DRAFT

Road Rules, 2013 Rule Package

Questions and Answers for Agency Personnel, RPFs and Landowners

California Department of Forestry and Fire Protection

California Geological Survey

California Department of Fish and Wildlife

North Coast Regional Water Quality Control Board

Central Valley Regional Water Quality Control Board

National Marine Fisheries Service

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Cover photo: CGS's Don Lindsay explaining bridge requirements during the Road Rules, 2013 Training Workshop held at Ione on September 16, 2014. The field portion of the workshop was held near Cook's Station in the central Sierra Nevada Mountains. The videotaped presentations from the indoor portion of the workshop are posted on the CAL FIRE webpage under: Resource Management, Forest Practice, Memorandums and Publications, Memorandums, at the following website: http://calfire.ca.gov/resource_mgt/resource_mgt_forestpractice_pubsmemos_memos.php

Introduction and Background Information

The Road Rules, 2013 rule package was approved by the California State Board of Forestry and Fire Protection (Board) during their January 2014 meeting held in Sacramento. This question and answer document contains questions asked at road rules training workshops held in Eureka, Willits, Redding, Ione, and Felton between September 3, 2014 and September 18, 2014, as well as additional questions submitted to the Department. The Road Rules, 2013 rule package will become effective January 1, 2015. The final Office of Administrative Law (OAL) approved version of this rule package is posted on the Board's website at: http://bofdata.fire.ca.gov/regulations/approved_regulations/2014_approved_regulations/roadrules2013.pdf.

Development of this rule package occurred over a 14 year period and included considerable work provided by two Board-appointed committees. The Board's primary objectives in adopting the new road rules were to (1) ensure that the road-related Forest Practice Rules are adequate to prevent adverse impacts to beneficial uses of water, and (2) 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.

The new Road Rules are more performance-based, rather than prescriptive-based, than in the past. This approach allows Registered Professional Foresters (RPFs) more flexibility, as well as the ability to apply innovation and professional judgment. It also requires a broad-based understanding of road design, construction, maintenance, and abandonment standards. Considerable information on these topics is provided in Weaver et al. 2014 (revised Handbook for Forest, Ranch and Rural Roads).

Key changes in the Road Rules, 2013 rule package include (1) new and revised definitions, including a significant sediment discharge definition used over 40 times in the rule package; (2) a statewide requirement for hydrologic disconnection of roads from watercourses where feasible; (3) a statewide road erosion site inventory; (4) improved road drainage and watercourse crossing requirements; (5) new road maintenance and monitoring requirements; and (6) additional plan mapping requirements. Technical Rule Addendum No. 5, also approved by the Board in January 2014, has been produced to assist RPFs, agency personnel, and landowners with the rule package; it is posted at http://bofdata.fire.ca.gov/regulations/approved_regulations/2014_approved_regulations/tra5_final.pdf and will be included in the 2015 California Forest Practice Rules book.

The purpose of this document is to provide RPFs, forest landowners, and agency personnel with answers to interpretive questions regarding these rules that were generated by both RPFs and agency personnel. It is not intended to establish policies outside of those adopted by the Board. The Road Rules, 2013 rules themselves are the standards; this document only attempts to provide insight into the application of these rules.

Road Rules, 2013 Rule Package

Questions and Answers

I. General Plan-Related Questions

1. When do the Road Rules, 2013 rules become effective?

January 1, 2015.

2. Do plans submitted in 2014 that were accepted for filing and are currently under review need to be brought into conformance with the new road rules prior to approval in January 2015?

Yes. Plans must be found in conformance with all current rules at the time the Director's representative approves the plan. The new road rules must be incorporated in plans prior to approval by CAL FIRE, if approved after January 1, 2015. We suggest plans submitted this date forward include these requirements.

3. Are currently approved THPs exempt from compliance with the new Road Rules, 2013 rule package?

No, not with operational rules (see PRC 4583: All timber operations shall conform to any changes or modifications of standards and rules made thereafter unless prior to the adoption of such changes or modifications…)

4. Do currently approved THPs need to be amended to address the new rule package?

No, unless a substantial deviation is proposed that will result in additional road construction.

5. How does one address the incursion of substantial liabilities and the unreasonable expense caused by adherence to the new road rules per PRC § 4583?

