**Board of Forestry and Fire Protection**

**Vegetation and Fuels in the WLPZ**

**Title 14 of the California Code of Regulations**

**Division 1.5, Chapter 4,**

**Subchapter 1 & 2**

**§ 895.1. Definitions**

* **Vegetation Protection** the term used when special measures are required to prevent damage to vegetation for the protection of water quality, the beneficial uses of water, and/or other forest resources.
* **Water Quality Requirements** means a water quality objective (narrative or numeric), prohibition, TMDL implementation plan, policy, or other requirement contained in a water quality control plan adopted by the Regional Board and approved by the State Water Board.
* **Waterbreak** means a ditch, dike, or dip, or a combination thereof, constructed diagonally across Logging Roads, tractor roads and firebreaks so that water flow is effectively diverted therefrom. Waterbreaks are synonymous with waterbars.
* **Watercourse** means any well-defined channel with distinguishable bed and bank showing evidence of having contained flowing water indicated by deposit of rock, sand, gravel, or soil, including but not limited to, Streams as defined in PRC 4528(f). Watercourse also includes manmade Watercourses.
* **Watercourse and Lake Protection Zone (WLPZ)** means a strip of land, along both sides of a Watercourse or around the circumference of a lake or spring, where additional practices may be required for protection of the quality and beneficial uses of water, fish and Riparian wildlife habitat, other forest resources and for controlling erosion.
* **Watercourse Bank** means the portion of the channel cross-section that confines the normal high water flow.

**§ 916, 936, 956 Intent of Watercourse and Lake Protection [All Districts]**

The purpose of this article is to ensure that Timber Operations do not potentially cause significant adverse site-specific and cumulative Impacts to the beneficial uses of water, native aquatic and Riparian-associated species, and the beneficial functions of Riparian zones; or result in an unauthorized take of listed aquatic species; or threaten to cause violation of any applicable legal requirements. This article also provides protection measures for application in watersheds with listed anadromous salmonids and watersheds listed as water quality limited under Section 303(d) of the Federal Clean Water Act.

It is the intent of the Board to restore, enhance, and maintain the productivity of Timberlands while providing appropriate levels of consideration for the quality and beneficial uses of water relative to that productivity. Further, it is the intent of the Board to clarify and assign responsibility for recognition of potential and existing Impacts of Timber Operations on Watercourses and lakes, native aquatic and Riparian-associated species, and the beneficial functions of Riparian zones and to ensure all plans, exemptions and emergency notices employ feasible measures to effectively achieve compliance with this article. Further, it is the intent of the Board that the evaluations that are made, and the measures that are taken or prescribed, be documented in a manner that clearly and accurately represents those existing conditions and those measures. "Evaluations made" pertain to the assessment of the conditions of the physical form, water quality, and biological characteristics of Watercourses and lakes, including cumulative Impacts affecting the beneficial uses of water on both the area of planned logging operations and in the Watershed Assessment Area (WAA). "Measures taken" pertain to the procedures used or prescribed for the restoration, enhancement, and maintenance of the beneficial uses of water.

All provisions of this article shall be applied in a manner, which complies with the following:

(a) During and following Timber Operations, the beneficial uses of water, native aquatic and Riparian-associated species, and the beneficial functions of Riparian zones shall be maintained where they are in good condition, protected where they are threatened, and insofar as feasible, restored where they are impaired.

(b) Maintenance, protection, and contribution towards restoration of the quality and beneficial uses of water during the planning, review, and conduct of Timber Operations shall comply with all applicable legal requirements including those set forth in any applicable water quality control plan adopted or approved by the State Water Resources Control Board. At a minimum, the LTO shall not remove water, trees or large woody debris from a Watercourse or lake, the adjacent Riparian area, or the adjacent flood prone areas in quantities deleterious to fish, wildlife, beneficial functions of Riparian zones, or the quality and beneficial uses of water.

(c) Protecting and restoring native aquatic and Riparian-associated species, the beneficial functions of Riparian zones, and the quality and beneficial uses of water shall be given equal consideration as a management objective within any prescribed WLPZ and within any ELZ or EEZ designated for Watercourse or lake protection and any other location where Timber Operations may affect Riparian zones or the quality and beneficial uses of water.

(d) The measures set forth in this Section are meant to enforce the public's historical and legal interest in protection for wildlife, fish, and water quality and are to be used to guide Timberland Owners in meeting their legal responsibilities to protect public trust resources.

**§ 916.1, 936.1, 956.1 In Lieu Practices [All Districts]**

In rule sections where provision is made for site specific practices to be proposed by the RPF, approved by the Director and included in the THP in lieu of a stated rule, the RPF shall reference the standard rule, shall explain and describe each proposed practice, how it differs from the standard practice, and the specific locations where it shall be applied; and shall explain and justify how the protection provided by the proposed practice is at least equal to the protection provided by standard rule.

**(a)** The in lieu practice(s) must provide for the protection of the beneficial uses of water to the standards of 14 CCR§§ 916.3, 936.3, 956.3 and 916.4(b), 936.4(b), 956.4(b).

**(b)** In lieu practices stated in an approved THP shall have the same enforceability and legal authority as those practices required by the standard Rules.

**(c)** Any in lieu practices which propose less than standard rule WLPZ widths for Class I Watercourses shall include 14 CCR §§ 916.5.(e), 936.5(e), 956.5(e), "A" & "D" protection measures.

**§ 916.2, 936.2, 956.2 Protection of the Beneficial Uses of Water and Riparian Functions [All Districts]**

**(a)** The measures used to protect each Watercourse and lake in a logging area shall be determined by the presence and condition of the following values:

**(1)** The existing and restorable quality and beneficial uses of water as specified by the applicable water quality control plan and as further identified and refined during preparation and review of the plan.

**(2)** The existing and restorable uses of water for fisheries as identified by the CDFW or as further identified and refined during preparation and review of the plan.

**(3)** The beneficial functions of the Riparian zone that provides for the biological needs of native aquatic and Riparian-associated species as specified in 14 CCR § 916.4 [936.4, 956.4] subsection (b) and 14 CCR §§ 916.9, 936.9, 956.9, when the plan is in a planning watershed with listed anadromous salmonids.

**(4)** Sensitive conditions near Watercourses and lakes as specified in 14 CCR §§ 916.4, 936.4, 956.4, subsection (a).

The maintenance, protection, and contribution towards restoration of these values shall be achieved through a combination of the Rules and plan-specific mitigation. The RPF shall propose, and the Director may require, adequate protection of overflow and changeable channels which are not contained within the Channel Zone.

**(b)** The State's waters are grouped into four classes based on key beneficial uses. These classifications shall be used to determine the appropriate protection measures to be applied during the conduct of Timber Operations. The basis for classification (characteristics and key beneficial uses) are set forth in 14 CCR §§ 916.5, 936.5, 956.5, Table 1 and the range of appropriate protective measures applicable to each class are contained in 14 CCR §§ 916.3, 936.3, 956.3, 916.4, 936.4, 956.4, and 916.5, 936.5, 956.5, and 916.9, [936.9, 956.9 when the plan is in a planning watershed with listed anadromous salmonids.

**(c)** When the protective measures contained in 14 CCR §§ 916.5, 936.5, 956.5, and 916.9, 936.9, 956.9 when the plan is in a planning watershed with listed anadromous salmonids, are not adequate to provide for maintenance, protection or to contribute towards restoration of beneficial uses of water set forth in 14 CCR § 916.5, 936.5, 956.5 Table 1, additional measures to achieve these goals shall be developed by the RPF or proposed by the Director under the provisions of 14 CCR §§ 916.6, 936.6, 956.6, Alternative Watercourse and Lake Protection, and incorporated in the plan when approved by the Director.

**§ 916.3, 936.3, 956.3 General Limitations Near Watercourses, Lakes, Marshes, Meadows and Other Wet Areas [All Districts]**

The quality and beneficial uses of water shall not be unreasonably degraded by Timber Operations. During Timber Operations, the Timber Operator shall not place, discharge, or dispose of or deposit in such a manner as to permit to pass into the water of this state, any substances or materials, including, but not limited to, soil, silt, bark, Slash, sawdust, or petroleum, in quantities deleterious to fish, wildlife, or the quality and beneficial uses of water. All provisions of this article shall be applied in a manner which complies with this standard.

**(a)** When there is reasonable expectation that Slash, debris, soil, or other material resulting from Timber Operations, falling or associated activities, will be deposited in Class I and Class II waters below the Watercourse or Lake Transition Line or in Watercourses which contain or conduct Class IV water, those harvest activities shall be deferred until equipment is available for its removal, or another procedure and schedule for completion of corrective work is approved by the Director.

**(b)** Accidental depositions of soil or other debris in lakes or below the Watercourse or lake Lake Transition Line in waters classed I, II, and IV shall be removed immediately after the deposition or as approved by the Director.

**(c)** The Timber Operator shall not construct or use tractor roads in Class I, II, III or IV Watercourses, in the WLPZ, marshes, wet meadows, and other wet areas unless explained and justified in the plan by the RPF, and approved by the Director, except as follows:

**(1)** At prepared tractor road crossings as described in 14 CCR §§ 914.8(b), 934.8(b), 954.8(b).

**(2)** Crossings of Class III Watercourses that are dry at the time of use.

**(3)** At new and existing tractor road crossings approved as part of the Fish and Game Code process (F&GC § 1600 et seq.).

**(d)** Vegetation, other than commercial species, bordering and covering meadows and wet areas shall be retained and protected during Timber Operations unless explained and justified in the THP and approved by the Director. Soil within the meadows and wet areas shall be protected to the maximum extent possible.

**(e)** Trees cut within the WLPZ shall be felled away from the Watercourse by pulling or other mechanical methods if necessary, in order to protect the residual vegetation in the WLPZ. Exceptions may be proposed in the THP and used when approved by the Director.

**(f)** Where less than 50% canopy exists in the WLPZs of Class I and II waters before Timber Operations, only sanitation salvage which protects the values described in 14 CCR §§ 916.4(b), 936.4(b), 956.4(b) shall be allowed.

**(g)** Recruitment of large woody debris for instream habitat shall be provided by retaining at least two living conifers per acre at least 16 inches diameter breast high and 50 ft. tall within 50 ft. of all Class I and II Watercourses.

**§ 916.4, 936.4, 956.4 Watercourse and Lake Protection [All Districts]**

**(a)** The RPF or supervised designee shall conduct a field examination and map all lakes and Class I, II, III, and IV Watercourses.

**(1)** As part of this field examination, the RPF or supervised designee shall evaluate areas near, and areas with the potential to directly Impact, Watercourses and lakes for sensitive conditions including, but not limited to, existing and proposed roads, skid trails and Landings, unstable and erodible Watercourse banks, unstable upslope areas, debris jam potential, inadequate flow capacity, migrating channels, overflow channels, flood prone areas, and Riparian zones wherein the values set forth in 14 CCR §§ 916.4, 936.4, 956.4, subsection (b) are impaired. The RPF shall consider these conditions, and those measures needed to maintain, and restore to the extent feasible, the functions set forth in 14 CCR §§ 916.4(b), 936.4(b), 956.4(b) when proposing WLPZ widths and protection measures. The plan shall identify such conditions, including where they may interact with proposed Timber Operations, that individually or cumulatively significantly and adversely affect the beneficial uses of water, and shall describe measures to protect and restore to the extent feasible, the beneficial uses of water. In proposing, reviewing, and approving such measures, preference shall be given to measures that are on-site, or to offsite measures where sites are located to maximize the benefits to the Impacted portion of a Watercourse or lake.

**(2)** As part of this field examination, the RPF or supervised designee shall map the location of spawning and rearing habitat for anadromous salmonids, and the condition of the habitat shall be evaluated using habitat typing that at a minimum identifies the pool, flatwater, and riffle percentages. The opportunity for habitat restoration shall be described within the plan for each Class I Watercourse, and for each Class II Watercourse that can be feasibly restored to a Class I.

**(3)** The mapping of conditions identified in subsection (a)(1) and (a)(2) above, and their protective measures, shall be sufficiently clear and detailed to permit the Director and the other review team representatives to evaluate the potential environmental Impacts of Timber Operations, the proposed mitigation measures and the proposed restoration measures.

**(4)** The mapping of conditions identified in subsection (a)(1) and (a)(2) above, and their protective measures, shall be sufficiently clear and detailed to provide direction and clear guidance to the Timber Operator.

**(5)** The mapping of conditions identified in 14 CCR §§ 916.4, 936.4, 956.4 subsections (a)(1) and (a)(2), and their protective and restoration measures, should be done at a scale of 1:2,400. In site-specific cases, the mapping of critical locations of corrective work and logging operation Impacts shall be done at a scale of at least 1:240 when the Director determines it is necessary to evaluate the plan.

**(6)** One set of photocopies of recent stereo aerial photographs of the plan area may be required by the Director.

**(b)** The standard width of the WLPZ and/or the associated basic protection measures shall be determined from Table I (14 CCR §§ 916.5, 936.5, 956.5) or §§ 916.4(c), 956.4(c), 956.4(c), and shall be stated in the plan. A combination of the Rules, the plan, and mitigation measures shall provide protection for the following:

**a.** Water temperature control.

**b**. Streambed and flow modification by large woody debris.

**c.** Filtration of organic and inorganic material.

**d.** Upslope stability.

**e.** Bank and channel stabilization.

**f.** Spawning and rearing habitat for salmonids

**g.** Vegetation structure diversity for fish and wildlife habitat, possibly including but not limited to:

**1.** Vertical diversity

**2.** Migration corridor

**3.** Nesting, roosting, and escape

**4.** Food abundance

**5.** Microclimate modification

**6.** Snags

**7.** Surface cover

**(1)** Measures and the appropriate zone widths for the protection of the State's waters which have been taken from Table I (14 CCR 916.5, 936.5, 956.5) or developed under §§ 916.4(c), 936.4(c), 956.4(c) shall be stated in the THP.

**(2)** All Timber Operations shall conform to the marking, flagging and other identification of protective measures specified in CCR §§ 916.4, 936.4, 956.4, and 916.5, 936.5, 956.5 and the THP. Conformance shall be determined based on the evaluation of no less than a 200 foot lineal segment of each Watercourse or lake.

**(3)** The width of the WLPZ shall be measured along the surface of the ground from the Watercourse or Lake Transition Line or in the absence of Riparian vegetation from the top edge of the Watercourse bank.

