

11-29-10 Road Rules Task Force Plead with FPC edits

Road Rules, 2010
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
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- 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
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- 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 Plan
- § 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 suggested by DFG under consideration

3 **Text in red** are amendments suggested by CGS or CAL FIRE under
consideration

4 *Italics* = most recent edits/edits since last version

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.

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1 Appurtenant Road means a road that is owned or controlled by the
2 timberland owner, timber operator or timber owner, and will be used
3 during the harvesting of a particular plan area.

4
5 (Option CB (CAL FIRE) Appurtenant Road means a logging road under the
6 ownership or control of the timber owner, timberland owner, timber
7 operator, or plan submitter that will be used for log hauling and that
8 is between the plan area and the first public road to be used for log
9 hauling.¹

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

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

16
17 Connected Headwall Swale means a geomorphic feature consisting of a
18 bowl-shaped, concave depression with convergent slopes, typically of
19 65 percent or greater steepness, that is connected to a watercourse or
20 lake by way of a continuous linear depression and that has been
21 sculpted over geologic time by shallow landslide events. The slope
22 profile is typically smooth and unbroken by benches, but may be

23
24
25 ¹ 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 interrupted by recent landslide deposits or scars. Emergent
2 groundwater and wet areas may exist at the base of the swale. Soil
3 and colluvium depth is typically greatest at the axis of the swale,
4 thinning to either side.

5
6 **Critical Dip** means a constructed dip across a logging road surface
7 immediately down grade from, or over, a culverted logging road
8 watercourse crossing that functions to prevent crossing overflow from
9 draining down the road.

10
11 **Crowning** means creating a road surface with a convex cross sectional
12 profile that drains runoff toward both sides of the road.

13
14 **Deactivated Road** means a logging road that is part of the permanent
15 road network where proactive measures have been applied to prevent
16 active use.

17
18 **Deactivation** means taking the proactive measures necessary to prevent
19 the active use of an existing logging road, landing, or logging road
20 watercourse crossing.

21
22 **End-Hauling** means the removal and transport of ~~excavated~~ excess
23 ~~material to prevent sidecast.~~

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1 **Excess Material** means excavated material that is not used ~~or needed~~ as
2 a functional part of the road or ~~a~~ landing. Excess material is
3 synonymous with spoils.

4
5 **Extended Wet Weather Period** means the period from October 15 to May 1.

6 2

7
8 **Fill** means material that is mechanically placed ~~in low areas~~ and built
9 up in lifts to form a the roadbed or landing surface. Fill includes
10 the material placed around culverts and related drainage structures at
11 logging road watercourse crossings.

12
13 **Ford** means a logging road watercourse crossing where the road grade
14 dips through the watercourse channel.

15
16 **Harvest Area** means the area where trees are felled and removed.

17
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21
22 ² The concept of the extended wet weather period being based on rainfall data,
23 perhaps on rainfall records for Hydrologic Sub Areas or Super Planning
24 Watersheds, appears to be a logical way to approach this issue. DFG
25 recommended that its option for a MAY 31 st date be dropped. This decision
was based on the May 31 date being generated from data from NW California
Coho salmon rainfall records. Since these records are from areas covered by
HCPs need for the extended date is not needed, and the May 31 date is not
applicable for other parts of the state.

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1 (DFG Option) Inside Ditch Hydraulic Capacity means the ability of an
2 inboard ditch to contain flow from a runoff event without overflowing
3 to the road surface or substantially downcutting the inboard ditch.

4
5 Insloping means shaping the road surface to drain toward a cutbank.

6 Outsloping means shaping the road surface to drain toward the outside
7 edge.

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

17
18 ~~Permanent Road Network~~ means the permanent, seasonal, ~~and temporary,~~
19 and deactivated roads that provide the infrastructure necessary for
20 timber operations and forest management.

21
22 ~~Permanent Watercourse Crossing~~ means a watercourse crossing that will
23 ~~be constructed to accommodate the estimated fifty year flood flow and~~
24 will remain in place when timber operations have been completed.

25 ~~Prescribed Maintenance Period~~ means the time period, beginning with
filing of the work completion report, provided that the report is

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1 subsequently approved, during which erosion controls ~~which~~ that are
2 required and constructed as part of a ~~timber operations~~ must be
3 maintained in a functional condition. ~~The period shall not exceed~~
4 ~~three years from the filing of the work completion report provided~~
5 ~~that the report is subsequently approved by the director.~~

6
7 **Public Road** means a road open to the general public which is: (a) in
8 ~~the~~ a Federal, State, ~~or~~ County, or City road system, or (b) a road on
9 which a public agency has deeded, unlimited easement.

10
11 **(DFG Option - 10/6/10 FPC changes in italics)**³ **Road approach** means the
12 portion of the logging road surface that drains overland water flow
13 and is not hydrologically disconnected from the watercourse
14 channel/crossing. Road approaches begin/end at the nearest functional
15 drainage structure/facility or the first high point on the road where
16 road surface overland water flow drains away from the watercourse
17 crossings. Crossings often have two road approaches.

18
19 **Road Maintenance** means activities involving manipulation of the
20 logging road prism to maintain stable operating surfaces, functioning
21 logging road drainage facilities and structures, and stable cutbanks
22 and fill slopes. (DFG Option) Examples of road maintenance include
23 shaping and/or rocking a road surface; installation and maintenance of

24
25 ³ Change made at FPC meeting on 9/7/10. Changes clarifies that approaches are characterized by road surfaces that are not hydrologically disconnected and drain overland water flow to watercourses.

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1 rolling and critical dips; restoring functional capacity of inboard
2 ditches, cross drains, or culverts; and repairing water bars.

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

5
6 (DFG Option)Scour means the process of erosion by flowing water.

7
8 ~~Seasonal Road means a road which is planned and constructed as part of~~
9 ~~a permanent transportation facility where: 1) commercial hauling may~~
10 ~~be discontinued during the winter period, or 2) the landowner desires~~
11 ~~continuation of access for fire control, forest management activities,~~
12 ~~Christmas tree growing, or for occasional or incidental use for~~
13 ~~harvesting of minor forest products, or similar activities. These~~
14 ~~roads have a surface adequate for hauling of forest products in the~~
15 ~~non winter periods, and in the extended dry periods or hard frozen~~
16 ~~conditions occurring during the winter period; and have drainage~~
17 ~~structures, if any, at watercourse crossing which will accommodate the~~
18 ~~fifty year flood flow. Some maintenance usually is required logging~~
19 ~~road that is part of the permanent road network where use is generally~~
20 ~~discontinued during the winter period.~~

21
22 (DFG Option)Sediment Filter Strip means a structure or vegetation that
23 substantially prevents concentration, transport, and delivery of sediment to
24 a watercourse or lake by reducing velocity and filtering water through
25 features such as gradual slopes treated with vegetation, gentle slopes, woody
debris and mulch or settling basins.

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

3

4 **Temporary Road** means a logging road that is to be used only during the
5 timber operations and that will be deactivated or abandoned upon
6 completion of use. ~~These roads have a surface adequate for seasonal~~
7 ~~logging use and have drainage structures, if any, adequate to carry~~
8 ~~the anticipated flow of water during the period of use.~~

9

10 **Through Cut** means a section of road that lies below the adjacent
11 ground level on both sides of the road.

12

13 **Through Fill** means a section of road upon constructed fill that lies
14 above the adjacent ground level on both sides of the road.

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1 Amend 14 CCR § 914.7 [934.7, 954.7]. Timber Operations, Winter
2 Period.

3 During the winter period:

4 (a) Mechanical site preparation and timber harvesting, shall not be
5 conducted unless a winter period operating plan is incorporated in the
6 timber harvesting plan and is followed, or unless the requirements of
7 subsection (c) are met. Cable, helicopter and balloon yarding methods
8 are exempted.

9 (b) The winter period operating plan shall include the specific
10 measures to be taken in winter timber operations to minimize damage
11 due to erosion, soil movement into watercourses and soil compaction
12 from felling, yarding, loading, mechanical site preparation, and
13 erosion control activities. A winter period operating plan shall
14 address the following subjects:

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

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

(1) Tractor yarding or the use of tractors for constructing
layouts, firebreaks or other tractor roads shall be done only during
dry, rainless periods and shall not be conducted on saturated soils
conditions that may produce sediment in quantities sufficient to cause
a visible increase in turbidity of downstream waters in receiving
Class I, II, III or IV waters or that violate Water Quality
Requirements.

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1 **OPTION A CAL FIRE 8/23/10⁴**

2 (1) Tractor yarding or the use of tractors for constructing
3 layouts, firebreaks or other tractor roads shall be done only during
4 dry, rainless periods where soils are not saturated. Tractor yarding
5 or the use of tractors may occur on isolated wet spots provided
6 measures, as specified in the THP, are taken to prevent impacts to
7 soil productivity, and discharge that may reach watercourses or lakes.
8 ~~and shall not be conducted on saturated soils conditions that may~~
9 ~~produce sediment in quantities sufficient to cause a visible increase~~
10 ~~in turbidity of downstream waters in receiving Class I, II, III or IV~~
11 ~~waters or that violate Water Quality Requirements.~~

12 **CGS OPTION**

13 (1)⁵ Tractor yarding or the use of tractors for constructing
14 layouts, firebreaks or other tractor roads shall be done only during
15 dry, rainless periods and shall not be conducted on saturated soils
16 conditions that may produce sediment in quantities that violate Water
17 Quality Requirements or result in significant **DFG OPTION** direct, indirect, or cumulative

18
19
20 ⁴ Option A incorporates Cal Fire recommended rule changes submitted to the
21 board on August 23, 2010. The changes address sediment discharge risks
22 associated with operations on saturated soils. The amendments ensure better
23 enforcement of operation on saturated soils as the current definition of
saturated soils is easy to understand, can be applied consistently by Cal
Fire inspectors, and avoids subjective interpretations of "potential"
discharges. The changes address water board issues on noncompliance with
policies regarding the use of "increased invisible turbidity" as the point of
cessation of operations.

24 ⁵ CGS OPTION was proposed as part of the FPC deliberation in 2010 for language
25 on sediment discharge. The language is used throughout the Road Rules, 2010
proposal. Staff's recommendation is that whichever Option is selected on
sediment discharge, (the CGS/RRTF's, CAL FIRE Option A, or the language
adopted by the Board in On 9/7/10, it be routinely used throughout the Road
Rules 2010 proposal.

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1 ~~adverse impacts to the beneficial uses of water sufficient to cause a~~
2 ~~visible increase in turbidity of downstream waters in receiving Class~~
3 ~~I, II, III or IV waters or that violate Water Quality Requirements.~~

4
5 **Amend § 914.8 [934.8, 954.8] Tractor Road Watercourse Crossing**

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

14
15 **Amend 14 CCR § 915.1 [935.1, 955.1]. Use of Heavy Equipment for Site**
16 **Preparation.**

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

19 (b) Heavy equipment shall not be used for site preparation under
20 saturated soil conditions that may produce sediment in quantities
21 sufficient to cause a visible increase in turbidity of downstream
22 waters in receiving Class I, II, III or IV waters; that violate Water
23 Quality Requirements; or when it cannot operate under its own power
24 due to wet conditions.
25

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1 **OPTION A CAL FIRE 8/23/10⁶**

2 (b) Heavy equipment shall not be used for site preparation under
3 saturated soil conditions. Heavy equipment use for site preparation
4 may occur on isolated wet spots provided measures, as specified in the
5 THP, are taken to prevent impacts to soil productivity, and discharge
6 that may reach watercourses or lakes.~~that may produce sediment in~~
7 ~~quantities sufficient to cause a visible increase in turbidity of~~
8 ~~downstream waters in receiving Class I, II, III or IV waters; that~~
9 ~~violate Water Quality Requirements; or when it cannot operate under~~
10 ~~its own power due to wet conditions.~~

11 **CGS OPTION**

12 (b)⁷ Heavy equipment shall not be used for site preparation
13 under saturated soil conditions that may produce sediment in
14 quantities that violate Water Quality Requirements or result in significant **DFG**

15 **OPTION direct, indirect, or cumulative** adverse impacts to the beneficial uses
16 of water. ~~sufficient to cause a visible increase in turbidity of~~
17

18 ⁶ Option A incorporates Cal Fire recommended rule changes submitted to the
19 board on August 23, 2010. The changes address sediment discharge risks
20 associated with operations on saturated soils. The amendments also ensure
21 better enforcement of operation on saturated soils as the current definition
22 of saturated soils is easy to understand, can be applied consistently by Cal
Fire inspectors, and avoids subjective interpretations of "potential"
discharges. The changes address water board issues on noncompliance with
policies regarding the use of "increased invisible turbidity" as the point of
cessation of operations.

