

7-20-11 Road Rules Task Force Plead with FPC edits

Road Rules, 2011  
14 CCR, Div. 1.5 Chapter 4

- 1
- 2 § 895.1 Definitions.
- 3 § 914.7 [934.7, 954.7]. Timber Operations, Winter Period.
- 4 § 914.8 [934.8,954.8] Tractor Road Watercourse Crossings.
- 5 § 915.1 [935.1, 955.1]. Use of Heavy Equipment for Site Preparation.
- 6 § 916.3 [936.3,956.3] General Limitations Near Watercourses.
- 7 § 916.4 [936.4,956.4]
- 8 § 916.9 [936.9,956.9] Protection and Restoration of the Beneficial functions  
of the Riparian Zone in Watersheds with Listed Anadromous Salmonids.
- 9 § 918.3 [938.3,958.3] Roads to be Kept Passable.
- 10 § 923 [943.1,963.1]Intent for Logging Roads, Landings, and Logging Road  
Watercourse Crossings.
- 11 § 923.1 [943.2,963.2] Logging Road and Landing Planning.
- 12 § 923.2 [943.3,963.3] Design and Implementation for Logging Roads and  
Landings.
- 13 § 923.3 [943.3,963.3] Mapping and Identification for Logging Roads and  
Landings.
- 14 § 923.4 [943.4,963.4] Construction & Reconstruction for Logging Roads and  
Landings.
- 15 § 923.5 [943.5,963.5] Erosion Control for Logging Roads and Landings.
- 16 § 923.6 [943.6,963.6] Use of Logging Roads and Landings.
- 17 § 923.7 [943.7,963.7] Maintenance & Monitoring for Logging Roads and Landings
- 18 § 923.8 [943.8,963.8] Abandonment & Deactivation of Logging Roads and  
Landings
- 19 § 923.9 [943.9,963.9]LTO Responsibility for Logging Roads and Landings
- 20 § 923.10 [943.10,963.10]Planning for Logging Road Watercourse Crossing
- 21 § 923.11 [943.11,963.11]Logging Road Watercourse Crossing Design and  
Implementation
- 22 § 923.12 [943.12,963.12] Logging Road Watercourse Crossing Mapping and  
Identification
- 23 § 923.13 [943.13,963.13] Logging Road Watercourse Crossing Construction &  
Reconstruction
- 24 § 923.14 [943.14,963.14] Logging Road Watercourse Crossing Erosion Control
- 25 § 923.15 [943.15,963.15] Logging Road Watercourse Crossing Use
- § 923.16 [943.16,963.16] Logging Road Watercourse Crossing Maintenance &  
Monitoring
- § 923.17 [943.17,963.17] Logging Road Watercourse Crossing Removal
- § 1034 Contents of Plans
- § 1051.1.Contents of Modified NTMP
- § 1090.5 Contents of NTMP
- § 1090.7 Notice of Timber Operations Content
- § 1092.09 PTHP Contents
- § 1093.2. Contents of Road Management Plan.
- § 1104.1. Conversion Exemptions.

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1 **Notes:** Proposed new or relocated text in underscore  
Deleted existing text in ~~strikeout~~

2 **Text in yellow** are amendments to the RRTF plead suggested by DFG or NMFS  
under consideration.

3 **Text in red** are amendments to the RRTF plead suggested by CGS, CAL FIRE or  
4 Board staff under consideration

5 **Amend § 895.1. Definitions.**

6  
7 **Abandoned Road** means a logging road on which proactive measures have  
8 been applied to effectively remove it from the permanent road network.

9  
10 ~~**Abandonment** means leaving a logging road reasonably impassable to~~  
11 ~~standard production four wheel drive highway vehicles, and leaving a~~  
12 ~~logging road and landings, in a condition which provides for long term~~  
13 ~~functioning of erosion controls with little or no continuing~~  
14 ~~maintenance.~~

15 **Abandonment** means taking proactive measures to effectively remove an  
16 existing logging road, landing, or logging road watercourse crossing  
17 from the permanent road network.

18  
19 **Appurtenant Road** means a road that is owned or controlled by the  
20 timberland owner, timber operator or timber owner, and will be used  
21 during the harvesting of a particular plan area.

22  
23 **CAL FIRE Option: Appurtenant Road** means a logging road under the  
24 ownership or control of the timber owner, timberland owner, timber  
25 operator, or plan submitter that will be used for log hauling and that

1 is between the plan area and the first public road to be used for log  
2 hauling.<sup>1</sup>

3 ~~Berm means a curb or dike constructed to control water and prevent~~  
4 ~~roadway runoff waters from discharging onto roadside slopes and/or to~~  
5 ~~provide material for subsequent road maintenance.~~

6 Berm means a curb, dike, or linear mound of earth that is constructed  
7 to control water and direct roadway runoff waters or that has  
8 developed through road grading activities.

9  
10 Connected Headwall Swale means a geomorphic feature consisting of a  
11 bowl-shaped, concave depression with convergent slopes, typically of  
12 65 percent or greater steepness, that is connected to a watercourse or  
13 lake by way of a continuous linear depression and that has been  
14 sculpted over geologic time by shallow landslide events. The slope  
15 profile is typically smooth and unbroken by benches, but may be  
16 interrupted by recent landslide deposits or scars. Emergent  
17 groundwater and wet areas may exist at the base of the swale. Soil  
18 and colluvium depth is typically greatest at the axis of the swale,  
19 thinning to either side.

20  
21 Critical Dip means a constructed dip across a logging road surface  
22 immediately down grade from, or over, a culverted logging road

23 \_\_\_\_\_  
24  
25 <sup>1</sup> Term inserted for two reasons: 1) term is used routinely in existing FPRs  
(see definition of Logging Area in 895.1) and needs a clear meaning; 2) The  
use of the term helps clarity which roads need erosion site assessments as  
proposed under 923.1 (e). As the Option CB CAL FIRE language is used in the  
Road Rules in section 1092.1

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1 watercourse crossing that functions to prevent crossing overflow from  
2 draining down the road.

3  
4 **Crowning** means creating a road surface with a convex cross sectional  
5 profile that drains runoff toward both sides of the road.

6  
7 **Deactivated Road** means a logging road that is part of the permanent  
8 road network where proactive measures have been applied to prevent  
9 active use.

10  
11 **Deactivation** means taking the proactive measures necessary to prevent  
12 the active use of an existing logging road, landing, or logging road  
13 watercourse crossing.

14  
15 **End-Hauling** means the removal and transport of ~~excavated~~ excess  
16 material ~~to prevent sidecast.~~

17  
18 **Excess Material** means excavated material that is not used ~~or needed~~ as  
19 a functional part of the road or a landing. Excess material is  
20 synonymous with spoils.

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1 **Extended Wet Weather Period** means the period from October 15 to May 1.

2 **2**

3 **Fill** means material that is mechanically placed ~~in low areas~~ and built  
4 up in lifts to form a the roadbed or landing surface. Fill includes  
5 the material placed around culverts and related drainage structures at  
6 logging road watercourse crossings.

7  
8 **Ford** means a logging road watercourse crossing where the road grade  
9 dips through the watercourse channel.

10  
11 **Harvest Area** means the area where trees are felled and removed.

12  
13 **DFG Option: Inside Ditch Hydraulic Capacity** means the ability of an  
14 inboard ditch to contain flow from a runoff event without overflowing  
15 to the road surface or substantially downcutting the inboard ditch.

16  
17 **Insloping** means shaping the road surface to drain toward a cutbank.

18  
19 <sup>2</sup> The concept of the extended wet weather period being based on rainfall data,  
20 perhaps on rainfall records for Hydrologic Sub Areas or Super Planning  
21 Watersheds, appears to be a logical way to approach this issue. However, DFG  
22 recommended that its option for using a May 31<sup>st</sup> ending date be dropped. This  
23 decision to not include a May 31 st ending date was because data use to  
24 validate this ending date was limited to NW California Coho salmon rainfall  
25 records. These location and records are already covered areas covered by HCPs  
which will highly control erosion control start and ending dates. Further the  
May 31 st is based on NW CA rainfall dates and is not applicable for other  
parts of the state. On June 8, 2011, the FPC chose to include the defintons  
for extended wet weather period, with fixed calendar dates for purposes of  
brevity in the rules. The FC decided to task the RRTF to investigate site  
specification fixed calendar date definitions but to not include this type of  
definition at this time.

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1 Outsloping means shaping the road surface to drain toward the outside  
2 edge.

3 ~~Permanent Road~~ means ~~a road which is planned and constructed to be~~  
4 ~~part of a permanent all-season transportation facility. These roads~~  
5 ~~have a surface which is suitable for the hauling of forest products~~  
6 ~~throughout the entire winter period and have drainage structures, if~~  
7 ~~any, at watercourse crossings which will accommodate the fifty-year~~  
8 ~~flood flow. Normally they are maintained during the winter period. a~~  
9 logging road that is part of the permanent road network and is  
10 planned, constructed, and maintained for year-round use.

11  
12 **Permanent Road Network** means the permanent, seasonal, ~~and temporary,~~  
13 and deactivated roads that provide the infrastructure necessary for  
14 timber operations and forest management.

15  
16 **Permanent Watercourse Crossing** means a watercourse crossing that ~~will~~  
17 ~~be constructed to accommodate the estimated fifty-year flood flow and~~  
18 will remain in place when timber operations have been completed.

19 **Prescribed Maintenance Period** means the time period, beginning with  
20 filing of the work completion report, provided that the report is  
21 subsequently approved, during which erosion controls ~~which~~ that are  
22 required and constructed as part of ~~a~~ timber operations must be  
23 maintained in a functional condition. ~~The period shall not exceed~~  
24 ~~three years from the filing of the work completion report provided~~  
25 ~~that the report is subsequently approved by the director.~~

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1 **Public Road** means a road open to the general public which is: (a) in  
2 ~~the~~ a Federal, State, ~~or~~ County, or City road system, or (b) a road on  
3 which a public agency has deeded, unlimited easement.

4  
5 **DFG Option - with 2/1/11 FPC changes:**<sup>3</sup> **Road approach** means the portion  
6 of the logging road surface that drains overland water flow to the  
7 watercourse crossing. Road approaches begin/end at the nearest  
8 functional drainage structure/facility or the first high point on the  
9 road where road surface overland water flow drains away from the  
10 watercourse crossings. Crossings often have two road approaches.

11  
12 **Road Maintenance** means activities involving manipulation of the  
13 logging road prism to maintain stable operating surfaces, functioning  
14 logging road drainage facilities and structures, and stable cutbanks  
15 and fill slopes. **DFG Option:** Examples of road maintenance include  
16 shaping and/or rocking a road surface; installation and maintenance of  
17 rolling and critical dips; restoring functional capacity of inboard  
18 ditches, cross drains, or culverts; and repairing water bars.

19  
20 **DFG Option: Road Prism** means all parts of a road including cut banks,  
21 ditches, road surfaces, road shoulders, and road fills.

22  
23 <sup>3</sup> Change made at FPC meeting on 2/1/11. Deletes that approaches are  
24 characterized by road surfaces that are not hydrologically disconnected and  
25 drain overland water flow to watercourses. Intent to clearly define physical  
feature of an approach and address requirements for connected approaches in  
the appropriate rule section. A companion edit is made to 923.5 (p)((4) and  
(5) to implement this intent, the section (p) is chosen by the FPC. FPC also  
notes that this definition is intended to address approaches at watercourse  
crossing, to various water bars, dips, away from water course crossings.

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**Road Prism** means all parts of a road including cut banks, ditches, road surfaces, road shoulders, and road fills.

**DFG Option: Scour** means the process of erosion by flowing water.

**Seasonal Road** means a ~~road which is planned and constructed as part of a permanent transportation facility where: 1) commercial hauling may be discontinued during the winter period, or 2) the landowner desires continuation of access for fire control, forest management activities, Christmas tree growing, or for occasional or incidental use for harvesting of minor forest products, or similar activities. These roads have a surface adequate for hauling of forest products in the non-winter periods, and in the extended dry periods or hard frozen conditions occurring during the winter period; and have drainage structures, if any, at watercourse crossing which will accommodate the fifty year flood flow. Some maintenance usually is required~~ logging road that is part of the permanent road network where use is generally discontinued during the winter period.

**Sidecast** means excess earthen material pushed or dumped ~~to or~~ over the side of a roads or landings.

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1 BOF Staff Option: Significant sediment discharge<sup>4</sup> means sediment that  
2 is currently, or may be in the future, discharged to watercourses or  
3 lakes in quantities that violate of Water Quality Requirements or  
4 result in significant individual or cumulative adverse impacts to the  
5 beneficial uses of water.

6  
7 BOF Staff Option: Significant existing or potential erosion site means  
8 a location where sediment is currently, or may be in the future,  
9 discharged to watercourses or lakes in quantities that violate Water  
10 Quality Requirements or result in significant individual or cumulative  
11 adverse impacts to the beneficial uses of water.<sup>5</sup> A site that is  
12 eroding but is not delivering, nor has the potential to deliver  
13 sediment to a water body, is not a significant existing or potential  
14 erosion site.<sup>6</sup>

15  
16 ~~Temporary Road means a logging road that is to be used only during the~~  
17 ~~timber operations and that will be deactivated or abandoned upon~~  
18 ~~completion of use. These roads have a surface adequate for seasonal~~  
19 ~~logging use and have drainage structures, if any, adequate to carry~~  
20 ~~the anticipated flow of water during the period of use.~~

21  
22  
23 <sup>4</sup> New definition proposed by Board staff in January 2011 to standardize  
sediment discharge prevention language used throughout the Road Rules.  
Endorsed by FPC on 5/4/11.

24 <sup>5</sup> Added on 12/20/10 by BOF staff as a result of usage proposed by FPC in  
25 section 923.1 (d). Endorsed by FPC.

<sup>6</sup> BOF staff revision to definition based on adaptation of language used in the  
NCRWQCB ECP guidance document for the Scott River. Endorsed by FPC.

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1 Through Cut means a section of road that lies below the adjacent  
2 ground level on both sides of the road.

3  
4 Through Fill means a section of road upon constructed fill that lies  
5 above the adjacent ground level on both sides of the road.

6  
7  
8 Amend 14 CCR § 914.7 [934.7, 954.7]. Timber Operations, Winter  
9 Period.

10 During the winter period:

11 (a) Mechanical site preparation and timber harvesting, shall not be  
12 conducted unless a winter period operating plan is incorporated in the  
13 timber harvesting plan and is followed, or unless the requirements of  
14 subsection (c) are met. Cable, helicopter and balloon yarding methods  
15 are exempted.

16 (b) The winter period operating plan shall include the specific  
17 measures to be taken in winter timber operations to minimize damage  
18 due to erosion, soil movement into watercourses and soil compaction  
19 from felling, yarding, loading, mechanical site preparation, and  
20 erosion control activities. A winter period operating plan shall  
21 address the following subjects:

- 16 (1) Erosion hazard rating.
- 17 (2) Mechanical site preparation methods.
- 18 (3) Yarding system (constructed skid trails).
- 19 (4) Operating Period.
- 20 (5) Erosion control facilities timing.
- 21 (6) Consideration of form of precipitation-rain or snow.
- 22 (7) Ground conditions (soil moisture condition, frozen).
- 23 (8) Silvicultural system-ground cover.
- 24 (9) Operations within the WLPZ.
- 25 (10) Equipment use limitations.
- (11) Known unstable areas.

22 (c) In lieu of a winter period operating plan, the RPF can specify  
23 the following measures in the THP:

24 (1) Tractor yarding or the use of tractors for constructing  
25 layouts, firebreaks or other tractor roads shall be done only during

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1 dry, rainless periods and shall not be conducted on saturated soils  
2 conditions that may produce significant sediment discharge. ~~sediment~~  
3 ~~in quantities sufficient to cause a visible increase in turbidity of~~  
4 ~~downstream waters in receiving Class I, II, III or IV waters or that~~  
5 ~~violate Water Quality Requirements.~~

6  
7  
8 **Amend § 914.8 [934.8, 954.8] Tractor Road Watercourse Crossing**

9 (d) Tractor road ~~W~~watercourse crossing facilities ~~not constructed to~~  
10 ~~permanent crossing standards on tractor roads~~ shall be removed and and  
11 stabilized before the beginning of the winter period. ~~If a~~  
12 ~~watercourse crossing is to be removed, it shall be removed in~~  
13 ~~accordance with~~ to the standards of 14 CCR § 923.3(d) [943.3(d),  
14 ~~963.3(d)] 923.17 [943.17, 963.17], subsections(a)-(c) . The RPF may  
15 propose an exception if explained and justified in the plan and found  
16 by the Director to be in conformance with this article.~~

17  
18 **Amend 14 CCR § 915.1 [935.1, 955.1]. Use of Heavy Equipment for Site**  
19 **Preparation.**

20 (a) Use of heavy equipment for site preparation shall comply with  
21 the provisions set forth in 14 CCR 914.2 [934.2, 954.2].

22 (b) Heavy equipment shall not be used for site preparation under  
23 saturated soil conditions that may produce significant sediment  
24 discharge ~~sediment in quantities sufficient to cause a visible~~  
25 ~~increase in turbidity of downstream waters in receiving Class I, II,~~

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1 ~~III or IV waters; that violate Water Quality Requirements; or when it~~  
2 cannot operate under its own power due to wet conditions.

3  
4 **Amend § 916.3 [936.3, 956.3]. General Limitations Near Watercourses,**  
5 **Lakes, Marshes, Meadows and Other Wet Areas**

6 (c) The timber operator shall not ~~construct or reconstruct roads,~~  
7 construct or use tractor roads ~~or landings~~ in Class I, II, III or IV  
8 watercourses, in the WLPZ, marshes, wet meadows, and other wet areas  
9 unless when explained and justified in the ~~THP~~ plan by the RPF, and  
10 approved by the Director, except as follows:

11 (1) At prepared tractor road crossings as described in 14 CCR §  
12 914.8(b) [934.8(b), 954.8(b)].

13 (2) Crossings of Class III watercourses ~~which~~ that are dry at  
14 the time of ~~timber operations~~ use.

15 ~~(3) At existing road crossings.~~

16 ~~(4)~~(3) At new tractor ~~and~~ road crossings approved as part of  
17 the Fish and Game Code process (F&GC 1600 et seq.).

18 ~~Use of existing roads is addressed in 916.4(a) [936.4(a),~~  
19 ~~956.4(a)]~~.

20  
21 **Amend 916.4 [936.4, 956.4]. Watercourse and Lake Protection.**

22 (a) The RPF or supervised designee shall conduct a field  
23 examination of all lakes and watercourses and shall map all lakes and  
24 watercourses which contain or conduct Class I, II, III or IV waters.

