



January 14, 2003

Craig J. Wilson
TMDL Listing Unit
Division of Water Quality
State Water Resources Control Board
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RE: Comments on draft statewide Policy for consistent identification of waters that do not meet water quality standards

Dear Mr. Wilson:

Please consider these comments, delivered on behalf of Squaw Valley Ski Corporation, on the "draft statewide Policy for consistent identification of waters that do not meet water quality standards":

1. The distinction between waters to be placed on the "Water Quality Limited Segments Category" (section 2.1) and waters to be placed in the "Enforceable Program Category" (section 2.3) is not clear and seems circular.

The criterion for waters to be placed in the Water Quality Limited Segments Category is "standards non-attainment... due to a pollutant or pollutants." Water segments are to be placed in the Enforceable Program Category "when other pollution control requirements required by local, state, or federal authority are not stringent enough to implement water quality standards applicable to such waters." It appears that the non-attained standard used as justification to place a water body in the Water Quality Limited Segments category would itself constitute a "pollution control requirement required by local, state, or federal authority," thus allowing such water bodies to be placed in the Enforceable Program Category rather than the TMDL Category. Clarification seems in order.

2. Section 3.1 states "If standards exceedances reflect... natural background conditions, the water segment shall not be placed on the 303D list." Some guidance for determining "natural background conditions" should be provided in the Policy.

3. Section 3.1.2 provides that "Numeric water quality objectives for conventional pollutants are exceeded in 10 percent of the samples with a confidence level of 90 percent using a binomial distribution (Table 3.1). For sample populations less

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than 20, when 5 or more samples exceed the water quality objective, the segment shall be listed.” We are uncertain whether sediment is considered a “conventional pollutant”; if it is, the proposed methodology for determining listing status does not appear applicable to the numeric standard for sediment in the Truckee River Hydrologic Unit of the Lahontan Region, which is expressed as a Mean of Monthly Means (MOMM). Guidance should be provided for listing/delisting of water bodies whose numeric criteria are expressed as MOMM.

In addition, it does not appear that a sample size of 20 could result in statistically significant conclusions regarding exceedances of water quality objectives, and we suggest that a minimum sample size of 30 representative samples would be necessary for a valid listing.

4. Section 3.1.7 and 3.1.7.2 state “Nuisance water odor, taste, excessive algae growth, foam, turbidity, oil, litter or trash, and color **shall be placed on the section 303(d) list if qualitative visual assessments...** of the water segment **and associated numerical water quality data meets any one of the following:...** **An acceptable evaluation guideline is exceeded** as described in section 3.1.1...” or “**when there is significant nuisance condition** when compared to reference conditions.”

Evaluation guidelines and the definition of “significant nuisance condition” appear to be “visual assessments or other semi-quantitative assessments” which, according to section 3.1 “may not be used as the sole line of evidence to support a 303(d) listing.

Clarification of this seeming inconsistency is warranted, because sections 3.1.7 and 3.1.7.2 appear to permit listing based solely on these visual assessments or semi-quantitative assessments.

5. Section 3.1.8 states “For adverse biological response related to sedimentation, the water segment shall be placed on the section 303(d) list if adverse biological response is identified and the effects are **associated with** clean sediment loads in water or those stored in the channel.” The term “associated with” should be replaced with the term “are scientifically and demonstrably caused by.” The mere association of effects with sediment loads should not be used as a listing criterion, particularly in the absence of a definition for the term “associated with.”

6. Section 3.1.8 states “Waters shall be placed on the section 303(d) list if evaluation guidelines... are exceeded in 10 percent of the samples with a confidence level of 90 percent using a binomial distribution (Table 3.1). For

sample populations less than 20, when 5 or more samples exceed the water quality objective, the segment shall be listed." Again, guidance should be provided for listing/ delisting of water bodies whose evaluation guidelines may be expressed as MOMM, and we suggest that a minimum sample size of 30 representative samples would be necessary for a valid listing.

7. Section 3.1.9 concerning degradation of biological populations and communities states as a listing criterion "A water segment exhibits significant degradation in biological populations and/ or communities as compared to reference site(s)... this condition requires diminished numbers of species or individuals... The analysis should rely on measurements from at least two stations." The proposal to list water bodies based on these degradation criteria does not recognize the tremendous natural temporal and spatial variability in biological systems and indicators. Guidance must be provided regarding the timeframe over which degradation must be measured in order to establish significance. At least several years of significant data regarding biological indicators must be considered in order to establish degradation.

8. Section 3.1.9 states "For population or community degradation related to sedimentation, the water segment shall be placed on the section 303(d) list if degraded populations or communities are identified and effects are associated with clean sediment loads in water or those stored in the channel." The term "associated with" should be replaced with the term "scientifically and demonstrably caused by" for the same reasons outlined in item #5 above.