23 ⁷ CGS OPTION was proposed as part of the FPC deliberation in 2010 for language
24 on sediment discharge. The language is used throughout the Road Rules, 2010
25 proposal. Staff's recommendation is that whichever Option is selected on
sediment discharge, (the CGS/RRTF's, CAL FIRE Option A, or the language
adopted by the Board in On 9/7/10, it be routinely used throughout the Road
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1 ~~downstream waters in receiving Class I, II, III or IV waters; that~~
2 ~~violate Water Quality Requirements; or when it cannot operate under~~
3 ~~its own power due to wet conditions.~~

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

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

12 (1) At prepared tractor road crossings as described in 14 CCR §
13 914.8(b) [934.8(b), 954.8(b)].

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

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

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

19 ~~Use of existing roads is addressed in 916.4(a) [936.4(a),~~
20 ~~956.4(a)]~~.

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1 Amend 916.4 [936.4, 956.4]. Watercourse and Lake Protection.

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

5 (1) As part of this field examination, the RPF or
6 supervised designee shall evaluate areas near, and areas with the
7 potential to directly impact, watercourses and lakes for sensitive
8 conditions including, but not limited to, ~~existing and proposed roads,~~
9 skidtrails ~~and landings~~⁸, unstable and erodible watercourse banks,
10 unstable upslope areas, debris, jam potential, inadequate flow
11 capacity, changeable channels, overflow channels, flood prone areas,
12 and riparian zones wherein the values set forth in 14 CCR §§ 916.4~~(b)~~
13 [936.4~~(b)~~, 956.4~~(b)~~], subsection(b) are impaired. *****

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25 ⁸ 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 Amend § 916.9 [936.9, 956.9]. Protection and Restoration of the
2 Beneficial functions of the Riparian Zone in Watersheds with Listed
3 Anadromous Salmonids.

4 *******(f)** Class I watercourses -

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

8 (A) Clear and enforceable specifications of timber
9 operations within the Class I WLPZ, including a description of how any
10 disturbance, or log or tree cutting and removal shall be carried out
11 to conform with 14 CCR §§ 916.2 [936.2, 956.2], subsection (a) and
12 916.9 [936.9, 956.9], subsection (a).

13 ~~(B) A description of all existing permanent logging road
14 watercourse crossings.~~

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

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

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

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1 ***** (3) Class I watercourses with flood prone areas or channel
2 migration zones:*****

3 ***** (E) Preferred Management Practices in the Inner Zone A
4 and B of Flood Prone Areas*****

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

12 **5.4.** Avoid Slash concentration and site
13 preparation:***** and pile burning.

14 **6.5.** Delineate Zone on the Ground:***** Locations
15 of all WLPZ zones and CMZs shall be designated on the ground.

16 **7.6.** Avoid Use of Water Drafting Sites:***** or
17 stream alteration permits.

18 **8.7. Avoid Disturbance to Critical Flood Prone**
19 **Area Habitat::******* and down large woody debris.

20 **(F) Outer Zone:*******

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

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

9 **OPTION A CAL FIRE 8/23/10 comment¹⁰**

10 (1) ~~Logging roads, landings or Ttractor roads shall not be used~~
11 ~~when visibly turbid water from the road, landing or tractor road (skid~~
12 ~~trail) or an inside ditch associated with the logging road, landing~~
13 ~~or tractor road may reach watercourses or lakes. produce sediment in~~
14 ~~quantities sufficient to cause a visible increase in turbidity of~~
15 ~~downstream waters in receiving Class I, II, III or IV waters or~~
16 ~~violate Water Quality Requirements.~~

22 ⁹ Modified RRTF proposal to conform to language for this section adopted by
23 BOF on 9/7/10 for the "Operations and Saturated Soils, 2010" regulation.

24 ¹⁰ Option A incorporates Cal Fire recommended rule changes submitted to the
25 board on August 23, 2010. The changes address water board issues on
noncompliance with policies regarding the use of "increased invisible
turbidity" as the point of cessation of operations.

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1 **CGS OPTION**

2 (1)¹¹ ~~Logging roads, landings or Tractor roads shall not be used~~
3 ~~when visibly turbid water from the road, landing or tractor road (skid~~
4 ~~trail) or an inside ditch associated with the logging road, landing or~~
5 ~~tractor road may produce sediment in quantities that violate Water Quality~~
6 ~~Requirements or result in significant **DFG OPTION** direct, indirect, or cumulative~~
7 ~~adverse impacts to the beneficial uses of water. ~~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 _____

23 ¹¹ CGS OPTION was proposed as part of the FPC deliberation in 2010 for
24 language on sediment discharge. The language is used throughout the Road
25 Rules, 2010 proposal. Staff's recommendation is that whichever Option is
selected on sediment discharge, (the CGS/RRTF's, CAL FIRE Option A, or the
language adopted by the Board in On 9/7/10, it be routinely used throughout
the Road Rules 2010 proposal.

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1 ~~needed to minimize soil erosion and sediment transport and to prevent~~
2 ~~the discharge of sediment into watercourses and lakes in quantities~~
3 ~~deleterious to the beneficial uses of water.~~

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

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

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

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

24 ~~(3) Logging roads, landings and tractor roads shall not be used~~
25 ~~when sediment from the logging road, landing or tractor road surface~~
~~is transported to a watercourse or a drainage facility that discharges~~

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1 ~~into a watercourse in amounts sufficient to cause a visible increase~~
2 ~~in turbidity in Class I, II, III, or IV waters.~~

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

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

13 **CGS OPTION** (n) **Treatments to stabilize soils** - Within the WLPZ, and
14 within any ELZ or EEZ designated for watercourse or lake protection,
15 treatments to stabilize soils, minimize soil erosion, and prevent the
16 discharge of sediment into watercourses or lakes in ~~amounts~~ quantities
17 that violate Water Quality Requirements or result in significant **DFG OPTION** direct,
18 indirect, or cumulative adverse impacts to the beneficial uses of water.

19 ~~deleterious to aquatic species or the quality and beneficial uses of~~
20 ~~water, or that threaten to violate applicable water quality~~
21 ~~requirements~~, shall be described in the plan as follows.

22 (1)*****

23 *******(C)** Disturbed tractor road cut banks and fills,
24 and*****

25 *******(2)** Soil stabilization treatment measures may include, but need
not be limited to, removal, armoring with rip-rap, replanting,

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1 mulching, ~~rip rapping~~, ~~grass~~ seeding, installing commercial erosion
2 control devices to manufacturer's specifications, or chemical soil
3 stabilizers.

4 (3)*****

5 *****~~(p) Erosion control maintenance~~ - ~~The erosion control~~
6 ~~maintenance period on permanent and seasonal roads and associated~~
7 ~~landings that are not abandoned in accordance with 14 CCR § 923.8~~
8 ~~[943.8, 963.8] shall be three years.~~

9 ~~(q)~~(p) Site preparation - *****

10 *****~~(r) Water drafting~~ - ~~Water drafting for timber operations~~
11 ~~shall:~~

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

13 ~~(A) Timber operations conducted under a Fish and Game Code~~
14 ~~Section 1600 master or long term agreement that includes water~~
15 ~~drafting may provide proof of such coverage for compliance with this~~
16 ~~paragraph.~~

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

19 ~~(A) a general description of the conditions and proposed~~
20 ~~water drafting;~~

21 ~~(B) a map showing proposed water drafting locations;~~

22 ~~(C) the watercourse classification;~~

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

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1 ~~(E) the estimated drainage area (acres) above the point~~
2 ~~of diversion;~~

3 ~~(F) the estimated unimpeded streamflow, pumping rate, and~~
4 ~~drafting duration,~~

5 ~~(G) a discussion of the effects on aquatic habitat~~
6 ~~downstream from the drafting site(s) of single pumping operations, or~~
7 ~~multiple pumping operations at the same location, and~~
8 ~~at other locations in the same watershed;~~

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

15 ~~(I) The methods that will be used to measure source~~
16 ~~streamflow prior to the water drafting operation and the conditions~~
17 ~~that will trigger streamflow to be measured during the operation.~~

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

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

~~1. Openings in perforated plate or woven wire mesh~~

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1 ~~screens shall not exceed 3/32 inches (2.38 millimeters). Slot~~
2 ~~openings in wedge wire screens shall not exceed 1/16 inches (1.75~~
3 ~~millimeters).~~

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

6 ~~3. The drafting operator shall regularly inspect,~~
7 ~~clean, and maintain screens to ensure proper operation whenever water~~
8 ~~is drafted.~~

9 ~~4. The approach velocity (water moving through the~~
10 ~~screen) shall not exceed 0.33 feet/second.~~

11 ~~5. The diversion rate shall not exceed 350 gallons per~~
12 ~~minute.~~

13 ~~(B) Approaches and associated drainage features to~~
14 ~~drafting locations within a WLPZ or channel zone shall be surfaced~~
15 ~~with rock or other suitable material to minimize generation of~~
16 ~~sediment.~~

17 ~~(C) Barriers to sediment transport, such as straw waddles,~~
18 ~~logs, straw bales or~~
19 ~~sediment fences, shall be installed outside the normal high water mark~~
20 ~~to prevent sediment delivery to the watercourse and limit truck~~
21 ~~encroachment.~~

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

~~(E) Bypass flows for Class I watercourses shall be~~

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1 ~~provided in volume sufficient to avoid dewatering the watercourse and~~
2 ~~maintain aquatic life downstream, and shall conform to the following~~
3 ~~standard:~~

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

6 ~~2. Diversion rate shall not exceed 10 percent of the~~
7 ~~surface flow.~~

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

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

17 ~~(G) Before commencing any water drafting operation, the RPF~~
18 ~~and the drafting operator shall conduct a pre operations field review~~
19 ~~to discuss the water drafting measures in the plan and/or Lake or~~
20 ~~Streambed Alteration Agreement.~~

21 ~~(s)(q) Exemption notices - *****~~

22 ~~(t)(r) Emergency Notices - *****~~

23 ~~(u)(s) Salvage logging - *****~~

24 (t) Section reserved for future use.

25 (u) Section reserved for future use.

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1 (v) Site-specific measures or nonstandard operational provisions No

2 Changes *****

3
4 Amend § 918.3 [938.3, 958.3]. Roads to be Kept Passable

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

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1 Amend Article 12. [Article 11.] Logging Roads, Landings, and Logging
2 Road Watercourse Crossings. ~~Logging Roads and Landings~~

3
4 Amend § 923 [943,963]. Intent for Logging Roads, Landings, and Logging
5 Road Watercourse Crossings ~~Logging Roads and Landings.~~

6
7 (a) All logging roads, landings, and logging road watercourse
8 crossings in the logging area shall be planned, constructed,
9 reconstructed, used, maintained, removed, abandoned, and deactivated
10 in a manner that:

11 (1) Is consistent with long-term enhancement and maintenance of
12 the forest resource.

13 (2) Accommodates appropriate yarding systems.

14 (3) Is economically feasible.

15 (b) Such planning, construction, reconstruction, use, maintenance,
16 removal, abandonment, and deactivation shall occur in a manner that
17 minimizes potential adverse impacts to, among other things:¹²

18 (1) Public safety.

19 (2) Fish and wildlife habitat.

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

21 (4) Soil resources.

22 (5) Significant archeological and historical sites.

23 (6) Air quality.

24 (7) Visual resources.

25
¹² FPC decision point from March 2010: standardizes language for intent of minimizing impacts.

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1 (8) Worker safety.

2 (9) Fire hazard.

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

6 (d) Exceptions may also be provided through application of Fish and
7 Game Code Sections 1600 et seq. and shall be made an enforceable part
8 of the plan in accordance with 14 CCR §§ 1039, 1040, 1090.14, 1092.26,
9 or 1092.27, as appropriate.

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

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

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

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

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

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

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

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

3 (a) Logging roads and landings shall be planned and located within
4 the context of a systematic layout pattern that considers 14 CCR §
5 923(b), uses existing logging roads and landings where feasible and
6 appropriate, provides access for fire and resource protection
7 activities, and minimizes the following¹³:

8 (1) Total road mileage.

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

10 (3) Activities near watercourses, lakes, marshes, wet meadows,
11 and other wet areas.

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

14 (5) Activities on unstable areas or in connected headwall
15 swales.

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

18 (7) Activities near significant populations of rare,
19 threatened, or endangered plants.

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

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

24 _____
25 ¹³ FPC decision point from March 2010: Standardizes language for intent of minimizing impacts.

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

3 (b) No logging roads or landings shall be planned for construction or
4 reconstruction in Class I, II, III, or IV watercourses or lakes,
5 within a WLPZ, or in marshes, wet meadows, and other wet areas, except
6 as follows:

7 (1) At existing logging road watercourse crossings.

8 (2) At constructed or reconstructed logging road watercourse
9 crossings approved as part of the Fish and Game Code process (F&GC
10 1600 et seq.)