**(4)** Slopes shall be measured in percent for the proposed WLPZ. If topography within the proposed WLPZ is variable, segments of the proposed WLPZ should be segregated by slope class as indicated in Table I, 14 CCR §§ 916.5, 936.5, 956.5.

**(5)** If requested by either party, and after on-the-ground inspection, the RPF and the Director may increase or decrease the width of a proposed WLPZ. A decrease shall not exceed 25 percent of the width as determined by the procedure prescribed in Sections 14 CCR §§ 916.4(c), 936.4(c), 956.4(c), and 916.5, 936.5, 956.5. Such changes in zone width shall be based on considerations of soil, slope, climatic factors, biologic, hydrologic, and geologic values listed in §§ 14 CCR 916.4(b), 936.4(b), 956.4(b), silvicultural methods, Yarding systems, road location, and Site Preparation activities. In no case shall the width be adjusted to less than 50 feet for Class I and II waters. Where soil surfaced roads exist within the standard WLPZ, no in-lieu reduction of WLPZ width shall be approved.

**(6)** Within the WLPZ, at least 75% surface cover and undisturbed area shall be retained to act as a filter strip for raindrop energy dissipation, and for wildlife habitat. This percentage may be adjusted to meet site specific conditions when proposed by the RPF and approved by the Director or where Broadcast Burning is conducted under the terms of a project type burning permit and in compliance with 14 CCR §§ 915.2(b), 935.2(b), 955.2(b).

**(c)** The protection and WLPZ widths for Class III and Class IV waters shall prevent the degradation of the downstream beneficial use of water and shall be determined on a site-specific basis.

**(1)** Where operations occur adjacent to Class III Watercourses, the RPF shall designate in the THP an equipment limitation zone (ELZ) of at least 25 feet where sideslope steepness is less than 30% and at least 50 feet where sideslope steepness is 30% or greater unless explained and justified otherwise in the THP and approved by the Director. Class III Watercourses within logging areas where the EHR is Low and the slopes are less than 30% shall not require an ELZ unless proposed by the RPF or required by the Director. The RPF shall describe the limitations on the use of heavy equipment in the THP. Where appropriate to protect the beneficial uses of water, the RPF shall describe additional protection measures, which may include surface cover retention, vegetation protection and timber falling limitations. The location of the areas of heavy equipment use in any ELZ shall be clearly described in the plan, or flagged or marked on the ground before the preharvest inspection. When necessary to protect the beneficial use of water, the RPF shall designate and the Director may require a WLPZ for Class III and Class IV waters or an ELZ for Class IV waters.

**(2)** The width of the WLPZ for Class III and IV waters shall be determined from on-site inspection. Minimum protective measures required when Class III and Class IV protection zones are necessary are contained in Table I 14 CCR §§ 916.5, 936.5, 956.5.

**(3)** Soil deposited during Timber Operations in a Class III Watercourse other than at a temporary crossing shall be removed and debris deposited during Timber Operations shall be removed or stabilized before the conclusion of Timber Operations, or before October 15. Temporary crossings shall be removed before the winter period, or as approved by the Director.

**(4)** When approved by the Director on an individual plan basis as provided in Section 14 CCR §§ 916.4(c)(1), 936.4(c)(1), 956.4(c)(1) Class IV waters shall be exempted from required protection when such protection is inconsistent with the management objectives of the owner of the manmade Watercourse.

**(d)** Heavy equipment shall not be used in timber falling, Yarding, or Site Preparation within the WLPZ unless such use is explained and justified in the THP and approved by the Director.

**(e)** Flagging for heavy equipment use within the WLPZ adjacent to Class I waters and for all tractor road Watercourse crossings of all Watercourses must be completed before the preharvest inspection if one is conducted or start of operations, whichever comes first. Flagging for heavy equipment use within the WLPZ adjacent to Class II, III and IV waters may be done at the option of the RPF or as required by the Director on a site-specific basis.

**(f)** Subsection (d) does not apply to (1)-(4) below. Subsection (e) does not apply to (2)-(4) below.

**(1)** At prepared tractor road crossings as described in §§ 914.8(b), 934.8(b), 954.8(b).

**(2)** Crossings of Class III Watercourses which are dry at the time of Timber Operations.

**(3)** At existing road crossings.

**(4)** At new tractor and road crossings approved as part of the Fish and Game Code Process (F&GC 1600 et seq.).

**§ 916.5, 936.5, 956.5 Procedure for Determining Watercourse and Lake Protection Zone (WLPZ) Widths and Protective Measures [All Districts]**

The following procedure for determining WLPZ widths and protective measures shall be followed:

**(a)** The following information shall be determined from field investigation:

**(1)** The location of all lakes and Watercourses including man made Watercourses.

**(2)** The existing and restorable beneficial uses of the waters to be protected as identified in subsection (1) above.

**(3)** The side slope classes for the individual class of waters to be protected (e.g. < 30%, 30-50%, >50%), where side slope is measured from the Watercourse or Lake Transition Line to a point 100 feet upslope from the Watercourse or Lake Transition Line, or, in the absence of Riparian vegetation, from the top of the Watercourse bank where slope configurations are variable, a weighted average method shall be used to determine sideslope percent.

**(b)** The beneficial uses noted from the field investigations in subsection (a) shall be compared to the characteristics or key beneficial uses listed in Row 1 of Table I (14 CCR §§ 916.5, 936.5, 956.5) to determine the water classes (e.g. I, II, III, IV, Row 2).

**(c)** The standard protection zone width differentiated by slope classes determined in Subsection (a) are shown in Rows 4-7, Table I (14 CCR 916.5 [936.5, 956.5]). These widths may be modified as stated in 14 CCR §§ 916.4(b)(5), 936.4(b)(5), 956.4(b)(5).

**(d)** The alphabetical letter designations A through I in Rows 4-7, Table 1 14 CCR §§ 916.5, 936.5, 956.5, and described in subsection (e) to Table I indicate the standard protective measures to be applied to the classes of water as determined in subsection (b) above.

**(e)** The letter designations shown in the "Protective Measures and Widths" column in Table I correspond to the following:

**"A"** WLPZ shall be clearly identified on the ground by the RPF who prepared the plan, or supervised designee, with paint, flagging, or other suitable means prior to the preharvest inspection. For nonindustrial timber management plans, sample identification of the WLPZ prior to the preharvest inspection may be allowed. The sample shall be based upon a field examination and be consistent with the applicable provisions of 14 CCR §§ 916.4, 936.4, 956.4 and 916.5, 936.5, 956.5, representing the range of conditions found within the WLPZ. The Director shall determine if the sample identification is adequate for plan evaluation during the preharvest inspection. If sample identification is allowed, the remaining WLPZ shall be identified by an RPF or supervised designee prior to the start of Timber Operations within or adjacent to the WLPZ. The RPF shall notify the Department when the WLPZ has been identified.

"**B**" WLPZ shall be clearly identified on the ground by an RPF or supervised designee, with paint, flagging, or other suitable means, prior to the start of Timber Operations. In watersheds with listed anadromous salmonids, on the ground identification of the WLPZ shall be completed prior to the preharvest inspection. For all NTMPs and WFMPs, sample identification of the WLPZ prior to the preharvest inspection may be allowed. The sample shall be based upon a field examination and be consistent with the applicable provisions of 14 CCR §§ 916.4, 936.4, 956.4 and 916.5, 936.5, 956.5, representing the range of conditions found within the WLPZ. The Director shall determine if the sample identification is adequate for Plan evaluation during the preharvest inspection. If sample identification is allowed, the remaining WLPZ shall be identified by an RPF or supervised designee prior to the start of Timber Operations within or adjacent to the WLPZ. The RPF shall notify the Department when the WLPZ has been identified.

**"C"** In site-specific cases, the RPF may provide in the plan, or the Director may require, that the WLPZ be clearly identified on the ground with flagging or by other suitable means prior to the start of Timber Operations.

**"D"** To ensure retention of shade canopy filter strip properties of the WLPZ and the maintenance of a multi-storied stand for protection of values described in 14 CCR §§ 916.4(b), 936.4(b), 956.4(b), residual or harvest trees shall be marked, including a base mark below the cut-line within the WLPZ by the RPF, or supervised designee. Outside of watersheds with listed anadromous salmonids, sample marking prior to the preharvest inspection is satisfactory in those cases where the Director determines it is adequate for Plan evaluation. When sample marking has been used, the remaining WLPZ shall be marked in advance of falling operations by the RPF, or supervised designee. In watersheds with listed anadromous salmonids, trees shall be marked in advance of the preharvest inspection. For all NTMPs and WFMPs, sample marking of the WLPZ prior to the preharvest inspection may be allowed. The sample shall be based upon a field examination and shall be consistent with the applicable provisions of 14 CCR §§ 916.4, 936.4, 956.4 and 916.5, 936.5, 956.5, representing the range of conditions found within the WLPZ. The Director shall determine if the sample mark is adequate for Plan evaluation during the preharvest inspection. If sample marking is allowed, the remaining WLPZ shall be marked by an RPF, or supervised designee, prior to the start of Timber Operations within or adjacent to the WLPZ. The RPF shall notify the Department when the WLPZ has been identified.

**"E"** To ensure retention of shade canopy filter strip properties of the WLPZ and the maintenance of a multi-storied stand for protection of values described in 14 CCR §§ 916.4(b), 936.4(b), 956.4(b), residual or harvest trees shall be marked, including a base mark below the cut line, within the WLPZ by the RPF or supervised designee. Outside of watersheds with listed anadromous salmonids, tree marking shall be done prior to timber falling operations. In watersheds with listed anadromous salmonids, trees shall be marked in advance of the preharvest inspection. For all NTMPs and WFMPs, sample marking of the WLPZ prior to the preharvest inspection may be allowed. The sample shall be based upon a field examination and shall be consistent with the applicable provisions of 14 CCR §§ 916.4, 936.4, 956.4 and 916.5 936.5, 956.5, representing the range of conditions found within the WLPZ. The Director shall determine if the sample mark is adequate for Plan evaluation during the preharvest inspection. If sample marking is allowed, the remaining WLPZ shall be marked by an RPF or supervised designee prior to the start of Timber Operations within or adjacent to the WLPZ. The RPF shall notify the Department when the WLPZ has been identified.

**"F"** Residual or harvest tree marking within the WLPZ may be stipulated in the THP by the RPF or required by the Director in site-specific cases to ensure retention of filter strip properties or to maintain soil stability of the zone. The RPF shall state in the THP if marking was used in these zones.

**"G"** To protect water temperature, filter strip properties, upslope stability, and fish and wildlife values, at least 50% of the overstory and 50% of the understory canopy covering the ground and adjacent waters shall be left in a well distributed multi-storied stand composed of a diversity of species similar to that found before the start of operations. The residual overstory canopy shall be composed of at least 25% of the existing overstory conifers. Species composition may be adjusted consistent with the above standard to meet on-site conditions when agreed to in the THP by the RPF and the Director.

**"H"** At least 50% of the understory vegetation present before Timber Operations shall be left living and well distributed within the WLPZ to maintain soil stability. This percentage may be adjusted to meet on-site conditions when agreed to in the THP by the RPF and the Director. Unless required by the Director, this shall not be construed to prohibit Broadcast Burning with a project type burning permit for Site Preparation.

**"I"** To protect water temperature, filter strip properties, upslope stability, and fish and wildlife values, at least 50% of the total canopy covering the ground shall be left in a well distributed multi-storied stand configuration composed of a diversity of species similar to that found before the start of operations. The residual overstory canopy shall be composed of at least 25% of the existing overstory conifers. Due to variability in Class II Watercourses these percentages and species composition may be adjusted to meet on-site conditions when agreed to by the RPF and the Director in the THP.

**§ 916.5, 936.5, 956.5 Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures [All Districts]**

**916.6, 936.6, 956.6 Alternative Watercourse and Lake Protection [All Districts]**

TABLE I

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Procedures for Determining Watercourse and Lake Protection Zone Widths and Protective Measures1** | | | | | | | | |
| Water Class Characteristics or Key Indicator Beneficial Use | 1. Domestic supplies, including springs, on site and/or within 100 feet downstream of the operations area and/or 2. Fish always or seasonally present onsite, includes habitat to sustain   fish migration and spawning. | | 1. Fish always or seasonally present offsite within 1000 feet downstream and/or 2. Aquatic habitat for nonfish aquatic species. 3. Excludes Class III waters that are tributary to Class I waters. | | No aquatic life present, Watercourse showing evidence of being capable of sediment transport to Class I and II waters under normal high water flow conditions after completion of Timber Operations. | | Man-made Watercourses, usually downstream, established domestic, agricultural, hydroelectric supply or other beneficial use. | |
| Water Class | Class I | | Class II | | Class III | | Class IV | |
| Slope Class (%) | Width Feet | Protection Measure | Width Feet | Protection Measure | Width Feet | Protection Measure | Width Feet | Protection Measure |
| [see 916.4(c)]  [see 936.4(c)]  [see 956.4(c)] | | [see 916.4(c)]  [see 936.4(c)]  [see 956.4(c)] | |
| <30 | 75 | BDG | 50 | BEI | See CFH | | See CFI | |
| 30-50 | 100 | BDG | 75 | BEI | See CFH | | See CFI | |
| >50 | 1502 | ADG | 1003 | BEI | See CFH | | See CFI | |
| 1 - See Section 916.5(e) for letter designations application to this table. 2 – Subtract 50 feet width for cable Yarding operations.  3 – Subtract 25 feet width for cable Yarding operations. | | | | | | | | |

**(a)** Alternative prescriptions for the protection of Watercourses and lakes may be developed by the RPF or proposed by the Director on a site-specific basis provided the following conditions are complied with and the alternative prescriptions will achieve compliance with the standards set forth in 14 CCR §§ 916.3, 936.3, 956.3 and 916.4(b), 936.4(b), 956.4(b).

**(1)** The following information regarding an alternative prescription shall be included in the THP:

**(A)** An identification of each standard prescription which would be replaced by the alternative prescription.

**(B)** An identification of any beneficial uses of water or other features listed in 14 CCR §§ 916.4(b), 936.4(b), 956.4(b), which may be adversely affected by the replaced standard prescription and the alternative practice.

**(C)** An evaluation of any significant effects on such beneficial uses or features due to implementation of the alternative prescription.