CAL FIRE expects that all timber operations under THPs approved prior to January 1, 2015 shall conform to the **operational** rules contained within the new road rules, unless "prior to the adoption of such changes or modifications, substantial liabilities for timber operations have been incurred in good faith and in reliance upon the standards in effect at the time the plan became effective and the adherence to such new rules or modifications would cause unreasonable additional expense to the owner or operator." For THPs approved prior to January 1, 2015 where substantial liabilities have been incurred, the RPF or plan submitter may request exemption from some or all of the new operational rules in areas of the THP yet to be completed through an amendment submitted to the Department pursuant to 14 CCR § 1039. The amendment should indicate each operational rule(s) from which the

submitter requests relief, with a detailed explanation of the substantial liability incurred and the unreasonable expense caused by the new rules. If CAL FIRE is presented with substantial evidence that relief from the new rules may result in "take" of a listed species or timber operations may result in a significant adverse impact, a substantial deviation will be required.

6. **If all the operations are completed on a plan, but the work completion report has not been signed by CAL FIRE, does the RPF still have to comply with all of the new road operational rules?**

   No.

7. **Has there been an evaluation of the costs associated with compliance for the new rule package?**

   Yes. See the Road Rules, 2013, Final Statement of Reasons (FSOR). http://bofdata.fire.ca.gov/board_business/binder_materials/2013/november_2013/full/full_16.0_road_rules_fsor.pdf

8. **Do the new rules apply to existing NTMPs?**

   Not always. Measures required are those that would result in the RPF, upon NTO submittal, to certify that the NTO will carry out either: best management practices for the protection of the beneficial uses of water, soil stability, forest productivity, and wildlife, as required by the current rules of the Board; or the NTO is consistent with the NTMP and will not result in significant degradation of the beneficial uses of water, soil stability, forest productivity, or wildlife, or be in violation of applicable legal requirements (ref. 14 CCR § 1090.7(l)).

9. **Do the new rules have to be amended into existing NTMPs?**

   Not necessarily. See the response to question number 8.

10. **If an NTMP-NTO is already enrolled in a GWDR with an Erosion Control Plan (ECP) in the North Coast Region, does that meet the intent of the new road rule requirements?**

    Yes. If there is an existing ECP for an already approved NTMP-NTO, then the intent of the new road rules is covered.

11. **Do the new road rules apply to existing Aquatic HCPs?**

    Aquatic HCPs are not exempt from the entire package, but they are exempt from the sections "that apply in watersheds with listed anadromous salmonids and in planning watersheds immediately upstream of, and contiguous to, any watershed with listed anadromous salmonids." See 14 CCR §§ 916.9 [936.9, 956.9] (w) and 923 [943, 963] (f).

II. Road Erosion Site Inventory-Related Questions

12. Is the CAL FIRE road erosion inventory table acceptable to all of the Review Team agencies?

Yes. The Review Team agencies could, however, ask for additional information to clarify conditions and/or proposed actions at a site. Also, RPFs can develop their own table if desired. Note, however, that while the road erosion inventory information is required, it does not have to be included in a table. The CAL FIRE Timber Harvesting Plan Related - Map Reference Table is posted on the following website under "Non-Industrial Timber Management Plan Related": http://calfire.ca.gov/resource_mgt/resource_mgt_forestpractice_pubsmemos_memos.php. Also posted is a document with instructions on how to fill out the Map Reference Table.

13. Do all erosion sites, or just controllable sites, need to be included in the table?

Only sites that have feasible treatments are to be included in the table. The RPF must map sites that cannot be treated and should describe why the non-treatable sites cannot be feasibly treated.

14. Does the required map and inventory of erosion sites include the logging area, or just the plan area?

The requirement applies to all logging roads within the logging area, including appurtenant roads. Existing and potential erosion sites do not necessarily need to be mapped for roads to rock pits and water drafting sites that will not have logs hauled on them. RPFs are to map and inventory all existing and potential erosion sites within the logging area that can deliver to a watercourse.

15. Explain what is meant by "logical order of treatment" for the road erosion site inventory. Can the LTO be provided with some flexibility?

The new road rules specify that the RPF must describe in the plan a logical order of treatment for the road erosion sites listed that can be feasibly treated. The most severe erosion sites should be addressed first (i.e., those erosion sites that threaten to significantly adversely impact water quality should be treated first). Additionally, sites that cannot be treated later, such as when crossings accessing them are abandoned, must be treated prior to abandonment, so that they are not left isolated. Rocking of road approaches, if found to be a significant existing or potential erosion site, should be done prior to use by log trucks in most situations. Some flexibility in timing for LTOs is possible, since it is necessary to allow for logging equipment to be moved on site. There is no general mandatory timing of treatment required prior to the expiration of the plan, however, there may be timing requirements specific to the site.

