np and Ns Waters

- Equipment limitation zone: 30 feet wide to limit surface disturbances caused by equipment.
- On-site mitigation is required if any of the following activities exposes the soil on more than 10 percent of the surface area of the zone.
  - Ground based equipment'
  - Skid trails;
  - Stream crossings, other than existing roads; or
  - Cabled logs that are partially suspended.
- Mitigation must be designed to replace the equivalent of lost functions especially prevention of sediment delivery. Examples include water bars, grass seeding, mulching, etc. **DNR is authorized to prevent actual or potential material damage to public resources under WAC 222-46-030 or -040 (notice to comply and stop work order) to condition FPAs.**
- Sensitive site and RMZs protection.
  - 50 foot no-harvest buffer along each side of Type Np Water; at least 50 percent if stream length must be protected by buffers on both sides. Buffered segments must be at least 100 feet in length.
  - No harvest permitted:
    - within 50 of outer perimeter of a soil zone perennially saturated from a headwall seep or side-slope seep;
    - within 56 foot radius buffer patch centered intersection of 2 or more Type Np Waters, or centered on a headwater spring or point at the uppermost extent of a Type Np Water;
    - on an alluvial fan.
  - None of the limitation on harvest in or around sensitive sites will preclude or limit construction or maintenance of roads for the purpose of crossing streams, or the creation and use of yarding corridors.
  - To the extent reasonably practical, the operation will both avoid creating yarding corridors or road crossings through Type Np RMZs or sensitive sites and associated

- buffers, and avoid management activities which would result in soil compaction, the loss of protective vegetation or sedimentation in perennially moist areas.
- Where yarding corridors or road crossings through Type Np Water RMZs or sensitive sites and their buffers cannot reasonably be avoided, the buffer area must be expanded to protect the sensitive site by an area equivalent to the disturbed area or by providing comparable functions through other management initiated efforts.

### **WAC 222-30-022 Eastern Washington riparian management zones.**

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

RMZs are 75-130 feet wide depending on site class and stream width.

#### Type S and F Waters

Permitted harvest varies by timber habitat type and site class

- Core zone: 30 foot no harvest buffer.
- Inner zone 45 or 70 feet depending on stream width ( $\leq 15$  feet or  $> 15$  feet).
  - Permitted harvest depends on inner zone basal area;
  - Required leave trees depends on existing stand density in the inner zone and timber habitat type (Ponderosa pine, mixed conifer, high elevation); generally, 50 trees per acre for stands with high basal area and 100-120 trees per acre for stands with low basal area and high density. **See Attachment A for a complete list of Eastern Washington leave tree requirements for Type S and F Waters.**
  - Must leave down wood as follows:
    - Ponderosa pine
      - $\geq 12$  tons per acre
      - 6 pieces greater than 16 inches diameter and 20 feet long
      - 4 pieces greater than 6 inches diameter and 20 feet long
    - Mixed conifer
      - $\geq 20$  tons per acre
      - 8 pieces greater than 16 inches diameter and 20 feet long
      - 8 pieces greater than 6 inches diameter and 20 feet long
    - High elevation
      - $\geq 30$  tons per acre
      - 8 pieces greater than 16 inches diameter and 20 feet long
      - 8 pieces greater than 6 inches diameter and 20 feet long
- Outer zone: 0-55 feet depending on site class and stream width. Leave trees per acre:
  - 10 or 15 trees per acre for Ponderosa pine and mixed conifer timber habitat type respectively; or
  - 5 or 8 if landowner voluntarily implements a LWD placement plan.

#### Type Np Waters

- Equipment limitation zone: 30 feet wide. Mitigation required if harvest activities expose the soil on more than 10 percent of the equipment limitation zone length. **DNR**



**authorized to prevent actual or potential material damage to public resources under WAC 222-46-030 or -040 or any related authority to condition FPAs.**

- Harvest may occur within 50 feet of stream; must choose either partial cut strategy or clearcut strategy.
  - Partial cut:
    - Required leave trees generally 50 trees  $\geq 10$  inches dbh. Leave tree selection based on priority: bank stability, shade to water, lean toward water, preferred species defined in WAC 222-16-010, or evenly distributed.
    - Side slope seeps must be protected with 50-foot partial cut buffer.
  - Clearcut:
    - 2-sided 50 foot no harvest buffer.
    - No harvest within 50 feet of sensitive sites: soil perennially saturated from a headwall seep, side slope seep, headwater spring, alluvial fan, intersection of two or more Type Np Waters.

