Attachment 4

Hines Nurseries
A Hines Horticulture, Inc. Company

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

2002 APR 24 A 10: 11

April 23, 2002

VIA FACSIMILE AND FIRST CLASS MAIL

Ms. Lisa Brown
California Regional Water Quality Control
Board, San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92124-1324

Re: March 22, 2002, Nutrient Total TMDL for Rainbow Creek

Dear Ms. Brown:

On behalf of Hines Nurseries, I want to thank you for the opportunity to comment on the Nutrient Total Maximum Daily Load (TMDL) for Rainbow Creek. We also appreciate your consideration of our prior comments submitted in connection with the TMDL, including those forwarded to you by letter dated January 24, 2002, along with the comments provided on behalf of Hines at the workshop on April 11, 2002. Hines recognizes that in response to our January 24, 2002 letter, certain factual issues have already been addressed and that additional factual information has been included in the TMDL. These changes provide a more accurate explanation of the background involving Rainbow Creek and the modifications made previously to the Creek in the area in and around what is now the Hines Nursery. Our prior correspondence also confirmed Hines' commitment to voluntarily cooperate with the Regional Board in achieving its nutrient goals for Rainbow Creek, particularly through Hines' commitment to implement a new recycling system at a cost to Hines of $1.5 to $2 million or more, to be expended over the next approximately 3 years. A comprehensive set of plans has already been provided to your office for review and consideration, and Hines is working with the County of San Diego to obtain their approval of the plans and to obtain all other necessary approvals.

The following comments are designed to follow up on our prior comments to the Regional Board, including the comments submitted at the recent workshop, and to emphasize some of the more significant concerns that Hines has with the draft TMDL. Hines respectfully requests that the comments that follow be considered in the Regional

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Board's evaluation and adoption of any TMDL for Rainbow Creek, along with all previous comments submitted on behalf of Hines.

1. Certain Statements Referencing Hines in the TMDL Should Be Deleted.

Initially, Hines requests that the language on page 47 of the Draft TMDL in connection with Hines purportedly being in violation of waste discharge prohibitions for discharges of waste to waters of the State in a manner causing a condition of pollution, contamination or nuisance, be deleted for the reasons previously set forth in our prior correspondence of January 24, 2002, and for reasons previously raised with Board staff in discussions involving Hines' involvement with the Site (only since 1996) and its operations. Hines has continued to operate the tailwater recovery system that was originally installed by Flynn-Rainbow Nurseries. This recovery system was discussed in the Final Report of the Rainbow Creek Non-Point Source Nitrate Reduction Program dated January 31, 1997 (a Report funded through the Regional Board), as a demonstration of the "potential for reducing nursery runoff with an irrigation system retrofit". In fact, the Report concludes that Flynn-Rainbow Nurseries was one of three major nurseries (along with Hines' Irvine Nursery) with "very successful tailwater recovery and recycling programs." (See Report, p. 44.) Moreover, now that Hines owns the subject property, it has moved ahead with design of an improved recycling system, and plans for such system have already been submitted to and reviewed with the Regional Board.[1]

In short, Hines firmly believes that the evidence shows that Hines has not caused or in any way contributed to a condition of pollution, contamination, or nuisance, and that to the contrary, its actions, and those of its predecessor have significantly improved the condition of Rainbow Creek. These improvements are also evidenced by the Regional Board's report entitled "Total Maximum Daily Load for Nutrients, Rainbow Creek, San Diego County," dated April 2000. This report concludes that tests conducted in 1998-1999 have shown a reduction in average nitrate concentrations in Rainbow Creek at Willow Glen Road from the 1986 maximum annual average of 215.8 mg/l down to 7.7 mg/l. This monitoring report, combined with the existing recycling system Hines has been implementing for several years in connection with its irrigation waters, and the fact that a large majority (up to 80% or more) of its irrigation waters are

[1] The current tailwater recovery system captures and recycles nutrients discharged to the creek by other nurseries as well as other land uses upstream of the temporary berm used to deflect water into Hines' recovery pond. Hines is currently removing constituents contributed by others, but these will not be removed by its new recycling system which, when completed, will avoid the creek.

already recycled, is strong evidence that Hines has not taken any action that has created a condition of pollution, contamination, or nuisance.

In discussions with your office over the language on page 47, Regional Board staff have indicated that this language would be deleted from the TMDL, in light of the actions of Hines over the years, and the lack of evidence to justify such statements.