**(D)** A clear and complete explanation and justification as to the reasons why, given site-specific technical, environmental, economic, or institutional considerations, an alternative prescription is needed. The reasons given must include at least one of the following:

**(1)** Implementation of the specified standard prescriptions would not be feasible.

**(2)** Implementation of the specified standard prescription(s) would not adequately prevent or reduce damage to the quality and beneficial uses of water.

**(3)** Implementation of the proposed alternative prescription would provide equal or greater protection, including all proposed mitigations for the quality and beneficial uses of water and those features listed in §§ 916.4(b) [936.4(b), 956.4(b)] than would implementation of the specified standard prescriptions.

**(E)** A plan for evaluating the results of the proposed alternative practice by either the plan submitter or the Director. The plan must include the criteria and procedures for evaluating and inspecting each approved alternative practice.

**(2)** The alternative measures stated in the plan shall be written so that they provide clear, enforceable standards for the guidance of the Timber Operator.

**(3)** Prior to beginning or continuing an operation in which alternative measures have been added to an approved THP in regard to Watercourse and lake protection measures, the Timber Operator shall acknowledge the new specifications by signing and filing with the Director, a copy of the amended plan.

**(b)** The Director shall not accept for inclusion in a THP alternative Watercourse and lake protection measures which do not meet the standard of subsection (a) of this section. In the event that written comments received from two or more agencies listed in PRC § 4582.6 and 14 CCR § 1037.3 and which participated in review of the plan, including on-the-ground inspection, lead to the conclusion that the proposed alternative does not meet the criteria of 14 CCR §§ 916.5, 936.5, 956.5, and is therefore not consistent with Rules of the Board, the Director shall reject the proposed alternative.

**(c)** Alternative practices stated in an approved THP shall have the same force and authority as those practices required by the standard rule.

**§ 916.7, 936.7, 956.7 Reduction of Soil Loss [All Districts]**

Within the Watercourse and lake protection zone adjacent to Class I and Class II waters, areas where mineral soil exceeding 800 continuous square feet in size, exposed by Timber Operations, shall be treated for reduction of soil loss. Treatment shall be done prior to October 15th except that such bare areas created after October 15th shall be so treated within 10 days, or as agreed to by the Director. Stabilization measures shall be included and explained in the THP or other required notices. Stabilization measures shall be selected that will prevent significant movement of soil into Class I and II waters and may include, but need not be limited to, mulching, rip-rapping, grass seeding, or chemical soil stabilizers.

**(a)** This section does not apply to the traveled surface of roads. Erosion control measures on road surfaces are specified in 14 CCR §§ 923, 943, 963.

**(b)** Where mineral soil has been exposed by Timber Operations on approaches to Watercourse crossings of Class I or II waters, or Class III waters if an ELZ or WLPZ is required, the disturbed area shall be stabilized to the extent necessary to prevent the discharge of soil into Watercourses or lakes in amounts deleterious to the quality and beneficial uses of water.

**(c)** Where necessary to protect beneficial uses of water from Timber Operations, protection measures, such as seeding, mulching, or replanting, shall be specified to retain and improve the natural ability of the ground cover within the standard width of the WLPZ to filter sediment, minimize soil erosion, and stabilize banks of Watercourses and lakes.

**§ 916.8, 936.8, 956.8 Sensitive Watersheds [All Districts]**

The Board, at a public hearing, shall determine whether nominated planning watersheds are "sensitive" to further Timber Operations. Classification of a watershed as "sensitive" shall be supported by substantial evidence that a condition, or conditions, exist(s) where further Timber Operations within the planning watershed will create a reasonable potential to cause, or contribute to ongoing, significant adverse cumulative effect(s) on the resources identified in 14 CCR §§ 916.8(a)(3), 936.8(a)(3), 956.8(a)(3), and as set forth in Technical Rule Addendum No. 2 (14 CCR §§ 912.9, 932.9, 952.9) and that mitigation of such significant cumulative effects requires the application of protection measures not required by the Forest Practice Rules. For all planning watersheds classified as "sensitive", the Board shall identify the specific resources which are sensitive to further Timber Operations and specific mitigation measures that will provide the necessary protection of the sensitive resource(s). A Board finding that a planning watershed is no longer sensitive shall be supported by substantial evidence that such conditions no longer exist. Unless and until a planning watershed(s) is classified as sensitive and any necessary rulemaking completed, the existing Rules shall apply:

**(a) Nomination process**: The Director, local, state, or federal agencies and the public may nominate planning watersheds to the Board and shall provide evidence supporting classification of the watershed as sensitive. The nominator shall discuss the effects that further Timber Operations will have on the specific resources identified in 14 CCR§§ 916.8(a)(3), 936.8(a)(3), 956.8(a)(3) which are at risk within the nominated watershed and specify those effects not sufficiently addressed under the forest practice Rules and discuss the significance of the effects in light of the condition of the resources in areas adjacent to the planning watershed. Such nominations must be accompanied by the following information, descriptions, documents, or maps as appropriate:

**1.** Name, approximate size and location of the watershed(s) identified by county, township and range, and name(s) of USGS topographic map(s) on which the planning watershed is found.

**2.** The name of the higher-order Stream, if any, to which the watershed is tributary.

**3.** Specific resources that are significantly threatened by further Timber Operations on non-federal Timberland in the nominated watershed, including, as appropriate, but not limited to:

**A.** Fish, aquatic organisms, aquatic habitat, or Riparian habitat;

**B.** Domestic and other water supplies, water quality, other beneficial uses of water existing at the time of nomination or factors related to the Stream system and channel morphology.

**C.** Downstream reservoirs, navigable channels, water diversion and transport facilities, estuaries, and harbors;

**D.** Wildlife species, or the habitat of species, listed under state or federal law as rare, threatened or endangered, candidate, or sensitive, including discussion of the habitat features threatened by Timber Operations;

**E.** Wildlife species with narrow geographic range, low density, low reproductive rates, and highly dependent on localized habitat features, including discussion of the habitat features threatened by Timber Operations and a discussion of why protective measures are required to prevent a loss of population viability.

**4.** Natural or management-induced conditions present in the watershed which pose a significant threat to the resources identified in 14 CCR §§ 916.8(a)(3), 936.8(a)(3), 956.8(a)(3), above, including, as appropriate, but not limited to:

**A.** Steep slopes and easily destabilized soils;

**B.** Continuing landslide or soil erosion problems related to past or ongoing land-use activities;

**C.** Extensive ground disturbance, particularly associated with roads, skid trails, Landings, and Watercourse crossings;

**D.** Accelerated aggradation, Streambank erosion, and channel scouring;

**E.** Changes in the habitat or condition of wildlife species identified in 14 CCR §§ 916.8(a)(3), 936.8(a)(3), 956.8(a)(3), above.

**F.** Accelerated rates of proposed road construction or timber harvesting within a watershed or near Streams or springs.

**5.** Approved Habitat Conservation Plans or other documents approved or under review by public agencies within the nominated watershed which provide for maintenance or improvement over time of management induced conditions within or adjacent to the planning watershed or forest district.

**6.** Suggested, feasible mitigation measures needed, in addition to current forest practice Rules, to provide adequate protection for resources identified in 14 CCR §§ 916.8(a)(3), 936.8(a)(3), 956.8(a)(3), above, and to mitigate or avoid new or continuing significant cumulative effects related to Timber Operations, including, but not limited to, restoration or rehabilitation of degraded resources within any portion of the proposed sensitive watershed. **7.** Other information about the watershed that may assist the Board to evaluate the nomination.

**8.** Literature citations, expert written opinion, and other relevant sources of information and, where possible, copies of information used to complete the nomination.

**9.** A list of names and mailing addresses of the following:

**A.** Landowners of 40 acres or more of lands zoned for timber production in the planning watershed;

**B.** Public water purveyors and known private purveyors within the planning watershed;

**C.** Commonly known watershed associations within the planning watershed;

**D.** Commonly known neighborhood or community associations within the planning watershed;

**E.** Chairman, county board of supervisors;

**F.** Chairman, county planning commission;

**G.** Local manager for any public agency having custodial responsibility for Timberlands within the planning watershed; and

**H.** District or local representatives for review team agencies.

**10.** A draft notice for newspaper publication containing the information in (a)(1)-(3), a statement that a public hearing will be scheduled before the Board within 60 days of Board receipt of a nomination forwarded by the committee, and a statement that further information can be obtained from the local Department Unit Headquarters.

**(b) Notice Process**: The Board shall mail notice of the nominated watershed, as provided in (a)10, to

the addresses of parties described in 9 A-H and shall publish the provided notice one time in a newspaper with general circulation in the county containing the planning watershed. Such notice shall be provided following a determination that information contained in the nomination meets the requirements of 14 CCR §§ 916.8(a), 936.8(a), 956.8(a), above.

**(c) Screening Process**: Before consideration by the Board, nominations shall be screened for compliance with the informational requirements by a nominations review committee, which may consist of the appropriate District Technical Advisory Committee or other Board Committee, as determined by the Board. The nominations review committee shall consult with CAL FIRE, the appropriate RWQCB, the CDFW, the CGS, and other(s) as deemed necessary to determine whether the nomination is supported by substantial evidence. The nominations review committee shall then forward a recommendation for approval or denial of the nomination to the Board within 120 days of the date of receipt by the committee, or such longer time provided by the Board. The nominations review committee shall describe its specific reason(s) for recommending approval or denial of the nomination. In the event that the committee forwards a recommendation for approval, it shall describe the substantial evidence which supports nomination, including specific reasons why the current forest practice Rules are inadequate to protect the specific resources at risk and shall provide the following information:

**1.** A list of which resource is threatened and by which Timber Operations;

**2.** If possible, performance standard(s) for Timber Operations that will avoid or mitigate new or continuing significant cumulative effects;

**3.** Additional information that is needed for evaluating the Impacts of proposed Timber Operations and is to be included in harvesting plans submitted in the planning watershed;

**4.** On-site mitigation measures in addition to the current forest practice Rules, which can be required by the Director to mitigate the Impacts of Timber Operations within the watershed;

**5.** Offsite mitigation measures that can be applied within or outside of the sensitive watershed area to offset adverse on-site Impacts of Timber Operations. If such mitigation measures are proposed to protect the resource discussed in subdivision (a)(3)(A) and (B), they must occur in the same drainage. Such measures may include, but are not limited to, voluntary mitigation agreements among ownerships.

**6.** If needed, recommended alternatives to evaluate the implementation and effectiveness of mitigations required under this section.

**7.** Exemptions for ownerships, emergencies, or land-use classifications that are different than those provided in the current forest practice regulations and that may be applied in the watershed.

**(d) Public hearing Process**: The Board shall consider the recommendations of the nominations review committee at a public hearing on classification of the planning watershed, which will be held within 60 days of receipt from the committee. The watershed nomination and recommendations of the committee will be made available to the public between the date of receipt by the Board and the public hearing. Recommendations adopted by the Board which have the effect of a regulation shall be processed in accordance with the Administrative Procedures Act (Gov. Code § 11340. et seq.).

**§ 916.9, 936.9, 956.9 Protection and Restoration of the Beneficial Functions of the Riparian Zone in Watersheds with Listed Anadromous Salmonids. [All Districts]**

In addition to all other Rules, the following requirements shall apply in any watershed with listed anadromous salmonids. Requirements of 14 CCR §§ 916.9, 936.9, 956.9

precede other sections of the FPRs.

**Geographic scope -** Requirements for watersheds with listed anadromous salmonids differ depending on the geographic location of the watershed and geomorphic characteristics of the Watercourse. Unique requirements for watersheds with listed anadromous salmonids are set forth for 1) Watercourses in the coastal anadromy zone with confined channels, 2) Watercourses with flood prone areas or Channel Migration Zones, and 3) Watercourses with confined channels located outside the coastal anadromy zone.

Watersheds which do not meet the definition of “watersheds with listed anadromous salmonids” are not subject to this section except as follows: The provisions of 14 CCR §§ 916.9 [936.9, 956.9], subsections (k)-(q) also apply to planning watersheds immediately upstream of, and contiguous to, any watershed with listed anadromous salmonids for purposes of reducing significant adverse Impacts from transported fine sediment. Projects in other watersheds further upstream that flow into watersheds with listed anadromous salmonids, not otherwise designated above, may be subject to these provisions based on an assessment consistent with cumulative Impacts assessment requirements in 14 CCR §§ 898 and 912.9 [932.9, 952.9] and Technical Rule Addendum No. 2, Cumulative Impacts Assessment. These requirements do not apply to upstream watersheds where permanent dams attenuate the transport of fine sediment to downstream Watercourses with listed anadromous salmonids.

**(a) Goal** - Every timber operation shall be planned and conducted to protect, maintain, and contribute to restoration of properly functioning salmonid habitat and listed salmonid species. To achieve this goal, every timber operation shall be planned and conducted to:

**(1)** Comply with the terms of a Total Maximum Daily Load (TMDL).

**(2)** Prevent significant sediment load increase to a Watercourse system or lake.

**(3)** Prevent significant instability of a Watercourse channel or of a Watercourse or lake bank.

**(4)** Prevent significant blockage of any aquatic migratory routes for any life stage of anadromous salmonids or listed species.

**(5)** Prevent significant adverse effects to streamflow.

**(6)** Consistent with the requirements of 14 CCR § 916.9 [936.9, 956.9], subsections (f), (g), (h) and (v), protect, maintain, and restore trees (especially conifers), snags, or downed large woody debris that currently, or may in the foreseeable future, provide large woody debris recruitment needed for instream habitat structure and fluvial geomorphic functions.

**(7)** Consistent with the requirements of 14 CCR § 916.9 [936.9, 956.9], subsections (f), (g), (h) and (v), protect, maintain, and restore the quality and quantity of vegetative canopy needed to:

**(A)** provide shade to the Watercourse or lake to maintain daily and seasonal water temperatures within the preferred range for anadromous salmonids or listed species where they are present or could be restored; and

**(B)** provide a deciduous vegetation component to the Riparian zone for aquatic nutrient inputs.

**(8)** Prevent significant increases in peak flows or large flood frequency.

**(b) Pre-plan adverse cumulative watershed effects -** Pre-plan adverse cumulative watershed effects on the populations and habitat of anadromous salmonids shall be considered. The plan shall specifically acknowledge or refute that such effects exist. When the proposed Timber Operations, in combination with any identified pre-plan watershed effects, will add to significant adverse existing cumulative watershed effects, the plan shall set forth measures to effectively reduce such effects.

