

**STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION**

**SUPPLEMENTAL SHEET FOR REGULAR MEETING OF JULY 12, 2012**  
Prepared on July 6, 2012

**ITEM NUMBER:** 12

**SUBJECT:** **CONDITIONAL WAIVER OF WASTE DISCHARGE  
REQUIREMENTS, TIMBER HARVEST PROGRAM**

**KEY INFORMATION:** Staff responses to late comments.

Since the staff report was prepared, Water Board staff received additional comments on the subject draft order from Redwood Empire and the City of Santa Cruz, included as Attachment 1 and Attachment 2, respectively. Water Board staff responses to these comments are discussed below. Attachment 3 is a revised summary of all public comments received on the draft order.

**Redwood Empire**

Mr. Mike Duffy of Redwood Empire submitted comments to Water Board staff on May 18, 2012. Mr. Duffy discovered that several comments were inadvertently omitted from his original message to the Water Board and submitted the omitted comment to Staff on June 30, 2012. All of Mr. Duffy's comments are now included in Attachment 1. Water Board staff's response below addresses only the new substantive comments received.

1. During a July 3, 2012 routine inspection of timber harvest sites by Water Board staff, Registered Professional Forrester (RPF) Mr. van Lennep of Redwood Empire expressed concern that the proposed monitoring and reporting program (MRP) requires photo-documentation where none was required before. Mr. van Lennep stated that the requirement was too costly.

Staff Response: The requirement for photo-documentation is a necessary step in the Board's timber harvest regulatory program. It allows Dischargers to demonstrate that their erosion control BMPs are adequate and that the harvest sites are in compliance with the Timber Order. The photos also allow the Board to evaluate the adequacy of erosion control BMPs at all active harvest sites. The photos are a means for Dischargers to self-monitor the adequacy of their water pollution control systems; namely, the erosion-control BMPs. Staff does not concur that the expense of obtaining the photos and tagging them with the necessary alpha-numeric information is excessive, and it can likely be done when the Discharger or RPF are present in the field to maintain the BMPs. Additionally, the photos extend the reach of Board staff as substitutes for inspections. Fewer inspections allow staff to employ the saved time in higher priority activities. Photo-documentation was previously a requirement in the 2005 and 2009 Orders.

2. (received July 2, 2012) Cumulative Effects Ratio (CER): The impacts to a watershed from selective harvesting are minimal to non-existent over ten years for the operation, including 15 years of harvesting results in the double counting of some harvest areas. Even when averaged with the five year rate, some projects will end up being counted 1.5 times (average of 2 harvests in 15 years and 1 harvest in 5 years). This results in an inflated effects ratio.

Studies from Caspar Creek concluded that the sediment effects following timber harvesting (Pre-Forest Practice Rules selection silviculture) reached background levels within eight years.

An appropriate method of calculating recovery would be to count the most recent five years, including proposed projects, at 100% of their harvest acreage. Plans harvested between six to ten years prior to the proposed project would be counted at 50% of their acreage. Selection harvest activities that occurred over ten years ago should no longer be considered to be impacting the watershed.

Staff Response: The revised CER will capture harvests if they are within the preceding 15-year period. However, this is moderated by the 5-year harvest rate to acknowledge the general trend towards pre-harvest hydrologic conditions<sup>1</sup>. Only in instances where the 5-year harvest rate is greater than the 15-year harvest rate will the CER result in a higher than 15-year harvest rate. Most importantly, this formulation allows staff to evaluate the intensity of harvest in a more meaningful way. Evaluating just one harvest rate period reveals nothing about what the most recent harvest activity's effect is in relation to longer term trends.

Despite the general trends revealed in the early Casper Creek studies, there are still considerable data to suggest a 15-year cumulative effects period is more appropriate.<sup>2,3</sup> A problem identified in the analysis performed by Thomas (1990) was a result of low sampling of sediment outputs. The issue of landslide frequency influenced by road design, age, and location presents another problem when trying to adequately capture the cumulative effects. Upon re-examining the Casper Creek literature, we find the recovery periods of the selection harvest units (South Fork) did not experience much harvest (i.e., road) related landsliding until just after the 10-year period and the specific years when the initial Casper Creek study examined (1976-1985) were relatively uneventful for high-intensity storms. Given the fact the current return interval for selection harvesting in the Central Coast Region has not been implemented over the typical time period of clearcuts (>50yrs), it remains to be seen if the higher frequency of less intense harvest will ultimately result in longer-term sediment outputs.

Staff considered a numerical threshold similar to the commenter and as discussed in Klein et al. (2012). The method discussed by Klein et al. was derived from extensive regression analysis specific to the conditions in the North Coast watershed examined. While the methods applied by Klein et al. are very thorough and applicable to the forest type in the Central Coast, the cumulative effects of timber harvest in our region face a greater variety of land use influences,

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<sup>1</sup> Thomas, R. 1990. Problems in Determining the return of a Watershed to Pretreatment Conditions: Techniques Applied to a Study at Casper Creek, California. *Water Resource Research*. 26 (9) p. 2079-2087

<sup>2</sup> Klein D., Lewis, J., Buffleben, M., 2011. Logging and Turbidity in the Coastal Watersheds of Northern California. *Geomorphology* 139-140. p. 136-144.

