

8-18-10 Road Rules Task Force Plead with FPC edits

Interagency Road Rules, 2010

14 CCR, Div. 1.5 Chapter 4:

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§ 1034 Contents of Plans

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§ 1092.09 PTHP Contents

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1 **Notes:** Proposed new or relocated text in underscore

2 Deleted existing text in ~~strikeout~~

3 Text in yellow are amendments suggested by DFG under consideration

4 Text in red are amendments suggested by CGS under consideration

5 Amend § 895.1. Definitions.

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

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

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

19
20 ~~Berm means a curb or dike constructed to control water and prevent~~
21 ~~roadway runoff waters from discharging onto roadside slopes and/or to~~
22 ~~provide material for subsequent road maintenance.~~

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

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1 Connected Headwall Swale means a geomorphic feature consisting of a
2 bowl-shaped, concave depression with convergent slopes, typically of
3 65 percent or greater steepness, that is connected to a watercourse or
4 lake by way of a continuous linear depression and that has been
5 sculpted over geologic time by shallow landslide events. The slope
6 profile is typically smooth and unbroken by benches, but may be
7 interrupted by recent landslide deposits or scars. Emergent
8 groundwater and wet areas may exist at the base of the swale. Soil
9 and colluvium depth is typically greatest at the axis of the swale,
10 thinning to either side.

11
12 Critical Dip means a constructed dip across a logging road surface
13 immediately down grade from, or over, a culverted logging road
14 watercourse crossing that functions to prevent crossing overflow from
15 draining down the road.

16
17 Crowning means creating a road surface with a convex cross sectional
18 profile that drains runoff toward both sides of the road.

19
20 Deactivated Road means a logging road that is part of the permanent
21 road network where proactive measures have been applied to prevent
22 active use.

23 Deactivation means taking the proactive measures necessary to prevent
24 the active use of an existing logging road, landing, or logging road
25 watercourse crossing.

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

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

Extended Wet Weather Period means the period from October 15 to May 1. (DFG Option) For watersheds with coho salmon this period is October 15 to May 31.

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

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

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

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

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

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

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

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

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

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

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

4
5 **Public Road** means a road open to the general public which is: (a) in
6 ~~the~~ a Federal, State, ~~or~~ County, or City road system, or (b) a road on
7 which a public agency has deeded, unlimited easement.

8
9 (DFG Option) Road approach means the logging road surface from the
10 watercourse channel or crossing to the nearest functional drainage
11 structure or facility to the first high point on the road where road
12 surface drainage flows away from the watercourse. Crossings have two
13 road approaches.

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

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

24
25 (DFG Option) Scour means the process of erosion by flowing water.

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

14
15 **(DFG Option) Sediment Filter Strip** means a structure or vegetation that
16 substantially prevents concentration, transport, and delivery of sediment to
17 a watercourse or lake by reducing velocity and filtering water through
18 features such as gradual slopes treated with vegetation, gentle slopes, woody
19 debris and mulch or settling basins.

20
21 **Sidecast** means excess earthen material pushed or dumped ~~to or~~ over the
22 side of a roads or landings.

23
24 **Temporary Road** means a logging road that is to be used only during ~~the~~
25 timber operations and that will be deactivated or abandoned upon
completion of use. These roads have a surface adequate for seasonal

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1 ~~logging use and have drainage structures, if any, adequate to carry~~
2 ~~the anticipated flow of water during the period of use.~~

3

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

6

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

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

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

10
11 Amend § 916.3 [936.3, 956.3]. General Limitations Near Watercourses,
12 Lakes, Marshes, Meadows and Other Wet Areas

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

18 (1) At prepared tractor road crossings as described in 14 CCR §
19 914.8(b) [934.8(b), 954.8(b)].

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

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

23 ~~(4)~~(3) At new tractor ~~and~~ road crossings approved as part of
24 the Fish and Game Code process (F&GC 1600 et seq.).