9. Section 3.1.9 states "Waters shall be placed on the section 303(d) list if evaluation guidelines... are exceeded in 10 percent of the samples with a confidence level of 90 percent using a binomial distribution (Table 3.1). For sample populations less than 20, when 5 or more samples exceed the water quality objective, the segment shall be listed." Guidance should be provided for listing/ delisting of water bodies whose evaluation guidelines may be expressed as MOMM, and we suggest that a minimum sample size of 30 representative samples would be necessary for a valid listing.

10. Section 3.1.10 states "A water segment exhibits concentrations of pollutants or water body conditions for any listing factor that shows a trend of declining water quality standards attainment." Guidance must be provided for the statistically relevant basis of a "trend." Simple declines in water quality standards attainment over an unspecified timeframe, measured in an unspecified manner, may not demonstrate a trend.

11. Section 3.1.10 item #3 states that in assessing trends in water quality RWQCBs shall "Specify statistical approaches used to evaluate the declining trend in water quality measurements." The objective for this item should not be to simply "specify statistical approaches" but rather to demonstrate statistically significant evidence that there is a difference between comparative sample data, and that the difference illustrates a trend.

12. Sections 4.8, Delisting Factors, states that waters shall be removed from the section 303(d) list if "associated water or sediment numeric pollutant-specific evaluation guidelines are exceeded in fewer than 10 percent of samples with a confidence level of 90 percent using a binomial distribution (Table 34.1)." Guidance should be provided for delisting of water bodies whose evaluation guidelines may be expressed as MOMM.

13. Section 4.9, Delisting Factors, states that waters shall be removed from the section 303(d) list if "Biological Populations and Communities degradation is no longer evident or associated water or sediment numeric pollutant-specific evaluation guidelines are exceeded in fewer than 10 percent of samples with a confidence level of 90 percent using a binomial distribution (Table 34.1)." Guidance should be provided for delisting of water bodies whose evaluation guidelines may be expressed as MOMM.

14. Section 5 Priority Setting and Scheduling states the priority rankings for development of TMDLs shall consider "importance and extent of beneficial uses..."; guidance should be provided regarding the means to determine the importance or extent of beneficial uses, if some uses are more important than others, or if the *extent* to which beneficial uses exist is important, as opposed to the simple question of *whether* such uses may exist.

15. Section 6.2.3 Evaluation Guideline Selection Process item #4 states "For other parameters, evaluation guidelines may be used if it can be demonstrated that the evaluation guideline is...Applicable to the beneficial use" and "Protective of the beneficial use." Guidance must be provided regarding the means to establish Evaluation Guidelines' applicability and protection of beneficial uses.

16. Section 6.2.5 Data Quantity Assessment Process states that RWQCBs shall implement certain considerations before determining if water quality standards are exceeded, including section 6.2.5.5 "Minimum Number of Samples." Section 6.2.5.5 in turn provides that "Generally, for assessment of numeric water quality standards or evaluation guidelines, a minimum of 10 or 20 independent samples is needed..."; this statement should be clarified to provide the precise number of

independent samples necessary. We suggest a minimum of 30 representative samples would be necessary to support listing.

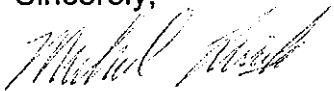
17. Section 6.2.5.6 Aggregation of Data by Reach/ Area states "Data related to the same pollutant from two or more adjoining segments shall be combined provided that there is at least one measurement above the applicable water quality objective in each segment of the water body." This proposed policy would improperly skew the outcome of data combination toward non compliance with the water quality objectives. If data is to be pooled for consideration, the data should be combined regardless of whether one of the measurements is above the applicable water quality objective.

18. Section 6.2.5.10 Binomial Model Statistical Evaluation states "When numerical data are evaluated, all of the following steps shall be completed... Sum the total number of measurements (sample population)." Some monitoring and reporting programs contain inherent sample bias (for example so-called rain-event-driven sampling requirements for turbidity), so considering the sample population will not yield a significant indicator of compliance that is representative of water quality conditions, especially when the compliance standard relates to MOMM water quality conditions as opposed to MOMM of sample results. A note should be added to indicate that the sample population must be representative of the criterion being measured.

19. Section 6.2.5.11 Evaluation of Bioassessment Data should identify the timeframe and data quantity necessary to evaluate biological data and information because high natural variability affects every potential biological measure and index.

Mr. Wilson, thank you for considering these comments delivered on behalf of Squaw Valley Ski Corporation. Please contact me if I may provide further explanation regarding any of the above matters.

Sincerely,



Mike Livak
Plans and Permits

cc: Nancy R. Wendt, President, Squaw Valley Ski Corporation
Rik L. Rasmussen, SWRCB TMDL Section