2. Rainbow Creek Is Not Listed As Being Impaired For Nutrients, and the TMDL Shows There Is No Visible Eutrophication.

The TMDL in issue is entitled a "Nutrient TMDL" for Rainbow Creek. Yet, language in the TMDL itself shows that Rainbow Creek is presently only listed on the Clean Water Act's Section 303(d) list for "eutrophication." There is no present listing of Rainbow Creek for nutrients. Hines is aware that the issue of whether Rainbow Creek should be listed as being impaired for nutrients is being addressed by State Board staff, in its review of the 2002 303(d) list. However, as of this date Rainbow Creek has ***not*** been listed as an impaired water body because of nutrients.

Thus, the "Nutrient" TMDL in issue is being proposed to address "eutrophication," not nutrients. Yet, the TMDL itself provides, in very clear terms, that "***eutrophic conditions have not been observed in the creek*** . . . ." Accordingly, as eutrophic conditions have not been observed in the creek, and as Rainbow Creek has not been listed as being impaired as a result of "nutrients," until such time as Rainbow Creek is identified on an adopted 303(d) list as impaired for nutrients, or at least until eutrophication has been identified, it is inappropriate to establish a TMDL for Rainbow Creek.

3. A Nutrient TMDL is Not Yet Suitable for Calculation.

An additional concern created by the premature establishment of a Nutrient TMDL for Rainbow Creek, is the requirement within the Clean Water Act that only those TMDLs that are "suitable for such calculation" are to be developed. (See 33 U.S.C. § 1313(d)(1)(c).) In the regulations to the Clean Water Act, EPA defined when TMDLs are "suitable for calculation" by finding that all pollutants are suitable for calculation under "proper technical conditions" in which to base the development of the TMDL. (See 43 Fed. Reg. 60662). The phrase "Proper Technical Conditions" was explained by EPA as referring to "the availability of the analytical methods, modeling techniques and a data base necessary to develop a technically defensible TMDL." EPA went on to conclude that "these elements were to vary in their level of sophistication depending on the nature of the pollutant and characteristics of the segment in question. It must be determined on a case-by-case basis." (Id.)

As further discussed herein, at this time, it does not appear that sufficient proper technical conditions exist in which to develop a TMDL for nutrients. Accordingly, as sufficient proper technical conditions do not exist, a Nutrient TMDL for Rainbow Creek is not at this time "suitable for such calculation." (33 U.S.C. § 1313(d)(1)(c).)

4. An Assimilative Capacity Study Must Be Prepared Prior to Establishing Any TMDL.

In developing a TMDL for any impaired water body, an assimilative capacity study should first be conducted in order to determine the pollutant load the water body can assimilate before becoming impaired. That is, the TMDL "load allocations" and "waste load allocations" which may be discharged into a water body without impairing the beneficial uses, can only be developed ***after*** the assimilative capacity of the water body has first been identified. There is thus no basis to determine a load allocation or a waste load allocation (i.e., there is no basis to develop a TMDL), where the assimilative capacity of the water body has not been established. Hines would thus recommend that additional monitoring and a study of the assimilative capacity of the various reaches of the creek be conducted ***before*** adopting the subject TMDL, as the assimilative capacity of the water body is the cornerstone of any properly developed TMDL.

5. The Translator For The Numeric Objectives Has Not Been Developed.

In the instant case, 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." It also indicates that "[a] desired goal in order to prevent plant nuisance in streams and other flowing waters appears to be 0.1 mg/l total P." The Basin Plan clearly states that "[a]nalogous thresholds have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld."

The TMDL then proceeds to assert a numeric objective of 1.0 mg for total nitrogen and .1 mg for total phosphorus, in part based on the fact that "data are lacking," and that the objective allows for the use of a weight to weight ratio. Yet, no data or analysis is included in the TMDL to support the translation of the narrative objective "to the numeric objectives," i.e., there has been no translator established to translate the narrative objective that inland surface waters shall not contain biostimulatory substances that promote aquatic growth which "cause nuisance or adversely affect beneficial uses," into the numeric objectives of 1.0 mg. and .1 mg. for total nitrogen and total phosphorus, respectively. In fact, at one point the TMDL provides that: "currently, no site-specific data are available that correlates in-stream nutrient concentrations with

abundance of algae." (TMDL, p. 12.) In effect, no "translator" has been developed for the TMDL to translate the narrative objective of not causing a nuisance or adversely affecting beneficial uses, into the 1.0 mg. and .1 mg. numeric objectives.