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

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

4 (a)-(e) [No change]

5 (f) Class I watercourses -

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

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

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

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

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

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

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

6 (2) No Changes

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

9 (A-D) No Changes

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

12 1., 2., and 3., No changes

13 4. ~~Avoid Road and Landing Use: All new roads and~~
14 ~~landings shall be located outside of zone. When feasible, minimize~~
15 ~~use of existing roads and landings in the flood prone area. No~~
16 ~~servicing of equipment within the flood prone area. Exceptions~~
17 ~~include the use of roads and landings to accomplish actions to~~
18 ~~improved salmonid habitat conditions stated 14 CCR § 916.9 [936.9,~~
19 ~~956.9]. ~~subsection (f)(3)(E(1.)) above.~~~~

20 ~~(5)(4) ...~~

21 ~~(6)(5) ...~~

22 ~~(7)(6) ...~~

23 ~~(8)(7) ...~~

24 (F) Outer Zone No Changes.

25 (g)-(i) [No change]

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

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1 ~~(1) Logging roads, landings or Ttractor~~ roads shall not be used
2 when visibly turbid water from the ~~road, landing or tractor road (skid~~
3 ~~trail) or an inside ditch associated with the logging road, landing or~~
4 ~~tractor road~~ may reach a watercourse or lake in ~~amounts~~ quantities
5 sufficient to cause a turbidity increase in Class I, II, III or IV
6 waters.

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

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

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

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

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

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

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

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

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

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1 (m) Tractor Road Drainage Facility Installation [No change]

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

9 (1)(A), (B) and (D) no change.

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

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

16 (3) - (7) No change

17 (o) Erosion Site identification and remedies [No change]

18 ~~(p) The erosion control maintenance period on permanent and seasonal~~
19 ~~roads and associated landings that are not abandoned in accordance~~
20 ~~with 14 CCR § 923.8 [943.8, 963.8] shall be three years.~~

21 ~~(q)~~(p) Site preparation No change.

22 ~~(s)~~(r) Exemption notices No Changes.

23 ~~(t)~~(s) Emergency Notices No Changes.

24 ~~(u)~~(t) Salvage logging No Changes.

25 ~~(w)~~(u) Site-specific measures or nonstandard operational provisions
No Changes

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1 Option 1: Section reserved for future use.

2 (v) Substitute Permitting No Changes. Option 1: Site-specific
3 measures or nonstandard operational provisions No Changes

4 (w)Option 1: Substitute Permitting No Changes

5
6 Amend § 918.3 [938.3, 958.3]. ~~Roads to be Kept Passable~~

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

10
11 Amend Article 12. [Article 11.] Logging Roads, Landings, and Logging
12 Road Watercourse Crossings ~~Logging Roads and Landings~~

13
14 Amend § 923 [943,963]. Intent for Logging Roads, Landings, and Logging
15 Road Watercourse Crossings ~~Logging Roads and Landings.~~

16
17 (a) All logging roads, landings, and logging road watercourse
18 crossings in the logging area shall be planned, constructed,
19 reconstructed, used, maintained, removed, abandoned, and deactivated
20 in a manner that:

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

23 (2) Accommodates appropriate yarding systems.

24 (3) Is economically feasible.

25 (b) Such planning, construction, reconstruction, use, maintenance,
removal, abandonment, and deactivation shall occur in a manner that

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1 minimizes potential adverse impacts to, among other things:¹

2 (1) Public safety.

3 (2) Fish and wildlife habitat.

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

5 (4) Soil resources.

6 (5) Significant archeological and historical sites.

7 (6) Air quality.

8 (7) Visual resources.

9 (8) Worker safety.

10 (9) Fire hazard.

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

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

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

23
24
25

¹ FPC decision point from March 2010: standardizes language for intent of minimizing impacts.

