

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

[Notice Published December 23, 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, 1<sup>st</sup> 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 9<sup>th</sup> 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](mailto: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 Sections 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](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.



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Eric Huff  
Regulations Coordinator  
Board of Forestry and Fire Protection

**INITIAL STATEMENT OF REASONS**

**“Road Rules, 2011”**

**[Published December 23, 2011]**

**Title 14 of the California Code of Regulations (14 CCR):**

**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

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§ 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

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§ 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 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.

The following is a brief summation of the purpose and necessity for each section of the rules proposal with proposed amendments to existing rule section titles shown in **bold underline** and ~~strikeout~~. Completely new section titles are shown in **bold underline**.

#### **§ 895.1 Definitions**

This rule section includes new and amended definitions for 32 terms utilized within the text of related sections of the road rules proposal. These new or amended definitions are necessary for understanding the meanings of the terms as they apply to various other regulatory standards. Clear understanding of the meaning of these terms is necessary to ensure broader understanding of the enforceable aspects of the rule proposal by the regulated public, the Department of Forestry and Fire Protection (lead agency), other state review agencies, and the general public.

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

This rule section has been amended to include the new defined term, “significant sediment discharge.” This new term replaces more ambiguous rule language thereby creating a more succinct and enforceable standard. The amended rule language is necessary for improved understanding of winter period timber operation prohibitions and enforceable performance expectations.

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

This rule section has been amended to reference uniform standards for watercourse crossing removal contained in a subsequent new rule section. The purpose of this amendment is to standardize rule language such that all watercourse crossings are removed in a consistent and effective manner. The amendment is necessary to achieve the overarching objectives of road-related rule reorganization, improved rule clarity, and achievement of enforceable performance expectations.

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

This rule section has been amended to include the new defined term, “significant sediment discharge.” This new term replaces more ambiguous rule language thereby creating a more succinct and enforceable standard. The amended rule language is necessary for improved understanding of enforceable performance expectations during saturated soil conditions.

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

This rule section has been amended to apply only to tractor roads rather than both tractor and logging roads. The purpose of this change is to distinguish tractor road limitations near watercourses, lakes, marshes, and other wet areas from logging road limitations. This partitioning recognizes the distinctions between tractor and logging roads in terms of surfacing and use. The amendment is necessary to ensure application of enforceable performance standards that are appropriate for tractor roads. It is also necessary for achievement of the overarching objectives of road-related rule reorganization and improved rule clarity.

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

This rule section has been amended to apply only to tractor roads rather than logging roads. The purpose of the amendment is to differentiate between tractor road-related watercourse protections and logging road-related watercourse protections. This is

necessary to ensure that watercourse protections are maintained while achieving the objectives of road-related rule reorganization and improved rule language clarity.

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

This rule section has been amended to remove all logging road-related rule provisions that are proposed for inclusion in subsequent logging road-specific rule sections starting with section 923. The purpose for this reorganization is improvement of rule clarity and understanding of enforceable performance expectations by regulated and regulator. This is necessary to reduce confusion in harvesting plan preparation and review, and to broaden the focus of road-related standards.

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

This rule section has been struck completely in order to place a slightly revised version in new rule section 923.6(d). The purpose for this reorganization is improvement of rule clarity and understanding of enforceable performance expectations by regulated and regulator.

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

The title of this Article has been amended to reflect the differentiation between tractor roads, and logging roads and landings. The amendment signals that the subsequent sections apply only to logging roads and landings thereby assuring the regulated public that everything they need to know about road-related rule conformance may now be found in this Article. This is necessary to achieve the rulemaking proposal's objectives of improved rule clarity, utility, and communication of performance expectations.

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

This rule section has been amended to be more inclusive of all aspects of road, landing, and watercourse crossing planning, construction, use, maintenance, and abandonment. The purpose and necessity for this section is to set the context for the subsequent and more specific rule sections. Similar to the revision to the title of Article 12, this section signals both the regulated and regulator that every performance standard or expectation pertinent to the entire road system may be found in the sections that follow.

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

This rule section has been amended to expand upon existing items for consideration in the planning for forest transportation systems. The amendments to existing language are centered on treating the road system as a whole rather than a series of individual pieces. This section requires the professional forester to consider utility of the entire system, identify locations where road construction or reconstruction is best minimized, and consider where road realignment and abandonment may be the wisest alternative. The purpose of this section is to set the context for road construction or reconstruction, use, maintenance, and possibly abandonment of certain road segments. This section is necessary to ensure that subsequent action related to the road system is logical, orderly, sensible, and not otherwise conducted in ad hoc fashion.

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

This rule section has been amended to expand upon existing logging road and landing construction standards, and to include specific reference to items typically considered by the professional forester during road design and construction. Among the items now specifically included in the amended rule language are public safety, additional geomorphic features such as connected headwall swales, and the potential for erosion and sediment delivery to watercourses. This amended section also includes the new requirement for “hydrologic disconnection” of roads from watercourses and other water bodies. This concept is central to the entire rule proposal and requires the professional forester to design transportation networks such that potential for deleterious delivery of fine sediment to bodies of water is minimized to the greatest extent possible. Additional new rule language is specified to direct transport and storage of road spoils, road gradient and shaping requirements, and minimization of cuts and fills. This amended section is necessary to bring road-related State Forest Practice Rules into conformance with state-of-the-art logging road and landing design and construction standards as well as professional expectations.

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

This section has been amended to replace existing rules for watercourse crossings with rule language that directs mapping and identification of logging roads and landings. Watercourse crossing rules have been moved to new rule sections beginning with section 923.10. The requirements contained in this amended section specify how roads are to be shown on harvest planning maps and what portions of road systems must be distinguished from others. The section also directs when and how proposed road segments are to be designated with flagging in the field for inspection by reviewing agencies. The purpose of this section is to give convey performance expectations to the professional forester, capturing existing rule language and including it with revised or new rule language. This section continues the effort toward logical reorganization of all road rules and is necessary for improved clarity and utility.