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

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

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1 (d) During the planning of logging roads and landings, the RPF or
2 supervised designee shall evaluate sensitive conditions and
3 significant existing and potential erosion sites.

4 (1) During the field examination of classified watercourses and
5 lakes required under 14 CCR § 916.4 [936.4, 956.4], the RPF or
6 supervised designee shall evaluate watercourse areas near existing,
7 constructed, and reconstructed logging roads and landings for
8 significant existing and potential adverse impacts to sensitive
9 conditions. Sensitive conditions include, but are not limited to,
10 unstable and erodible watercourse banks, unstable upslope areas,
11 channels with inadequate flow capacity, changeable channels, overflow
12 channels, flood prone areas, debris jam potential, aggraded channels,
13 and riparian zones wherein the values set forth in 14 CCR 916.4
14 [936.4, 956.4], subsection (b) are impaired.

15 (2) The RPF or supervised designee shall evaluate all logging
16 roads and landings in the logging area, including appurtenant roads,
17 for evidence of significant existing and potential erosion sites.
18 Significant existing and potential erosion sites means where sediment
19 is currently, or may be in the future, discharged to watercourses or
20 lakes in quantities that violate Water Quality Requirements or result
21 in significant adverse impacts to the beneficial uses of water.

22 (3) The RPF shall consider the sensitive conditions and
23 significant existing and potential erosion sites identified by
24 sections 14 CCR § 923.1 [943.1, 963.1] subsections(d)(1) and (2), and
25 the measures needed to maintain and restore, to the extent feasible,
the functions set forth in 14 CCR § 916.4 [936.4, 956.4], subsection

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1 (b) when planning logging roads and landings. Key factors to consider
2 as part of developing necessary measures include:

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

7 (B) Age of road and the history of sediment delivery from
8 existing roads.

9 (C) Beneficial uses of the watercourse or lake and
10 sensitive conditions potentially affected by the road including, among
11 other things, watercourse classification and presence of listed
12 anadromous salmonids.

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

15 (E) The erodibility of hillslope material exposed by the
16 road.

17 (F) The length of hydrologic connectivity of a road reach,
18 the physical properties of the connected reach and the presence or
19 absence of a sediment filter strip along the connected reach.

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

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1 (4) The RPF shall describe in the plan feasible protection
2 measures and treatments for identified sensitive conditions and
3 significant existing and potential erosion sites.

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

8 (A) A map showing the location(s) of significant existing
9 and potential erosion site(s) with a unique identifier for each site.

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

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

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

16 (6) A list of the significant existing and potential erosion
17 sites¹⁴ identified in 14 CCR § 923.1 [943.1, 963.1], subsection (d)(2),
18 for which no feasible remediation measures exist, shall also be
19 submitted with the plan and contain requirements stated in 14 CCR
20 923.1 (d) (5)(A)-(B) above.

21 (7) Where feasible erosion site treatments are proposed, the RPF
22 shall specify an implementation schedule in the plan.

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24
25 ¹⁴ 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) When selecting feasible alternatives (see 14 CCR §§ 897 and 898)
2 during the planning phase of logging roads and landings, the RPF shall
3 consider the location and planned use of logging roads and landings
4 and whether such logging roads and landings will be abandoned or
5 deactivated.

6 (g) (RRFT Option)¹⁵ In watersheds with listed anadromous salmonids and
7 in planning watersheds immediately upstream of, and contiguous to, any
8 watershed with listed anadromous salmonids, where logging road or
9 landing construction or reconstruction is proposed, the plan shall
10 identify:

11 (1) How the proposed operations will fit into the systematic
12 layout pattern.

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

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22 ¹⁵ FPC decision point from April 2010: Use optional language for consistency
23 with preamble to intent sections in 923. Deletes language adopted in ASP
24 rules in 2009.
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1 (h)¹⁶ In planning watersheds with listed anadromous salmonids and in
2 planning watersheds immediately upstream of, and contiguous to
3 planning watersheds with listed anadromous salmonids, and for the
4 purposes of reducing adverse impacts from the transport of fine
5 sediment into watercourses, the RPF or supervised designee shall
6 evaluate all logging roads and landings that will be used for timber
7 operations , and their associated drainage structures and facilities.
8 The plan shall include an inventory of all logging roads and landings
9 that will be used for timber operations, and their associated drainage
10 structures and facilities. The information used to complete this
11 evaluation and inventory shall be collected while traversing the
12 logging roads and landings used for timber operations. The inventory
13 shall be submitted with the plan and shall require, but not be limited
14 to, the following information:

15 (1) A map of the length and distribution of existing and
16 potential sediment sources.

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

20 (3) Site-specific information regarding the condition of and
21 location of all existing or potential sediment sources including, but
22

23 _____
24 ¹⁶ This is a NMFS and DFG recommendation dated 10/4/10. It is ASP specific
25 erosion site assessment requirements. The major requirements are a 1)
complete inventory of all logging roads used in the logging area (includes
appurtenant roads); 2) specific on type of inventory information; and 3)
focus on treatments that protect maintain or improve properly function
salmonid habitat. It would replace proposed 923.2 (f) AKA the existing ASP
916.9 (o).

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1 not limited to: crossings, road approaches, ditch relief culverts,
2 road surfaces, road cuts, road fills, inboard ditches, through-cuts,
3 and landings.

4 (4) Treatment measures for existing and potential sediment
5 sources, which shall consider pre-plan adverse cumulative watershed
6 effects on the populations and habitats of anadromous salmonids and
7 shall have protection, maintenance or restoration of the beneficial
8 uses of water and properly functioning salmonid habitat as significant
9 objectives.

10 (5) The implementation schedule of the effective treatment
11 measures for existing or potential sediment sources as proposed by the
12 RPF. The RPF shall ensure that the effective treatment measures are
13 implemented in accordance with the implementation schedule in the
14 approved plan.

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

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

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

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

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

6
7 Amend § 923.2 [943.2, 963.2]. Design and Implementation for Logging
8 Roads and Landings ~~Road Construction.~~

9 Constructed and reconstructed logging roads and landings¹⁷ shall be
10 designed and implemented in accordance with their proposed use,
11 maintenance requirements, and the approved plan:

12 (a) All logging roads and landings shall:

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

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

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

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

20 (5) Be hydrologically disconnected from watercourses and lakes to
21 the extent feasible.¹⁸

22
23
24 ¹⁷ FPC decision point from May 2010: Rejected DFG comments to widen
application of design standards to ALL roads and instead retained focus on
roads to be constructed or reconstructed.

25 ¹⁸ 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.

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1 (6) Include adequate drainage structures and facilities¹⁹ necessary
2 to avoid concentrating and diverting runoff, to minimize erosion of
3 roadbeds, landing surfaces, drainage ditches, sidecast and fills, to
4 minimize the potential for soil erosion and sediment transport, and to
5 prevent the discharge of sediment into watercourses and lakes in
6 quantities deleterious **CGS OPTION** that violate Water Quality requirements or
7 result in significant adverse **DFG OPTION** *direct, indirect, or cumulative* impacts to
8 the beneficial uses of water.

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

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

23 _____
24
25 ¹⁹ FPC decision point from May 2010: Rejects DFG option to include "road rocking" as a method for adequate drainage structure. FPC desires to retain 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 (c) Excess material excavated during logging road and landing
2 construction shall not be transported to disposal sites where it will
3 discharge into a watercourse or lake in quantities **CGS OPTION**
4 ~~deleterious~~ that violate Water Quality Requirements or result in significant adverse
5 **DFG OPTION** *direct, indirect, or cumulative* impacts to the beneficial uses of
6 water.

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

9 (1) Be no wider than a single-lane compatible with the largest
10 type of equipment specified for use on the logging road, with adequate
11 turnouts provided as required for safety unless prohibited by existing
12 contracts with the U.S.D.A. Forest Service or other federal agency.

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

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

20 (1) Be consistent with the yarding and loading system to be
21 used.

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

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

25

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1 (f) In watersheds with listed anadromous salmonids and in planning
2 watersheds immediately upstream of, and contiguous to, any watershed
3 with listed anadromous salmonids, as part of the plan the RPF shall:

4 (1) Identify logging road and landing sites in the logging
5 area, where erosion and sediment production are ongoing during any
6 period of the year and which pose significant risks to the beneficial
7 uses of water.

8 (2) Assess those sites identified in 14 CCR § 923.2(f)(1)
9 [943.2(f)(1), 963.2(f)(1)] to determine whether feasible remedies
10 exist.

11 (3) For sites that pose significant risks to the beneficial
12 uses of water and where feasible remedies exist, the plan shall
13 propose appropriate treatment.

14 **DFG Option - Delete (f) and instead use 923.1 DFG option**

15 **PFR Option - Delete CGS and DFG options in 923.1 and instead insert**

16 **923.2 (f) - the ASP find it an fix it-**

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

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

22 (a) For logging road- and landing-related mapping requirements refer
23 to 14 CCR §§ 1034(x)(4)(A)-(B) and (5)(A)-(L), 1090.5(w)(4)-(6),
24 1090.5(hh), 1090.7(n)(4)-(6), and 1092.09(1)(5)(A)-(B) and (6)(A)-(L).

25 (b) For logging road- and landing-related disclosure and description
requirements refer to 14 CCR §§ 1034(bb), **Option 1** 1034(hh) (**Option 2**

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

4 (c) Option 1 For logging road- and landing-related identification
5 requirements refer to 14 CCR § 1034(hh). (Option 2 If Option 1 under
6 1034(hh) is not adopted, do not adopt the contents of subsection
7 923.3(c) [943.3(c), 963.3(c)] proposed under Option 1 and and begin
8 re-numbering subsection (d) as (c) and (e) as (d).)

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

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

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

16 (e) The location of all logging roads to be constructed or
17 reconstructed shall be flagged or otherwise identified on the ground

18 **RRFT OPTION** Option 1: before submission of a plan or substantial
19 deviation (RRFT OPTION Option 2: prior to the pre-harvest inspection,
20 if necessary, or prior to logging road construction or
21 reconstruction). Exceptions may be explained and justified in the
22 plan and agreed to by the Director if flagging is unnecessary as a
23 substantial aid to examining: (1) compatibility between logging road
24 location and yarding and silvicultural systems, or (2) possible
25 significant adverse effects of logging road location on the factors
listed under 14 CCR § 923(b) [943(b), 963(b)].

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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.²⁰

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
²⁰ 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) 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 minimize
16 soil erosion and sediment transport and to prevent the discharge of
17 sediment into watercourses and lakes in quantities **CGS OPTION**
18 ~~deleterious~~ that violate Water Quality Requirements or result in significant adverse
19 **DFG OPTION** *direct, indirect, or cumulative* impacts to the beneficial uses of
20 water.

21 (1) Construction or reconstruction operations shall not be
22 conducted when saturated soils do not allow meeting standard
23 engineered compaction methods.²¹

24 _____
25 ²¹ Subsection 923.4 (j)(1) is added to ensure that construction standards are maintained during operations on saturated soils.

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1 **OPTION A CAL FIRE 8/23/10 comment**

2 (j)²² Logging roads or landings shall not be constructed or
3 reconstructed under saturated soil conditions. Road or landings
4 construction or reconstruction may occur on isolated wet spots
5 provided measures, as specified in the THP, are taken to prevent
6 sediment discharge that may reach watercourses or lakes.

7 (1) Construction or reconstruction operations shall not be
8 conducted when saturated soils do not allow meeting standard
9 engineered compaction methods.

10 (k) Construction or reconstruction of logging roads or landings shall
11 not take place during the winter period unless the approved plan
12 incorporates a complete winter period operating plan pursuant to 14 §
13 CCR 914.7 [934.7, 954.7], subsection (a) that specifically addresses
14 such logging road or landing construction or reconstruction.

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

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

20
21
22 ²² Option A incorporates Cal Fire recommended rule changes submitted to the
23 board on August 23, 2010. The changes address sediment discharge risks
24 associated with operations on saturated soils. The amendments also ensure
25 better enforcement of operation on saturated soils as the current definition
of saturated soils is easy to understand, can be applied consistently by Cal
Fire inspectors, and avoids subjective interpretations of "potential"
discharges.

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

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

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

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

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

15 (1) Public safety.

16 (2) Areas that could deliver sediment into a watercourse or
17 lake in quantities **CGS OPTION deleterious that violate Water Quality**
18 **Requirements or result in significant adverse DFG OPTION direct, indirect, or**
19 **cumulative impacts** to the beneficial uses of water.

20 (q) Where conditions are encountered during logging road or landing
21 construction or reconstruction that differ from what was anticipated
22 during the preparation and review of the plan and that will result in
23 a significant adverse impact on the environment or to public safety,
24 the LTO shall inform the RPF or plan submitter of these unanticipated
25 conditions in accordance with 14 CCR § 1035.3. If necessary, the
responsible RPF or plan submitter shall submit to the Director a

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1 deviation to the plan describing the unanticipated conditions and
2 proposing appropriate actions.

