



California Regional Water Quality Control Board Central Valley Region

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CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD COMMENTS ON KEY QUESTIONS AND REVIEW ASSIGNMENTS FOR AGENCIES AND THE MSG/IMMP

Thank you for the opportunity to provide comments on the key questions for the Forest Practice Committee's (FPC) review of the California Forest Practice Rules related to protection of watersheds with anadromous salmonid species (i.e., T/I Rules). Although the Central Valley Regional Water Quality Control Board's (CVRWQCB) primary interest is the protection of water quality, we understand that an integrated approach is necessary for the meaningful protection and restoration of watersheds with threatened or impaired values. Most successful cases of environmental problem solving require a combination of innovation, vision, leadership, and incentives (Ryan and Jensen, 2003). We ask that the Board of Forestry embrace these key strategies in crafting/revising a T/I rule package that will accomplish resource objectives (i.e., habitat recovery) and satisfy the relevant stakeholders.

Please consider our comments for the following questions.

Key Question #5: Should the road decommissioning definition (adopted in coho rules 2007) add the phrase "to the extent feasible" and what is the legal or policy basis for this?

Comment: The goal of road decommissioning is to re-establish natural drainage along the road and to leave the road prism in a condition that will not damage public resources (i.e., water quality). Adding words such as "feasible" takes away from the precise meaning of the term. Feasibility of various road decommissioning measures should be determined and discussed in a field setting.

Key Question #6: Does the "watersheds with threatened or impaired values" definition reflect geographic scope consistent with your agency's laws and policies?

Comment: The Water Quality Control Plan for the Central Valley Region (Basin Plan) recognizes surface water bodies based on hydrologic contributing area. "Planning watersheds", as defined in the Forest Practice Rules, are primarily based on area (i.e., <10,000 acres), with secondary consideration to hydrologic contributing area. T/I watersheds are "planning watersheds" that contain anadromous salmonids that are listed as threatened, endangered, or candidate under State or Federal Endangered Species Act, or can be restored. T/I watersheds do not include "planning watersheds" wholly outside the anadromous zone that drain to T/I watersheds.



As noted in previous comments, the cold freshwater habitats (i.e., a beneficial use identified in the Basin Plan) occupied by listed anadromous salmonids (i.e., another beneficial use identified in the Basin Plan) are a complex integration of all upslope and upstream constituents, energy, and processes. Timber harvest activities have well noted interactions with a variety of hydrologic, geomorphic, and ecological processes, and can adversely affect the magnitude and timing of a variety of watershed constituents – especially sediment (JAWRA, 2005; Forest Science, 2007). This indicates that the geographic scope of the T/I watershed definition is not consistent with the protection and enhancement of beneficial uses identified in the Central Valley Region Basin Plan.

Key Question #13: Is the term “feasible measures”, as used in the Forest Practice Rules, consistent with the phrase “maintain where they’re in good condition, protect where they are threatened and insofar feasible, restore where they are impaired”? In the same phrase does the term threatened and impaired mean dictionary or legal definition? From your agency’s perspective, what is the legal, policy, or science basis for this?

Comments: See State Water Resources Control Board’s (SWRCB) response.

Key Question #17: Should application of protection measures (based on conditions of resource values) be expanded to appurtenant roads, including those roads outside of the watershed or outside of the THP boundary? From your agency’s perspective, what is the legal, policy, or science basis for this?

Comments: Research studies and sediment budgets indicate that roads are the dominant sediment sources in managed forested watersheds of California, and that road-derived sediments generally comprise more than two-thirds of anthropogenic sediment inputs (Cafferata et al., 2007). Roads may also account for up to half of the management-induced peak flow increases in managed forested watersheds (Bowling and Lettenmaier, 2001). Successful restoration entails “reestablishing the processes necessary to support the natural ecosystem within a watershed” (Wohl et al., 2005). By ignoring road geomorphic/hydrologic process interactions at the watershed scale, site-by-site protection measures are more of a “band-aid” approach than true restoration.

Key Question #19: What should be the basis for determining where values need to be restored? Is the term “where needed” too vague? Should language used in section 916 be used instead? From your agency’s perspective, what is the legal, policy, or science basis?