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

This section has been amended to replace existing road maintenance standards now found in amended section 923.7. The logging road and landing construction and reconstruction standards contained in this section are a combination of existing and new rule language from two different sections. Landing construction currently occupies its own section in the Forest Practice Rules, but would now be included in this amended section. Considerations for public safety and geomorphic features have been added as well as refinements of existing slope and watercourse-related limitations, among other items. The purpose for this amended section is to provide professional foresters and timber operators with state-of-the-art guidance on logging road construction and reconstruction techniques and considerations. This amended language is necessary to elevate rule standards to current practical standards while increasing clarity and utility.

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

This section has been amended to replace landing construction rules now located in the previous amended rule section (§ 923.4). The erosion control standards found in a number of existing rule sections are consolidated into this one comprehensive section in

keeping with the overarching objective of rule reorganization for improved clarity and utility. This amended rule section now includes drainage requirements consistent with the new standard for “hydrologic disconnection” of roads and landings from waterbodies. To that end, this section also incorporates standards for waterbreaks, including those constructed by hand, outsloping of roads, and construction of rolling dips. This amended section is necessary to promote the new standard of hydrologic disconnection while simultaneously communicating performance standards that are clear and useful to the regulated public and reviewing agencies.

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

This section has been amended to include the new standards for “stable operating surfaces” and “hydrologic disconnection.” Both of these standards are central to the objective of reducing the potential for deleterious deposition of sediment from logging roads and landings into watercourses and lakes. As the newly revised section title suggests, this section pertains entirely to the use of transportation systems and the need for protective vigilance in the course of such use. This amended section is necessary for conveyance of the point that inappropriate and untimely use of roads can render even the best constructed road segment a problem from the perspective of resource protection.

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

This amended section removes the Timber Operator responsibility provision that would now be found in subsequent section 923.9 in favor of comprehensive maintenance and monitoring standards. In addition to incorporation of existing rule specifications for the erosion control maintenance period, this amended section now includes requirements for extended wet weather period inspections of logging road systems. The section goes on to state that compliance with existing Regional Water Quality Control Board monitoring requirements may be used to achieve compliance with inspection standards. The purpose of this amended section is to ensure that roads which are planned, designed, constructed, and used in accordance with the current state-of-the-art standards continue to serve as such throughout their period of existence. This section is necessary if not crucial to achieve the consistent objective of “hydrologic disconnection” from watercourses and lakes.

**Amend § 923.8[943.8, 963.8]. Planned Abandonment and Deactivation of Logging Roads, Watercourse Crossings, and Landings.**

This amended section recognizes that portions of road systems, including landings, can be completely and permanently abandoned, or temporarily deactivated for some period of time. Standards for abandonment of watercourse crossings have been removed from this section and placed in a new section 923.17 specific to crossing removal. The purpose of this section is to standardize the differentiation between portions of road system that are intended to be used in the future from those that are unlikely to be used again—particularly legacy or older segments no longer useful to management operations. This amended section is necessary to support the overarching objective of hydrologic disconnection of road systems from watercourses and lakes.

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

This amended section removes standards associated with listed anadromous salmonids that would now be included as a component of previously identified amended and subsequent new sections of this proposal. In their place are the Timber Operator responsibility requirements that were removed from existing section 923.7. The purpose of this rule amendment is in keeping with the objectives of improved clarity, utility, and logical reorganization of all logging road and landing-related rules into one location.

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

This existing rule section has been completely eliminated as the language is now included as a component of previously identified amended and subsequent new sections of this proposal. Portions of this proposal include protection standards inclusive of all listed anadromous salmonid species rather than just coho salmon. This removal is necessary to achieve the objectives of improved clarity, utility, and logical reorganization of all logging road and landing-related rules into one location.

**Amend § 1034 Contents of Plan**

This section has been amended consistent with the proposed changes and new rule sections provided in this rule proposal. The amendment of this section is necessary to ensure that all new or modified requirements for logging roads, landings, and watercourse crossings are incorporated into the contents of Timber Harvesting Plan (THP) submissions.

**Amend § 1051.1 Contents of Modified THP**

This section has been amended consistent with the proposed changes and new rule sections provided in this rule proposal. The amendment of this section is necessary to ensure that all new or modified requirements for logging roads, landings, and watercourse crossings are incorporated into the contents of Modified Timber Harvesting Plan (MTHP) submissions.

**Amend § 1090.5 Contents of NTMP**

This section has been amended consistent with the proposed changes and new rule sections provided in this rule proposal. The amendment of this section is necessary to ensure that all new or modified requirements for logging roads, landings, and watercourse crossings are incorporated into the contents of Non-industrial Timber Management Plan (NTMP) submissions.

**Amend § 1090.7 Notice of Timber Operations Content**

This section has been amended consistent with the proposed changes and new rule sections provided in this rule proposal. The amendment of this section is necessary to ensure that all new or modified requirements for logging roads, landings, and watercourse crossings are incorporated into the contents of Notice of Timber Operations (NTO) submissions tiered to approved Non-industrial Timber Management Plans (NTMPs).

**Amend § 1092.09 PTHP Contents**

This section has been amended consistent with the proposed changes and new rule sections provided in this rule proposal. The amendment of this section is necessary to

ensure that all new or modified requirements for logging roads, landings, and watercourse crossings are incorporated into the contents of Program Timber Harvesting Plan (PTHP) submissions tiered to certified Program Timberland Environmental Impact Reports (PTEIRs).

**Amend § 1093.2 Contents of Road Management Plan**

This section has been amended consistent with the proposed changes and new rule sections provided in this rule proposal. The amendment of this section is necessary to ensure that all new or modified requirements for logging roads, landings, and watercourse crossings are incorporated into the contents of Road Management Plan (RMP) submissions.

**Amend § 1104.1 Conversion Exemptions**

This section has been amended consistent with the proposed changes and new rule sections provided in this rule proposal. The amendment of this section is necessary to ensure that all new or modified requirements for logging roads, landings, and watercourse crossings are incorporated into the contents of Conversion Exemption submissions.