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

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

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

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

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

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

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

3 (a) Logging roads and landings shall be planned and located within
4 the context of a systematic layout pattern that considers 14 CCR §
5 923(b), uses existing logging roads and landings where feasible and
6 appropriate, provides access for fire and resource protection
7 activities, and minimizes the following²:

8 (1) Total road mileage.

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

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

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

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

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

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

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

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

24 _____
25 ² FPC decision point from March 2010: Standardizes language for intent of minimizing impacts.

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

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

7 (1) At existing logging road watercourse crossings.

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

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

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

19 (d) As part of the field examination of classified watercourses and
20 lakes, the RPF or supervised designee shall evaluate areas in and near
21 existing, constructed, and reconstructed logging roads and landings
22 for sensitive conditions, including, but not limited to, unstable and
23 erodible watercourse banks, unstable upslope areas, channels with
24 inadequate flow capacity, changeable channels, overflow channels,
25 flood prone areas, debris jam potential, and riparian zones.

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1 (e) (CGS Option) The RPF or supervised designee shall evaluate all logging roads
2 and landings in the harvest area and all other logging roads that will be used for timber
3 operations between the harvest area and the first public road for sensitive conditions,
4 including evidence of potential sediment discharge to watercourses or lakes.

5 For (d) and (e) above³:

6 (1) The RPF shall consider these conditions and the measures
7 needed to maintain and restore, to the extent feasible, the functions
8 set forth in 14 CCR § 916.4(b) [936.4(b), 956.4(b)] when planning
9 logging roads and landings.

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

14 (3) The RPF shall describe in the plan feasible protection
15 measures for identified sensitive conditions, which consider the
16 watercourse classification and the location and planned use of all
17 logging roads and landings.

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

20 (e) (DFG Option) The RPF or supervised designee shall evaluate
21 logging road and landing surface and drainage conditions for all road
22 segments, cuts, fills and inboard ditches, landings, drainage
23 structures, and drainage facilities within the harvest area and on all

24 _____
25 ³ For CGS DGF Options, Change numbering for the remainder of the section as needed with no additional changes to text.

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1 other logging roads that will be used for timber operations between
2 the harvest area and the first public road. Field inventory
3 information shall be obtained by an RPF or supervised designee while
4 traversing the road segments. Maintenance needs identified during and
5 after the road assessment shall be addressed as soon as is feasible.

6 (f) When selecting feasible alternatives (see 14 CCR §§ 897 and 898)
7 during the planning phase of logging roads and landings, the RPF shall
8 consider the location and planned use of logging roads and landings
9 and whether such logging roads and landings will be abandoned or
10 deactivated.

11 (g) In watersheds with listed anadromous salmonids and in planning
12 watersheds immediately upstream of, and contiguous to, any watershed
13 with listed anadromous salmonids, where logging road or landing
14 construction or reconstruction is proposed, the plan shall state the
15 location of, and specifications for, logging road and landing
16 abandonment or other mitigation measures to minimize the adverse
17 effects of long-term site occupancy of the road system within the
18 watershed.

19 (RRFT Option)⁴ In watersheds with listed anadromous salmonids and in
20 planning watersheds immediately upstream of, and contiguous to, any
21 watershed with listed anadromous salmonids, where logging road or
22 landing construction or reconstruction is proposed, the plan shall
23 identify:

24 _____
25 ⁴ FPC decision point from April 2010: Use optional language for consistency with preamble to intent sections in 923. Deletes language adopted in ASP rules in 2009.

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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 **DFG Option (h)** In watersheds with listed anadromous salmonids, and in
8 planning watersheds immediately upstream, the RPF shall certify that
9 the assessment conducted pursuant to 923.1(e) and 923.10(g) was
10 completed. The plan shall identify the proposed treatment of all
11 existing or potential sediment sources including drainage structures
12 and facilities that are not functioning or are discharging sediment
13 into watercourses and lakes in quantities that violate Water Quality
14 requirements or result in significant adverse impacts to the
15 beneficial uses of water. The plan shall specify an implementation
16 schedule for treatments. Maintenance needs identified during and
17 after the road assessment shall be addressed as soon as is feasible.