**WAC 222-30-023 Riparian management zones for exempt 20-acre parcels.**

(landowners with total parcel ownership of less than 80 forested acres)

- RMZ buffers Western Washington
  - Type S and F Water:
    - Must meet shade requirements in WAC 222-30-040.
    - 29-115 foot buffer depending on stream size.
    - Leave tree ratio conifer/deciduous depends on stream size, and number of trees retained per 1000 feet on each side of the stream depends on gravel size (gravel/cobble  $< 10$  inch diameter or boulder/bedrock  $\geq 10$  inch diameter)
  - Type Np Water:
    - Where DNR requires trees to be left to protect public resources:
    - 29 foot buffer
    - leave trees are  $\geq 29$  conifer or deciduous,  $\geq 6$  inches diameter, each side of every 1000 feet of stream length
- RMZ buffers Eastern Washington
  - Type S and F Water:
    - Must meet shade requirements in WAC 222-30-040.
    - Buffer width based on adjacent harvest type, defined in WAC 222-16-010 “Partial cutting”
    - When adjacent harvest type is partial cutting, buffer must average 35-58 feet wide.
    - Leave tree counts depend on size available, wildlife reserve trees available.  
Minimums:  
75 per acre  $\leq 4$  inches diameter, boulder/bedrock stream bed.  
155 per acre  $\leq 4$  inches diameter, gravel/cobble stream bed.
  - Type Np Water (same as for Western Washington)
    - Where DNR requires trees to be left to protect public resources:
    - 29 foot buffer
    - leave trees are  $\geq 29$  conifer or deciduous,  $\geq 6$  inches diameter, each side for every 1000 feet of stream length

**The rest of the rules in chapter 222-30 WAC are for both Western and Eastern Washington.**

**WAC 222-30-030 Stream bank integrity.**

Within riparian management zones of Type S, F, and Np Waters, operators must:

- Avoid disturbing brush and similar understory vegetation;
- Avoid disturbing stumps and root systems and any logs embedded in the bank;
- Leave high stumps where necessary to prevent felled and bucked timber from entering the water;
- Leave trees that display large root systems embedded in the bank.

**WAC 222-30-040 Shade requirements to maintain water temperature.**

- Type S and F Waters.
- Bulltrout overlay: All available shade retained within 75 feet from stream.
- Outside bulltrout overlay: If a landowner elects to remove any tree within 75 feet of stream, must demonstrate would not be contrary to satisfy shade requirement, by using temperature prediction method in Board Manual Section 1.

**WAC 222-30-045 Salvage logging within RMZ**

- No salvage in any typed water.
- No salvage in core zone.
- Inner zone: permissible if stand requirements can be met by the residual stand and meets Westside/Eastside down wood guidelines.
- Outer zone: permissible if riparian leave tree requirements can be met of the residual standing or down trees. Only down wood not needed to meet riparian leave tree requirements in outer zone may be salvaged.

**WAC 222-30-060 (4) Cable yarding in RMZs, sensitive sites, and WMZs**

(in part) Reasonable care shall be taken to minimize damage to the vegetation providing shade to the stream or open water areas and to minimize disturbance to understory vegetation, stumps and root systems.

**WAC 222-30-070 Ground-based logging systems**

- **Type S or F Water:** no ground-based equipment allowed except with DNR approval and an HPA.
- **Type Np and Ns Waters**
  - ground based transport of logs is not allowed across flowing water.
  - whenever skidding across Type Np or Ns Waters, the direction of the log movement between stream banks shall be designed to minimize potential for damage to public resources.
  - to maintain wetland water movement and water quality, and to prevent soil compaction, ground-based logging systems shall not be used in Type A or B wetlands.
- **Wetlands:**
  - No equipment allowed in Type A or B wetlands.