**Adopt § 923.10 [943.10, 963.10] Planning for Logging Road Watercourse Crossings**

This is the first of the new watercourse crossing sections that follow the same logical order and construction as the logging road and landing sections for “planning,” “design and implementation,” “mapping and identification,” “construction and reconstruction,” “erosion control,” “use,” “maintenance and monitoring,” and “removal” (consistent with logging road and landing abandonment and deactivation section). This new section requires consideration of public safety, fish passage at all life stages, accommodation of 100-year flood flows, and creation of crossing types that are consistent with the use intended for the road system. The purpose of this section is to set the context for watercourse crossing construction or reconstruction, use, maintenance, and possibly removal of certain road segments. This section is necessary to ensure that subsequent action related to watercourse crossings is logical, orderly, sensible, and not otherwise conducted in ad hoc fashion.

**§ 923.11 [943.11, 963.11] Logging Road Watercourse Crossing Design and Implementation**

This is the second of the new watercourse crossing sections that follow the same logical order and construction as the logging road and landing sections for “planning,” “design and implementation,” “mapping and identification,” “construction and reconstruction,” “erosion control,” “use,” “maintenance and monitoring,” and “removal” (consistent with logging road and landing abandonment and deactivation section). This new section requires that watercourse crossings be designed for public safety, fish passage at all life stages and protection of listed anadromous salmonids, accommodation of 100-year flood flows, minimization of the potential for watercourse diversion, and inclusion of “fail-soft” standards. The purpose of this section is to give convey performance expectations to the professional forester, capturing existing rule language and including it with revised or new rule language. This section continues the effort toward logical reorganization of all road rules and is necessary for improved clarity and utility.

### **§ 923.12 [943.12, 963.12] Logging Road Watercourse Crossing Mapping and Identification**

This is the third of the new watercourse crossing sections that follow the same logical order and construction as the logging road and landing sections for “planning,” “design and implementation,” “mapping and identification,” “construction and reconstruction,” “erosion control,” “use,” “maintenance and monitoring,” and “removal” (consistent with logging road and landing abandonment and deactivation section). The requirements contained in this amended section specify how watercourse crossings are to be shown on harvest planning maps by incorporated reference to existing rule sections (§ 1034). This new section also directs when and how proposed crossings are to be designated with flagging in the field for inspection by reviewing agencies. The purpose of this section is to give convey performance expectations to the professional forester, continue the effort toward logical reorganization of all logging road, landing, and watercourse rules, and is necessary for improved clarity and utility.

### **§ 923.13 [943.13, 963.13] Logging Road Watercourse Crossing Construction and Reconstruction**

This is the fourth of the new watercourse crossing sections that follow the same logical order and construction as the logging road and landing sections for “planning,” “design and implementation,” “mapping and identification,” “construction and reconstruction,” “erosion control,” “use,” “maintenance and monitoring,” and “removal” (consistent with logging road and landing abandonment and deactivation section). This new section specifies requirements for watercourse construction including provisions for accommodation of 100-year flood flows, use of crossings by fish at all life stages, installation of “fail-soft” critical dips over the crossing to minimize harmful effects of crossing failure, and installation of energy dissipating devices on fill slopes, among other items. This section also specifies the expectation for timing of watercourse crossing installation relative to weather, streamflow, and soil moisture conditions. The purpose of this section is to give convey performance expectations to the professional forester, continue the effort toward logical reorganization of all logging road, landing, and watercourse rules, and is necessary for improved clarity and utility.

### **§ 923.14 [943.14, 963.14] Logging Road Watercourse Erosion Control**

This is the fifth of the new watercourse crossing sections that follow the same logical order and construction as the logging road and landing sections for “planning,” “design and implementation,” “mapping and identification,” “construction and reconstruction,” “erosion control,” “use,” “maintenance and monitoring,” and “removal” (consistent with logging road and landing abandonment and deactivation section). This new section includes drainage and erosion control requirements consistent with the new standard for “hydrologic disconnection” of watercourse crossings (along with roads and landings) from watercourses, lakes, and other wet areas. This amended section is necessary to promote the new standard of hydrologic disconnection while simultaneously communicating performance standards that are clear and useful to the regulated public and reviewing agencies.

### **§ 923.15 [943.15, 963.15] Logging Road Watercourse Use**

This is the sixth of the new watercourse crossing sections that follow the same logical order and construction as the logging road and landing sections for “planning,” “design and implementation,” “mapping and identification,” “construction and reconstruction,” “erosion control,” “use,” “maintenance and monitoring,” and “removal” (consistent with logging road and landing abandonment and deactivation section). This brief new section

specifies that watercourse crossing use must be consistent with the design, construction, and maintenance of the type of road to which it is connected. The purpose and necessity of this section is clearly convey performance expectations and ensure that the crossings are being used appropriate to their construction.

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

This is the seventh of the new watercourse crossing sections that follow the same logical order and construction as the logging road and landing sections for “planning,” “design and implementation,” “mapping and identification,” “construction and reconstruction,” “erosion control,” “use,” “maintenance and monitoring,” and “removal” (consistent with logging road and landing abandonment and deactivation section). This new section is consistent with the logging road and landing maintenance and monitoring section as it contains the same inspection requirements during the extended wet weather period and allowance for reliance upon Regional Water Quality Control Board standards for compliance with this section. The purpose of this new section is to ensure that watercourse crossings which are planned, designed, constructed, and used in accordance with the current state-of-the-art standards continue to serve as such throughout their period of existence. This section is necessary to ensure that the passage of all life stages of fish is maintained without deleterious interference and that the natural hydrologic flow pattern is preserved despite the presence of road systems.

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

This is the last of the new watercourse crossing sections that follow the same logical order and construction as the logging road and landing sections for “planning,” “design and implementation,” “mapping and identification,” “construction and reconstruction,” “erosion control,” “use,” “maintenance and monitoring,” and “removal” (consistent with logging road and landing abandonment and deactivation section). This new section specifies the standards to be achieved in the removal of temporary and abandoned crossings. It also provides performance minimums to prevent sediment movement and discharge into watercourses associated with crossing removal. This section is necessary to ensure that the best intentions of crossing removal are not nullified by unintended consequences associated with crossing fill removal and crossing approaches left untreated.