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

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

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

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

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

8
9 **Amend § 923.2 [943.2, 963.2]. Design and Implementation for Logging**
10 **Roads and Landings Road Construction.**

11 Constructed and reconstructed logging roads and landings⁵ shall be
12 designed and implemented in accordance with their proposed use,
13 maintenance requirements, and the approved plan:

14 (a) All logging roads and landings shall:

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

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

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

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

22
23
24
25 ⁵ FPC decision point from May 2010: Rejected DFG comments to widen application of design standards to ALL roads and instead retained focus on roads to be constructed or reconstructed.

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1 (5) Be hydrologically disconnected from watercourses and lakes to
2 the extent feasible.⁶

3 (6) Include adequate drainage structures and facilities⁷ necessary
4 to avoid concentrating and diverting runoff, to minimize erosion of
5 roadbeds, landing surfaces, drainage ditches, sidecast and fills, to
6 minimize the potential for soil erosion and sediment transport, and to
7 prevent the discharge of sediment into watercourses and lakes in
8 quantities deleterious **that violate Water Quality requirements or result in**
9 **significant adverse impacts** to the beneficial uses of water.

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

23 ⁶ FPC decision point from May 2010: Inserts portion of DFG recommendation to
24 include requirement for "hydrological disconnection. Other specifics on how
to accomplish hydro-disconnection were not accepted by FPC.

25 ⁷ FPC decision point from May 2010: Rejects DFG option to include "road
rocking" as a method for adequate drainage structure. FPC desires to retain
performance standard language to allow maximum flexibility to implement
technologies that accomplish the intent of sections to provide adequate
drainage structures and facilities.

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

4 (c) Excess material excavated during logging road and landing
5 construction shall not be transported to disposal sites where it will
6 discharge into a watercourse or lake in quantities ~~deleterious that~~
7 violate Water Quality Requirements or result in significant adverse impacts to the
8 beneficial uses of water.

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

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

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

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

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

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

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

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

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

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

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

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

15 **PFR Option - Delete CGS and DFG options in (e) and (h) and instead**

16 **insert 923.2 (f) - the ASP find it an fix it- for 923.1 (h)**

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

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

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

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

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

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

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

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

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

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

18 Option 1: before submission of a plan or substantial deviation (Option

19 2: prior to the pre-harvest inspection, if necessary, or prior to

20 logging road construction or reconstruction). Exceptions may be

21 explained and justified in the plan and agreed to by the Director if

22 flagging is unnecessary as a substantial aid to examining: (1)

23 compatibility between logging road location and yarding and

24 silvicultural systems, or (2) possible significant adverse effects of

25 logging road location on the factors listed under 14 CCR § 923(b)

[943(b), 963(b)].

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

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

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

(b) Logging roads or landings shall not be constructed or reconstructed in Class I, II, III, or IV watercourses or lakes, the WLPZ, marshes, wet meadows, or other wet areas, except for logging road watercourse crossings or as specified in the plan.⁸

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

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

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

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

⁸ Option for 150 foot distance from WTL for new road construction recommended by Staff and science team.

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

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

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

12 (j) Logging roads or landings shall not be constructed or
13 reconstructed under saturated soil conditions, except that
14 construction may occur on isolated wet spots arising from localized
15 ground water such as springs, provided measures are taken to minimize
16 soil erosion and sediment transport and to prevent the discharge of
17 sediment into watercourses and lakes in quantities ~~deleterious that~~
18 ~~violate Water Quality Requirements or result in significant adverse impacts~~ to the
19 beneficial uses of water.

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

23 (k) Construction or reconstruction of logging roads or landings shall
24 not take place during the winter period unless the approved plan

25 ⁹ Subsection 923.4 (j)(1) is added to ensure that construction standards are maintained during operations on saturated soils.