25 (1) As part of this field examination, the RPF or  
supervised designee shall evaluate areas near, and areas with the

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1 potential to directly impact, watercourses and lakes for sensitive  
2 conditions including, but not limited to, ~~existing and proposed roads,~~  
3 skidtrails ~~and landings~~<sup>7</sup>, unstable and erodible watercourse banks,  
4 unstable upslope areas, debris, jam potential, inadequate flow  
5 capacity, changeable channels, overflow channels, flood prone areas,  
6 and riparian zones wherein the values set forth in 14 CCR §§ 916.4~~(b)~~  
7 [936.4~~(b)~~, 956.4~~(b)~~], subsection(b) are impaired. \*\*\*\*\*

8  
9 **Amend § 916.9 [936.9, 956.9]. Protection and Restoration of the**  
10 **Beneficial functions of the Riparian Zone in Watersheds with Listed**  
11 **Anadromous Salmonids.**

12 In addition to all other district Forest Practice Rules, the  
13 following requirements shall apply in any watershed with listed  
14 anadromous salmonids. Requirements of 14 CCR § 916.9 [936.9, 956.9]  
15 precede other sections of the FPRs.

16 **Geographic scope** - Requirements for watersheds with listed  
17 anadromous salmonids differ depending on the geographic location of  
18 the watershed and geomorphic characteristics of the watercourse.  
19 Unique requirements for watersheds with listed anadromous salmonids  
20 are set forth for 1) watercourses in the coastal anadromy zone with  
21 confined channels, 2) watercourses with flood prone areas or channel  
22 migration zones, and 3) watercourses with confined channels located  
23 outside the coastal anadromy zone.

24 Watersheds which do not meet the definition of "watersheds with  
25 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), ~~923.3 [943, 963] and 923.9 [943.9, 963.9]~~ also apply to  
planning watersheds immediately upstream of, and contiguous to, any  
watershed with listed anadromous salmonids for purposes of reducing

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<sup>7</sup> Deleted requirement for examination of roads and landings as part of the watercourse classification, because this requirement has been transferred to 923.1 (d).

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1 significant adverse impacts from transported fine sediment. Projects  
2 in other watersheds further upstream that flow into watersheds with  
3 listed anadromous salmonids, not otherwise designated above, may be  
4 subject to these provisions based on an assessment consistent with  
5 cumulative impacts assessment requirements in 14 CCR §§ 898 and 912.9  
6 [932.9, 952.9] and Technical Rule Addendum No. 2, Cumulative Impacts  
7 Assessment. These requirements do not apply to upstream watersheds  
8 where permanent dams attenuate the transport of fine sediment to  
9 downstream watercourses with listed anadromous salmonids.\*\*\*\*\*

10  
11 \*\*\*\*\***(f) Class I watercourses -**

12 (1) For Class I watercourses, where fish are always or seasonally  
13 present or where fish habitat is restorable, any plan involving timber  
14 operations within the WLPZ shall contain the following information:

15 (A) Clear and enforceable specifications of timber  
16 operations within the Class I WLPZ, including a description of how any  
17 disturbance, or log or tree cutting and removal shall be carried out  
18 to conform with 14 CCR §§ 916.2 [936.2, 956.2], subsection (a) and  
19 916.9 [936.9, 956.9], subsection (a).

20 ~~(B) A description of all existing permanent logging road  
21 watercourse crossings.~~

22 ~~(C) Clear and enforceable specifications describing how  
23 these crossings are to be modified, used, and treated to minimize  
24 risks, giving special attention to allowing fish to pass both upstream  
25 and downstream during all life stages.~~

~~(D) Clear and enforceable specifications for construction  
and operation of any new crossing(s) of a Class I watercourse to  
prevent direct harm, habitat degradation, water velocity increase,  
hindrance of fish passage, or other potential impairment of beneficial  
uses of water~~

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1           **(EB)** Documentation of how proposed harvesting in the WLPZ  
2 contributes to the objectives of each zone stated in 14 CCR § 916.9  
3 [936.9, 956.9], subsection (c) and other goals in 14 CCR § 916.9  
4 [936.9, 956.9], subsection (a) (1)-(8). Documentation shall include  
5 the examinations, analysis, and other requirements listed in 14 CCR §  
6 916.4 [936.4, 956.4], subsection (a).\*\*\*\*\*

7           \*\*\*\*\* **(3)** Class I watercourses with flood prone areas or channel  
8 migration zones:\*\*\*\*\*

9           \*\*\*\*\* **(E)** Preferred Management Practices in the Inner Zone A  
10 and B of Flood Prone Areas\*\*\*\*\*

11           -       ~~4. Avoid Road and Landing Use: All new roads and~~  
12 ~~landings shall be located outside of zone. When feasible, minimize~~  
13 ~~use of existing roads and landings in the flood prone area. No~~  
14 ~~servicing of equipment within the flood prone area. Exceptions~~  
15 ~~include the use of roads and landings to accomplish actions to~~  
16 ~~improved salmonid habitat conditions stated 14 CCR § 916.9 [936.9,~~  
17 ~~956.9]. subsection (f)(3)(E(1.) above.~~

18                   **5-4.** Avoid Slash concentration and site  
19 preparation:\*\*\*\*\* and pile burning.

20                   **6-5.** Delineate Zone on the Ground:\*\*\*\*\* Locations  
21 of all WLPZ zones and CMZs shall be designated on the ground.

22                   **7-6.** Avoid Use of Water Drafting Sites:\*\*\*\*\* or  
23 stream alteration permits.

24                   **8-7.** Avoid Disturbance to Critical Flood Prone  
25 **Area Habitat::\*\*\*\*\*** and down large woody debris.

**(F)** Outer Zone:\*\*\*\*\*

1 \*\*\*\*(k) Year-round logging road, landing and tractor road use  
2 limitations.

3 (1)<sup>8</sup> Logging roads, landings or tractor roads shall not be  
4 used when operations may result in significant sediment discharge  
5 visibly turbid water from the road, landing or tractor road (skid  
6 trail) or an inside ditch associated with the logging road, landing or  
7 tractor road may produce sediment in quantities sufficient to cause a  
8 visible increase in turbidity of downstream waters in receiving Class  
9 I, II, III or IV waters or violate Water Quality Requirements.

10 (2) Log hauling on logging roads and landings shall be limited  
11 to those which are hydrologically disconnected from watercourses to  
12 the extent feasible, and exhibit a stable operating surface in  
13 conformance with (1) above.

14 (3) Concurrent with use for log hauling, approaches to logging  
15 road watercourse crossings shall be treated for erosion control as  
16 needed to minimize soil erosion and sediment transport and to prevent  
17 the discharge of sediment into watercourses and lakes in quantities  
18 deleterious to the beneficial uses of water.

19 (4) Concurrent with use for log hauling, all traveled surfaces  
20 of logging roads in a WLPZ or within any ELZ or EEZ designated for  
21 watercourse or lake protection shall be treated for erosion control as  
22 needed to minimize soil erosion and sediment transport and to prevent  
23 the discharge of sediment into watercourses and lakes in quantities

24 \_\_\_\_\_

25 <sup>8</sup> Modified RRTF proposal to conform to language for this section adopted by  
BOF on 9/7/10 for the "Operations and Saturated Soils, 2010" regulation.

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1 ~~deleterious to the beneficial uses of water.~~

2 ~~5) Grading to obtain a drier running surface more than one time~~  
3 ~~before reincorporation of any resulting berms back into the road~~  
4 ~~surface is prohibited.~~

5 (1) ~~Extended Wet Weather Period - October 15 to May 1 shall be~~  
6 ~~considered the extended wet weather period and the~~The following shall  
7 apply during the extended wet weather period:

8 (1) No timber operations shall take place unless the approved  
9 plan incorporates a complete winter period operating plan pursuant to  
10 14 CCR § 914.7 [934.7, 954.7], subsection (a) that specifically  
11 addresses, where applicable, proposed ~~logging road, landing or tractor~~  
12 ~~road construction, reconstruction and use during the extended wet~~  
13 ~~weather period. Where logging road watercourse crossing construction~~  
14 ~~or reconstruction is proposed an implementation schedule shall be~~  
15 ~~specified.~~

16 (2) Unless the winter period operating plan proposes operations  
17 during an extended wet weather period with low antecedent soil wetness,  
18 no tractor roads shall be constructed, reconstructed, or used on slopes  
19 that are over 40 percent and within 200 feet of a Class I, II, or III  
20 watercourse, as measured from the watercourse or lake transition line  
21 ~~during the extended wet weather period.~~

22 ~~(3) Logging roads, landings and tractor roads shall not be used~~  
23 ~~when sediment from the logging road, landing or tractor road surface~~  
24 ~~is transported to a watercourse or a drainage facility that discharges~~  
25 ~~into a watercourse in amounts sufficient to cause a visible increase~~  
~~in turbidity in Class I, II, III, or IV waters.~~

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1       ~~(4) Logging roads and landings shall not be used for log hauling~~  
2 ~~when saturated soil conditions result in the visible increase in~~  
3 ~~turbidity specified in (3) above.\*\*\*\*\*~~

4 **\*\*\*\*\* (n) Treatments to stabilize soils** - Within the WLPZ, and within  
5 any ELZ or EEZ designated for watercourse or lake protection,  
6 treatments to stabilize soils, minimize soil erosion, and prevent  
7 ~~significant sediment discharge the discharge of sediment into~~  
8 ~~watercourses or lakes in amounts deleterious to aquatic species or the~~  
9 ~~quality and beneficial uses of water, or that threaten to violate~~  
10 ~~applicable water quality requirements~~, shall be described in the plan  
11 as follows.

12       **(1)\*\*\*\*\***

13               **\*\*\*\*\* (C)** Disturbed tractor road cut banks and fills,  
14 and\*\*\*\*\*

15 **\*\*\*\*\* (2)** Soil stabilization treatment measures may include, but need  
16 not be limited to, removal, armoring with rip-rap, replanting,  
17 ~~mulching, rip-rapping, grass~~ seeding, installing commercial erosion  
18 control devices to manufacturer's specifications, or chemical soil  
19 stabilizers.

20       **(3)\*\*\*\*\***

21 **\*\*\*\*\* (o)** Section reserved for future use. ~~Erosion site~~  
22 ~~identification and remedies \*\*\*\*\*~~

23       (p) Section reserved for future use. ~~Erosion control maintenance~~  
24 ~~The erosion control maintenance period on permanent and seasonal roads~~  
25 ~~and associated landings that are not abandoned in accordance with 14~~  
~~CCR § 923.8 [943.8, 963.8] shall be three years. \*\*\*\*\*~~

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1 \*\*\*\*\* (r) Section reserved for future use. Water drafting — Water  
2 drafting for timber operations shall:

3 (1) Comply with Fish and Game Code Section 1600, et seq.

4 (A) Timber operations conducted under a Fish and Game Code  
5 Section 1600 master or long-term agreement that includes water  
6 drafting may provide proof of such coverage for compliance with this  
7 paragraph.

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

10 (A) a general description of the conditions and proposed  
11 water drafting;

12 (B) a map showing proposed water drafting locations;

13 (C) the watercourse classification;

14 (D) the drafting parameters including the months the site  
15 is proposed for use; estimated total volume needed per day; estimated  
16 maximum instantaneous drafting rate and filling time; and disclosure  
17 of other water drafting activities in the same watershed;

18 (E) the estimated drainage area (acres) above the point  
19 of diversion;

20 (F) the estimated unimpeded streamflow, pumping rate, and  
21 drafting duration;

22 (G) a discussion of the effects on aquatic habitat  
23 downstream from the drafting site(s) of single pumping operations, or  
24 multiple pumping operations at the same location, and  
25 at other locations in the same watershed;

(H) a discussion of proposed alternatives and measures to

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1 ~~prevent adverse effects to fish and wildlife resources, such as~~  
2 ~~reducing hose diameter; using gravity-fed tanks instead of truck~~  
3 ~~pumping; reducing the instantaneous or daily intake at one location;~~  
4 ~~describing allowances for recharge time; using other dust palliatives;~~  
5 ~~and drafting water at alternative sites; and \_\_\_\_\_~~

6 ~~(1) The methods that will be used to measure source~~  
7 ~~streamflow prior to the water drafting operation and the conditions~~  
8 ~~that will trigger streamflow to be measured during the operation.~~

9 ~~(3) All water drafting for timber operations are subject to each~~  
10 ~~requirement below unless the Department of Fish and Game modifies the~~  
11 ~~requirement in the Lake or Streambed Alteration agreement that~~  
12 ~~authorized the drafting operation, or unless otherwise specified~~  
13 ~~below:~~

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

17 ~~1. Openings in perforated plate or woven wire mesh~~  
18 ~~screens shall not exceed 3/32 inches (2.38 millimeters). Slot~~  
19 ~~openings in wedge wire screens shall not exceed 1/16 inches (1.75~~  
20 ~~millimeters).~~

21 ~~2. The screen surface shall have at least 2.5 square~~  
22 ~~feet of openings submerged in water.~~

23 ~~3. The drafting operator shall regularly inspect,~~  
24 ~~clean, and maintain screens to ensure proper operation whenever water~~  
25 ~~is drafted.~~

~~4. The approach velocity (water moving through the~~

1 ~~screen) shall not exceed 0.33 feet/second.~~

2 ~~5. The diversion rate shall not exceed 350 gallons per~~  
3 ~~minute.~~

4 ~~(B) Approaches and associated drainage features to~~  
5 ~~drafting locations within a WLPZ or channel zone shall be surfaced~~  
6 ~~with rock or other suitable material to minimize generation of~~  
7 ~~sediment.~~

8 ~~(C) Barriers to sediment transport, such as straw waddles,~~  
9 ~~logs, straw bales or~~  
10 ~~sediment fences, shall be installed outside the normal high water mark~~  
11 ~~to prevent sediment delivery to the watercourse and limit truck~~  
12 ~~encroachment.~~

13 ~~(D) Water drafting trucks parked on streambeds and~~  
14 ~~floodplains shall use drip pans or other devices such as absorbent~~  
15 ~~blankets, sheet barriers or other materials as needed to prevent soil~~  
16 ~~and water contamination from motor oil or hydraulic fluid leaks.~~

17 ~~(E) Bypass flows for Class I watercourses shall be~~  
18 ~~provided in volume sufficient to avoid dewatering the watercourse and~~  
19 ~~maintain aquatic life downstream, and shall conform to the following~~  
20 ~~standard:~~

21 ~~1. Bypass flows in the source stream during~~  
22 ~~drafting shall be at least 2 cubic feet per second.~~

23 ~~2. Diversion rate shall not exceed 10 percent of the~~  
24 ~~surface flow.~~

25 ~~3. Pool volume reduction shall not exceed 10 percent.~~

~~(F) The drafting operator shall keep a log that records~~

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1 ~~for each time water is drafted, the date, total pumping time, pump~~  
2 ~~rate, starting time, ending time, and volume diverted. Logs shall be~~  
3 ~~filed with the Department of Forestry and Fire Protection at the end~~  
4 ~~of seasonal operations and maintained with the plan record. This~~  
5 ~~requirement may be modified in the approved plan that covers the water~~  
6 ~~drafting, but only with concurrence from the Department of Fish and~~  
7 ~~Game.~~

8 ~~(G) Before commencing any water drafting operation, the RPF~~  
9 ~~and the drafting operator shall conduct a pre operations field review~~  
10 ~~to discuss the water drafting measures in the plan and/or Lake or~~  
11 ~~Streambed Alteration Agreement.\*\*\*\*\*~~

12 \*\*\*\*\*~~(v) Site-specific measures or nonstandard operational~~  
13 ~~provisions\*\*\*\*\*~~

14  
15 ~~Amend § 918.3 [938.3, 958.3]. Roads to be Kept Passable~~

16 ~~Timber operators shall keep all logging truck roads in a passable~~  
17 ~~condition during the dry season for fire truck travel until snag and~~  
18 ~~slash disposal has been completed.~~

19  
20 ~~Amend Article 12. [Article 11.] Logging Roads, Landings, and Logging~~  
21 ~~Road Watercourse Crossings. Logging Roads and Landings~~

22  
23 ~~Amend § 923 [943,963]. Intent for Logging Roads, Landings, and Logging~~

24 ~~Road Watercourse Crossings Logging Roads and Landings.~~

25 ~~(a) All logging roads, landings, and logging road watercourse~~  
~~crossings in the logging area shall be planned, constructed,~~

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1 reconstructed, used, maintained, removed, abandoned, and deactivated  
2 in a manner that:

3 (1) Is consistent with long-term enhancement and maintenance of  
4 the forest **NMFS OPTION 1/3/11 and aquatic CGS Option natural**<sup>9</sup> resource.

5 (2) Accommodates appropriate yarding systems.

6 (3) Is economically feasible.

7 (b) Such planning, construction, reconstruction, use, maintenance,  
8 removal, abandonment, and deactivation shall occur in a manner that  
9 minimizes potential adverse impacts to, among other things:<sup>10</sup>

10 (1) Public safety.

11 (2) Fish and wildlife habitat.

12 (3) Water quality and the beneficial uses of water.

13 (4) Soil resources.

14 (5) Significant archeological and historical sites.

15 (6) Air quality.

16 (7) Visual resources.

17 (8) Worker safety.

18 (9) Fire hazard.

19 (c) The RPF may propose exceptions to these rules if explained and  
20 justified in the plan and found by the Director to be in conformance  
21 with this article.

22 (d) Exceptions may also be provided through application of Fish and  
23 \_\_\_\_\_

24 <sup>9</sup> All natural resources need to be considered; aquatic resources are  
25 specifically addressed in 923 (b). This amendment would also begin to  
address NMFS on Intent language for ASP goals proposed in 923 (f).

<sup>10</sup> FPC endorsement from March 2010: standardizes language for intent of  
minimizing impacts.

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1 Game Code Sections 1600 et seq. and shall be made an enforceable part  
2 of the plan in accordance with 14 CCR §§ 1039, 1040, 1090.14, 1092.26,  
3 or 1092.27, as appropriate.