- Where harvest in wetlands is permitted, ground-based logging systems limited to low impact harvest systems; only allowed during periods of low soil moisture or frozen soil conditions.
- **RMZs:** any use of ground-based yarding equipment within zone must
  - be approved by DNR;
  - minimize routes through zone;
  - minimize damage to leave trees and vegetation in the zone to the extent practical and consistent with good safety practices.
- **WMZs:**
  - where feasible logs shall be skidded with at least one end suspended from the ground so as to minimize soil disturbance and damage to leave trees and vegetation in the WMZ;
  - ground-based harvesting systems shall not be used within the minimum WMZ unless DNR approved.
- **Deadfalls:** logs firmly embedded in the bed or bank of Type S or F Waters shall not be removed or disturbed without HPA.
- **Moisture conditions:**
  - Systems shall not be used on exposed erodible soils or saturated soils if sediment delivery is likely to disturb a wetland, stream, lake or pond;
  - When soil moisture is high and unrestricted operation of ground-based equipment would result in unreasonable soil compaction, operations shall be restricted to methods that minimize widespread soil compaction or, operations postponed until site conditions improve such that yarding may proceed without causing unreasonable soil compaction and the long-term impacts to soil productivity and moisture absorption capacity that can result.
- **Protection of residual timber:**
  - Reasonable care shall be taken to minimize damage from skidding to the stems and root systems of residual timber and to young reproduction.
- **Skid trail location and construction:**
  - Shall be kept to the minimum width.
  - Reasonable care shall be taken to minimize the amount of sidecast required and shall only be permitted above the 100-year flood level.
  - Shall be outsloped where practical, but be insloped where necessary to prevent logs from sliding or rolling downhill off the skid trail.
  - Skid trails running parallel or near parallel to streams shall be located outside the no-harvest zone of all typed waters and at least 30 feet from the outer edge of the bankfull width of the unbuffered portions of Type Np or Ns Water unless approved in writing by the department.
  - Skid trails shall cross the drainage point of swales at an angle to minimize the potential for delivering sediment to a typed water or where channelization is likely to occur.
- **Skid trail maintenance.**
  - Upon completion of use and termination of seasonal use, skid trails on slopes in exposed soils shall be water barred where necessary to prevent soil erosion.
  - Skid trails located within 200 feet horizontal distance of any typed water that directly delivers to the stream network shall use water bars, grade breaks, and/or slash to

- minimize sediment delivery to the stream. Water bars shall be placed at a frequency to minimize gullyng and soil erosion. In addition to water barring, skid trails with exposed soil that is erodible and may be reasonably expected to cause damage to a public resource shall be seeded with a noninvasive plant species (preferably a species native to the state) and adapted for rapid revegetation of disturbed soil, or treated with other erosion control measures acceptable to the department.
- **Slope restrictions.** Ground-based systems shall not be used on slopes where in the opinion of the department this method of operation would cause actual or potential material damage to a public resource.
  - **Disturbance avoidance for northern spotted owls.** The operation of heavy equipment within a SOSEA boundary shall not be allowed within 0.25 mile of a northern spotted owl site center between March 1 and August 31, provided that, this restriction shall not apply if:
    - The landowner demonstrates that the owls are not actively nesting during the current nesting season; or
    - The forest practice is operating in compliance with a plan or agreement developed for the protection of the northern spotted owl under WAC 222-16-080 (6)(a), (e), or (f).
  - **Disturbance avoidance for marbled murrelets.** Operation of heavy equipment shall not be allowed within 0.25 mile of an occupied marbled murrelet site during the daily peak activity periods within the critical nesting season, provided that, this restriction shall not apply if the forest practice is operating in compliance with a plan or agreement developed for the protection of the marbled murrelet under WAC 22-16-080 (a) or (c).

#### **WAC 222-30-080 Landing cleanup.**

Except as approved by the department, the following rules shall be met within 60 days after completion of hauling logs from any landing, or as soon thereafter as practical.

