

**Board of Forestry and Fire Protection
Title 14 of the California Code of Regulations**

[Notice Published December 16, 2011]

NOTICE OF PROPOSED RULEMAKING

“Road Rules, 2011”

The Board of Forestry and Fire Protection (Board) proposes to adopt the regulations of Title 14 of the California Code of Regulations (14 CCR) described below after considering all comments, objections, and recommendations regarding the proposed action.

Amend:

§ 895.1 Definitions

§ 914.7 [934.7, 954.7] Timber Operations, Winter Period

§ 914.8 [934.8, 954.8] Tractor Road Watercourse Crossing

§ 915.1 [934.8, 954.8] Use of Heavy Equipment for Site Preparation

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

§ 916.4 [936.4, 956.4] Watercourse and Lake Protection

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

§ 918.3 [938.3, 958.3] Roads to be Kept Passable

Article 12 [Article 11. Northern] Logging Roads and Landings

§ 923 [943, 963] Logging Roads and Landings

§ 923.1 [943.1, 963.1] Planning for Roads and Landings

§923.2 [943.2, 963.2] Road Construction

§ 923.3 [943.3, 963.3] Watercourse Crossings

§ 923.4 [943.4, 963.4] Road Maintenance

- § 923.5 [943.5, 963.5] Landing Construction
- § 923.6 [943.6, 963.6] Conduct of Operations on Roads and Landings
- § 923.7 [943.7, 963.7] Licensed Timber Operator Responsibility for Roads and Landings
- § 923.8 [943.8, 963.8] Planned Abandonment of Roads, Watercourse Crossings, and Landings
- § 923.9 [943.9, 963.9] Roads and Landings in Watersheds with Listed Anadromous Salmonids
- § 923.9.1 [943.9.1] Measures for Roads and Landings in Watersheds with Coho Salmon
- § 1034 Contents of Plan
- § 1051.1 Contents of Modified THP
- § 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

Adopt:

- § 923.10 [943.10, 963.10] Planning for Logging Road Watercourse Crossings
- § 923.11 [943.11, 963.11] Logging Road Watercourse Crossing Design and Implementation
- § 923.12 [943.12, 963.12] Logging Road Watercourse Crossing Mapping and Identification
- § 923.13 [943.13, 963.13] Logging Road Watercourse Crossing Construction and Reconstruction
- § 923.14 [943.14, 963.14] Logging Road Watercourse Erosion Control

§ 923.15 [943.15, 963.15] Logging Road Watercourse Use

§ 923.16 [943.16, 963.16] Logging Road Watercourse Crossing Maintenance
and Monitoring

§ 923.17 [943.17, 963.17] Logging Road Watercourse Crossing Removal

PUBLIC HEARING

The Board will hold a public hearing on Wednesday, April 4, 2012, starting at 8:00 a.m., at the Resources Building Auditorium, 1st Floor, 1416 Ninth Street, Sacramento, California. At the hearing, any person may present statements or arguments, orally or in writing, relevant to the proposed action described in the *Informative Digest*. The Board requests, but does not require, that persons who make oral comments at the hearing also submit a summary of their statements. Additionally, pursuant to Government Code § 11125.1, any information presented to the Board during the open hearing in connection with a matter subject to discussion or consideration becomes part of the public record. Such information shall be retained by the Board and shall be made available upon request.

WRITTEN COMMENT PERIOD

Any person, or authorized representative, may submit written comments relevant to the proposed regulatory action to the Board. The written comment period ends at 5:00 P.M., on Monday, March 26, 2012. The Board will consider only written comments received at the Board office by that time (in addition to those written comments received at the public hearing). The Board requests, but does not require, that persons who submit written comments to the Board reference the title of the rulemaking proposal in their comments to facilitate review.

Written comments shall be submitted to the following address:

Board of Forestry and Fire Protection
Attn: Eric Huff
Regulations Coordinator
P.O. Box 944246
Sacramento, CA 94244-2460

Written comments can also be hand delivered to the contact person listed in this notice at the following address:

Board of Forestry and Fire Protection
Room 1506-14
1416 9th Street
Sacramento, CA

Written comments may also be sent to the Board via facsimile at the following phone number:

(916) 653-0989

Written comments may also be delivered via e-mail at the following address:

board.public.comments@fire.ca.gov

AUTHORITY AND REFERENCE

Authority cited: Sections 4551, 4551.5, 4553, 4554.5, 4562.5, 4562.7, 4562.9, 4581, 4582, 4582.75, 4593, 4621, 21082 Public Resources Code. Reference: Sections 4551, 4551.5, 4553, 4554.5, 4562.5, 4562.7, 4562.9, 4581, 4582, 4582.75, 4593, 4621, 21080.5 Public Resources Code.

INFORMATIVE DIGEST/POLICY STATEMENT OVERVIEW

The Board is authorized under Public Resources Code 4551, *et. seq.* to adopt regulations, "...to assure the continuous growing and harvesting of commercial forest tree species and to protect the soil, air, fish and wildlife, and water resources, including, but not limited to, streams, lakes, and estuaries." The Board is proposing a regulation to revise and improve upon existing protections of the aforementioned resources, most notably water resources, from the potentially adverse impacts associated with roads, landings, and watercourse crossings. In addition, the regulation is intended to reorganize all Forest Practice Rule sections associated with roads, landings, and watercourse crossings into a more coherent and useful format and location for the benefit of the regulated and regulator alike.

DISCLOSURES REGARDING THE PROPOSED ACTION

The Board has determined the proposed action will have the following effects:

- Mandate on local agencies and school districts: None
- Costs or savings to any State agency: None
- Cost to any local agency or school district which must be reimbursed in accordance with the applicable Government Code (GC) sections commencing with GC § 17500: None
- Other non-discretionary cost or savings imposed upon local agencies: None
- Cost or savings in federal funding to the State: None
- The Board has made an initial determination that there will be no significant statewide adverse economic impact directly affecting business, including the ability of California businesses to compete with businesses in other states.

- Cost impacts on representative private persons or businesses: The board is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.
- Significant effect on housing costs: None
- Adoption of these regulations will not: (1) create or eliminate jobs within California; (2) create new businesses or eliminate existing businesses within California; or (3) affect the expansion of businesses currently doing business within California.
- Effect on small business: None. The Board has determined that Commercial and non-industrial timberland owners and managers, Licensed Timber Operators, and Registered Professional Foresters are already compelled by existing regulations and resource stewardship principles to limit the potential for adverse impacts from roads, landings, and watercourse crossings. This rulemaking proposal represents a refinement of existing regulations for improved utility and clarity as well as state-of-the-art protection of the beneficial uses of water.
- The proposed rules do not conflict with, or duplicate Federal regulations.

BUSINESS REPORTING REQUIREMENT

The regulation does not require a report, which shall apply to businesses.

CONSIDERATION OF ALTERNATIVES

In accordance with Government Code § 11346.5(a)(13), the Board must determine that no reasonable alternative it considers or that has otherwise been identified and brought to the attention of the Board would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.

CONTACT PERSON

Requests for copies of the proposed text of the regulations, the *Initial Statement of Reasons*, modified text of the regulations and any questions regarding the substance of the proposed action may be directed to:

Board of Forestry and Fire Protection
Attn: Eric Huff
Regulations Coordinator
P.O. Box 944246
Sacramento, CA 94244-2460
Telephone: (916) 653-8031

The designated backup person in the event Mr. Huff is not available is Mr. George Gentry, Executive Officer of the California Board of Forestry and Fire Protection, at the above address and phone.

AVAILABILITY OF STATEMENT OF REASONS AND TEXT OF PROPOSED REGULATIONS

The Board has prepared an *Initial Statement of Reasons* providing an explanation of the purpose, background, and justification for the proposed regulations. The statement is available from the contact person on request. When the *Final Statement of Reasons* has been prepared, the statement will be available from the contact person on request.

A copy of the express terms of the proposed action using UNDERLINE to indicate an addition to the California Code of Regulations and ~~STRIKETHROUGH~~ to indicate a deletion is also available from the contact person named in this notice.

The Board will have the entire rulemaking file, including all information considered as a basis for this proposed regulation, available for public inspection and copying throughout the rulemaking process at its office at the above address. All of the above referenced information is also available on the Board web site at:

http://www.fire.ca.gov/BOF/board/board_proposed_rule_packages.html

AVAILABILITY OF CHANGED OR MODIFIED TEXT

After holding the hearing and considering all timely and relevant comments received, the Board may adopt the proposed regulations substantially as described in this notice. If the Board makes modifications which are sufficiently related to the originally proposed text, it will make the modified text—with the changes clearly indicated—available to the public for at least 15 days before the Board adopts the regulations as revised. Notice of the comment period on changed regulations, and the full text as modified, will be sent to any person who:

- a) testified at the hearings,
- b) submitted comments during the public comment period, including written and oral comments received at the public hearing, or
- c) requested notification of the availability of such changes from the Board of Forestry and Fire Protection.

Requests for copies of the modified text of the regulations may be directed to the contact person listed in this notice. The Board will accept written comments on the modified regulations for 15 days after the date on which they are made available.

A handwritten signature in black ink, appearing to read "Eric Huff", written over a horizontal line.

Eric Huff
Regulations Coordinator
Board of Forestry and Fire Protection

INITIAL STATEMENT OF REASONS

“Road Rules, 2011”

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PUBLIC PROBLEM, ADMINISTRATIVE REQUIREMENT, OR OTHER CONDITION OR CIRCUMSTANCE THE REGULATIONS ARE INTENDED TO ADDRESS

This regulation is intended to satisfy two long-term objectives of benefit to the regulated public, regulatory agencies, the general public, and the natural resources of the State. The first of these objectives is to ensure that all road-related Forest Practice Rules are adequate to prevent adverse impacts to beneficial uses of water. The second objective is to organize all road-related Forest Practice Rules into a logical, consistent order and locate them in one portion of the Forest Practice Rulebook for ease of reference and understanding by all. Logging roads and logging road watercourse crossings have long

been recognized as the principal source of sediment delivered to watercourses (McCashion and Rice, 1983; Cafferata and Munn, 2002; Brandow and others, 2006). It is for this reason that prescriptive and performance-based rules regulating the planning for, construction, use, maintenance, and removal of logging roads, landings, and logging road watercourse crossings are present throughout the Forest Practice Rules (hereafter “Rules”). Changes in the understanding of how road systems interact and influence hydraulic function in watersheds have resulted in periodic changes to road-related Rules. It has likewise resulted in the inclusion of road-related Rules provisions in otherwise non-road related sections. An unfortunate consequence of their ubiquitous presence across multiple Rules sections is that Registered Professional Foresters, review team agencies, and the public alike find it challenging to discern what is required by road-related Rules in any particular context.

As previously mentioned, road-related Rules have historically been the subject of numerous amendments and revision efforts. However, amendments or newly adopted road-related Rules are typically incorporated into Rules sections that are not exclusive to logging roads, landings, and watercourse crossings. Thus, in addition to the Rules specific to logging roads, landings, and crossings contained in Article 12, Title 14 of the California Code of Regulations, beginning with Section 923, there are road-related requirements contained in Rules for the contents of harvesting plans and protection of anadromous salmonids, among other sections.