3 (r) In watersheds with listed anadromous salmonids, no logging roads
4 or landings shall be constructed or reconstructed within the CMZ or
5 Core Zone of a Class I watercourse except for those listed in 14 CCR §
6 916.9([936.9, 956.9]subsections (e)(1)(A)-(F) or pursuant to 14 CCR §
7 916.9[936.9, 956.9], subsection (v).

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

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

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

15 (B) Where cutbank stability is not an issue, logging roads
16 may be constructed as a full-benched cut (no fill). Spoils not
17 utilized in logging road construction shall be disposed of in stable
18 areas with less than 30 percent slope outside of any WLPZ, EEZ, or ELZ
19 designated for watercourse or lake protection. The Director, with
20 concurrence from other responsible agencies, may waive inclusion of
21 these measures where the RPF can show that slope depressions and other
22 natural retention and detention features are sufficient to control
23 overland transport of eroded material.

24 (C) Logging roads may be constructed with balanced cuts
25 and fills:

(i) If properly engineered, or,

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

3 (2) During the extended wet weather period, no timber
4 operations shall take place unless the approved plan incorporates
5 a complete winter period operating plan pursuant to 14 CCR §
6 914.7[934.7, 954.7]subsection (a) that specifically addresses,
7 where applicable, proposed logging road or landing construction,
8 reconstruction. ²³

22 ²³ 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 Amend § 923.5 [943.5,963.5]. Erosion Control for Logging Roads and
2 Landings ~~Landing Construction~~.

3 The following erosion control standards shall apply to logging roads
4 and landings:

5 (a) All logging road and landing surfaces shall be adequately drained
6 through the use of surface geometry configurations in combination with
7 the installation of drainage structure or *facilities*²⁴ and shall be
8 hydrologically disconnected from watercourses and lakes to the extent
9 feasible.²⁵

10 (b) Drainage facilities or ditch drains shall be installed along all
11 logging roads and all landings that are used for timber operations in
12 sufficient number to minimize soil erosion and sediment transport and
13 to prevent the discharge of sediment into watercourses and lakes in
14 quantities ~~CGS OPTION-deleterious~~ that violate Water Quality Requirements or
15 result in significant adverse **DFG OPTION** *direct, indirect, or cumulative* impacts to the
16 beneficial uses of water.

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

19 (1) Be adequately sized to transmit runoff.

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

21 (3) Avoid discharge onto fill.

22
23
24 ²⁴ Added "facilities for consistency with other sections. This is a more
encompassing term for all type of drainage features associated with a road.

25 ²⁵ Amendments to subsection 923.5 (a) were added to include the CGS amendment for
hydrologic disconnection for drainage facilities.

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1 (4 DFG Option) Drain to stable sediment filter strips²⁶.

2 (4)(5) Minimize potential adverse impacts to slope stability.

3 (d) Waterbreaks and rolling dips installed across logging roads and
4 landings shall be of sufficient size and number and be located to (DFG
5 Option) drain to stable sediment filter strips and²⁷ avoid collecting
6 and discharging concentrated runoff onto fills, erodible soils,
7 unstable areas, and connected headwall swales.

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

22 _____
23
24 ²⁶ CGS recommends rejection of these Options as it is covered in 923.5 (h)

25 ²⁷ CGS recommends rejection of these Options as it is covered in 923.5 (h).

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1 **(f) RRTF Option 1:** Distances between waterbreaks shall not exceed
2 the standards specified in 14 CCR § 914.6(c) [(934.6(c), 954.6(c))].

3 **RRTF Option 2:** Distances between waterbreaks shall not exceed the
4 following standards:

5 **MAXIMUM DISTANCE BETWEEN WATERBREAKS**

6 Estimated	7 Logging Road	8 Gradient in Percent	
9 Hazard	10 10 or less	11 11-25	12 >25
13 Rating	14 Feet	15 Feet	16 Feet
17 Extreme	18 100	19 75	20 50
21 High	22 150	23 100	24 75
25 Moderate	26 200	27 150	28 100
29 Low	30 300	31 200	32 150)

10 **(g)** Where outsloping and rolling dips are used to control surface
11 runoff, the dip in the logging road grade shall be sufficient to
12 capture runoff from the logging road surface. The steepness of cross-
13 slope gradient in conjunction with the logging road or landing
14 gradient and the estimated soil erosion hazard rating shall be used to
15 determine the rolling dip spacing in order to minimize soil erosion
16 and sediment transport and to prevent the discharge of sediment into
17 watercourses and lakes in quantities **CGS OPTION**~~deleterious~~ that violate
18 **Water Quality Requirements** or result in significant adverse **DFG OPTION** **direct,**
19 **indirect, or cumulative** impacts to the beneficial uses of water.

20 **(h)** Drainage facilities and ditch drains shall discharge into
21 vegetation or rock wherever possible. Where erosion-resistant
22 material is not present, slash, rock, or other energy dissipating
23 material shall be installed below the drainage facility or drainage
24 structure outlet.

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1 (ii) indexing placeholder) (CGS Option revised by FPC on 10/6/10) Where
2 logging road and landing surfaces, road approaches²⁸, inside ditches
3 and drainage structures cannot be hydrologically disconnected, and
4 where there is existing or potential discharge of sediment to watercourses or
5 lakes in quantities that violate Water Quality Requirements or result in
6 significant adverse impacts to the beneficial uses of water , necessary and
7 feasible treatments to prevent the discharge will be described in the plan.

8 (i) All logging roads and landings used for timber operations shall
9 have adequate drainage upon completion of use for the year or by
10 October 15, whichever is earlier. An exception is that drainage
11 facilities and drainage structures do not need to be constructed on
12 logging roads in use ~~after October 15 during the extended wet weather period~~
13 provided that all such drainage facilities and drainage structures are
14 installed prior to the start of rain that generates overland flow.

15 (j) Where logging road or landing construction or reconstruction
16 takes place ~~from October 15 to May 1 during the extended wet weather period,~~
17 drainage facilities and drainage structures shall be installed
18 concurrent with construction or reconstruction operations.

19 (k) Bare soil on logging road or landing cuts, fills, transported
20 spoils, or sidecast that is created or exposed by timber operations

21 _____
22 ²⁸ Inclusion this subsection recommended by the FPC in at the July 6th, 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
addressed 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 shall be stabilized to the extent necessary to minimize soil erosion
2 and sediment transport and to prevent the discharge of sediment into
3 watercourses and lakes in quantities **CGS OPTION** ~~deleterious~~ **that violate**
4 **Water Quality Requirements or result in significant adverse** **DFG OPTION** **direct,**
5 **indirect, or cumulative** impacts to the beneficial uses of water. *Bare soil*
6 *stabilization treatments for road surfaces are addressed in other*
7 *subsection.*²⁹ Sites to be stabilized include, but are not limited to:

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

11 (2) Cut and fills associated with approaches to logging road
12 watercourse crossings³⁰ of Class I or II waters or Class III waters
13 where an ELZ, EEZ, or a WLPZ is required.

14 (3) Bare areas exceeding 800 continuous square feet within a
15 WLPZ.

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

21 _____
22 ²⁹ 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.

³⁰ Recommended edits based RRRTF 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.

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

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

11 (o) Overhanging or unstable concentrations of slash, woody debris or
12 soil along the downslope edge or face of landings shall be removed or
13 stabilized when it is located on slopes greater than 65 percent or
14 within 100 feet of the boundary of a WLPZ on slopes greater than 50
15 percent that drain toward the zoned watercourse or lake. Removed
16 materials shall not be placed at disposal sites that could discharge
17 into a watercourse or lake in quantities ~~CGS OPTION deleterious that~~
18 ~~violate Water Quality Requirements or result in significant adverse DFG OPTION direct,~~
19 ~~indirect, or cumulative impacts~~ to the beneficial uses of water.

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

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

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

6 (3) Within the WLPZ, and within any ELZ or EEZ designated for
7 watercourse or lake protection, treatments to stabilize soils,
8 minimize soil erosion, and prevent the discharge of sediment into
9 watercourses or lakes in quantities deleterious to aquatic species or
10 the quality and beneficial uses of water, or that threaten to violate
11 applicable water quality requirements shall be described in the plan
12 as follows:

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

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

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

19 (iii) Any other area of disturbed soil that threatens
20 to discharge sediment into water in quantities **CGS OPTION deleterious**
21 that violate Water Quality Requirements or result in significant adverse **DFG OPTION**
22 direct, indirect, or cumulative impacts to the beneficial uses of water.

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

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

6 (D) For areas disturbed ~~from May 1 to October 14~~ outside of
7 the extended wet weather period, treatment shall be completed prior to the
8 start of any rain that causes overland flow across or along the
9 disturbed surface that could deliver sediment into a watercourse or
10 lake in quantities ~~CGS OPTION deleterious~~ that violate Water Quality
11 Requirements or result in significant adverse DFG OPTION direct, indirect, or
12 cumulative impacts to the beneficial uses of water.

13 (E) For areas disturbed ~~from October 15 to May 1~~ during the
14 extended wet weather period, treatment shall be completed prior to any day
15 for which a chance of rain of 30 percent or greater is forecast by the
16 National Weather Service or within 10 days of disturbance, whichever
17 is earlier.

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

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1 (4 DFG Option Y1) Logging road approach surfaces for permanent
2 roads shall consist of high-quality, durable, compacted rock or paving
3 except where site-specific alternatives are explained, justified and
4 approved by the Director³¹.

5 (5) Logging road approach surfaces for seasonal roads crossing
6 Class I watercourses or any roads used for hauling by heavy equipment
7 during the extended wet weather period shall consist of high-quality,
8 durable, compacted rock or paving when one or more of the following
9 factors³² are present. Exceptions where site-specific alternatives are
10 explained, justified may be approved by the Director:

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

13 (ii) High volume of use (discussion needed on specifics).

14 (iii) The road grade of road approaches exceeds 7 %
15 gradient.

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

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

23 _____
24 ³¹ Adds "opt-out" language for use by RPF to use an alternative to rocking
25 approaches.

³² 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.

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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.

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1 Amend § 923.6 [943.6, 963.6]. Use of Logging Roads and Landings

2 ~~Conduct of Operations on Roads and Landings.~~

3 The following use standards shall apply to logging roads and
4 landings:

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

7 (b) Logging roads and landings shall not be used when conditions that
8 could result in sediment discharge into watercourses or lakes in
9 quantities ~~CGS OPTION-deleterious~~ that violate Water Quality Requirements or
10 result in significant adverse DFG OPTION direct, indirect, or cumulative impacts to
11 the beneficial uses of water, except in emergencies to protect the
12 road, to reduce erosion, to protect water quality, or in response to
13 public safety needs.

14 (c) Logging roads and landings shall not be used when, due to general
15 wet conditions, equipment cannot operate under its own power. Use may
16 occur when logging roads and landings are generally firm and easily
17 passable or during hard frozen conditions. Isolated wet spots on
18 these logging roads or landings shall be rocked or otherwise treated
19 to permit passage.

20 **OPTION A CAL FIRE 8/23/10 comment**

21 (c) Logging roads and landings shall not be used when, due to general
22 wet conditions, equipment cannot operate under its own power. Use may
23 occur when logging roads and landings are generally firm and easily
24 passable or during hard frozen conditions. Isolated wet spots on
25 these logging roads or landings shall be rocked or otherwise treated

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1 to permit passage. However, use shall not occur when sediment
2 discharged from landings or roads may reach watercourses or lakes.³³

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

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

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

12 (g) Logging roads and landings shall not be used for log hauling
13 between October 15 and May 1 when saturated soil conditions result in
14 soil erosion and sediment transport that could discharge sediment into
15 watercourses and lakes in quantities **CGS OPTION deleterious that violate**
16 **Water Quality Requirements or result in significant adverse DFG OPTION direct,**
17 **indirect, or cumulative impacts** to the beneficial uses of water.

24
25 ³³ Option A incorporates Cal Fire recommended rule changes submitted to the board on August 23, 2010. The changes address the need for uniform terminology, greater brevity, and consistency with other rule standards for protection of beneficial uses of water.

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1 **OPTION A CAL FIRE 8/23/10 comment**

2 (g)³⁴ Logging roads and landings shall not be used for log hauling
3 between October 15 and May 1 when saturated soil conditions exist on
4 the road. *Log hauling may occur on isolated wet spots provided*
5 *measures, as specified in the THP, are taken to prevent sediment*
6 *discharge that may reach watercourses or lakes.*

7
8 **OPTION B BOF language adopted on 9/7/10**

9 (g)³⁵ Logging roads and landings shall not be used for log hauling
10 between October 15 to May 1 when saturated soil conditions *exist on*
11 *the road that may produce sediment in quantities sufficient to cause a*
12 *visible increase in turbidity of downstream waters in receiving Class*
13 *I, II, III or IV waters or that violate Water Quality Requirements.*

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19 ³⁴ Option A incorporates Cal Fire recommended rule changes submitted to the
20 board on August 23, 2010. The changes address sediment discharge risks
21 associated with operations on saturated soils. The amendments also ensure
22 better enforcement of operation on saturated soils as the current definition
of saturated soils is easy to understand, can be applied consistently by Cal
Fire inspectors, and avoids subjective interpretations of "potential"
discharges.