**(c) Objectives for Timber Operations or silvicultural prescriptions in WLPZs** - Any timber operation or silvicultural prescription within any Watercourse or lake protection zone shall have protection, maintenance, or restoration of the beneficial uses of water, and properly functioning salmonid habitat and listed aquatic or Riparian-associated species as significant objectives. Specific objectives are described below.

**(1) Core Zone**: The primary objective for this zone is streamside bank protection to promote bank stability, wood recruitment by bank erosion, and canopy retention. Timber Operations are generally excluded from this zone and limited to actions which meet the objectives stated above or improve salmonid habitat consistent with 14 CCR § 916.9 [936.9, 956.9] subsections (a) and (c).

**(2) Inner Zone**: The primary objective for this zone is to develop a large number of trees for large wood recruitment, to provide additional shading, to develop vertical structural diversity, and to provide a variety of species (including hardwoods) for nutrient input. This is accomplished through the establishment of high basal area and canopy retention by retaining or more rapidly growing a sufficient number of large trees. Additional specific objectives include locating large trees retained for wood recruitment nearer to the Core Zone and maintaining or improving salmonid habitat on flood prone areas and CMZs when present. Timber Operations within WLPZs are limited to those actions which meet the objectives stated above or to improve salmonid habitat consistent with 14 CCR § 916.9 [936.9, 956.9] subsection (a) and (c).

**(3) Outer Zone**: The primary objective for this zone is to buffer the Inner and Core Zones and to provide the following functions: 1) wind resistance where windthrow is common or likely to occur, 2) additional wood recruitment, 3) microclimate control in the Inner or Core Zones for purposes other than limiting water temperature change, 4) habitat for terrestrial wildlife species that depend on Riparian areas, and 5) an additional sediment filter on steeper slopes with high or moderate erosion hazard rating when tractor operations are proposed.

**(4) Class II Large Watercourses (Class II-L)**: The primary objective is to maintain, protect or restore the values and functions of Class II-L type Watercourses described below. Class II-L Watercourses can have greater individual effects on receiving Class I Watercourse temperature, sediment, nutrient, and large wood loading than Class II standard (Class II-S) Watercourses due to larger channel size, greater magnitude and duration of flow, and overall increased transport capacity for watershed products. Other objectives stated in 14 CCR § 916.9 [936.9, 956.9] subsections (c )(1) and (2) above for the Core Zone and Inner Zone are also desired objectives for Class II-L type Watercourses.

**(5)** A primary objective for all WLPZs is to implement practices to maintain, protect and contribute to restoration of properly functioning salmonid habitat and repair conditions detrimental to the species or species habitat. Practices to meet this objective include, but are not limited to, thinning for increased conifer growth; felling or Yarding trees for wood placement in the channel; restoration of conifer deficient areas; management to promote a mix of conifers and hardwoods; Abandonment and upgrading of non-functioning or high risk roads, Watercourse crossings, tractor roads, and Landings; and fuel hazard reduction activities that will reduce fire hazards and stand replacing wildfires which would result in significant adverse effects to salmonid species or Riparian habitat.

**(d) Measures to Offset Adverse Watershed Effects –**

**(1)** The plan shall fully describe: (A) the type and location of each measure needed to fully offset sediment loading, thermal loading, and potential significant adverse watershed effects from the proposed Timber Operations, and (B) the person(s) responsible for the implementation of each measure, if other than the Timber Operator.

**(2)** In proposing, reviewing, and approving such measures, preference shall be given to the following: (A) measures that are both onsite (i.e., on or near the plan area) and in-kind (i.e., erosion control measures where sediment is the problem), and (B) sites that are located to maximize the benefits to the Impacted portion of a Watercourse or lake. Out-of-kind measures (i.e., improving shade where sediment is the problem) shall not be approved as meeting the requirements of this subsection.

**(e) Channel Zone requirements**

**(1)** There shall be no Timber Operations within the Channel Zone with the following exceptions:

**(A)** Actions directed to improve salmonid habitat with review and concurrence by CDFW.

**(B)** Actions necessary for the construction, reconstruction, removal, or Abandonment of approved Watercourse crossings.

**(C)** Actions necessary for the protection of public health, safety and general welfare. This includes actions necessary to protect infrastructure facilities including, but not limited to, roads, bridges, powerlines, utilities, water drafting structures, homes, and other Approved and Legally Permitted Structures.

**(D)** Actions to allow for full suspension Cable Yarding when necessary to transport logs through the Channel Zone.

**(E)** Class III Watercourses consistent with 14 CCR § 916.9 [936.9, 956.9] subsection (h)(7).

**(F)** Actions reviewed by the RWQCB which seek to correct or remediate adverse Impacts to the beneficial uses of water.

**(2)** In all instances where trees are proposed to be felled within the Channel Zone, a base mark shall be placed below the cut line of the harvest trees within the zone. Such marking shall be completed by the RPF that prepared the plan, or a supervised designee, prior to the preharvest inspection.

**(f) Class I Watercourses –**

**(1)** For Class I Watercourses, where fish are always or seasonally present or where fish habitat is restorable, any plan involving Timber Operations within the WLPZ shall contain the following information:

**(A)** Clear and enforceable specifications of Timber Operations within the Class I WLPZ, including a description of how any disturbance, or log or tree cutting and removal shall be carried out to conform with 14 CCR §§ 916.2 [936.2, 956.2], subsection (a) and 916.9 [936.9, 956.9], subsection (a).

**(B)** Documentation of how proposed harvesting in the WLPZ contributes to the objectives of each zone stated in 14 CCR § 916.9 [936.9, 956.9], subsection (c) and other goals in 14 CCR § 916.9 [936.9, 956.9], subsection (a)(1)-(8). Documentation shall include the examinations, analysis, and other requirements listed in 14 CCR § 916.4 [936.4, 956.4], subsection (a).

**(2) Class I Watercourses with confined channels in watersheds in the coastal anadromy zone:** The following are the minimum requirements for WLPZ delineation and Timber Operations in Class I WLPZs in watersheds in the coastal anadromy zone where confined channels are present. WLPZ width ranges from 100-150 feet slope distance, depending on the silvicultural system applied above the WLPZ. Three Zones are established within the WLPZs: The Core Zone is nearest to the water, the Inner Zone is the middle zone contiguous to the Core Zone, and the Outer Zone is furthest from the water and contiguous to the Inner Zone. Graphic depictions of zones and the abbreviated descriptions of the silvicultural prescriptions and operational requirements are shown in Figure 5. Table 1 specifies the enforceable standards to be used for protection of Class I Watercourses for the area included in the coastal anadromy zone:

**(A) Core Zone:** The minimum width of the Core Zone shall be 30 feet measured from the Watercourse Transition Line or Lake Transition Line. No Timber Operations are permitted in this zone except for those listed in 14 CCR § 916.9 [936.9, 956.9], subsection (e)(1)(A)-(F), or those approved pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9, 956.9], subsections (s), (t), and (u).

**(B) Inner Zone:** The minimum width of the Inner zone shall be 70 feet measured from the landward edge of Core Zone. Timber Operations are permitted in this zone when conducted to meet the goals of this section, objectives for the Inner Zone in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(2), pursuant to 14 CCR § 916.9 [936.9, 956.9], subsections (e) (1)(A)-(F), or pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Harvesting prescriptions should focus on practices that use thinning from below. Silvicultural systems for harvesting are limited to the use of commercial thinning or single tree selection modified to meet the following requirements:

**1.** When commercial thinning is used, the QMD of conifer trees greater than 8 inches dbh in the preharvest project area shall be increased in the postharvest stand.

**2**. Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9, 956.9], subsections (s), (t), and (u).

**3**. Postharvest stand shall have a minimum 80% overstory canopy cover in the Coast and Southern Forest Districts of the coastal anadromy zone and a minimum 70% overstory canopy cover in the Northern Forest District of the coastal anadromy zone. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.

**4**. Postharvest stand shall retain the 13 largest conifer trees (live or dead) on each acre of the area that encompasses the Core and Inner Zones.

**5**. Large trees retained to meet 14 CCR § 916.9 [936.9, 956.9], subsections (f)(2)(B)(1.) and (3.) above that are the most conducive to recruitment to provide for the beneficial functions of Riparian zones (e.g., trees that lean towards the channel, have an unimpeded fall path toward the Watercourse, are in an advanced state of decay, are located on unstable areas or downslope of such unstable areas, or have undermined roots) are to be given priority to be retained as future recruitment trees.

**(C) Outer Zone:** The minimum width of the Outer Zone shall be 50 feet measured from the landward edge of Inner Zone. This zone is required where evenaged regeneration methods, seed tree removal, shelterwood removal, alternative prescriptions declared under 14 CCR § 913.6 [933.6. 953.6], subsection (b)(3) as most related to any evenaged silvicultural system**,** variable retention or rehabilitation of understocked areas will be utilized contiguous to the Watercourse and lake protection zone. Timber Operations are permitted in this zone when conducted to meet the goals of this section, including those for the Outer Zone in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(3), and (5), pursuant to 14 CCR § 916.9 [936.9], subsection (e)(1)(A)-(F), or pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Silvicultural systems for harvesting are limited to the use of commercial thinning or single tree selection modified to meet the following requirements:

**1**. Postharvest stand shall have a minimum 50% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.

**2**. Priority shall be given to retain wind firm trees.

**(D) Preferred Management Practices in the Inner and Outer Zones:** When Timber Operations are considered pursuant to 14 CCR §§ 916.3 [936.3, 956.3], subsection (c) and 916.4 [936.4, 956.4], subsection (d), the following Preferred Management Practices should be considered for inclusion in the Plan by the RPF and by the Director:

**1**. Preflagging or marking of any skid trails before the preharvest inspection;

**2.** Heavy equipment should be limited to slopes less than 35% with low or moderate EHR;

**3**. Use feller bunchers or hydraulic heel boom loaders which do not drag/skid logs through the zone;

**4**. Minimize turning of heavy equipment which would result in increased depth of ground surface depressions; and

**5**. Use mechanized harvesting equipment which delimb harvested trees on pathway over which heavy equipment would travel.

**(E) Additional Special Operating Zone:** For situations contiguous to the Outer Zone where evenaged regeneration methods, seed tree removal step, shelterwood removal step, alternative prescriptions declared under 14 CCR § 913.6 [933.6, 953.6], subsection (b)(3) as most related to any evenaged silvicultural system**,** variable retention or rehabilitation of understocked areas with the same effect as a clearcut is used, slopes are greater than 50%, and the Outer Zone is located on any north aspect, the RPF shall consider the need for a special operating zone for purposes of shading the Watercourse from direct low angle solar radiation from beneath the overstory canopy that is expected to have a potential significant adverse Impact on water temperature. When the special operating zone is needed, the special operating zone shall retain understory and mid-canopy conifers and hardwoods. These trees shall be protected during falling, Yarding and Site Preparation to the extent feasible. Width of the zone shall be 50 feet measured from the landward edge of the Outer Zone.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Table 1: Procedure for Determining WLPZ Widths and Protective Measures Class I WLPZs - Confined Channels - Coastal Anadromy Zone** | | | | | | |
| **Pursuant to 14 CCR 916.9[936.9,956.9](f)(2)** | | | | | | |
| **Zone Designation** | **Zone width**  **(ft.)** | **Overstory Canopy Cover** | | **Large Tree Retention** | **Silviculture Requirements** | **Operational Requirements** |
| **Channel Zone** | Variable | Retain all trees except per 916.9 [936.9, 956.9](e)(1) A-  F or 916.9 [936.9 956.9] (v) | | Retain all trees except per 916.9  [936.9,  956.9](e) (1)  A-F or 916.9  [936.9 956.9]  (v) | Retain all trees except per 916.9  [936.9, 956.9] (e)  (1) A-F or 916.9  [936.9, 956.9](v) | No Timber Operations except per 916.9 [936.9,  956.9] (e) (1)A-F  or 916.9 [936.9, 956.9](v); |
| **Core Zone**  per 916.9  [936.9  956.9] (f)(2)(A) | 30 ft. | Retain all trees except per 916.9 [936.9, 956.9](e) (1)A-  F or 916.9 [936.9 956.9] (v) | | Retain all trees except per 916.9  [936.9, 956.9](e)(1) A-F or 916.9  [936.9 956.9]  (v) | Retain all trees except per 916.9  [936.9, 956.9] (e)  (1) A-F or 916.9  [936.9, 956.9](v); no  sanitation salvage except 916.9 (s)(t)and (u). | No Timber Operations except per 916.9 [936.9,  956.9] (e) (1) A-F  or 916.9 [936.9, 956.9](v); |
| **Inner Zone**  per 916.9  [936.9  956.9] (f)(2)(B) | 70 ft. | 80% Coast and Southern Forest District of Coastal Anadromy Zone per 916.9 [936.9  956.9] (f)(2)(B)3. | 70% in Northern Forest District of Coastal Anadromy Zone per 916.9 [936.9  956.9] (f)(2)(B)3. | 13 largest trees /ac. per 916.9 [936.9  956.9] (f)(2)(B)4. | Increase QMD;  No sanitation salvage except 916.9 (s)(t)and (u); commercial thinning or single tree selection only. | Preferred Management Practices in 916.9  [936.9, 956.9]  (f)(2)(D) |
| **Outer Zone** |  |  | |  |  |  |
| per 916.9 |  |  | |  |  |  |
| [936.9 |  |  | |  |  |  |
| 956.9] |  |  | |  |  |  |
| (f)(2)(C)  Outer Zone applicable only where  even-aged | 50 ft. | 50%  per 916.9 [936.9 956.9] (f)(2)(C).1. | | NA | Commercial thinning or single tree selection only; Retain wind firm trees. | Preferred Management Practices in 916.9  [936.9, 956.9]  (f)(2)(D) |
| regeneration |  |  | |  |  |  |
| used |  |  | |  |  |  |
| adjacent to |  |  | |  |  |  |
| the WLPZ |  |  | |  |  |  |
| **Special** |  |  | |  | SOZ applicable only where even-aged regeneration used adjacent to the WLPZ **.** Retain understory and midstory trees per 916.9 [936.9, 956.9]  (f)(2)(E) |  |
| **Operating** |  |  | |  |  |
| **Zone** |  |  | |  |  |
| per 916.9  [936.9  956.9] | 50 ft. | NA | | NA | All other Forest Practice Rules |
| (f)(2)(E) |  |  | |  |  |

**(3) Class I Watercourses with flood prone areas or Channel Migration Zones:** The following are the minimum requirements for WLPZ delineation and Timber Operations in Class I WLPZs in locations where flood prone areas and/or CMZs are present. WLPZ widths vary depending on the extent of the flood prone area and silvicultural system applied contiguous to the WLPZ.