16. <u>If a new plan includes an Erosion Control Plan (ECP) table used for a NCRWQCB GWDR permit, does it need to also include a separate table for inventoried road erosion sites required under the new road rules?</u>

It is recommended that one table, with all of the required information, be included in the plan.

17. <u>Consider an appurtenant road for a plan that is a mainline haul road constantly being used by multiple landowners. How and when do road erosion inventory sites get addressed in this situation? In other words, how do you prioritize these sites under multiple plans? Which plans should identify the sites? What happens if the plan does not go active, but there is an Erosion Control Plan?</u>

Each plan must include the road erosion inventory table (or information provided in another form), including shared road points. If a shared road point was evaluated and approved under another plan, the plan subsequently submitted, which shares the road point, should include the same point identifier (i.e., do not identify it with a different map point identifier), and reference the plan number the point was reviewed and approved under. The mitigation measures identified on the shared road shall be completed under the first plan that completes operations.

18. <u>How can road erosion inventory sites be addressed on an ownership-wide basis?</u>

Road management plans, either voluntary or as specified in the Forest Practice Rules (14 CCR § 1093 et. seq.), are encouraged and can be used to address existing or potential road erosion sites on an ownership or watershed basis (see DFW 2006 for watershed-wide inventory procedures).

19. <u>Can you use offsite mitigation if you can't feasibly treat existing or potential road erosion sites?</u>

14 CCR § 923.1 [943.1, 963.1] (g)(2) specifies that in Anadromous Salmonid Protection (ASP) watersheds and those planning watersheds immediately upstream, where logging road construction or reconstruction is proposed, the plan shall identify what, if any, offsetting mitigation measures are needed to minimize potential adverse impacts to watersheds from the road system. Additionally, in both ASP and non-ASP watersheds, offsite mitigation could be specified as an exception under 14 CCR § 923 [943, 963] (c).

<u>III. Watercourse Crossing-Related Questions</u>

20. <u>How do the new rules address the old requirement [14 CCR § 923.4 [943.4, 964.4] (f)] that existing drainage structures (e.g., culverts) must pass at least the 50-year flood flow?</u>

There is no comparable rule included in 14 CCR § 923.9 [943.9, 963.9].[1] A substantially undersized pipe would likely be considered a significant potential erosion source capable of producing a significant sediment discharge (SSD) in the road erosion inventory prepared by the RPF, and should be addressed in that manner. A problematic existing watercourse crossing will be handled with a normal Pre-Harvest Inspection (PHI) recommendation.

21. How do the new road rules address what are properly functioning drainage structures on roads that existed before timber operations [as is currently addressed in existing rule 14 § CCR 923.4 [943.4, 963.4] (f)]?

There is no comparable rule to 14 CCR § 923.4 [934.4, 963.4] (f) in the new rule package. Properly functioning existing drainage structures that are not sized for 100-year flood flows will usually not be required to be upgraded because they will not be considered a significant potential erosion source. The RPF should be prepared to provide an explanation of why a particular existing drainage structure that is not sized for 100-year flows is properly functioning, if asked by the Review Team.

22. What are the engineering requirements for new permanent bridge installations?

CAL FIRE does not enforce the Professional Engineers Act. However, in some site-specific circumstances, it is possible that other resource management entities may consider bridge design engineering expertise a necessity per the Professional Engineers Act requirements.[2] It is the RPF's responsibility to determine if the services of professionals with the appropriate expertise, including but not limited to licensed professional engineers or licensed professional geologists, is required, where such expertise is called for by Professional Foresters Law, Public Resources Code section 750 et seq., particularly Section 758; the Business and Professions Code section 6700 et seq. (Professional Engineers Act); and/or section 7800 et seq. (Geologists and Geophysicists Act).

23. Under the new road rules, can an RPF instruct an LTO to install "waterholes" at culvert inlets to act as a water source?

The new Road Rules, 2013 rule package does not specifically prohibit the construction of waterholes at crossing inlets. However, this practice should only be

[1] General rule requirements related to this topic include 14 CCR § 923 [943, 963] (b)(1)(2), 14 CCR § 923 [943, 963] (e) ; 14 CCR § 923.9 [943.9, 963.9] (a), (o).

[2] It is recommended that the factors listed for bridges and bottomless culverts listed by DFW in Attachment A, Fisheries Engineering Review Checklist for Coho HELP Act projects, be considered when designing a bridge or other structure in a watercourse with state and federally listed anadromous salmonids. This checklist is available online at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=58461&inline=1

specified where appropriate, since it can increase the risk of a culvert plugging with woody debris and catastrophically failing (Furniss et al. 1998). In other words, site specific conditions must be taken into consideration before this practice is implemented. Other site-specific options should be considered, such as installation of off-channel storage tanks or use of temporary boards at the pipe inlet.