23 ³⁵ OPTION B is BOF language adopted on 9/7/10 in the "Operation on Saturated
24 Soils and Stable Operation Surface, 2010" regulation. Option B uses the
25 introductory language proposed by the RRFT and incorporates the 9/7/10
language on sediment discharge. Staff's recommendation is that whichever
Option is selected on sediment discharge, (the CGS/RRTF's, CAL FIRE Option A,
or BOF Option B) it be routinely used throughout eh Road Rules 2010 proposal.

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1 (h) Logging roads and landings used for log hauling during the winter
2 period shall be, where necessary, surfaced with rock to a depth and
3 quantity sufficient to maintain a stable road surface throughout the
4 period of use.

5 **Option B BOF adopted rule in 9/7/10**

6 (h)³⁶ Logging roads and landings used for log hauling during winter
7 period [Staff recommendation: or extended wet weather period] shall
8 be, where necessary, surfaced with rock in depth and quantity
9 sufficient to maintain a stable road surface that does not produce
10 sediment in quantities that may cause a visible increase in turbidity
11 of downstream waters in receiving Class I, II, III or IV waters or
12 would violate Water Quality Requirements throughout the period of use.
13 Exceptions may be proposed by the RPF, justified in the THP, and found
14 by the Director to be in conformance with the requirements of this
15 subsection.

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20 ³⁶ OPTION B is BOF language adopted on 9/7/10 in the "Operation on Saturated
21 Soils and Stable Operation Surface, 2010" regulation. Option B uses the
22 introductory language proposed by the RRFT and incorporates the 9/7/10
23 language on sediment discharge. Any of the Options proposed for 923.6 (h)
24 are similar to the DFG proposal in 923.5 (p) (4) and (5). The primary
25 difference between 923.5(p) (4) and (5) compared to 923.6 (h) is that
923.5(p) has mandatory rocking of road approaches and 923.6 (h) has mandatory
rocking "where necessary to maintain a stable operating for any portion of a
road surface". Staff's recommendation: 1) add term "extended wet weather
period" to ensure rocking is applied at critical wet conditions; add language
that better describes the type of durable rock required; and whichever Option
is selected on sediment discharge, (the CGS/RRTF's used elsewhere, CAL FIRE
Option A, or BOF Option B) it be routinely used throughout eh Road Rules 2010
proposal.

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1 **OPTION A CAL FIRE 8/23/10 comment**

2 (h)³⁷ Logging roads and landings used during the winter period shall
3 be, where necessary, surfaced with rock to a depth and quantity
4 sufficient to maintain a stable operating surface throughout the
5 period of use. Road and landing use may occur on isolated wet spots
6 provided measures, as specified in the THP, are taken to prevent
7 sediment discharge that may reach watercourses or lakes.

8 (i) In watersheds with listed anadromous salmonids, the following
9 shall apply:

10 (1) Existing logging roads or landings shall not be used within
11 the CMZ of a Class I watercourse except as listed in 14 CCR § 916.9
12 916.9 [936.9, 956.9]subsection (e)(1)(A)-(F) or pursuant to 14 CCR §
13 916.9(v) [936.9(v), 956.9(v)].

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

16 Exceptions include the use of roads and landings to accomplish actions
17 to improve salmonid habitat conditions stated in 14 CCR § 916.9
18 916.9(f)(3)(E)(1.) [936.9(f)(3)(E)(1.), 956.9(f)(3)(E)(1.)]

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23 ³⁷ Option A incorporates Cal Fire recommended rule changes submitted to the
24 board on August 23, 2010. The changes address sediment discharge risks
25 associated with operations on saturated soils/stable operating surfaces. The
amendments also ensure better enforcement of operation on saturated soils as
the current definition of saturated soils is easy to understand, can be
applied consistently by Cal Fire inspectors, and avoids subjective
interpretations of "potential" discharges.

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1 (j) 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)³⁸ Logging roads and landings shall not be used when visibly
5 turbid water from the road or landing surface or an inside ditch
6 associated with the logging road or landing may produce sediment in
7 quantities sufficient to cause a visible increase in turbidity of
8 downstream waters in receiving Class I, II, III or IV waters or
9 violate Water Quality Requirements.

10 **OPTION A CAL FIRE 8/23/10 comment³⁹**

11 (1) Logging roads and landings shall not be used when visibly
12 turbid water from the road or landing or drainage facility associated
13 with the logging road or landing may reach watercourses or lakes.

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

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23 ³⁸ Edit to include language for BOF adopted rules for operations on saturated
soils in Sept. 2010.

24 ³⁹ Option A incorporates Cal Fire recommended rule changes submitted to the
25 board on August 23, 2010. The changes provide a consistent brief usage of
requirements regarding sediment discharge.

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1 **OPTION A CAL FIRE 8/23/10 comment**

2 (2)⁴⁰ Log hauling on logging roads and landings shall be limited
3 to those which are hydrologically disconnected from watercourses to
4 the extent feasible, and exhibit a stable operating surface. *Log*
5 *hauling may occur on isolated wet spots provided measures, as*
6 *specified in the THP, are taken to prevent sediment discharge that may*
7 *reach watercourses or lakes.*

8 (3)⁴¹ Concurrent with use for log hauling, approaches to logging
9 road watercourse crossings shall be treated for erosion control as
10 needed to minimize soil erosion and sediment transport and to prevent
11 the discharge of sediment into watercourses and lakes in quantities
12 ~~CGS OPTION deleterious~~ that violate Water Quality Requirements or result in
13 significant adverse **DFG OPTION** *direct, indirect, or cumulative* impacts to the
14 beneficial uses of water.

21 ⁴⁰ Option A incorporates Cal Fire recommended rule changes submitted to the
22 board on August 23, 2010. The changes address sediment discharge risks
23 associated with operations on saturated soils. The amendments also ensure
24 better enforcement of operation on saturated soils as the current definition
of saturated soils is easy to understand, can be applied consistently by Cal
Fire inspectors, and avoids subjective interpretations of "potential"
discharges.

25 ⁴¹ The FPC decided on 9/7/10 to retain this section and 923.5 (ii) in the
FPRs. Although these two sections have redundant requirements, it is
necessary to ensure that road approach surface treatments for erosion
prevention are the focus of review for any ASP watershed.

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1 **OPTION A CAL FIRE 8/23/10 comment**

2 (3)⁴² Concurrent with use for log hauling, approaches to logging
3 road watercourse crossings shall be treated for erosion control as
4 needed to minimize soil erosion and sediment transport and to prevent
5 the discharge of sediment *that may reach watercourses or lakes.*

6 (4) Concurrent with use for log hauling, all traveled
7 surfaces of logging roads in a WLPZ, and ELZ or EEZ designated for
8 watercourse or lake protection, (DFG Option Z) or other watercourses
9 within 100 feet of appurtenant roads⁴³ shall be treated for erosion
10 control as needed to minimize soil erosion and sediment transport and
11 to prevent the discharge of sediment into watercourses and lakes in
12 quantities ~~CGS OPTION-deleterious~~ that violate Water Quality Requirements or
13 result in significant adverse DFG OPTION direct, indirect, or cumulative impacts to
14 the beneficial uses of water.

15 **OPTION A CAL FIRE 8/23/10 comment**

16 (4)⁴⁴ Concurrent with use for log hauling, all traveled
17 surfaces of logging roads in a WLPZ, and ELZ or EEZ designated for
18 watercourse or lake protection, shall be treated for erosion control
19 as needed to minimize soil erosion and sediment transport and to
20 prevent discharge of sediment *that may reach watercourses or lakes.*

21 _____
22 ⁴² Option A incorporates Cal Fire recommended rule changes submitted to the
23 board on August 23, 2010. The changes provide a consistent brief usage of
requirements regarding sediment discharge.

24 ⁴³ DFG option to address road used for hauling near watercourses that are
appurtenant roads and currently not subject to this provision.

25 ⁴⁴ Option A incorporates Cal Fire recommended rule changes submitted to the
board on August 23, 2010. The changes provide a consistent brief usage of
requirements regarding sediment discharge.

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1
2 (5) No timber operations shall take place during the extended wet
3 weather period unless the approved plan incorporates a complete winter
4 period operating plan pursuant to 14 CCR § 914.7(a) [934.7(a),
5 954.7(a)] that specifically addresses, where applicable, proposed
6 logging road or landing use.

7
8 923.7, 943.7, 963.7 Maintenance and Monitoring for Logging Roads and
9 Landings

10 The following maintenance and monitoring standards shall apply to
11 logging roads and landings:

12 (a) Logging road and landing surfaces shall be maintained during
13 timber operations and throughout the prescribed maintenance period to
14 minimize soil erosion and sediment transport and to prevent the
15 discharge of sediment into watercourses and lakes in quantities **CGS**
16 **OPTION-deleterious** that violate Water Quality Requirements or result in significant
17 adverse **DFG OPTION** direct, indirect, or cumulative impacts to the beneficial
18 uses of water.

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

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

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

6 (e) Waterbreaks shall be maintained as specified in 14 CCR § 914.6
7 [934.6, 954.6]subsection (h).

8 (f) Soil stabilization treatments on logging road or landing cuts,
9 fills, and sidecast shall be maintained as needed to minimize soil
10 erosion and sediment transport and to prevent sediment discharge into
11 watercourses and lakes in quantities deleterious to the beneficial
12 uses of water.

13 (g) Actions shall be taken as needed to reduce the potential for
14 failures of cuts, fills, or sidecast to discharge sediment into
15 watercourses and lakes in quantities deleterious to the beneficial
16 uses of water.

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

21 (i) Where evidence of substantial soil erosion and discharge of
22 sediment into watercourses or lakes in quantities ~~deleterious~~ that violate
23 Water Quality Requirements or result in significant adverse DFG OPTION direct,
24 indirect, or cumulative impacts to the beneficial uses of water is present
25 along a logging road or landing used for timber operations, additional
drainage facilities and structures shall be installed as needed to

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1 minimize soil erosion and sediment transport and to prevent the
2 discharge of sediment into watercourses and lakes in quantities **CGS**
3 **OPTION deleterious that violate Water Quality Requirements or result in significant**
4 **adverse DFG OPTION direct, indirect, or cumulative impacts** to the beneficial
5 uses of water.

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

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

16 (1) In watersheds with listed anadromous salmonids, water drafting
17 for timber operations shall:

18 (1) Comply with Fish and Game Code Section 1600, et seq. Timber
19 operations conducted under a Fish and Game Code Section 1600 master or
20 long-term agreement that includes water drafting may provide proof of
21 such coverage for compliance with this paragraph.

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

24 (A) A general description of the conditions and proposed
25 water drafting;

(B) The watercourse classification;

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

5 (D) The estimated drainage area (acres) above the point of
6 diversion;

7 (E) The estimated unimpeded streamflow, pumping rate, and
8 drafting duration,

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

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

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

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

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

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

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

10 (iii) The drafting operator shall regularly inspect,
11 clean, and maintain screens to ensure proper operation whenever water
12 is drafted.

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

15 (v) The diversion rate shall not exceed 350 gallons
16 per minute.

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

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

24 (D) Water drafting trucks parked on streambeds or
25 floodplains shall use drip pans or other devices such as adsorbent or
absorbent blankets, sheet barriers or other materials as needed to

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1 prevent soil and water contamination from motor oil or hydraulic fluid
2 leaks.

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

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

8 (ii) Diversion rate shall not exceed 10 percent of
9 the surface flow.

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

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

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

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

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

4 (2) 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
9 **Adopt § 923.8[943.8, 963.8]. Abandonment and Deactivation of Logging**
10 **Roads and Landings.**

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

21 (a) All abandoned and deactivated logging roads shall be left in a
22 condition that provides for long-term functioning of erosion controls.

23 (b) Soil exposed by abandonment or deactivation operations on cuts,
24 fills, and sidecast shall be stabilized as needed during and upon
25 completion of abandonment or deactivation operations to minimize soil
erosion and sediment transport and to prevent the discharge of

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1 sediment into watercourses and lakes in quantities deleterious to the
2 beneficial uses of water.

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

5 (d) Fills or sidecast shall be pulled or shaped where site conditions
6 indicate that there is a reasonable potential for perched materials to
7 enter a watercourse or lake in quantities deleterious to the
8 beneficial uses of water.