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

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

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

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

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

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

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

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

23 (1) Public safety.
24
25

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1 (2) Areas that could deliver sediment into a watercourse or
2 lake in quantities deleterious **that violate Water Quality Requirements or result**
3 **in significant adverse impacts** to the beneficial uses of water.

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

13 (r) In watersheds with listed anadromous salmonids, no logging roads
14 or landings shall be constructed or reconstructed within the CMZ or
15 Core Zone of a Class I watercourse except for those listed in 14 CCR §
16 916.9(e)(1)(A)-(F) [936.9(e)(1)(A)-(F), 956.9(e)(1)(A)-(F)] or
17 pursuant to 14 CCR § 916.9(v) [936.9(v), 956.9(v)].

18 (s) 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) On slopes greater than 50 percent that have access to a
22 watercourse or lake:

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

25 (B) Where cutbank stability is not an issue, logging roads
may be constructed as a full-benched cut (no fill). Spoils not

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1 utilized in logging road construction shall be disposed of in stable
2 areas with less than 30 percent slope outside of any WLPZ, EEZ, or ELZ
3 designated for watercourse or lake protection. The Director, with
4 concurrence from other responsible agencies, may waive inclusion of
5 these measures where the RPF can show that slope depressions and other
6 natural retention and detention features are sufficient to control
7 overland transport of eroded material.

8 (C) Logging roads may be constructed with balanced cuts
9 and fills:

10 (i) If properly engineered, or,

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

13 (2) During the extended wet weather period, no timber
14 operations shall take place unless the approved plan incorporates
15 a complete winter period operating plan pursuant to 14 CCR §
16 914.7(a) [934.7(a), 954.7(a)] that specifically addresses, where
17 applicable, proposed logging road or landing construction,
18 reconstruction. ¹⁰

19
20
21
22 ¹⁰ DFG comment for adding 923.4 (s) (3) contained in the May 20 2010
23 version was deleted(***(3 DFG Option) No road or landing construction,***
24 *reconstruction, or decommissioning shall be undertaken during the extended wet*
25 *weather period, or at any time outside this period when saturated soil*
conditions exist, except on hydrologic ally disconnected road segments.) *The*
subsection was deleted because it content is already contained in 923.4 (j) and
923.4 (s) (2). The mention of hydrologic disconnection was added by the FPC in
923.2 (a) (5)

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

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

5 (a) All logging road and landing surfaces shall be adequately drained
6 through the use of surface geometry configurations in combination with
7 the installation of drainage facilities or ditch drains and shall be
8 hydrologically disconnected from watercourses and lakes to the extent
9 feasible.¹¹

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

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

18 (1) Be adequately sized to transmit runoff.

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

20 (3) Avoid discharge onto fill.

21 (4 DFG Option) Drain to stable sediment filter strips¹².

22 (4)(5) Minimize potential adverse impacts to slope stability.

23
24 ¹¹ Amendments to subsection 923.5 (a) were added to include the CGS amendment for
hydrologic disconnection for drainage facilities.

25 ¹² CGS recommends rejection of these Options as it is covered in 923.5 (h)

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1 (d) Waterbreaks and rolling dips installed across logging roads and
2 landings shall be of sufficient size and number and be located to (DFG
3 Option) drain to stable sediment filter strips and¹³ avoid collecting
4 and discharging concentrated runoff onto fills, erodible soils,
5 unstable areas, and connected headwall swales.

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

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

22 RRTF Option 2: Distances between waterbreaks shall not exceed the
23 following standards:

24 _____
25 ¹³ CGS recommends rejection of these Options as it is covered in 923.5 (h).