24. Are fords acceptable for Class I watercourses with fish?

Wet fords that are built in contact with the streambed so that vehicles can drive over the channel and are composed of streambed gravels that simulates natural streambed characteristics can provide fish passage, but this is not a preferred option for fish passage. Better options include temporary crossings, bridges, and bottomless (open-bottom) arches (see Weaver et al. 2014). The presence of listed fish or amphibians at the crossing location may likely require consideration of another type of crossing to avoid take of those species.

25. When should trash racks be used at culvert crossings?

Use of debris control structures in front of the inlet of culverts, such as debris racks, debris deflectors, and debris turning bars, is discouraged as a general management measure, but can be an effective mechanism to reduce failure risk. They must be easily accessed and maintained throughout the winter period (i.e., winter maintenance is critical for success). Not all watercourses are candidates for debris control structures (see Weaver et al. 2014). If trash racks are installed, the recommended distance upstream from the inlet is at least 1.5 times the culvert diameter to minimize the potential for the inlet to become blocked by debris.

Landowners with Lake or Streambed Alteration Agreements (LSAAs) or Master Agreements for Timber Operations (MATOs) through California Department of Fish and Wildlife may have specific conditions that preclude the use of these structures.

IV. Monitoring and Maintenance-Related Questions

26. How long is monitoring required under the new road rules package?

As specified in 14 CCR § 923.7 [943.7, 963.7] (i), the prescribed erosion control maintenance period is one to three years for non-ASP rule areas. 14 CCR § 923.7 [943.7, 963.7] (j) specifies that “In watersheds with listed anadromous salmonids and in planning watersheds immediately upstream of, and contiguous to, any watershed with listed anadromous salmonids, the prescribed maintenance period for deactivated or abandoned roads shall be one year unless otherwise prescribed by the Director pursuant to 14 CCR § 1050. The prescribed maintenance period for logging roads and associated landings, including appurtenant roads, shall be three years.” 14 CCR § 923.7 [943.7, 963.7] (k) states that monitoring inspections are to be conducted, when access is feasible during the prescribed maintenance period, a sufficient number of times during the extended wet weather period, particularly after

large winter storm events and at least once annually, to evaluate the function of drainage facilities and structures.

27. Is there a standard available for determining when the maintenance period should be extended to more than one year in non-ASP rule areas?

The standard used by the reviewing agencies for extension beyond one year for the Prescribed Maintenance Period (PMP) in non-ASP rule areas is that specified in 14 CCR § 1050 (d), which states that "Upon approving a work completion report, the Director may prescribe a maintenance period which extends for as much as three years after filing the work completion report based on physical evidence (such as location of erosion controls in disturbed areas with high or extreme erosion hazard, on steep or unstable slopes, or within or adjacent to the standard width of a water course or lake protection zone) that erosion controls need to be maintained for the extended maintenance period in order to minimize soil erosion or slope instability or to prevent degradation of the quality and beneficial uses of water."

28. Is monitoring only required in ASP watersheds?

No. As specified in 14 CCR § 923.7 [943.7, 963.7] (k), monitoring is to occur on a statewide basis. See the response to question number 26.

29. Does the monitoring requirement apply to existing plans with logging operations completed but still under the erosion control maintenance period?

No. Monitoring under 14 CCR § 923.7 [943.7, 963.7] (k) is not considered to be an "operational" rule.

30. Where does the monitoring documentation (paperwork) go, and how is it processed?

If the monitoring is done to satisfy the requirements for a permit required by one of the Review Team agencies, such as Erosion Control Plans that must be submitted to the North Coast Regional Water Quality Control Board (NCRWQCB), documentation is to be sent to that agency. Otherwise, 14 CCR § 923.7 [943.7, 963.7] (k) does not require documentation to be submitted to CAL FIRE. However, the monitoring results should be readily available in the event that it is necessary to provide them to the Review Team agencies. CAL FIRE's mandatory monitoring inspections will be documented with entries into its Forest Practice System (FPS) database (i.e., it is a maintenance inspection that is already captured in FPS and no new procedures are required).

31. Can small landowners conduct the required monitoring?

Small landowners can conduct the monitoring work. The CVRWQCB has an existing guidance document for general monitoring assistance that will be useful to small landowners. See:

http://www.waterboards.ca.gov/rwqcb5/water_issues/timber_harvest/guidelines_waiver_monitoring_2010_pt1.pdf

32. Will the Regional Water Boards accept monitoring conducted by landowners?

Yes.