4 (e) The provisions of Articles 12 [Article 11 for Northern  
5 District] that apply in watersheds with listed anadromous  
6 salmonids and in planning watersheds immediately upstream of, and  
7 contiguous to, any watershed with listed anadromous salmonids  
8 shall not apply to a plan that is subject to:

9 (1) A valid incidental take permit issued by DFG pursuant to  
10 Section 2081(b) of the Fish and Game Code that addresses anadromous  
11 salmonid protection; or

12 (2) A federal incidental take statement or incidental take  
13 permit that addresses anadromous salmonid protection, for which a  
14 consistency determination has been made pursuant to Section 2080.1 of  
15 the Fish and Game Code; or

16 (3) A valid natural community conservation plan that  
17 addresses anadromous salmonid protection approved by DFG under  
18 section 2835 of the Fish and Game Code; or

19 (4) A valid NMFS OPTION 1/3/11 Habitat Conservation Plan  
20 that addresses anadromous salmonid protection, approved under  
21 Section 10 of the federal Endangered Species Act of 1973; or

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

1 (f) NMFS OPTION 1/3/11 In addition to all other district Forest

2 Practice Rules the following goals and objectives shall apply to all  
3 logging roads, landings, and logging road watercourse crossings in  
4 watersheds with listed anadromous salmonids and in planning watersheds  
5 immediately upstream of, and contiguous to, except in watersheds where  
6 permanent dams attenuate the transport of fine sediment to downstream  
7 watercourses, and in any watershed with listed anadromous salmonids:

8 (1) Goal: All logging roads, landings, and logging road  
9 watercourse crossings in the logging area shall be planned,  
10 constructed, reconstructed, used, maintained, removed, abandoned, and  
11 deactivated in a manner that protects, maintains, and contributes to  
12 the restoration and recovery of properly functioning salmonid habitat  
13 and populations of listed salmonid species. To achieve this goal, the  
14 RPF and LTO shall ensure that all logging roads and landings be  
15 planned, constructed, reconstructed, used, maintained, removed,  
16 abandoned, and deactivated to:

17 (A) Comply with terms of a Total Maximum Daily Load (TMDL).

18 (B) Prevent, individual and cumulative, significant  
19 sediment load transport to a watercourse or lake in order to ensure a  
20 functioning anadromous salmonid population can have the quality and  
21 quantity of habitat that occurs in their preferred range or where they  
22 are present or where they could be restored, needed to:

23 (i) provide foraging opportunities for juvenile  
24 anadromous salmonids to achieve optimal growth before ocean entry;

25 (ii) provide rearing habitat throughout the year; and

(iii) provide clean gravels for successful spawning.

1 (C) Prevent any blockage of any aquatic migratory routes  
2 for any life stage of anadromous salmonids or listed species.

3 (D) Prevent any adverse effects to stream flow.

4 (E) Consider watershed recommendations in Recovery Plans  
5 for listed anadromous salmonids developed by the National Marine  
6 Fisheries Service and the California Department of Fish and Game.

7 (2) Objectives for Logging Roads, Landings, and Logging Road  
8 Crossings. All logging roads, landings, and logging road crossings-  
9 that are planned, constructed, reconstructed, used, maintained,  
10 removed, abandoned, and deactivated as part of a Plan shall have  
11 protection, maintenance, or restoration and repair existing conditions  
12 detrimental to the species or species habitat of properly functioning  
13 salmonid habitat and populations as objectives. Practices that meet  
14 this objective include, but are not limited to, abandonment and up-  
15 grading of non-functioning and high risk roads, watercourse crossings,  
16 road approaches, and hydrologically disconnecting to the maximum  
17 extent practicable logging roads and landings that are existing  
18 constructed or reconstructed.

19 Amend § 923.1[943.1, 963.1]. Planning for Logging Roads and Landings.

20 The following standards shall apply to logging roads and landings:

21 (a) Logging roads and landings shall be planned and located within  
22 the context of a systematic layout pattern that considers 14 CCR §  
23 923(b), uses existing logging roads and landings where feasible and  
24  
25

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1 appropriate, provides access for fire and resource protection  
2 activities, and minimizes the following<sup>11</sup>:

3 (1) Total road mileage.

4 (2) The number of logging road watercourse crossings.

5 (3) Activities near watercourses, lakes, marshes, wet meadows,  
6 and other wet areas.

7 (4) Activities across steep areas that lead without flattening  
8 to Class I, II, III, or IV watercourses and lakes.

9 (5) Activities on unstable areas or in connected headwall  
10 swales.

11 (6) Activities near nesting sites of rare, threatened, or  
12 endangered bird species.

13 (7) Activities near significant populations of rare,  
14 threatened, or endangered plants.

15 (8) Ground disturbance, cuts, and fills.

16 (9) The potential for affecting surface hydrology, including  
17 but not limited to, concentrating or diverting runoff or draining the  
18 logging road or landing surface directly into a watercourse or lake.

19 (10) Maintenance needs while being compatible with the logging  
20 road classification and long-term road usage.

21 (b) No logging roads or landings shall be planned for construction or  
22 reconstruction in Class I, II, III, or IV watercourses or lakes,  
23 within a WLPZ, or in marshes, wet meadows, and other wet areas, except

24 as follows:  
25 \_\_\_\_\_

<sup>11</sup> FPC decision point from March 2010: Standardizes language for intent of minimizing impacts.

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1 (1) At existing logging road watercourse crossings.

2 (2) At constructed or reconstructed logging road watercourse  
3 crossings approved as part of the Fish and Game Code process (F&GC  
4 1600 et seq.)

5 (3) At logging road watercourse crossings of Class III  
6 watercourses that are dry at the time of use.

7 (c) Logging roads and landings shall be planned and located to avoid  
8 unstable areas and connected headwall swales. The Director may  
9 approve an exception if those areas are unavoidable and site-specific  
10 measures to minimize slope instability due to logging road or landing  
11 construction or reconstruction are described and justified in the  
12 plan.

13 (d)<sup>12</sup> As part of the planning and use of logging roads landings, and  
14 watercourse crossings **in the logging area**, the RPF or supervised  
15 designee shall evaluate and document sensitive conditions and  
16 significant existing and potential erosion sites, and specify and  
17 schedule feasible treatments.

18 (1) During the field examination of classified watercourses and  
19 lakes required under 14 CCR § 916.4 [936.4, 956.4], the RPF or  
20 supervised designee shall evaluate watercourse areas near existing,  
21 constructed, and reconstructed logging roads and landings **in the**

22  
23 <sup>12</sup> On January 4, 2011, the FPC determined to include in the Road Rules 2011  
24 proposal for erosion site assessments section 923.1 (d). This decision  
25 results in the RRTF proposals in 923.2 (f), the existing ASP rules 916.9 (o)  
and DFG/NMFS proposal in 923.1 (h) being deleted. The FPC found that 923.1  
(d) provides additional documentation requirements of erosion sites compared  
to 916.9 (o). 923.1 (d) requires disclosure of both existing and potential  
sites, where 916.9 (o) required only "on-going sites". Also the FPC found  
that the proposed 923.1(d) requires disclosures of a schedule to treat sites  
where (o) does not.

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1 logging area for significant existing and potential adverse impacts to  
2 sensitive conditions. Sensitive conditions include, but are not  
3 limited to, unstable and erodible watercourse banks, unstable upslope  
4 areas, channels with inadequate flow capacity, changeable channels,  
5 overflow channels, flood prone areas, debris jam potential, aggraded  
6 channels, and riparian zones wherein the values set forth in 14 CCR  
7 916.4 [936.4, 956.4], subsection (b) are impaired.

8 (2) The RPF or supervised designee shall evaluate all logging  
9 roads and landings in the logging area, including appurtenant roads,  
10 for evidence of significant existing and potential erosion sites.

11 (3) The RPF shall consider the sensitive conditions and  
12 significant existing and potential erosion sites identified by  
13 sections 14 CCR § 923.1 [943.1, 963.1] subsections(d)(1) and (2), and  
14 the measures needed to maintain and restore, to the extent feasible,  
15 the functions set forth in 14 CCR § 916.4 [936.4, 956.4], subsection  
16 (b) when planning logging roads and landings. Key factors to consider  
17 as part of developing necessary measures include:

18 (A) Type of road (permanent all-season, seasonal, or  
19 temporary road), road location, expected log truck haul routes, and  
20 traffic use (e.g. volume and season) of each road segment during the  
21 life of the plan.

22 (B) Age of road and the history of sediment delivery from  
23 existing roads.

24 (C) Beneficial uses of the watercourse or lake and  
25 sensitive conditions potentially affected by the road including, among

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1 other things, watercourse classification and presence of listed  
2 anadromous salmonids.

3 (D) The hillslope grade, road grade of crossing approaches  
4 and the gradient of the stream channel.

5 (E) The erodibility of hillslope material exposed by the  
6 road, NMFS OPTION 1/3/11 including mass wasting potential of roads in  
7 unstable areas such as, but not limited to inner gorges and headwall  
8 swales.

9 (F) The length of hydrologic connectivity of a road  
10 segment, the physical properties of the connected segment and the  
11 presence or absence of erosion resistant material along the connected  
12 segment.

13 (G) Site-specific information regarding the condition of  
14 and location of all existing or potential sediment sources including,  
15 but not limited to: watercourse crossings, road approaches, ditch  
16 relief culverts, road surfaces, road cuts, road fills, inboard  
17 ditches, through-cuts, and landings.

18 (4) The RPF shall describe in the plan feasible protection  
19 measures and treatments for identified sensitive conditions that could  
20 be affected by roads and landings.

21 (5) A list of the significant existing and potential erosion  
22 sites identified in 14 CCR § 923.1 [943.1, 963.1], subsection (d)(2)  
23 which have feasible treatments shall be submitted with the plan and  
24 shall require the following information:

25

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1           (A) A map showing the location(s) of significant existing  
2 and potential erosion site(s) with a unique identifier for each site.<sup>13</sup>

3           (B) Brief description of present condition of the mapped  
4 significant existing or potential erosion site.

5           (C) Brief description of proposed treatments for the mapped  
6 significant existing or potential erosion site.

7           (D) Items (B) and (C) above can be provided in tabular form  
8 as part of the plan.

9           (6) Disclose and map the significant existing and potential  
10 erosion sites<sup>14</sup> identified in 14 CCR § 923.1 [943.1, 963.1], subsection  
11 (d)(2), for which no feasible treatment measures exist.

12           (7) Where feasible treatments for significant existing or  
13 potential erosion site are proposed, the RPF shall submit a schedule  
14 that prioritizes a logical order of treatment. Prioritization of  
15 treatments shall be given to sites with increasing erosion risks.

16           (e) When selecting feasible alternatives (see 14 CCR §§ 897 and 898)  
17 during the planning phase of logging roads and landings, the RPF shall  
18 consider the location and planned use of logging roads and landings  
19 and whether such logging roads and landings will be abandoned or  
20 deactivated.

21 \_\_\_\_\_  
22  
23 <sup>13</sup> The FPC intent for listing significant existing and potential erosion site(s) with a  
24 unique identifier for each site is to allow multiple sites to be grouped together as a  
25 single site when descriptions or treatments are all the same for the general  
location.

<sup>14</sup> The FPC requested inclusion of item (6) which requires listing significant  
erosion sites that are not planned to be treated. This is necessary to  
provide a more complete picture to Plan reviewers of impacts related to  
roads.

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1 (f)<sup>15</sup> In watersheds with listed anadromous salmonids and in planning  
2 watersheds immediately upstream of, and contiguous to, any watershed  
3 with listed anadromous salmonids, where logging road or landing  
4 construction or reconstruction is proposed, the plan shall identify:

5 (1) How the proposed operations will fit into the systematic  
6 layout pattern.

7 (2) What, if any, offsetting mitigation measures, including but  
8 not limited to, abandonment of logging roads and landings, are needed  
9 to minimize potential adverse impacts to watersheds from the road  
10 system.

11 (g) In watersheds with listed anadromous salmonids no logging roads  
12 or landings shall be planned for construction or reconstruction in the  
13 CMZ or Core Zone of a Class I watercourse except those listed in 14  
14 CCR § 916.9(e)(1)(A)-(E) [936.9(e)(1)(A)-(E), 956.9(e)(1)(A)-(E)] or  
15 pursuant to 14 CCR § 916.9(v) [936.9(v), 956.9(v)].

16 (h) In watersheds with listed anadromous salmonids within the Inner  
17 Zone A and B of flood prone areas of Class I watercourses the  
18 following Preferred Management Practices should be considered for  
19 inclusion in the plan by the RPF and by the Director:

20 (1) Constructed and reconstructed logging roads and landings  
21 should not be planned for location within these zones.

22 (2) When feasible, planned use of existing logging roads and  
23 landings should be minimized in the flood prone area.

24 \_\_\_\_\_  
25 <sup>15</sup> FPC decision point from April 2010: Use optional language proposed by the RRTF for consistency with preamble to intent sections in 923. Deletes language adopted in ASP rules in 2009.

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1        (3) Exceptions include the use of roads and landings to  
2 accomplish actions to improve salmonid habitat conditions stated in 14  
3 CCR § 916.9(f)(3)(E)(1) [936.9(f)(3)(E)(1), 956.9(f)(3)(E)(1)].

4  
5 **Amend § 923.2 [943.2, 963.2]. Design and Implementation for Logging**  
6 **Roads and Landings ~~Read Construction.~~**

7        Constructed and reconstructed logging roads and landings<sup>16</sup> shall be  
8 designed and implemented in accordance with their proposed use,  
9 maintenance requirements, and the approved plan:

10       (a) All logging roads and landings shall:

11           (1) Avoid or mitigate potential impacts to public safety.

12           (2) Avoid unstable areas and connected headwall swales and  
13 minimize activities that adversely affect them.

14           (3) Minimize cuts and fills to the extent feasible.

15           (4) Be outsloped where feasible and drained with waterbreaks or  
16 rolling dips in conformance with other applicable Forest Practice  
17 Rules.

18           (5) Be hydrologically disconnected from watercourses and lakes to  
19 the extent feasible.<sup>17</sup>

20           (6) Include adequate drainage structures and facilities<sup>18</sup>  
21 necessary to avoid concentrating and diverting runoff, to minimize

22 \_\_\_\_\_  
23 <sup>16</sup> FPC decision point from May 2010: Rejected DFG comments to widen  
24 application of design standards to all roads and instead retained focus on  
roads to be constructed or reconstructed.

25 <sup>17</sup> FPC decision point from May 2010: Inserts portion of DFG recommendation to  
include requirement for "hydrological disconnection. Other specifics on how  
to accomplish hydro-disconnection were not accepted by FPC.

<sup>18</sup> FPC decision point from May 2010: Rejects DFG option to include "road  
rocking" as a method for adequate drainage structure. FPC desires to retain

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1 erosion of roadbeds, landing surfaces, drainage ditches, sidecast and  
2 fills, to minimize the potential for soil erosion and sediment  
3 transport, and to prevent significant sediment discharge.

4 (7) Avoid crossing, or locations on, 100 feet or more of lineal  
5 distance over any slopes greater than 65 percent or within 100 feet of  
6 the boundary of a WLPZ on slopes greater than 50 percent that drain  
7 toward the zoned watercourse or lake. Where logging road or landing  
8 construction or reconstruction is necessary in these areas, specific  
9 measures to minimize movement of soil and the discharge of  
10 concentrated surface runoff shall be incorporated in the plan. The  
11 Director may waive inclusion of such measures where the RPF can show  
12 that slope depressions, drainage ways, and other natural retention and  
13 detention features are sufficient to control overland transport of  
14 eroded material.

15 (b) The Director may require removal of deposits of excess material  
16 if the deposits are in a position to adversely affect the beneficial  
17 uses of water and if the removal of the material is feasible.

18 (c) Excess material excavated during logging road and landing  
19 construction shall not be transported to disposal sites where it may  
20 result in significant sediment discharge.

21 (d) In addition to the requirements of subsection (a) above, all  
22 constructed and reconstructed logging roads shall:

23 (1) Be no wider than a single-lane compatible with the largest  
24 type of equipment specified for use on the logging road, with adequate

25 performance standard language to allow maximum flexibility to implement technologies that accomplish the intent of sections to provide adequate drainage structures and facilities.

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1 turnouts provided as required for safety unless prohibited by existing  
2 contracts with the U.S.D.A. Forest Service or other federal agency.

3 (2) Avoid grades greater than 20% or grades greater than 15% that  
4 extend greater than 500 continuous feet. Exceptions may be approved  
5 where there is no other feasible access for harvesting of timber or  
6 where use of a gradient greater than 20% will serve to reduce soil  
7 disturbance.

8 (e) In addition to the requirements of subsection (a) above, all  
9 constructed and reconstructed landings shall:

10 (1) Be consistent with the yarding and loading system to be  
11 used.

12 (2) Be no larger than one-half acre.

13 (3) Avoid construction on slopes greater than 40 percent where  
14 the landing will exceed one-quarter acre in size.

15  
16 **Amend § 923.3 [943.3, 963.3]. Mapping and Identification for Logging**  
17 **Roads and Landings ~~Watercourse Crossings~~.**

18 The following mapping and identification standards shall apply to  
19 logging roads and landings:

20 (a) For logging road- and landing-related mapping requirements refer  
21 to 14 CCR §§ 1034(x)(4)(A)-(B) and (5)(A)-(L), 1090.5(w)(4)-(6),  
22 1090.5(hh), 1090.7(n)(4)-(6), and 1092.09(l)(5)(A)-(B) and (6)(A)-(L).

23 (b) For logging road- and landing-related disclosure and description  
24 requirements refer to 14 CCR §§ 1034(bb), ~~RRTF Option 1 1034(hh)~~

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1 (RRTF Option 2 If Option 1 under 1034(hh) is not adopted, do not  
2 adopt Option 1), 1034(ii)(1)-(5), 1034(jj)(1)-(17), 1034(kk)(1)-(3)  
3 and (4)(A), 1034(mm) and 1090.5(gg).

4 ~~(c) RRTF Option 1 For logging road and landing related~~  
5 ~~identification requirements refer to 14 CCR § 1034(hh).~~

6 (RRTF Option 2 If Option 1 under 1034(hh) is not adopted, do not  
7 adopt the contents of subsection 923.3(c) [943.3(c), 963.3(c)]  
8 proposed under Option 1 and and begin re-numbering subsection (d) as  
9 (c) and (e) as (d).)

10 ~~(d)~~(c) The RPF shall identify in the field all constructed and  
11 reconstructed logging roads and landings:

12 (1) Across slopes greater than 65 percent for 100 lineal feet  
13 or more.

14 (2) Across slopes greater than 50 percent for 100 lineal feet  
15 or more within 100 feet of the boundary of a WLPZ that drains toward  
16 the zoned watercourse or lake.

17 ~~(e)~~(d) The location of all logging roads to be constructed or  
18 reconstructed shall be flagged or otherwise identified on the ground  
19 prior to the pre-harvest inspection. Exceptions may be explained and  
20 justified in the plan and agreed to by the Director if flagging is  
21 unnecessary as a substantial aid to examining: (1) compatibility  
22 between logging road location and yarding and silvicultural systems,  
23 or (2) possible significant adverse effects of logging road location  
24 on the factors listed under 14 CCR § 923(b) [943(b), 963(b)].  
25

1 Amend § 923.4 [943.4, 963.4]. Construction and Reconstruction for  
2 Logging Roads and Landings ~~Road Maintenance~~.

3 Logging roads and landings shall be constructed or reconstructed in  
4 accordance with the approved plan and the following requirements. If  
5 a change in designation of logging road classification is made after  
6 the plan is approved, the change shall be reported in accordance with  
7 14 CCR §§ 1039, 1040, 1090.14, 1092.26 or 1092.27, as appropriate.

