MEMORANI

Ex A1

Cal/EPA

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FROM: Ranjit S. Gill, Ph.D., Chief
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REGIONAL WATER QUALITY CONTROL BOARD
SOUTH LAKE TAHOE

DATE: September 17, 1996

SUBJECT: MANAGEMENT AGENCY AGREEMENT WITH THE U.S. FOREST SERVICE—BEST MANAGEMENT PRACTICE EVALUATION PROGRAM

Thank you for sending a copy of the U.S. Forest Service's Best Management Practice Evaluation Program (EP) Annual Report. As you know, we are very interested in seeing this program move forward in order to implement the Management Agency Approach to water quality protection. The EP program should prove especially useful to assist in the identification of specific practices that may not be sufficiently protective of water quality.

We have reviewed this year's EP annual report, and have some comments, as follows:

The report states (at page 2) that:

> "Effectiveness scores from sites where BMPs were implemented are compared to scores from sites where BMPs were not fully implemented. The hypothesis tested is that there is no difference in effectiveness scores between sites where BMPs were and were not implemented. We believe that rejection of this hypothesis (finding a difference) is evidence that, when implemented, BMPs are effective in meeting their objectives."

We respectfully disagree with the conclusion reached by Forest Service staff that a difference between effectiveness rates at sites where BMPs were and were not fully implemented necessarily means that BMPs are effective in meeting their objectives. As you know, the "objective" of BMP implementation is to meet State water quality standards. Showing simply that full implementation of BMPs provides better protection for water quality than poorly implemented BMPs (or no implementation of BMPs) does **not** demonstrate that BMPs are effective at achieving compliance with State standards.

We are concerned about this issue because U.S. Forest Service (USFS) environmental documents often claim that BMPs have been proven to prevent nonpoint source pollution, citing the EP program as evidence. However, while the EP's findings (that full implementation of BMPs provides better protection for water quality than poor or no implementation of BMPs) appear valid, the EP is not designed to quantify the amount of water quality degradation that occurs in response to Forest Service activities, and it is therefore not capable of "proving" whether or not USFS activities achieve compliance with State standards.

With a very limited budget, we have documented several instances where State water quality standards were violated by USFS projects, even after the intensive application of BMPs. This finding is not surprising. Other investigators have shown that, while BMPs are often effective at *reducing* nonpoint pollution, BMPs are not 100 percent effective at preventing sediment delivery to stream channels in many situations (Brown and others 1993, USEPA 1993a, 1993b). And this year's EP report itself documents that Forest Service action/inaction was "not effective" approximately 20 percent of the time.

Forest Service staff throughout California need to acknowledge that standard USFS implementation of BMPs has **not** been proven to "prevent" nonpoint source pollution. (To the contrary, the violations documented by my staff and the findings of numerous authors, contained in the references cited above, demonstrate that additional measures may be needed in many situations.) We request that Forest Service staff make a concerted effort to dispel this myth by amending the EP annual report to make it clear that routine implementation of standard BMPs, given all of the funding and personnel constraints faced by the Forest Service, does not automatically guarantee compliance with State standards.

Furthermore, what appears necessary at this juncture is a concerted, cooperative effort to scientifically evaluate the magnitude of water quality degradation that may result due to various forest activities given the application of BMPs. Managers and regulators alike need to know what practices, under what circumstances, may result in water quality degradation—even if current state-of-knowledge BMPs are properly applied. Given such information, it would be possible to evaluate potential effects with greater certainty and to design mitigation measures to offset expected impacts. We note that the California Board of Forestry is in need of an evaluation program for its BMPs (e.g., Forest Practice Rules). Perhaps the federal government (USFS, USEPA, etc.) could combine resources with California and other states to fund a comprehensive and *quantitative* evaluation of BMPs. While the development and dissemination of BMPs in the 1980s was a key first step, we see more quantitative evaluations of BMPs as the next critical step if we are to advance this aspect of water quality protection in the 1990s and beyond.

In summary, we know that USFS activities can and do at times adversely impact water quality. While the USFS's EP program may, in time, assist in identifying (in a qualitative sense) those practices that may not be sufficiently protective of water quality, we believe that the state and federal governments need to work together to design a more comprehensive

evaluation of BMPs so that managers and regulators alike have a more predictable ability to evaluate and mitigate water quality impacts due to forest activities.

We request that you transmit these comments to the Forest Service. Please send to me a copy of your transmittal, and any response you may receive. We also request to be kept informed of the annual MAA meeting. It is our understanding that the annual meeting has not occurred to date, and that it has not yet been scheduled.

Please call Tom Suk of my staff at 542-5419 if you have any questions regarding this memo.

cc: Frank Reichmuth, RWQCB-Santa Rosa
Jerrold Bruns/Sue Yee, RWQCB-Sacramento
Dennis Heiman/Mark Harvey, RWQCB-Redding

References

Brown, T.C., D. Brown, and D. Binkley. 1993. Laws and programs for controlling nonpoint source pollution in forest areas. *Water Resources Bulletin* 29(1):1-13.

USEPA. 1993a. Guidance specifying management measures for sources of nonpoint pollution in coastal waters. U.S. Environmental Protection Agency, Office of Water, Washington, D.C. 840-B-92-002, January 1993.

USEPA. 1993b. Water quality effects and nonpoint source control for forestry: an annotated bibliography. U.S. Environmental Protection Agency, Office of Water, Washington, D.C. EPA-841/B-93-005, August 1993