There are up to 5 zones established within the WLPZ: The CMZ (when present), the Core Zone is the portion of the flood prone area nearest the water (and contiguous to the CMZ when present), the Inner Zone A is contiguous to the Core Zone, the Inner Zone B is contiguous to the Inner Zone A and extends to the landward edge of the flood prone area, and the Outer Zone is the hillslope area and is contiguous to the Inner Zone B and landward perimeter of the flood prone area. Table 2 specifies the enforceable standards to be used for protection of Class I Watercourses with flood prone areas or Channel Migration Zones. The zones and the abbreviated descriptions of the silvicultural prescriptions, and operational requirements are shown in Figure 6.

**(A) Channel Migration Zone:** When a CMZ is present, no Timber Operations are permitted in this zone except for those listed in § 916.9 [936.9, 956.9], subsection (e)(1)(A)-(F), or pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v).

**(B) Core Zone:** The minimum width of the Core Zone shall be 30 feet measured from the Watercourse Transition Line or Lake Transition Line. No Timber Operations are permitted in this zone except for those listed in 14 CCR § 916.9 [936.9, 956.9], subsection (e)(1)(A)-(F), or those approved pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9, 956.9], subsections (s), (t), and (u).

**(C) Inner Zone A:** The Inner Zone A generally encompasses the portion of the flood prone area from 30 feet beyond the WTL (Core Zone perimeter) up to 150 feet from the WTL. The minimum width of the Inner Zone A shall be the greater of the distance from the landward edge of the Core Zone to the landward edge of the Inner Zone A or 70 feet. The maximum width is 120 feet. Timber Operations are permitted in this zone when conducted to meet the goals of this section, including those for the Inner Zone in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(2), pursuant to 14 CCR § 916.9 [936.9, 956.9], subsections (e)(1)(A)-(F) or pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Harvesting prescriptions should focus on practices that use thinning from below. Silvicultural systems for harvesting are limited to the use of commercial thinning or single tree selection modified to meet the following requirements:

**1.** When commercial thinning is used, the QMD of conifer trees greater than 8 inches dbh in the preharvest project area shall be increased in the postharvest stand.

**2**. Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9, 956.9], subsections (s), (t), and (u).

**3**. Postharvest stand shall have a minimum 80% overstory canopy cover in the Coast and Southern Forest Districts of the coastal anadromy zone and a minimum 70% overstory canopy cover in all other watersheds with listed anadromous salmonids. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.

**4**. Postharvest stand shall retain the 13 largest conifer trees (live or dead) on each acre of the area that encompasses the Core and Inner Zones.

**5**. Large trees retained to meet 14 CCR § 916.9 [936.9, 956.9], subsections (f)(3)(C)(1.) and (3.) above that are the most conducive to recruitment to provide for the beneficial functions of Riparian zones (e.g. trees that lean towards the channel, have an unimpeded fall path toward the Watercourse, are in an advanced state of decay, are located on unstable areas or downslope of such unstable areas, or have undermined roots) are to be given priority to be retained as future recruitment trees.

**(D) Inner Zone B:** The Inner Zone B is applicable when there are very wide flood prone areas. The Inner Zone B encompasses the portion of the flood prone area from the landward edge of the Inner Zone A (i.e., 150 feet from the WTL) to the landward edge of the flood prone area. The landward edge of the Inner Zone B (i.e., the landward perimeter of the flood prone area) shall be established in accordance with flood prone area definitions in 14 CCR § 895.1. Timber Operations are permitted in this zone when conducted to meet the goals of this section, including those for the Inner Zone in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(2), 14 CCR § 916.9 [936.9, 956.9], subsection (e)(1)(A)-(F), or pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Silvicultural systems for harvesting are limited to the use of commercial thinning or single tree selection modified to meet the following requirements:

**1.** Postharvest stand shall retain the 13 largest conifer trees (live or dead) on each acre of the area that encompasses the Core and Inner Zones.

**2.** Postharvest stand shall have a minimum 50% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.

**(E) Preferred Management Practices in the Inner Zone A and B of flood prone areas.** When Timber Operations are considered pursuant to 14 CCR §§ 916.3 [936.3, 956.3], subsection (c) and 916.4 [936.4, 956.4], subsection (d), the following Preferred Management Practices should be considered for inclusion in the Plan by the RPF and by the Director when Timber Operations are conducted in the Inner Zones of the flood prone area.

**1. Implement actions to improved salmonid habitat conditions:** Implement maintenance and repair actions that contribute to improving undesired existing conditions and contribute to restoring properly functioning salmonid habitat.

**2. Minimize Yarding and Skidding**: Skid trails, Yarding corridors, falling activities, and log Yarding should not alter the natural drainage or flow patterns. EEZ of 30 feet should be applied near side channels and areas of ponding. Very limited, pre-flagged, pre-approved prior to falling skid trails shall be used and abandoned so as to minimize risk of becoming new secondary channels by flood flows. Minimize or exclude, to the extent feasible, tractor Skidding/crossings over, through, or along secondary channels (protection of overflow channels is a key element). Locate tractor roads on high ground areas to the greatest extent possible. When feasible, use feller bunchers which do not drag/skid logs through the zone, minimize turning of equipment which would result in increased depth of ground surface depressions, and utilize mechanized harvesting equipment which delimbs harvested trees on the pathway over which equipment would travel. Cable Yarding corridors should be located at wide intervals consistent with practices that use lateral Yarding. Full suspension should be used when possible.

**3. Minimize Soil Erosion and Prevent Discharge**: Design Timber Operations to avoid turbid runoff by treating any ground disturbance greater than 100 square feet. Operations shall be conducted only in dry soil conditions. Avoid disturbance of vegetation not intended for harvest that could increase the likelihood of erosion or damages the reinforcing root network on the channel banks, including any secondary overflow channel. Restore any tracks or trails to an original surface.

**4. Avoid Slash concentration and Site Preparation:** Logging Slash shall not be disposed of or concentrated in side channels. When Slash is treated within the flood prone areas, scatter Slash and avoid piling or other concentrations that may obstruct flows in side channels. When feasible, concentrate/mulch Slash in tractor roads. No Mechanical Site Preparation, Broadcast Burning or pile burning.

**5. Delineate Zone on the Ground:** Locations of all WLPZ zones and CMZs shall be designated on the ground.

**6. Avoid Use of Water Drafting Sites:** Water drafting sites shall be located outside flood prone areas when feasible (exceptions could include, but are not limited to, drafting from an existing Watercourse crossing that is appropriately engineered to facilitate properly functioning salmonid habitat and those sites designed and permitted pursuant to a waste discharge or Stream alteration permits.

**7. Avoid Disturbance to Critical Flood Prone Area Habitat**: Avoid disturbance of abandoned meanders, oxbox lakes, or other features that provide off-channel habitat for fish during flood flows. Avoid activities that could increase potential for diversion or avulsion of Stream flow out of existing channel, including breaching or lowering the elevation of natural levees. Retain adequate hydraulic roughness provided by trees on the floodplain surface, thereby slowing flood water velocity on floodplains, attenuating peak flood flows, and allowing sediment to be deposited. Retain existing deciduous hardwoods preferential to anadromous salmonid species and down large woody debris.

**(F) Outer Zone:** The width of the Outer Zone is 50 feet measured from the landward edge of the Inner Zone. This zone is required where evenaged regeneration methods, seed tree removal, shelterwood removal, alternative prescriptions declared under 14 CCR §913.6 [933.6, 956.6], subsection (b)(3) as most related to any evenaged silvicultural system**,** variable retention or rehabilitation of understocked areas will be utilized contiguous to the Watercourse and lake protection zone. Timber Operations are permitted in this zone when conducted to meet the goals of this section, including those for the Outer Zone in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(3) and (5), pursuant to 14 CCR § 916.9 [936.9, 956.9] subsection (e)(1)(A)-(F), or pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Silvicultural systems for harvesting are limited to the use of commercial thinning or single tree selection modified to meet the following requirements:

**1**. Postharvest stand shall have a minimum 50% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.

**2**. Priority shall be given to retain wind firm trees.

**(4) Class I Watercourses with confined channels outside watersheds in the coastal anadromy zone:** The following are the minimum requirements for WLPZ delineation and Timber Operations in Class I WLPZs in locations outside of watersheds in the coastal anadromy zone where confined channels are present. WLPZ width is 100 feet slope distance, with an additional 25 foot ELZ depending on the silvicultural system applied contiguous to the WLPZ. Three zones are established within the WLPZs: The Core Zone is nearest to the water, the Inner Zone is the middle zone contiguous to the Core Zone, and the Outer Zone is furthest from the water and contiguous to the Inner Zone. Graphic depiction of the zones and the abbreviated descriptions of the silvicultural prescriptions and operational requirements are shown in Figure 7. Table 3 specifies the enforceable standards to be used for protection of Class I Watercourses for the area outside the coastal anadromy zone:

**(A) Core Zone:** The minimum width of the Core Zone shall be 30 feet measured from the Watercourse Transition Line or Lake Transition Line. No Timber Operations are permitted in this zone except for those listed in 14 CCR § 916.9 [936.9, 956.9], subsection (e)(1)(A)-(F), or those approved pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9, 956.9], subsections (s), (t), and (u).

**(B) Inner Zone:** The minimum width of the Inner Zone shall be 40 feet measured from the landward edge of Core Zone. Timber Operations are permitted in this zone when conducted to meet the goals of this section, including those for the Inner Zone in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(2), pursuant to 14 CCR § 916.9 [936.9, 956.9], subsections (e)(1) (A)-(F) or pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Harvesting prescriptions should focus on practices that use thinning from below. Silvicultural systems for harvesting are limited to the use of commercial thinning or single tree selection modified to meet the following requirements:

**1.** When commercial thinning is used, the QMD of conifer trees greater than 8 inches dbh in the preharvest project area shall be increased in the postharvest stand.

**2**. Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9, 956.9], subsections (s), (t), and (u).

**3**. Postharvest stand shall have a minimum 70% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.

**4**. Postharvest stand shall retain the 7 largest conifer trees (live or dead) on each acre of the area that encompasses the Core and Inner Zones.

**5.** Large trees retained to meet 14 CCR § 916.9 [936.9, 956.9], subsections (f)(4)(B)(1.) and (3.) above that are the most conducive to recruitment to provide for the beneficial functions of Riparian zones (e.g., trees that lean towards the channel, have an unimpeded fall path toward the Watercourse, are in an advanced state of decay, are located on unstable areas or downslope of such unstable areas, or have undermined roots) are to be given priority to be retained as future recruitment trees.

**(C) Outer Zone:** The minimum width of the Outer Zone shall be 30 feet measured from the landward edge of the Inner Zone. When evenaged regeneration methods, seed tree removal, shelterwood removal, alternative prescriptions declared under 14 CCR § 913.6 [933.6, 953.6], subsection (b)(3) as most related to any evenaged silvicultural system**,** variable retention, or rehabilitation will be utilized contiguous to Watercourse and lake protection zones, an additional 25 foot ELZ is required contiguous to the Outer Zone. Timber Operations are permitted in the Outer Zone when conducted to meet the goals of this section, including those for the Outer Zone in 14 CCR § 916.9 [936.9, 956.9], subsection (c)(3) and (5) pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (e)(1)(A)-(F), or pursuant to 14 CCR § 916.9 [936.9, 956.9],

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| **Table 2: Procedure for Determining WLPZ Widths and Protective Measures Class I WLPZs – with flood prone areas or channel migration zones** | | | | | | |
| **Pursuant to 14 CCR 916.9 [936.9, 956.9] (f)(3)** | | | | | | |
| **Zone Designation** | **Zone width (ft.)** | **Overstory Canopy Cover** | | **Large Tree Retention** | **Silviculture Requirements** | **Operational Requirements** |
| **Channel Zone or Channel Migration Zone**  per 916.9  [936.9 956.9] (f)(3)(A) | Variable | Retain all trees except per 916.9 [936.9, 956.9](e) (1)A-F  or 916.9 [936.9 956.9] (v) | | Retain all trees except per 916.9  [936.9,  956.9](e)  (1)A-F or 916.9 [936.9  956.9] (v) | Retain all trees except per 916.9  [936.9, 956.9] (e)  (1) A-F or 916.9  [936.9, 956.9](v) | No Timber Operations except per 916.9 [936.9,  956.9] (e)(1) A-F  or 916.9 [936.9, 956.9](v); |
| **Core Zone**  per 916.9  [936.9 956.9] (f)(3)(B) | 30 ft. | Retain all trees except per 916.9 [936.9, 956.9](e) (1)A-F  or 916.9 [936.9 956.9] (v) | | Retain all trees except per 916.9  [936.9,  956.9](e)  (1)A-F or 916.9 [936.9  956.9] (v) | Retain all trees except per 916.9  [936.9, 956.9] (e)  (1) A-F or 916.9  [936.9, 956.9](v);  no sanitation salvage except  916.9 (s)(t)and (u). | No Timber Operations except per 916.9 [936.9,  956.9] (e) (1)A-F  or 916.9 [936.9, 956.9](v); |
| **Inner Zone A**  per 916.9  [936.9 956.9] (f)(3)(C) | Minimum 70 ft. Maximum 120 ft. | 80% Coast and Southern Forest District of Coastal Anadromy Zone per 916.9  [936.9 956.9] (f)(3)(C)3. | 70% in all other watersheds per 916.9  [936.9 956.9] (f)(3)(C)3. | 13 largest trees /ac. per 916.9 [936.9  956.9] (f)(3)(C)4. | Increase QMD; No sanitation salvage except  916.9 (s)(t)and (u); commercial thinning  or single tree selection only. | Preferred Management Practices in 916.9  [936.9, 956.9]  (f)(3)(E) |
| **Inner Zone B**  per 916.9  [936.9 956.9] (f)(3)(D) | Variable: distance from Inner Zone A to end of FPA. | 50% | | 13 largest trees /ac. per 916.9 [936.9  956.9] (f)(3)(D)1. | Increase QMD; No sanitation salvage except  916.9 (s)(t)and (u); commercial thinning  or single tree selection only. | Preferred Management Practices in 916.9  [936.9, 956.9]  (f)(3)(E) |
| **Outer Zone**  per 916.9  [936.9 956.9] (f)(3)(F)  Applicable only where even-aged regeneration used adjacent to the WLPZ | 50 ft. | 50% | | NA | Commercial thinning or single tree selection only; Retain wind firm trees. | Preferred Management Practices in 916.9  [936.9, 956.9]  (f)(3)(E) |

subsection (v). Silvicultural systems for harvesting are limited to the use of commercial thinning or single

tree selection modified to meet the following requirements:

**1**. Postharvest stand shall have a minimum 50% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.

**2**. Priority shall be given to retain wind firm trees.

**(D) Preferred Management Practices in the Inner and Outer Zone:**

When Timber Operations are considered pursuant to 14 CCR §§ 916.3 [936.3, 956.3], subsection (c) and 916.4 [936.4, 956.4], subsection (d), the following Preferred Management Practices should be considered for inclusion in the Plan by the RPF and by the Director:

**1**. Preflagging or marking of any skid trails before the preharvest inspection;

**2.** Heavy equipment should be limited to slopes less than 35% with low or moderate EHR;

**3**. Use feller bunchers or hydraulic heel boom loaders which do not drag/skid logs through the zone;

**4**. Minimize turning of heavy equipment which would result in increased depth of ground surface depressions; and

**5**. Use mechanized harvesting equipment which delimb harvested trees on pathway over which heavy equipment would travel.