8 (a) Logging roads and landings shall not be constructed or  
9 reconstructed where such operations pose a significant risk to public  
10 safety.

11 (b) Logging roads or landings shall not be constructed or  
12 reconstructed in Class I, II, III, or IV watercourses or lakes, the  
13 WLPZ, marshes, wet meadows, or other wet areas, except for logging  
14 road watercourse crossings or as specified in the plan.<sup>19</sup>

15 (c) Logging roads and landings shall not be constructed or  
16 reconstructed across unstable areas or connected headwall swales.

17 (d) Logging roads and landings shall not be constructed with  
18 overhanging banks.

19 (e) Any tree over 12 inches dbh with more than 25 percent of the root  
20 surface exposed by logging road or landing construction shall be  
21 felled concurrently with the timber operations.

22 (f) On slopes greater than 40 percent, the organic layer of the soil  
23 shall be removed prior to fill placement.

24 \_\_\_\_\_  
25 <sup>19</sup> Option for 150 foot distance from WTL for new road construction recommended  
by Staff and science team.

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1 (g) Waste organic material, such as uprooted stumps, cull logs,  
2 accumulations of limbs and branches, and unmerchantable trees, shall  
3 not be buried in logging road or landing fills. Wood debris or cull  
4 logs and chunks may be placed and stabilized at the toe of fill to  
5 restrain excavated soil from moving downslope.

6 (h) Slash and other debris from road construction shall not be  
7 bunched against residual trees, which are required for silvicultural  
8 or wildlife purposes, nor shall it be placed in locations where it  
9 could be discharged into Class I or II watercourses or lakes.

10 (i) Where constructed fills will exceed three feet in vertical  
11 thickness, fill slopes shall be inclined no greater than 65 percent.

12 (j)<sup>20</sup> Logging roads or landings shall not be constructed or  
13 reconstructed under saturated soil conditions, except that  
14 construction may occur on isolated wet spots arising from localized  
15 ground water such as springs, provided measures are taken to prevent  
16 significant sediment discharge.

17 (1) Construction or reconstruction operations shall not be  
18 conducted when saturated soils do not allow meeting standard  
19 engineered compaction methods.<sup>21</sup>

20 (k) Construction or reconstruction of logging roads or landings  
21 shall not take place during the winter period unless the approved plan  
22 \_\_\_\_\_

23 <sup>20</sup> The language shown is a combination of existing FPRs 923.2 (r) and 923.5  
24 (e) that were adopted by the BOF on 9/7/10. These two sections are existing  
25 FPRs for construction of roads and construction of landings. They were  
merged here for consistency with format the RRTF suggested. The language was  
endorsed by the FPC on May 3, 2011.

<sup>21</sup> Subsection 923.4 (j)(1) is added to ensure that construction standards are  
maintained during operations on saturated soils.

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1 incorporates a complete winter period operating plan pursuant to 14 §  
2 CCR 914.7 [934.7, 954.7], subsection (a) that specifically addresses  
3 such logging road or landing construction or reconstruction.

4 (1) On slopes greater than 50 percent for greater than 100 lineal  
5 feet, fills greater than four feet in vertical height at the outside  
6 shoulder of the logging road or landing shall be:

7 (1) Constructed on a bench that is excavated at the proposed toe  
8 of the fill and is wide enough to compact the first lift.

9 (2) Compacted in approximately one-foot lifts from the toe to the  
10 finished grade or retained by an engineered structure.

11 (m) Logging roads and landings shall not be constructed or  
12 reconstructed across 100 feet or more of lineal distance on any slope  
13 greater than 65 percent or within 100 feet of the boundary of a WLPZ  
14 on slopes greater than 50 percent that drain toward the zoned  
15 watercourse or lake unless specific construction techniques or  
16 measures are described in the plan.

17 (n) Fills shall not be constructed on slopes greater than 65 percent.

18 (o) On slopes greater than 65 percent, sidecast from logging road and  
19 landing construction shall be minimized to the degree feasible.

20 (p) Excess material transported from logging road or landing  
21 construction or reconstruction shall be deposited and stabilized in a  
22 manner and in areas that avoid potential adverse impacts to:

23 (1) Public safety.

24 (2) Areas that could deliver significant sediment discharge.

25 (q) Where conditions are encountered during logging road or landing  
construction or reconstruction that differ from what was anticipated

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1 during the preparation and review of the plan and that will result in  
2 a significant adverse impact on the environment or to public safety,  
3 the LTO shall inform the RPF or plan submitter of these unanticipated  
4 conditions in accordance with 14 CCR § 1035.3. If necessary, the  
5 responsible RPF or plan submitter shall submit to the Director a  
6 deviation to the plan describing the unanticipated conditions and  
7 proposing appropriate actions.

8 (r) In watersheds with listed anadromous salmonids, no logging  
9 roads or landings shall be constructed or reconstructed within the CMZ  
10 or Core Zone of a Class I watercourse except for those listed in 14  
11 CCR § 916.9([936.9, 956.9]subsections (e)(1)(A)-(F) or pursuant to 14  
12 CCR § 916.9[936.9, 956.9], subsection (v).

13 (s) In watersheds with listed anadromous salmonids and in planning  
14 watersheds immediately upstream of, and contiguous to, any watershed  
15 with listed anadromous salmonids, the following shall apply:

16 (1) On slopes greater than 50 percent that have access to a  
17 watercourse or lake:

18 (A) Specific provisions shall be identified and described  
19 for all logging road construction.

20 (B) Where cutbank stability is not an issue, logging roads  
21 may be constructed as a full-benched cut (no fill). Spoils not  
22 utilized in logging road construction shall be disposed of in stable  
23 areas with less than 30 percent slope outside of any WLPZ, EEZ, or ELZ  
24 designated for watercourse or lake protection. The Director, with  
25 concurrence from other responsible agencies, may waive inclusion of  
these measures where the RPF can show that slope depressions and other

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1 natural retention and detention features are sufficient to control  
2 overland transport of eroded material.

3 (C) Logging roads may be constructed with balanced cuts and  
4 fills:

5 (i) If properly engineered, or,

6 (ii) If fills are removed and the slopes recontoured  
7 prior to the winter period.

8 (2) During the extended wet weather period, no timber  
9 operations shall take place unless the approved plan incorporates  
10 a complete winter period operating plan pursuant to 14 CCR §  
11 914.7[934.7, 954.7]subsection (a) that specifically addresses,  
12 where applicable, proposed logging road or landing construction,  
13 reconstruction. <sup>22</sup>

14  
15 **Amend § 923.5 [943.5,963.5]. Erosion Control for Logging Roads and**  
16 **Landings-Landing Construction.**

17 The following erosion control standards shall apply to logging roads  
18 and landings:

19 (a) All logging road and landing surfaces shall be adequately drained  
20 through the use of surface geometry configurations in combination with

21 \_\_\_\_\_  
22 <sup>22</sup> DFG comment for adding 923.4 (s) (3) contained in the May 20 2010  
23 version was deleted(**(3 DFG Option)** No road or landing construction,  
24 reconstruction, or decommissioning shall be undertaken during the extended wet  
25 weather period, or at any time outside this period when saturated soil  
conditions exist, except on hydrologic ally disconnected road segments.) The  
subsection was deleted because it content is already contained in 923.4 (j) and  
923.4 (s) (2). The mention of hydrologic disconnection was added by the FPC in  
923.2 (a) (5)

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1 the installation of drainage structure or facilities<sup>23</sup> and shall be  
2 hydrologically disconnected from watercourses and lakes to the extent  
3 feasible.<sup>24</sup>

4 (b) Drainage facilities or **DFG OPTION drainage structures** ~~ditch~~  
5 ~~drains~~ shall be installed along all logging roads and all landings  
6 that are used for timber operations in sufficient number to minimize  
7 soil erosion and sediment transport and to prevent significant  
8 sediment discharge.

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

- 11 (1) Be adequately sized to transmit runoff.
- 12 (2) Minimize erosion of logging road and landing surfaces.
- 13 (3) Avoid discharge onto fill.
- 14 (4) Discharge to erosion resistant material<sup>25</sup>.
- 15 (5) Minimize potential adverse impacts to slope stability.

16 (d) Waterbreaks and rolling dips installed across logging roads and  
17 landings shall be of sufficient size and number and be located to <sup>26</sup>

18  
19  
20 <sup>23</sup> Added "facilities for consistency with other sections. This is a more encompassing  
term for all type of drainage features associated with a road.

21 <sup>24</sup> Amendments to subsection 923.5 (a) were added to include the CGS amendment for  
hydrologic disconnection for drainage facilities.

22  
23 <sup>25</sup> CGS recommends rejection of DFG Option to use term "sediment filter strip" because  
it is covered in 923.5 (h). FPC chose on 6/8/11 to not use the term "sediment filter  
strip" and rely on language and standards in 923.5 (h) to achieve the goals requested  
24 by DFG.

25 <sup>26</sup> GS recommends rejection of DFG Option to use term "sediment filter strip" because it  
is covered in 923.5 (h). FPC chose on 6/8/11 to not use the term "sediment filter  
strip" and rely on language and standards in 923.5 (h) to achieve the goals requested  
by DFG.

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1 avoid collecting and discharging concentrated runoff onto fills,  
2 erodible soils, unstable areas, and connected headwall swales.

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

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

19 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>
Extreme	100	75	50
High	150	100	75
Moderate	200	150	100
Low	300	200	150 )

24 (g) Where outsloping and rolling dips are used to control surface  
25 runoff, the dip in the logging road grade shall be sufficient to

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1 capture runoff from the logging road surface. The steepness of cross-  
2 slope gradient in conjunction with the logging road or landing  
3 gradient and the estimated soil erosion hazard rating shall be used to  
4 determine the rolling dip spacing in order to minimize soil erosion  
5 and sediment transport and to prevent significant sediment discharge.

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

11 (ii) Where logging road and landing surfaces, road approaches<sup>27</sup>,  
12 inside ditches and drainage structures cannot be hydrologically  
13 disconnected, and where there is existing or the potential for  
14 significant sediment discharge, necessary and feasible treatments to  
15 prevent the discharge will be described in the plan.

16 (i) All logging roads and landings used for timber operations shall  
17 have adequate drainage upon completion of use for the year or by  
18 October 15, whichever is earlier. An exception is that drainage  
19 facilities and drainage structures do not need to be constructed on  
20 logging roads in use during the extended wet weather period provided

21 \_\_\_\_\_  
22 <sup>27</sup> Inclusion this subsection recommended by the FPC in at the July 6<sup>th</sup>, 2010  
23 committee meeting is to address surface erosion and for roads in all  
24 locations. Amendments were made to this section as a result of discussion at  
25 August 27 2010 RRTF subcommittee meeting. This subsection is currently being  
reviewed in context with 923.5 (p)(4)and (5) proposed amendments by DFG  
address and similar requirements for ASP watersheds. On 9/7/10, the FPC  
included the term "Road Approaches" to the subsection to ensure clarity and  
focus attention on the critical need to address road approaches for surface  
erosion preventions. Also at this meeting the FPC directed staff to  
reorganize the wording for clarity and proper language usage.

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1 that all such drainage facilities and drainage structures are  
2 installed prior to the start of rain that generates overland flow.

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

7  
8 (k) 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 Bare soil stabilization treatments for road surfaces are addressed in  
13 other subsection.<sup>28</sup> Sites to be stabilized include, but are not limited

14 to:

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

18 (2) Cut and fills associated with approaches to logging road  
19 watercourse crossings<sup>29</sup> of Class I or II waters or Class III waters  
20 where an ELZ, EEZ, or a WLPZ is required.

21 \_\_\_\_\_  
22 <sup>28</sup> Recommended edits based RRTF meeting 8/26/10. Clarifies that this is  
23 section is intended to apply to portions of the road other than the road  
24 surface. Requirements for treating road surfaces are dealt with in other  
25 subsections.

<sup>29</sup> Recommended edits based RRTF meeting 8/26/10. Clarifies that this is  
section is intended to apply to portions of the road other than the road  
surface. Requirements for treating road surfaces are dealt with in other  
subsections.

1       (3) Bare areas exceeding 800 continuous square feet within a  
2 WLPZ.

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

8       (m) Where the natural ability of ground cover within a WLPZ is  
9 inadequate to protect the beneficial uses of water by minimizing soil  
10 erosion or by filtering sediments, the plan shall specify protection  
11 measures to retain and improve the natural ability of the ground cover  
12 to filter sediment and minimize soil erosion.

13       (n) Soil stabilization treatments shall be in place upon completion  
14 of operations for the year of use or prior to ~~DFG OPTION-October-15~~  
15 the extended wet weather operating period, whichever comes first. An  
16 exception is that bare areas created ~~DFG OPTION-after October-15~~  
17 during the extended wet weather operating period shall be treated  
18 within 10 days or as agreed to by the Director.

19       (o) Overhanging or unstable concentrations of slash, woody debris or  
20 soil along the downslope edge or face of landings shall be removed or  
21 stabilized when it is located on slopes greater than 65 percent or  
22 within 100 feet of the boundary of a WLPZ on slopes greater than 50  
23 percent that drain toward the zoned watercourse or lake. Removed  
24 materials shall not be placed at disposal sites that could result in a  
25 significant sediment discharge.

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1 (p) In watersheds with listed anadromous salmonids and in planning  
2 watersheds immediately upstream of, and contiguous to, any watershed  
3 with listed anadromous salmonids, the following shall apply:

4 (1) Constructed and reconstructed logging roads shall be  
5 outsloped where feasible and drained with waterbreaks or rolling dips  
6 CGS Option ~~(where the road grade is inclined at seven (7) percent or~~  
7 ~~less)~~ in conformance with other applicable Forest Practice Rules.

8 (2) In addition to the provisions listed under 14 CCR §  
9 923.2(d)(2) [943.2(d)(2), 963.2(d)(2)], all permanent and seasonal  
10 logging roads with a grade of 15 percent or greater that extend 500  
11 continuous feet or more shall have specific erosion control measures  
12 stated in the plan.

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

17 (A) In addition to the requirements of subsections (k)-  
18 (o), soil stabilization is required for the following areas:

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

21 (ii) Disturbed logging road and landing cut banks and  
22 fills, and

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

25 (B) Where straw mulch is used, the minimum straw coverage  
shall be 90 percent, and any treated area that has been reused or has

1 less than 90 percent surface cover shall be treated again by the end  
2 of timber operations.

3 (C) Where slash mulch is packed into the ground surface  
4 through the use of a tractor or equivalent piece of heavy equipment  
5 the minimum slash coverage shall be 75 percent, DFG OPTION and any  
6 treated area that has been reused or has less than 75 percent surface  
7 cover shall be treated again by the end of timber operations.

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

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

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

23 (4) DFG Option Logging road approach surfaces that are not  
24 hydrologically disconnected for permanent roads shall consist of high  
25

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1 ~~quality, durable, compacted rock or paving except where site specific~~  
2 ~~alternatives are explained, justified and approved by the Director<sup>30</sup>.~~

3 ~~-(5) Logging road approach surfaces not hydrologically~~  
4 ~~disconnected for seasonal roads crossing Class I watercourses or any~~  
5 ~~roads used for hauling by heavy equipment during the extended wet weather~~  
6 ~~period shall consist of high quality, durable, compacted rock or paving~~  
7 ~~when one or more of the following factors<sup>31</sup> are present. Exceptions where~~  
8 ~~site specific alternatives are explained, justified may be approved by~~  
9 ~~the Director:~~

10 ~~-(i) New road construction or there is a history of~~  
11 ~~significant sediment delivery from existing roads.~~

12 ~~-(ii) High volume of use (discussion needed on specifics).~~

13 ~~-(iii) The road grade of road approaches exceeds 7 %~~  
14 ~~gradient.~~

15 ~~-(iv) The hillslope and road surface exposed is composed of~~  
16 ~~highly erodible material as such as decomposed granite.~~

17 ~~-(6) Logging road approach surfaces on (i) all seasonal roads~~  
18 ~~used for hauling in the current year, (ii) all seasonal roads used~~  
19 ~~during the extended wet weather period for purposes other than hauling~~  
20 ~~shall be treated with either: rock, slash, seed and straw mulch, seed~~  
21 ~~and stabilized straw, or seed and slash.~~

23 <sup>30</sup> Adds "opt-out" language for use by RPF to use an alternative to rocking  
24 approaches. FPC did not endorse this Option, and section should be deleted.  
Decision made on May 3, 2011.

25 <sup>31</sup> Presence of any one of these factors would "trigger" the rocking of road  
approach surface. Age of road, wet weather use, traffic levels, parent  
material, and road gradient were identified as critical factors by the RRTF.  
FPC did not endorse this (p) (5) Option, and section should be deleted.  
Decision made on May 3, 2011.

1 ~~(7) Logging road approaches to temporary crossings shall be~~  
2 ~~stabilized and maintained after crossing removal to avoid rutting or~~  
3 ~~pumping fines during administrative use after removal.~~

4 ~~(8) Logging road approach ditches exhibiting downcutting for~~  
5 ~~(i) permanent logging roads, (ii) seasonal roads crossing Class I~~  
6 ~~watercourses, and (iii) logging roads used for hauling during the~~  
7 ~~extended wet weather period shall be lined with high-quality, durable~~  
8 ~~rock, installed with erosion control materials or structures to~~  
9 ~~manufacturers specifications, or treated with other effective means as~~  
10 ~~described in the plan.~~

11  
12 Amend § 923.6 [943.6, 963.6]. Use of Logging Roads and Landings  
13 Conduct of Operations on Roads and Landings.

14 The following use standards shall apply to logging roads and  
15 landings:

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

18 (b) Logging roads and landings shall not be used during any time of  
19 the year when operations may result in significant sediment discharge  
20 to watercourse or lakes<sup>32</sup>, except in emergencies to protect the road,

21 \_\_\_\_\_  
22  
23  
24 <sup>32</sup> (add to 895.1) **Significant sediment discharge** means sediment that is  
25 currently, or may be in the future, discharged to watercourses or lakes in  
quantities that violate of Water Quality Requirements or result in  
significant individual or cumulative adverse impacts to the beneficial uses  
of water. Subsection (a) and (b) endorsed by FPC on May 3, 2011.

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1 to reduce erosion, to protect water quality, or in response to public  
2 safety needs.

3  
4 (c) Log hauling or other heavy equipment uses<sup>33</sup> shall be limited to on  
5 logging roads and landings which are hydrologically disconnected from  
6 watercourses to the extent feasible and exhibit a stable operating  
7 surface<sup>34</sup>. Use may occur on limited segments of roads or landings that  
8 do not exhibit a stable operating surface when the road segment or  
9 landing is completely, and at all times, hydrologically disconnected  
10 from a watercourse and equipment can operate under its own power<sup>35</sup>.