### **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](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](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
- 8 § 1051.1 Contents of Modified THP
- 9 § 1090.5 Contents of NTMP
- 10 § 1090.7 Notice of Timber Operations Content
- 11 § 1092.09 PTHP Contents
- 12 § 1093.2 Contents of Road Management Plan
- 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  
5 Deactivation means taking the proactive measures necessary to prevent  
6 the active use of an existing logging road, landing, or logging road  
7 watercourse crossing.

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

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

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

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

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

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

2  
3 Insloping means shaping the road surface to drain toward a cutbank.

4  
5 Outsloping means shaping the road surface to drain toward the outside  
6 edge.

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

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

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

24  
25 Prescribed Maintenance Period means the time period, beginning with  
filing of the work completion report, provided that the report is

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

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

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

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

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

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

17  
18 **Sidecast** means excess earthen material pushed or dumped ~~to or~~ over the  
19 side of a roads or landings.

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

1 Significant existing or potential erosion site means a location where  
2 soil erosion is currently, or may be in the future, discharged to  
3 watercourses or lakes in quantities that violate Water Quality  
4 Requirements or result in significant individual or cumulative adverse  
5 impacts to the beneficial uses of water. A site that is eroding but is  
6 not delivering, or does not have the potential to deliver sediment to  
7 a water body, is not a significant existing or potential erosion site.

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

14  
15 Through Cut means a section of road that lies below the adjacent  
16 ground level on both sides of the road.

17  
18 Through Fill means a section of road upon constructed fill that lies  
19 above the adjacent ground level on both sides of the road.

20  
21 **Amend 14 CCR § 914.7 [934.7, 954.7]. Timber Operations, Winter**  
22 **Period.**

23 During the winter period:

24 (a) Mechanical site preparation and timber harvesting, shall not be  
25 conducted unless a winter period operating plan is incorporated in the  
timber harvesting plan and is followed, or unless the requirements of

1 subsection (c) are met. Cable, helicopter and balloon yarding methods  
2 are exempted.

3 (b) The winter period operating plan shall include the specific  
4 measures to be taken in winter timber operations to minimize damage  
5 due to erosion, soil movement into watercourses and soil compaction  
6 from felling, yarding, loading, mechanical site preparation, and  
7 erosion control activities. A winter period operating plan shall  
8 address the following subjects:

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

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

22 (1) Tractor yarding or the use of tractors for constructing  
23 layouts, firebreaks or other tractor roads shall be done only during  
24 dry, rainless periods and shall not be conducted on saturated soils  
25 conditions that may produce significant sediment discharge. ~~sediment~~  
~~in quantities sufficient to cause a visible increase in turbidity of~~

1 ~~downstream waters in receiving Class I, II, III or IV waters or that~~  
2 ~~violate Water Quality Requirements.~~

3  
4 **Amend § 914.8 [934.8, 954.8] Tractor Road Watercourse Crossing**

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

13  
14 **Amend 14 CCR § 915.1 [935.1, 955.1]. Use of Heavy Equipment for Site**  
15 **Preparation.**

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

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

24  
25 **Amend § 916.3 [936.3, 956.3]. General Limitations Near Watercourses,**  
**Lakes, Marshes, Meadows and Other Wet Areas**

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

6 (1) At prepared tractor road crossings as described in 14 CCR §  
7 914.8(b) [934.8(b), 954.8(b)].

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

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

11 ~~(4)~~(3) At new tractor ~~and~~ road crossings approved as part of  
12 the Fish and Game Code process (F&GC 1600 et seq.).

13 ~~Use of existing roads is addressed in 916.4(a) [936.4(a),~~  
14 ~~956.4(a)].~~

15  
16 **Amend 916.4 [936.4, 956.4]. Watercourse and Lake Protection.**

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

20 (1) As part of this field examination, the RPF or  
21 supervised designee shall evaluate areas near, and areas with the  
22 potential to directly impact, watercourses and lakes for sensitive  
23 conditions including, but not limited to, ~~existing and proposed roads,~~  
24 ~~skidtrails and landings~~, unstable and erodible watercourse banks,  
25 unstable upslope areas, debris, jam potential, inadequate flow  
capacity, changeable channels, overflow channels, flood prone areas,

1 and riparian zones wherein the values set forth in 14 CCR §§ 916.4~~(b)~~  
2 [936.4~~(b)~~, 956.4~~(b)~~], subsection(b) are impaired. \*\*\*\*\*

3  
4 **Amend § 916.9 [936.9, 956.9]. Protection and Restoration of the**  
5 **Beneficial Functions of the Riparian Zone in Watersheds with Listed**  
6 **Anadromous Salmonids.**

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

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

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

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

8 \*\*\*\*\***(f) Class I watercourses** -

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

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

17 ~~(B) A description of all existing permanent logging road~~  
18 ~~watercourse crossings.~~

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

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

1 ~~uses of water~~

2           **(EB)** Documentation of how proposed harvesting in the WLPZ  
3 contributes to the objectives of each zone stated in 14 CCR § 916.9  
4 [936.9, 956.9], subsection (c) and other goals in 14 CCR § 916.9  
5 [936.9, 956.9], subsection (a) (1)-(8). Documentation shall include  
6 the examinations, analysis, and other requirements listed in 14 CCR §  
7 916.4 [936.4, 956.4], subsection (a).\*\*\*\*\*

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

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

12           -       ~~**4. Avoid Road and Landing Use:** All new roads and~~  
13 ~~landings shall be located outside of zone. When feasible, minimize~~  
14 ~~use of existing roads and landings in the flood prone area. No~~  
15 ~~servicing of equipment within the flood prone area. Exceptions~~  
16 ~~include the use of roads and landings to accomplish actions to~~  
17 ~~improved salmonid habitat conditions stated 14 CCR § 916.9 [936.9,~~  
18 ~~956.9]. subsection (f)(3)(E(1.)) above.~~

19                       **5.4. Avoid Slash concentration and site**  
20 **preparation:\*\*\*\*\*** or pile burning.

21                       **6.5. Delineate Zone on the Ground:\*\*\*\*\*** Locations  
22 of all WLPZ zones and CMZs shall be designated on the ground.

23                       **7.6. Avoid Use of Water Drafting Sites:\*\*\*\*\*** or  
24 stream alteration permits.

25                       **8.7. Avoid Disturbance to Critical Flood Prone**  
**Area Habitat::\*\*\*\*\*** and down large woody debris.