33. Does 14 CCR § 923.7 [943.7, 963.7] (j) mean that the three year prescribed maintenance period in anadromous salmonid protection (ASP) watersheds applies only to permanent and seasonal logging roads?

Yes. As stated in the rule language, deactivated or abandoned roads (both of which can be temporary roads) have a one year maintenance period.

V. Mapping and Noticing-Related Questions

34. Do wells and storage tanks for road watering need to be mapped?

Wells and water storage tanks not related to surface water do not need to be mapped as part of the new road rules package, since they are not direct water drafting sites. Drafting sites associated with surface water storage tanks must be mapped. It is appropriate to add a description in the plan that a well(s) or other source(s) will be used for obtaining water for dust control, and where the source(s) is located. Additionally, the Regional Water Boards may require wells to be mapped as a PHI recommendation and DFW may require notification under a 1600 agreement for Class II water tank use for dust abatement purposes.

35. Consider the following scenario: An RPF has a THP that will utilize a rock pit that is five miles from the plan area that will not be used for log hauling, but will have one culvert replaced. How should the road be mapped?

The RPF should map the road as an existing seasonal road only [ref. 14 CCR §1034(x)(4)(A)]. This rule section states that all roads are to be mapped. The RPF shall also include the proposed culvert replacement site as a mapped project point in the plan. Existing and potential erosion sites do not need to be mapped for this road segment, since it is not a logging road.

36. Considering the road described in question number 35 above, does the RPF's noticing need to include the location (i.e., public land survey system (PLSS) information) for the entire five mile road segment, or just the culvert and rock pit sites?

The noticing requirement would just apply to the culvert and rock pit sites. The Notice of Intent (NOI) rules (14 CCR § 1032.7) require identification of the plan area. While plan area is not defined, it is logical that since timber operations will occur at the culvert and rock pit site, these sites should be identified and noticed.

37. 14 CCR § 1034(x)(4)(C) requires mapping of logging roads that provide access to rock pits and drafting sites. Is it understood that this would not include access roads if they are not used by log trucks?

No, 14 CCR §1034(x)(4)(A) requires mapping of all roads associated with timber operations. See the response to question number 35.

38. Regarding 14 CCR § 1034(x)(5) – are these mapping requirements for proposed or existing roads?

This rule applies to proposed roads and proposed reconstructed roads.

39. There appears to be a conflict relative to the statement under 14 CCR § 1034(x)—"The appurtenant roads referenced in…(C), (D)…" Neither (C) or (D) are appurtenant roads. Can this be addressed through the Board's "Section 100" process?

While several corrections to the Road Rules, 2013 rule package are being submitted to OAL for "Section 100" changes prior to January 1, 2015, this is was not selected for alteration at the current time.

40. 14 CCR § 1034 (x)(4)(A) states: "The classification of all roads as permanent, seasonal, temporary, deactivated, or proposed for abandonment." It is unclear what is being asked to be classified relative to "deactivated": roads previously "deactivated" and proposed for use under the current plan; or roads that will be deactivated under the current plan, at least by end of timber operations; or both. Please clarify.

Both cases apply under 14 CCR § 1034 (x)(4)(A): roads that will be deactivated under the current plan are to be mapped as deactivated, as are roads that have been deactivated under a previous plan and proposed for use under the current plan.

41. With the nested categories of roads that are required to be mapped with the new road rules package, does CAL FIRE envision THP maps having various symbols to differentiate them by category (see below), as well as by class (permanent, seasonal, temporary, etc.)?

- **a. logging roads**
- **b. appurtenant roads**
- **c. roads used for timber operations, but which are not logging roads**
- **d. roads not used for operations, but which are potentially impacted by them**
- **e. public roads within ¼-mile of the harvest area (vs. more distant public roads)**
- **f. other roads which appear on the base map, but which do not fall within any of these categories**

CAL FIRE will require RPFs to differentiate between permanent, seasonal, and temporary roads, and encourages RPFs to continue to map roads as proposed or existing, all with different symbology. Reconstructed roads, appurtenant roads, deactivated roads, and abandoned roads should also have different symbols so that the reviewing agencies will have adequate information for plan review, and the LTO will have adequate information for operations. Other road types listed above may use different symbology if desired for clarity in the plan.

VI. Definition-Related Questions, including Significant Sediment Discharge

42. "Logging Road" means a non-public road "used by trucks going to and from landings to transport logs ...". If the new road rule language refers to "logging roads", does that mean that the rule does not apply to other roads which might be used during timber operations, but which are not used by either empty or loaded log trucks?

Yes, as currently worded.

