



California Regional Water Quality Control Board

North Coast Region

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June 17, 2002

William Snyder
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Subject: Non-concurrence with Second Review Team Chairman's Recommendation of Approval for Timber Harvest Plan 1-02-052 HUM

Dear Mr. Snyder:

Second Review for Timber Harvest Plan 1-02-052 HUM (THP) was conducted on June 13, 2002. Representatives from the California Department of Forestry and Fire Protection (CDF) and the Pacific Lumber Company (PALCO) were present, while the North Coast Regional Water Quality Control Board (the Regional Water Board) staff participated by telephone.

The Regional Water Board staff disagree with the second review team chairman's recommendation for approval because, among other things, two of the Regional Water Board staff recommendations were not included in this THP. The recommendations were made concerning this plan in meeting the goals of the Forest Practices Act and the requirements of the Sustained Yield Plan and are explained below.

CDF Must Delay Approval of this THP in Order to Meet the Requirements of the Forest Practices Act

The first Regional Water Board staff recommendation that the review team chairman did not include in her recommendation stated:

We recommend that CDF defer approval of proposed harvest activities in Units 1, 2, 4, 5, and 6, or direct the RPF to use lower-impact practices such that the THP may be consistent with the goals of the Forest Practices Act (i.e., achieve maximum sustainable production of high quality timber products while protecting natural resources from unreasonable degradation.)

As stated in the THP, the units mentioned above were all recently thinned. These stands have not reached their maximum growth rate after their initial treatment (Arvola, 1978). As stated in

California Environmental Protection Agency

CDF's PHI report, the units "could benefit from a five to ten year *no harvest* period to increase merchantable volume of the total stand (CDF, 2002)." Furthermore, clearcutting, ground-based yarding, mechanical site preparation, and winter operations are practices that pose the greatest threat to water quality. When weighing this potential threat against the low volume and the poor quality of products to be generated, and considering the cumulative effect of entering the stand twice in a period of 3 to 4 years, it is clear that the degradation of natural resources that will result from this plan is unreasonable.

CDF Must Amend The SYP Before It Considers Whether To Approve This THP

The second recommendation made Regional Water Board staff and not included into the review team chairman's decision recommended:

"Change the proposed silvicultural method in this plan to a method that is consistent with the SYP [Sustained Yield Plan] projections for the Van Duzen WAA [Watershed Assessment Area]. Otherwise, the landowner's SYP must be amended prior to plan approval."

In light of the Regional Water Board's disagreement with the recommendation for approval, this letter reiterates the rationale for the Regional Water Board's position. As explained in detail below, this THP triggers the need to amend the SYP. Further, the approval of this THP, as presently constituted, would exacerbate noncompliance with water quality objectives in the Regional Water Board's water quality control plan and would therefore violate the Forest Practice Rules (Cal. Code Regs., tit. 14, § 895.1 et seq.) (FPRs).

As the Regional Water Board staff have previously stated, a THP that substantially deviates from a SYP must be preceded by a SYP amendment except in an emergency. The governing section of the FPRs provides:

"1091.13 Amendments

Except under emergency circumstances, substantial deviations from the SYP shall not be undertaken in the THPs unless an amendment has been submitted to and approved by the Director following the same procedures as for approving an SYP initially. No THPs may be approved which rely upon a substantial deviation proposed in an amendment to a SYP until such a deviation is approved by the Director.

- (a) **Substantial Deviations.** For purposes of the sustained timber production portion of any SYP, any deviation from the average harvesting projections in any ten-year period which exceeds ten percent, including a deviation caused by changes of ownership and catastrophic events, shall be considered a substantial deviation. For purposes of watershed and fish and wildlife issues, any deviation from the plan which could result in a significant change in timber operations and could result in significant adverse effects to watershed or fish and wildlife values shall be considered a substantial deviation.

- (b) Minor deviations shall be reported to the Director immediately in writing but shall not require amendment of the plan.”

Section 1091.13(a) provides a two-part test for determining whether a deviation from a SYP is substantial. The first prong provides that any deviation from average harvesting projections in any ten-year period that exceeds 10 percent is substantial. As Dean Lucke of CDF explained in a December 5, 2001 letter (Lucke Letter), the sustained timber production portion of the SYP sets harvest targets for PALCO’s entire ownership and does not take into account watershed-specific changes in harvest volume. This THP would not cause 10-year projected harvest volumes over PALCO’s entire ownership to deviate more than 10 percent. Thus, we agree with CDF that this THP does not amount to a substantial deviation under the harvest volume measure.

