

1 ~~the protection of the beneficial uses of water or control erosion to a~~  
2 ~~standard at least equal to that which would result from the~~  
3 ~~application of the standard rule.~~

4  
5 **Amend § 923.5 [943.5,963.5]. Erosion Control for Logging Roads and**  
6 **Landings ~~Landing Construction.~~**

7 The following erosion control standards shall apply to logging roads  
8 and landings:

9 (a) All logging road and landing surfaces shall be adequately drained  
10 through the use of [logging road and landing surface geometry](#)  
11 [configurationsshaping](#) in combination with the installation of drainage  
12 structures or facilities and shall be hydrologically disconnected from  
13 watercourses and lakes to the extent feasible. [Guidance on methods for](#)  
14 [hydrologic disconnection may be found in the Board's Technical Rule](#)  
15 [Addendum Number 5.](#)

16 (b) Drainage facilities [and structures](#) shall be installed along all  
17 logging roads and all landings that are used for timber operations in  
18 sufficient number to minimize soil erosion and sediment transport and  
19 to prevent significant sediment discharge.

20 (c) Ditch drains, associated necessary protective structures, and  
21 other features associated with the ditch drain shall:

22 (1) Be adequately sized, [spaced, and of sufficient number](#) to  
23 transmit runoff.

24 (2) Minimize erosion of logging road and landing surfaces.

25 (3) Avoid discharge onto [unprotected](#) fill.

(4) Discharge to erosion resistant material.

1 (5) Minimize potential adverse impacts to slope stability.

2 (d) Waterbreaks and rolling dips installed across logging roads and  
3 landings shall be of sufficient size and number and be located to  
4 avoid collecting and discharging concentrated runoff onto fills,  
5 erodible soils, unstable areas, and connected headwall swales.

6 (e) Where logging roads or landings do not have permanent and  
7 adequate drainage, and where waterbreaks are to be used to control  
8 surface runoff, the waterbreaks shall be cut diagonally a minimum of  
9 six inches into the firm roadbed and shall have a continuous firm  
10 embankment of at least six inches in height immediately adjacent to  
11 the lower edge of the waterbreak cut. On logging roads that have  
12 firmly compacted surfaces, waterbreaks may be installed by hand  
13 methods and need not provide the additional six-inch embankment  
14 provided the waterbreak ditch is constructed so that it is at least  
15 six inches deep and six inches wide on the bottom and provided there  
16 is ample evidence based on slope, material, amount of rainfall, and  
17 period of use that the waterbreaks so constructed will be effective in  
18 diverting water flow from the logging road surface without the  
19 embankment.

20 (f) Distances between waterbreaks shall not exceed the following  
21 standards and consider erosion hazard rating and road gradient:

22 **MAXIMUM DISTANCE BETWEEN WATERBREAKS**

<u>Estimated</u>	<u>Logging Road</u>	<u>Gradient in Percent</u>	
<u>Hazard</u>	<u>10 or less</u>	<u>11-25</u>	<u>&gt;25</u>
<u>Rating</u>	<u>Feet</u>	<u>Feet</u>	<u>Feet</u>

1	Extreme	100	75	50
2	High	150	100	75
3	Moderate	200	150	100
4	Low	300	200	150 )

5 (g) Where outsloping and rolling dips are used to control surface  
6 runoff, the dip in the logging road grade shall be sufficient to  
7 capture runoff from the logging road surface. The steepness of cross-  
8 slope gradient in conjunction with the logging road or landing  
9 gradient and the estimated soil erosion hazard rating shall be used to  
10 determine the rolling dip spacing in order to minimize soil erosion  
11 and sediment transport and to prevent significant sediment discharge.

12 (h) Drainage facilities and ditch drains shall discharge into  
13 vegetation, woody debris, or rock wherever possible. Where erosion-  
14 resistant material is not present, slash, rock, or other energy  
15 dissipating material shall be installed below the drainage facility or  
16 drainage structure outlet.

17 (i) Where logging road and landing surfaces, road approaches, inside  
18 ditches and drainage structures cannot be hydrologically disconnected,  
19 and where there is existing or the potential for significant sediment  
20 discharge, necessary and feasible treatments to prevent the discharge  
21 will be described in the plan.