**(g) Class II Watercourses –**

The following are the minimum requirements for Class II WLPZ delineation and Timber Operations. Differing Rules are specified for watersheds in the coastal anadromy zone, the Southern Subdistrict of the Coast Forest District, and areas outside the coastal anadromy zone. WLPZ width ranges from 50 to 100 feet slope distance, depending on side slope steepness in the WLPZ and the Watercourse type. Additional site-specific measures may be incorporated into the plan as necessary to protect beneficial uses of water relative to Riparian function pursuant to 14 CCR § 916.2(c), 916.4(a)(1), and 916.9 (b).

**(1) Determine the Class II Watercourse Type:** Class II Watercourses are composed of two types - Class II-S (standard) Watercourses and Class II-L (large) Watercourses. Class II-S Watercourses are those classified as Class II Watercourses pursuant to 14 CCR § 916.5 [936.5, 956.5], but do not possess the characteristics of a Class II-L Watercourse.

**(A)** A Class II-L Watercourse is defined as a Class II Watercourse having either of the following characteristics:

**1.** A contributing drainage area of ≥100 acres in the Coast Forest District, or ≥150 acres for the Northern and Southern Forest Districts, as measured from the confluence of the receiving Class I Watercourse.

**2.** An average Active Channel width of five feet (5 ft.) or greater near the confluence with the receiving Class I Watercourse. Where field measurements are necessary to make this determination, Active Channel width measurements shall be taken at approximately fifty foot (50 ft.) intervals beginning at the point where the Class II Watercourse intersects the Class I WLPZ boundary and moving up the Class II Watercourse for a distance of approximately two-hundred feet (200 ft.). The combined average of these five (5) measurements shall be used to establish the average Active Channel width. Measurement points may be adjusted based upon site-specific conditions, and should occur at riffle locations and outside the influence of Watercourse crossings to the extent feasible.

**(B)** All Class II-L Watercourses shall incorporate requirements stated in 14 CCR § 916.9 [936.9, 956.9], subsection (g)(2) for a distance of one-thousand feet (1,000 ft.), or total length of Class II, whichever is less, as measured from the confluence with a Class I Watercourse. The RPF shall include the mapped location of Class II-L Watercourse segments receiving protections pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (g)(2) in the plan area. Where such Class II-L Watercourses branch prior to the end of the one-thousand foot (1,000 ft.) protection distance, the branch that meets or exceeds the drainage area standards of 14 CCR § 916.9 [936.9, 956.9], subsection (g)(1)(A) shall receive the remainder of the one-thousand foot (1,000 ft.) protection distance. If two or more branches meet or exceed the drainage area standards of 14 CCR § 916.9 [936.9, 956.9], subsection (g)(1)(A)1., then the remainder of the one-thousand foot (1,000 ft.) protection distance shall be applied to all branches exceeding the standard. If no individual branch exceeds the drainage area standards of 14 CCR § 916.9 [936.9, 956.9], subsection (g)(1)(A)1., then the single branch with the largest drainage area shall receive the remainder of the one-thousand foot (1,000 ft.) protection distance.

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| **Table 3: Procedure for Determining WLPZ Widths and Protective Measures Class I WLPZs - Confined Channels - Outside the Coastal Anadromy Zone** | | | | | |
| **Pursuant to 14 CCR 916.9[936.9,956.9](f)(4)** | | | | | |
| **Zone Designation** | **Zone width (ft.)** | **Overstory Canopy Cover** | **Large Tree Retention** | **Silviculture Requirements** | **Operational Requirements** |
| **Channel Zone** | Variable | Retain all trees except per 916.9 [936.9,  956.9](e)(1) A-F or 916.9  [936.9 956.9]  (v) | Retain all trees except per 916.9  [936.9, 956.9](e)(1) A-F or 916.9  [936.9 956.9]  (v) | Retain all trees except per 916.9  [936.9, 956.9] (e)(1)  A-F or 916.9 [936.9, 956.9](v) | No Timber Operations except per 916.9 [936.9, 956.9] (e)(1) A-F or  916.9 [936.9, 956.9](v); |
| **Core Zone**  per 916.9  [936.9 956.9] (f)(4)(A) | 30 ft. | Retain all trees except per 916.9 [936.9,  956.9](e)(1) A-F or 916.9  [936.9 956.9]  (v) | Retain all trees except per 916.9  [936.9, 956.9](e)(1) A-F or 916.9  [936.9 956.9]  (v) | Retain all trees except per 916.9  [936.9, 956.9] (e)(1)  A-F or 916.9 [936.9, 956.9](v); no  sanitation salvage except 916.9  (s)(t)and (u). | No Timber Operations except per 916.9 [936.9, 956.9] (e)(1) A-F or  916.9 [936.9, 956.9](v); |
| **Inner Zone**  per 916.9  [936.9 956.9] (f)(4)(B) | 40 ft. | 70%  per 916.9  [936.9 956.9] (f)(4)(B)3. | 7 largest trees  /ac. per 916.9  [936.9 956.9] (f)(4)(B)4. | Increase QMD;  No sanitation salvage except 916.9 (s)(t)and (u); commercial thinning  or single tree selection only. | Preferred Management Practices in 916.9 [936.9,  956.9] (f)(4)(D) |
| **Outer Zone** |  | 50% |  | Commercial thinning |  |
| per 916.9  [936.9 956.9] (f)(4)(C)1. | 30 ft. | per 916.9  [936.9 956.9] (f)(4)(C).1. | NA | or single tree selection only; Retain wind firm trees. | Preferred Management Practices in 916.9 [936.9,  956.9] (f)(4)(D) |
| **ELZ** |  |  |  |  |  |
| Applicable only where even-aged regeneration used adjacent to the WLPZ | 25 ft. | NA | NA | All other Forest Practice Rules | All other Forest Practice Rules |

**(C)** The above method for determination of Class II Watercourse type shall sunset on January 1, 2023 pending further evaluation of the efficacy of Class II WLPZ widths and operational requirements in relationship to Watercourse characteristics and achievement of the goals specified in 14 CCR § 916.9 [936.9, 956.9] subsection (a).

**(2) Class II WLPZ Widths and Operational Requirements:** All Class II WLPZs shall be composed of two zones regardless of the Watercourse type: a Core Zone and an Inner Zone. The Core Zone is nearest to the water; the Inner Zone is contiguous to the Core Zone and is furthest from the water. The width of the Core and Inner Zones vary depending on the following three factors: (i) side slope steepness in the WLPZ, (ii) whether the Watercourse is a Class II-S or Class II-L Watercourse type, and (iii) whether the Watercourse is within a watershed in the coastal anadromy zone or outside the coastal anadromy zone. Graphic depictions of zones and the abbreviated descriptions of the silvicultural prescriptions and operational requirements are shown in Figure 8.

**(A) Core Zone:** The width of the Core Zone varies from 10 feet to 30 feet measured from the Watercourse or Lake Transition Line. When established, no Timber Operations are permitted in this zone except for those listed in 14 CCR § 916.9 [936.9, 956.9], subsection (e)(1)(A)-(F), or practices approved pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v). Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9, 956.9], subsections (s), (t), and (u). Table 4 summarizes the minimum width for the Core Zone.

**(B) Inner Zone:** The widths of the Inner Zone vary from 35 feet to 90 feet and shall be measured from the landward edge of Core Zone or WTL, whichever is greater. Timber Operations are permitted in this zone when conducted to meet the goals of this section, including those for the Inner Zone in 14 CCR § 916.9 [936.9, 956.9], subsections (c)(2) and (4), pursuant to 14 CCR § 916.9 [936.9, 956.9], subsections (e)(1)(A)-(F) or pursuant to 14 CCR § 916.9 [936.9, 956.9] subsection (v). Harvesting prescriptions should focus on practices that use thinning from below. Inner Zone widths are summarized in Table 4.

**1. Class II-S Watercourses**: Any Class II-S Watercourses shall receive protection in conformance with 14 CCR §§ 916 [936, 956] through 916.7 [936.7, 956.7] in addition to the requirements listed under 14 CCR §§ 916.9 [936.9, 956.9] (g)(2)(A) and (B).

**2. Class II-L Watercourses in the coastal anadromy zone:** Silvicultural systems for harvesting are limited to the use of commercial thinning or single tree selection modified to meet the following requirements:

**(i)** When commercial thinning is used, the QMD of conifer trees greater than 8 inches dbh in the preharvest project area shall be increased in the postharvest stand.

**(ii)** Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9, 956.9], subsections (s), (t) and (u).

**(iii)** Postharvest stand shall have a minimum 80% overstory canopy cover in the Coast and Southern Forest Districts of the coastal anadromy zone and a minimum 70% overstory canopy cover in the Northern Forest District of the coastal anadromy zone. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.

**(iv)** Postharvest stand shall retain the 13 largest conifer trees (live or dead) on each acre of the area that encompasses the Core and Inner Zones.

**(v)** Large trees retained to meet 14 CCR § 916.9 [936.9, 956.9], subsections (g)(2)(B)(2.)(i) and (iii) above that are the most conducive to recruitment to provide for the beneficial functions of Riparian zones (e.g., trees that lean towards the channel, have an unimpeded fall path toward the Watercourse, are in an advanced state of decay, are located on unstable areas or downslope of such unstable areas, or have undermined roots) are to be given priority to be retained as future recruitment trees.

**3. Class II-L Watercourses outside watersheds in the coastal anadromy zone:** Silvicultural systems for harvesting are limited to the use of commercial thinning or single tree selection modified to meet the following requirements:

**(i)** When commercial thinning is used, the QMD of conifer trees greater than 8 inches dbh in the preharvest project area shall be increased in the postharvest stand.

**(ii)** Sanitation-Salvage is prohibited except as provided in 14 CCR § 916.9 [936.9, 956.9], subsections (s), (t), and (u).

**(iii)** Postharvest stand shall have a minimum 70% overstory canopy cover. The postharvest canopy may be composed of both conifers and hardwood species and shall have at least 25% overstory conifer canopy.

**(iv)** Postharvest stand shall retain the 7 largest conifer trees (live or dead) on each acre of the area that encompasses the Core and Inner Zones.

**(v)** Large trees retained to meet 14 CCR § 916.9 [936.9, 956.9], subsections (g)(2)(B)(3.)(i) and (iii) above that are the most conducive to recruitment to provide for the beneficial functions of Riparian zones (e.g., trees that lean towards the channel, have an unimpeded fall path toward the Watercourse, are in an advanced state of decay, are located on unstable areas or downslope of such unstable areas, or have undermined roots) are to be given priority to be retained as future recruitment trees.

**Table 4. Core and Inner Zone widths.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Water Class** | | | | **Class II-S (feet)** | | | | | **Class II-L (feet)** | | | |
| **Geographic location** | | **Watersheds in the coastal anadromy zone** | | | **Watersheds outside the coastal anadromy zone** | | | **Watersheds in the coastal anadromy zone** | | | **Watersheds outside the coastal anadromy zone** | |
| **Slope class** | Core Zone  (feet) | | Inner Zone (feet) | Core Zone  (feet) | | Inner Zone  (feet) | Core Zone  (feet) | | Inner Zone (feet) | Core Zone  (feet) | | Inner Zone  (feet) |
| ≤30% | 15 | | 35 | 10 | | 40 | 30 | | 70 | 20 | | 80 |
| 30-50% | 15 | | 60 | 10 | | 65 | 30 | | 70 | 20 | | 80 |
| >50% | 15 | | 85 | 10 | | 90 | 30 | | 70 | 20 | | 80 |

**(3) Class II Watercourses in the Southern Subdistrict of the Coast Forest District:** In addition to all other Forest Practice Rules applicable to timber harvesting within the Southern Subdistrict of the Coast Forest District, the following Rules apply within a Class II WLPZ. These requirements supersede any other requirements for Class II Watercourses contained in 14 CCR § 916.9(g).

**(A)** Retain all trees within the Class II WLPZ that meet the following criteria:

**1.** all trees located within the Channel Zone;

**2.** all trees that have boles that overlap the edge of the Channel Zone; and

**3.** all trees with live roots permeating the bank or providing channel grade control, with the following exception:

**(i)** 1/3 of the stems of redwoods with live roots permeating the bank or providing channel grade control may be harvested.

**(B)** Where sufficient spacing exists prior to harvesting, retained redwood trees greater than or equal to 12 inches dbh shall not be spaced more than 25 feet apart.

**(C)** A minimum of 80% overstory canopy shall be maintained within the Channel Zone. If 80% overstory canopy is not present within the Channel Zone, the existing overstory canopy within the channel shall not be reduced.

**(D)** No more than 1/3 of the conifers 18" dbh or larger may be harvested.

**(h) Class III Watercourses –**

The following are the minimum requirements for Timber Operations in Class III Watercourses, unless explained and justified in the plan and approved by the Director.