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

14 (e) All roadside berms shall be removed or breached before the  
15 beginning of the winter period, with the exception of berms needed for  
16 erosion control.

17  
18  
19 <sup>33</sup> Terminology for "other heavy equipment" was added in various sections to  
20 provide clarity that the requirements for road use apply not only for log  
21 hauling but also for other heavy equipment uses such as low bed transport  
22 equipment, watertrucks, skidding or walking skidders.

21 <sup>34</sup> Requirements for road use on saturated soils were deleted in favor of using  
22 Stable Operating Surface. Requirements for both saturated soils and stable  
23 operating surface conflicted. FPC tentatively endorsed subsection (c ) May 3,  
2011, pending a discussion and report from CAL Fire on the effectiveness and  
24 enforceability of the term "stable operation surface"

24 <sup>35</sup> Exceptions are permitted for use on limited road segments or landings that  
25 are completely (voiding the "to the extent feasible") and at all times,  
(meaning before during and after use) hydrologically disconnected and  
equipment can operate under its own power.

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1 (f) Temporary roads shall be blocked or otherwise closed (RRTF  
2 Option 1) to normal vehicular traffic (RRTF Option 2) standard  
3 production four-wheel drive highway vehicles) prior to the winter  
4 period.

5 (g)<sup>36</sup> Logging roads and landings used for log hauling or other heavy  
6 equipment uses during the winter period shall occur on a stable  
7 operating surface and, where necessary, surfaced with rock to a depth  
8 and quantity sufficient to maintain such a surface. Use is not  
9 permitted on roads which are hydrologically connected and exhibit  
10 saturated soil conditions. Use may occur when logging roads and  
11 landings are generally firm and easily passable or during hard frozen  
12 conditions. Isolated wet spots on these logging roads or landings  
13 shall be rocked or otherwise treated to permit passage<sup>37</sup>.  
14 Exceptions may be proposed by the RPF, when locations are disclosed  
15 and justified in the THP, consistent with 14 CCR 923.6 (c)<sup>38</sup>, and  
16 approved by the Director.

17 \_\_\_\_\_  
18 <sup>36</sup> FPC tentatively endorsed subsection (g) on May 3, 2011, pending a  
19 discussion and report from CAL Fire on the effectiveness and enforceability  
20 of the term "stable operation surface"

21 <sup>37</sup> This section addresses winter road use. This section was developed from  
22 existing FPR sections 923.2 (t) and 923.6. The intent is winter period road  
23 use shall require rocking where necessary to maintain a stable operating  
24 surface. Implied in this subsection is rocking during the winter is not  
25 always mandatory. Rocking would not be mandatory when conditions are  
firm/passable and operations are on a stable operating surface (such as  
during dry periods in the winter). Conversely, if conditions are wet, and the  
road use surface is not a stable operating surface, then rocking is required.  
The rule further states that at no times shall road use occur on road  
segments that exhibit saturated soils conditions.

<sup>38</sup> Exceptions allowing road use on roads which are not on a stable operating  
surface are permitted as previously stated in 923.6(c). Such exception

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1 (h)<sup>39</sup> In watersheds with listed anadromous salmonids and in planning  
2 watersheds immediately upstream of, and contiguous to, any watershed  
3 with listed anadromous salmonids<sup>40</sup>, the following shall apply:

4 (1) Existing logging roads or landings shall not be used within  
5 the CMZ of a Class I watercourse except as listed in 14 CCR § 916.9  
6 916.9 [936.9, 956.9]subsection (e)(1)(A)-(F) or pursuant to 14 CCR §  
7 916.9(v) [936.9(v), 956.9(v)].

8 (2) When feasible, minimize use of existing logging roads and  
9 landings located within Inner Zones A and B of flood prone areas.  
10 Exceptions include the use of roads and landings to accomplish actions  
11 to improve salmonid habitat conditions stated in 14 CCR § 916.9  
12 916.9(f)(3)(E)(1.) [936.9(f)(3)(E)(1.), 956.9(f)(3)(E)(1.)]

13 (3) Concurrent with use for log hauling or other heavy equipment  
14 uses, all<sup>41</sup> road approaches to logging road watercourse crossings shall  
15 be treated for erosion control as needed to minimize soil erosion and  
16 sediment transport and to prevent significant sediment discharge to  
17 watercourses or lakes.

18  
19  
20 during the winter period require disclosure and justification in the plan and  
21 approval by the Director.

22 <sup>39</sup> FPC endorsed subsection (h) on May 3, 2011.

23 <sup>40</sup> All ASP specific road use erosion control rules are applied to both ASP  
watersheds upstream contiguous watersheds.

24 <sup>41</sup> Language is added (923.6 (h)(3)) to specify that all road approaches shall  
25 be treated for erosion control, not just those which are hydrologically  
connected (as required by 923.5 (ii)).

1  
2 (4) Concurrent with use for log hauling or other heavy equipment  
3 uses, all traveled surfaces of logging roads in a WLPZ, and ELZ or EEZ  
4 designated for watercourse or lake protection, **DFG OPTION** or the  
5 **appurtenant roads associated with undesignated watercourses<sup>42</sup>**, shall be  
6 treated for erosion control as needed to minimize soil erosion and  
7 sediment transport and to prevent significant sediment discharge to  
8 watercourses or lakes.

9 (5) No timber operations shall take place during the extended wet  
10 weather period unless the approved plan incorporates a complete winter  
11 period operating plan pursuant to 14 CCR § 914.7(a) [934.7(a),  
12 954.7(a)] that specifically addresses, where applicable, proposed  
13 logging road or landing use.

14  
15 **Amend § 923.7, 943.7, 963.7 Maintenance and Monitoring for Logging**  
16 **Roads and Landings**

17 The following maintenance and monitoring standards shall apply to  
18 logging roads and landings:

19 (a) Logging road and landing surfaces shall be maintained during  
20 timber operations and throughout the prescribed maintenance period to  
21 minimize soil erosion and sediment transport and to prevent  
22 significant sediment discharge.

23  
24 <sup>39</sup> DFG option to address road used for hauling near watercourses that are  
25 appurtenant roads and currently not subject to this provision. Allows a  
variable treatment area for appurtenant road watercourse crossings. CGS  
comment: This option has not been discussed by the RRTF and could result in  
unanticipated costs as worded.

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

4 (c) Maintenance treatments to the running surfaces of logging roads  
5 and landing surfaces shall be described in the plan and may include,  
6 but not be limited to, rocking, watering, paving, chemically treating,  
7 or installing commercial erosion control devices to manufacturer's  
8 specifications.

9 (d) Drainage facilities and drainage structures, including associated  
10 necessary protective structures, shall be maintained to allow free  
11 flow of water and minimize soil erosion or they shall be repaired,  
12 replaced, or installed DFG OPTION as soon as feasible, when  
13 maintenance is needed to protect the quality and beneficial uses of  
14 water.

15 (e) Waterbreaks shall be maintained as specified in 14 CCR § 914.6  
16 [934.6, 954.6]subsection (h).

17 (f) Soil stabilization treatments on logging road or landing cuts,  
18 fills, and sidecast shall be maintained as needed to minimize soil  
19 erosion and sediment transport and to prevent significant sediment  
20 discharge.

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

24 (h) Heavy equipment shall not be used in a WLPZ for maintenance  
25 during wet weather, except in emergencies to protect the road, to

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1 reduce erosion, to protect water quality, or in response to public  
2 safety needs.

3 (i) Where evidence of substantial soil erosion and significant  
4 sediment discharge is present along a logging road or landing used for  
5 timber operations, additional drainage facilities and structures shall  
6 be installed as needed to minimize soil erosion and sediment transport  
7 and to prevent significant sediment discharge.

8 (j) The prescribed maintenance period for erosion controls on  
9 permanent and seasonal logging roads and associated landings and  
10 drainage structures, which are not abandoned or deactivated in  
11 accordance with 14 CCR §§ 923.8 [943.8, 963.8] and 923.17 [943.17,  
12 963.17], shall be at least one year. The Director may prescribe a  
13 maintenance period extending up to three years in accordance with 14  
14 CCR § 1050.

15 (k) Logging roads, landings, and associated drainage structures used  
16 for timber operations shall be monitored as needed to comply with 14  
17 CCR § 1050.

18 (l) In watersheds with listed anadromous salmonids, water drafting  
19 for timber operations shall:

20 (1) Comply with Fish and Game Code Section 1600, et seq. Timber  
21 operations conducted under a Fish and Game Code Section 1600 master or  
22 long-term agreement that includes water drafting may provide proof of  
23 such coverage for compliance with this paragraph DFG OPTION and 14 CCR  
24 923.7(1)(2).

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

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1           (A) A general description of the conditions and proposed  
2 water drafting;

3           (B) The watercourse classification;

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

8           (D) The estimated drainage area (acres) above the point of  
9 diversion;

10          (E) The estimated unimpeded streamflow, pumping rate, and  
11 drafting duration,

12          (F) a discussion of the effects on aquatic habitat  
13 downstream from the drafting site(s) of single pumping operations, or  
14 multiple pumping operations at the same location, and at other  
15 locations in the same watershed;

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

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

25          (3) All water drafting for timber operations are subject to each  
requirement below unless the Department of Fish and Game modifies the

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1 requirement in the Lake or Streambed Alteration agreement that  
2 authorized the drafting operation, or unless otherwise specified  
3 below:

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

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

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

13 (iii) The drafting operator shall regularly inspect,  
14 clean, and maintain screens to ensure proper operation whenever water  
15 is drafted.

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

18 (v) The diversion rate shall not exceed 350 gallons  
19 per minute.

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

23 (C) Barriers to sediment transport, such as straw waddles,  
24 logs, straw bales or sediment fences, shall be installed outside the  
25 normal high water mark to prevent sediment delivery to the watercourse  
and limit truck encroachment.

1           (D) Water drafting trucks parked on streambeds or  
2 floodplains **CGS Option, or within a WLPZ for a classified water body**  
3 during water drafting<sup>43</sup> shall use drip pans or other devices such as  
4 adsorbent or absorbent blankets, sheet barriers or other materials as  
5 needed to prevent soil and water contamination from motor oil or  
6 hydraulic fluid leaks.

7           (D) **DFG Option During water drafting, parked water trucks**  
8 shall use drip pans or other devices such as adsorbent or absorbent  
9 blankets, sheet barriers or other materials as needed to prevent soil  
10 and water contamination from motor oil or hydraulic fluid leaks.

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

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

16           (ii) Diversion rate shall not exceed 10 percent of  
17 the surface flow.

18           (iii) Pool volume reduction shall not exceed 10  
19 percent.

20           (F) The drafting operator shall keep a log that records for  
21 each time water is drafted, the date, total pumping time, pump rate,  
22 starting time, ending time, and volume diverted. Logs shall be filed  
23 with the Department of Forestry and Fire Protection at the end of  
24 \_\_\_\_\_

25 <sup>43</sup> CGS comment: Do water trucks need to use drip pans or similar devises  
anywhere in the Plan area or only when they are near water?

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1 seasonal operations and maintained with the plan record. This  
2 requirement may be modified in the approved plan that covers the water  
3 drafting, but only with concurrence from the Department of Fish and  
4 Game.

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

9 (m) In watersheds with listed anadromous salmonids and in planning  
10 watersheds immediately upstream of, and contiguous to, any watershed  
11 with listed anadromous salmonids, the following shall apply:

12 (1) Grading logging roads or landings to obtain a drier running  
13 surface more than one time before reincorporation of any resulting  
14 berms back into the road surface is prohibited.

15 (2) The erosion control maintenance period on permanent and  
16 seasonal logging roads and associated landings that are not abandoned  
17 or deactivated in accordance with 14 CCR § 923.8 [943.8, 963.8] shall  
18 be three years.

19 (1) DFG Option Inboard ditches shall be graded only when they  
20 are blocked or lack adequate inside ditch hydraulic capacity, or  
21 driver safety is a concern. Where feasible, blading the segment of  
22 ditch between the watercourse and first drainage facility shall be  
23 avoided.

24 (2) Grading logging roads or landings to obtain a drier running  
25 surface more than one time before reincorporation of any resulting  
berms back into the road surface is prohibited. DFG Option Grading of

1 logging road surfaces shall occur only when necessary to achieve a  
2 uniform, stable, and well-drained operating surface. Grading logging  
3 roads or landings to obtain a drier running surface is prohibited.

4 (3) The erosion control maintenance period on permanent and  
5 seasonal logging roads and associated landings that are not abandoned  
6 or deactivated in accordance with 14 CCR § 923.8 [943.8, 963.8] shall  
7 be three years.

8 (4) All logging roads within the plan area and appurtenant to  
9 proposed operations shall be inspected:

10 (A) by the LTO at least twice annually - once outside the  
11 extended wet weather period, and at least once during the extended wet  
12 weather period following the first storm event producing bankfull  
13 stage and prior to completion of operations; Information produced for  
14 other permitting requirements may be used to satisfy this subsection.

15 (B) by the timberland owner during the same time periods  
16 for the remainder of the prescribed maintenance period.

17 The inspection shall be started as soon as conditions permit access  
18 to ensure that drainage structures and facilities are functioning to  
19 hydrologically disconnect the road prism from waters. Inspection  
20 results and follow up corrective measures shall be documented and  
21 shall be provided to CAL FIRE.

22 (C) Forest floor discharge sites below the outlets of  
23 drainage facilities on all roads within the plan area and appurtenant  
24 to proposed operations shall be inspected by the LTO for evidence of  
25 sediment delivery to Class I, II, or III watercourses and lakes. If  
evidence of sediment delivery is present, additional cross drains,

Comment [C1]: TS - ask FPC  
to put to RRTF.

Comment [C2]: DC - WDR is  
Nov 15 to May

1 waterbars, or rolling dips shall be installed to reduce the discharge  
2 volume to the site.

3 (5) Decommissioned roads shall be inspected following the first  
4 storm event producing bankfull stage after decommissioning and again  
5 prior to filing the completion report. The purpose of the inspection  
6 will be to verify the effectiveness of treatments in preventing  
7 sediment discharges to waters and to ensure treatments are functioning  
8 to restore natural drainage and hillslope stability. If treatments  
9 are found to be ineffective prior to the end of the prescribed  
10 maintenance period, further treatments shall be applied if the volume  
11 of sediment prevented from entering a channel by additional treatments  
12 is greater than that incurred by re-entering the site.

13  
14 Amend § 923.8[943.8, 963.8]. Abandonment and Deactivation of Logging  
15 Roads and Landings.

16 All logging roads and landings that are proposed to be removed from  
17 the permanent road network, including historic roads and landings,  
18 shall be abandoned. All temporary logging roads and landings that are  
19 to remain a part of the permanent road network shall be deactivated  
20 prior to the winter period or upon completion of timber operations,  
21 whichever comes first. Other logging roads and landings proposed to  
22 be deactivated shall comply with the standards specified in this  
23 section. Where abandonment or deactivation is required or proposed,  
24 specific measures used to apply the following general requirements  
25 shall be described in the plan:

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1 (a) All abandoned and deactivated logging roads shall be left in a  
2 condition that provides for long-term functioning, **DFG Option**  
3 **maintenance-free drainage** of erosion controls.

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4 (b) Soil exposed by abandonment or deactivation operations on cuts,  
5 fills, and sidecast shall be stabilized as needed during and upon  
6 completion of abandonment or deactivation operations to minimize soil  
7 erosion and sediment transport and to prevent significant sediment  
8 discharge.

9 (c) Logging road and landing surfaces shall be graded or shaped where  
10 needed to disperse runoff.

11 (d) Fills or sidecast shall be pulled or shaped where site conditions  
12 indicate that there is a reasonable potential for perched materials to  
13 enter a watercourse or lake and result in a significant sediment  
14 discharge.

15 (e) Logging road watercourse crossings, other drainage structures,  
16 and associated fills shall be removed and stabilized in accordance  
17 with 14 CCR § 923.17 [943.17, 963.17] subsections (a)-(c). Where it is  
18 not feasible to remove drainage structures and associated fills, the  
19 plan shall identify how the potential for soil erosion and sediment  
20 transport will be minimized and how significant sediment discharge  
21 will be prevented.

22 (f) Logging roads to be abandoned or deactivated shall be blocked  
23 prior to the winter period so that standard production four wheel-  
24 drive highway vehicles cannot pass the point of closure at the time of  
25 abandonment or deactivation. If the logging road is to be abandoned,  
then the blockage design shall be described in the plan.

1 Amend § 923.9 [943.9, 963.9]. Licensed Timber Operator Responsibility  
2 for Logging Roads and Landings.

3 The licensed timber operator who is responsible for the  
4 implementation or execution of the plan shall be responsible for the  
5 construction and maintenance of logging roads and landings, unless  
6 another licensed timber operator is employed for that purpose and  
7 amended into the plan as the responsible party.

8  
9 Adopt § 923.10 [943.10, 963.10]. Planning for Logging Road Watercourse  
10 Crossings.

11 The following planning standards shall apply to logging road  
12 watercourse crossings:

13 (a) Logging road watercourse crossings shall be planned and located  
14 within the context of a systematic logging road layout pattern.

15 (b) Logging road watercourse crossings shall be planned in a manner  
16 that is consistent with their proposed use.

17 (c) The number of logging road watercourse crossings shall be kept to  
18 a feasible minimum.

19 (d) Existing logging road watercourse crossing locations shall be  
20 utilized where feasible and appropriate.

21 (e) Where logging road watercourse crossings are proposed to be  
22 constructed or reconstructed in areas where public safety may be  
23 affected, the potential public safety impacts shall be disclosed in  
24 the plan.

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1 ~~(f)~~<sup>44</sup>As part of the field examination of DFG Option classified  
2 watercourses and lakes, the RPF or supervised designee shall evaluate  
3 areas at and near existing and constructed or reconstructed logging  
4 road watercourse crossings for sensitive conditions, including, but  
5 not limited to, past diversion, overtopping, plugging, significant  
6 inlet or outlet erosion, soil piping, fill slope erosion and  
7 significant mechanical damage or wear.

8 ~~(1)~~ The RPF shall consider these conditions, and those measures  
9 needed to maintain, and restore to the extent feasible, the functions  
10 set forth in 14 CCR § 916.4(b) [936.4(b), 956.4(b)], when planning  
11 logging road watercourse crossings.

12 ~~(2)~~ The plan shall identify such conditions, including where  
13 they may interact with proposed timber operations, that individually  
14 or cumulatively, significantly and adversely affect the beneficial  
15 uses of water.

16 ~~(3)~~ The RPF shall describe in the plan feasible protection  
17 measures for identified sensitive conditions that consider the  
18 watercourse classification and the location and planned use of logging  
19 road watercourse crossings.