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MAXIMUM DISTANCE BETWEEN WATERBREAKS

<u>Estimated</u>	<u>Logging Road</u>	<u>Gradient in Percent</u>	
<u>Hazard</u>	<u>10 or less</u>	<u>11-25</u>	<u>>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)

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

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

(ii indexing placeholder) (CGS Option) Where road cannot be hydrologically disconnected, and where feasible, logging road surfaces, inside ditches, rolling dips, waterbars, and landing surfaces shall be rocked, paved, or receive other surface treatment that will prevent the discharge of sediment to watercourses or lakes in

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1 quantities that violate Water Quality Requirements or result in significant adverse
2 impacts to the beneficial uses of water.¹⁴

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

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

14 (k) Bare soil on logging road or landing cuts, fills, transported
15 spoils, or sidecast that is created or exposed by timber operations
16 shall be stabilized to the extent necessary to minimize soil erosion
17 and sediment transport and to prevent the discharge of sediment into
18 watercourses and lakes in quantities ~~deleterious~~ that violate Water Quality
19 Requirements or result in significant adverse impacts to the beneficial uses of
20 water. Sites to be stabilized include, but are not limited to:

21 _____
22
23
24 ¹⁴ Inclusion this subsection recommended by the FPC in at the July 6th, 2010
25 committee meeting is to address surface erosion and for roads in all
locations. This subsection is currently being reviewed in context with 923.5
(p)(4)and (5) proposed amendments by DFG address and similar requirements for
ASP watersheds.

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

4 (2) Approaches to logging road watercourse crossings of Class I
5 or II waters or Class III waters where an ELZ, EEZ, or a WLPZ is
6 required.

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

9 (1) Soil stabilization measures shall be described in the plan and
10 may include, but are not limited to, removal, armoring with rip-rap,
11 replanting, mulching, seeding, installing commercial erosion control
12 devices to manufacturer's specifications, or chemical stabilizers.

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

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

23 (o) Overhanging or unstable concentrations of slash, woody debris or
24 soil along the downslope edge or face of landings shall be removed or
25 stabilized when it is located on slopes greater than 65 percent or
within 100 feet of the boundary of a WLPZ on slopes greater than 50

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1 percent that drain toward the zoned watercourse or lake. Removed
2 materials shall not be placed at disposal sites that could discharge
3 into a watercourse or lake in quantities ~~deleterious that violate Water~~
4 ~~Quality Requirements or result in significant adverse impacts~~ to the beneficial
5 uses of water.

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

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

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

18 (3) Within the WLPZ, and within any ELZ or EEZ designated for
19 watercourse or lake protection, treatments to stabilize soils,
20 minimize soil erosion, and prevent the discharge of sediment into
21 watercourses or lakes in quantities deleterious to aquatic species or
22 the quality and beneficial uses of water, or that threaten to violate
23 applicable water quality requirements shall be described in the plan
24 as follows:

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

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

3 (ii) Disturbed logging road and landing cut banks and
4 fills, and

5 (iii) Any other area of disturbed soil that threatens
6 to discharge sediment into water in quantities ~~deleterious that violate~~
7 Water Quality Requirements or result in significant adverse impacts to the
8 beneficial uses of water.

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

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

16 (D) For areas disturbed ~~from May 1 to October 14 outside of~~
17 the extended wet weather period, treatment shall be completed prior to the
18 start of any rain that causes overland flow across or along the
19 disturbed surface that could deliver sediment into a watercourse or
20 lake in quantities ~~deleterious that violate Water Quality Requirements or result~~
21 in significant adverse impacts to the beneficial uses of water.

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

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1 (F) Where the natural ability of ground cover is
2 inadequate to protect the beneficial uses of water by minimizing soil
3 erosion or by filtering sediments within any ELZ or EEZ designated for
4 watercourse or lake protection, the plan shall specify protection
5 measures to retain and improve the natural ability of the ground cover
6 to filter sediment and minimize soil erosion.