Comment: We feel strongly that the commencement of restoration activities should not wait until a waterbody becomes impaired. T/I watersheds can be put on the trajectory of recovery by focusing on the recovery and maintenance of watershed processes that create and maintain aquatic habitats through space and time (Reeves et al., 1995; Wohl et al., 2005). How this approach is implemented will largely depend on the types of watershed processes and elements that control aquatic habitats, and their interactions with both anthropogenic and natural disturbances. Since the strength and nature of these interactions not only varies significantly between geomorphic provinces and within a watershed (Montgomery, 1999), this necessitates planning at a regional scale or smaller.



Key Question # 22: Should the term “minimum protection measures” be replaced with the term “standard protection measures”? Use of the term minimum implies.

Comments: See SWRCB's response.

Key Question #27: Have threatened or impaired rules created unintended consequences to biodiversity specifically to terrestrial wildlife species by retaining dense buffer strips? What is the science or policy basis for your agency's perspective?

Comment: Variability is an intrinsic feature of most ecosystems, and acknowledging this concept is fundamental for the long term management and restoration of riparian and aquatic ecosystems (Reeves et al., 1995; Wohl et al., 2005). The CVRWQCB considers this a worthy hypothesis to test within a formal adaptive management program.

Key Question #28: Has any monitoring been conducted related to effect on non-salmonid species due to implementation of the T/I rules and if so what are the finding and scientific robustness of the monitoring information.

Comments: The CVRWQCB is not aware of any monitoring that explicitly examines the effect of the T/I rules on non-salmonid species. The CVRWQCB considers this fruitful discussion within a formal adaptive management program, as specific hypotheses regarding the T/I rules and biotic response can be developed and tested in a rigorous manner.

Key Question #29: How should selection harvesting or other restoration practices promoting habitat conditions for non-salmonid species be considered? Should selection harvesting be permitted in riparian zones for purposes of improving habitat for other species? What is the legal, policy, or science basis for your agency's perspective?

Comments: [See SWRCB's response] As mentioned in the SWRCB's comments, this question “exposes a major deficiency in State government.” Furthermore, the fragmentation of regulatory goals, responsibility and authority leads to situations where restoration attempts become more of a piecemeal solution rather than a comprehensive and coherent restoration strategy (Ryan and Jensen, 2003).

Key Question #30: Are the existing goals relevant to achieving conditions directly affected by forest regulation? To what extent should Forest Practice Rules contribute to larger agency goals of meeting TMDL requirements or species recovery requirements?

Comments: See SWRCB's response.

Key Question #32: In watersheds that do not have adopted TMDLs, must operations be planned so they do not result in any measurable sediment load increase to a watercourse or lake? If so, this standard is greater than for watercourses within adopted TMDLs, which permit a specified sediment load increase. What is the policy or legal basis for your agency's perspective on this?

Comments: See SWRCB's response.



Key Question #36: Should a more site-specific approach be developed for rule requirement, as opposed to one-size-fits-all? What is the legal, policy, or science basis for your agency's perspective?

Comments: Ideally, yes. However, this approach requires a greater understanding of the relevant processes operating in a watershed, and requires the proper analytical tools so that site specific protection measures can be evaluated within broader spatial scales (Benda et al., 2007). Site-specific approaches also need to be treated as hypotheses that can be tested within the context of a rigorous monitoring program (Ralph and Poole, 2003).

Key Question #39: Should rules state that small contributions to pre-project cumulatively considerable adverse conditions be avoided, minimized or mitigated? What is the legal, policy, or science basis for your agency's perspective.

Comments: See SWRCB's response.

Key Question #40: Should a 303(d) listed waterbody or CESA listed species elevate the goal of restoring the listed entity above the goal of maximizing sustainable timber production per the FPA? Should such listings require evidence from project proponent for clearly demonstrating contribution towards recover or conserving the listed entity? What is the legal, policy, or science basis for your agency's perspective?

Comments: See SWRCB's response.

Key Question #41: What is the legal or policy basis for corrective or restoration actions being required on non-TMDL water bodies which are approaching listings? Should separate corrective or restoration actions related to or separate from THP implementation be conducted by the BOF?

Comments: See SWRCB's response.