Instead of looking to harvest volume for determining whether a deviation is substantial, the second prong of section 1091.13(a) focuses on the resulting environmental effects. Under that prong, a deviation is substantial if it could: (1) result in a “significant change in timber operations” that (2) could result in significant adverse effects on watershed or fish and wildlife values. As explained in detail below, this THP amounts to a substantial deviation under test.

Significant Change In Timber Operations

Regional Water Board staff previously asserted that this THP’s contribution to the disproportionate amount of clearcutting in the Van Duzen WAA amounts to a significant change in timber operations. The Lucke Letter responded to this concern and others. Notably, the Lucke Letter does not dispute that the THPs would amount to a significant change in timber operations. We therefore assume that CDF agrees with the Regional Water Board on this point. Regardless, we have reiterated below the basis for our argument.

A SYP must include certain key information as required by FPRs section 1091.6(c)(2), which states, in relevant part:

‘For the initial ten year period, for all planning watersheds in which harvesting will take place, descriptions shall include as appropriate: [¶] . . . [¶] **(B)** Estimate of the SYP submitter’ s ownership acres of forest types to be harvested by silvicultural method and yarding method, and the location of submitter’ s approved and submitted THPs and presently projected future timber operations.’”

For PALCO’s SYP, this requirement was satisfied by providing the number of acres harvested by silvicultural methods in the Watershed Assessment Areas (WAAs). For the period from 1999 to 2009, the SYP calls for harvesting of 4,437 acres in the Van Duzen WAA, 1,638 of them by clearcutting. Taken over 10 years, then, harvest acreage in the Van Duzen WAA should average 443.7 acres per year, 163.8 by clearcutting. Based on those rates, PALCO should at this point (3 years into the SYP) have harvested 1,331 acres, 491 by clearcutting. Instead, approximately 3,031 acres have been approved for harvest, 1,984 by clearcutting (modified from THP 1-02-052 HUM). Those harvest rates significantly exceed the SYP projections, particularly for clearcutting.

More fundamentally, approval of this THP would allow more clearcutting in the Van Duzen WAA than projected in the SYP for the entire ten year period. The approval of this THP, which proposes another 127 acres of clearcutting, would bring total clearcutting in the Van Duzen WAA to 2,111 acres. That amount exceeds the acreage planned for clearcutting in the SYP projections by 475 acres, or approximately 29%.¹

Thus, the approval of this THP would continue a trend away from the proportion of timber harvesting methodology required by the SYP. At this point in the SYP, PALCO has been approved to harvest 1,493 more acres by clearcutting than projected by the SYP, an exceedance of 305 percent. This THP would do more than exacerbate that trend. It would allow clearcutting on more acreage in the Van Duzen WAA than was supposed to occur by 2009. This drastic shift in methodology to clearcutting constitutes a significant change in the timber operations contemplated by the SYP.

Significant Adverse Effects on Watershed Values

Regional Water Board staff previously asserted that the significant change in timber operations proposed by THPs that exceeded the clearcut acreage threatens to cause significant adverse effects on Van Duzen watershed values. Mr. Lucke argues that the thresholds of significance applicable to the SYP do not support that conclusion:

“The Palco SYP has associated with it an FEIS/EIR and a HCP. The FEIS/EIR has established ‘Thresholds of Significance’ for both aquatic and terrestrial species. Discussions with the signatory agencies to the HCP indicate that the current level of harvest does not constitute a significant adverse effect to watershed or wildlife values provided the measures of 6.11.2.1 of the HCP are complied with” (Lucke Letter, p. 2.)

For several reasons, Mr. Lucke is incorrect.

First, Mr. Lucke cites discussions with “signatory agencies to the HCP” as a basis for concluding that impacts of the THPs are less than significant. He thus implies that these agencies possess plenary authority to determine the significance of timber harvesting impacts. To the contrary, the Management Agency Agreement between the State Water Resources Control Board (State Water Board), Board of Forestry and CDF (MAA) provides a special role for the State and Regional Water Boards in reviewing the effects of silvicultural activities on nonfederal lands:

¹ Notably, there are additional PALCO THPs undergoing review that will exacerbate the disproportionate amount of clearcutting in the Van Duzen WAA. These THPs would add 43 acres of clearcutting, which, if approved, would bring the total clearcut area in the Van Duzen WAA to 2,154 acres. With that additional acreage, PALCO will have exceeded the clearcut area allowed by the SYP by 481 acres, or 29 percent.