As a result of the Board’s receipt of one such comprehensive set of proposed revisions to road-related Rules in 1999, the Board appointed an “Inter-Agency Road Rules Task Force.” This Task Force was directed to review existing road-related Rules sections and then advise the Board on possible revisions to these sections. The task force submitted their package of revised road rules to the Board’s Forest Practice Committee in April of 2003. In December of 2004, following review and discussion of the Inter-Agency proposal, the Forest Practice Committee appointed another committee, the “Road Rules Technical Working Group,” and tasked this body with reviewing and revising the technical aspects of the Inter-Agency proposal. In addition, and at the recommendation of the Working Group members, the Board directed the group to try and collate all Rules related to roads, landings, and watercourse crossings into one specific location rather than keeping them diffused throughout the rulebook.

In 2008, the Road Rules Technical Working Group presented their revised “Road Rules” proposal to the Board. Following a short hiatus to address other more pressing regulatory matters, the Board’s Forest Practice Committee returned to its review of the Working Group’s proposal. Following years of subsequent review and discussion, the Board authorized at its November 2011 meeting a lengthy public review and comment period for the proposal in its current form.

SPECIFIC PURPOSE AND NECESSITY OF THE REGULATIONS

This regulatory proposal is intended to ensure that waters of the State are adequately protected from the potentially harmful effects of road, landing, and watercourse construction, use, and abandonment associated with timber operations in compliance with the Z’berg-Nejedly Forest Practice Act. It is also intended to improve the utility and coherence of road, landing, and watercourse crossing-related Forest Practice Rules by reorganizing them into one distinct Article for ease of reference and use.

ALTERNATIVES TO THE REGULATIONS CONSIDERED BY THE BOARD AND THE BOARD'S REASONS FOR REJECTING THOSE ALTERNATIVES

The Board has evaluated several alternatives to the proposed regulation.

Alternative 1: No Action – No Changes to Existing Rules or Format.

This alternative would result in no change to the California Forest Practice Rules as they currently exist. No attempt would be made to ensure their adequacy for protection of the beneficial uses of water in association with permitted timber operations. No changes to the existing organization and format of the Rules would be proposed for improvement of utility and user comprehension. This alternative is not acceptable as it neither fulfills the Board's express priority for review of all road-related Forest Practice Rule provisions to ensure state-of-the-art consistency with water quality objectives, nor satisfies the need for improved Rule coherency. It is therefore rejected.

Alternative 2: Partial Adoption of Proposal – Adopt Only New and Revised Rule Provisions or Proposed Rule Reorganization.

This alternative would result in the Board's satisfaction of only one of the two express objectives of this regulatory proposal. The Board would either adopt the proposed new rule language or adopt the proposed reorganization of all road-related rules, but would not incorporate both into the same adoption.

Under this alternative it is conceivable that the benefits of adopting one half of the proposal would be muted by the loss of the remaining half. Rules to improve water quality protection could be encapsulated in rule sections otherwise unrelated to roads rendering them difficult to comprehend and enforce. Conversely, the existing rules could be reorganized into a more coherent format, but fail to improve upon the existing protection of the beneficial uses of water. Either way the Board would be compelled to pursue a separate rulemaking proposal to address the deficiency left by partial adoption of this proposal. This alternative is therefore rejected.

Alternative 3: Adoption of Proposal with Sunset Date.

This alternative would result in the Board's adoption of the complete rulemaking proposal with the addition of a specific sunset date by which time the Board must evaluate and reconsider extension of the proposal's lifespan. While proponents of a sunset date might argue that inclusion of such a feature prompts the Board to review the regulation on an ongoing basis, the Board is already obligated by Public Resources Code Section 4553 to continuously review and revise regulations as appropriate. And, in the absence of a sunset date, the regulated public most affected by the rulemaking proposal has some assurance of regulatory certainty during the timeline of planned operations.

A significant downside to sunset dates that has been demonstrated repeatedly in other Board rulemaking efforts is the disproportionate amount of already limited meeting and staff time spent on the same regulation. As was recently illustrated by another Board regulation adopted with a sunset date two years ago, monitoring of rule effectiveness may not yield meaningful information in the time interval between adoption and the initial sunset date. In such instances, the Board is compelled to readopt a regulation with revised sunset dates on one or more occasions until such time as the regulation has been utilized sufficiently to generate meaningful information for its review. In light of the

aforementioned existing statutory authority for continuous review and revision of existing regulations, it would appear to be more sensible to rely upon that authority rather than a sunset date to achieve the same objective. For these reasons, this alternative is rejected.

Alternative 4: Preferred Alternative – Adoption of Proposal.

Under this alternative, the Board would adopt the proposal with or without modification following a lengthy public comment period that includes at least two field visits and workshops, and concludes with a public hearing. The two primary objectives of ensuring state-of-the-art protection of the beneficial uses of water, and improving the clarity and utility of road-related Forest Practice Rules would be achieved. This alternative would represent the successful culmination of over a decade's worth of inter-agency collaboration and public participation toward a shared goal. This alternative would benefit the resources of the State, public and private timberland ownerships, landowners, resource professionals, state and federal agencies, and the general public. It is therefore proposed as the preferred alternative.

POSSIBLE SIGNIFICANT ADVERSE ENVIRONMENTAL EFFECTS AND MITIGATIONS

This regulatory proposal is intended to improve upon existing protections of the beneficial uses of water and road-related resources. No significant adverse environmental effects have been identified in association with this rulemaking proposal.

ALTERNATIVES TO THE PROPOSED REGULATORY ACTION THAT WOULD LESSEN ANY ADVERSE IMPACT ON SMALL BUSINESS

The Board finds that this proposed regulation would not have an adverse impact on small business.

EVIDENCE SUPPORTING FINDING OF NO SIGNIFICANT ADVERSE ECONOMIC IMPACT ON ANY BUSINESS

Commercial and non-industrial timberland owners and managers, Licensed Timber Operators, and Registered Professional Foresters are already compelled by existing regulations and resource stewardship principles to limit the potential for adverse impacts from roads, landings, and watercourse crossings. This rulemaking proposal represents a refinement of existing regulations for improved utility and clarity as well as state-of-the-art protection of the beneficial uses of water.

TECHNICAL, THEORETICAL, AND/OR EMPIRICAL STUDY, REPORTS, OR DOCUMENTS

The State Board of Forestry and Fire Protection consulted the following listed information and/or publications as referenced in this *Initial Statement of Reasons*. Unless otherwise noted in this *Initial Statement of Reasons*, the Board did not rely on any other technical, theoretical, or empirical studies, reports or documents in proposing the adoption of this regulation.

1. California Forest Practice Act and Rules, 2007-2011. Public Resources Code § 4511, *et seq.*, Title 14 California Code of Regulations, Chapters 4, 4.5, and 10.
2. “Modified Completion Report Monitoring Program: Monitoring Results from 2001 Through 2004.” Monitoring Study Group Final Report prepared for the California State Board of Forestry and Fire Protection. Brandow, C.A., P.H. Cafferata, and J.R. Munn. 2006. Sacramento, CA. 80 p. Available at: http://www.bof.fire.ca.gov/pdfs/MCRFinal_Report_2006_07_7B.pdf
3. “Hillslope Monitoring Program: Monitoring Results from 1996 through 2001.” Monitoring Study Group Final Report prepared for the California State Board of Forestry and Fire Protection. Cafferata, P.H., and J.R. Munn. 2002. Sacramento, CA. 114 p. Available at: http://www.bof.fire.ca.gov/pdfs/ComboDocument_8_.pdf
4. Erosion on Logging Roads in Northwestern California: How Much is Avoidable? McCashion, J.D., and R.M. Rice. 1983. *Journal of Forestry* 81(1): 23-26. Available at: <http://www.fs.fed.us/psw/publications/rice/McCashion.pdf>.
5. “Road Rules Committee Executive Summary Outline.” Road Rules Committee Presentation to California State Board of Forestry and Fire Protection. March 5, 2008.

Pursuant to Government Code § 11346.2(b)(6)

In order to avoid unnecessary duplication or conflicts with federal regulations contained in the Code of Federal Regulations addressing the same issues as those addressed under the proposed regulation revisions listed in this *Initial Statement of Reasons*; the Board has directed the staff to review the Code of Federal Regulations. The Board staff determined that no unnecessary duplication or conflict exists.

PROPOSED TEXT

The proposed revisions or additions to the existing rule language are represented in the following manner:

The following revisions or additions to the existing rule language are represented in the following manner:

underline indicates an addition to the California Code of Regulations, and

~~strikeout~~ indicates a deletion from the California Code of Regulations.

All other text is existing rule language.

1 § 923.8 [943.8, 963.8] Planned Abandonment of Roads, Watercourse
2 Crossings, and Landings
3 § 923.9 [943.9, 963.9] Roads and Landings in Watersheds with Listed
4 Anadromous Salmonids
5 § 923.9.1 [943.9.1] Measures for Roads and Landings in Watersheds with
6 Coho Salmon
7 § 1034 Contents of Plan
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13 § 1104.1 Conversion Exemptions
14
15 **Adopt:**
16 § 923.10 [943.10, 963.10] Planning for Logging Road Watercourse
17 Crossings
18 § 923.11 [943.11, 963.11] Logging Road Watercourse Crossing Design and
19 Implementation
20 § 923.12 [943.12, 963.12] Logging Road Watercourse Crossing Mapping
21 and Identification
22 § 923.13 [943.13, 963.13] Logging Road Watercourse Crossing
23 Construction and Reconstruction
24 § 923.14 [943.14, 963.14] Logging Road Watercourse Erosion Control
25 § 923.15 [943.15, 963.15] Logging Road Watercourse Use

1 § 923.16 [943.16, 963.16] Logging Road Watercourse Crossing

2 Maintenance and Monitoring

3 § 923.17 [943.17, 963.17] Logging Road Watercourse Crossing Removal

4
5 **Note:** Proposed new or relocated text in underscore. Deleted existing text in
6 ~~strikeout~~

7
8 **Amend 14 CCR § 895.1. Definitions.**

9
10 **Abandoned Road** means a logging road on which proactive measures have
11 been applied to effectively remove it from the permanent road network.

12
13 **Abandonment** means ~~leaving a logging road reasonably impassable to~~
14 ~~standard production four wheel drive highway vehicles, and leaving a~~
15 ~~logging road and landings, in a condition which provides for long term~~
16 ~~functioning of erosion controls with little or no continuing~~
17 ~~maintenance.~~ taking proactive measures to effectively remove an
18 existing logging road, landing, or logging road watercourse crossing
19 from the permanent road network.

20
21 **Appurtenant Road** means a logging road under the ownership or control
22 of the timber owner, timberland owner, timber operator, or plan
23 submitter that will be used for log hauling and that is between the
24 plan area and the first public road to be used for log hauling.

1 ~~**Berm** means a curb or dike constructed to control water and prevent~~
2 ~~roadway runoff waters from discharging onto roadside slopes and/or to~~
3 ~~provide material for subsequent road maintenance.~~ a curb, dike, or
4 linear mound of earth that is constructed to control water and direct
5 roadway runoff waters or that has developed through road grading
6 activities.

7
8 **Connected Headwall Swale** means a geomorphic feature consisting of a
9 bowl-shaped, concave depression with convergent slopes, typically of
10 65 percent or greater steepness that is connected to a watercourse or
11 lake by way of a continuous linear depression and that has been
12 sculpted over geologic time by shallow landslide events. The slope
13 profile is typically smooth and unbroken by benches, but may be
14 interrupted by recent landslide deposits or scars. Emergent
15 groundwater and wet areas may exist at the base of the swale. Soil
16 and colluvium depth is typically greatest at the axis of the swale,
17 thinning to either side.

18
19 **Critical Dip** means a constructed dip or low point across a logging
20 road surface immediately down grade from, or over, a culverted logging
21 road watercourse crossing that functions to prevent crossing overflow
22 from draining down the road.