<sup>3</sup> Reid. L.1998. Cumulative Watershed Effects. Casper Creek and Beyond. Proceedings of the Conference on Coastal Watersheds: The Caspar Creek Story. USFS. GTR-168.

particularly urban development and other agricultural uses, as evidenced by the distribution and extent of acreage zoned for timber production in the region (Staff Report, Appendix B SAP, 2012). The commenter's weighting appears to merely truncate the recovery period to what the minimum time frame under the Forest Practice Rules stipulates. The past 10 year threshold measure used to assess cumulative effects was not stipulated as a maximum under CAL FIRE's guidance on cumulative effect analysis. At present there is no defined time frame for cumulative effects under CEQA<sup>4</sup>. In the absence of the types of analysis provided by the methods applied in the North Coast or a way to measure the rate of change for harvest acres in a given watershed, it is prudent to keep the 15-year time frame to 'capture' reasonably recent cumulative effects from timber harvests while incorporating the understanding of the general diminishing hydrologic effect of timber harvests with time. Furthermore, the revised EC uses readily available data which continue to be updated for accuracy.

### City of Santa Cruz

3. Thank you for your response to our written comments. I'd like to clarify our concerns regarding inspections of Winter Ops sites and regarding monitoring of water diversions.

Regarding Winter Ops, our comments regarding increased inspections were referring *specifically* to those plans with Winter Ops. While inspections of *all* sites, whether or not they have Winter Ops, may not be optimal, we believe that inspection of all of the relatively few *Winter Ops* sites is reasonable and achievable and is the only way to ensure the protection of beneficial use of waters.

With regard to Water Diversions, we believe that the MRP should contain language *explicitly* requiring "monitoring and reporting of instantaneous diversion rates. In conjunction with the requirement that no more than 10% of creek flow is diverted, a threshold should be included to require a minimum bypass that ensures the protection of beneficial uses including MUN, COLD, SPWN, etc. – which are particularly relevant in Santa Cruz County watersheds." Your response indicates that this is covered by the BMPs required by the MRP. Can you please clarify which section of the MRP explicitly (or even implicitly) requires monitoring of water diversions?

Staff Response: Staff agrees that inspection of all sites is not an optimal use of resources. Staff understands that, based on the application of statistics, inspection of a representative sample of sites is known to provide a high level of confidence regarding the status of all the sites from which the smaller sample is taken. Note that 49 of 61 (about 80 percent) of plans currently regulated by the Timber Order propose winter operations and 20 of 25 (again 80 percent) of sites inspected since 2009 proposed winter operations. Staff finds the sample size is more than adequate. Staff neither found signs of impairment in stream reaches nor evidence of excessive sediment deposition in the low-sloped areas within or below post-harvest sites. Therefore, staff assessment is that the requirements implemented in the winter operation plan have adequately protected water quality and there is no need to increase onsite inspections

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<sup>4</sup> CEQA guideline Section 15335.

because plans proposed winter operations. Using a statistically valid and representative approach does not preclude staff from increasing scrutiny of sites through onsite inspection if evidence warrants. In part, staff will use the designated photo-monitoring points to extend the validation inspections in a targeted way to increase the program's overall effectiveness.

It appears the use of the term water diversion<sup>5</sup> is misunderstood by the commenter. A diversion in the context of the existing timber harvest MRP is not a system of water capture and conveyance as understood in the water supply context. A water diversion in a timber harvest

occurs when a drainage structure, such as a culvert, becomes obstructed causing erosion and sedimentation by forcing flow to be diverting outside the erosion and sedimentation control measure. Another circumstance would be when a streambed is altered with logs to create a temporary crossing, in which diversion potential exists if excessive flows are forced to the channel bank and cause bank erosion. The revised eligibility criteria spreadsheet includes guide to the terminology as it is used in the timber harvest setting. As for the Monitoring and Reporting of instantaneous diversion rates, this falls under the purview of the Water Rights Division of the State Water Resources Control Board<sup>6</sup>. Staff has not observed a water diversion in this Region's Timber Production Zone, as defined by California Water Code Section 5103, which requires a permit from the Division of Water Rights.

#### ATTACHMENTS

1. Comments from Mr. Mike Duffy, Redwood Empire
2. Comments from Mr. Zeke Bean, City of Santa Cruz
3. Summary of Public Comments

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<sup>5</sup> CWC 5103(c) Diversion: means taking water by gravity or pumping from a surface stream or subterranean stream flowing through a known and definite channel, or other body of surface water, into a canal, pipeline, or other conduit, and includes impoundment of water in a reservoir.

<sup>6</sup> Refer to California Water Code Sections 5100 through 5107 for further information.