##### **\*(1) Drainage.**

(a) Clean any ditches and culverts obstructed by dirt or debris during operation(s).

(b) Establish a slope that will prevent water from accumulating on the landing or running from the landing down any erodible fill.

##### **\*(2) Other erosion control measures.**

(a) Cut slopes shall be cut back to an angle expected to remain stable.

(b) Where exposed soil is unstable or erodible and may be reasonably expected to cause damage to a public resource, it shall be seeded with grass, clover or ground cover or compacted, riprapped, water barred, benched or mulched, or be treated by other means approved by the department.

##### **(3) Cleanup.**

(a) Slash accumulations which would prevent reforestation of otherwise plantable fills, sidecast or cut slopes of landings shall be disposed of or be piled on the landing floor for future disposal.

(b) Slash shall not be buried in any filled portion of the landing in connection with landing cleanup operations.

(c) All cables, machine parts and other inorganic debris resulting from harvest operation(s) shall be removed at the time of landing cleanup.

### **WAC 222-30-090 Postharvest site preparation**

The following sit preparation is required to establish a condition suitable for reforestation:

- Cutting, slashing, or other treatment of all noncommercial tree species, other competing vegetation, and nonmerchantable size trees commonly known as "whips" which will not reasonably utilize the growing capacity of the soil except in wetland management zones, riparian management zones; or
- Pile or windrow slash; or
- Mechanically scatter slash; or
- Leave the cutover area in a condition for controlled broadcast burning, and subsequently burn.

### **WAC 222-30-110 Timber harvesting on islands.**

- Landowners are not allowed to clearcut more than 40 contiguous acres of forest land.
- Clearcuts remain in clearcut condition until it reaches canopy closure or has been reforested for at least ten years.
- Within 200 feet of saltwater, only selective harvest allowed – no more than 30 percent of merchantable trees in any 10 year period (there are further caveats).
- This section does not apply to harvest or salvage of trees damaged by wind, disease, insects, fire, or other natural causes.

### **Chapter 222-34 WAC, Reforestation**

#### **WAC 222-34-010 Required reforestation — West of Cascades Summit.**

- (2) **Reforestation standards.** A harvested area is reforested when that area contains an average of 190 or more vigorous, undamaged commercial species seedlings per acre that have survived on the site for at least 1 growing season. Up to 20 percent of the harvested area may contain fewer than 190 seedlings per acre, but no portion of the harvested area with timber growing capacity may contain less than 150 seedlings per acre. The department may determine that less than an average of 190 seedlings per acre is acceptable if fewer seedlings will reasonably utilize the timber growing capacity of the site.

#### **WAC 222-34-020 Required reforestation — East of Cascades Summit.**

- (2) **Reforestation standards.** A harvest area is reforested when that area contains an average of 150 or more vigorous, undamaged commercial species seedlings per acre that have survived on the site for at least 1 growing season. Up to 20 percent of the harvested area may contain fewer than 150 seedlings per acre, but no portion of the harvested area with timber growing capacity may contain less than 120 seedlings per acre. The department may determine that less than an average of 150 seedlings per acre is acceptable if fewer seedlings will reasonably utilize the timber growing capacity of the site.

#### **WAC 222-34-030 Reforestation plans—Reports--Inspections**

- (1) **Reforestation plans.** Reforestation plans must be submitted with the application or notification except where no reforestation is required. The department shall designate difficult regeneration areas utilizing silvicultural information. When a forest practice is proposed for such an area, the department may require additional information regarding

harvest systems and post harvest site preparation, as well as regeneration. The department shall approve the reforestation plan for difficult regeneration areas if it determines that such a plan will achieve acceptable stocking according to WAC 222-34-010 and 222-34-020.

**WAC 222-34-040 Site preparation and rehabilitation.**

(1) **Heavy equipment.** Heavy equipment shall not be used in connection with site preparation or rehabilitation work:

(a) When, because of soil moisture conditions or the type of soils, undue compaction or unnecessary damage to soil productivity would occur or erosion would result in damage to water quality; or

(b) Within riparian management zones, Type A and B Wetlands, wetland management zones, or within equipment limitation zones of Type Np and Ns Waters on slopes of 30 percent or less. On slopes greater than 30 percent heavy equipment shall not operate within 50 feet of Type S through Ns Waters unless a site specific plan has been approved by the department.