22 (j) All logging roads and landings used for timber operations shall  
23 have adequate drainage upon completion of use for the year or by  
24 October 15, whichever is earlier. An exception is that drainage  
25 facilities and drainage structures do not need to be constructed on  
logging roads and landings in use during the extended wet weather

1 period provided that all such drainage facilities and drainage  
2 structures are installed prior to the start of rain that generates  
3 overland flow ~~off of the logging road or landing surface.~~

4 (k) Where logging road or landing construction or reconstruction  
5 takes place during the extended wet weather period, drainage  
6 facilities and drainage structures shall be installed concurrent with  
7 construction or reconstruction operations.

8 (1) Bare soil on logging road or landing cuts, fills, transported  
9 spoils, or sidecast that is created or exposed by timber operations  
10 shall be stabilized to the extent necessary to minimize soil erosion  
11 and sediment transport and to prevent significant sediment discharge.

12 Sites to be stabilized include, but are not limited to:

13 (1) Sidecast or fill exceeding 20 feet in slope distance from  
14 the outside edge of a logging road or a landing that has access to a  
15 watercourse or lake.

16 (2) Cut and fills associated with approaches to logging road  
17 watercourse crossings of Class I or II waters or Class III waters  
18 where an ELZ, EEZ, or a WLPZ is required.

19 (3) Bare areas exceeding 800 continuous square feet within a  
20 WLPZ.

21 (m) Soil stabilization measures shall be described in the plan  
22 pursuant to 14 CCR 923.5(k1) [943.5(1), 963.5(1)], ~~subsection (k)~~ and  
23 may include, but are not limited to, removal, armoring with rip-rap,  
24 replanting, mulching, seeding, installing commercial erosion control  
25 devices to manufacturer's specifications, or chemical stabilizers.

1 (n) Where the natural ability of ground cover within a WLPZ is  
2 inadequate to protect the beneficial uses of water by minimizing soil  
3 erosion or by filtering sediments, the plan shall specify protection  
4 measures to retain and improve the natural ability of the ground cover  
5 to filter sediment and minimize soil erosion.

6 (o) Soil stabilization treatments shall be in place upon completion  
7 of operations for the year of use or prior to the extended wet weather  
8 operating period, whichever comes first. An exception is that bare  
9 areas created during the extended wet weather ~~operating~~ period shall  
10 be treated [prior to the start of rain that generates overland flow, or](#)  
11 within 10 days, [whichever is sooner](#), or as agreed to by the Director.

12 (p) Overhanging or unstable concentrations of slash, woody debris or  
13 soil along the downslope edge or face of landings shall be removed or  
14 stabilized when it is located on slopes greater than 65 percent~~or~~,  
15 within 100 feet of the boundary of a WLPZ on slopes greater than 50  
16 percent that drain toward the zoned watercourse or lake, [or when it](#)  
17 [may result in significant sediment discharge](#). Removed materials shall  
18 not be placed at disposal sites that could result in a significant  
19 sediment discharge.

20 (q) In watersheds with listed anadromous salmonids and in planning  
21 watersheds immediately upstream of, and contiguous to, any watershed  
22 with listed anadromous salmonids, the following shall apply:

23 (1) Constructed and reconstructed logging roads shall be  
24 outsloped where feasible and drained with waterbreaks or rolling dips  
25 where the road grade is inclined at seven (7) percent or less) in  
conformance with other applicable Forest Practice Rules. [Outsloping](#)

1 may not be feasible in all situations due to safety concerns, timing  
2 of use, or expected traffic.

3 (2) In addition to the provisions listed under 14 CCR §  
4 923.2(d)(2) [943.2(d)(2), 963.2(d)(2)], all permanent and seasonal  
5 logging roads with a grade of 15 percent or greater that extend 500  
6 continuous feet or more shall have specific erosion control measures  
7 stated in the plan.