20 ~~(4)~~ Where feasible protection measures are proposed, the RPF  
21 shall specify an implementation schedule in the plan.

22  
23  
24  
25 <sup>44</sup> Staff Note: Conform this section (f) (1- 4) should be assessed for consistency with FPC decision on language used in 923.1 (d). the following CGS option may address this need for consistency with its proposed deletion of subsection (f) and adding simplified reference text citing 923.1 (d)

1 (f) The planning and use of logging road watercourse crossings shall  
2 include the evaluation and documentation of sensitive conditions and  
3 significant existing and potential erosion sites consistent with 14CCR

4 § 923.1(d)

5 ~~(f) DFG OPTION The RPF or supervised designee shall evaluate logging~~  
6 ~~road and landing surface and drainage conditions for all road~~  
7 ~~segments, drainage structures and facilities within the harvest area~~  
8 ~~and all other logging roads that will be used for timber operations~~  
9 ~~between the harvest area and the first public road. Field inventory~~  
10 ~~information shall be obtained by an RPF or supervised designee while~~  
11 ~~traversing the road segments.~~

12 ~~(1) Crossings and associated fills shall be removed,~~  
13 ~~reconstructed or repaired where there is evidence of failure potential~~  
14 ~~or substantial sediment delivery to Class I, II, or III watercourses~~  
15 ~~and lakes.~~

16 ~~(2) Culverts shall be replaced or removed if they are crushed,~~  
17 ~~perforated, piping, separated, not adequate to carry water from the~~  
18 ~~fifty-year flood level, located in unstable fill, or causing erosion~~  
19 ~~that may be expected to deliver substantial sediment to Class I, II,~~  
20 ~~or III watercourses and lakes.~~

21 ~~(3) Bridges (including associated fill, rip rap, and abutments)~~  
22 ~~and bridge approaches showing evidence of failure potential or~~  
23 ~~substantial sediment delivery to Class I, II, or III watercourses and~~  
24 ~~lakes shall be repaired, replaced, or removed.~~

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1 (g) The RPF shall disclose in the plan how diversion of stream  
2 overflow at logging road watercourse crossings will be prevented.

3 (h) All new permanent constructed or reconstructed logging road  
4 watercourse crossing culverts installed on Class I watercourses, where  
5 fish are always or seasonally present or where fish habitat is  
6 restorable, shall be planned to allow upstream and downstream passage  
7 of fish or listed aquatic species during any life stage and for the  
8 natural movement of bedload to form a continuous bed through the  
9 culvert.

10  
11 **Adopt § 923.11, 943.11, 953.11 Logging Road Watercourse Crossing**

12 **Design and Implementation**

13 The following design and implementation standards shall apply to  
14 logging road watercourse crossings:

15 (a) All constructed and reconstructed logging road watercourse  
16 crossings shall be designed in accordance with the planned use of the  
17 associated logging road.

18 (b) All logging road watercourse crossings shall be designed to  
19 avoid or mitigate potential significant adverse impacts to public  
20 safety.

21 (c) All constructed and reconstructed permanent logging road  
22 watercourse crossing structures shall be designed to accommodate the  
23 estimated 100-year flood flow, including debris and sediment loads.

24 (d) All new and replacement culverts used for logging road  
25 watercourse crossings shall be designed to be installed at or slightly

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1 below the natural watercourse grade, in alignment with the watercourse  
2 channel and of the appropriate length.

3 (e) Where new culverts are proposed for permanent installation at a  
4 logging road watercourse crossing, the minimum diameter of the culvert  
5 and the method(s) used to determine the culvert diameter shall be  
6 specified in the plan.

7 (f) All necessary protective structures associated with logging  
8 road watercourse crossings shall be adequately sized to transmit  
9 runoff, minimize erosion of crossing fills, and prevent significant  
10 sediment discharge.

11 (g) Methods to mitigate or prevent diversion of stream overflow at  
12 logging road watercourse crossings shall be stated in the plan.

13 (h) Rock used to DFG Option construct fords and stabilize the outlet  
14 of fords shall be adequately sized to resist mobilization, with the  
15 range of required rock dimensions described in the plan.

16 (i) Drainage structures on watercourses that support fish shall allow  
17 for unrestricted passage of all life stages of fish that may be  
18 present, and shall be fully described in the plan in sufficient  
19 clarity and detail to allow evaluation by the review team and the  
20 public, provide direction to the LTO for implementation, and provide  
21 enforceable standards for the inspector.

22 (j) All new permanent constructed and reconstructed logging road  
23 watercourse crossing culverts installed within Class I watercourses,  
24 which meet the criteria for Class I waters where fish are always or  
25 seasonally present or where fish habitat is restorable, shall include

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1 the analysis and specifications that document conformance with 14 CCR  
2 § 923.10 [943.10, 963.10]subsection (h).

3 (k) Where logging road networks are remote or are located where the  
4 landscape is unstable, where crossing fills over culverts are large,  
5 or where logging road watercourse crossing drainage structures and  
6 erosion control features historically have a high failure rate,  
7 drainage structures and erosion control features shall be oversized,  
8 designed for low maintenance, reinforced, or removed before the  
9 completion of the timber operation. **RRTF Option 1:** The method of  
10 analysis and the design for crossing protection shall be included in  
11 the plan. [And do not add 923.11(m) below]

12 (1) In watersheds with listed anadromous salmonids, for Class I  
13 watercourses, where fish are always or seasonally present or where  
14 fish habitat is restorable, any plan involving timber operations  
15 within the WLPZ shall contain the following information:

16 (1) A description of all existing permanent logging road  
17 watercourse crossings.

18 (2) Clear and enforceable specifications describing how these  
19 crossings are to be modified, used, and treated to minimize risks,  
20 giving special attention to allowing fish to pass both upstream and  
21 downstream during all life stages and in conformance with the  
22 standards of subsection (j) above and 14 CCR § 923.10[943.10,  
23 963.10]subsection (h).

24 (3) Clear and enforceable specifications for construction and  
25 operation of any new crossing(s) of a Class I watercourse to prevent

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1 direct harm, habitat degradation, water velocity increase, hindrance  
2 of fish passage, or other potential impairment of beneficial uses of  
3 water.

4 (m) RRTF Option 2 In watersheds with listed anadromous salmonids, in  
5 addition to the requirements of 14 CCR § 923.11 [943.11,  
6 963.11]subsection (k), the method of analysis and the design for  
7 crossing protection shall be included in the plan.)

8  
9 **Adopt § 923.12[943.12, 963.12]. Logging Road Watercourse Crossing**  
10 **Mapping and Identification.**

11 The following mapping and identification standards shall apply to  
12 logging road watercourse crossings:

13 (a) For logging road watercourse crossing-related mapping  
14 requirements refer to 14 CCR §§ 1034(x)(6)(A)-(C), 1090.5(w)(7),  
15 1090.7(n)(7), and 1092.09(1)(7)(A)-(C).

16 (b)For logging road watercourse crossing-related disclosure and  
17 description requirements refer to 14 CCR §§ 1034(ii)(1)-(2) and (4),  
18 1034(kk)(4)(A), 1034(ll) and 1034(mm).

19 (c) The location of all logging road watercourse crossings to be  
20 constructed or reconstructed shall be flagged or otherwise identified  
21 on the ground ~~RRTF Option 1: before submission of a plan or~~  
22 ~~substantial deviation~~ **RRTF Option 2:** prior to the pre-harvest  
23 inspection, if necessary, or prior to logging road watercourse  
24 crossing construction or reconstruction. Exceptions may be explained  
25 and justified in the plan and agreed to by the Director if flagging is  
unnecessary as a substantial aid to examining possible significant

1 adverse effects of the crossing location on the factors listed under  
2 14 CCR § 923 [943), 963]subsection (b).

3  
4 adopt § 923.13 [943.13, 963.13]. Logging Road Watercourse Crossing  
5 Construction and Reconstruction.

6 The following construction and reconstruction standards shall apply to  
7 logging road watercourse crossings:

8 (a) Where applicable, logging road watercourse crossing construction  
9 and reconstruction shall comply with the DFG Option ~~design-of~~  
10 conditions in required DFG 1602 agreements.  
11 design of required DF&G 1600 agreements.

12 (b) All constructed and reconstructed permanent logging road  
13 watercourse crossings shall accommodate the 100-year flood flow,  
14 including debris and sediment loads.

15 (c) All new and replacement culverts used for logging road  
16 watercourse crossings shall be installed at or slightly below the  
17 natural watercourse grade and in alignment with the watercourse  
18 channel. For Class I watercourses where fish are always or seasonally  
19 present or where fish habitat is restorable, new and replacement  
20 culverts shall be installed below grade and in alignment with the  
21 watercourse channel to allow upstream and downstream passage of fish  
22 or listed aquatic species during any life stage and natural movement  
23 of bedload to form a continuous bed through the culvert and shall be  
24 in conformance the design specified in 14 CCR § 923.11 [943.11,963.11]  
25 subsection (j) and with DFG Option conditions in required DFG 1602  
agreements specified in subsection (a) above.

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1 (d) Fills for constructed and reconstructed logging road watercourse  
2 crossings shall be thoroughly compacted in approximately one-foot  
3 lifts during installation. The face of crossing fills shall be no  
4 greater than 65 percent (1.5:1, horizontal to vertical).

5 (e) Logging road watercourse crossings shall not discharge water onto  
6 erodible fill or other erodible material without the installation of  
7 energy dissipators and other necessary protective structures.

8 (f) Where water is flowing at the time of logging road watercourse  
9 crossing construction or reconstruction, necessary protective  
10 structures shall be concurrently installed.

11 (g) Where a significant volume of sediment is stored upstream from a  
12 logging road watercourse crossing that is proposed to be  
13 reconstructed, the stored sediment shall be removed or stabilized, to  
14 the extent feasible, as described in the plan and in conformance with  
15 DFG Option conditions in required DFG 1602 agreements.

16 (h) Critical dips shall be incorporated into the construction or  
17 reconstruction of logging road watercourse crossings utilizing  
18 culverts, except where diversion of overflow is prevented by other  
19 methods stated in the plan.

20 (i) Logging road watercourse crossings with sensitive conditions  
21 identified under 14 CCR § 923.10[943.10, 963.10]subsection (f) shall  
22 be upgraded to address these conditions, replaced in accordance with  
23 14 CCR § 923.11 [943.11, 963.11] and this section, or removed in  
24 accordance with 14 CCR § 923.17 [943.17, 963.17].

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1 (j) Logging road watercourse crossings shall not be constructed or  
2 reconstructed under saturated soil conditions or when such activities  
3 could result in significant sediment discharge.

4 (k) Where conditions are encountered during logging road watercourse  
5 crossing construction or reconstruction that differ from what was  
6 anticipated during the preparation and review of the plan and that  
7 will result in a significant adverse impact on the environment or to  
8 public safety, the LTO shall notify the RPF or plan submitter of these  
9 unanticipated conditions in accordance with 14 CCR § 1035.3. If  
10 necessary, the responsible RPF or plan submitter shall submit to the  
11 Director a proposed deviation to the plan describing the unanticipated  
12 conditions and proposing appropriate actions.

13 (l) Logging road watercourse crossings shall be installed no later  
14 than October 15, except where logging road construction or  
15 reconstruction takes place from October 15 to November 15 or from  
16 April 1 to May 1 where logging road watercourse crossings shall be  
17 installed concurrent with the activity. Logging road watercourse  
18 crossings shall not be installed during the winter period, except as  
19 specified in an approved winter operating plan per 14 CCR § 914.7  
20 [934.7, 954.7]subsection (a).

21 ~~(l) DFG OPTION Logging road watercourse crossings shall be installed~~  
22 ~~no later than October 15, except where logging road construction or~~  
23 ~~reconstruction takes place from October 15 to November 15 or from~~  
24 ~~April 1 to May 1 where logging road watercourse crossings shall be~~  
25 ~~installed concurrent with the activity.~~— Logging road watercourse  
crossings shall not be installed during the winter period, except as

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1 specified in an approved winter operating plan per 14 CCR § 914.7  
2 [934.7, 954.7]subsection (a).

3 (m) In watersheds with listed anadromous salmonids, excavated  
4 material and cut banks resulting from construction and reconstruction  
5 shall be sloped back from the channel to prevent slumping and to  
6 minimize soil erosion and DFG Option where needed, stabilized per 14  
7 CCR § 923.14 [943.14, 963.14]subsection (b).

8 (n) In watersheds with listed anadromous salmonids and in planning  
9 watersheds immediately upstream of, and contiguous to, any watershed  
10 with listed anadromous salmonids, during the extended wet weather  
11 period no timber operations shall take place unless the approved plan  
12 incorporates a complete winter period operating plan pursuant to 14 CCR  
13 § 914.7 [934.7, 954.7], subsection (a). that specifically addresses,  
14 where applicable, proposed logging road watercourse construction or  
15 reconstruction. Where logging road watercourse crossing construction  
16 or reconstruction is proposed an implementation schedule shall be  
17 specified.

18  
19 **Adopt § 923.14 [943.14, 963.14]. Logging Road Watercourse Crossing**  
20 **Erosion Control.**

21 (a) The following drainage standards shall apply to logging road  
22 watercourse crossings:

23 (1) Adequate surface drainage at logging road watercourse  
24 crossings shall be provided through the use of surface geometry  
25 configurations in combination with the installation of drainage  
facilities, ditch drains, or other necessary protective structures DFG

1 OPTION to hydrologically disconnect the road from the crossing to the  
2 extent feasible.

3 (2) Drainage facilities and ditch drains shall be installed  
4 adjacent to logging road watercourse crossings, as needed, to ~~CGS~~  
5 option hydrologically disconnect the logging road approach from the  
6 crossing, to minimize soil erosion and sediment transport and to  
7 prevent significant sediment discharge during and upon completion of  
8 timber operations. See 14 CCR § 923.5 [943.5, 963.5], subsections  
9 (d)-(j)

10 (3) Drainage facilities or ~~DFG OPTION drainage structures~~ ~~ditch~~  
11 ~~drains~~<sup>45</sup> installed adjacent to logging road watercourse crossings shall  
12 be located to avoid discharging concentrated runoff onto fills,  
13 erodible soils, unstable areas, and connected headwall swales.

14 (b) The following stabilization standards shall apply to logging road  
15 watercourse crossings:

16 (1) Bare soil on fills or sidecast associated with logging road  
17 watercourse crossings that are created or exposed by timber operations  
18 shall be stabilized to the extent necessary to minimize soil erosion  
19 and sediment transport and to prevent significant sediment discharge.

20 Erosion control measures for the traveled surface of roads and  
21 landing surfaces are specified in 14 CCR §§ 923.5 [943.5, 963.5] and  
22 923.7 [943.7, 963.7]. Sites to be stabilized include, but are not  
23 limited to, sidecast or fill greater than 20 feet in slope distance

24 \_\_\_\_\_  
25 <sup>45</sup> Wording for this section and parallel section 923.5 (b) should be consistent.

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1 from the outside edge of the road surface at the logging road  
2 watercourse crossing.

3 (2) Soil stabilization measures shall be described in the plan  
4 and may include, but are not limited to, removal, armoring with rip-  
5 rap, replanting, mulching, seeding, installing commercial erosion  
6 control devices to manufacturer's specifications, or chemical  
7 stabilizers.

8 (3) Soil stabilization treatments shall be in place upon  
9 completion of operations for the year of use or prior to the extended  
10 wet weather period, whichever comes first. An exception is that bare  
11 areas created after the extended wet weather period shall be treated  
12 within 10 days or as agreed to by the Director.

13 (4) In watersheds with listed anadromous salmonids and in  
14 planning watersheds immediately upstream of, and contiguous to, any  
15 watershed with listed anadromous salmonids, within the WLPZ and within  
16 any ELZ or EEZ designated for watercourse or lake protection,  
17 treatments to stabilize soils, minimize soil erosion, and prevent  
18 significant sediment discharge, shall be described in the plan as  
19 follows:

20 (A) In addition to the requirements of subsections (b)(1)-  
21 (3), soil stabilization is required for the following:

22 (i) Areas exceeding 100 continuous square feet where  
23 timber operations have exposed bare soil.

24 (ii) Disturbed logging road watercourse crossing cut  
25 banks and fills, and

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

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

7                    (C) Where slash mulch is packed into the ground surface  
8 through the use of a tractor or equivalent piece of heavy equipment  
9 the minimum slash coverage shall be 75 percent, DFG OPTION and any  
10 treated area that has been reused or has less than 75 percent surface  
11 cover shall be treated again by the end of timber operations.

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

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

21  
22 **Adopt § 923.15 [943.15, 963.15]. Logging Road Watercourse Crossing**

23 **Use.**

24 Logging road watercourse crossings shall be used in a manner that is  
25 consistent with the design, construction, and maintenance of the  
logging road along which they have been constructed (Refer to 14 CCR

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1 §§ 923.2 [943.2, 963.2], 923.4 [943.4, 963.4], 923.6 [943.6, 963.6],  
2 and 923.7 [943.7, 963.7]).

3  
4 **Adopt § 923.16 [943.16, 963.16]. Logging Road Watercourse Crossing**  
5 **Maintenance and Monitoring.**

6 The following maintenance and monitoring standards shall apply to  
7 logging road watercourse crossings:

8 (a) Logging road watercourse crossings shall be maintained as  
9 designed, constructed, and reconstructed during timber operations and  
10 throughout the prescribed maintenance period.

11 (b) Logging road watercourse crossings that are used in connection  
12 with stocking activities shall be maintained throughout such use, even  
13 if this extends beyond the prescribed maintenance period.

14 (c) Soil stabilization treatments on logging road watercourse  
15 crossing fills shall be maintained to minimize soil erosion and  
16 sediment transport and to prevent significant sediment discharge.

17 (d) The plan shall identify measures to be used to reduce sediment  
18 delivery from logging road watercourse crossings where evidence of  
19 substantial soil erosion and significant sediment discharge is present  
20 at a logging road watercourse crossing used for timber operations.

21 Where evidence of substantial soil erosion and significant sediment  
22 discharge is present at a logging road watercourse crossing used for  
23 timber operations, additional measures shall be stated in the plan and  
24 installed, as needed, to minimize soil erosion and prevent significant  
25 sediment discharge.

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1 (e) Logging road watercourse crossings used for timber operations  
2 shall be monitored, as needed, to comply with 14 CCR § 1050.

3 (f) Drainage structures and associated necessary protective  
4 structures shall be maintained, repaired, and replaced as needed to  
5 minimize crossing blockage and to provide for adequate capacity.