23
24 **Crowning** means creating a road surface with a convex cross sectional
25 profile that drains runoff toward both sides of the road.

1 Deactivated Road means a logging road that is part of the permanent
2 road network where proactive measures have been applied to prevent
3 active use.

4 Deactivation means taking the proactive measures necessary to prevent
5 the active use of an existing logging road, landing, or logging road
6 watercourse crossing.

7
8 End-Hauling means the removal and transportation of ~~excavated~~ excess
9 excavated material ~~to prevent sidecast to~~ a designated storage area.

10
11 Excess Material means excavated material that is not used ~~or needed~~ as
12 a functional part of the road or ~~a~~ landing. Excess material is
13 synonymous with spoils.

14
15 Extended Wet Weather Period means the period from October 15 to May 1.

16
17 Fill means material that is mechanically placed ~~in low areas~~ and built
18 up in lifts to form a ~~the~~ roadbed or landing surface. Fill includes
19 the material placed around culverts and related drainage structures at
20 logging road watercourse crossings.

21
22 Ford means a logging road watercourse crossing where the road grade
23 dips through the watercourse channel.

24
25 Harvest Area means the area where trees are felled and removed.

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

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

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

14
15 **Permanent Road Network** means the permanent, seasonal, ~~and temporary,~~
16 and deactivated roads, including appurtenant roads, that provide the
17 infrastructure necessary for timber operations and forest management.

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

22
23 **Prescribed Maintenance Period** means the time period, beginning with
24 filing of the work completion report, provided that the report is
25 subsequently approved, during which erosion controls ~~which~~ that are
required and constructed as part of ~~a~~ timber operations must be

1 maintained in a functional condition. ~~The period shall not exceed~~
2 ~~three years from the filing of the work completion report provided~~
3 ~~that the report is subsequently approved by the director.~~
4

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

9 **Road approach** means the portion of the logging road surface that
10 drains overland water flow to the watercourse crossing. Road
11 approaches begin/end at the nearest functional drainage
12 structure/facility or the first high point on the road where road
13 surface overland water flow drains away from the watercourse
14 crossings. Crossings often have two road approaches.
15

16 **Road Maintenance** means activities involving manipulation of the
17 logging road prism to maintain stable operating surfaces, functioning
18 logging road drainage facilities and structures, and stable cutbanks
19 and fill slopes. Examples of road maintenance include shaping and/or
20 rocking a road surface; outsloping; installation and maintenance of
21 rolling and critical dips; restoring functional capacity of inboard
22 ditches, cross drains, or culverts; and repairing water bars.
23

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

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

14
15 **Sidecast** means excess earthen material pushed or dumped ~~to or~~ over the
16 side of a roads or landings.

17
18 **Significant sediment discharge** means soil erosion that is currently,
19 or may be in the future, discharged to watercourses or lakes in
20 quantities that violate of Water Quality Requirements or result in
21 significant individual or cumulative adverse impacts to the beneficial
22 uses of water.

23
24 **Significant existing or potential erosion site** means a location where
25 soil erosion is currently, or may be in the future, discharged to
watercourses or lakes in quantities that violate Water Quality

1 Requirements or result in significant individual or cumulative adverse
2 impacts to the beneficial uses of water. A site that is eroding but is
3 not delivering, or does not have the potential to deliver sediment to
4 a water body, is not a significant existing or potential erosion site.

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

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

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

17
18 **Amend 14 CCR § 914.7 [934.7, 954.7]. Timber Operations, Winter**
19 **Period.**

20 During the winter period:

21 (a) Mechanical site preparation and timber harvesting, shall not be
22 conducted unless a winter period operating plan is incorporated in the
23 timber harvesting plan and is followed, or unless the requirements of
24 subsection (c) are met. Cable, helicopter and balloon yarding methods
25 are exempted.

(b) The winter period operating plan shall include the specific

1 measures to be taken in winter timber operations to minimize damage
2 due to erosion, soil movement into watercourses and soil compaction
3 from felling, yarding, loading, mechanical site preparation, and
4 erosion control activities. A winter period operating plan shall
5 address the following subjects:

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

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

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

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

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

10
11 **Amend 14 CCR § 915.1 [935.1, 955.1]. Use of Heavy Equipment for Site**
12 **Preparation.**

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

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

21
22 **Amend § 916.3 [936.3, 956.3]. General Limitations Near Watercourses,**
23 **Lakes, Marshes, Meadows and Other Wet Areas**

24 (c) The timber operator shall not ~~construct or reconstruct roads,~~
25 ~~construct or use tractor roads or landings~~ in Class I, II, III or IV
watercourses, in the WLPZ, marshes, wet meadows, and other wet areas

1 unless when explained and justified in the ~~THP~~ plan by the RPF, and
2 approved by the Director, except as follows:

3 (1) At prepared tractor road crossings as described in 14 CCR §
4 914.8(b) [934.8(b), 954.8(b)].

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

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

8 ~~(4)~~(3) At new tractor ~~and~~ road crossings approved as part of
9 the Fish and Game Code process (F&GC 1600 et seq.).

10 ~~Use of existing roads is addressed in 916.4(a) [936.4(a),~~
11 ~~956.4(a)].~~

12
13 **Amend 916.4 [936.4, 956.4]. Watercourse and Lake Protection.**

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

17 (1) As part of this field examination, the RPF or
18 supervised designee shall evaluate areas near, and areas with the
19 potential to directly impact, watercourses and lakes for sensitive
20 conditions including, but not limited to, ~~existing and proposed roads,~~
21 ~~skidtrails and landings,~~ unstable and erodible watercourse banks,
22 unstable upslope areas, debris, jam potential, inadequate flow
23 capacity, changeable channels, overflow channels, flood prone areas,
24 and riparian zones wherein the values set forth in 14 CCR §§ 916.4(~~b~~)
25 [936.4(~~b~~), 956.4(~~b~~)], subsection(b) are impaired. *****

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

8 **Geographic scope** - Requirements for watersheds with listed
9 anadromous salmonids differ depending on the geographic location of
10 the watershed and geomorphic characteristics of the watercourse.
11 Unique requirements for watersheds with listed anadromous salmonids
12 are set forth for 1) watercourses in the coastal anadromy zone with
13 confined channels, 2) watercourses with flood prone areas or channel
14 migration zones, and 3) watercourses with confined channels located
15 outside the coastal anadromy zone.

16 Watersheds which do not meet the definition of "watersheds with
17 listed anadromous salmonids" are not subject to this section except as
18 follows: The provisions of 14 CCR 916.9 [936.9, 956.9], subsections
19 (k)-(q), ~~923.3 [943, 963]~~ and ~~923.9 [943.9, 963.9]~~ also apply to
20 planning watersheds immediately upstream of, and contiguous to, any
21 watershed with listed anadromous salmonids for purposes of reducing
22 significant adverse impacts from transported fine sediment. Projects
23 in other watersheds further upstream that flow into watersheds with
24 listed anadromous salmonids, not otherwise designated above, may be
25 subject to these provisions based on an assessment consistent with
cumulative impacts assessment requirements in 14 CCR §§ 898 and 912.9

1 [932.9, 952.9] and Technical Rule Addendum No. 2, Cumulative Impacts
2 Assessment. These requirements do not apply to upstream watersheds
3 where permanent dams attenuate the transport of fine sediment to
4 downstream watercourses with listed anadromous salmonids.*****

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

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

9 (A) Clear and enforceable specifications of timber
10 operations within the Class I WLPZ, including a description of how any
11 disturbance, or log or tree cutting and removal shall be carried out
12 to conform with 14 CCR §§ 916.2 [936.2, 956.2], subsection (a) and
13 916.9 [936.9, 956.9], subsection (a).

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

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

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

25 (EB) Documentation of how proposed harvesting in the WLPZ
contributes to the objectives of each zone stated in 14 CCR § 916.9

1 [936.9, 956.9], subsection (c) and other goals in 14 CCR § 916.9
2 [936.9, 956.9], subsection (a) (1)-(8). Documentation shall include
3 the examinations, analysis, and other requirements listed in 14 CCR §
4 916.4 [936.4, 956.4], subsection (a).*****

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

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

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

16 ~~5.4. Avoid Slash concentration and site~~
17 ~~preparation:***** or pile burning.~~

18 ~~6.5. Delineate Zone on the Ground:*****~~ Locations
19 of all WLPZ zones and CMZs shall be designated on the ground.

20 ~~7.6. Avoid Use of Water Drafting Sites:*****~~ or
21 stream alteration permits.

22 ~~8.7. Avoid Disturbance to Critical Flood Prone~~
23 ~~Area Habitat::*****~~ and down large woody debris.

24 (F) Outer Zone:*****
25 ***** (k) Year-round logging road, landing and tractor road use
limitations.

1 ~~(1) Logging roads, landings or Tttractor roads shall not be~~
2 used when operations may result in significant sediment discharge
3 ~~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 sufficient to cause a~~
6 ~~visible increase in turbidity of downstream waters in receiving Class~~
7 ~~I, II, III or IV waters or violate Water Quality Requirements.~~

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

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

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

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

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

4 (1) No timber operations shall take place unless the approved
5 plan incorporates a complete winter period operating plan pursuant to
6 14 CCR § 914.7 [934.7, 954.7], subsection (a) that specifically
7 addresses, where applicable, proposed ~~logging road, landing or tractor~~
8 ~~road construction, reconstruction and use during the extended wet~~
9 ~~weather period. Where logging road watercourse crossing construction~~
10 ~~or reconstruction is proposed an implementation schedule shall be~~
11 ~~specified.~~

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

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

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

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

9 (1)*****

10 *******(C)** Disturbed tractor road cut banks and fills,
11 and*****

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

17 (3)*****

18 *******(o)** Section reserved for future use. ~~Erosion site~~
19 ~~identification and remedies~~*****

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

24 *****

25 *******(r)** Section reserved for future use. ~~Water drafting~~ - Water
drafting for timber operations shall:

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

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

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

8 ~~(A) a general description of the conditions and proposed~~
9 ~~water drafting;~~

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

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

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

16 ~~(E) the estimated drainage area (acres) above the point~~
17 ~~of diversion;~~

18 ~~(F) the estimated unimpeded streamflow, pumping rate, and~~
19 ~~drafting duration,~~

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

24 ~~(H) a discussion of proposed alternatives and measures to~~
25 ~~prevent adverse effects to fish and wildlife resources, such as~~
~~reducing hose diameter; using gravity-fed tanks instead of truck~~

1 ~~pumping; reducing the instantaneous or daily intake at one location;~~
2 ~~describing allowances for recharge time; using other dust palliatives;~~
3 ~~and drafting water at alternative sites; and~~ _____

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

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

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

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

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

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

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

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

1 minute.

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

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

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

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

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

21 ~~2. Diversion rate shall not exceed 10 percent of the~~
22 ~~surface flow.~~

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

24 ~~(F) The drafting operator shall keep a log that records~~
25 ~~for each time water is drafted, the date, total pumping time, pump~~
~~rate, starting time, ending time, and volume diverted. Logs shall be~~

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

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

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

12
13 **Amend § 918.3 [938.3, 958.3]. Roads to be Kept Passable**

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

17
18 **Amend Article 12. [Article 11. Northern] Logging Roads, Landings, and**
19 **Logging Road Watercourse Crossings. Logging Roads and Landings**

20
21 **Amend § 923 [943,963]. Intent for Logging Roads, Landings, and Logging**
22 **Road Watercourse Crossings Logging Roads and Landings.**

23 **(a) All logging roads, landings, and logging road watercourse**
24 **crossings in the logging area shall be planned, constructed,**
25 **reconstructed, used, maintained, removed, abandoned, and deactivated**
in a manner that:

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

3 (2) Accommodates appropriate yarding systems.