8 (3) Within the WLPZ, and within any ELZ or EEZ designated for  
9 watercourse or lake protection, treatments to stabilize soils,  
10 minimize soil erosion, and prevent significant sediment discharge  
11 shall be described in the plan as follows:

12 (A) In addition to the requirements of subsections (\*1)-  
13 (o), soil stabilization is required for the following areas:

14 (i) Areas exceeding 100 continuous square feet where  
15 timber operations have exposed bare soil, and

16 (ii) Disturbed logging road and landing cut banks and  
17 fills, and

18 (iii) Any other area of disturbed soil that threatens  
19 to cause significant sediment discharge.

20 (B) Where straw mulch is used, the minimum straw coverage  
21 shall be 90 percent, and any treated area that has been reused or has  
22 less than 90 percent surface cover shall be treated again by the end  
23 of timber operations.

24 (C) Where slash mulch is packed into the ground surface  
25 through the use of a tractor or equivalent piece of heavy equipment

1 the minimum slash coverage in contact with the ground surface shall be  
2 75 percent.

3 (D) For areas disturbed outside of the extended wet weather  
4 period, treatment shall be completed prior to the start of any rain  
5 that causes overland flow across or along the disturbed surface that  
6 could result in significant sediment discharge.

7 (E) For areas disturbed during the extended wet weather  
8 period, treatment shall be completed prior to any day for which a  
9 chance of rain of 30 percent or greater is forecast by the National  
10 Weather Service or within 10 days of disturbance, whichever is  
11 earlier.

12 (F) Where the natural ability of ground cover is  
13 inadequate to protect the beneficial uses of water by minimizing soil  
14 erosion or by filtering sediments within any ELZ or EEZ designated for  
15 watercourse or lake protection, the plan shall specify protection  
16 measures to retain and improve the natural ability of the ground cover  
17 to filter sediment and minimize soil erosion.

18 ~~Landings shall be constructed according to the following standards:~~

19 ~~(a) On slopes greater than 65%, no fill shall be placed and sidecast~~  
20 ~~shall be minimized to the degree feasible. The Director may approve an~~  
21 ~~exception if, site specific measures to minimize slope instability,~~  
22 ~~soil erosion, and discharge of concentrated surface runoff are~~  
23 ~~described and justified in the THP.~~

24 ~~(b) On slopes greater than 50%, fills greater than 4 ft. in vertical~~  
25 ~~height at the outside shoulder of the landing shall be: 1) constructed~~  
~~on a bench that is excavated at the proposed toe of the fill and is~~

1 ~~wide enough to compact the first lift, and 2) compacted in~~  
2 ~~approximately 1 ft. lift from the toe to the finished grade. The RPF~~  
3 ~~or supervised designee shall flag the location of this bench or the~~  
4 ~~RPF shall provide a description of the bench location (narrative or~~  
5 ~~drawing) in the THP for fills meeting the above criteria, where the~~  
6 ~~length of landing section is greater than 100 feet. The RPF may~~  
7 ~~propose an exception in the THP and the Director may approve the~~  
8 ~~exception where it is justified that the landing will be stabilized.~~

9 ~~(e) Waste organic material, such as uprooted stumps cull logs,~~  
10 ~~accumulations of limbs and branches, or unmerchantable trees, shall~~  
11 ~~not be buried in landing fills. Wood debris or cull logs and chunks~~  
12 ~~may be placed and stabilized at the toe of landing fills to restrain~~  
13 ~~excavated soil from moving downslope.~~

14 ~~(d) Constructed landings shall be the minimum in width, size, and~~  
15 ~~number consistent with the yarding and loading system to be used.~~  
16 ~~Landings shall be no larger than one half acre (.202 ha) unless~~  
17 ~~explained and justified in the THP.~~

18 ~~(e) No landing construction shall occur under saturated soil~~  
19 ~~conditions that may produce sediment in quantities sufficient to cause~~  
20 ~~a visible increase in turbidity of downstream waters in receiving~~  
21 ~~Class I, II, III or IV waters or that violate Water Quality~~  
22 ~~Requirements.~~

23 ~~(f) The following specifications shall be met upon completion of~~  
24 ~~timber operations for the year or prior to October 15, whichever~~  
25 ~~occurs first:~~