7 **(4 DFG Option) The following erosion control shall be completed:**

8 **(A) Logging road approach surfaces on the following shall**
9 **consist of high-quality, durable, compacted rock or paving: (i)**
10 **permanent roads, (ii) seasonal roads crossing Class I watercourses,**
11 **(iii) roads used for hauling (logs, rock, heavy equipment) during the**
12 **extended wet weather period.**

13 **(B) Logging road approach surfaces on the following shall**
14 **be treated with either: rock, slash, seed and straw mulch, seed and**
15 **stabilized straw, or seed and slash: (i) all seasonal roads used for**
16 **hauling in the current year, (ii) all seasonal roads used during the**
17 **extended wet weather period for purposes other than hauling.**

18 **(C) Logging road approaches to temporary crossings shall**
19 **be stabilized and maintained after crossing removal to avoid rutting**
20 **or pumping fines during administrative use after removal.**

21 **(D) Logging road approach ditches exhibiting downcutting**
22 **shall be lined with high-quality, durable rock, installed with erosion**
23 **control materials or structures to manufacturers specifications, or**
24 **treated with other effective means as described in the plan, in the**
25 **following locations: (i) permanent logging roads, (ii) seasonal**

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1 roads crossing Class I watercourses, (iii) logging roads used for
2 hauling during the extended wet weather period.

3 (E) Logging road approach ditches shall be treated to
4 minimize sediment transport in the following locations: (i) seasonal
5 logging roads used for hauling in the current year, (ii) seasonal
6 logging roads used during the extended wet weather period for purposes
7 other than hauling.

8 (5 DFG Option) All segments of hydrologically connected logging
9 roads in Class I and Class II WLPZs shall exhibit a rocked or paved
10 stable operating surface. The surface shall consist of high quality,
11 durable, compacted rock, or paving. The road surface and base shall
12 be maintained to avoid generation of fines during use.

13
14
15 Amend § 923.6 [943.6, 963.6]. Use of Logging Roads and Landings
16 Conduct of Operations on Roads and Landings.

17
18 The following use standards shall apply to logging roads and
19 landings:

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

22 (b) Logging roads and landings shall not be used when conditions that
23 could result in sediment discharge into watercourses or lakes in
24 quantities ~~deleterious~~ that violate Water Quality Requirements or result in
25 significant adverse impacts to the beneficial uses of water, except in

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

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

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

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

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

18 (g) Logging roads and landings shall not be used for log hauling
19 between October 15 and May 1 when saturated soil conditions result in
20 soil erosion and sediment transport that could discharge sediment into
21 watercourses and lakes in quantities ~~deleterious~~ that violate Water Quality
22 Requirements or result in significant adverse impacts to the beneficial uses of
23 water.

24 (h) Logging roads and landings used for log hauling during the winter
25 period shall be, where necessary, surfaced with rock to a depth and

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1 quantity sufficient to maintain a stable road surface throughout the
2 period of use.

3 (i) In watersheds with listed anadromous salmonids, the following
4 shall apply:

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

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

11 Exceptions include the use of roads and landings to accomplish actions
12 to improve salmonid habitat conditions stated in 14 CCR § 916.9
13 916.9(f)(3)(E)(1.) [936.9(f)(3)(E)(1.), 956.9(f)(3)(E)(1.)]

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

17 (1) Logging roads and landings shall not be used when visibly
18 turbid water from the road or landing surface or an inside ditch
19 associated with the logging road or landing may reach a watercourse or
20 lake in quantities sufficient to cause a turbidity increase in Class
21 I, II, III or IV waters.

22 (2) Log hauling on logging roads and landings shall be limited
23 to those which are hydrologically disconnected from watercourses to
24 the extent feasible, and exhibit a stable operating surface in
25 conformance with (3) above.

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1 (3) Concurrent with use for log hauling, approaches to logging
2 road watercourse crossings shall be treated for erosion control as
3 needed to minimize soil erosion and sediment transport and to prevent
4 the discharge of sediment into watercourses and lakes in quantities
5 ~~deleterious~~ that violate Water Quality Requirements or result in significant adverse
6 impacts to the beneficial uses of water.