43. The new definition of "Road Maintenance" is slightly different from the existing definition, which applies only in "Watersheds with Coho Salmon." Will the existing definition be deleted?

The Board of Forestry and Fire Protection has not proposed to delete the definition found under "watersheds with coho salmon" at this time.

44. The new road rules definitions help differentiate between "Road Maintenance" and "Reconstructed Roads." Is there similar guidance available to differentiate between maintenance and reconstruction of watercourse crossings?

No, but similar principles would apply to watercourse crossings. Reconstruction of a watercourse crossing would involve replacing or upgrading the structure and involve substantial soil movement and disturbance of the road prism at the crossing location.

45. Discuss what is meant by feasible and what is "economically" feasible.

See the definition of feasible provided in the existing Forest Practice Rules [ref 14 CCR § 895.1].

46. What is the difference between an abandoned road and deactivated road? Are decommissioned roads also defined?

An abandoned road has proactive measures applied to remove it from the permanent road network. The road prism may still exist in most areas, with only portions of the road segment removed (e.g., crossings and perched fill areas). An abandoned road must have effective self-sustaining drainage structures and also be "blocked", and the blockage design must be described in the plan [ref. 14 CCR § 923.8 [943.8, 963.8] (d)]. Blockage is to occur with structures like large boulders or a "tank trap", and not a gate.

Deactivated roads are logging roads that will remain as part of the permanent road network, but have had measures implemented to prevent use by logging trucks and standard four-wheel drive vehicles. They must have had their crossings pulled and must have effective self-sustaining drainage facilities; also they must be blocked prior to the winter period. A gate may be used for blockage. Note that "decommissioned" roads are not used or defined in the new road rules package.

47. Can seasonal and permanent roads be considered deactivated?

Usually, only a temporary road would require deactivation. In some instances, however, a seasonal or permanent road could be deactivated (these roads would not be required to be deactivated). One example would be a temporary bridge associated with a permanent road installed on a Class I watercourse that is removed before the winter period; the road would also need to be blocked (see the response to question 46).

48. When a road is deactivated, is there terminology for reactivating it? Is it a reconstructed road?

In most instances this would be identified as a temporary road. In the plan, the road would be described as a reactivation of a previously deactivated road. See the responses to questions number 40, 46, and 47.

49. Can a temporary road be deactivated after the start of the winter period?

If temporary logging roads (including watercourse crossings) and landings are not going to be deactivated annually prior to the winter period or upon completion of timber operations, whichever is earlier, the RPF must specify this in a Winter Period Operating Plan pursuant to 14 CCR § 914.7(b) [934.7(b), 954.7(b)].

50. Regarding the permanent road definition, is a road segment permanent in perpetuity, or could it be changed at a later date? CAL FIRE GIS staff sometimes see permanent roads in one plan that are later described as seasonal roads in more recent THPs.

It is possible to downgrade roads from permanent to seasonal in more recent plans based on need and updated conditions. The same condition could occur in reverse as well (e.g., a seasonal road could be converted to a permanent road).

51. Does any visible increase in turbidity in a receiving watercourse constitute a violation of Water Quality Requirements using standards found in Regional Water Board Basin Plans, when considering the significant sediment discharge definition?

While Basin Plans are clear on what magnitude of change triggers a violation, they are vague on the duration of the change. For example, in the Central Valley Region, appropriate time averaging can be used, whereas the North Coast and Central Coast Regions refer to spatial averaging or zones of dilution instead of time averaging. The Lahontan Region allows for neither time averaging nor spatial averaging. Instantaneous or very short duration exceedances are not the focus of this rule definition; rather the key is to eliminate longer term and/or chronic turbidity exceedance sources.

52. How will an RPF recognize areas with significant sediment discharges? Is a single rill on an unsurfaced forest road now a site capable of producing a significant sediment discharge?

Generally no. See the answers to question numbers 51 and 53.

53. Is there a rule violation when there is evidence of a visible increase in turbidity of water that may go into a cross drain or rolling dip?

To have a significant sediment discharge, you must have delivery to a classified watercourse, or the potential for delivery in the future. Therefore, if the water in a cross drain or rolling dip cannot deliver to a watercourse, then it cannot be a significant sediment discharge (i.e., no connectivity = no violation). See the response to question number 51.

54. Regarding a significant sediment discharge that *may in the future* discharge to a watercourse, and the significant existing or *potential* erosion site definition, what constitutes a possible discharge or future erosion site? How far into the future does an RPF have to consider for these rule requirements?