1 ~~(1) Overhanging or unstable concentrations of slash, woody debris and~~  
2 ~~soil along the downslope edge or face of the landings shall be removed~~  
3 ~~or stabilized when they are located on slopes over 65% or on slopes~~  
4 ~~over 50% within 100 ft. of a WLPZ.~~

5 ~~(2) Any obstructed ditches and culverts shall be cleaned.~~

6 ~~(3) Landings shall be sloped or ditched to prevent water from~~  
7 ~~accumulating on the landings. Discharge points shall be located and~~  
8 ~~designed to reduce erosion.~~

9 ~~(4) Sidecast or fill material extending more than 20 feet in slope~~  
10 ~~distance from the outside edge of the landing and which has access to~~  
11 ~~a watercourse or lake shall be seeded, planted, mulched, removed or~~  
12 ~~treated as specified in the THP to adequately reduce soil erosion.~~

13 ~~(5) Sidecast or fill material extending across a watercourse shall be~~  
14 ~~removed in accordance with standards for watercourse crossing removal~~  
15 ~~set forth in 14 CCR 923.3 (d).~~

16 ~~(g) On slopes greater than 35%, the organic layer of the soil shall~~  
17 ~~substantially removed prior to fill placement.~~

18 ~~(h) When landings are constructed after October 15 they shall be~~  
19 ~~adequately drained concurrent with construction operations and shall~~  
20 ~~meet the requirements of (f) (1) through (f) (4) of this subsection upon~~  
21 ~~completion of operations at that landing.~~

22 ~~(i) The RPF may propose and the Director may approve waiver of~~  
23 ~~requirements in (f) (1) through (f) (4) of this subsection if the~~  
24 ~~Director finds they are not necessary to minimize erosion or prevent~~  
25 ~~damage to downstream beneficial uses. The Director may also approve an~~

1 ~~exception to the October 15th date for treatment of slash and debris,~~  
2 ~~including the practice of burning.~~

3  
4 **Amend § 923.6 [943.6, 963.6]. Use of Logging Roads and Landings**

5 **Conduct of Operations on Roads and Landings.**

6 The following use standards shall apply to logging roads and  
7 landings:

8 (a) Logging roads and landings shall be used in a manner that is  
9 consistent with their design and construction specifications.

10 (b) Logging roads and landings shall not be used during any time of  
11 the year when operations may result in significant sediment discharge  
12 to watercourse or lakes, except in emergencies to protect the road, to  
13 reduce erosion, to protect water quality, or in response to public  
14 safety needs.

15 (c) During the extended wet weather period, log hauling or other  
16 heavy equipment uses shall be limited to logging roads and landings  
17 which are hydrologically disconnected from watercourses to the extent  
18 feasible and exhibit a stable operating surface in conformance with  
19 (b) above. Routine use of logging roads and landings may occur on  
20 limited segments of roads or landings that do not exhibit a stable  
21 operating surface when the road segment or landing is completely, and  
22 at all times, hydrologically disconnected from a watercourse shall not  
23 take place when and equipment cannot operate under its own power.

24 (d) When burning permits are required pursuant to PRC § 4423, logging  
25 roads and landings that are in use shall be kept in passable condition  
for fire trucks.

1 (e) All roadside berms that impede logging road drainage, create  
2 logging road surface flow, or lead to hydrologic connection shall be  
3 removed or breached before the beginning of the winter period, with  
4 the exception of berms needed for erosion control.

5 (f) Temporary roads shall be blocked or otherwise closed to standard  
6 production four-wheel drive highway vehicles prior to the winter  
7 period.

8 (g) Logging roads and landings used for log hauling or other heavy  
9 equipment uses during the winter period shall occur on a stable  
10 operating surface and, where necessary, be surfaced with rock to a  
11 depth and quantity sufficient to maintain such a surface. Use is  
12 prohibited on roads that are not hydrologically disconnected and  
13 exhibit saturated soil conditions. Exceptions may be proposed by the  
14 RPF, when locations are disclosed and justified in the THP, consistent  
15 with 14 CCR 923.6 (c), and approved by the Director.