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

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

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

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

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

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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) As part of the field examination of classified watercourses and
12 lakes, the RPF or supervised designee shall evaluate areas at and near
13 existing and constructed or reconstructed logging road watercourse
14 crossings for sensitive conditions, including, but not limited to,
15 past diversion, overtopping, plugging, significant inlet or outlet
16 erosion, soil piping, fill slope erosion and significant mechanical
17 damage or wear. See CGS Option in 923.1 (e)

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

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

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

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

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

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

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

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

22 (a) Where applicable, logging road watercourse crossing construction
23 and reconstruction shall comply with the design of required DF&G 1600
24 agreements.

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

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

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

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

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

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1 (g) Where a significant volume of sediment is stored upstream from a
2 logging road watercourse crossing that is proposed to be
3 reconstructed, the stored sediment shall be removed or stabilized, to
4 the extent feasible, as described in the plan and in conformance with
5 required DF&G 1600 agreements.

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

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

15 (j) Logging road watercourse crossings shall not be constructed or
16 reconstructed under saturated soil conditions or when such activities
17 could result in the discharge of sediment into watercourses or lakes
18 in quantities deleterious to the beneficial uses of water.

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

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

3 (l) Logging road watercourse crossings shall be installed no later
4 than October 15, except where logging road construction or
5 reconstruction takes place from October 15 to November 15 or from
6 April 1 to May 1 where logging road watercourse crossings shall be
7 installed concurrent with the activity. Logging road watercourse
8 crossings shall not be installed during the winter period, except as
9 specified in an approved winter operating plan per 14 CCR § 914.7(a)
10 [934.7(a), 954.7(a)].

11 (m) In watersheds with listed anadromous salmonids, excavated
12 material and cut bank resulting from construction and reconstruction
13 shall be sloped back from the channel to prevent slumping and to
14 minimize soil erosion and where needed, stabilized per 14 CCR §
15 923.14(b) [943.14(b), 963.14(b)].

16 (n) In watersheds with listed anadromous salmonids and in planning
17 watersheds immediately upstream of, and contiguous to, any watershed
18 with listed anadromous salmonids, during the extended wet weather
19 period no timber operations shall take place unless the approved plan
20 incorporates a complete winter period operating plan pursuant to 14 CCR
21 § 914.7(a) [934.7(a), 954.7(a)] that specifically addresses, where
22 applicable, proposed logging road watercourse construction or
23 reconstruction. Where logging road watercourse crossing construction
24 or reconstruction is proposed an implementation schedule shall be
25 specified.

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1 Adopt § 923.16 [943.16, 963.16]. Logging Road Watercourse Crossing
2 Maintenance and Monitoring.

3
4 The following maintenance and monitoring standards shall apply to
5 logging road watercourse crossings:

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

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

12 (c) Soil stabilization treatments on logging road watercourse
13 crossing fills shall be maintained to minimize soil erosion and
14 sediment transport and to prevent the discharge of sediment into
15 watercourses and lakes in quantities ~~deleterious that violate Water Quality~~
16 ~~Requirements or result in significant adverse impacts~~ to the beneficial uses of
17 water.

18 (d) The plan shall identify measures to be used to reduce sediment
19 delivery from logging road watercourse crossings where evidence of
20 substantial soil erosion and discharge of sediment into watercourses
21 and lakes in quantities deleterious to the beneficial uses of water is
22 present at a logging road watercourse crossing used for timber
23 operations. Where evidence of substantial soil erosion and discharge
24 of sediment into watercourses and lakes in quantities deleterious to
25 the beneficial uses of water is present at a logging road watercourse
crossing used for timber operations, additional measures shall be

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1 stated in the plan and installed, as needed, to minimize soil erosion
2 and sediment transport and to prevent the discharge of sediment into
3 watercourses and lakes in quantities deleterious to the beneficial
4 uses of water.

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

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

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

16
17
18 End of section under review as of 8/18/10
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