Potential erosion sites and significant sediment discharges must be expected to occur in the reasonably foreseeable future, which would generally be considered as the life of the plan (CEQA analyses and cumulative impacts assessments often use five years), and they must be near enough to affect a classified watercourse.

55. Can work done to address an existing or potential road erosion site (such as a culvert replacement) be considered a significant sediment discharge when it produces a visible flush of turbidity in a receiving watercourse?

Work done under a permit and/or agreement to address an existing or potential road erosion site that produces a flush of visible turbidity into a receiving watercourse

does not constitute a violation, assuming that the installation work was correctly implemented.

56. The definition of "significant existing or potential erosion site" includes the words "is currently" or "in the very near future." Are RPFs required to address all of the potential significant sediment discharge sites *before* using a road for log hauling?

If log hauling operations will exacerbate the situation and degrade water quality, it is appropriate to complete the corrective work for road erosion sites prior to log hauling. If timber operations are not going to impact the site, it can be addressed after log hauling. This requirement is specified in 14 CCR § 923.1 [943.1, 963.1] (e)(5), which specifies that a logical order of treatment is to be utilized for significant existing or potential sites with feasible treatments.

VII. Road Drainage-Related Questions

57. 14 CCR § 923.2 [943.2, 963.2] (a)(4) requires that all new and reconstructed roads be outsloped where feasible. Technical Rule Addendum No. 5 states that there are situations where outsloped roads are not appropriate. If a new or reconstructed road is not outsloped because it is not appropriate, even though outsloping would be feasible, will it be in conflict with 923.2(a)(4)?

No. Technical Rule Addendum No. 5 was produced to supply guidance to RPFs on when it is appropriate to outslope roads with rolling dips and/or waterbreaks. If it is not appropriate to outslope a road (perhaps due to safety considerations), this will be considered not feasible, as per the rule language. The RPF should either include the rational for non-feasibility of outsloping in the plan or be prepared to supply the information if requested by the Review Team agencies.

58. 14 CCR § 923.9 [943.9 963.9] (j) and (k) address overflow diversion and allow for methods other than critical dips. Does CAL FIRE have examples of other acceptable methods for addressing overflow diversion?

Other acceptable methods may include an earthen berm, k-rail diversion structure, secondary overflow pipe positioned high in the fill, and/or vertical stand pipes with perforations and an open top (see Weaver et al. 2014).

59. How effective is maintaining a berm to route water on a forest road to discharge to a stable filter strip location?

Using a berm as a drainage facility to route water to a stable filter strip location should be considered a temporary solution. While it is allowed under the new road rules, it should be used with caution, and only as a short-term site-specific approach.

60. <u>It is commonly observed that county roads are in very poor condition and are used as part of timber operations. How can road drainage on county roads be addressed?</u>

The California Forest Practice Rules do not apply to county roads. The Regional Water Boards are currently addressing county roads in a number of ways, including working with county road maintenance crews (Shasta, Tehama Counties), and implementation of the Five Counties Salmonid Conservation Program (Del Norte, Humboldt, Mendocino, Siskiyou, and Trinity).[3] Further work is required. Significant road erosion issues identified by the RPF on county roads should be addressed in the watershed resources section of the plan's cumulative impacts assessment.

61. <u>How will the new road rules be applied in cooperative USFS situations (i.e., USFS coop roads)?</u>

CAL FIRE has no jurisdiction to enforce the new road rules on federal lands. However, significant road erosion issues identified by the RPF on USFS lands should be addressed in the watershed resources section of the plan's cumulative impacts assessment. RPFs should identify measures in the plan that could be implemented on their lands to reduce cumulative impacts within the assessment area to the level of insignificance. The Regional Water Boards are currently addressing non-point source discharges from federal lands via various permitting options.

<u>VIII. Technical Rule Addendum No. 5-Related Questions</u>

62. <u>Technical Rule Addendum #5 (TRA#5) occasionally goes beyond the specific rule language in the process of providing guidance on rule interpretation and implementation, in effect extending the scope of the regulation. Are the Board and CAL FIRE aware of the following inconsistencies between the rule language and TRA#5?</u>

a. <u>The introduction to Part I of TRA#5 (last sentence) states that 923.1(e) requires an evaluation of all possibly connected road segments, along with identification of disconnection treatments. Hydrologic disconnection is addressed in 923.1(e)(2)(F), where the RPF is directed to consider length, physical properties, and filter strip characteristics of connected road segments associated with previously identified significant existing or potential erosion sites.</u>