16 (h) In watersheds with listed anadromous salmonids and in planning  
17 watersheds immediately upstream of, and contiguous to, any watershed  
18 with listed anadromous salmonids, the following shall apply:

19 (1) Existing logging roads or landings shall not be used within  
20 the CMZ of a Class I watercourse except as listed in 14 CCR § 916.9  
21 916.9 [936.9, 956.9] subsection (e) (1) (A)-(F) or pursuant to 14 CCR §  
22 916.9(v) [936.9(v), 956.9(v)].

23 (2) When feasible, minimize use of existing logging roads and  
24 landings located within Inner Zones A and B of flood prone areas.

25 Exceptions include the use of roads and landings to accomplish actions

1 to improve salmonid habitat conditions stated in 14 CCR § 916.9

2 916.9(f)(3)(E)(1.) [936.9(f)(3)(E)(1.), 956.9(f)(3)(E)(1.)]

3 (3) Concurrent with use for log hauling or other heavy equipment  
4 uses, all road approaches to logging road watercourse crossings shall  
5 be treated for erosion control as needed to minimize soil erosion and  
6 sediment transport and to prevent significant sediment discharge to  
7 watercourses or lakes.

8 (4) Concurrent with use for log hauling or other heavy equipment  
9 uses, all traveled surfaces of logging roads in a WLPZ, and ELZ or EEZ  
10 designated for watercourse or lake protection, shall be treated for  
11 erosion control as needed to minimize soil erosion and sediment  
12 transport and to prevent significant sediment discharge to  
13 watercourses or lakes.

14 (5) No timber operations shall take place during the extended wet  
15 weather period unless the approved plan incorporates a complete winter  
16 period operating plan pursuant to 14 CCR § 914.7(a) [934.7(a),  
17 954.7(a)] that specifically addresses, where applicable, proposed  
18 logging road or landing use.

19 ~~Routine use and maintenance of roads and landings shall not take place~~  
20 ~~when, due to general wet conditions, equipment cannot operate under~~  
21 ~~its own power. Operations may take place when roads and landings are~~  
22 ~~generally firm and easily passable or during hard frozen conditions.~~  
23 ~~Isolated wet spots on these roads or landings shall be rocked or~~  
24 ~~otherwise treated to permit passage. However, operations and~~  
25 ~~maintenance shall not occur when sediment discharged from landings or~~  
~~roads will reach watercourses or lakes in amounts deleterious to the~~

1 ~~quality and beneficial uses of water. This section shall not be~~  
2 ~~construed to prohibit activities undertaken to protect the road or to~~  
3 ~~reduce erosion.~~

4  
5 **Amend § 923.7, 943.7, 963.7 Maintenance and Monitoring for Logging**  
6 **Roads and Landings ~~Licensed Timber Operator Responsibility for Roads~~**  
7 **and Landings**

8 The following maintenance and monitoring standards shall apply to  
9 logging roads and landings:

10 (a) Logging road and landing surfaces shall be monitored and  
11 maintained during timber operations and throughout the prescribed  
12 maintenance period to ensure hydrologic disconnection from  
13 watercourses and lakes to the extent feasible, minimize soil erosion  
14 and sediment transport, and to prevent significant sediment discharge.

15 (b) Logging roads that are used in connection with stocking  
16 activities shall be maintained throughout such use, even if this  
17 extends beyond the prescribed maintenance period.

18 (c) Maintenance treatments to the running surfaces of logging roads  
19 and landing surfaces shall be described in the plan, if applicable,  
20 and may include, but not be limited to, rocking, watering, paving,  
21 chemically treating, or installing commercial erosion control devices  
22 to manufacturer's specifications.

23 (1) In watersheds with listed anadromous salmonids and in  
24 planning watersheds immediately upstream of, and contiguous to, any  
25 watershed with listed anadromous salmonids grading of logging roads or  
landings to obtain a drier running surface more than one time before

1 reincorporation of any resulting berms back into the road surface is  
2 prohibited.

3 (d) Drainage facilities and drainage structures, including associated  
4 necessary protective structures, shall be maintained to allow free  
5 flow of water and minimize soil erosion. ~~or they~~ Facilities and  
6 structures shall be repaired, replaced, or installed ~~when maintenance~~  
7 is as needed to protect the quality and beneficial uses of water.