“The [State] Water [Resources Control] Board and the Regional Water Quality Control Boards . . . have the authority and responsibility, pursuant to the State Porter-Cologne Act and the Federal Clean Water Act (as amended), to promulgate Water Quality Management (WQM) plans and water quality control plans (Basin Plans) which set forth objectives for restoring, enhancing, and maintaining the quality and beneficial uses of the State’s waters, to promulgate regulations and policies to attain these objectives, and to administer these regulations and policies to ensure that waste discharges, including those from silvicultural activities, do not degrade the quality and beneficial uses of the State’s waters.” (MAA, p. 1.)

The undisclosed discussions with HCP signatory agencies cited by Mr. Lucke may support CDF’s conclusion that effects on wildlife and fish values are insignificant. However, the determination of whether watershed values could be significantly affected is, per the MAA, the province of the Regional Water Board.

Second, Mr. Lucke’s citation to the thresholds of significance applicable to this determination is incomplete. In addition to the thresholds he alludes to for “aquatic and terrestrial species,” the FEIS/EIR identifies thresholds for water quality:

“The effects on water quality will be evaluated based upon the likelihood that land management parameters would exceed thresholds of significance for different water quality objectives. The thresholds of significance for water quality objectives set forth by the [Regional Water Board] Basin Plan Several, but not all, of the water quality objectives would be affected by the management of PALCO lands. These include temperature, dissolved oxygen, water color, sediment, turbidity, floating material, settleable material, biostimulatory substances, pesticides/herbicides, and fecal coliform.

The Basin Plan states that when other factors result in the degradation of water quality beyond the levels or limits established by the NCRWQCB, then controllable factors shall not cause further degradation of water quality. Controllable water quality factors are those actions or conditions, or circumstances resulting from management activities that may influence the quality of the waters of the state and may be reasonably controlled. The controllable management activities that affect the water quality objectives of concern include timber harvest methods, maintenance and construction of roads, burning, grazing, and herbicide application.”

Thus, as the above thresholds demonstrate, the appropriate focus for determining whether effects on watershed values are significant is the effects on water quality objectives and beneficial uses.

Mr. Lucke states “that the current level of harvest does not constitute a significant adverse effect to watershed or wild life values provided the measures of 6.11.2.1 of the HCP are complied with.” Section 6.11 of the HCP prescribes measures to conserve habitat diversity and structural components. Section 6.11.2.1 describes minimal seral stage distributions for each hydrologic unit.

Clearly, this section is not designed to protect watershed values and therefore it is not appropriate to use this section to determine significant effects on water quality.

Bill Snyder of CDF explained in a December 19, 2001 letter that “the triggering mechanism developed to deal with watershed impacts is linked to calculation of a Disturbance Index (DI) value... The DI is the threshold which the Department considers critical in terms of requiring changes in silviculture or yarding systems.” However, the DI is not a water quality objective, nor is it protective of the beneficial uses of water. The DI was tested to determine if the DI could assess watershed impairment by seeing if the DI was correlated with percent fines (Draft HCP/SYP). Percent fines is an important habitat indicator in which the percentage of fine grained sediments has been correlated with reduced salmonid embryo survival and fry emergence (Chapman, 1988; Reiser and White, 1988; Young et al., 1991). Therefore, percent fines is used as an indicator to determine the health of a watershed (US EPA, 1999). The DI correlation with percent fines <0.85 mm and <4.7 mm had a coefficient of determination (R^2) values of 0.01 and 0.006 respectively (Draft HCP/SYP). The very low R^2 values indicate a strong non-correlation between the DI and sediment impacts. In other words, the DI can not be used to determine significant adverse watershed impacts. Although minor changes were made to the DI in the approved HCP, these changes did not address the need for calibrating the DI so that it could be used as an indicator of sediment impacts. Nevertheless, once again, the appropriate focus for determining whether effects on watershed values are significant is the effects on water quality objectives and beneficial uses.

Third, based on the appropriate thresholds, the effects of this THP on watershed values is significant. Applicable water quality objectives include suspended material, settleable material, and sediment. The Van Duzen watershed appears on the Clean Water Act section 303(d) list as sediment impaired. That means that on a watershed wide basis, the Van Duzen already does not meet water quality objectives for sediment. Any further sediment delivery due to timber harvesting activities would, therefore, exacerbate that noncompliance and would impede the recovery of the watershed.