6 (g) In watersheds with listed anadromous salmonids and in planning  
7 watersheds immediately upstream of, and contiguous to, any watershed  
8 with listed anadromous salmonids, the erosion control maintenance  
9 period on logging road watercourse crossings that are not abandoned or  
10 deactivated in accordance with 14 CCR § 923.8 [943.8, 963.8] shall be  
11 three years.

12  
13 **Adopt § 923.17[943.17, 963.17] Logging Road Watercourse Crossing**

14 **Removal.**

15 All logging road watercourse crossings that are proposed by the plan  
16 submitter to be removed, including temporary crossings and those along  
17 abandoned or deactivated logging roads, shall be removed as described  
18 in the plan and shall apply the following standards:

19 (a) Fills shall be excavated to form a channel that is as close as  
20 feasible to the natural watercourse grade and orientation and that is  
21 wider than the average natural channel, as observed upstream and  
22 downstream of the logging road watercourse crossing to be removed.

23 (b) The excavated material and any resulting cut bank shall be no  
24 greater than 65 percent (1.5:1, horizontal to vertical) from the  
25 outside edge of the constructed channel to prevent slumping, to

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1 minimize soil erosion and sediment transport, and to prevent  
2 significant sediment discharge.

3 (c) Exposed soil associated with logging road watercourse crossing  
4 fill removal, including cut banks and excavated material, shall be  
5 stabilized during and upon completion of removal operations, as  
6 needed, or as otherwise specified in the rules. Soil stabilization  
7 measures may include, but are not limited to, armoring with rip-rap,  
8 replanting, mulching, seeding, installing commercial erosion control  
9 devices to manufacture's specifications, or other suitable treatment  
10 to minimize soil erosion and sediment transport and to prevent  
11 significant sediment discharge.

12 (d) Appropriate drainage facilities shall be installed along removed  
13 logging road watercourse crossing approaches at locations that  
14 minimize the concentration of surface runoff and soil erosion and to  
15 prevent significant sediment discharge.

16 (e) Where it is not feasible to remove a logging road watercourse  
17 crossing or its associated fill to the above standards, the plan shall  
18 identify how soil erosion and sediment transport will be minimized and  
19 how significant sediment discharge will be prevented.

20 (f) Where a significant volume of sediment is stored upstream from a  
21 logging road watercourse crossing that is proposed to be removed, the  
22 stored sediment shall be removed or stabilized, to the extent  
23 feasible, as described in the plan and in conformance with required  
24 DFG 1600 agreements.

25 (g) All logging road watercourse crossings proposed for removal shall  
be removed upon completion of use, prior to the winter period or as

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1 specified in the applicable DFG 1600 agreement, whichever is earlier,  
2 or as otherwise specified in the plan.

3 (h) Where the removal of an individual logging road watercourse  
4 crossing eliminates access to other temporary crossings, all such  
5 crossings shall be removed concurrently.

6 (i) If operations are conducted during the winter period, temporary  
7 logging road watercourse crossings shall be removed before the flow of  
8 water exceeds the capacity of the individual crossing.

9  
10 **Amend § 1034. Contents of Plan.**

11 ~~\*\*\*\*\*~~(x) The information in subsections (1)-(4)(A), (5)(A)-(5)(K),  
12 if applicable, (6)(A)-(B), and (7)-(16) shall be clearly shown on a  
13 map that is based upon a U. S. Geological Survey topographic  
14 quadrangle map, or equivalent, published at a scale of 1:24,000 or  
15 larger. ~~On titled USGS (if available) or equivalent topographic maps of~~  
16 ~~a scale not less than 2" to the mile, the information in subsections~~  
17 ~~(1-4), (8), (9), and (11-13) shall be clearly shown. The information~~  
18 in subsections (4)(B), (5)(A)-(5)(L), if applicable, and (6)(C) shall  
19 be clearly shown on a topographic map at a scale of 1/2 inch equals 1  
20 mile (1:126,720) or larger. Additional maps, which may be topographic  
21 or planimetric, may be used to provide the information required in the  
22 other subsections, to ~~ex~~ show specific details, and to improve map  
23 clarity. ~~The appurtenant roads referenced in subsection (4) may be~~  
24 ~~shown on a map which may be planimetric with a scale as small as one-~~  
25 ~~half inch equals one mile.~~ Color coding shall not be used. A legend  
shall be included indicating the meaning of the symbols used to depict

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1 operational features on maps. See the district rules for the  
2 appropriate minimum mapping acreages.

3 (1)-(3) [No change]

4 (4) ~~Location of public roads and those private roads to be used~~  
5 ~~for timber operations within the plan area, and private roads~~  
6 ~~appurtenant to the timber operations where such roads are under the~~  
7 ~~ownership or control of the timber owner, timberland owner, timber~~  
8 ~~operator, or submitter of the plan, and classification of all proposed~~  
9 ~~and existing logging roads as permanent, seasonal, or temporary roads.~~

10 The following logging road- and landing-related features shall be  
11 shown on a map of the appropriate type and scale as described in  
12 subsection (x) above:

13 (A) Location of logging roads within the harvest area,  
14 including those located in watercourses, lakes, WLPZs, marshes, wet  
15 meadows, or other wet areas and those proposed for abandonment or  
16 deactivation.

17 (B) Location of logging roads under the ownership or  
18 control of the timber owner, timberland owner, timber operator, or  
19 plan submitter that will be used for log hauling and that are between  
20 the harvest area and the first public road to be used for log hauling.

21 This shall include:

22 (i) Logging roads and landings located in  
23 watercourses, lakes, WLPZs, marshes, wet meadows, or other wet areas,  
24 other than at logging road watercourse crossings.

25 (ii) Logging roads and landings proposed for  
abandonment or deactivation.

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1                    (iii) Logging roads that provide access to rock pits  
2 and water drafting sites.

3                    ~~(5) Probable location of proposed and existing landings in the~~  
4 ~~watercourse and lake protection zone, and landings outside the zone~~  
5 ~~that are greater than 1/4 acre in size or whose construction involves~~  
6 ~~substantial excavation.~~ The following shall be mapped at the  
7 appropriate scale required under subsection (x), whichever is  
8 applicable, for all constructed and reconstructed logging roads and  
9 landings, unless otherwise described:

10                    (A) Location of logging road grades greater than 15  
11 percent for over 200 continuous feet or logging road grades exceeding  
12 20 percent.

13                    (B) Location of road failures on existing logging roads to  
14 be reconstructed.

15                    (C) Location of logging roads across and landings on  
16 unstable areas or connected headwall swales.

17                    (D) Location of logging roads or landings within Class I,  
18 II, III, or IV watercourses or lakes, WLPZs, marshes, wet meadows, or  
19 other wet areas other than at logging road watercourse crossings.

20                    (E) Location of logging roads and landings with  
21 insloping, inside ditch drainage, or crowning in excess of 300 lineal  
22 feet that drains into a classified watercourse or lake.

23                    (F) Location of landings that require substantial  
24 excavation and landings in excess of one-quarter acre in size.

25

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1           (G) Location of disposal sites for spoils generated during  
2 logging road or landing construction or reconstruction on slopes  
3 greater than 40 percent or on active unstable areas.

4           (H) Location of logging roads and landings across slopes  
5 greater than 65 percent for 100 lineal feet or more.

6           (I) Location of logging roads and landings across slopes  
7 greater than 50 percent for 100 lineal feet or more within 100 feet of  
8 the boundary of a WLPZ that drains toward the zoned watercourse or  
9 lake.

10           (J) In watersheds with listed anadromous salmonids and in  
11 planning watersheds immediately upstream of, and contiguous to, any  
12 watershed with listed anadromous salmonids, location of active erosion  
13 sites on logging roads and landings that will be treated.

14           (K) In watersheds with listed anadromous salmonids,  
15 location of proposed water drafting locations.

16           (L) Location of any other area(s) where non-standard  
17 practices on logging roads are proposed.

18           (6) The following logging road watercourse crossing-related  
19 features shall be shown on a map of the appropriate type and scale as  
20 described in subsection (x) above:

21           (A) Location of existing logging road watercourse  
22 crossings within the harvest area, including those crossings to be  
23 abandoned or deactivated. This requirement may be met by depicting  
24 the intersection of a logging road and a watercourse.

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1           (B) Location of constructed and reconstructed logging road  
2 watercourse crossings within the harvest area, including those  
3 crossings to be abandoned or deactivated.

4           (C) Logging road watercourse crossings that are not within  
5 the harvest area but are under the ownership or control of the owner  
6 of the timberland where timber is proposed for harvest and are between  
7 the harvest area and the first public road to be used for log hauling  
8 that are:

9                   (i) Existing logging road watercourse crossings of  
10 Class I and Class II waters that will be used for log hauling.

11                   (ii) Constructed and reconstructed logging road  
12 watercourse crossings that will be used for log hauling.

13                   (iii) Existing logging road watercourse crossings to be  
14 abandoned or deactivated.

15           Existing logging road watercourse crossings may be shown by  
16 depicting the intersection of a logging road and a watercourse.

17           ~~(6) Road failures on existing roads to be reconstructed.~~

18           (7) Location of all tractor road watercourse crossings of  
19 classified watercourses except temporary crossings of Class III  
20 watercourses that are dry at the time of use ~~without flowing water~~  
21 ~~during timber operations at that crossing.~~

22           (8) Location of erosion hazard rating areas, if more than one  
23 rating exists.

24           (9) Location of watercourses and lakes with Class I, II, III,  
25 or IV waters.

(10) Location of known unstable areas or slides.

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1 (11) Location of understocked areas prior to timber operations,  
2 and other areas not normally bearing timber to at least a 20-acre  
3 minimum, or as specified in the district rules.

4 (12) Location of boundaries of timber-site classes needed for  
5 determination of stocking standards to be applied, down to at least a  
6 20-acre minimum or as specified in the district rules.

7 (13) Location of main ridge tops on the logging area suitable  
8 for fire suppression efforts that will require the felling of snags.

9 (14) Location of Coastal Commission Special Treatment Areas or  
10 any special treatment area.

11 (15) Location for which heavy equipment use is proposed on  
12 unstable areas, or on areas for which tractor use is proposed beyond  
13 the limitations of the standard forest practice rules.

14 (16) Location of any in lieu use of heavy equipment and location  
15 of tractor roads other than crossings in the watercourses, lakes  
16 WLPZs, marshes, wet meadows, and other wet areas.

17 ~~(17) Location of any new or reconstructed road segment(s) that~~  
18 ~~exceed an average 15% grade for over 200 feet.~~

19 (aa)- [No change]

20 (bb) Winter period operating plan where appropriate that addresses  
21 proposed logging road or landing construction, reconstruction. (Refer  
22 to 14 CCR § 923.4(k) [943.4(k), 963.4(k)]).

23 (cc) Explanation and justification for use of watercourses, marshes,  
24 wet meadows, and other wet areas as ~~landings, roads, or skid trails~~  
25 tractor roads.

(dd)-(ee) [No change]

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1 ~~(ff) Explanation and justification for landings that exceed the~~  
2 ~~maximum size specified in the rules.~~

3 ~~(gg)-(ff)~~Any other information required by the rules or the Act to be  
4 included in the plan. The district rules provide for exceptions and  
5 alternatives to standard requirements that require inclusion of  
6 information in the THP.

7 ~~(hh) Where roads, watercourse crossings, and associated landings in~~  
8 ~~the logging area will be abandoned, the methods for abandonment shall~~  
9 ~~be described.~~

10 ~~(ii) On a map complying with subsection 1034(x), the locations and~~  
11 ~~classifications of roads, watercourse crossings, and landings to be~~  
12 ~~abandoned shall be shown.~~

13 ~~(jj)~~(gg) A general description of physical conditions at the plan  
14 site, including general soils and topography information, vegetation  
15 and stand conditions, and watershed and stream conditions.

16 ~~(hh) Option 1: All logging roads and all landings requiring~~  
17 ~~construction or reconstruction along non public roads that are not~~  
18 ~~within the harvest area nor under the ownership or control of the~~  
19 ~~timberland owner whose land is being harvested shall be identified.~~

20 ~~(Option 2: Do not adopt the contents of subsection (hh) proposed~~  
21 ~~under Option 1 and begin re-numbering subsection (ii) as (hh), (jj) as~~  
22 ~~(ii), etc.)~~

23 ~~(ii) The following shall be disclosed and described in the plan for~~  
24 ~~all existing, constructed, and reconstructed logging roads, landings~~  
25 ~~and logging road watercourse crossings, where applicable.~~

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1 ~~(1) For those with identified sensitive conditions per 14 CCR §~~  
2 ~~923.1(d) [943.1(d), 963.1(d)] and 923.10(f) [943.10(f), 963.10(f)]:~~

3 ~~(A) Such sensitive conditions, including where they may~~  
4 ~~interact with proposed timber operations, that individually or~~  
5 ~~cumulatively, significantly and adversely affect, the beneficial uses~~  
6 ~~of water.~~

7 ~~(B) Feasible protection measures for identified sensitive~~  
8 ~~conditions, which consider the watercourse classification and the~~  
9 ~~location and planned use of all logging roads and landings.~~

10 ~~(C) An implementation schedule where feasible protection~~  
11 ~~measures are proposed.~~

12 ~~(2) Soil stabilization measures, including timing of~~  
13 ~~installation. (Refer to 14 CCR § 923.5(1) [943.5(1), 963.5(1)])~~

14 ~~(3) Maintenance treatments to running surfaces of logging roads~~  
15 ~~and landing surfaces. (Refer to 14 CCR § 923.7(e) [943.7(e),~~  
16 ~~963.7(e)]).~~

17 ~~(4) Describe any proposed operations to remove how logging road~~  
18 ~~watercourse crossings, including temporary crossings and those along~~  
19 ~~abandoned or deactivated logging roads, are to be removed. (Refer to~~  
20 ~~14 CCR § 923.17 [943.17, 963.17]).~~

21 ~~(5) In watersheds with listed anadromous salmonids and in~~  
22 ~~planning watersheds immediately upstream of, and contiguous to, any~~  
23 ~~watershed with listed anadromous salmonids:~~

24 ~~(A) Specific erosion control measures for all permanent~~  
25 ~~and seasonal logging roads with a grade of 15 percent or greater that~~

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1 ~~extend 500 continuous feet or more. (Refer to 14 CCR § 923.5(p)(2)~~  
2 ~~[943.5(p)(2), 963.5(p)(2)]).~~

3 ~~(B) Soil stabilization measures, including timing of~~  
4 ~~installation. (Refer to 14 CCR § 923.5(p)(3) [943.5(p)(3),~~  
5 ~~963.5(p)(3)].).~~

6 ~~(6) In watersheds with listed anadromous salmonids, water~~  
7 ~~drafting site conditions and proposed water drafting activity. (Refer~~  
8 ~~to 14 CCR § 923.7(1)(2) [923.7(1)(2), 923.7(1)(2)].)~~

9 [Note:§1034(ii)(1-6) struck as part of FPC non-concurrence with  
10 §1034(hh) Option 1, refer to §923.3(b) Option 2.

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11 ~~(jj) The following shall be disclosed and described in the plan for~~  
12 ~~all constructed and reconstructed logging roads and landings:~~

13 ~~(1) Approximate lineal distance of individual segments of logging~~  
14 ~~road construction and reconstruction.~~

15 ~~(Option 2: Total lineal distance of all logging road~~  
16 ~~construction.)~~

17 ~~(2) Potential public safety concerns. (Refer to 14 CCR §~~  
18 ~~923.10(e) [943.10(e), 963.10(e)].)~~

19 ~~(3) Logging roads wider than single lane compatible with the~~  
20 ~~largest type of equipment specified for use.~~

21 ~~(4) Areas with identified isolated outcrops of asbestos bearing~~  
22 ~~soil or parent material.~~

23 ~~(5) Areas with potential mercury in soil, fills, or mine~~  
24 ~~tailings.~~

25 ~~(6) Areas where rules require a constructed bench to support~~  
~~fill on slopes greater than 50 percent for 100 lineal feet or more.~~

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1 ~~(7) Landings in excess of one quarter acre on slopes exceeding~~  
2 ~~40 percent.~~

3 ~~(8) Logging roads across or landings on unstable areas or~~  
4 ~~connected headwall swales.~~

5 ~~(9) Logging roads or landings within Class I, II, III, or IV~~  
6 ~~watercourses or lakes, WLPZs, marshes, wet meadows, or other wet areas~~  
7 ~~other than at logging road watercourse crossings.~~

8 ~~(10) Logging road and landing insloping, inside ditch drainage,~~  
9 ~~or crowning in excess of 300 lineal feet that drains to a classified~~  
10 ~~watercourse or lake.~~

11 ~~(11) Road failures on existing logging roads to be~~  
12 ~~reconstructed.~~

13 ~~(12) Disposal sites for spoils generated during logging road or~~  
14 ~~landing construction or reconstruction on slopes greater than 40~~  
15 ~~percent or on active unstable areas.~~

16 ~~(13) Logging roads and landings across slopes greater than 50~~  
17 ~~percent for 100 lineal feet or more within 100 feet of the boundary of~~  
18 ~~a WLPZ that drains toward the zoned watercourse or lake, including~~  
19 ~~specific construction techniques or measures. (Refer to 14 CCR §~~  
20 ~~923.4(m) [943.4(m), 963.4(m)]).~~

21 ~~(14) Logging roads and landings across or landings on slopes~~  
22 ~~greater than 65 percent for 100 lineal feet or more, including~~  
23 ~~specific construction techniques or measures to minimize movement of~~  
24 ~~soil and the discharge of concentrated surface runoff. (Refer to 14~~  
25 ~~CCR § 923.2(a)(6) [943.2(a)(6), 963.2(a)(6)]).~~

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1 ~~(15) Logging roads or landings to be abandoned or deactivated,~~  
2 ~~including specific measures used to apply the general abandonment or~~  
3 ~~deactivation requirements of 14 CCR § 923.8 [943.8, 963.8].~~

4 ~~(16) Landings that require substantial excavation and landings~~  
5 ~~in excess of one quarter acre in size.~~

6 ~~(17) Any other areas where non standard practices on logging~~  
7 ~~roads or landings are proposed.~~ [Note: §1034(jj)(1-17) struck as part of  
8 FPC non-concurrence with §1034(hh) Option 1, refer to §923.3(b) Option  
9 2.