8 (e) Waterbreaks shall be maintained as specified in 14 CCR § 914.6  
9 [934.6, 954.6] ~~subsection (h).~~

10 (f) Soil stabilization treatments on logging road or landing cuts,  
11 fills, and sidecast shall be maintained as needed ~~to reduce the~~  
12 potential for failures, ~~to~~ minimize soil erosion and sediment  
13 transport, and to prevent significant sediment discharge.

14 ~~(g) Actions shall be taken as needed to reduce the potential for~~  
15 ~~failures of cuts, fills, or sidecast that could result in significant~~  
16 ~~sediment discharge.~~

17 (hg) Heavy equipment shall not be used in a WLPZ for maintenance  
18 during wet weather, except in emergencies to protect the road, to  
19 reduce erosion, to protect water quality, or in response to public  
20 safety needs.

21 (ih) Where evidence of substantial soil erosion ~~and-or~~ significant  
22 sediment discharge is present along a logging road or landing used for  
23 timber operations, additional drainage facilities and structures shall  
24 be installed as needed to minimize soil erosion and sediment transport  
25 and to prevent significant sediment discharge.

1 (ji) The prescribed maintenance period for erosion controls on  
2 permanent and seasonal logging roads and associated landings and  
3 drainage structures, including private appurtenant, which are not  
4 abandoned, and or deactivated logging roads and landings in accordance  
5 with 14 CCR §§ 923.8 [943.8, 963.8] and 923.17 [943.17, 963.17], shall  
6 be at least one year. The Director may prescribe a maintenance period  
7 extending up to three years in accordance with 14 CCR § 1050.

8 (1) In watersheds with listed anadromous salmonids and in  
9 planning watersheds immediately upstream of, and contiguous to, any  
10 watershed with listed anadromous salmonids, the erosion  
11 control prescribed maintenance period on permanent and seasonal logging  
12 roads and associated landings, including private appurtenant, that are  
13 not abandoned, or and deactivated logging roads and landings in  
14 accordance with 14 CCR § 923.8 [943.8, 963.8] shall be three years.

15 (kj) All Logging roads, including abandoned, deactivated, and private  
16 appurtenant roads, landings, and associated drainage structures used  
17 for timber operations shall be monitored as needed to comply with 14  
18 CCR § 1050. Monitoring inspections shall be conducted, when access is  
19 feasible during the prescribed maintenance period, at least once  
20 annually and a sufficient number of times during the extended wet  
21 weather period, particularly after large winter storm events, to  
22 ensure that drainage facilities and structures are properly  
23 functioning as designed.

24 (1) Inspections shall include checking drainage facilities and  
25 structures for evidence of downcutting, plugging, overtopping, loss of  
function, and sediment delivery to Class I, II, or III watercourses

1 and lakes. If evidence of sediment delivery or potential sediment  
2 delivery is present, and the implementation of feasible corrective  
3 measures could reduce the potential for significant sediment  
4 discharge, such additional measures shall be implemented when  
5 feasible.

6 (2) Inspections conducted pursuant to California Regional Water  
7 Quality Control Board requirements may be used to satisfy the  
8 inspection requirements of this section.

9 (~~1k~~) In watersheds with listed anadromous salmonids, water drafting  
10 for timber operations shall:

11 (1) Comply with Fish and Game Code Section 1600, et seq. Timber  
12 operations conducted under a Fish and Game Code Section 1600 Master  
13 Agreement for Timber Operations that includes water drafting may  
14 provide proof of such coverage for compliance with 14 CCR 923.7(1).

15 (2) Describe the water drafting site conditions and proposed  
16 water drafting activity in the plan, including:

17 (A) A general description of the conditions and proposed  
18 water drafting;

19 (B) The watercourse classification;

20 (C) The drafting parameters including the months the site  
21 is proposed for use; estimated total volume needed per day; estimated  
22 maximum instantaneous drafting rate and filling time; and disclosure  
23 of other water drafting activities in the same watershed;

24 (D) The estimated drainage area (acres) above the point of  
25 diversion;

(E) The estimated unimpeded streamflow, pumping rate, and

1 drafting duration,

2 (F) a discussion of the effects on aquatic habitat  
3 downstream from the drafting site(s) of single pumping operations, or  
4 multiple pumping operations at the same location, and at other  
5 locations in the same watershed;