Clearcutting, beyond other forms of silvicultural methods, increases sediment delivery. Use of process based models (e.g. WEPP) or empirical models (e.g. universal soil loss equation) shows that clearcutting increases surface erosion compared to other silvicultural methods due to the loss of cover (Brady and Weil, 1999). Clearcutting also increases sediment delivery due to mass wasting. The Van Duzen TMDL (US EPA, 1999) indicated that there was an order of magnitude increase in sediment delivery from clear cuts when compared to partial cuts that occurred in the lower portion of the Van Duzen watershed basin. Furthermore, watershed analysis conducted for PALCO for the Van Duzen indicates that mass wasting from clearcuts resulted in approximately 2.8 times more sediment per acre delivered to streams than partial cut hillslopes (Tetra Tech, Inc, 2001). The rise in clearcutting inherent in this THP, therefore, could cause significant adverse impacts on watershed values.

In response to our non-concurrences for THPs in the Van Duzen WAA that exceeded the clearcut projections, Mr. Snyder acknowledged that there is the potential for clearcuts to deliver more sediment to watercourses. But, Mr. Snyder noted various provisions of the Forest Practice Rules

that limit the disturbance of evenaged management and other provisions that are intended to limit sediment delivery. Mr. Snyder noted that “the rules are designed to describe a set of best management practices which in conjunction with the THP review process will adequately deal with non-point sediment sources in compliance with the Basin Plan.” First, it should be noted that the Forest Practice Rules have not been certified by the U.S. EPA as Best Management Practices because, in part, their effectiveness has not been tested and proven through water quality monitoring. Second, two recent reviews of the Forest Practice Rules (Scientific Review Panel (SRP), 1999 and University of California Committee on Cumulative Watershed Effects (UC CWE), 2001) both criticize the rules for being inadequate in addressing cumulative effects, in part, because the rules do not address an appropriate activity level (i.e. rate of harvest). The SYP is intended to limit activity levels (i.e. rate of harvest) to a sustainable level of harvest and, if there is a deviation from the SYP and could result in significant adverse effects to the watershed, the SYP must be amended.

Mr. Snyder cited the HCP requirement that the sediment production of harvest units is offset with appropriate sediment saving sites. However, the sediment saving calculation is inaccurate and misleading. The sediment production estimate is only for surface erosion for the timber harvest units and one years worth of erosion for the roads, and assumes that all mitigations work perfectly (e.g., no mass wasting, no other sediment production from the sediment saving sites). As discovered during previous PHIs in the Van Duzen watershed, not all mitigations work perfectly (NCRWQCB PHI report for 1-01-387 HUM). Roadwork completed for recent THPs in the plan area was inadequate and greatly increased the sediment delivery, beyond that which was “saved” in those THPs. Furthermore, the sediment saving sites are unlikely to “save” the sediment during the same time frame in which the surface erosion will occur. This offsetting mitigation alone is not protective of water quality and is a reason why activity limitations (e.g. harvest rate), in conjunction with best management practices and offsetting mitigations, are necessary to protect the beneficial uses.

Mr. Snyder also cites other provisions of the HCP that are designed to reduce sediment delivery beyond the requirements of the Forest Practice Rules. These include the avoidance of Mass Wasting Areas of Concern, enhanced riparian protection measures, additional limits on winter operations, sediment assessments, stormproofing of roads and landings, road maintenance, and wet weather road use restrictions. Similarly, the HCP requires instream effectiveness monitoring of the interim prescriptions. To date, PALCO has not conducted instream effectiveness monitoring that could demonstrate the effectiveness of the HCP interim prescriptions. However, data resulting from limited instream turbidity monitoring conducted by PALCO at the recommendation of Regional Water Board staff on two THPs in the Jordan and Stitz Creek watersheds indicate that the interim prescriptions of the HCP are not sufficiently protective to prevent sediment discharges in violation of the Basin Plan.

We anticipate that activities proposed under this THP will result in sediment discharges which violate the Basin Plan objectives for fine sediment. The high rate of harvest proposed within the Van Duzen River watershed at this time is likely to result in a significant cumulative adverse impact due to the sediment discharges from the numerous plans throughout the watershed conducted over a short period of time. We believe that a strategy to avoid and minimize further

sediment discharges rather than to attempt to mitigate new sediment discharges is necessary in this watershed at this time. Therefore, we reiterate our recommendation to change the proposed silvicultural method in this plan to a method to be consistent with the SYP [Sustained Yield Plan] projections for the Van Duzen WAA [Watershed Assessment Area] or amend the SYP.