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

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

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

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

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

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

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

4  
5       **(1) Extended Wet Weather Period** - ~~October 15 to May 1 shall be~~  
6 ~~considered the extended wet weather period and the~~The following shall  
7 apply during the extended wet weather period:

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

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

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

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

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

13       **(1)\*\*\*\*\***

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

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

21       **(3)\*\*\*\*\***

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

24       **\*\*\*\*\* (p)** Section reserved for future use. ~~Erosion control maintenance~~  
25 ~~period~~ - The erosion control maintenance period on permanent and  
seasonal roads and associated landings that are not abandoned in

1 ~~accordance with 14 CCR § 923.8 [943.8, 963.8] shall be three years.~~

2 \*\*\*\*\*

3 ~~\*\*\*\*\* (r) Section reserved for future use. Water drafting — Water~~  
4 ~~drafting for timber operations shall:~~

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

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

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

12 ~~(A) a general description of the conditions and proposed~~  
13 ~~water drafting;~~

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

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

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

20 ~~(E) the estimated drainage area (acres) above the point~~  
21 ~~of diversion;~~

22 ~~(F) the estimated unimpeded streamflow, pumping rate, and~~  
23 ~~drafting duration,~~

24 ~~(G) a discussion of the effects on aquatic habitat~~  
25 ~~downstream from the drafting site(s) of single pumping operations, or~~  
~~multiple pumping operations at the same location, and~~

1 ~~at other locations in the same watershed;~~

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

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

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

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

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

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

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

1 ~~is drafted.~~

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

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

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

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

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

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

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

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

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

2                   (F) ~~The drafting operator shall keep a log that records~~  
3 ~~for each time water is drafted, the date, total pumping time, pump~~  
4 ~~rate, starting time, ending time, and volume diverted. Logs shall be~~  
5 ~~filed with the Department of Forestry and Fire Protection at the end~~  
6 ~~of 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 \*\*\*\*\*(v) **Site-specific measures or nonstandard operational**  
15 **provisions\*\*\*\*\***

16  
17 **Amend § 918.3 [938.3, 958.3]. Roads to be Kept Passable**

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

21  
22 **Amend Article 12. [Article 11. Northern] Logging Roads, Landings, and**  
23 **Logging Road Watercourse Crossings. Logging Roads and Landings**

24  
25 **Amend § 923 [943,963]. Intent for Logging Roads, Landings, and Logging**  
**Road Watercourse Crossings Logging Roads and Landings.**

1 (a) All logging roads, landings, and logging road watercourse  
2 crossings in the logging area shall be planned, constructed,  
3 reconstructed, used, maintained, removed, abandoned, and deactivated  
4 in a manner that:

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

7 (2) Accommodates appropriate yarding systems.

8 (3) Is economically feasible.

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

12 (1) Public safety.

13 (2) Listed species of fish and wildlife.

14 (3) Fish and wildlife habitat.

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

16 (5) Soil resources.

17 (6) Significant archeological and historical sites.

18 (7) Air quality.

19 (8) Visual resources.

20 (9) Worker safety.

21 (10) Fire hazard.

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

25 (d) Exceptions may also be provided through application of Fish and  
Game Code Sections 1600 et seq. and shall be made an enforceable part

1 of the plan in accordance with 14 CCR §S 1039, 1040, 1090.14, 1092.26,  
2 or 1092.27, as appropriate.

3 (e) For watersheds with listed anadromous salmonids and for planning  
4 watersheds immediately upstream of, and contiguous to, any watershed  
5 with listed anadromous salmonids all logging roads, landings, and  
6 logging road watercourse crossings shall be planned, designed,  
7 constructed and reconstructed, used, maintained , abandoned,  
8 deactivated, and removed in accordance with 14 CCR § 916.9 (a) and (c)  
9 [936.9 (a) and (c), 956.9 (a) and (c)].

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

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

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

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

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

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

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

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

- 20       ~~(a) Use of existing roads whenever feasible.~~
- 21       ~~(b) Use of systematic road layout patterns to minimize total mileage.~~
- 22       ~~(c) Planned to fit topography to minimize disturbance to the natural~~  
23 ~~features of the site.~~
- 24       ~~(d) Avoidance of routes near the bottoms of steep and narrow canyons,~~  
25 ~~through marshes and wet meadows, on unstable areas, and near~~

1 ~~watercourses or near existing nesting sites of threatened or~~  
2 ~~endangered bird species.~~

3 ~~(e) Minimization of the number of watercourse crossings.~~

4 ~~(f) Location of roads on natural benches, flatter slopes and areas of~~  
5 ~~stable soils to minimize effects on watercourses.~~

6 ~~(g) Use of logging systems which will reduce excavation or~~  
7 ~~placement of fills on unstable areas.~~

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

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

10 (a) Logging roads and landings shall be planned and located within  
11 the context of a systematic layout pattern that considers 14 CCR §  
12 923(b), uses existing logging roads and landings where feasible and  
13 appropriate, provides access for fire and resource protection  
14 activities, and minimizes the following:

15 (1) Duplicative roads and total road mileage.

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

17 (3) Activities near watercourses, lakes, marshes, wet meadows,  
18 and other wet areas.

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

21 (5) Activities on unstable areas or in connected headwall  
22 swales.

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

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

1       (8) Ground disturbance and the size of cuts and fills.

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

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

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

11       (1) At existing logging road watercourse crossings.

12       (2) At constructed or reconstructed logging road watercourse  
13 crossings approved as part of the Fish and Game Code process (F&GC  
14 1600 et seq.)

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

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

23       (d) As part of the planning and use of logging roads, landings, and  
24 watercourse crossings in the logging area, the RPF or supervised  
25 designee shall: 1) evaluate and document the potential of the road or  
landing to impact sensitive conditions and 2) locate and map

1 significant existing and potential erosion sites, and 3) specify and  
2 schedule feasible treatments to mitigate significant adverse impacts  
3 from the road or landing.

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

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

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

25 (A) Type of road (permanent all-season, seasonal, or  
temporary road), road location, expected log truck haul routes, and

1 traffic use (e.g. volume and season) of each road segment during the  
2 life of the plan.