Key Question #46: CEQA guidelines for functional certification require enabling legislation for regulatory programs to contain authority for protection of the environment. Do other agency laws or policies that require more than protection of environment supersede CEQA guidelines.

Comments: See SWRCB's response.

Key Question #47: The Administrative Procedures Act requires regulations be adopted within the scope of authority prescribed by certain laws (the FPA for T/I rules). Are APA project impact mitigation requirements per GC 11340(d) exceeded by T/I rules?

Comments: See SWRCB's response.

Key Question #48: The APA requires consideration of performance standards. Should performance standards be established to meet other agency goals beyond the Forest Practice Act?



Comments: [See SWRCB's response] Adopting a performance-based approach will require a new emphasis on monitoring to ensure that performance standards are being achieved over space and time. For instance, Washington State has combined performance-based and prescriptive forest practice regulations, and spends approximately 3 million dollars per year on collaborative research and monitoring. In Oregon State, monitoring costs are shared by multiple stakeholders (e.g., Oregon Department of Forestry; Oregon State University; private industry; Oregon Department of Fish and Wildlife; etc) and exceeds one million dollars per year (George Ice, NCASI, personal communication). A performance-based approach is not appropriate unless a well-funded, formal, and rigorous monitoring strategy is in place.

Key Question #49: Does the achievement of other agency goals, such as implementing restoration requirements, exceed regulatory functional certification requirements, where a regulation shall not be approved or adopted if there are feasible alternatives or mitigations available?

Comments: See SWRCB's response.

References:

- Benda, L., D. Miller, K. Andras, P. Bigelow, G. Reeves, and D. Michael. 2007. NetMap: A new tool in support of watershed science and resource management. *Forest Science*. 53(2): 206-219.
- Bowling, L.C. and D.P. Lettenmaier. 2001. The effects of forest roads and harvest on catchment hydrology in a mountainous maritime environment. P. 145-164 in *Land use and watersheds: Human influence on hydrology and geomorphology in urban and forest areas*. Water Science Application 2. American Geophysical Union. Washington, DC. 227 p.
- Cafferata, P.H., D.B.R. Coe, and R.R. Harris. 2007. Water resource issues and solutions for forest roads in California. *Proceedings of the 2007 American Institute of Hydrology. Hydrological Science and Technology*. 23(1-4): 39-56.
- Forest Science*, 2007. Special issue: Science and management of forest headwater streams. 53(2): 1-383.
- JAWRA (Journal of the American Water Resources Association), 2005. Special issue: Small stream channels and their riparian zones in forested catchments of the Pacific Northwest. 41(4): 759-984.
- Montgomery, D.R. 1999. Process domains and the river continuum. *Journal of the American Water Resources Association*. 35(2): 397-410.
- Montgomery, D.R. 2000. Coevolution of the Pacific salmon and Pacific Rim topography. *Geology*. 28(12) 1107-1110.



- Ralph, S.C. and G. C. Poole. 2003. Putting monitoring first: Designing accountable ecosystem restoration and management plans. P. 222-242 *in* Restoration of Puget Sound Rivers. Montgomery, D. R., Bolton, S., Booth, D. B., and Wall, L., (eds.). University of Washington Press, Seattle, WA. 512 p.
- Reeves, G.H., L.E. Benda, K.M. Burnett, P.A. Bisson, J.R. Sedell. 1995. A disturbance-based ecosystem approach to maintaining and restoring freshwater habitats of evolutionary significant units of anadromous salmonids in the Pacific Northwest. American Fisheries Society Symposium. 17: 334-349.
- Ryan, C.M. and S.M Jensen. 2003. Scientific, institutional, and individual constraints on restoring Puget Sound rivers. P. 155-173 *in* Restoration in Puget Sound Rivers. D.R. Montgomery, S. Bolton, D.B. Booth, and L. Wall (eds.). University of Washington Press, Seattle, WA. 512 p.
- Wohl, E., P. L. Angermeier, B. Bledsoe, G. M. Kondolf, L. MacDonnell, D. M. Merritt, M. A. Palmer, N. L. Poff, and D. Tarboton. 2005. River restoration. Water Resources Research. 41, W10301, doi:10.1029/2005WR003985.

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