(2) Surface water drainage. Where site preparation or rehabilitation involves contouring or terracing of slopes, drainage ditches, or similar work:

(a) The gradient of ditches or other artificial water courses in erodible soils shall not cause significant stream, lake, pond, or wetland siltation.

(b) Ditches and other artificial water courses shall not discharge onto any road, landing or fill.

(c) Ditches and other artificial water courses shall not be constructed to discharge onto the property of other parties without their consent.

**Chapter 222-46 WAC, Consultation and Enforcement**

**WAC 222-46-020 Informal conferences.**

DNR shall allow for reasonable opportunities to discuss proposed enforcement actions unless DNR determines there may be imminent damages to the public resource.

**WAC 222-46-030 Notice to comply.**

If a violation, a deviation, material damage or potential for material damage to a public resource has occurred and the department determines that a stop work order is unnecessary, then the department shall issue and serve upon the operator and/or landowner a notice.

**WAC 222-46-040 Stop work order.**

If the following occurs, DNR shall serve a stop work order which shall be a final order of the department:

- Violation of the provisions of the Forest Practices Act or rules; or
- Deviation from the approved application; or
- Immediate action is necessary to prevent continuation of or to avoid material damage to a public resource.

**WAC 222-46-050 Corrective action.**

- If operator fails to undertake and complete any required course of action, DNR may determine cost and give written notice to operator, timber owner, landowner.

- If failure to undertake course of action within 30 days, DNR undertakes the course of action and responsible party is liable for costs.
- If not paid within 60 day after DNR takes course of action, such amount to become a lien on forest land and DNR may collect in the same manner provided for in chapter 60.04 RCW for mechanics' liens.
- Immediate corrective action: If operator has failed to obey a stop work order, DNR may take immediate corrective action to prevent continuation of or avoid material damage to public resources.

## **Chapter 222-50 WAC, Relationship to Other Laws and Regulations**

### **WAC 222-50-010 Policy.**

A major policy of the Forest Practices Act and the board is to work toward a comprehensive, statewide system of laws and rules provide for interagency input and cooperation to the extent that can be accomplished without interfering with the authority of the affected federal, state, regional and local agencies.

### **WAC 222-50-020 Other agency requirements.**

(1) Many other laws and rules apply to the conduct of forest practices. Other agencies administer some of these other regulatory programs. Permits may be required by such agencies prior to the conduct of certain forest practices. The department will maintain a list for distribution of state, regional and local regulatory programs that apply to forest practices operations. Affected parties are urged to consult with the specified agencies and independent experts with respect to the regulatory requirements shown on the list.

(2) **Hydraulics project approval law**, chapter 77.55 RCW. A hydraulics project approval must be obtained from the department of fish and wildlife prior to constructing any form of hydraulic project or other work that will use, divert, obstruct, or change the natural flow or bed of any river or stream or that will utilize any of the waters of the state or materials from the stream beds. See chapter 77.55 RCW and WAC 232-14-010.

\*(3) **Compliance with the Shoreline Management Act**, chapter 90.58 RCW, is required. The Shoreline Management Act is implemented by the department of ecology and the applicable local governmental entity. A substantial development permit must be obtained prior to conducting forest practices which are "substantial developments" within the "shoreline" area as those terms are defined by the Shoreline Management Act.

(4) Nothing in these rules is intended to interfere with any authority of the department of fish and wildlife to protect wildlife under any other statutes or regulations, or under any agreements with landowners.

(5) Federal Endangered Species Act, 16 U.S.C. 1531 et seq., and other federal laws. The federal Endangered Species Act and other federal laws may impose certain obligations on persons conducting forest practices. Compliance with the Forest Practices Act or these rules does not ensure compliance with the Endangered Species Act or other federal laws.