[3] For more information on the Five Counties Salmonid Conservation Program, see: http://www.5counties.org/

b. **The first paragraph of Part I.C suggests that hydrologic disconnection treatments are necessary for existing roads only where needed to address identified existing or potential erosion sites, whereas they should be incorporated more broadly into the design of new and reconstructed roads. The list of rule sections which apply to existing roads fails to include 923.7(a), which requires that [all] logging roads [including existing] be maintained to ensure hydrologic disconnection.**

c. **The third bullet in Part I.C seems to imply that the RPF is expected to either (a) use the sample cross drain spacing guidelines in Table 1, or (b) develop and use alternative guidelines; i.e., the implication is that the RPF is to pre-determine maximum ditch runs under various site conditions. However, the rule pertaining to ditch drains, 923.5(c), does not seem to provide the authority to impose spacing standards for ditch drains.**

Technical Rule Addendum No. 5 is provided only as guidance to RPFs, landowners, and agency personnel, as explained in the Purpose section on page 1. While minor wording differences may exist, significant inconsistencies do not exist between the rule package and TRA#5.

63. **In its list of effective energy dissipaters for use at the outlets of drainage features, Part II.B of Technical Rule Addendum #5 includes pit run rock. Pit run rock includes fines which, at least initially, can be easily mobilized and transported by the flow of water from the drainage feature. Is there a reason that pit run rock is listed, rather than less-well-graded rock such as appropriately-sized cobble?**

While pit run rock may include fines, given the intended use as an energy dissipater, it is assumed only coarse pit run rock, mostly free of fines, would be used. The reason the term pit run rock is used is to provide flexibility for the LTO/RPF to apply locally sourced material, rather than having to source the material from a select borrow site or a commercial facility. Despite where the material is sourced, it should be adequately sized to be able to resist scour when subjected to the anticipated 100-year storm flows plus associated sediment and debris. Consequently, if the material is sized properly, it would not have a high percent of fines.

64. **How practical is Table 1 in TRA#5 for use? Are there expectations from the reviewing agencies that ditch relief culverts and rolling dips will be spaced at the distances specified in this table?**

Table 1 in TRA#5 is one of several similar tables available in the literature. As stated in TRA#5, Table 1 is only an example and is not required for field use. It is provided as a guideline, but other spacing guidance and local knowledge can be used by the RPF.

65. Why does TRA#5 have references to rule sections that do not exist [14 CCR § 923.10(k) [943.10(k), 963.10(k); 14 CCR § 923.11(i) [943.11(i), 953.11 (i)] in the Road Rules, 2013 rule package?

The watercourse crossing section of the Road Rules, 2013 rule package was condensed from several sections in earlier versions of the rule package down to one section (14 CCR § 923.9 [943.9, 963.9]) in the final version of the rule package. The rule citations listed above were not corrected in the OAL approved version of TRA#5. The Board's Regulations Coordinator has filed a "Section 100" with OAL to correct these errors prior to January 1, 2015.

IX. Hydrologic Disconnection, Road Construction and Reconstruction-Related Questions

66. 14 CCR § 923.1 [943.1, 963.1] (c) specifies that no logging roads are to be reconstructed within WLPZs, except at watercourse crossings. Can existing roads with slope failures be reconstructed in these areas?

Yes, provided the RPF requests an exception to this rule, as specified in 14 CCR § 923 [943, 963] (c), explains and justifies it in the plan, and it is approved by the Director's representative.[4] Note that the new road rules make a clear distinction between new road construction and reconstruction when specifying distances from classified watercourses. Existing rule language (14 CCR § 916.3 [936.3, 956.3] (c) currently specifies that construction or reconstruction of logging roads cannot occur in WLPZs.

67. If an RPF hydrologically disconnects a road segment, with the remaining 30-100 feet still connected but there is no active erosion within the approach to the watercourse crossing, is further disconnection work required?

The rule language specifies that hydrologic disconnection work is to occur to the extent feasible. Even with our best efforts, in many cases 10% or slightly more of road network will remain connected. If there will still be a significant sediment discharge even with this level of disconnection work, additional treatment, such as rocking road approaches, will be necessary. If there is a low likelihood of a significant sediment discharge, no further work should be necessary.

68. Can hydrologic disconnection be achieved with outsloping alone (i.e., without installing rolling dips and/or waterbreaks)?

While it is theoretically possible, it is not a recommended practice. If is far better to have redundant drainage in place to ensure hydrologic disconnection through at least the end of maintenance period. Rutting of forest roads by pickup trucks is a

[4] Note that an RPF can request an exception to any of the new road rules using 14 CCR § 923 [943, 963] (c).

common occurrence and can easily prevent adequate road drainage without installation of rolling dips and/or waterbreaks.

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