**(1)** Establish a 30 foot wide ELZ on both sides of the Watercourse for slopes less than 30% and an additional 20 foot ELZ where sideslopes are >30%. The ELZ is measured from the WTL. Within the ELZ:

**(A)** no new construction of tractor roads permitted;

**(B)** no ground based equipment on slopes >50%; and

**(C)** ground-based operations are limited to existing stable tractor roads that show no visible evidence of sediment deposition being transported into the adjacent Watercourse or to the use of feller- bunchers or shovel Yarding.

**(2)** Retain all pre-existing large wood on the ground within the ELZ that is stabilizing sediment and is necessary to prevent potential discharge into the Watercourse.

**(3)** Retain all pre-existing down wood and debris in the Channel Zone.

**(4)** Retain hardwoods, where feasible, within the ELZ.

**(5)** Retain all snags (except as required for safety) within the ELZ*.*

**(6)** Retain all countable trees needed to achieve resource conservation standards in 14 CCR § 912.7 [932.7, 952.7] within the ELZ.

**(7)** Retain all trees in the ELZ and Channel Zone which show visible indicators of providing bank or bed stability, excluding sprouting conifers that do not have boles overlapping the Channel Zone. Visible indicators of stability include roots that permeate the bank or provide channel grade control.

**(8)** Exceptions pursuant to 14 CCR § 916.9 [936.9, 956.9], subsections (e)(1)(A)-(F) are permitted in any ELZ and Channel Zone.

**(i)** Section reserved for future use.

**(j) Inner Gorge -** Where an inner gorge extends beyond a Class I WLPZ and slopes are greater than 55%, a special management zone shall be established where the use of evenaged regeneration methods is prohibited. This zone shall extend upslope to the first major break-in-slope to less than 55% for a distance of 100 feet or more, or 300 feet as measured from the Watercourse or Lake Transition Line, whichever is less. All operations on slopes exceeding 65% within an inner gorge of a Class I or II Watercourse shall be reviewed by a Professional Geologist prior to plan approval, regardless of whether they are proposed within a WLPZ or outside of a WLPZ.

**(k) Year-round tractor road use limitations –**

**(1)** Tractor roads shall not be used when operations may result in significant sediment discharge.

**(l) Extended Wet Weather Period -** No Timber Operations shall take place unless the approved plan incorporates a complete winter period operating plan pursuant to 14 CCR § 914.7 [934.7, 954.7] subsection (b).

**(1)** Unless the winter period operating plan proposes operations during an extended wet weather period with low antecedent soil wetness, no tractor roads shall be constructed, Reconstructed, or used on slopes that are over 40 percent and within 200 feet of a Class I, II, or III Watercourse, as measured from the Watercourse or Lake Transition Line.

**(m) Tractor Road Drainage Facility Installation -** All tractor roads shall have drainage and/or drainage collection and storage facilities installed as soon as practical following Yarding and prior to either (1) the start of any rain which causes overland flow across or along the disturbed surface within a WLPZ or within any ELZ or EEZ designated for Watercourse or lake protection, or (2) any day with a National Weather Service forecast of a chance of rain of 30 percent or more, a flash flood warning, or a flash flood watch.

**(n) Treatments to stabilize soils -**Within the WLPZ, and within any ELZ or EEZ designated for Watercourse or lake protection, treatments to stabilize soils, minimize soil erosion, and prevent significant sediment discharge shall be described in the plan as follows.

**(1)** Soil stabilization is required for the following areas:

**(A)** Areas exceeding 100 contiguous square feet where Timber Operations have exposed bare soil.

**(B)** Approaches to tractor road Watercourse crossings between the drainage facilities closest to the crossing.

**(C)** Any other area of disturbed soil that threatens to discharge sediment into waters in amounts that would result in a significant sediment discharge.

**(2)** Soil stabilization treatment measures may include, but need not be limited to, removal, armoring with rip-rap, replanting, mulching, seeding, installing commercial erosion control devices to manufacturer’s specifications, or chemical soil stabilizers.

**(3)** Where straw or Slash mulch is used, the minimum straw coverage shall be 90 percent, and any treated area that has been reused or has less than 90 percent surface cover shall be treated again by the end of Timber Operations.

**(4)** Where Slash mulch is packed into the ground surface through the use of a tractor or equivalent piece of heavy equipment the minimum Slash coverage shall be 75 percent.

**(5)** For areas disturbed from May 1 to October 15, treatment shall be completed prior to the start of any rain that causes overland flow across or along the disturbed surface that could deliver sediment into a Watercourse or lake in quantities deleterious to the beneficial uses of water.

**(6)** For areas disturbed from October 15 to May 1, treatment shall be completed prior to any day for which a chance of rain of 30 percent or greater is forecast by the National Weather Service or within 10 days, whichever is earlier.

**(7)** Where the natural ability of ground cover is inadequate to protect beneficial uses of water by minimizing soil erosion or by filtering sediment, the plan shall specify protection measures to retain and improve the natural ability of the ground cover to filter sediment and minimize soil erosion.

**(o)** [Section reserved for future use.]

**(p)** [Section reserved for future use.]

**(q) Site Preparation -** Site Preparation activities shall be designed to prevent soil disturbance within, and minimize soil movement into, the channels of Watercourses. Prior to any Broadcast Burning for Site Preparation, burning prescriptions shall be designed to prevent loss of large woody debris in Watercourses, and vegetation and duff within a WLPZ, or within any ELZ or EEZ designated for Watercourse or lake protection. No ignition is to occur within any WLPZ, or within any ELZ or EEZ designated for Watercourse or lake protection. When burning prescriptions are proposed, the measures or burning restrictions which are intended to accomplish this goal shall be stated in the plan and included in any required burning permit. This information shall be provided in addition to the information required under 14 CCR § 915.4 [935.4, 955.4].

**(r)** [Section reserved for future use.]

**(s) Exemption notices -** No Timber Operations are allowed in a WLPZ, or within any ELZ or EEZ designated for Watercourse or lake protection, under exemption notices except for:

**(1)** Hauling on existing roads.

**(2)** Road maintenance.

**(3)** Operations conducted for public safety.

**(4)** Construction or reconstruction of approved Watercourse crossings.

**(5)** Temporary crossings of dry Class III Watercourses that do not require notification under Fish and Game Code §1600 et seq.

**(6)** Harvesting recommended in writing by CDFW to address specifically identified forest conditions.

**(t) Emergency notices -** No Timber Operations are allowed in a WLPZ, or within any ELZ or EEZ designated for Watercourse or lake protection, under emergency notices except for:

**(1)** Hauling on existing roads.

**(2)** Road maintenance.

**(3)** Operations conducted for public safety.

**(4)** Construction or reconstruction of approved Watercourse crossings.

**(5)** Temporary crossings of dry Class III Watercourses that do not require notification under Fish and Game Code §1600 et seq.

**(6)** Harvesting recommended in writing by CDFW to address specifically identified forest conditions.

**(7)** The harvest of dead or dying conifer trees subject to the following conditions:

**(A)** Retention of all trees in the core zone of Class I and Class II-L Watercourses.

**(B)** Within any WLPZ, ELZ, or EEZ designated for Class II or III Watercourse protection, a minimum of two dead, dying, or diseased conifer trees per acre at least sixteen (16) inches d.b.h. and fifty (50) feet tall shall be retained within fifty (50) feet of the Watercourse transition line.

**(C)** Trees to be harvested or retained shall be marked by, or under the supervision of, an RPF prior to Timber Operations within the WLPZ or ELZ/EEZ.

**(D)** Within the WLPZ or ELZ/EEZ, if the stocking standards of 14 CCR § 912 [932, 952].7 are not met upon completion of Timber Operations, unless the area meets the definition of substantially damaged Timberlands, at least ten (10) trees shall be planted for each tree harvested but need not exceed the point count standards contained in 14 CCR § 912.7(b)(1) [932.7(b)(1), 952.7(b)(1)], as appropriate.

**(8)** The harvest of trees or vegetation designated for removal pursuant to 14 CCR § 1052.5 to address Sudden Oak Death that are:

**(A)** symptomatic of the pathogen that causes Sudden Oak Death and confirmed infected by a certified lab; or

**(B)** host hardwood trees that could spread the pathogen.

**(u) Salvage logging -** No salvage logging is allowed in a WLPZ without an approved HCP, a PTEIR, an SYP, or an approved plan that contains a section that sets forth objectives, goals, and measurable results for streamside salvage operations.

**(1)** This section does not apply to emergency operations under 14 CCR § 1052.

**(v) Site-specific measures or nonstandard operational provisions**

**(1)** In consideration of the spatial variability of the forest landscape, the RPF may propose site-specific measures or nonstandard operational provisions in place of any of the provisions contained in this section. Site specific plans may be submitted when, in the judgment of the RPF, such measures or provisions offer a more effective or more feasible way of achieving the goals and objectives set forth in 14 CCR § 916.9 [936.9, 956.9], subsections (a) and (c), and would result in effects to the beneficial functions of the Riparian zone equal to or more favorable than those expected to result from the application of the operational provisions required under 14 CCR § 916.9 [936.9, 956.9].

**(2)** Measures or provisions proposed pursuant to 14 CCR § 916.9 [936.9, 956.9], subsections (v) shall only be approved when the plan incorporates an evaluation of the beneficial functions of the Riparian zone as set forth in subsection (3) below. In the event of measures limited in applicability to specific sites, the submitter may instead of an evaluation, obtain written concurrence from CDFW prior to plan submittal. RPFs may request a preconsultation for the site specific plan and the Director may agree and request staff from responsible agencies.

**(3)** The evaluation of the beneficial functions of the Riparian zone shall be included in addition to any evaluation required by all other District Forest Practice Rules, may incorporate by reference any such evaluation, and shall include the following components scaled appropriately to the scope of the proposed measure(s) or provision(s) and the beneficial functions potentially affected.

**(A)** The following are required components of an evaluation conducted pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v)(3):

**1.** A description of the evaluation area. If the evaluation area is different than the watershed assessment area described pursuant to Technical Rule Addendum No. 2, the RPF shall briefly explain the rationale for establishing the evaluation area.

**2.** A description of the current condition of the Riparian zone within the evaluation area related to the beneficial functions. The RPF may incorporate by reference any conditions described in the plan pursuant to 14 CCR § 916.4 [936.4, 956.4], subsection (a). The RPF shall use the best available information, at the appropriate scale, to describe the existing vegetation, timber stand characteristics, roads, skid trails, Landings, channel types, unstable areas, flood prone areas, and overflow channels.

**3.** An identification of the beneficial functions that may potentially be affected by the proposed measure(s) or provision(s).

**4.** An identification of the potential effects to the beneficial functions, both positive and negative. The RPF may use a reasoned analysis to describe the effects and may assign ratings of high, moderate and low to those effects that may individually or cumulatively limit anadromous salmonid distribution and abundance in the watershed.

**5.** A detailed description of the site-specific measure(s) or nonstandard operational provision(s) proposed. The description should address at a minimum the relationships between the Riparian stand characteristics and ecological functions, the relative importance of the beneficial functions of the Riparian zone to the Watercourse, the cost effectiveness of the measure(s) or provision(s), and the predicted consequences.

**6.** A schedule for implementing proposed management practices.

**7.** A plan for monitoring consistent with 14 CCR § 916.11 [936.11, 956.11].

**(4)** Measures or provisions proposed pursuant to 14 CCR § 916.9 [936.9, 956.9], subsections (v) shall only be approved when they meet the following additional standards:

**(A)** They must be based upon the best available science, and explained and justified in the plan.

**(B)** They must identify potential significant adverse Impacts that may occur to listed salmonids or the beneficial functions of the Riparian zone as a result of the proposed measure(s) or provision(s).

**(C)** They must identify feasible systems, methods, procedures or approaches proposed to avoid or mitigate identified potential significant adverse Impacts to a level of insignificance.

**(D)** They must be written so they provide clear instructions and enforceable standards for the Timber Operator;

**(E)** They must provide that, where appropriate for implementation of the measure(s) or provision(s), the plan submitter is responsible for retaining an RPF to aid in interpreting the plan to the Timber Operator and Timberland Owner on a continuing basis to help assure compliance with the measure(s) or provision(s).

**(F)** They must identify each standard prescription that would be replaced by the measure(s) or provision(s) proposed.

**(5)** Guidance is provided below for site specific plans for flood prone areas:

**(A)** Site-Specific Plans for Watercourses with flood prone areas or Channel Migration Zones:

This section is an optional approach to be used at the discretion of the plan submitter. When used, this section replaces requirements found in 14 CCR § 916.9 [936.9, 956.9], subsection (f)(3). The goal of this approach is to allow RPFs to develop a site specific plan for salmonid habitat protection on a flood prone area. Site specific plans are to lead to development of properly functioning salmonid habitat and can include active management to restore the beneficial uses of the Riparian zone.

**(B)** Timber Operations are limited to the flood prone areas beyond the outer margin of a CMZ.

**(C)** RPFs are to propose Riparian protection zones and management practices that are designed for local conditions.

**(D)** Site specific assessments shall include:

**1.** Identifying the issues that need to be considered for Watercourse and Riparian protections [refer to Table 1 of “Flood Prone Area Considerations in the Coast Redwood Zone “(Riparian Protection Committee Report, Cafferata et al 2005) ].

**2.** Describing processes that need to be considered for the issues identified above.

**3.** Developing a method to define a desired trajectory for Watercourse and Riparian conditions in the context of the goals of 14 CCR § 916.9 [936.9, 956.9], subsection (a).

**4.** Defining how the proposed operations will aid reaching the desired trajectories.

**5.** Disclosing assumptions being made at each step and limits to both the science and the proposed management activities.

**6.** Identifying how to determine what needs to be monitored and how to conduct the monitoring.

**7.** Supporting documentation is required including but not limited to field data, NetMap analysis, large wood modeling results, etc.