4 (3) Is economically feasible.

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

8 (1) Public safety.

9 (2) Listed species of fish and wildlife.

10 (3) Fish and wildlife habitat.

11 (4) Water quality and the beneficial uses of water.

12 (5) Soil resources.

13 (6) Significant archeological and historical sites.

14 (7) Air quality.

15 (8) Visual resources.

16 (9) Worker safety.

17 (10) Fire hazard.

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

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

25 (e) For watersheds with listed anadromous salmonids and for planning
watersheds immediately upstream of, and contiguous to, any watershed

1 with listed anadromous salmonids all logging roads, landings, and
2 logging road watercourse crossings shall be planned, designed,
3 constructed and reconstructed, used, maintained , abandoned,
4 deactivated, and removed in accordance with 14 CCR § 916.9 (a) and (c)
5 [936.9 (a) and (c), 956.9 (a) and (c)].

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

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

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

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

21 (4) A valid Habitat Conservation Plan (HCP) that addresses
22 anadromous salmonid protection, approved under Section 10 of the
23 federal Endangered Species Act of 1973; or

24 (5) Project revisions, guidelines, or take avoidance measures
25 pursuant to a memorandum of understanding or a planning agreement
entered into between the plan submitter and DFG in preparation of

1 obtaining a natural community conservation plan that addresses
2 anadromous salmonid protection.

3 ~~All logging roads and landings in the logging area shall be planned,~~
4 ~~located, constructed, reconstructed, used, and maintained in a manner~~
5 ~~which: is consistent with long term enhancement and maintenance of the~~
6 ~~forest resource; best accommodates appropriate yarding systems, and~~
7 ~~economic feasibility; minimizes damage to soil resources and fish and~~
8 ~~wildlife habitat; and prevents degradation of the quality and~~
9 ~~beneficial uses of water. The provisions of this article shall be~~
10 ~~applied in a manner which complies with this standard.~~

11 ~~Factors that shall be considered when selecting feasible alternatives~~
12 ~~(see 14 CCR 897 and 898) shall include, but are not limited to, the~~
13 ~~following:~~

- 14 ~~(a) Use of existing roads whenever feasible.~~
- 15 ~~(b) Use of systematic road layout patterns to minimize total mileage.~~
- 16 ~~(c) Planned to fit topography to minimize disturbance to the natural~~
17 ~~features of the site.~~
- 18 ~~(d) Avoidance of routes near the bottoms of steep and narrow canyons,~~
19 ~~through marshes and wet meadows, on unstable areas, and near~~
20 ~~watercourses or near existing nesting sites of threatened or~~
21 ~~endangered bird species.~~
- 22 ~~(e) Minimization of the number of watercourse crossings.~~
- 23 ~~(f) Location of roads on natural benches, flatter slopes and areas of~~
24 ~~stable soils to minimize effects on watercourses.~~
- 25 ~~(g) Use of logging systems which will reduce excavation or~~
~~placement of fills on unstable areas.~~

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 following:

8 (1) Duplicative roads and 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 and the size of 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 (10) Maintenance needs while being compatible with the logging
25 road classification and long-term road usage.

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

5 (1) At existing logging road watercourse crossings.

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

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

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

17 (d) As part of the planning and use of logging roads, landings, and
18 watercourse crossings in the logging area, the RPF or supervised
19 designee shall: 1) evaluate and document the potential of the road or
20 landing to impact sensitive conditions and 2) locate and map
21 significant existing and potential erosion sites, and 3) specify and
22 schedule feasible treatments to mitigate significant adverse impacts
23 from the road or landing.

24 (1) During the field examination of classified watercourses and
25 lakes required under 14 CCR § 916.4 [936.4, 956.4], the RPF or
supervised designee shall evaluate watercourse areas near existing,

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

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

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

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

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

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

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

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

5 (E) The erodibility of hillslope material exposed by the
6 road.

7 (F) The length of hydrologic connectivity of a road
8 segment, the physical properties of the connected segment and the
9 presence or absence and functionality of erosion resistant material
10 adjacent to the connected segment.

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

16 (4) The RPF shall describe in the plan feasible protection
17 measures and treatments for roads and landings that impact identified
18 sensitive conditions.

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

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

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

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

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

5 (6) Disclose and map the significant existing and potential
6 erosion sites identified in 14 CCR § 923.1 [943.1, 963.1], subsection
7 (d)(2), for which no feasible treatment measures exist.

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

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

17 (f) In watersheds with listed anadromous salmonids and in planning
18 watersheds immediately upstream of, and contiguous to, any watershed
19 with listed anadromous salmonids, where logging road or landing
20 construction or reconstruction is proposed, the plan shall identify:

21 (1) How the proposed operations will fit into the systematic
22 layout pattern.

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

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

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

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

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

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

17 ~~The following standards for logging roads and landings shall be~~
18 ~~adhered to:~~

19 ~~(a) All logging roads shall be located and classified on the THP map~~
20 ~~as permanent, seasonal, or temporary. Road failures on existing roads~~
21 ~~which will be reconstructed shall also be located on the THP map. In~~
22 ~~addition to the requirements of 14 CCR 1034(x), the probable location~~
23 ~~of those landings which require substantial excavation or which exceed~~
24 ~~one quarter acre in size, shall be shown on the THP map.~~

25 ~~(b) New logging roads shall be planned in accordance with their~~
~~classification and maintenance requirements.~~

1 ~~(c) Logging roads and landings shall be planned and located, when~~
2 ~~feasible, to avoid unstable areas. The Director shall approve an~~
3 ~~exception if those areas are unavoidable, and site specific measures~~
4 ~~to minimize slope instability due to construction are described and~~
5 ~~justified in the THP.~~

6 ~~(d) Where roads and landings will be located across 100 feet or more~~
7 ~~of lineal distance on any slopes over 65% or on slopes over 50% which~~
8 ~~are within 100 ft. of the boundary of a WLPZ, measures to minimize~~
9 ~~movement of soil and the discharge of concentrated surface runoff~~
10 ~~shall be incorporated in the THP. The Director may waive inclusion of~~
11 ~~such measures where the RPF can show that slope depressions, drainage~~
12 ~~ways, and other natural retention and detention features are~~
13 ~~sufficient to control overland transport of eroded material. The~~
14 ~~Director may require end hauling of material from areas within 100 ft.~~
15 ~~of the boundary of a WLPZ to a stable location if end hauling is~~
16 ~~feasible and is necessary to protect water quality. The Director shall~~
17 ~~require maintenance provisions in the THP for drainage structures and~~
18 ~~facilities provided that such maintenance is feasible and necessary to~~
19 ~~keep roadbeds and fills stable.~~

20 ~~(e) New logging roads shall not exceed a grade of 15% except that~~
21 ~~itches of up to 20% shall be allowed not to exceed 500 continuous~~
22 ~~feet (152.4 m). These percentages and distances may be exceeded only~~
23 ~~where it can be explained and justified in the THP that there is no~~
24 ~~other feasible access for harvesting of timber or where in the~~
25 ~~Northern or Southern Districts use of a gradient in excess of 20% will~~
~~serve to reduce soil disturbance.~~

1 ~~(f) Roads and landings shall be planned so that an adequate number of~~
2 ~~drainage facilities and structures are installed to minimize erosion~~
3 ~~on roadbeds, landing surfaces, sidecast and fills.~~

4 ~~(g) Unless exceptions are explained and justified in the THP, general~~
5 ~~planning requirements for roads shall include:~~

6 ~~(1) Logging roads shall be planned to a single lane width compatible~~
7 ~~with the largest type of equipment used in the harvesting operation~~
8 ~~with turnouts at reasonable intervals.~~

9 ~~(2) Roads shall be planned to achieve as close a balance between cut~~
10 ~~volume and fill volume as is feasible.~~

11 ~~(3) When roads must be planned so that they are insloped and ditched~~
12 ~~on the uphill side, drainage shall be provided by use of an adequate~~
13 ~~number of ditch drains.~~

14 ~~(h) Road construction shall be planned to stay out of Watercourse and~~
15 ~~Lake Protection Zones. When it is a better alternative for protection~~
16 ~~of water quality or other forest resources, or when such roads are the~~
17 ~~only feasible access to timber, exceptions may be explained and~~
18 ~~justified in the THP and shall be agreed to by the Director if they~~
19 ~~meet the requirements of this subsection.~~

20 ~~(i) [Coast] The location of all logging roads to be constructed shall~~
21 ~~be flagged or otherwise identified on the ground before submission of~~
22 ~~a THP or major amendment. Exceptions may be explained and justified in~~
23 ~~the THP and agreed to by the Director if flagging is unnecessary as a~~
24 ~~substantial aid to examining: (1) compatibility between road location~~
25 ~~and yarding and silvicultural systems, or (2) possible significant~~

1 ~~adverse effects of road location on water quality, soil productivity,~~
2 ~~wildlife habitat, or other special features of the area.~~

3 ~~(i) [Northern, Southern] All logging roads to be constructed shall be~~
4 ~~flagged or otherwise identified on the ground before submission of a~~
5 ~~THP or, substantial deviation, except for temporary roads less than~~
6 ~~600 ft. in length that would meet the requirements for a minor~~
7 ~~deviation (see 14 CCR 1036, 1039, 1040) if they were submitted as~~
8 ~~such. Exceptions may be explained and justified in the THP and agreed~~
9 ~~to by the Director if flagging or other identification is unnecessary~~
10 ~~as a substantial aid to examining: (1) compatibility between road~~
11 ~~location and yarding and silvicultural systems or (2) possible~~
12 ~~significant adverse effects of road location on water quality, soil~~
13 ~~productivity, wildlife habitat, or other special features of the area.~~

14 ~~(j) If logging roads will be used from the period of October 15 to May~~
15 ~~1, hauling shall not occur when saturated soil conditions exist on the~~
16 ~~road that may produce sediment in quantities sufficient to cause a~~
17 ~~visible increase in turbidity of downstream waters in receiving Class~~
18 ~~I, II, III or IV waters or that violate Water Quality Requirements.~~

19
20 **Amend § 923.2 [943.2, 963.2]. Design and Location for Logging Roads and**
21 **Landings Road Construction.**

22 Constructed and reconstructed logging roads and landings shall be
23 designed and located in accordance with their proposed use,
24 maintenance requirements, and the approved plan:

25 (a) All logging roads and landings shall:

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

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

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

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

7 (5) Be hydrologically disconnected from watercourses and lakes to
8 the extent feasible.

9 (6) Include adequate drainage structures and facilities necessary
10 to avoid concentrating and diverting runoff, to minimize erosion of
11 roadbeds, landing surfaces, drainage ditches, sidecast and fills, to
12 minimize the potential for soil erosion and sediment transport, and to
13 prevent significant sediment discharge.