10 ~~(kk) In watersheds with listed anadromous salmonids and in planning~~  
11 ~~watersheds immediately upstream of, and contiguous to, any watershed~~  
12 ~~with listed anadromous salmonids, the following shall be disclosed in~~  
13 ~~the plan:~~

14 ~~(1) Erosion sites on logging roads and landings that will be~~  
15 ~~treated, including proposed treatment(s). (Refer to 14 CCR § 923.2(f)~~  
16 ~~[943.2(f), 963.2(f)].~~

17 ~~(2) Identification and description of specific provisions for~~  
18 ~~all proposed logging road construction on slopes greater than 50~~  
19 ~~percent. (Refer to 14 CCR § 923.4(s)(1)(A) [943.4(s)(1)(A),~~  
20 ~~963.4(s)(1)(A)].~~

21 ~~(3) Where logging road or landing construction or~~  
22 ~~reconstruction is proposed, the location of, and specifications for,~~  
23 ~~logging road and landing abandonment or other mitigation measures to~~  
24 ~~minimize the adverse effects of long term site occupancy of the road~~  
25 ~~system within the watershed. (Refer to 14 CCR § 923.1(f) [943.1(f),~~  
~~963.1(f)].~~

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~~(3) Where logging road or landing construction or reconstruction is proposed, the plan shall identify:~~

~~(A) How the proposed operations will fit into the systematic layout pattern.~~

~~(B) What, if any, offsetting mitigation measures, including but not limited to, abandonment of logging roads and landings, are needed to minimize potential adverse impacts to watersheds from the road system. (Refer to 14 CCR § 923.1(f) [943.1(f), 963.1(f)].)~~

~~(4) During the extended wet weather period, the winter period operating plan shall:~~

~~(A) Address, where applicable, proposed logging road or landing construction, reconstruction and use. (Refer to 14 CCR §§ 923.4(e)(2) [943.4(e)(2), 963.4(e)(2)] and 923.6(j)(5) [943.4(j)(5), 963.4(j)(5)].)~~

~~(B) Specify an implementation schedule where logging road watercourse crossing construction or reconstruction is proposed. (Refer to 14 CCR § 923.13(n) [943.13(n), 963.13(n)].)~~

[Note:§1034(kk)(1-3, 4(A-B)) struck as part of FPC non-concurrence with §1034(hh) Option 1, refer to §923.3(b) Option 2.]

~~(11)(hh) In watersheds with listed anadromous salmonids, the following shall apply:~~

~~(1) Disclose and describe all existing permanent logging road watercourse crossings. (Refer to 14 CCR § 14 CCR § 923.11(l)(1) [943.11(l)(1), 963.11(l)(1)].)~~

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1        (2) In addition to the description of all existing permanent  
2 logging road watercourse crossings required by subsection (kk)(3), for  
3 Class I watercourses, where fish are always or seasonally present or  
4 where fish habitat is restorable, any plan involving timber operations  
5 within the WLPZ shall contain the following information:

6            (A) Clear and enforceable specifications describing how  
7 these crossings are to be modified, used, and treated to minimize  
8 risks, giving special attention to allowing fish to pass both upstream  
9 and downstream during all life stages and in conformance with the  
10 standards of subsection 923.11(j) [943.11(j), 963.11(j)] and 14 CCR §  
11 923.10(h) [943.10(h), 963.10(h)].

12            (B) Clear and enforceable specifications for construction  
13 and operation of any new crossing(s) of a Class I watercourse to  
14 prevent direct harm, habitat degradation, water velocity increase,  
15 hindrance of fish passage, or other potential impairment of beneficial  
16 uses of water. (Refer to 14 CCR § 923.11(1)(2)-(3) [943.11(1)(2)-(3),  
17 963.11(1)(2)-(3)].)

18 ~~(mm)(ii)~~ The following shall be provided in the plan for all  
19 constructed and reconstructed logging road watercourse crossings:

20            (1) Describe all constructed or reconstructed logging road  
21 watercourse crossings within the harvest area, as needed.

22            ~~(2) Option 1: Disclose and describe all permanent and~~  
23 ~~temporary logging road watercourse crossings requiring construction or~~  
24 ~~reconstruction along non-public roads, except temporary logging road~~  
25 ~~watercourse crossings of Class III watercourses that are dry at the~~  
~~time of use, that are not within the harvest area nor under the~~

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1 ~~ownership or control of the timberland owner where timber is proposed~~  
2 ~~for harvest.~~ (Option 2: Do not adopt the contents of subsection  
3 (mm)(2) proposed under Option 1 and begin re-numbering subsection  
4 (mm)(3) as (mm)(2), (mm)(4) as (mm)(3), etc.)

5 ~~(3)~~(2) Disclose the potential public safety impacts where  
6 crossing construction or reconstruction may affect public safety.  
7 (Refer to 14 CCR § 923.10(e) [943.10(e), 963.10(e)]).

8 ~~(4)~~(3) Disclose how diversions at logging road watercourse  
9 crossings will be avoided, including proposed method(s). (Refer to 14  
10 CCR §§ 923.10(g) [943.10(g), 963.10(g)] and 923.11(g) [943.11(g),  
11 963.11(g)].

12 ~~(5)~~ (4) Include the analyses and specifications that  
13 demonstrate all permanent constructed and reconstructed logging road  
14 watercourse crossing structures installed within Class I watercourses,  
15 where fish are always or seasonally present or where fish habitat is  
16 restorable, will be designed to allow for upstream and downstream  
17 passage of fish or listed aquatic species during any life stage and  
18 for the natural movement of bedload. (Refer to 14 CCR § 923.11(i)-(j)  
19 [943.11(i)-(j), 963.11(i)-(j)].)

20 ~~(6)~~ (5) Specify the minimum diameter of the culvert and the  
21 method(s) used to determine the culvert diameter where new culverts  
22 are proposed for permanent installation at a logging road watercourse  
23 crossing. (Refer to 14 CCR § 923.11(e) [943.11(e), 963.11(e)].)

24 ~~(7)~~ (6) State the range of required rock dimensions for rock  
25 used in logging road watercourse crossings utilizing fords. (Refer to  
14 CCR § 923.11(h) [943.11(h), 963.11(h)].)

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1 ~~(8)~~ (7) Identify protection measures needed to reduce sediment  
2 delivery where evidence of substantial soil erosion and significant  
3 sediment discharge is present at a logging road watercourse crossing  
4 used for timber operations. (Refer to 14 CCR § 923.16(d) [943.16(d),  
5 963.16(d)].)

6 ~~(9)~~ (8) Identify how soil erosion and sediment transport will be  
7 minimized and how significant sediment discharge will be prevented  
8 where it is not feasible to remove a logging road watercourse crossing  
9 or its associated fill to the standards contained in 14 CCR § 923.17  
10 [943.17, 963.17]. (Refer to 14 CCR §§ 923.8(e) [943.8(e), 963.8(e)]  
11 and 923.17(e) [943.17(e), 963.17(e)].)

12 ~~(10)~~ (9) Disclose and describe site conditions, and, to the  
13 extent feasible, specify measures to be taken to address potential  
14 sediment mobilization where a significant volume of sediment is stored  
15 upstream from a logging road watercourse crossing that is proposed to  
16 be removed. (Refer to 14 CCR §§ 923.13(g) [943.13(g), 963.13(g)] and  
17 923.17(f) [943.17(f), 963.17(f)].)

18 ~~(11)~~ (10) In watersheds with listed anadromous salmonids, **Option**  
19 1 state how existing permanent culverts used for logging road  
20 watercourse crossings on Class I watercourses, where fish are always  
21 or seasonally present or where fish habitat is restorable, shall be  
22 brought up to the standards of 14 CCR § 923.11(c) [943.11(c),  
23 963.11(c)].

24 **[Option 2, (A)] state how existing permanent culverts used**  
25 for logging road watercourse crossings on Class I watercourses, where  
fish are always or seasonally present or where fish habitat is

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1 restorable, shall be brought up to the standards of 14 CCR § 923.11(c)  
2 [943.11(c), 963.11(c)].

3 (B) (This only applies if 14 CCR § 923.11(k) [943.11(k),  
4 963.11(k)], Option 1 is adopted.) In addition to the requirements of  
5 14 CCR § 923.11(k) [943.11(k), 963.11(k)], include the method of  
6 analysis and the design for logging road watercourse crossing  
7 protection. (Refer to 14 CCR § 14 CCR § 923.11(k) [943.11(k),  
8 963.11(k)].)]

9  
10 **Amend 1051.1. Contents of Modified THP**

11 A plan submitted under ~~section~~ 14 CCR § 1051 above shall contain all  
12 the provisions of 14 CCR § 1034 except the following: (o), (x)(6),  
13 (x)(7), (z), (cc), (dd), (ee), (ff), and (mm), and the RPF shall:  
14

15 **Amend 1090.5 Contents of NTMP**

16 (w) On a USGS quadrangle or equivalent topographical map of a scale  
17 not less than 2" to the mile, the following information shall be  
18 clearly provided. Additional maps may be required to show specific  
19 details, and may be planimetric. Color coding shall not be used. A  
20 legend shall be included indicating the meaning of the symbols used to  
21 depict operational features on maps. See the district rules for the  
22 appropriate minimum mapping acreages.

23 (1)-(3) [No change]

24 (4) Location of public roads within the ~~plan~~ harvest area, and  
25 private roads appurtenant to the timber operations where such roads  
are under the ownership or control of the timberland owner and are

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1 contiguous with the ~~plan~~ harvest area, and classification of all  
2 proposed and existing logging roads as permanent, seasonal, or  
3 temporary roads.

4 (5)-14) [No change]

5 (x)-(ff) [No change]

6 ~~(gg) Where logging roads, logging road watercourse crossings, and~~  
7 ~~associated landings in the logging area will be abandoned or~~  
8 ~~deactivated, the methods for abandonment or deactivation shall be~~  
9 ~~described. [Note: §1090.5(gg) struck as part of FPC non-concurrence~~  
10 ~~with §1034(hh) Option 1, refer to §923.3(b) Option 2.~~

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11 ~~(hh)~~(gg) On a map complying with ~~subsection 14 CCR § 1090.6(x)~~  
12 1090.5(w), the locations and classifications of logging roads, logging  
13 road watercourse crossings, and landings to be abandoned or  
14 deactivated shall be shown.

15 ~~(ii) [No change]~~ [Note: remaining lettering/numbering under §1090.5,  
16 beginning with item (hh), will require revision.]

17  
18 Amend 1090.7 Notice of Timber Operations Content

19 \*\*\*\*\*(n) On a USGS quadrangle or equivalent map of a scale not less  
20 than 2" to the mile, the following information pertinent to the Notice  
21 of Operations shall be clearly provided. Additional maps may be  
22 required to show specific details, and may be planimetric. Color  
23 coding shall not be used. A legend shall be included indicating the  
24 meaning of the symbols used to depict operational features on maps.  
25 See the district rules for the appropriate minimum mapping acreages.

(1)-(3) [No change]

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1 (4) Location of public roads within the Notice area, and  
2 private roads appurtenant to the timber operations where such roads  
3 are under the ownership or control of the timberland owner, and are  
4 contiguous with the Notice area, and classification of all proposed  
5 and existing logging roads as permanent, seasonal, or temporary roads.

6 (5)-(11) [No change]

7 Amend 1092.09 PTHP Contents

8 (a) - (K) No change

9 (1) On a ~~titled USGS quadrangle or equivalent topographic map of a~~  
10 ~~scale not less than 2" to the mile map that is based upon a U. S.~~  
11 Geological Survey topographic quadrangle map, or equivalent, published  
12 at a scale of 1:24,000 or larger, the information in subsections (1-5)  
13 (1)-(5)(A), (6)(A)-(6)(K), if applicable, (7)(A)-(B), and (7-11) shall  
14 be clearly shown. On a topographic map at a scale of 1/2 inch equals  
15 1 mile (1:126,720) or larger, the information in subsections (5)(B),  
16 (6)(A)-(6)(K), if applicable, and (7)(C) shall be clearly shown.

17 Additional maps, which may be topographic or planimetric, may be used  
18 to provide the information required in other subsections or show  
19 specific details, and to improve map clarity. ~~The appurtenant roads~~  
20 ~~referenced in subsection (5) may be shown on a map which may be~~  
21 ~~planimetric with a scale as small as one half inch equals one mile.~~  
22 Color coding shall not be used. A legend shall be included indicating  
23 the meaning of the symbols used to depict operational features on  
24 maps. See the district rules for the appropriate minimum mapping  
25 acreage.

(1)-(4) [No change]

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1           (5) ~~Location of public roads within the PTHP, and private roads~~  
2 ~~appurtenant to the timber operations where such roads are under the~~  
3 ~~ownership or control of the timber owner, timberland owner or timber~~  
4 ~~operator, and classification of all proposed and existing logging~~  
5 ~~roads as permanent, seasonal, or temporary roads. The following~~  
6 logging road- and landing-related features shall be shown on a map of  
7 the appropriate type and scale as described in subsection (1) above:

8           (A) Location of all logging roads within the harvest area,  
9 including those located in watercourses, lakes, WLPZs, marshes, wet  
10 meadows, or other wet areas and those proposed for abandonment or  
11 deactivation.

12           (B) Location of all logging roads that will be used for  
13 log hauling under the ownership or control of the timber owner,  
14 timberland owner, timber operator, or plan submitter that are between  
15 the harvest area and the first public road to be used for log hauling.

16 This shall include:

17           (i) Logging roads and landings located in  
18 watercourses, lakes, WLPZs, marshes, wet meadows, or other wet areas,  
19 other than at logging road watercourse crossings.

20           (ii) Logging roads and landings proposed for  
21 abandonment or deactivation.

22           (iii) Logging roads that provide access to rock pits  
23 and water drafting sites.

24           (6) The following shall be mapped at the appropriate scale  
25 required under subsection (1), whichever is applicable, for all

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1 constructed and reconstructed logging roads and landings, unless  
2 otherwise noted:

3 (A) Location of logging road grades greater than 15  
4 percent for over 200 continuous feet or logging road grades greater  
5 than 20 percent.

6 (B) Location of road failures on existing roads to be  
7 reconstructed.

8 (C) Location of logging roads across or landings on  
9 unstable areas or connected headwall swales.

10 (D) Location of logging roads or landings within Class I,  
11 II, III, or IV watercourses or lakes, WLPZs, marshes, wet meadows, or  
12 other wet areas other than at logging road watercourse crossings.

13 (E) Location of logging road and landing insloping, inside  
14 ditch drainage, or crowning in excess of 300 lineal feet that drains  
15 to a classified watercourse or lake.

16 (F) Location of landings that require substantial  
17 excavation and landings in excess of one-quarter acre in size.

18 (G) Location of disposal sites for spoils generated during  
19 logging road or landing construction or reconstruction on slopes  
20 greater than 40 percent or on active unstable areas.

21 (H) Location of logging roads and landings across slopes  
22 greater than than 65 percent for 100 lineal feet or more.

23 (I) Location of logging roads and landings across slopes  
24 greater than 50 percent for 100 lineal feet or more within 100 feet of  
25 the boundary of a WLPZ that drains toward the zoned watercourse or  
lake.

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1           (J) In watersheds with listed anadromous salmonids and in  
2 planning watersheds immediately upstream of, and contiguous to, any  
3 watershed with listed anadromous salmonids, the location of active  
4 erosion sites on logging roads and landings that will be treated.

5           (K) In watersheds with listed anadromous salmonids,  
6 location of proposed water drafting locations.

7           (L) Location of any other area(s) where non-standard  
8 practices on logging roads are proposed.

9           ~~(7)(6) — Location of proposed and existing landings in the~~  
10 ~~watercourse and lake protection zone, and landings outside the zone~~  
11 ~~that are greater than 1/4 acre in size or whose construction involves~~  
12 ~~substantial excavation.~~ The following logging road watercourse  
13 crossing-related items shall be shown on a map of the appropriate type  
14 and scale as described in subsection (1) above:

15           (A) Location of all existing logging road watercourse  
16 crossings within the harvest area, including those proposed for  
17 abandonment or deactivation. This requirement may be met by depicting  
18 the intersection of a logging road and a watercourse.

19           (B) Location of all constructed or reconstructed logging  
20 road watercourse crossings within the harvest area, including those  
21 proposed for abandonment or deactivation.

22           (C) For logging road watercourse crossings that are not  
23 within the harvest area but are under the ownership or control of the  
24 owner of the timberland where timber is proposed for harvest and that  
25 are between the harvest area and the first public road to be used for  
log hauling:

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1                    (i) Existing logging road watercourse crossings of  
2 Class I and Class II waters that will be used for log hauling.

3                    (ii) Constructed and reconstructed logging road  
4 watercourse crossings that will be used for log hauling.

5                    (iii) Existing logging road watercourse crossings to be  
6 abandoned or deactivated.

7                    Existing logging road watercourse crossings may be shown by  
8 depicting the intersection of a logging road and a watercourse.

9                    ~~(8) (7) Road failures on existing roads to be reconstructed.~~

10                   ~~(8) Location of all tractor road watercourse crossings of~~  
11 ~~classified watercourses except temporary crossings of class III~~  
12 ~~watercourses that are dry at the time of use without flowing water~~  
13 ~~during timber operations at that crossing.~~

14                   (9) Location of erosion hazard rating areas, if more than one  
15 rating exists.

16                   (10) Location of watercourses and lakes with Class I, II, III or  
17 IV waters.

18                   (11) Location of known unstable areas or slides.

19                   (12) Location of unique areas.

20  
21 **Amend § 1093.2. Contents of Road Management Plan.**

22        The Road Management Plan shall, at a minimum, contain the following  
23 information:\*\*\*\*\*

24                   \*\*\*\*\* (3) The operational element shall, at a minimum, address  
25 proposed road management operations, stated time frames for actions,  
clear lines of responsibility for implementation, and schedules to be

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1 implemented in a plan, including:

2           (A) (A) A road construction, reconstruction and use  
3 component to ensure that operations occur on a stable operating  
4 surface, consistent with 14 CCR 923.6. ~~that does not produce sediment~~  
5 ~~in quantities that may cause a visible increase in turbidity of~~  
6 ~~downstream waters in receiving Class I, II, III or IV waters or would~~  
7 ~~violate Water Quality Requirements.~~ This component shall include, at a  
8 minimum, restrictions for wet weather operations, surfacing  
9 objectives, and provisions for water drafting.\*\*\*\*\*

10  
11 Amend § 1104.1. Conversion Exemptions.

12 Timber operations conducted under this subsection shall be exempt  
13 from conversion permit and timber harvesting plan requirements of this  
14 article\*\*\*\*\*

15           \*\*\*\*\***(E)** Timber operations may be conducted during the winter  
16 period. Tractor operations in the winter period are allowed under any  
17 of the following conditions:

18           1. During dry, rainless periods but shall not be conducted  
19 on saturated soil conditions that may produce significant sediment  
20 discharge. ~~sediment in quantities sufficient to cause a visible~~  
21 ~~increase in turbidity of downstream waters in receiving Class I, II,~~  
22 ~~III or IV waters or that violate Water Quality Requirements.~~ Erosion  
23 control structures shall be installed on all constructed skid trails  
24 and tractor roads prior to sunset if the National Weather Service  
25 forecast is a "chance" (30% or more) of rain within the next 24  
hours.\*\*\*\*\*

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1 End as of 7/20/11

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