3 (B) Age of road and the history of sediment delivery from  
4 existing roads.

5 (C) Beneficial uses of the watercourse or lake and  
6 sensitive conditions potentially affected by the road including, among  
7 other things, watercourse classification and presence of listed  
8 anadromous salmonids.

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

11 (E) The erodibility of hillslope material exposed by the  
12 road.

13 (F) The length of hydrologic connectivity of a road  
14 segment, the physical properties of the connected segment and the  
15 presence or absence and functionality of erosion resistant material  
16 adjacent to the connected segment.

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

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

25 (5) A list of the significant existing and potential erosion  
sites identified in 14 CCR § 923.1 [943.1, 963.1], subsection (d)(2)

1 which have feasible treatments shall be submitted with the plan and  
2 shall require the following information:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

23 ~~The following standards for logging roads and landings shall be~~  
24 ~~adhered to:~~

25 ~~(a) All logging roads shall be located and classified on the THP map~~  
~~as permanent, seasonal, or temporary. Road failures on existing roads~~

1 ~~which will be reconstructed shall also be located on the THP map. In~~  
2 ~~addition to the requirements of 14 CCR 1034(x), the probable location~~  
3 ~~of those landings which require substantial excavation or which exceed~~  
4 ~~one quarter acre in size, shall be shown on the THP map.~~

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

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

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

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

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

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

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

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

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

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

1 ~~(i) [Coast] The location of all logging roads to be constructed shall~~  
2 ~~be flagged or otherwise identified on the ground before submission of~~  
3 ~~a THP or major amendment. Exceptions may be explained and justified in~~  
4 ~~the THP and agreed to by the Director if flagging is unnecessary as a~~  
5 ~~substantial aid to examining: (1) compatibility between road location~~  
6 ~~and yarding and silvicultural systems, or (2) possible significant~~  
7 ~~adverse effects of road location on water quality, soil productivity,~~  
8 ~~wildlife habitat, or other special features of the area.~~

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

20 ~~(j) If logging roads will be used from the period of October 15 to May~~  
21 ~~1, hauling shall not occur when saturated soil conditions exist on the~~  
22 ~~road that may produce sediment in quantities sufficient to cause a~~  
23 ~~visible increase in turbidity of downstream waters in receiving Class~~  
24 ~~I, II, III or IV waters or that violate Water Quality Requirements.~~

1 Amend § 923.2 [943.2, 963.2]. Design and Location for Logging Roads and  
2 Landings Road Construction.

3 Constructed and reconstructed logging roads and landings shall be  
4 designed and located in accordance with their proposed use,  
5 maintenance requirements, and the approved plan:

6 (a) All logging roads and landings shall:

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

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

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

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

14 (5) Be hydrologically disconnected from watercourses and lakes to  
15 the extent feasible.

16 (6) Include adequate drainage structures and facilities necessary  
17 to avoid concentrating and diverting runoff, to minimize erosion of  
18 roadbeds, landing surfaces, drainage ditches, sidecast and fills, to  
19 minimize the potential for soil erosion and sediment transport, and to  
20 prevent significant sediment discharge.

21 (7) Avoid crossing, or locations on, 100 feet or more of lineal  
22 distance over any slopes greater than 65 percent or within 100 feet of  
23 the boundary of a WLPZ on slopes greater than 50 percent that drain  
24 toward the zoned watercourse or lake. Where logging road or landing  
25 construction or reconstruction is necessary in these areas, specific  
measures to minimize movement of soil and the discharge of

1 concentrated surface runoff shall be incorporated in the plan. The  
2 Director may waive inclusion of such measures where the RPF can show  
3 that slope depressions, drainage ways, and other natural retention and  
4 detention features are sufficient to control overland transport of  
5 eroded material.

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

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

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

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

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

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

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

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

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

4 ~~Logging roads shall be constructed or reconstructed in accordance with~~  
5 ~~the following requirements or as proposed by the RPF, justified in the~~  
6 ~~THP, and found by the Director to be in conformance with the~~  
7 ~~requirements of this Article.~~

8 ~~(a) Logging roads shall be constructed in accordance with the approved~~  
9 ~~THP. If a change in designation of road classification is subsequently~~  
10 ~~made, the change shall be reported in accordance with 14 CCR 1039 or~~  
11 ~~1040, as appropriate.~~

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

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

1 ~~will provide equal protection to water quality and prevention of soil~~  
2 ~~erosion.~~

3 ~~(d) [Coast] Fills, including through fills across watercourses shall~~  
4 ~~be constructed in a manner to minimize erosion of fill slopes using~~  
5 ~~techniques such as insloping through fill approaches, waterbars,~~  
6 ~~berms, rock armoring of fill slopes, or other suitable methods.~~

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

13 ~~(e) Through fills shall be constructed in approximately one foot~~  
14 ~~lifts.~~

15 ~~(f) On slopes greater than 35 percent, the organic layer of the soil~~  
16 ~~shall be substantially disturbed or removed prior to fill placement.~~  
17 ~~The RPF may propose an exception in the THP and the Director may~~  
18 ~~approve the exception where it is justified that the fill will be~~  
19 ~~stabilized.~~

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

23 ~~(h) Drainage structures and facilities shall be of sufficient size,~~  
24 ~~number and location to carry runoff water off of roadbeds, landings~~  
25 ~~and fill slopes. Drainage structures or facilities shall be installed~~  
~~so as to minimize erosion, to ensure proper functioning, and to~~

1 ~~maintain or restore the natural drainage pattern. Permanent~~  
2 ~~watercourse crossings and associated fills and approaches shall be~~  
3 ~~constructed where feasible to prevent diversion of stream overflow~~  
4 ~~down the road and to minimize fill erosion should the drainage~~  
5 ~~structure become plugged.~~

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

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

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

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

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

24 ~~(n) All culverts at watercourse crossings in which water is flowing at~~  
25 ~~the time of installation shall be installed with their necessary~~  
~~protective structures concurrently with the fill, construction and~~

1 ~~reconstruction of logging roads. Other permanent drainage structures~~  
2 ~~shall be installed no later than October 15. For construction and~~  
3 ~~reconstruction of roads after October 15, drainage structures shall be~~  
4 ~~installed concurrently with the activity.~~