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

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

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

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% that
14 extend greater than 500 continuous feet. Exceptions may be approved
15 where there is no other feasible access for harvesting of timber or
16 where use of a gradient greater than 20% will serve to reduce soil
17 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 ~~Logging roads shall be constructed or reconstructed in accordance with~~
~~the following requirements or as proposed by the RPF, justified in the~~

1 ~~THP, and found by the Director to be in conformance with the~~
2 ~~requirements of this Article.~~

3 ~~(a) Logging roads shall be constructed in accordance with the approved~~
4 ~~THP. If a change in designation of road classification is subsequently~~
5 ~~made, the change shall be reported in accordance with 14 CCR 1039 or~~
6 ~~1040, as appropriate.~~

7 ~~(b) Where a road section which is greater than 100 feet in length~~
8 ~~crosses slopes greater than 65%, placement of fill is prohibited and~~
9 ~~placement of sidecast shall be minimized to the degree feasible. The~~
10 ~~Director may approve an exception where site specific measures to~~
11 ~~minimize slope instability, soil erosion, and discharge of~~
12 ~~concentrated surface runoff are described and justified in the THP.~~

13 ~~(c) On slopes greater than 50%, where the length of road section is~~
14 ~~greater than 100 ft., and the road is more than 15 ft. wide (as~~
15 ~~measured from the base of the cut slope to the outside of the berm or~~
16 ~~shoulder of the road) and the fill is more than 4 ft. in vertical~~
17 ~~height at the road shoulder for the entire 100 feet the road shall be~~
18 ~~constructed on a bench that is excavated at the proposed toe of the~~
19 ~~compacted fill and the fill shall be compacted. The Director may~~
20 ~~approve exception to this requirement where on a site specific basis~~
21 ~~if the RPF has described and justified an alternative practice that~~
22 ~~will provide equal protection to water quality and prevention of soil~~
23 ~~erosion.~~

24 ~~(d) [Coast] Fills, including through fills across watercourses shall~~
25 ~~be constructed in a manner to minimize erosion of fill slopes using~~

1 ~~techniques such as insloping through fill approaches, waterbars,~~
2 ~~berms, rock armoring of fill slopes, or other suitable methods.~~

3 ~~(d) [Northern, Southern] Roads shall be constructed so no break in~~
4 ~~grade, other than that needed to drain the fill, shall occur on~~
5 ~~through fill; breaks in grade shall be above or below the through~~
6 ~~fill, as appropriate. Where conditions do not allow the grade to break~~
7 ~~as required, through fills must be adequately protected by additional~~
8 ~~drainage structures or facilities.~~

9 ~~(e) Through fills shall be constructed in approximately one foot~~
10 ~~lifts.~~

11 ~~(f) On slopes greater than 35 percent, the organic layer of the soil~~
12 ~~shall be substantially disturbed or removed prior to fill placement.~~

13 ~~The RPF may propose an exception in the THP and the Director may~~
14 ~~approve the exception where it is justified that the fill will be~~
15 ~~stabilized.~~

16 ~~(g) Excess material from road construction and reconstruction shall be~~
17 ~~deposited and stabilized in a manner or in areas where downstream~~
18 ~~beneficial uses of water will not be adversely affected.~~

19 ~~(h) Drainage structures and facilities shall be of sufficient size,~~
20 ~~number and location to carry runoff water off of roadbeds, landings~~
21 ~~and fill slopes. Drainage structures or facilities shall be installed~~
22 ~~so as to minimize erosion, to ensure proper functioning, and to~~
23 ~~maintain or restore the natural drainage pattern. Permanent~~
24 ~~watercourse crossings and associated fills and approaches shall be~~
25 ~~constructed where feasible to prevent diversion of stream overflow~~

1 ~~down the road and to minimize fill erosion should the drainage~~
2 ~~structure become plugged.~~

3 ~~(i) Where there is evidence that soil and other debris is likely to~~
4 ~~significantly reduce culvert capacity below design flow, oversize~~
5 ~~culverts, trash racks, or similar devices shall be installed in a~~
6 ~~manner that minimizes culvert blockage.~~

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

12 ~~(k) Logging roads shall be constructed without overhanging banks.~~

13 ~~(l) Any tree over 12 inches (30.5 cm) d.b.h. with more than 25% of the~~
14 ~~root surface exposed by road construction, shall be felled~~
15 ~~concurrently with the timber operations.~~

16 ~~(m) Sidecast or fill material extending more than 20 ft. (6.1 m) in~~
17 ~~slope distance from the outside edge of the roadbed which has access~~
18 ~~to a watercourse or lake which is protected by a WLPZ shall be seeded,~~
19 ~~planted, mulched, removed, or treated as specified in the THP, to~~
20 ~~adequately reduce soil erosion.~~

21 ~~(n) All culverts at watercourse crossings in which water is flowing at~~
22 ~~the time of installation shall be installed with their necessary~~
23 ~~protective structures concurrently with the fill, construction and~~
24 ~~reconstruction of logging roads. Other permanent drainage structures~~
25 ~~shall be installed no later than October 15. For construction and~~

1 ~~reconstruction of roads after October 15, drainage structures shall be~~
2 ~~installed concurrently with the activity.~~

3 ~~(o) Drainage structures and drainage facilities on logging roads shall~~
4 ~~not discharge on erodible fill or other erodible material unless~~
5 ~~suitable energy dissipators are used. Energy dissipators suitable for~~
6 ~~use with waterbreaks are described in 14 CCR 914.6(f) [934.6(f),~~
7 ~~954.6(f)].~~

8 ~~(p) Where roads do not have permanent and adequate drainage, the~~
9 ~~specifications of Section 914.6 [934.6, 954.6] shall be followed.~~

10 ~~(q) Drainage facilities shall be in place and functional by October~~
11 ~~15. An exception is that waterbreaks do not need to be constructed on~~
12 ~~roads in use after October 15 provided that all such waterbreaks are~~
13 ~~installed prior to the start of rain that generates overland flow.~~

14 ~~(r) No road construction shall occur under saturated soil conditions~~
15 ~~that may produce sediment in quantities sufficient to cause a visible~~
16 ~~increase in turbidity of downstream waters in receiving Class I, II,~~
17 ~~III or IV waters or that violate Water Quality Requirements, except~~
18 ~~that construction may occur on isolated wet spots arising from~~
19 ~~localized ground water such as springs, provided measures are taken to~~
20 ~~prevent material from significantly damaging water quality.~~

21 ~~(s) Completed road construction shall be drained by outsloping,~~
22 ~~waterbreaks and/or cross draining before October 15. If road~~
23 ~~construction takes place from October 15 to May 1, roads shall be~~
24 ~~adequately drained concurrent with construction operations.~~

25 ~~(t) Roads to be used for log hauling during the winter period shall~~
~~be, where necessary, surfaced with rock in depth and quantity~~

1 ~~sufficient to maintain a stable road surface that does not produce~~
2 ~~sediment in quantities that may cause a visible increase in turbidity~~
3 ~~of downstream waters in receiving Class I, II, III or IV waters or~~
4 ~~would violate Water Quality Requirements throughout the period of use.~~
5 ~~Exceptions may be proposed by the RPF, justified in the THP, and found~~
6 ~~by the Director to be in conformance with the requirements of this~~
7 ~~subsection.~~

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

12 ~~(v) Road construction activities in the WLPZ, except for stream~~
13 ~~crossings or as specified in the THP, shall be prohibited.~~

14
15 **Amend § 923.3 [943.3, 963.3]. Mapping and Identification for Logging**
16 **Roads and Landings Watercourse Crossings.**

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

19 (a) For logging road- and landing-related mapping requirements refer
20 to 14 CCR §§ 1034(x)(4)(A)-(B) and (5)(A)-(L), 1090.5(w)(4)-(6),
21 1090.5(hh), 1090.7(n)(4)-(6), and 1092.09(1)(5)(A)-(B) and (6)(A)-(L).

22 (b) For logging road- and landing-related disclosure and description
23 requirements refer to 14 CCR §§ 1034(bb)

24 (c) The RPF shall identify in the field all constructed and
25 reconstructed logging roads and landings:

(1) Across slopes greater than 65 percent for 100 lineal feet

1 or more.

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

5 (d) The location of all logging roads to be constructed or
6 reconstructed shall be flagged or otherwise identified on the ground
7 prior to the pre-harvest inspection. Exceptions may be explained and
8 justified in the plan and agreed to by the Director if flagging is
9 unnecessary as a substantial aid to examining: (1) compatibility
10 between logging road location and yarding and silvicultural systems,
11 or (2) possible significant adverse effects of logging road location
12 on the factors listed under 14 CCR § 923(b) [943(b), 963(b)].

13 ~~Watercourse crossing drainage structures on logging roads shall be~~
14 ~~planned, constructed, reconstructed, and maintained or removed,~~
15 ~~according to the following standards. Exceptions may be provided~~
16 ~~through application of Fish and Game Code Sections 1600 et seq. and~~
17 ~~shall be included in the THP.~~

18 ~~(a) The location of all new permanent watercourse crossing drainage~~
19 ~~structures and temporary crossings located within the WLPZ shall be~~
20 ~~shown on the THP map. If the structure is a culvert intended for~~
21 ~~permanent use, the minimum diameter of the culvert shall be specified~~
22 ~~in the plan. Extra culverts beyond those shown in the THP map may be~~
23 ~~installed as necessary.~~

24 ~~(b) The number of crossings shall be kept to a feasible minimum.~~

25 ~~(c) Drainage structures on watercourses that support fish shall allow~~
~~for unrestricted passage of all life stages of fish that may be~~

1 ~~present, and shall be fully described in the plan in sufficient~~
2 ~~clarity and detail to allow evaluation by the review team and the~~
3 ~~public, provide direction to the LTO for implementation, and provide~~
4 ~~enforceable standards for the inspector.~~

5 ~~(d) When watercourse crossings, other drainage structures, and~~
6 ~~associated fills are removed, the following standards shall apply:~~

7 ~~(1) Fills shall be excavated to form a channel that is as close as~~
8 ~~feasible to the natural watercourse grade and orientation, and that is~~
9 ~~wider than the natural channel.~~

10 ~~(2) The excavated material and any resulting cut bank shall be sloped~~
11 ~~back from the channel and stabilized to prevent slumping and to~~
12 ~~minimize soil erosion. Where needed, this material shall be stabilized~~
13 ~~by seeding, mulching, rock armoring, or other suitable treatment.~~

14 ~~(e) All permanent watercourse crossings that are constructed or~~
15 ~~reconstructed shall accommodate the estimated 100 year flood flow,~~
16 ~~including debris and sediment loads.~~

17 ~~(f) Watercourse crossings and associated fills and approaches shall be~~
18 ~~constructed or maintained to prevent diversion of stream overflow down~~
19 ~~the road and to minimize fill erosion should the drainage structure~~
20 ~~become obstructed. The RPF may propose an exception where explained in~~
21 ~~the THP and shown on the THP map and justified how the protection~~
22 ~~provided by the proposed practice is at least equal to the protection~~
23 ~~provided by the standard rule.~~

24 ~~(g) All new permanent culverts on Class I watercourses, where fish are~~
25 ~~always or seasonally present or where fish habitat is restorable,~~
~~shall be planned, designed and constructed to allow upstream and~~

1 ~~downstream passage of fish or listed aquatic species during any life~~
2 ~~stage and for the natural movement of bedload to form a continuous bed~~
3 ~~through the culvert and shall require an analysis and specifications~~
4 ~~demonstrating conformance with the intent of this section and~~
5 ~~subsection.~~

6
7 **Amend § 923.4 [943.4, 963.4]. Construction and Reconstruction for**
8 **Logging Roads and Landings Road Maintenance.**

9 Logging roads and landings shall be constructed or reconstructed in
10 accordance with the approved plan and the following requirements. If
11 a change in designation of logging road classification is made after
12 the plan is approved, the change shall be reported in accordance with
13 14 CCR §§ 1039, 1040, 1090.14, 1092.26 or 1092.27, as appropriate.