9 (e) Logging road watercourse crossings, other drainage structures,
10 and associated fills shall be removed and stabilized in accordance
11 with 14 CCR § 923.17 [943.17, 963.17] subsections (a)-(c). Where it is
12 not feasible to remove drainage structures and associated fills, the
13 plan shall identify how the potential for soil erosion and sediment
14 transport will be minimized and how the discharge of sediment into
15 watercourses and lakes in quantities deleterious to the beneficial
16 uses of water will be prevented.

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

22
23 **Adopt §923.9 [943.9, 963.9]. Licensed Timber Operator Responsibility**
24 **for Logging Roads and Landings.**

25 The licensed timber operator who is responsible for the
implementation or execution of the plan shall be responsible for the

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1 construction and maintenance of logging roads and landings, unless
2 another licensed timber operator is employed for that purpose and
3 amended into the plan as the responsible party.

4
5 **Adopt § 923.10 [943.10, 963.10]. Planning for Logging Road Watercourse**

6 **Crossings.**

7 The following planning standards shall apply to logging road
8 watercourse crossings:

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

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

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

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

17 (e) Where logging road watercourse crossings are proposed to be
18 constructed or reconstructed in areas where public safety may be
19 affected, the potential public safety impacts shall be disclosed in
20 the plan.

21 (f)⁴⁵As part of the field examination of **classified** watercourses and
22 lakes, the RPF or supervised designee shall evaluate areas at and near
23 existing and constructed or reconstructed logging road watercourse
24 crossings for sensitive conditions, including, but not limited to,
25 _____

⁴⁵ Staff Note: Conform this section to be consistent with FPC decision on language used in **923.1 (d)**

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1 past diversion, overtopping, plugging, significant inlet or outlet
2 erosion, soil piping, fill slope erosion and significant mechanical
3 damage or wear.

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

8 (2) The plan shall identify such conditions, including where
9 they may interact with proposed timber operations, that individually
10 or cumulatively, significantly and adversely affect the beneficial
11 uses of water.

12 (3) The RPF shall describe in the plan feasible protection
13 measures for identified sensitive conditions that consider the
14 watercourse classification and the location and planned use of logging
15 road watercourse crossings.

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

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

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

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1 923.11, 943.11, 953.11 Logging Road Watercourse Crossing Design and
2 Implementation

3
4 The following design and implementation standards shall apply to
5 logging road watercourse crossings:

6 (a) All constructed and reconstructed logging road watercourse
7 crossings shall be designed in accordance with the planned use of the
8 associated logging road.

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

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

14 (d) All new and replacement culverts used for logging road
15 watercourse crossings shall be designed to be installed at or slightly
16 below the natural watercourse grade, in alignment with the watercourse
17 channel and of the appropriate length.

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

22 (f) All necessary protective structures associated with logging road
23 watercourse crossings shall be adequately sized to transmit runoff,
24 minimize erosion of crossing fills, and prevent the discharge of
25 sediment into watercourses and lakes in quantities **CGS OPTION**

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1 deleterious that violate Water Quality Requirements or result in significant adverse

2 **DFG OPTION** direct, indirect, or cumulative impacts to the beneficial uses of
3 water.

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

6 (h) Rock used to stabilize the outlet of fords shall be adequately
7 sized to resist mobilization, with the range of required rock
8 dimensions described in the plan.

9 (i) Drainage structures on watercourses that support fish shall allow
10 for unrestricted passage of all life stages of fish that may be
11 present, and shall be fully described in the plan in sufficient
12 clarity and detail to allow evaluation by the review team and the
13 public, provide direction to the LTO for implementation, and provide
14 enforceable standards for the inspector.

15 (j) All new permanent constructed and reconstructed logging road
16 watercourse crossing culverts installed within Class I watercourses,
17 which meet the criteria for Class I waters where fish are always or
18 seasonally present or where fish habitat is restorable, shall include
19 the analysis and specifications that document conformance with 14 CCR
20 § 923.10 [943.10, 963.10]subsection (h).

21 (k) Where logging road networks are remote or are located where the
22 landscape is unstable, where crossing fills over culverts are large,
23 or where logging road watercourse crossing drainage structures and
24 erosion control features historically have a high failure rate,
25 drainage structures and erosion control features shall be oversized,
designed for low maintenance, reinforced, or removed before the

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1 completion of the timber operation. **RRTF Option 1:** The method of
2 analysis and the design for crossing protection shall be included in
3 the plan. [And do not add 923.11(m) below]

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

8 (1) A description of all existing permanent logging road
9 watercourse crossings.

10 (2) Clear and enforceable specifications describing how these
11 crossings are to be modified, used, and treated to minimize risks,
12 giving special attention to allowing fish to pass both upstream and
13 downstream during all life stages and in conformance with the
14 standards of subsection (j) above and 14 CCR § 923.10[943.10,
15 963.10]subsection (h).

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

21 (m) (**Option 2** In watersheds with listed anadromous salmonids, in
22 addition to the requirements of 14 CCR § 923.11 [943.11,
23 963.11]subsection (k), the method of analysis and the design for
24 crossing protection shall be included in the plan.)

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1 Adopt § 923.12[943.12, 963.12]. Logging Road Watercourse Crossing

2 Mapping and Identification.

3 The following mapping and identification standards shall apply to
4 logging road watercourse crossings:

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

8 (b) For logging road watercourse crossing-related disclosure and
9 description requirements refer to 14 CCR §§ 1034(ii)(1)-(2) and (4),
10 1034(kk)(4)(A), 1034(ll) and 1034(mm).

11 (c) The location of all logging road watercourse crossings to be
12 constructed or reconstructed shall be flagged or otherwise identified
13 on the ground **RRTF Option 1:** before submission of a plan or
14 substantial deviation **RRTF Option 2:** prior to the pre-harvest
15 inspection, if necessary, or prior to logging road watercourse
16 crossing construction or reconstruction). Exceptions may be explained
17 and justified in the plan and agreed to by the Director if flagging is
18 unnecessary as a substantial aid to examining possible significant
19 adverse effects of the crossing location on the factors listed under
20 14 CCR § 923 [943), 963]subsection (b).

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1 Adopt § 923.13 [943.13, 963.13]. Logging Road Watercourse Crossing
2 Construction and Reconstruction.

3 The following construction and reconstruction standards shall apply to
4 logging road watercourse crossings:

5 (a) Where applicable, logging road watercourse crossing construction
6 and reconstruction shall comply with the ~~design of conditions in~~
7 required DFG 1602 agreements.

8 design of required DF&G 1600 agreements.

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

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

24 (d) Fills for constructed and reconstructed logging road watercourse
25 crossings shall be thoroughly compacted in approximately one-foot

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1 lifts during installation. The face of crossing fills shall be no
2 greater than 65 percent (1.5:1, horizontal to vertical).

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

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

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

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

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

23 (j) Logging road watercourse crossings shall not be constructed or
24 reconstructed under saturated soil conditions or when such activities
25 could result in the discharge of sediment into watercourses or lakes

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1 in quantities ~~CGS OPTION deleterious~~ that violate Water Quality Requirements
2 or result in significant adverse DFG OPTION direct, indirect, or cumulative impacts to
3 the beneficial uses of water.

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 (m) In watersheds with listed anadromous salmonids, excavated
22 material and cut banks resulting from construction and reconstruction
23 shall be sloped back from the channel to prevent slumping and to
24 minimize soil erosion and where needed, stabilized per 14 CCR § 923.14
25 [943.14, 963.14]subsection (b).

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1 (n) In watersheds with listed anadromous salmonids and in planning
2 watersheds immediately upstream of, and contiguous to, any watershed
3 with listed anadromous salmonids, during the extended wet weather
4 period no timber operations shall take place unless the approved plan
5 incorporates a complete winter period operating plan pursuant to 14 CCR
6 § 914.7 [934.7, 954.7], subsection (a). that specifically addresses,
7 where applicable, proposed logging road watercourse construction or
8 reconstruction. Where logging road watercourse crossing construction
9 or reconstruction is proposed an implementation schedule shall be
10 specified.

11
12 **Adopt § 923.14 [943.14, 963.14]. Logging Road Watercourse Crossing**
13 **Erosion Control.**

14 (a) The following drainage standards shall apply to logging road
15 watercourse crossings:

16 (1) Adequate surface drainage at logging road watercourse
17 crossings shall be provided through the use of surface geometry
18 configurations in combination with the installation of drainage
19 facilities, ditch drains, or other necessary protective structures.

20 (2) Drainage facilities and ditch drains shall be installed
21 adjacent to logging road watercourse crossings, as needed, to minimize
22 soil erosion and sediment transport and to prevent the discharge of
23 sediment into watercourses and lakes in quantities deleterious to the
24 beneficial uses of water during and upon completion of timber
25 operations. See 14 CCR § 923.5 [943.5, 963.5], subsections (d)-(j)

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1 (3) Drainage facilities or ditch drains installed adjacent to
2 logging road watercourse crossings shall be located to avoid
3 discharging concentrated runoff onto fills, erodible soils, unstable
4 areas, and connected headwall swales.

5 (b) The following stabilization standards shall apply to logging road
6 watercourse crossings:

7 (1) Bare soil on fills or sidecast associated with logging road
8 watercourse crossings that are created or exposed by timber operations
9 shall be stabilized to the extent necessary to minimize soil erosion
10 and sediment transport and to prevent the discharge of sediment into
11 watercourses and lakes in quantities ~~CGS OPTION deleterious that~~
12 ~~violate Water Quality Requirements or result in significant adverse~~
13 ~~DFG OPTION direct, indirect, or cumulative~~ impacts to the beneficial
14 uses of water. Erosion control measures for the traveled surface of
15 roads and landing surfaces are specified in 14 CCR §§ 923.5 [943.5,
16 963.5] and 923.7 [943.7, 963.7]. Sites to be stabilized include, but
17 are not limited to, sidecast or fill greater than 20 feet in slope
18 distance from the outside edge of the road surface at the logging road
19 watercourse crossing.

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

25 (3) Soil stabilization treatments shall be in place upon
completion of operations for the year of use or prior to October 15,

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1 whichever comes first. An exception is that bare areas created after
2 October 15 shall be treated within 10 days or as agreed to by the
3 Director.

4 (4) In watersheds with listed anadromous salmonids and in
5 planning watersheds immediately upstream of, and contiguous to, any
6 watershed with listed anadromous salmonids, within the WLPZ and within
7 any ELZ or EEZ designated for watercourse or lake protection,
8 treatments to stabilize soils, minimize soil erosion, and prevent the
9 discharge of sediment into watercourses and lakes in quantities
10 deleterious to aquatic species or the quality and beneficial uses of
11 water, or that threaten to violate applicable water quality
12 requirements, shall be described in the plan as follows:

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

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

17 (ii) Disturbed logging road watercourse crossing cut
18 banks and fills, and

19 (iii) Any other area of disturbed soil that threatens
20 to discharge sediment into water in quantities deleterious to the
21 quality and beneficial uses of water.

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

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1 (C) Where slash mulch is packed into the ground surface
2 through the use of a tractor or equivalent piece of heavy equipment
3 the minimum slash coverage shall be 75 percent.

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

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

13
14 **Adopt § 923.15[943.15, 963.15]. Logging Road Watercourse Crossing Use.**

15 Logging road watercourse crossings shall be used in a manner that is
16 consistent with the design, construction, and maintenance of the
17 logging road along which they have been constructed (Refer to 14 CCR
18 §§ 923.2 [943.2, 963.2], 923.4 [943.4, 963.4], 923.6 [943.6, 963.6],
19 and 923.7 [943.7, 963.7]).

20
21 **Adopt § 923.16 [943.16, 963.16]. Logging Road Watercourse Crossing**
22 **Maintenance and Monitoring.**

23 The following maintenance and monitoring standards shall apply to
24 logging road watercourse crossings:

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

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

7 (c) Soil stabilization treatments on logging road watercourse
8 crossing fills shall be maintained to minimize soil erosion and
9 sediment transport and to prevent the discharge of sediment into
10 watercourses and lakes in quantities ~~deleterious~~ that violate Water Quality
11 Requirements or result in significant adverse DFG OPTION direct, indirect, or
12 cumulative impacts to the beneficial uses of water.

13 (d)⁴⁶The plan shall identify measures to be used to reduce sediment
14 delivery from logging road watercourse crossings where evidence of
15 substantial soil erosion and discharge of sediment into watercourses
16 and lakes in quantities ~~deleterious~~ that violate Water Quality Requirements or
17 result in significant adverse DFG OPTION direct, indirect, or cumulative impacts to
18 the beneficial uses of water.