**(E)** As described in the “Flood Prone Area Considerations in the Coast Redwood Zone” (Cafferata et al 2005), the site-specific plan for Class I flood prone area management shall include:

**1.** an inventory of the flood prone area for all hydrologic, geomorphic, and biological functions present that can be affected by Timber Operations;

**2.** a determination of the category of inundation where management is proposed [i.e., very frequent (1-5 yr. recurrence interval or RI), frequent (5-20 yr. RI), moderately frequent (20-50 yr. RI), or infrequent (50+ yr. RI)]; and

**3.** an appropriate analysis for functions present in light of possible significant adverse Impacts from management. Analysis for hydrologic functions may include how the flood prone area vegetative roughness will change with Timber Operations. Analyses for geomorphic functions may include how proposed operations will change bank stabilization, amount of soil disturbance on the flood prone area, and the potential for channel avulsion. Analyses for biological functions may include how harvesting will affect overflow channels, large wood recruitment, Stream shading, Riparian microclimate, organic matter input, and terrestrial wildlife habitat.

**(F)** Disclosure and analysis requirements increase with increased risk associated with the proposed level of activity and the increased frequency of inundation in the flood prone area. In particular, management proposed within the 20 year recurrence interval flood prone area in a watershed with coho salmon habitat or restorable habitat requires detailed analysis.

**(G)** In addition to considering how proposed prescriptions will affect flood prone area functions at the project level, site specific plans must consider a larger watershed perspective that includes consideration of the Stream network and past activities in the watershed. Also, consideration must be given to the current condition of the flood prone area.

**(H)** Information provided in the “Flood Prone Area Considerations in the Coast Redwood Zone “ (Cafferata et al 2005) is to be used for guidance in the coast redwood zone.

**(I)** The site-specific plan for Class I Riparian management must: (1) have Review Team agencies pre-consultation and receive concurrence from the Review Team agencies, including CDFW, and (2) include a monitoring component.

**(6)** Guidance is provided below for site specific plans for fire hazard reduction:

**(A)** For site specific plans that address WLPZs having conditions where catastrophic, stand replacing wildfire will result in significant adverse effects to salmonid species, Riparian habitat or other wildlife species, the site specific plan shall address measure(s) or provision(s) that create fire resilient forests, promote reduced fire intensities, and retain functional habitat following a wildfire. Site specific plans proposed for fuel hazard reduction shall contain information demonstrating the potential for severe fire behavior and likelihood of stand replacing fires. Fuel reduction measure(s) or provision(s) shall be designed to reduce fire behavior to levels appropriate for the region and Riparian area. Measure(s) or provision(s) include, but are not limited to, activities that eliminate the vertical and horizontal continuity among all vegetative fuel layers (surface fuels, ladder fuels and crown fuels), focus on reducing surface and ladder fuel hazards, and simultaneously meet goals and objectives of 14 CCR § 916.9 [936.9, 956.9] subsections (a) and (c).

**(7)** No site-specific measure(s) or nonstandard operational provision(s) proposed pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v) may be prescribed by an RPF or approved by the Director in lieu of the following Rules:

**(A)** The Rules contained in Subchapter 2 (Application of Forest Practice Rules); Article 2 (Ratings and Standards) and Article 11 (Coastal Commission Special Treatment Areas) of Subchapter 4 (Coast Forest District Rules); Article 2 (Ratings and Standards) of Subchapter 5 (Northern Forest District Rules); Article 2 (Ratings and Standards) and Article 11 (Coastal Commission Special Treatment Areas) of Subchapter 6 (Southern Forest District Rules); and Subchapter 7 (Administration) of Chapter 4, Division 1.5 of Title 14 of the California Code of Regulations; or

**(B)** Any Forest Practice Rule pertaining to the width of the Special Treatment Area adjacent to a wild and scenic river declared pursuant to PRC 5093.50, et seq.; or

**(C)** Any Forest Practice Rules or parts of Rules that incorporate practices or standards specified in the FPA.

**(8)** The Director shall not accept for inclusion in a plan any site-specific measures or non-standard operational provisions as described in this section where the CDFW or where two or more agencies listed in PRC § 4582.6 and 14 CCR § 1037.3 have submitted written comments which lead to the Director's conclusion that the proposed measures or provisions will not meet the goal of this section and the agencies participated in the review of the plan, including an on-the-ground inspection.

**(9)** Site-specific measures or nonstandard operational provisions proposed pursuant to 14 CCR § 916.9 [936.9, 956.9], subsection (v) shall not be considered alternative practices pursuant to 14 CCR §§ 897 or 914.9 [934.9, 954.9], in lieu practices or site specific practices pursuant to 14 CCR § 916.1 [936.1, 956.1], or alternative prescriptions for the protection of Watercourses or lakes pursuant to 14 CCR § 916. 6 [936.6, 956.6].

**(10)** Board staff and the Department shall work with agencies, stakeholders, and appropriate scientific participants (e.g., Monitoring Study Group, Technical Advisory Committee) in a transparent process to: (1) describe and implement two pilot Projects, including monitored results, using site-specific or non-standard operational provisions; and (2) provide recommendations to the Board for consideration for adoption to provide detailed guidance for the application of site-specific or non-standard operational provisions. The pilot Projects and guidance shall address cumulative and planning watershed Impacts, and the guidance may address the appropriate standards the site-specific or non-operational provisions shall meet. A report on the progress of the pilot Projects and implementation guidance shall be presented to the Board within 18 months of the effective date of this regulation.

**(w)** Except when expressly required by 14 CCR § 916.9 [936.9, 956.9], subsections (w)(1)-(5) below, the provisions of 14 CCR § 916.9 [936.9, 956.9] shall not apply to a plan that is subject to:

**(1)** a valid incidental take permit issued by CDFW pursuant to Section 2081(b) of the F&GC that addresses anadromous salmonid protection; or

**(2)** a federal incidental take statement or incidental take permit that addresses anadromous salmonid protection, for which a consistency determination has been made pursuant to Section 2080.1 of the F&GC; or

**(3)** a valid natural community conservation plan that addresses anadromous salmonid protection approved by CDFW under section 2835 of the F&GC; or

**(4)** a valid Habitat Conservation Plan that addresses anadromous salmonid protection, approved under Section 10 of the federal Endangered Species Act of 1973; or

**(5)** project revisions, guidelines, or take avoidance measures pursuant to a memorandum of understanding or a planning agreement entered into between the plan submitter and CDFW in preparation of obtaining a natural community conservation plan that addresses anadromous salmonid protection.

**§ 916.10, 936.10, 956.10 Domestic Water Supply Protection [All Districts]**

**(a)** When proposed Timber Operations may threaten to degrade a domestic water supply the Director shall evaluate any mitigations recommended prior to the close of the public comment period (PRC 4582.7) and shall require the adoption of those practices which are feasible and necessary to protect the quality and beneficial use of the supply.

**(b)** The Director may require a post-harvest evaluation of the effectiveness of the mitigations and practices designed to protect the domestic water supply as a condition of plan approval. The Director shall require an evaluation at the request of the California Regional Water Quality Control Board, or any affected water purveyor, if the necessity for the evaluation is supported by substantial evidence in the record. This evidence may include, but is not limited to, potential land failures, accelerated rate of road construction or harvesting within a watershed, concentration or intensity of harvesting activity near Streams or springs. The design and implementation of the evaluation shall be done in consultation with the Director, appropriate RWQCB, and THP submitter, and the sufficiency of the information requested by the Director shall be judged in light of reasonableness and practicality.

**§ 916.11, 936.11, 956.11 Effectiveness and Implementation Monitoring [All Districts]**

**(a)** Where Timber Operations will be conducted within a WLPZ, the Director may require a post-harvest evaluation of the effectiveness of the mitigations and practices designed to protect the Watercourse(s) or lake(s) as a condition of plan approval. The Director shall require such an evaluation if the necessity for the evaluation is supported by substantial evidence in the record. This evidence may include, but is not limited to, potential land failures, accelerated rate of road construction or harvesting within a watershed, concentration or intensity of harvesting activity near Watercourses, and potential for accelerated windthrow. The design and implementation of the evaluation shall be done in consultation with the Director, the RWQCB or CDFW, and THP submitter, and the sufficiency of the information requested by the Director shall be judged in light of reasonableness and practicality. The evaluation may utilize procedures including, but not limited, to:

**(1)** Procedures for effectiveness and implementation monitoring,

**(2)** Existing landowner monitoring programs, or

**(3)** Photographic monitoring

**§ 916.11.1 and 936.11.1 Monitoring for Adaptive Management in Watersheds with Coho Salmon**

**(a) Goal:** The Board will develop a monitoring and adaptive management program for timber harvesting operations in watersheds with coho salmon. The purpose of the program will be: (i) to determine whether or not the operational Forest Practice Rules and associated hillslope and instream mitigation measures afford a level of protection that is both appropriate and adequate to ensure protection of coho salmon and its habitat, (ii) to provide monitoring necessary to ensure the Forest Practice Rules are being implemented in a manner consistent with the California Endangered Species Act as required under 14 CCR § 896, and (iii) to provide a timely feedback process for the Board to assess rule effectiveness in meeting the stated goals under subsections (i) and (ii).

**(1)** The monitoring component of the program will provide the information necessary to evaluate the effectiveness of mitigation measures and identify when site-specific mitigation or operational Rules should be revised to better accomplish the goals of the Board.

**(A)** Four types of monitoring will be addressed under the program including: (i) compliance, (ii) implementation, (iii) effectiveness, and (iv) validation.

**(B)** Review Team agencies will continue to conduct mandated compliance and implementation monitoring as part of their regulatory responsibilities.

**(C)** Effectiveness monitoring will be undertaken by the landowner; or be a cooperative effort between landowners and the Department, Review Team agencies, or a cooperative interdisciplinary team.

**(D)** Long-term validation monitoring will be undertaken by the Department, or facilitated through cooperative agreements among stakeholders and Review Team agencies.

**(E)** The Board or its designee may include any monitoring that meets the intent of this section, including any efforts that are already underway by the landowner, agencies or other cooperators.

**(2)** The adaptive management component of the program will be a process of action-based planning, monitoring, evaluating and adjusting through use of the scientific method; with the objective of maintaining fully functioning habitat conditions and facilitating conservation of coho salmon populations.

**(A)** Four elements of adaptive management will be addressed under the program including: (i) identification of substantial new information, (ii) collection of substantial new information, (iii) evaluation of substantial new information, and (iv) determination regarding the necessity or benefit of adjustments and improvements to mitigation and protective measures, including the Forest Practice Rules, based upon the substantial new information.

**(b) (1)** In collaboration with the Department and other Review Team agencies, the Board shall appoint a scientific technical advisory committee to develop monitoring practices to evaluate the effectiveness of mitigation measures at the appropriate scale.

**(A)** In development of monitoring practices, the Board’s appointed scientific technical advisory committee may also engage other experts in the field for assistance.

**(B)** The monitoring practices will be applied by the landowner; or be a cooperative effort between landowners and the Department, Review Team agencies, or a cooperative interdisciplinary team.

**(2)** Monitoring practices and strategies may be peer reviewed by a scientific technical advisory committee as directed by the Board.

**(3)** The design and implementation of monitoring shall be done in consultation with the Department and other Review Team agencies, and the sufficiency of information shall be judged in light of its scientific merit and what is reasonable and practical.

**(A)** Monitoring data shall be derived from agency monitoring programs, landowner monitoring programs, or cooperative Projects.

**(4)** As a condition of plan approval, based upon substantial evidence in the record, the Director may require monitoring:

**(A)** Any time after plan approval,

**(B)** Concurrent with Timber Operations, and

**(C)** After completion of operations during the remainder of the prescribed maintenance period.

**(5)** Monitoring data collected pursuant to (b)(4) or (b)(6) shall be provided to the Board annually.

**(6)** The plan shall incorporate monitoring requirements in conformance with the requirements of a valid incidental take permit for coho salmon within the planning watershed that has been authorized pursuant to the following:

**(A)** a valid incidental take permit issued by DFG pursuant to Section 2081(b) of the Fish and Game Code; or

**(B)** a federal incidental take statement or incidental take permit, for which a consistency determination has been made pursuant to Section 2080.1 of the Fish and Game Code; or

**(C)** Section 2835 of the Fish and Game Code under a valid natural community conservation plan approved by DFG.

**(c)** The Department shall prepare an annual report in conjunction with a Board appointed technical subcommittee summarizing progress and significant findings from monitoring activities collected throughout the year in accordance with subsection (b)(4) above. The report shall be (i) provided to the Board during the first quarter of each calendar year, (ii) made available to the public upon request, and (iii) placed on the Board’s website for at least 180 days.

**(d)** Based upon the findings presented in the annual monitoring report(s), the Director, in conjunction with the Board appointed technical subcommittee, may recommend additions, deletions or modifications to the Forest Practice Rules if the necessity for such a change is supported by substantial evidence in the reports. A specific recommendation based upon the findings that a rule requirement is no longer necessary shall also be supported by substantial evidence.

**§ 916.12, 936.12, 956.12 Section 303(d) Listed Watersheds [All Districts]**

For any planning watershed in which Timber Operations could contribute to the pollutants or stressors which have been identified as limiting water quality in a water body listed pursuant to 303(d) Federal Clean Water Act, the following shall apply:

**(a)** The Department shall, in collaboration with the appropriate RWQCB and SWRCB, prioritize watersheds in which the following will be done: 1) conduct or participate in any further assessment or analysis of the watershed that may be needed, 2) participate in the development of Total Maximum Daily Load (TMDL) problem assessment, source assessment, or load allocations related to Timber Operations, and 3) if existing Rules are deemed not to be sufficient, develop recommendations for watershed-specific silvicultural implementation, enforcement and monitoring practices to be applied by the Department.

**(b)** The Department shall prepare a report setting forth the Department’s findings and recommendations from the activities identified pursuant to (a) above. The report shall be submitted to the Board and the appropriate RWQCB. The report shall be made available to the public upon request and placed on the Boards’ website for a 90-day period.

**(c)** Where the Department has recommended that the adoption of watershed specific Rules is needed, the Board shall consider that recommendation as a proposal for rulemaking under the Administrative Procedures Act (Section 11340 et. seq. Gov. Code) and shall begin that process within 180 days following receipt of that report.

**(d)** These watershed specific Rules shall be developed in collaboration with the appropriate RWQCB, the landowner(s) or designee with land in the planning watershed, and other persons or groups within the watershed, and may also be incorporated into a TMDL implementation plan.

**(e)** The watershed specific Rules shall remain in effect until the water body has been removed from the 303(d) list, or that the Board finds, after consulting with the appropriate RWQCB, that Timber Operations are no longer a significant source of the pollutant or stressor that limits water quality in the listed water body.

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