Testimony of Richard A. Watson

For Hines Nurseries

Before the

California Regional Water Quality Control Board, San Diego Region

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Good Morning Chairman Minan and Members of the Board. My name is Richard Watson. I am a planning consultant with over eleven years' experience in analyzing and implementing storm water quality regulations. I have been an active participant on the California Stormwater Quality Task Force since 1991 and currently chair its Impaired Waters/TMDL/Watershed Management Work Group. Today, I am before you representing Hines Nurseries. I will address the situation facing the Board through a series of questions and answers. Then I will suggest some actions, in addition to those mentioned by Dr. Summers, that we recommend you take to properly address water quality in Rainbow Creek.

When is a TMDL required?

The State Board staff points out in Volume I of the Staff Report entitled *Revisions of the Clean Water Act Section 303(d) List of Water Quality Limited Segments* that, "CWA section 303(d) requires states to identify waters that do not meet applicable water quality standards with technology-based controls alone." Once a waterbody is listed, Section 303(d) mandates development of a Total Maximum Daily Load (TMDL). In other words, a TMDL is required if a waterbody is

determined to be impaired and the application of technology-based controls cannot bring it into compliance with water quality objectives.

How Should a TMDL be Prepared?

A properly developed TMDL must be based on *data* with respect to exceedances of "load allocations" and "waste load allocations" for a given waterbody. Allocations can only be developed after the assimilative capacity (also called loading capacity) of the water body has been identified. No such identification has been made for Rainbow Creek. We do not know its assimilative capacity; the necessary studies have not been performed. We, therefore, cannot know what pollutant load the waterbody can assimilate before impairment. Staff has attempted to guess at the assimilative capacity of Rainbow Creek. Without the necessary background studies about this specific waterbody, there really is no valid basis to determine a load allocation or a waste load allocation.

In fact, EPA Region 9 in its draft comments on the draft TMDL, has said that the "Regional Board must change its approach to defining the loading capacity and TMDL for nitrogen." EPA urged Regional Board staff to directly determine the loading capacity by starting with the desired water quality objective(s) and use stream flow records to calculate loading capacity and TMDLs for total nitrogen and total phosphorus. This requested change presents an opportunity to institute adaptive management as recommended by the National Research Council.

What is the Correct 303(d) Listing for Rainbow Creek at this Time?

The State Board's staff report on the 2002 revision to the 303(d) list identifies the following assumptions on which the report was based:

> "1. The 1998 section 303(d) list forms the basis for the 2002 list submittal.
>
> "2. RWQCB recommendations to change existing listings would be considered by the SWRCB."

State Board Staff understands that although they may make recommendations, only the State Board can make changes to the 303(d) list in 2002. In the past, the 303(d) listing process has been inconsistent. This year the State Board has implemented a more structured program.

However, review of the 1998 California 303(d) List and your staff's *Final Draft Clean Water Act 303(d) List of Impaired Waters, 2002 Update* reveals that Regional Board Staff has misunderstood the process and consequently has made two mistakes. First, Rainbow Creek is currently listed for eutrophic conditions, not for nutrient pollution. Staff has either written the wrong TMDL or submitted a draft TMDL prematurely. Second, Regional Board Staff has exceeded its authority by attempting to make changes to the 303(d) list without recommending the changes to the State Board or even obtaining a formal approval by your Board.

On page 17 of the 2002 Update, Regional Board staff explains that; "*The impairment for Rainbow Creek has been changed from 'eutrophication' to 'nitrate and phosphorus.' The original designation was based on a faulty assumption that eutrophic conditions existed because of the elevated levels of nutrients.*" It appears that Regional Board Staff, in noting that the current designation was "faulty" have simply changed it themselves. They argue on page 1 of the 2002 Update that, "*...changes were minor and primarily add clarity.*" The wholesale change of a 303(d) listing is not minor. The State's 303(d) List is the determiner of impairment. What is the correct listing? The answer is the one in the approved 1998 303(d) list.

What Are the Applicable Water Quality Objectives?

Tentative Resolution No. R9-2002-0108 Finding No. 5, states that the Basin Plan establishes the following numerical water quality objectives for biostimulatory substances: Total Nitrogen of 1.0 mg/l and Total Phosphorus of 0.1 mg/l. This is inaccurate. Numerical biostimulatory water quality objectives have not been set for either nitrogen or phosphorus in the Basin Plan. The Basin Plan includes a narrative objective that inland surface waters are not to "contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growths cause nuisance or adversely affect beneficial uses." However, there is a numeric water quality objective for Nitrate in drinking water.

The erroneously asserted numeric objectives of 1.0 mg for total nitrogen and .1 mg for total phosphorus are, in part, based on the fact that "data are lacking," and that the Basin Plan includes an explanation of the narrative water quality objectives. The explanation includes the statement that "A desired goal in order to prevent plant nuisance in flowing waters appears to be 0.1 mg/L total P" and allows the use of a weight-to-weight ratio in estimating a nitrogen threshold. One of the scientists charged with peer review of the November draft of this document called this assumption "arbitrary" and "unsupportable."

No data or analysis is included in the Basin Plan or the Staff Report to support the translation of the narrative objective to the proposed numeric objectives for Rainbow Creek. In fact, in Section 3.2 of their Report, Staff concedes, "currently, no site-specific data are available that correlates in-stream nutrient concentrations with abundance of algae." (Staff Report, p. 12.) What are the applicable water quality objectives? The answer for Rainbow Creek is the nitrate objective for drinking water; there is no numeric water quality objective for biostimulatory substances.