**This THP Cannot Be Approved Because it Will Contribute
To a Violation of Basin Plan Water Quality Objectives**

The approval of this THP would be inconsistent with the FPRs. FPR 898.2 requires that “[t]he Director shall disapprove a plan as not conforming to the rules of the Board if any one of the following conditions exist: [¶] . . . [¶] (h) Implementation of the plan as proposed would cause a violation of any requirement of an applicable water quality control plan adopted or approved by the State Water Resources Control Board.” The above discussion demonstrates that the approval of this THP would contribute to existing violations of water quality objectives in the Van Duzen watershed. Thus, approval of this THP will violate FPR 898.2.

For clarification, this THP proposes to violate prohibition #1 of the Action Plan for Logging, Construction, and Associated Activities. The prohibition states:

The discharge of soil, slit, bark, slash, sawdust, or other organic and earthen material from any logging, construction, or associated activity of whatever nature into any stream or watercourse in the basin in quantities deleterious to fish, wildlife, or other beneficial uses is prohibited.

This plan proposes to discharge 159 cubic yards of sediment from the timber units and 450 cubic yards of sediment from roads (9 cubic yards per year for fifty years, which is the next time the clearcut stands will be harvested commercially). As stated earlier, this amount should be considered a minimum because it assumes all mitigations will work perfectly, an assumption known to be false. Although sediment “savings” sites will minimize sediment inputs from other locations in the watershed, they do not prevent sediment from this THP from reaching the watercourse and therefore the sediment delivered from this plan adds to, in deleterious amounts, the cumulative impacts in the Van Duzen River.

The Basin Plan also contains an additional provision calling for the restriction of “controllable factors.” It specifically states: “[w]hen other factors result in the degradation of water quality beyond the levels or limits established herein as water quality objectives, then controllable factors shall not cause further degradation of water quality.” Controllable factors include silvicultural, yarding, and site preparation methods; road construction, maintenance, and abandonment activities; and rate of harvest. The silvicultural method proposed in this plan, clearcutting, and the proposed rate of harvest by this method in excess of the SYP projections in the Van Duzen WAA are both controllable factors that will cause further degradation of water quality. This Basin Plan provision provides evidence that this THP violates the Basin Plan.

Finally, I would like to respond to CDF’s Official Response to Timber Harvest Plan 1-01-387 HUM. In this response, CDF misquotes the US EPA’s TMDL for the Van Duzen River. The

Official response states that “the Department finds that this THP meets the HCP implementation standard that EPA found would ensure attainment of water quality standards – including beneficial uses – in the lower Van Duzen Basin.” US EPA gave no such assurances that the HCP would attain water quality standards. In the TMDL, US EPA repeatedly states that the successful implementation could address the source categories in the TMDL and concerns by the SRP. However, several key measures, including watershed analysis and effectiveness monitoring, have not been fully implemented. Furthermore, CDF’s own document, the FEIR/EIS, states the HCP is not designed to meet water quality standards. Additionally, EPA provided comments on the FEIR/EIS listing several concerns about the implementation of the HCP/SYP (US EPA, 1999).

In conclusion, the Regional Water Board staff acknowledge that the HCP has many prescriptions that are more protective than the FPRs. Sediment delivered under these practices will likely be less than that delivered under practices that would be allowed under the FPRs. However, the FPRs call for an amendment to the SYP when a THP proposes a substantial deviation from the SYP. The above arguments show that this THP proposes a substantial deviation. Amending the SYP would allow an opportunity to clarify the errors in SYP projections, evaluate the status of watershed improvements and provide additional mitigations. It is clear that the FPRs require this evaluation prior to approval of this THP.

The above recommendations and comments are provided pursuant to the statutory authority contained in the Porter-Cologne Water Quality Control Act (California Water Code Section 13000 et seq.), the Water Quality Control Plan for the North Coast Region (Basin Plan), and the Z’Berg Nejedly Forest Practice Act (California Public Resources Code section 1037.5).

We trust the information presented herein provides guidance that will be helpful in protecting the beneficial uses of waters of the State of California. Please include this letter in the official files for THP 1-02-052 HUM. If you have any questions, please feel free to contact me.

Respectfully submitted,

Original signed by

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cc:

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