19 to the beneficial uses of water is present at a logging road
20 watercourse crossing used for timber operations. Where evidence of
21 substantial soil erosion and discharge of sediment into watercourses
22 and lakes in quantities ~~deleterious~~ that violate Water Quality Requirements or
23 result in significant adverse DFG OPTION direct, indirect, or cumulative impacts to
24 the beneficial uses of water

25 ⁴⁶ This section is redundant to requirements in 923.1 (d)

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1 is present at a logging road watercourse crossing used for timber
2 operations, additional measures shall be stated in the plan and
3 installed, as needed, to minimize soil erosion and sediment transport
4 and to prevent the discharge of sediment into watercourses and lakes
5 in quantities deleterious to the beneficial uses of water.

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

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

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

17
18 **Adopt § 923.17[943.17, 963.17] Logging Road Watercourse Crossing**
19 **Removal.**

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

24 (a) Fills shall be excavated to form a channel that is as close as
25 feasible to the natural watercourse grade and orientation and that is

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1 wider than the average natural channel, as observed upstream and
2 downstream of the logging road watercourse crossing to be removed.

3 (b) The excavated material and any resulting cut bank shall be no
4 greater than 65 percent (1.5:1, horizontal to vertical) from the
5 outside edge of the constructed channel to prevent slumping, to
6 minimize soil erosion and sediment transport, and to prevent the
7 discharge of sediment into watercourses and lakes in quantities
8 deleterious to the beneficial uses of water.

9 (c) Exposed soil associated with logging road watercourse crossing
10 fill removal, including cut banks and excavated material, shall be
11 stabilized during and upon completion of removal operations, as
12 needed, or as otherwise specified in the rules. Soil stabilization
13 measures may include, but are not limited to, armoring with rip-rap,
14 replanting, mulching, seeding, installing commercial erosion control
15 devices to manufacturer's specifications, or other suitable treatment
16 to minimize soil erosion and sediment transport and to prevent the
17 discharge of sediment into watercourses and lakes in quantities ~~CGS~~

18 ~~OPTION deleterious~~ that violate Water Quality Requirements or result in significant
19 adverse ~~DFG OPTION~~ **direct, indirect, or cumulative** impacts to the beneficial
20 uses of water.

21 (d) Appropriate drainage facilities shall be installed along removed
22 logging road watercourse crossing approaches at locations that
23 minimize the concentration of surface runoff and soil erosion and to
24 prevent the discharge of sediment into watercourses and lakes in
25 quantities deleterious to the beneficial uses of water.

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1 (e) Where it is not feasible to remove a logging road watercourse
2 crossing or its associated fill to the above standards, the plan shall
3 identify how soil erosion and sediment transport will be minimized and
4 how the discharge of deleterious quantities of sediment into
5 watercourses and lakes will be prevented.

6 (f) Where a significant volume of sediment is stored upstream from a
7 logging road watercourse crossing that is proposed to be removed, the
8 stored sediment shall be removed or stabilized, to the extent
9 feasible, as described in the plan and in conformance with required
10 DF&G 1600 agreements.

11 (g) All logging road watercourse crossings proposed for removal shall
12 be removed upon completion of use, prior to the winter period or as
13 specified in the applicable DFG 1600 agreement, whichever is earlier,
14 or as otherwise specified in the plan.

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

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

21
22 **Amend § 1034. Contents of Plan.**

23 ******* (x) The information in subsections (1)-(4)(A), (5)(A)-(5)(K),**
24 **if applicable, (6)(A)-(B), and (7)-(16) shall be clearly shown on a**
25 **map that is based upon a U. S. Geological Survey topographic**
quadrangle map, or equivalent, published at a scale of 1:24,000 or

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1 ~~larger~~ ~~On titled USGS (if available) or equivalent topographic maps of~~
2 ~~a scale not less than 2" to the mile, the information in subsections~~
3 ~~(1-4), (8), (9), and (11-13) shall be clearly shown. The information~~
4 ~~in subsections (4)(B), (5)(A)-(5)(L), if applicable, and (6)(C) shall~~
5 ~~be clearly shown on a topographic map at a scale of 1/2 inch equals 1~~
6 ~~mile (1:126,720) or larger.~~ Additional maps, which may be topographic
7 or planimetric, may be used to provide the information required in the
8 other subsections, to ~~or~~ show specific details, and to improve map
9 clarity. ~~The appurtenant roads referenced in subsection (4) may be~~
10 ~~shown on a map which may be planimetric with a scale as small as one-~~
11 ~~half inch equals one mile.~~ Color coding shall not be used. A legend
12 shall be included indicating the meaning of the symbols used to depict
13 operational features on maps. See the district rules for the
14 appropriate minimum mapping acreages.

15 **(1)-(3) [No change]**

16 **(4)** ~~Location of public roads and those private roads to be used~~
17 ~~for timber operations within the plan area, and private roads~~
18 ~~appurtenant to the timber operations where such roads are under the~~
19 ~~ownership or control of the timber owner, timberland owner, timber~~
20 ~~operator, or submitter of the plan, and classification of all proposed~~
21 ~~and existing logging roads as permanent, seasonal, or temporary roads.~~
22 The following logging road- and landing-related features shall be
23 shown on a map of the appropriate type and scale as described in
24 subsection (x) above:

25 (A) Location of logging roads within the harvest area,
including those located in watercourses, lakes, WLPZs, marshes, wet

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1 meadows, or other wet areas and those proposed for abandonment or
2 deactivation.

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

7 This shall include:

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

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

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

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

22 (A) Location of logging road grades greater than 15
23 percent for over 200 continuous feet or logging road grades exceeding
24 20 percent.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

13 (C) Logging road watercourse crossings that are not within
14 the harvest area but are under the ownership or control of the owner
15 of the timberland where timber is proposed for harvest and are between
16 the harvest area and the first public road to be used for log hauling
17 that are:

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

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

22 (iii) Existing logging road watercourse crossings to be
23 abandoned or deactivated.

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

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

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

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

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

9 (10) Location of known unstable areas or slides.

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

13 (12) Location of boundaries of timber-site classes needed for
14 determination of stocking standards to be applied, down to at least a
15 20-acre minimum or as specified in the district rules.

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

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

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

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

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

3 **(aa)- [No change]**

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

7 **(cc)** Explanation and justification for use of watercourses, marshes,
8 wet meadows, and other wet areas as ~~landings, roads, or skid trails~~
9 tractor roads.

10 **(dd)-(ee) [No change]**

11 ~~**(ff)** Explanation and justification for landings that exceed the~~
12 ~~maximum size specified in the rules.~~

13 ~~**(gg)** Any other information required by the rules or the Act to be~~
14 ~~included in the plan. The district rules provide for exceptions and~~
15 ~~alternatives to standard requirements that require inclusion of~~
16 ~~information in the THP.~~

17 ~~**(hh)** Where roads, watercourse crossings, and associated landings in~~
18 ~~the logging area will be abandoned, the methods for abandonment shall~~
19 ~~be described.~~

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

23 ~~**(jj)**~~**(gg)** A general description of physical conditions at the plan
24 site, including general soils and topography information, vegetation
25 and stand conditions, and watershed and stream conditions.

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

5 (Option 2: Do not adopt the contents of subsection (hh) proposed
6 under Option 1 and begin re-numbering subsection (ii) as (hh), (jj) as
7 (ii), etc.)

8 (ii) The following shall be disclosed and described in the plan for
9 all existing, constructed, and reconstructed logging roads, landings
10 and logging road watercourse crossings, where applicable:

11 (1) For those with identified sensitive conditions per 14 CCR §
12 923.1(d) [943.1(d), 963.1(d)] and 923.10(f) [943.10(f), 963.10(f)]:

13 (A) Such sensitive conditions, including where they may
14 interact with proposed timber operations, that individually or
15 cumulatively, significantly and adversely affect, the beneficial uses
16 of water.

17 (B) Feasible protection measures for identified sensitive
18 conditions, which consider the watercourse classification and the
19 location and planned use of all logging roads and landings.

20 (C) An implementation schedule where feasible protection
21 measures are proposed.

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

24 (3) Maintenance treatments to running surfaces of logging roads
25 and landing surfaces. (Refer to 14 CCR § 923.7(c) [943.7(c),
963.7(c)]).

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1 (4) Describe how logging road watercourse crossings, including
2 temporary crossings and those along abandoned or deactivated logging
3 roads, are to be removed. (Refer to 14 CCR § 923.17 [943.17,
4 963.17]).

5 (5) In watersheds with listed anadromous salmonids and in
6 planning watersheds immediately upstream of, and contiguous to, any
7 watershed with listed anadromous salmonids:

8 (A) Specific erosion control measures for all permanent
9 and seasonal logging roads with a grade of 15 percent or greater that
10 extend 500 continuous feet or more. (Refer to 14 CCR § 923.5(p)(2)
11 [943.5(p)(2), 963.5(p)(2)].

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

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

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

20 (1) Option 1: Lineal distance of individual segments of logging
21 road construction.

22 (Option 2: Total lineal distance of all logging road
23 construction.)

24 (2) Potential public safety concerns. (Refer to 14 CCR §
25 923.10(e) [943.10(e), 963.10(e)].)

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

3 (4) Areas with identified isolated outcrops of asbestos-bearing
4 soil or parent material.

5 (5) Areas with potential mercury in soil, fills, or mine
6 tailings.

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

9 (7) Landings in excess of one-quarter acre on slopes exceeding
10 40 percent.

11 (8) Logging roads across or landings on unstable areas or
12 connected headwall swales.

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

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

19 (11) Road failures on existing logging roads to be
20 reconstructed.

21 (12) Disposal sites for spoils generated during logging road or
22 landing construction or reconstruction on slopes greater than 40
23 percent or on active unstable areas.

24 (13) Logging roads and landings across slopes greater than 50
25 percent for 100 lineal feet or more within 100 feet of the boundary of
a WLPZ that drains toward the zoned watercourse or lake, including

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1 specific construction techniques or measures. (Refer to 14 CCR §
2 923.4(m) [943.4(m), 963.4(m)]).

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

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

11 (16) Landings that require substantial excavation and landings
12 in excess of one-quarter acre in size.

13 (17) Any other areas where non-standard practices on logging
14 roads or landings are proposed.

15 (kk) In watersheds with listed anadromous salmonids and in planning
16 watersheds immediately upstream of, and contiguous to, any watershed
17 with listed anadromous salmonids, the following shall be disclosed in
18 the plan:

19 (1) Erosion sites on logging roads and landings that will be
20 treated, including proposed treatment(s). (Refer to 14 CCR § 923.2(f)
21 [943.2(f), 963.2(f)]).

22 (2) Identification and description of specific provisions for
23 all proposed logging road construction on slopes greater than 50
24 percent. (Refer to 14 CCR § 923.4(s)(1)(A) [943.4(s)(1)(A),
25 963.4(s)(1)(A)]).

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1 **(3)** Where logging road or landing construction or
2 reconstruction is proposed, the location of, and specifications for,
3 logging road and landing abandonment or other mitigation measures to
4 minimize the adverse effects of long-term site occupancy of the road
5 system within the watershed. (Refer to 14 CCR § 923.1(f) [943.1(f),
6 963.1(f)]).

7 **Option 1** Where logging road or landing construction or
8 reconstruction is proposed, the plan shall identify:

9 **(A)** How the proposed operations will fit into the
10 systematic layout pattern.

11 **(B)** What, if any, offsetting mitigation measures,
12 including but not limited to, abandonment of logging roads and
13 landings, are needed to minimize potential adverse impacts to
14 watersheds from the road system. (Refer to 14 CCR § 923.1(f)
15 [943.1(f), 963.1(f)]).

16 **(4)** During the extended wet weather period, the winter period
17 operating plan shall:

18 **(A)** Address, where applicable, proposed logging road or
19 landing construction, reconstruction and use. (Refer to 14 CCR §§
20 923.4(s)(2) [943.4(s)(2), 963.4(s)(2)] and 923.6(j)(5) [943.4(j)(5),
21 963.4(j)(5)]).

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

25 **(11)** In watersheds with listed anadromous salmonids, the following
shall apply:

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1 (1) Disclose and describe all existing permanent logging road
2 watercourse crossings. (Refer to 14 CCR § 14 CCR § 923.11(1)(1)
3 [943.11(1)(1), 963.11(1)(1)].)

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

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

15 (B) Clear and enforceable specifications for construction
16 and operation of any new crossing(s) of a Class I watercourse to
17 prevent direct harm, habitat degradation, water velocity increase,
18 hindrance of fish passage, or other potential impairment of beneficial
19 uses of water. (Refer to 14 CCR § 923.11(1)(2)-(3) [943.11(1)(2)-(3),
20 963.11(1)(2)-(3)].)

21 (mm) The following shall be provided in the plan for all constructed
22 and reconstructed logging road watercourse crossings:

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

25 (2) Option 1: Disclose and describe all permanent and
temporary logging road watercourse crossings requiring construction or

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1 reconstruction along non-public roads, except temporary logging road
2 watercourse crossings of Class III watercourses that are dry at the
3 time of use, that are not within the harvest area nor under the
4 ownership or control of the timberland owner where timber is proposed
5 for harvest. (Option 2: Do not adopt the contents of subsection
6 (mm)(2) proposed under Option 1 and begin re-numbering subsection
7 (mm)(3) as (mm)(2), (mm)(4) as (mm)(3), etc.)