6 (G) A discussion of proposed alternatives and measures to  
7 prevent adverse effects to fish and wildlife resources, such as  
8 reducing hose diameter; using gravity-fed tanks instead of truck  
9 pumping; reducing the instantaneous or daily intake at one location;  
10 describing allowances for recharge time; using other dust palliatives;  
11 and drafting water at alternative sites;

12 (H) The methods that will be used to measure source  
13 streamflow prior to the water drafting operation and the conditions  
14 that will trigger streamflow to be measured during the operation.

15 (3) All water drafting for timber operations are subject to each  
16 requirement below unless the Department of Fish and Game modifies the  
17 requirement in the Lake or Streambed Alteration agreement that  
18 authorized the drafting operation, or unless otherwise specified  
19 below:

20 (A) All intakes shall be screened to prevent impingement of  
21 juvenile fish against the screen. The following requirements apply to  
22 screens and water drafting on Class I waters:

23 (i) Openings in perforated plate or woven wire mesh  
24 screens shall not exceed 3/32 inches (2.38 millimeters). Slot  
25 openings in wedge wire screens shall not exceed 1/16 inches (1.75  
millimeters).

1                   (ii) The screen surface shall have at least 2.5  
2 square feet of openings submerged in water.

3                   (iii) The drafting operator shall regularly inspect,  
4 clean, and maintain screens to ensure proper operation whenever water  
5 is drafted.

6                   (iv) The approach velocity (water moving through the  
7 screen) shall not exceed 0.33 feet/second.

8                   (v) The diversion rate shall not exceed 350 gallons  
9 per minute.

10                  (B) Approaches and associated drainage features to drafting  
11 locations within a WLPZ or channel zone shall be surfaced with rock or  
12 other suitable material to minimize generation of sediment.

13                  (C) Barriers to sediment transport, such as straw wattles,  
14 logs, straw bales or sediment fences, shall be installed outside the  
15 normal high water mark to prevent sediment delivery to the watercourse  
16 and limit truck encroachment.

17                  (D) Water drafting trucks parked on streambeds,  
18 floodplains, or within a WLPZ shall use drip pans or other devices  
19 such as adsorbent or absorbent blankets, sheet barriers or other  
20 materials as needed to prevent soil and water contamination from motor  
21 oil or hydraulic fluid leaks.

22                  (E) Bypass flows for Class I watercourses shall be provided  
23 in volume sufficient to avoid dewatering the watercourse and maintain  
24 aquatic life downstream, and shall conform to the following standard:

25                   (i) Bypass flows in the source stream during  
drafting shall be at least 2 cubic feet per second.

1                    (ii) Diversion rate shall not exceed 10 percent of  
2 the surface flow.

3                    (iii) Pool volume reduction shall not exceed 10  
4 percent.

5                    (F) The drafting operator shall keep a log that records for  
6 each time water is drafted, the date, total pumping time, pump rate,  
7 starting time, ending time, and volume diverted. Logs shall be filed  
8 with the Department of Forestry and Fire Protection at the end of  
9 seasonal operations and maintained with the plan record. This  
10 requirement may be modified in the approved plan that covers the water  
11 drafting, but only with concurrence from the Department of Fish and  
12 Game.

13                    (G) Before commencing any water drafting operation, the RPF  
14 and the drafting operator shall conduct a pre-operations field review  
15 to discuss the water drafting measures in the plan and/or Lake or  
16 Streambed Alteration Agreement.

17 ~~The licensed timber operator who is responsible for the implementation~~  
18 ~~or execution of the plan shall not be responsible for the construction~~  
19 ~~and maintenance of roads and landings, unless the licensed timber~~  
20 ~~operator is employed for that purpose.~~

21  
22 **Amend § 923.8[943.8, 963.8]. Planned Abandonment and Deactivation of**  
23 **Logging Roads, Watereourse Crossings, and Landings.**

24        All logging roads and landings that are proposed to be removed from  
25 the permanent road network, including historic roads and landings,  
shall be abandoned. All temporary logging roads and landings that are