5 ~~(o) Drainage structures and drainage facilities on logging roads shall~~  
6 ~~not discharge on erodible fill or other erodible material unless~~  
7 ~~suitable energy dissipators are used. Energy dissipators suitable for~~  
8 ~~use with waterbreaks are described in 14 CCR 914.6(f) [934.6(f),~~  
9 ~~954.6(f)].~~

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

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

16 ~~(r) No road construction shall occur under saturated soil conditions~~  
17 ~~that may produce 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 or that violate Water Quality Requirements, except~~  
20 ~~that construction may occur on isolated wet spots arising from~~  
21 ~~localized ground water such as springs, provided measures are taken to~~  
22 ~~prevent material from significantly damaging water quality.~~

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

1 ~~(t) Roads to be used for log hauling during the winter period shall~~  
2 ~~be, where necessary, surfaced with rock in depth and quantity~~  
3 ~~sufficient to maintain a stable road surface that does not produce~~  
4 ~~sediment in quantities that may cause a visible increase in turbidity~~  
5 ~~of downstream waters in receiving Class I, II, III or IV waters or~~  
6 ~~would violate Water Quality Requirements throughout the period of use.~~  
7 ~~Exceptions may be proposed by the RPF, justified in the THP, and found~~  
8 ~~by the Director to be in conformance with the requirements of this~~  
9 ~~subsection.~~

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

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

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

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

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

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

(c) The RPF shall identify in the field all constructed and

1 reconstructed logging roads and landings:

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

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

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

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

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

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

1 ~~(c) Drainage structures on watercourses that support fish shall allow~~  
2 ~~for unrestricted passage of all life stages of fish that may be~~  
3 ~~present, and shall be fully described in the plan in sufficient~~  
4 ~~clarity and detail to allow evaluation by the review team and the~~  
5 ~~public, provide direction to the LTO for implementation, and provide~~  
6 ~~enforceable standards for the inspector.~~

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

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

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

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

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

1 ~~(g) All new permanent culverts on Class I watercourses, where fish are~~  
2 ~~always or seasonally present or where fish habitat is restorable,~~  
3 ~~shall be planned, designed and constructed to allow upstream and~~  
4 ~~downstream passage of fish or listed aquatic species during any life~~  
5 ~~stage and for the natural movement of bedload to form a continuous bed~~  
6 ~~through the culvert and shall require an analysis and specifications~~  
7 ~~demonstrating conformance with the intent of this section and~~  
8 ~~subsection.~~

9  
10 **Amend § 923.4 [943.4, 963.4]. Construction and Reconstruction for**  
11 **Logging Roads and Landings Road Maintenance.**

12 Logging roads and landings shall be constructed or reconstructed in  
13 accordance with the approved plan and the following requirements. If  
14 a change in designation of logging road classification is made after  
15 the plan is approved, the change shall be reported in accordance with  
16 14 CCR §§ 1039, 1040, 1090.14, 1092.26 or 1092.27, as appropriate.

17 (a) Logging roads and landings shall not be constructed or  
18 reconstructed where such operations pose a significant risk to public  
19 safety.

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

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

1 (d) Logging roads and landings shall not be constructed with  
2 overhanging banks.

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

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

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

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

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

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

24 (k) Construction or reconstruction of logging roads or landings shall  
25 not take place during the winter period unless the approved plan  
incorporates a complete winter period operating plan pursuant to 14 §

1 CCR 914.7 [934.7, 954.7], subsection (a) that specifically addresses  
2 such logging road or landing construction or reconstruction.

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

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

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

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

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

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

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

22 (1) Public safety.

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

24 (q) Where conditions are encountered during logging road or landing  
25 construction or reconstruction that differ from what was anticipated  
during the preparation and review of the plan and that will result in

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

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

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

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

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

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

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

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

5 (i) If properly engineered, or,  
6 (ii) If fills are removed and the slopes recontoured  
7 prior to the winter period.

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

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

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

1 ~~a maintenance period extending up to three years in accordance with 14~~  
2 ~~CCR 1050.~~

3 ~~(b) Upon completion of timber operations, temporary roads and~~  
4 ~~associated landings shall be abandoned in accordance with 14 CCR 923.8~~  
5 ~~[943.8, 963.8].~~

6 ~~(c) Waterbreaks shall be maintained as specified in 14 CCR 914.6~~  
7 ~~[934.6, 954.6].~~

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

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

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

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

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

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

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

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

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

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

1 ~~(n) Permanent watercourse crossings and associated approaches shall be~~  
2 ~~maintained to prevent diversion of stream overflow down the road~~  
3 ~~should the drainage structure become plugged. Corrective action shall~~  
4 ~~be taken before the completion of timber operations or the drainage~~  
5 ~~structure shall be removed in accordance with 14 CCR Section 923.3(d)~~  
6 ~~[943.3(d), 963.3(d)].~~

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

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

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

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

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

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

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

7 (1) Be adequately sized to transmit runoff.

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

9 (3) Avoid discharge onto fill.

10 (4) Discharge to erosion resistant material.

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

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

16 (e) Where logging roads or landings do not have permanent and  
17 adequate drainage, and where waterbreaks are to be used to control  
18 surface runoff, the waterbreaks shall be cut diagonally a minimum of  
19 six inches into the firm roadbed and shall have a continuous firm  
20 embankment of at least six inches in height immediately adjacent to  
21 the lower edge of the waterbreak cut. On logging roads that have  
22 firmly compacted surfaces, waterbreaks may be installed by hand  
23 methods and need not provide the additional six-inch embankment  
24 provided the waterbreak ditch is constructed so that it is at least  
25 six inches deep and six inches wide on the bottom and provided there  
is ample evidence based on slope, material, amount of rainfall, and

1 period of use that the waterbreaks so constructed will be effective in  
 2 diverting water flow from the logging road surface without the  
 3 embankment.