14 (a) Logging roads and landings shall not be constructed or
15 reconstructed where such operations pose a significant risk to public
16 safety.

17 (b) Logging roads or landings shall not be constructed or
18 reconstructed in Class I, II, III, or IV watercourses or lakes, the
19 WLPZ, marshes, wet meadows, or other wet areas, except for logging
20 road watercourse crossings or as specified in the plan.

21 (c) Logging roads and landings shall not be constructed or
22 reconstructed across unstable areas or connected headwall swales
23 except as specified in the Plan.

24 (d) Logging roads and landings shall not be constructed with
25 overhanging banks.

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

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

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

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

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

17 (j) Logging roads or landings shall not be constructed or
18 reconstructed under saturated soil conditions, except that
19 construction may occur on isolated wet spots arising from localized
20 ground water such as springs, provided measures are taken to prevent
21 significant sediment discharge.

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

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

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

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

8 (m) Logging roads and landings approved for construction or
9 reconstruction across 100 feet or more of lineal distance on any slope
10 greater than 65 percent or within 100 feet of the boundary of a WLPZ
11 on slopes greater than 50 percent that drain toward the zoned
12 watercourse or lake shall be constructed to the specific construction
13 techniques or measures as described in the plan.

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

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

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

20 (1) Public safety.

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

22 (q) Where conditions are encountered during logging road or landing
23 construction or reconstruction that differ from what was anticipated
24 during the preparation and review of the plan and that will result in
25 a significant adverse impact on the environment or to public safety,
the LTO shall inform the RPF or plan submitter of these unanticipated

1 conditions in accordance with 14 CCR § 1035.3. If necessary, the
2 responsible RPF or plan submitter shall submit to the Director a
3 deviation to the plan describing the unanticipated conditions and
4 proposing appropriate actions.

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

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

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

15 (A) Specific provisions for the protection of salmonid
16 habitat shall be identified and described for all logging road
17 construction.

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

1 (C) Logging roads may be constructed with balanced cuts and
2 fills:

3 (i) If properly engineered, or,

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

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

12 ~~Logging roads, landings, and associated drainage structures used in a~~
13 ~~timber operation shall be maintained in a manner which minimizes~~
14 ~~concentration of runoff, soil erosion, and slope instability and which~~
15 ~~prevents degradation of the quality and beneficial uses of water~~
16 ~~during timber operations and throughout the prescribed maintenance~~
17 ~~period. In addition those roads which are used in connection with~~
18 ~~stocking activities shall be maintained throughout their use even if~~
19 ~~this is beyond the prescribed maintenance period.~~

20 ~~(a) The prescribed maintenance period for erosion controls on~~
21 ~~permanent and seasonal roads and associated landings and drainage~~
22 ~~structures which are not abandoned in accordance with 14 CCR 923.8~~
23 ~~[943.8, 963.8] shall be at least one year. The Director may prescribe~~
24 ~~a maintenance period extending up to three years in accordance with 14~~
25 ~~CCR 1050.~~

1 ~~(b) Upon completion of timber operations, temporary roads and~~
2 ~~associated landings shall be abandoned in accordance with 14 CCR 923.8~~
3 ~~[943.8, 963.8].~~

4 ~~(c) Waterbreaks shall be maintained as specified in 14 CCR 914.6~~
5 ~~[934.6, 954.6].~~

6 ~~(d) Unless partially blocked to create a temporary water source,~~
7 ~~watercourse crossing facilities and drainage structures, where~~
8 ~~feasible, shall be kept open to the unrestricted passage of water.~~
9 ~~Where needed, trash racks or similar devices shall be installed at~~
10 ~~culvert inlets in a manner which minimizes culvert blockage. Temporary~~
11 ~~blockages shall be removed by November 15.~~

12 ~~(e) Before the beginning of the winter period, all roadside berms~~
13 ~~shall be removed from logging roads or breached, except where needed~~
14 ~~to facilitate erosion control.~~

15 ~~(f) Drainage structures, if not adequate to carry water from the~~
16 ~~fifty year flood level, shall be removed in accordance with 14 CCR~~
17 ~~923.3(d) [943.3(d), 963.3(d)] by the first day of the winter period,~~
18 ~~before the flow of water exceeds their capacity if operations are~~
19 ~~conducted during the winter period, or by the end of timber operations~~
20 ~~whichever occurs first. Properly functioning drainage structures on~~
21 ~~roads that existed before timber operations need not be removed. An~~
22 ~~RPF may utilize an alternative practice, such as breaching of fill, if~~
23 ~~the practice is approved by the Director as providing greater or equal~~
24 ~~protection to water quality as removal of the drainage structure.~~

25 ~~(g) Temporary roads shall be blocked or otherwise closed to normal~~
~~vehicular traffic before the winter period.~~

1 ~~(h) During timber operations, road running surfaces in the logging~~
2 ~~area shall be treated as necessary to prevent excessive loss of road~~
3 ~~surface materials by, but not limited to, rocking, watering,~~
4 ~~chemically treating, asphaltting or oiling.~~

5 ~~(i) Soil stabilization treatments on road or landing cuts, fills, or~~
6 ~~sidecast shall be installed or renewed, when such treatment could~~
7 ~~minimize surface erosion which threatens the beneficial uses of water.~~

8 ~~(j) Drainage ditches shall be maintained to allow free flow of water~~
9 ~~and minimize soil erosion.~~

10 ~~(k) Action shall be taken to prevent failures of cut, fill, or~~
11 ~~sidecast slopes from discharging materials into watercourses or lakes~~
12 ~~in quantities deleterious to the quality or beneficial uses of water.~~

13 ~~(l) Each drainage structure and any appurtenant trash rack shall be~~
14 ~~maintained and repaired as needed to prevent blockage and to provide~~
15 ~~adequate carrying capacity. Where not present, new trash racks shall~~
16 ~~be installed if there is evidence that woody debris is likely to~~
17 ~~significantly reduce flow through a drainage structure.~~

18 ~~(m) Inlet and outlet structures, additional drainage structures~~
19 ~~(including ditch drains), and other features to provide adequate~~
20 ~~capacity and to minimize erosion of road and landing fill and sidecast~~
21 ~~to minimize soil erosion and to minimize slope instability shall be~~
22 ~~repaired, replaced, or installed wherever such maintenance is needed~~
23 ~~to protect the quality and beneficial uses of water.~~

24 ~~(n) Permanent watercourse crossings and associated approaches shall be~~
25 ~~maintained to prevent diversion of stream overflow down the road~~
~~should the drainage structure become plugged. Corrective action shall~~

1 ~~be taken before the completion of timber operations or the drainage~~
2 ~~structure shall be removed in accordance with 14 CCR Section 923.3(d)~~
3 ~~[943.3(d), 963.3(d)].~~

4 ~~(o) Except for emergencies and maintenance needed to protect water~~
5 ~~quality, use of heavy equipment for maintenance is prohibited during~~
6 ~~wet weather where roads or landings are within a WLPZ.~~

7 ~~(p) The Director may approve an exception to a requirement set forth~~
8 ~~in subsections (b) through (o) above when such exceptions are~~
9 ~~explained and justified in the THP and the exception would provide for~~
10 ~~the protection of the beneficial uses of water or control erosion to a~~
11 ~~standard at least equal to that which would result from the~~
12 ~~application of the standard rule.~~

13
14 **Amend § 923.5 [943.5,963.5]. Erosion Control for Logging Roads and**
15 **Landings Landing Construction.**

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

18 (a) All logging road and landing surfaces shall be adequately drained
19 through the use of surface geometry configurations in combination with
20 the installation of drainage structures or facilities and shall be
21 hydrologically disconnected from watercourses and lakes to the extent
22 feasible.

23 (b) Drainage facilities shall be installed along all logging roads
24 and all landings that are used for timber operations in sufficient
25 number to minimize soil erosion and sediment transport and to prevent
significant sediment discharge.

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

3 (1) Be adequately sized to transmit runoff.

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

5 (3) Avoid discharge onto fill.

6 (4) Discharge to erosion resistant material.

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

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

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

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

3 MAXIMUM DISTANCE BETWEEN WATERBREAKS

4 Estimated Logging Road Gradient in Percent

5 Hazard 10 or less 11-25 >25

6 Rating

7 Feet Feet Feet

8 Extreme 100 75 50

9 High 150 100 75

10 Moderate 200 150 100

11 Low 300 200 150)

12 (g) Where outsloping and rolling dips are used to control surface
13 runoff, the dip in the logging road grade shall be sufficient to
14 capture runoff from the logging road surface. The steepness of cross-
15 slope gradient in conjunction with the logging road or landing
16 gradient and the estimated soil erosion hazard rating shall be used to
17 determine the rolling dip spacing in order to minimize soil erosion
18 and sediment transport and to prevent significant sediment discharge.

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

24 (i) Where logging road and landing surfaces, road approaches, inside
25 ditches and drainage structures cannot be hydrologically disconnected,
and where there is existing or the potential for significant sediment

1 discharge, necessary and feasible treatments to prevent the discharge
2 will be described in the plan.

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

10 (k) Where logging road or landing construction or reconstruction
11 takes place during the extended wet weather period, drainage
12 facilities and drainage structures shall be installed concurrent with
13 construction or reconstruction operations.

14 (l) Bare soil on logging road or landing cuts, fills, transported
15 spoils, or sidecast that is created or exposed by timber operations
16 shall be stabilized to the extent necessary to minimize soil erosion
17 and sediment transport and to prevent significant sediment discharge.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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.

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

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

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

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

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

25 ~~(b) On slopes greater than 50%, fills greater than 4 ft. in vertical~~
~~height at the outside shoulder of the landing shall be: 1) constructed~~

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

15 (c) Log hauling or other heavy equipment uses shall be limited to
16 logging roads and landings which are hydrologically disconnected from
17 watercourses to the extent feasible and exhibit a stable operating
18 surface. Use may occur on limited segments of roads or landings that
19 do not exhibit a stable operating surface when the road segment or
20 landing is completely, and at all times, hydrologically disconnected
21 from a watercourse and equipment can operate under its own power.

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

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

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

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

15 (h) 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 apply:

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

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

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

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

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

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

1 ~~construed to prohibit activities undertaken to protect the road or to~~
2 ~~reduce erosion.~~

3
4 **Amend § 923.7, 943.7, 963.7 Maintenance and Monitoring for Logging**
5 **Roads and Landings Licensed Timber Operator Responsibility for Roads**
6 **and Landings**

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

9 (a) Logging road and landing surfaces shall be monitored and
10 maintained during timber operations and throughout the prescribed
11 maintenance period to minimize soil erosion and sediment transport and
12 to prevent significant sediment discharge.

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

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

21 (1) In watersheds with listed anadromous salmonids and in
22 planning watersheds immediately upstream of, and contiguous to, any
23 watershed with listed anadromous salmonids grading of logging roads or
24 landings to obtain a drier running surface more than one time before
25 reincorporation of any resulting berms back into the road surface is
prohibited.

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 significant sediment
11 discharge.

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

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

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

24 (j) The prescribed maintenance period for erosion controls on
25 permanent and seasonal logging roads and associated landings and
drainage structures, which are not abandoned or deactivated in

1 accordance with 14 CCR §§ 923.8 [943.8, 963.8] and 923.17 [943.17,
2 963.17], shall be at least one year. The Director may prescribe a
3 maintenance period extending up to three years in accordance with 14
4 CCR § 1050.