### **WAC 222-50-030 Interagency agreements.**

The board recommends that the department negotiate interagency agreements with other governmental agencies. The board further recommends that such agreements include, to the extent acceptable to the other agency, provisions specifying:

- (1) **The law** and rules covered;
- (2) **Any geographical** or other limits on the authority and responsibility under the agreement;
- (3) **Priorities** and standards for resolution of any conflicts between such laws and regulations and the act and these rules;
- (4) **Procedures** for administrative appeals of actions taken;
- (5) **Provisions for** continuing cooperation between the department and the other agency or agencies regarding interpretation of the laws and regulations involved;
- (6) **Procedures for** termination of the interagency agreement; and
- (7) **Procedures for** processing applications and notifications.

The department is directed to provide copies of all such agreements to the board, and to make known to the public that such interagency agreements exist.

### **WAC 222-50-040 Safety and health.**

The forest practices rules contained in chapters 222-24 through 222-38 WAC are automatically superseded to the extent inconsistent with any applicable safety regulations, or with any orders or directives having the force of law and based on any applicable safety regulations, including:

- (1) **Chapter 296-54** WAC (safety standards for logging operations, department of labor and industry's division of safety).
- (2) **Chapter 296-24** WAC (general safety and health standards, department of labor and industry's division of safety).
- (3) **All applicable** Federal Occupational Safety and Health Administration regulations.
- (4) **Regarding aircraft**, chapters 12-24, 12-28, and 12-32 WAC (Washington aeronautics commission).
- (5) **Regarding explosives**, chapter 296-52 WAC (department of labor and industry) and all applicable federal regulations.
- (6) **Regarding chemicals**, chapter 16-228 WAC (department of agriculture) and all applicable federal regulations.
- (7) **All applicable** state and local sanitation regulations relating to municipal watersheds and sources of domestic water supply.

In such cases of conflict, the department is authorized to seek from other agencies such waivers or modifications in the applicable safety and health regulations as may be necessary for the department to be able to fully enforce the forest practices rules contained in chapters 222-24 through 222-38 WAC.

Applicants are cautioned that there may be additional safety and health laws and regulations that may be applicable in addition to those specifically listed above.

### **WAC 222-50-050 Forest fire prevention and suppression.**

All laws and rules relating to forest fire prevention and suppression apply in addition to these forest practices rules and, in cases of conflict, supersede the forest practices rules contained in chapters 222-24 through 222-38 WAC.



**WAC 222-50-060 Other regulatory programs administered by the department.**

The board recommends that, to the extent permitted by law and when necessary the department adopt rules and policies under which approved applications and notifications can serve to eliminate or reduce the need for separate permits and approvals under regulatory programs administered by the department (such as the power driven machinery permits, RCW 76.04.275, dumping mill waste and forest debris permit, RCW 76.04.242, and surface mining permits, chapter 78.44 RCW) as applied to forest practices. The department is directed to notify the public of the existence of such rules and policies.

**Attachment A**  
**Eastern Washington Leave Tree Requirements for Type S and F Waters**

**Ponderosa pine timber habitat type (stands below 2,500 feet in elevation).**

**1. Stands with high basal area.**

Basal area requirement. Harvest is allowed if the basal area is more than 110 square feet per acre for all tree species equal to or greater than 6 inches dbh in the inner zone.

Leave tree requirements. Harvest must leave at least 50 trees per acre and a basal area of at least 60 sq. ft./ac. You must select leave trees as follows:

- 21 largest trees per acre; and
- An additional 29 trees per acre that are  $\geq 10$  inches dbh
  - If there are fewer than  $29 \geq 10$ -inch dbh trees per acre, leave the 29 largest trees.
  - If there are more than  $29 \geq 10$ -inch dbh trees per acre, leave 29
  - $\geq 10$ -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;
    - Trees that are evenly distributed across the inner zone.

If more than 50 trees per acre are needed to meet the minimum leave tree basal area of 60 square feet per acre, then additional trees  $\geq 6$  inches dbh must be left. If the minimum basal area cannot be met with fewer than 100 trees that are  $\geq 6$  inches dbh, then no more than 100 trees per acre of the largest remaining trees are required to be left regardless of basal area.