Furthermore, EPA has identified a critical water quality objective problem. The issue of naturally occurring pollutant levels that exceed applicable water quality objectives must be addressed. A site-specific water quality objective for Rainbow Creek may be needed. Alternatively, an exclusion from meeting water quality

objectives due to naturally occurring sources could be defined. If this issue is not addressed, Rainbow Creek will never meet water quality objectives.

What are the Data Problems with the Draft TMDL?

Throughout the Staff Report there are numerous references to data gaps. In addition, there are various statements that the data collected during *implementation* will be used to fill such data gaps and to provide additional information to determine the need for revision. For example, on page 22, it is noted that: "The total nitrogen and total phosphorus load capacities will be adjusted as necessary once additional data have been obtained from the Implementation Plan and Monitoring Strategy." The implementation phase is not the time to gather the vital data upon which to base a TMDL. Due to lack of data, this draft TMDL is merely modeled using "simple models and assumptions." TMDLs based on "assumptions" are, by definition, not "technically defensible TMDLs," which require the availability of analytical methods, modeling techniques and a database. (See 43 Fed. Reg. 60662).

The Clean Water Act requires that only those TMDLs "suitable for such calculation" be developed. (See 33 U.S.C. § 1313(d)(1)(c).) In the regulations to the Clean Water Act, EPA states that such suitability can be met under "proper technical conditions." (See 43 Fed. Reg. 60662.) This phrase refers to "the availability of the analytical methods, modeling techniques and a data base necessary to develop a technically defensible TMDL." Those requirements are

not met in the case of Rainbow Creek. Theoretical susceptibility does not constitute the basis for establishing a TMDL. The scientific basis of the TMDL program must be strengthened, and your Board has an opportunity to contribute to that effort.

We note that in the scientific peer review of the draft Rainbow Creek TMDL, all three scientists questioned recognized the need for additional data and/or for clarification of contradictory statements. The draft TMDL before you today should be rejected. Unfortunately, this TMDL has been rushed to meet a promised time schedule. Under Federal Regulations, establishing proper technical conditions for calculating a TMDL takes priority over meeting an arbitrary time schedule.

The draft TMDL establishes load allocations for commercial nurseries and indicates that the figures are derived from a 2000 report from the Southern California Coastal Water Research Project (SCCWRP). Review of the referenced report, however, shows that it does not, in fact, contain any co-efficients for commercial nurseries. It contains only co-efficients for general commercial facilities, such as shopping centers and restaurants, and for agriculture. (See Tables 6-1 and 6-2, Staff Report)

Further, the SCCWRP study indicates that the co-efficient for agriculture was based on one site located in Ventura County. Clearly, such a co-efficient has little, if any, application for a commercial nursery located adjacent to a creek near

an interstate highway in inland San Diego County. For a regulatory document such as a TMDL, specific regional co-efficients should be developed.

Why is This TMDL Before You?

The Regional Board is under pressure to do something to improve water quality in the region. This Regional Board, together with others, was criticized by EPA and environmental groups for not preparing TMDLs in a timely manner. The Board committed to develop two initial TMDLs. This is one of them. However, the difficulty of establishing a coherent and acceptable nutrient TMDL for Rainbow Creek has been greater than anticipated. Despite the lack of data and the statement from EPA Region 9 that, "As presented, EPA cannot approve the Rainbow Creek TMDL," Staff apparently feels the need to move ahead to meet their current schedule.

What Should the Regional Board Do?

The Regional Board should defer taking action at least until after the State Board has adopted the 2002 303(d) listings. This will allow any future TMDL to accurately reflect the listing status of the waterbody. Adoption of the new 303(d) list is scheduled for September. After that time, should a change in listing be made, your Board can proceed to take action toward any required TMDL. This hearing should be continued, not closed. The regulated community deserves a chance to comment on Staff's final recommendations.

Your Board should provide adequate opportunity for additional voluntary reductions. We respectfully disagree that the waterbody is not able to meet water quality standards using available pollution controls. We agree in this instance with the County of San Diego, whose Director of the Department of Environmental Health, Gary W. Erbeck, noted in a letter to your Board dated April 23, 2002 that, "...an appropriate opportunity should be provided to achieve 'voluntary' reductions in loadings before drastic regulatory measures are applied..."

Furthermore, your Board should take the opportunity to develop a TMDL in accordance with the recommendations of the National Research Council in their report *Assessing the TMDL Approach to Water Quality Management*, prepared at the request of Congress. Specifically, your Board should follow the adaptive management approach advocated by the National Research Council once a TMDL is adopted. The initial target should be the drinking water standard, for which there is solid scientific basis. The first phase of the TMDL should last for five years to allow the results of the new Hines Nursery recycling system and septic tank improvements made with AB 885 funds to become apparent.

The Regional Board should establish scientifically valid numeric objectives for biostimulatory substances and strengthen the scientific foundations on which a TMDL can be properly established. We recognize that your Board is under

pressure to act, and encourage you to demonstrate your commitment to improving the region's storm water quality by promoting a science-based approach.

Thank you for the opportunity to comment on the proposed TMDL on behalf of Hines Nurseries. As Dr. Summers noted, Hines is a responsible corporate citizen and has committed to making further improvements to its storm water program. The proposed TMDL, however, is not flexible enough to allow Hines and others in the region to carry out their activities while remaining in compliance. If the Regional Board defers taking further action until after the State Board's review of the 303(d) list, and then makes critical changes with respect to its application of science, it may be able to craft a workable, defensible TMDL. Until that time, no TMDL should be adopted.