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

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

20 (1) Inspections shall include checking drainage facilities and
21 structures for evidence of downcutting, plugging, overtopping, loss of
22 function, and sediment delivery to Class I, II, or III watercourses
23 and lakes. If evidence of sediment delivery or potential sediment
24 delivery is present, and the implementation of feasible corrective
25 measures could reduce the potential for significant sediment

1 discharge, such additional measures shall be implemented when
2 feasible.

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

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

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

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

14 (A) A general description of the conditions and proposed
15 water drafting;

16 (B) The watercourse classification;

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

21 (D) The estimated drainage area (acres) above the point of
22 diversion;

23 (E) The estimated unimpeded streamflow, pumping rate, and
24 drafting duration,

25 (F) a discussion of the effects on aquatic habitat
downstream from the drafting site(s) of single pumping operations, or

1 multiple pumping operations at the same location, and at other
2 locations in the same watershed;

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

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

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

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

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

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

(iii) The drafting operator shall regularly inspect,

1 clean, and maintain screens to ensure proper operation whenever water
2 is drafted.

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

5 (v) The diversion rate shall not exceed 350 gallons
6 per minute.

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

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

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

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

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

24 (ii) Diversion rate shall not exceed 10 percent of
25 the surface flow.

(iii) Pool volume reduction shall not exceed 10

1 percent.

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

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

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

18
19 **Amend § 923.8[943.8, 963.8]. Planned Abandonment and Deactivation of**
20 **Logging Roads, Waterecourse Crossings, and Landings.**

21 All logging roads and landings that are proposed to be removed from
22 the permanent road network, including historic roads and landings,
23 shall be abandoned. All temporary logging roads and landings that are
24 to remain a part of the permanent road network shall be deactivated
25 prior to the winter period or upon completion of timber operations,
whichever comes first. Other logging roads and landings proposed to

1 be deactivated shall comply with the standards specified in this
2 section. Where abandonment or deactivation is required or proposed,
3 specific measures used to apply the following general requirements
4 shall be described in the plan:

5 (a) All abandoned and deactivated logging roads shall be left in a
6 condition that provides for long-term, maintenance-free function of
7 drainage and erosion controls.

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

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

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

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

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

6 ~~Abandonment of roads, watercourse crossings and landings shall be~~
7 ~~planned and conducted in a manner which provides for permanent~~
8 ~~maintenance free drainage, minimizes concentration of runoff, soil~~
9 ~~erosion and slope instability, prevents unnecessary damage to soil~~
10 ~~resources, promotes regeneration, and protects the quality and~~
11 ~~beneficial uses of water. General abandonment procedures shall be~~
12 ~~applied in a manner which satisfies this standard and include the~~
13 ~~following:~~

14 ~~(a) Blockage of roads so that standard production four wheel drive~~
15 ~~highway vehicles cannot pass the point of closure at the time of~~
16 ~~abandonment.~~

17 ~~(b) Stabilization of exposed soil on cuts, fills, or sidecast where~~
18 ~~deleterious quantities of eroded surface soils may be transported in a~~
19 ~~watercourse.~~

20 ~~(c) Grading or shaping of road and landing surfaces to provide~~
21 ~~dispersal of water flow.~~

22 ~~(d) Pulling or shaping of fills or sidecast where necessary to prevent~~
23 ~~discharge of materials into watercourses due to failure of cuts,~~
24 ~~fills, or sidecast.~~

25 ~~(e) Removal of watercourse crossings, other drainage structures, and~~
~~associated fills in accordance with 14 CCR 923.3(d). Where it is not~~

1 ~~feasible to remove drainage structures and associated fills, the fill~~
2 ~~shall be excavated to provide an overflow channel which will minimize~~
3 ~~erosion of fill and prevent diversion of overflow along the road~~
4 ~~should the drainage structure become plugged.~~

5 ~~The Director may approve an exception to a requirement set forth in~~
6 ~~(b) through (c) above when such exceptions are explained and justified~~
7 ~~in the THP and the exception would provide for the protection of the~~
8 ~~beneficial uses of water or control erosion to a standard at least~~
9 ~~equal to that which would result from the application of the standard~~
10 ~~rule.~~

11
12 **Amend § 923.9 [943.9, 963.9]. Licensed Timber Operator Responsibility**
13 **for Logging Roads and Landings. Roads and Landings in Watersheds with**
14 **Listed Anadromous Salmonids**

15 The licensed timber operator who is responsible for the
16 implementation or execution of the plan shall be responsible for the
17 construction and maintenance of logging roads and landings, unless
18 another licensed timber operator is employed for that purpose and
19 amended into the plan as the responsible party.

20 ~~In addition to all other district Forest Practice Rules, the following~~
21 ~~requirements shall apply in any planning watershed with listed~~
22 ~~anadromous salmonids:~~

23 ~~(a) Where logging road or landing construction or reconstruction is~~
24 ~~proposed, the plan shall state the locations of, and specifications~~
25 ~~for, logging road or landing abandonment or other mitigation measures~~

1 ~~to minimize the adverse effects of long term site occupancy of the~~
2 ~~transportation system within the watershed.~~

3 ~~(b) Unless prohibited by existing contracts with the U.S.D.A. Forest~~
4 ~~Service or other federal agency, new and reconstructed logging roads~~
5 ~~shall be no wider than a single lane compatible with the largest type~~
6 ~~of equipment specified for use on the road, with adequate turnouts~~
7 ~~provided as required for safety. The maximum width of these roads~~
8 ~~shall be specified in the plan. These roads shall be outsloped where~~
9 ~~feasible and drained with water breaks or rolling dips (where the road~~
10 ~~grade is inclined at 7 percent or less), in conformance with other~~
11 ~~applicable Forest Practice Rules.~~

12 ~~(c) The following shall apply on slopes greater than 50% that have~~
13 ~~access to a watercourse or lake:~~

14 ~~(1) Specific provisions of construction shall be identified and~~
15 ~~described for all new roads.~~

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

25 ~~(3) Logging roads may be constructed with balanced cuts and fills: if~~

~~(A) Properly engineered, or~~

1 ~~(B) Fills are removed and the slopes recontoured prior to the winter~~
2 ~~period.~~

3 ~~(d) In addition to the provisions listed under 14 CCR § 923.1 [943.1,~~
4 ~~963.1], subsection (e), all permanent or seasonal logging roads with a~~
5 ~~grade of 15% or greater that extend 500 continuous feet or more shall~~
6 ~~have specific erosion control measures stated in the plan.~~

7 ~~(e) Where logging road networks are remote or are located where the~~
8 ~~landscape is unstable, where crossing fills over culverts are large,~~
9 ~~or where logging road watercourse crossing drainage structures and~~
10 ~~erosion control features historically have a high failure rate,~~
11 ~~drainage structures and erosion control features shall be oversized,~~
12 ~~designed for low maintenance, reinforced, or removed before the~~
13 ~~completion of the timber operation. The method of analysis and the~~
14 ~~design for crossing protection shall be included in the plan.~~

15 ~~(f) Except when expressly required by 14 CCR § 923.9 [943.9, 963.9],~~
16 ~~subsections (f)(1) (5) below, the provisions of 14 CCR § 923.9 [943.9,~~
17 ~~963.9] shall not apply to a plan that is subject to:~~

18 ~~(1) a valid incidental take permit issued by DFG pursuant to Section~~
19 ~~2081(b) of the Fish and Game Code that addresses anadromous salmonid~~
20 ~~protection; or~~

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

1 ~~(3) a valid natural community conservation plan that addresses~~
2 ~~anadromous salmonid protection approved by DFG under section 2835 of~~
3 ~~the Fish and Game Code; or~~
4 ~~(4) a valid Habitat Conservation Plan that addresses anadromous~~
5 ~~salmonid protection, approved under Section 10 of the federal~~
6 ~~Endangered Species Act of 1973; or~~
7 ~~(5) project revisions, guidelines, or take avoidance measures pursuant~~
8 ~~to a memorandum of understanding or a planning agreement entered into~~
9 ~~between the plan submitter and DFG in preparation of obtaining a~~
10 ~~natural community conservation plan that addresses anadromous salmonid~~
11 ~~protection.~~

12
13 **Amend 923.9.1 [943.9.1]. Measures for Roads and Landings in Watersheds**
14 **with Coho Salmon.**

15 ~~In addition to all other district Forest Practice Rules, the~~
16 ~~regulations in 14 CCR §§ 923.3 [949.3] and 923.9 [943.9] as amended~~
17 ~~and effective on January 1, 2010 shall apply in any planning watershed~~
18 ~~with coho salmon.~~

19
20 **Adopt § 923.10 [943.10, 963.10]. Planning for Logging Road Watercourse**
21 **Crossings.**

22 The following planning standards shall apply to logging road
23 watercourse crossings:

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

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

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

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

7 (e) Where logging road watercourse crossings are proposed to be
8 constructed or reconstructed in areas where public safety may be
9 affected, the potential public safety impacts shall be disclosed in
10 the plan.

11 (f) The planning and use of logging road watercourse crossings shall
12 include the evaluation and documentation of sensitive conditions and
13 significant existing and potential erosion sites consistent with 14
14 CCR § 923.1(d).

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

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

1 **Adopt § 923.11, 943.11, 953.11 Logging Road Watercourse Crossing**

2 **Design and Implementation**

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

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

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

1 (g) Methods to mitigate or prevent diversion of stream overflow at
2 logging road watercourse construction or stabilization of ford
3 crossings shall be adequately sized to resist mobilization, with the
4 range of required rock dimensions described in the plan.

5 (h) Drainage structures at locations on watercourses that support
6 both upstream and downstream movement of fish shall allow for
7 unrestricted passage of all life stages of fish that may be present,
8 and shall be fully described in the plan in sufficient clarity and
9 detail to allow evaluation by the review team and the public, provide
10 direction to the LTO for implementation, and provide enforceable
11 standards for the inspector.

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

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

25 (k) In watersheds with listed anadromous salmonids, for Class I
watercourses, where fish are always or seasonally present or where

1 fish habitat is restorable, any plan involving timber operations
2 within the WLPZ shall contain the following information:

3 (1) A description of all existing permanent logging road
4 watercourse crossings.

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

11 (3) Clear and enforceable specifications for construction and
12 operation of any new crossing(s) of a Class I watercourse to prevent
13 direct harm, habitat degradation, water velocity increase, hindrance
14 of fish passage at all life stages, or other potential impairment of
15 beneficial uses of water.

16 (1) In watersheds with listed anadromous salmonids, in addition to
17 the requirements of 14 CCR § 923.11 [943.11, 963.11] subsection (k),
18 the method of analysis and the design for crossing protection shall be
19 included in the plan.

20
21 **Adopt § 923.12[943.12, 963.12]. Logging Road Watercourse Crossing**
22 **Mapping and Identification.**

23 The following mapping and identification standards shall apply to
24 logging road watercourse crossings:

1 (a) For logging road watercourse crossing-related mapping
2 requirements refer to 14 CCR §§ 1034(x)(6)(A)-(C), 1090.5(w)(7),
3 1090.7(n)(7), and 1092.09(1)(7)(A)-(C).

4 (b) For logging road watercourse crossing-related disclosure and
5 description requirements refer to 14 CCR §§ 1034(ii)(1)-(2) and (4),
6 1034(kk)(4)(A), 1034(ll) and 1034(mm).

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

16
17 **Adopt § 923.13 [943.13, 963.13]. Logging Road Watercourse Crossing**
18 **Construction and Reconstruction.**

19 The following construction and reconstruction standards shall apply to
20 logging road watercourse crossings:

21 (a) Where applicable, logging road watercourse crossing construction
22 and reconstruction shall comply with the conditions of required DFG
23 1600 agreements.