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

<u>MAXIMUM DISTANCE BETWEEN WATERBREAKS</u>			
<u>Estimated</u>	<u>Logging Road Gradient in Percent</u>		
<u>Hazard</u>	<u>10 or less</u>	<u>11-25</u>	<u>&gt;25</u>
<u>Rating</u>	<u>Feet</u>	<u>Feet</u>	<u>Feet</u>
Extreme	100	75	50
High	150	100	75
Moderate	200	150	100
Low	300	200	150 )

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

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

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

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

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

17 (l) Bare soil on logging road or landing cuts, fills, transported  
18 spoils, or sidecast that is created or exposed by timber operations  
19 shall be stabilized to the extent necessary to minimize soil erosion  
20 and sediment transport and to prevent significant sediment discharge.  
21 Sites to be stabilized include, but are not limited to:

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

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

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

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

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

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

21           (p) Overhanging or unstable concentrations of slash, woody debris or  
22 soil along the downslope edge or face of landings shall be removed or  
23 stabilized when it is located on slopes greater than 65 percent or  
24 within 100 feet of the boundary of a WLPZ on slopes greater than 50  
25 percent that drain toward the zoned watercourse or lake. Removed

1 materials shall not be placed at disposal sites that could result in a  
2 significant sediment discharge.

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

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

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

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

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

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

23 (ii) Disturbed logging road and landing cut banks and  
24 fills, and

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

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

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

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

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

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

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

24 ~~(a) On slopes greater than 65%, no fill shall be placed and sidecast~~  
25 ~~shall be minimized to the degree feasible. The Director may approve an~~  
~~exception if, site specific measures to minimize slope instability,~~

1 ~~soil erosion, and discharge of concentrated surface runoff are~~  
2 ~~described and justified in the THP.~~

3 ~~(b) On slopes greater than 50%, fills greater than 4 ft. in vertical~~  
4 ~~height at the outside shoulder of the landing shall be: 1) constructed~~  
5 ~~on a bench that is excavated at the proposed toe of the fill and is~~  
6 ~~wide enough to compact the first lift, and 2) compacted in~~  
7 ~~approximately 1 ft. lift from the toe to the finished grade. The RPF~~  
8 ~~or supervised designee shall flag the location of this bench or the~~  
9 ~~RPF shall provide a description of the bench location (narrative or~~  
10 ~~drawing) in the THP for fills meeting the above criteria, where the~~  
11 ~~length of landing section is greater than 100 feet. The RPF may~~  
12 ~~propose an exception in the THP and the Director may approve the~~  
13 ~~exception where it is justified that the landing will be stabilized.~~

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

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

23 ~~(e) No landing construction shall occur under saturated soil~~  
24 ~~conditions that may produce sediment in quantities sufficient to cause~~  
25 ~~a visible increase in turbidity of downstream waters in receiving~~

1 ~~Class I, II, III or IV waters or that violate Water Quality~~  
2 ~~Requirements.~~

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

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

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

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

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

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

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

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

1 ~~(i) The RPF may propose and the Director may approve waiver of~~  
2 ~~requirements in (f)(1) through (f)(4) of this subsection if the~~  
3 ~~Director finds they are not necessary to minimize erosion or prevent~~  
4 ~~damage to downstream beneficial uses. The Director may also approve an~~  
5 ~~exception to the October 15th date for treatment of slash and debris,~~  
6 ~~including the practice of burning.~~

7  
8 **Amend § 923.6 [943.6, 963.6]. Use of Logging Roads and Landings**  
9 **Conduct of Operations on Roads and Landings.**

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

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

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

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

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

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

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

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

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

21 (1) Existing logging roads or landings shall not be used within  
22 the CMZ of a Class I watercourse except as listed in 14 CCR § 916.9  
23 916.9 [936.9, 956.9] subsection (e)(1)(A)-(F) or pursuant to 14 CCR §  
24 916.9(v) [936.9(v), 956.9(v)].

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

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

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

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

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

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

1 ~~roads will reach watercourses or lakes in amounts deleterious to the~~  
2 ~~quality and beneficial uses of water. This section shall not be~~  
3 ~~construed to prohibit activities undertaken to protect the road or to~~  
4 ~~reduce erosion.~~

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

18 (B) The watercourse classification;

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

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

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

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

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

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

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

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

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

(ii) The screen surface shall have at least 2.5

1 square feet of openings submerged in water.

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

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

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

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

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

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

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

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

(ii) Diversion rate shall not exceed 10 percent of

1 the surface flow.

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

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

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

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

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

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

1 prior to the winter period or upon completion of timber operations,  
2 whichever comes first. Other logging roads and landings proposed to  
3 be deactivated shall comply with the standards specified in this  
4 section. Where abandonment or deactivation is required or proposed,  
5 specific measures used to apply the following general requirements  
6 shall be described in the plan:

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

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

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

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

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

1 transport will be minimized and how significant sediment discharge  
2 will be prevented.

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

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

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

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

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

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

1 ~~(e) Removal of watercourse crossings, other drainage structures, and~~  
2 ~~associated fills in accordance with 14 CCR 923.3(d). Where it is not~~  
3 ~~feasible to remove drainage structures and associated fills, the fill~~  
4 ~~shall be excavated to provide an overflow channel which will minimize~~  
5 ~~erosion of fill and prevent diversion of overflow along the road~~  
6 ~~should the drainage structure become plugged.~~

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

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

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

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

25 ~~(a) Where logging road or landing construction or reconstruction is~~  
~~proposed, the plan shall state the locations of, and specifications~~

1 ~~for, logging road or landing abandonment or other mitigation measures~~  
2 ~~to minimize the adverse effects of long term site occupancy of the~~  
3 ~~transportation system within the watershed.~~

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

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

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

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

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

1 ~~(A) Properly engineered, or~~

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

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

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

16 ~~(f) Except when expressly required by 14 CCR § 923.9 [943.9, 963.9],~~  
17 ~~subsections (f)(1) (5) below, the provisions of 14 CCR § 923.9 [943.9,~~  
18 ~~963.9] shall not apply to a plan that is subject to:~~

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

22 ~~(2) a federal incidental take statement or incidental take permit that~~  
23 ~~addresses anadromous salmonid protection, for which a consistency~~  
24 ~~determination has been made pursuant to Section 2080.1 of the Fish and~~  
25 ~~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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