**2. Stands with low basal area and high density.**

Basal area and density requirements. Thinning is permitted if the basal area of all species is less than 60 square feet per acre AND there are more than 100 trees per acre.

Leave tree requirements.

Thinning in low basal area and high density stands must leave a minimum of 100 trees per acre. The trees to be left shall be selected as follows:

- The 50 largest trees per acre; and
- An additional 50 trees per acre in the 6-inch diameter class or larger. If there are not 50 trees per acre in the 6-inch diameter class or larger, then all trees in the 6-inch diameter class or larger per acre must be left, plus the largest remaining trees to equal 50 trees per acre. Select the additional 50 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.

**Mixed conifer timber habitat type (stands 2,500 to 5,000 feet in elevation).**

The rules for the mixed conifer timber habitat type require knowledge of the site index of a harvest unit. For purposes of carrying out the RMZ rules, site indices are reported in the *Washington State Department of Natural Resources State Soil Survey* and detailed in the associated forest soil summary sheets. Contact a Department of Natural Resources (DNR) region office for site index information. If the soil survey does not report a site index for your location or it indicates noncommercial or marginal forest land, then see (3) of the definition of “site class” in WAC 222-16-010 for guidance.

### **1. Stands with high basal area.**

Basal area requirement. Harvest is allowed if the total basal area of all species greater than 6 inches dbh in the inner zone is more than:

- 100 sq. ft./ac. on low site index (< 90)
- 130 sq. ft./ac. on medium site index (90 to  $\leq$  110)
- 150 sq. ft./ac. on high site index (> 110)

Leave tree requirements. Harvest must leave at least 50 trees per acre AND a basal area of at least:

- 70 sq. ft./ac. on low site index (< 90)
- 90 sq. ft./ac. on medium site index (90 to  $\leq$  110)
- 110 sq. ft./ac. on high site index (> 110)

The trees to be left shall be selected as follows:

- 21 largest trees per acre
- An additional 29 trees per acre that are  $\geq$  10 inches dbh
  - If there are fewer than 29  $\geq$  10-inch trees per acre, leave the 29 largest trees.
  - If there are more than 29  $\geq$  10-inch trees per acre, leave 29  $\geq$  10-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;
    - Trees that are evenly distributed across the inner zone.

If more than 50 trees per acre are needed to meet the minimum leave tree basal area for the applicable site index, then additional trees  $\geq$  6 inches dbh must be left. If the minimum basal area cannot be met with fewer than 100 trees that are  $\geq$  6 inches dbh, then no more than 100 trees per acre of the largest remaining trees are required to be left regardless of basal area.

### **2. Stands with low basal area and high density.**

Basal area and density requirements. Thinning is permitted if the basal area of all species in the inner zone is less than the minimum requirements for the site index (as shown below) AND there are more than 120 trees per acre:

70 sq. ft./ac. on low site index (< 90)  
90 sq. ft./ac. on medium site index (90 to ≤ 110)  
110 sq. ft./ac. on high site index (> 110)

Leave tree requirements. Thinning in low basal area and high density stands must leave a minimum of 120 trees per acre. The trees to be left shall be selected as follows:

- The 50 largest trees per acre; and
- An additional 70 trees per acre in the 6-inch diameter class or larger. If there are not 70 trees per acre in the 6-inch diameter class or larger, then all trees in the 6-inch diameter class or larger per acre must be left, plus the largest remaining trees to equal 70 trees per acre. Select the additional 70 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.

### **Additional Leave Tree Requirements.**

The 21 largest trees do not have to be evenly spaced.

The 29 additional ≥ 10-inch dbh trees per acre should be selected based on the following priority order:

- Trees that provide shade to water.
- Trees that lean toward the water.
- Trees of the preferred species:
  - Ponderosa pine habitat type All hardwoods, Ponderosa pine, western larch, Douglas-fir, western red cedar
  - Mixed conifer habitat type All hardwoods, western larch, Ponderosa pine, western red cedar, western white pine, Douglas-fir, lodgepole pine
- Trees that are evenly spaced across the inner zone.