8 (3) Disclose the potential public safety impacts where crossing
9 construction or reconstruction may affect public safety. (Refer to 14
10 CCR § 923.10(e) [943.10(e), 963.10(e)].

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

15 (5) Include the analyses and specifications that demonstrate
16 all permanent constructed and reconstructed logging road watercourse
17 crossing structures installed within Class I watercourses, where fish
18 are always or seasonally present or where fish habitat is restorable,
19 will be designed to allow for upstream and downstream passage of fish
20 or listed aquatic species during any life stage and for the natural
21 movement of bedload. (Refer to 14 CCR § 923.11(i)-(j) [943.11(i)-(j),
22 963.11(i)-(j)].)

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

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

4 (8) Identify protection measures needed to reduce sediment delivery
5 where evidence of substantial soil erosion and discharge of sediment
6 into watercourses or lakes in quantities ~~CGS OPTION deleterious that~~
7 violate Water Quality Requirements or result in significant adverse
8 DFG OPTION direct, indirect, or cumulative impacts to the beneficial
9 uses of water is present at a logging road watercourse crossing used
10 for timber operations. (Refer to 14 CCR § 923.16(d) [943.16(d),
11 963.16(d)].)

12 (9) Identify how soil erosion and sediment transport will be
13 minimized and how the discharge ~~of deleterious quantities~~ of soil ~~CGS~~
14 OPTION in quantities that violate Water Quality Requirements or result
15 in significant adverse DFG OPTION direct, indirect, or cumulative
16 impacts to the beneficial uses of water into watercourses or lakes
17 will be prevented where it is not feasible to remove a logging road
18 watercourse crossing or its associated fill to the standards contained
19 in 14 CCR § 923.17 [943.17, 963.17]. (Refer to 14 CCR §§ 923.8(e)
20 [943.8(e), 963.8(e)] and 923.17(e) [943.17(e), 963.17(e)].)

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

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1 (11) In watersheds with listed anadromous salmonids, Option 1
2 state how existing permanent culverts used for logging road
3 watercourse crossings on Class I watercourses, where fish are always
4 or seasonally present or where fish habitat is restorable, shall be
5 brought up to the standards of 14 CCR § 923.11(c) [943.11(c),
6 963.11(c)].

7 [Option 2, (A) state how existing permanent culverts used
8 for logging road watercourse crossings on Class I watercourses, where
9 fish are always or seasonally present or where fish habitat is
10 restorable, shall be brought up to the standards of 14 CCR § 923.11(c)
11 [943.11(c), 963.11(c)].

12 (B) (This only applies if 14 CCR § 923.11(k) [943.11(k),
13 963.11(k)], Option 1 is adopted.) In addition to the requirements of
14 14 CCR § 923.11(k) [943.11(k), 963.11(k)], include the method of
15 analysis and the design for logging road watercourse crossing
16 protection. (Refer to 14 CCR § 14 CCR § 923.11(k) [943.11(k),
17 963.11(k)].)]

18
19 **Amend 1051.1. Contents of Modified THP**

20 A plan submitted under ~~section~~ 14 CCR § 1051 above shall contain all
21 the provisions of 14 CCR § 1034 except the following: (o), (x)(6),
22 (x)(7), (z), (cc), (dd), (ee), (ff), and (mm), and the RPF shall:
23

24 **Amend 1090.5 Contents of NTMP**
25

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

8 (1)-(3) [No change]

9 (4) Location of public roads within the ~~plan~~ harvest area, and
10 private roads appurtenant to the timber operations where such roads
11 are under the ownership or control of the timberland owner and are
12 contiguous with the ~~plan~~ harvest area, and classification of all
13 proposed and existing logging roads as permanent, seasonal, or
14 temporary roads.

15 (5)-14) [No change]

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

17 (gg) Where logging roads, logging road watercourse crossings, and
18 associated landings in the logging area will be abandoned or
19 deactivated, the methods for abandonment or deactivation shall be
20 described.

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

25 (ii) [No change]

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1 Amend 1090.7 Notice of Timber Operations Content

2
3 (n) On a USGS quadrangle or equivalent map of a scale not less than
4 2" to the mile, the following information pertinent to the Notice of
5 Operations shall be clearly provided. Additional maps may be required
6 to show specific details, and may be planimetric. Color coding shall
7 not be used. A legend shall be included indicating the meaning of the
8 symbols used to depict operational features on maps. See the district
9 rules for the appropriate minimum mapping acreages.

10 (1)-(3) [No change]

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

16 (5)-(11) [No change]

17
18
19 Amend 1092.09 PTHP Contents

20 (a) - (K) No change

21 (1) On a ~~titled USGS quadrangle or equivalent topographic map of a~~
22 ~~scale not less than 2" to the mile~~ map that is based upon a U. S.
23 Geological Survey topographic quadrangle map, or equivalent, published
24 at a scale of 1:24,000 or larger, the information in subsections ~~(1-5)~~
25 (1)-(5)(A), (6)(A)-(6)(K), if applicable, (7)(A)-(B), and (7-11) shall
be clearly shown. On a topographic map at a scale of 1/2 inch equals

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1 1 mile (1:126,720) or larger, the information in subsections (5)(B),
2 (6)(A)-(6)(K), if applicable, and (7)(C) shall be clearly shown.

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

12 (1)-(4) [No change]

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

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

24 (B) Location of all logging roads that will be used for
25 log hauling under the ownership or control of the timber owner,
timberland owner, timber operator, or plan submitter that are between

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1 the harvest area and the first public road to be used for log hauling.

2 This shall include:

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

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

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

10 (6) The following shall be mapped at the appropriate scale
11 required under subsection (1), whichever is applicable, for all
12 constructed and reconstructed logging roads and landings, unless
13 otherwise noted:

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

17 (B) Location of road failures on existing roads to be
18 reconstructed.

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

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

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

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

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

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

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

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

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

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

20 ~~(7)(6) Location of proposed and existing landings in the~~
21 ~~watercourse and lake protection zone, and landings outside the zone~~
22 ~~that are greater than 1/4 acre in size or whose construction involves~~
23 ~~substantial excavation. The following logging road watercourse~~
24 ~~crossing-related items shall be shown on a map of the appropriate type~~
25 ~~and scale as described in subsection (l) above:~~

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

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

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

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

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

17 (iii) Existing logging road watercourse crossings to be
18 abandoned or deactivated.

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

21 (8) ~~(7)~~ Road failures on existing roads to be reconstructed.

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

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

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

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

6 (12) Location of unique areas.

7
8
9 **Amend § 1093.2. Contents of Road Management Plan.**

10 The Road Management Plan shall, at a minimum, contain the following
11 information:*****

12 *******(3)** The operational element shall, at a minimum, address
13 proposed road management operations, stated time frames for actions,
14 clear lines of responsibility for implementation, and schedules to be
15 implemented in a plan, including:

16 **(A)** A road construction, reconstruction and use component
17 to ensure that operations occur on a stable operating surface that
18 does not produce sediment in quantities that may cause a visible
19 increase in turbidity of downstream waters in receiving Class I, II,
20 III or IV waters or would violate Water Quality Requirements. This
21 component shall include, at a minimum, restrictions for wet weather
22 operations, surfacing objectives, and provisions for water
23 drafting.*****

24 **CGS OPTION**

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1 (A)⁴⁷ A road construction, reconstruction and use component
2 to ensure that operations occur on a stable operating surface that
3 does not produce sediment in quantities that violate Water Quality
4 Requirements or result in significant adverse DFG OPTION direct, indirect, or
5 cumulative impacts to the beneficial uses of water ~~may cause a visible~~
6 ~~increase in turbidity of downstream waters in receiving Class I, II,~~
7 ~~III or IV waters or would violate Water Quality Requirements.~~

9 **OPTION A CAL FIRE 8/23/10 comment**

10 (A)⁴⁸ A road construction, reconstruction and use component
11 to ensure that operations occur on a stable operating surface.
12 Construction, reconstruction and use may occur on isolated wet spots
13 provided measures, as specified in the THP, are taken to prevent
14 sediment discharge that may reach watercourses or lakes. This
15 component shall include, at a minimum, restrictions for wet weather
16 operations, surfacing objectives, and provisions for water drafting.

17 _____
18 ⁴⁷ CGS OPTION was proposed as part of the FPC deliberation in 2010 for
19 language on sediment discharge. The language is used throughout the Road
20 Rules, 2010 proposal. Staff's recommendation is that whichever Option is
21 selected on sediment discharge, (the CGS/RRTF's, CAL FIRE Option A, or the
22 language adopted by the Board in On 9/7/10, it be routinely used throughout
23 eh Road Rules 2010 proposal.

24 ⁴⁸ Option A incorporates Cal Fire recommended rule changes submitted to the
25 board on August 23, 2010. The changes address sediment discharge risks
associated with operations on saturated soils. The amendments also ensure
better enforcement of operation on saturated soils as the current definition
of saturated soils is easy to understand can be applied consistently by Cal
Fire inspectors and avoids subjective interpretations of "potential"
discharges. The changes address water board issue on noncompliance with
policies regarding the use of "increased invisible turbidity" as the point of
cessation of operations.

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1
2
3 *****Note: Authority cited: Sections 4551, 4551.5, 4553, 4562.7 and
4 21000(g), Public Resources Code. Reference: Sections 751, 4512, 4513,
5 4551, 4551.5, 4562.5, 4562.7, 21000 and 21001, Public Resources Code;
6 Sections 100, 1243 and 13050(f), Water Code; Sections 1600 and
7 5650(c), Fish and Game Code; and NRDC v. Arcata National Corp. (1976)
8 59 Cal. App. 3d 959, 131 Cal. Rptr. 172.

6 Amend § 1104.1. Conversion Exemptions.

7 Timber operations conducted under this subsection shall be exempt
8 from conversion permit and timber harvesting plan requirements of this
9 article*****

10 *******(E)** Timber operations may be conducted during the winter
11 period. Tractor operations in the winter period are allowed under any
12 of the following conditions:

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

21 **OPTION A CAL FIRE 8/23/10 comment**

22 1. ⁴⁹ During dry, rainless periods where saturated soils
23 conditions, as defined in 14 CCR 895.1, are not present. Timber

24
25

⁴⁹ Option A incorporates Cal Fire recommended rule changes submitted to the board on August 23, 2010. The changes address sediment discharge risks

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1 operations may occur on isolated wet spots provided measures, as
2 specified in the THP, are taken to prevent sediment discharge that may
3 reach watercourses or lakes. ~~that may produce sediment in quantities~~
4 ~~sufficient to cause a visible increase in turbidity of downstream~~
5 ~~waters in receiving Class I, II, III or IV waters or that violate~~
6 ~~Water Quality Requirements.~~ Erosion control structures shall be
7 installed on all constructed skid trails and tractor roads prior to
8 sunset if the National Weather Service forecast is a "chance" (30% or
9 more) of rain within the next 24 hours.*****

10 **CGS OPTION**

11 1.⁵⁰ During dry, rainless periods and shall not be
12 conducted on saturated soil conditions that may produce sediment in
13 quantities that violate Water Quality Requirements or result in significant adverse

14 **DFG OPTION** direct, indirect, or cumulative impacts to the beneficial uses of
15 water sufficient to cause a visible increase in turbidity of
16 downstream waters in receiving Class I, II, III or IV waters or that
17 violate Water Quality Requirements. Erosion control structures shall

18
19 associated with operations on saturated soils. The amendments also ensure
20 better enforcement of operations on saturated soils as the current definition
21 of saturated soils is easy to understand, can be applied consistently by Cal
22 Fire inspectors, and avoids subjective interpretations of "potential"
23 discharges. The changes address water board issue on noncompliance with
24 policies regarding the use of "increased invisible turbidity" as the point of
25 cessation of operations.

23 ⁵⁰ CGS OPTION was proposed as part of the FPC deliberation in 2010 for
24 language on sediment discharge. The language is used throughout the Road
25 Rules, 2010 proposal. Staff's recommendation is that whichever Option is
selected on sediment discharge, (the CGS/RRTF's, CAL FIRE Option A, or the
language adopted by the Board in On 9/7/10, it be routinely used throughout
eh Road Rules 2010 proposal.

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1 be installed on all constructed skid trails and tractor roads prior to
2 sunset if the National Weather Service forecast is a "chance" (30% or
3 more) of rain within the next 24 hours.*****

4
5
6 *****Note: Authority cited: Sections 4551, 4553, 4584, 4604, 4611 and
7 4628, Public Resources Code. Reference: Sections 4512, 4513, 4628 and
8 4584, Public Resources Code.

9 End of section under review as of 11/29/10
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