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

1 (c) All new and replacement culverts used for logging road
2 watercourse crossings shall be installed at or slightly below the
3 natural watercourse grade and in alignment with the watercourse
4 channel. For Class I watercourses where fish are always or seasonally
5 present or where fish habitat is restorable, and where fish can move
6 upstream of the crossing location, new and replacement culverts shall
7 be installed below grade and in alignment with the watercourse channel
8 to allow upstream and downstream passage of fish or listed aquatic
9 species during any life stage and natural movement of bedload to form
10 a continuous bed through the culvert and shall be in conformance the
11 design specified in 14 CCR § 923.11 [943.11,963.11] subsection (j) and
12 with conditions of required DFG 1600 agreements specified in
13 subsection (a) above.

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

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

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

24 (g) Where a significant volume of sediment is stored upstream from a
25 logging road watercourse crossing that is proposed to be
reconstructed, the stored sediment shall be removed or stabilized, to

1 the extent feasible, as described in the plan and in conformance with
2 the conditions of required DFG 1600 agreements.

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

7 (i) Logging road watercourse crossings shall not be constructed or
8 reconstructed under saturated soil conditions or when such activities
9 could result in significant sediment discharge.

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

19 (k) Logging road watercourse crossings shall be installed no later
20 than October 15, except where logging road construction or
21 reconstruction takes place from October 15 to November 15 or from
22 April 1 to May 1 where logging road watercourse crossings shall be
23 installed concurrent with the activity.

24 (l) Logging road watercourse crossings shall not be installed during
25 the winter period, except as specified in an approved winter operating
plan per 14 CCR § 914.7 [934.7, 954.7]subsection (a).

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

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

16
17 **Adopt § 923.14 [943.14, 963.14]. Logging Road Watercourse Crossing**
18 **Erosion Control.**

19 (a) The following drainage standards shall apply to logging road
20 watercourse crossings:

21 (1) Adequate surface drainage at logging road watercourse
22 crossings shall be provided through the use of surface geometry
23 configurations in combination with the installation of drainage
24 facilities, ditch drains, or other necessary protective structures to
25 hydrologically disconnect the road from the crossing to the extent
feasible.

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

8 (3) Drainage facilities installed adjacent to logging road
9 watercourse crossings shall be located to avoid discharging
10 concentrated runoff onto fills, erodible soils, unstable areas, and
11 connected headwall swales.

12 (b) The following stabilization standards shall apply to logging road
13 watercourse crossings:

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

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

24 (2) Soil stabilization measures shall be described in the plan
25 and may include, but are not limited to, removal, armoring with rip-
rap, replanting, mulching, seeding, installing commercial erosion

1 control devices to manufacturer's specifications, or chemical
2 stabilizers.

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

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

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

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

19 (ii) Disturbed logging road watercourse crossing cut
20 banks and fills, and

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

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.

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 of the exposed surface
4 area.

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

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

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

17 Logging road watercourse crossings shall be used in a manner that is
18 consistent with the design, construction, and maintenance of the
19 logging road along which they have been constructed (Refer to 14 CCR
20 §§ 923.2 [943.2, 963.2], 923.4 [943.4, 963.4], 923.6 [943.6, 963.6],
21 and 923.7 [943.7, 963.7]).

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

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

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 prevent soil erosion and
9 significant sediment discharge.

10 (d) The plan shall identify measures to be used to reduce sediment
11 delivery from logging road watercourse crossings where evidence of
12 erosion and significant sediment discharge is present.

13 (e) Logging road watercourse crossings used for timber operations
14 shall be monitored, as needed, to comply with 14 CCR § 1050.
15 Monitoring inspections shall be conducted, when access is feasible
16 during the prescribed maintenance period, at least once annually and a
17 sufficient number of times during the extended wet weather period,
18 particularly after large winter storm events, to ensure that
19 watercourse crossings are properly functioning as designed.

20 (1) Inspections shall include checking watercourse crossings for
21 evidence of downcutting, plugging, overtopping, loss of function, and
22 sediment delivery to Class I, II, or III watercourses and lakes. If
23 evidence of sediment delivery or potential sediment delivery is
24 present, and the implementation of feasible corrective measures could
25 reduce the potential for significant sediment discharge, such
additional measures shall be implemented when feasible.

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

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

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

13
14 **Adopt § 923.17[943.17, 963.17] Logging Road Watercourse Crossing**
15 **Removal.**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

21 This shall include:

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

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

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

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

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

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

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

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

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

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

25 (G) Location of new sites on slopes greater than 40
percent or on active unstable areas used for disposal of spoils

1 generated during logging road or landing construction or
2 reconstruction.

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

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

9 (J) The location of significant erosion sites on logging
10 roads and landings.

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

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

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

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

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

25 (C) Logging road watercourse crossings that are not within
the harvest area but are under the ownership or control of the owner

1 of the timberland where timber is proposed for harvest and are between
2 the harvest area and the first public road to be used for log hauling
3 that are:

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

6 (ii) Existing logging road watercourse crossings to be
7 abandoned or deactivated.

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

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

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

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

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

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

21 (12) Location of boundaries of timber-site classes needed for
22 determination of stocking standards to be applied, down to at least a
23 20-acre minimum or as specified in the district rules.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

16 (A) Clear and enforceable specifications describing how
17 these crossings are to be modified, used, and treated to minimize
18 risks, giving special attention to allowing fish to pass both upstream
19 and downstream during all life stages and in conformance with the
20 standards of 14 CCR § 923.10(h) [943.10(h), 963.10(h)] and 923.11(j)
21 [943.11(j), 963.11(j)].

22 (B) Clear and enforceable specifications for construction
23 and operation of any new crossing(s) of a Class I watercourse to
24 prevent direct harm, habitat degradation, water velocity increase,
25 hindrance of fish passage at all life stages, or other potential

1 impairment of beneficial uses of water. (Refer to 14 CCR §
2 923.11(k)(2)-(3) [943.11(k)(2)-(3), 963.11(k)(2)-(3)].)

3 (ii) The following shall be provided in the plan for all constructed
4 and reconstructed logging road watercourse crossings:

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

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

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

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

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

1 (6) 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 (7) Identify protection measures needed to reduce sediment
5 delivery where evidence of soil erosion and significant sediment
6 discharge is present at a logging road watercourse crossing used for
7 timber operations. (Refer to 14 CCR § 923.16(d) [943.16(d),
8 963.16(d)].)

9 (8) Identify how soil erosion and significant sediment discharge
10 will be prevented where it is not feasible to remove a logging road
11 watercourse crossing or its associated fill to the standards contained
12 in 14 CCR § 923.17 [943.17, 963.17]. (Refer to 14 CCR §§ 923.8(e)
13 [943.8(e), 963.8(e)] and 923.17(e) [943.17(e), 963.17(e)].)

14 (9) Disclose and describe site conditions, and, to the extent
15 feasible, specify measures to be taken to address potential sediment
16 mobilization where a significant volume of sediment is stored upstream
17 from a logging road watercourse crossing that is proposed to be
18 removed. (Refer to 14 CCR §§ 923.13(g) [943.13(g), 963.13(g)] and
19 923.17(f) [943.17(f), 963.17(f)].)

20 (10) In watersheds with listed anadromous salmonids, state how
21 existing permanent culverts used for logging road watercourse
22 crossings on Class I watercourses, where fish are always or seasonally
23 present or where fish habitat is restorable, and where fish can move
24 upstream of the crossing location, shall be brought up to the
25 standards of 14 CCR § 923.11(c) [943.11(c), 963.11(c)].

1 (11) In addition to the requirements of 14 CCR § 923.11(k)
2 [943.11(k), 963.11(k)], include the method of analysis and the design
3 for logging road watercourse crossing protection.

4
5 **Amend 1051.1. Contents of Modified THP**

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

9
10 **Amend 1090.5 Contents of NTMP**

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

18 (1)-(3) [No change]

19 (4) Location of public roads within the ~~plan~~ harvest area, and
20 private roads appurtenant to the timber operations where such roads
21 are under the ownership or control of the timberland owner and are
22 contiguous with the ~~plan~~ harvest area, and classification of all
23 proposed and existing logging roads as permanent, seasonal, or
24 temporary roads.

25 (5)-14) [No change]

(x)-(ff) [No change]

1 ~~(gg) Where logging roads, logging road watercourse crossings, and~~
2 ~~associated landings in the logging area will be abandoned or~~
3 ~~deactivated, the methods for abandonment or deactivation shall be~~
4 ~~described.~~

5 ~~(hh)~~(gg) On a map complying with ~~subsection 14 CCR § 1090.6(x)~~
6 1090.5(w), the locations and classifications of logging roads, logging
7 road watercourse crossings, and landings to be abandoned or
8 deactivated shall be shown.

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

11
12 **Amend 1090.7 Notice of Timber Operations Content**

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

20 **(1)-(3) [No change]**

21 **(4)** Location of public roads within the Notice area, and
22 private roads appurtenant to the timber operations where such roads
23 are under the ownership or control of the timberland owner, and are
24 contiguous with the Notice area, and classification of all proposed
25 and existing logging roads as permanent, seasonal, or temporary roads.

(5)-(11) [No change]

1 **Amend 1092.09 PTHP Contents**

2 **(a) - (k)** No change

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

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

20 **(1)-(4) [No change]**

21 ~~(5) Location of public roads within the PTHP, and private roads~~
22 ~~appurtenant to the timber operations where such roads are under the~~
23 ~~ownership or control of the timber owner, timberland owner or timber~~
24 ~~operator, and classification of all proposed and existing logging~~
25 ~~roads as permanent, seasonal, or temporary roads. The following~~

1 logging road- and landing-related features shall be shown on a map of
2 the appropriate type and scale as described in subsection (1) above:

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

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

11 This shall include:

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

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

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

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

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

1 (B) Location of road failures on existing roads to be
2 reconstructed.

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

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

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

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

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

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

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

22 (J) The location of active erosion sites on logging roads
23 and landings that will be treated.

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

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

3 ~~(7)(6) Location of proposed and existing landings in the~~
4 ~~watercourse and lake protection zone, and landings outside the zone~~
5 ~~that are greater than 1/4 acre in size or whose construction involves~~
6 ~~substantial excavation.~~ The following logging road watercourse
7 crossing-related items shall be shown on a map of the appropriate type
8 and scale as described in subsection (1) above:

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

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

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

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

23 (ii) Existing logging road watercourse crossings to be
24 abandoned or deactivated.

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

1 ~~(8) (7) Road failures on existing roads to be reconstructed.~~

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

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

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

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

11 (12) Location of unique areas.

12
13 **Amend § 1093.2. Contents of Road Management Plan.**

14 The Road Management Plan shall, at a minimum, contain the following
15 information:*****

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

20 (A) A road construction, reconstruction and use component
21 to ensure that operations occur on a stable operating surface,
22 consistent with 14 CCR 923.6. ~~that does not produce sediment in~~
23 ~~quantities that may cause a visible increase in turbidity of~~
24 ~~downstream waters in receiving Class I, II, III or IV waters or would~~
25 ~~violate Water Quality Requirements.~~ This component shall include, at a
minimum, restrictions for wet weather operations, surfacing

1 objectives, and provisions for water drafting.*****

2
3 **Amend § 1104.1. Conversion Exemptions.**

4 Timber operations conducted under this subsection shall be exempt
5 from conversion permit and timber harvesting plan requirements of this
6 article*****

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

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

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20 End as of 12/16/11
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