6. The TMDLs Should Be Properly Developed, Not Modeled.

Throughout the TMDL, there are references to data gaps and the lack of data necessary to develop numeric objectives. 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 needed to be used to determine if the TMDL and load allocations should thereafter be revised or if localized TMDLs are needed. For example, on page 22 of the draft TMDL, the TMDL provides 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." As a result of the lack of data at this juncture, the draft TMDLs established for nutrients for Rainbow Creek are merely modeled using "simple models and assumptions. TMDLs based on "the lack of data." They are, therefore, not "technically defensible TMDLs" based on the availability of analytical methods, modeling techniques and a data base. (See 43 Fed. Reg. 60662).

One significant data gap recognized in the TMDL itself is the lack of data on releases from septic tank disposal systems in the area. In fact, the TMDL identifies these septic systems as an area requiring further study. Releases from septic tanks must be evaluated to determine the amount of nutrients released to groundwater from such disposal systems, and furthermore, to then determine the impact of groundwater on surface waters at various locations within Rainbow Creek. Septic tank releases may play a significant role in the release of nutrients and possibly other contaminants to Rainbow Creek. The TMDL identifies and recognizes the need for a groundwater investigation to, at a minimum, "identify the contribution of groundwater discharge to surface flow," as well as a number of other items worthy of groundwater investigation.

In short, the use of a "modeled" TMDL without proper technical conditions and sufficient monitoring data has resulted in the development of a TMDL that is unsupported and unobtainable.[2]

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[2] Another example of the data gap in developing the TMDL is the lack of any flow analysis to convert the concentrations detected from monitoring into load allocations for the nutrients in issue. The monitoring data which has identified concentrations in samples at various points along the Creek, is only relevant if the total flow or quantity of water that would contain such concentrations is also determined. Without this information, insufficient data exists to develop a "load" allocation for the TMDL.

7. The Annual Load Allocation for Commercial Nurseries is Unsupported and Unobtainable.

The TMDL also establishes annual load allocations for commercial nurseries for both nitrogen and phosphorus (see Tables 6-1 and 6-2) that are both unrealistic and unobtainable. The data and analysis in the TMDL simply do not support the load allocations developed thereunder, specifically for commercial nurseries. For example, under Table 4-1 of the TMDL, the TMDL assumes an annual total nitrogen load of 611 kilograms per year for commercial nurseries. The reference to 611 kilograms per year is apparently based on a figure of 4.1 kilograms per hector per year as an export co-efficient, which, according to the reference, was derived from a 2000 report from the SCCWRP. Yet, a review of the SCCWRP 2000 report shows that it does ***not*** contain any co-efficients for commercial ***nurseries***. Rather, and to the contrary, it only contains co-efficients for general commercial facilities (e.g., shopping centers, restaurants and the like), and for agriculture.

Futhermore, the SCCWRP study indicates that the co-efficient for agriculture was based on one site located in Ventura County. For the subject TMDL, co-efficients should be developed for inland San Diego County commercial nurseries, field agriculture and orchards. The co-efficients used in the SCCWRP study may have been appropriate for a regional study of coastal waters, however, they are not appropriate for a regulatory document such as a TMDL. Additional research is required to develop appropriate co-efficients.

8. The Economic Consideration Section Should Be Revised.

The economic consideration section of the TMDL includes a Section discussing BMPs and the incursion of other implementation costs for landowners and land uses, including for commercial nurseries. The estimated best management practice costs identified in this Section, although acknowledging Hines' new recycling system in the narrative in Section 11.2, do not incorporate into the costs described in Table 11-5, the $1.5 to $2 million recycling system that Hines Nurseries has voluntarily committed to undertake to further reduce the amount of runoff entering Rainbow Creek. Nor does the discussion on economics in this Section scale up these costs to the commercial nursery industry as a whole.

Please also recognize that the costs of this recycling system are in addition to other costs for best management practices incurred by Hines and others in implementing other BMPs to reduce the discharge of nutrients to Rainbow Creek. For example, in addition to its regular monitoring of irrigation waters and ongoing adjustment of irrigation, Hines primarily uses dry slow release fertilizers in its nursery's

operations and rarely uses liquid fertilizers, even though liquid feed fertilizers would allow the nursery to vary the quantity of fertilizer according to the needs of the plants. Dry slow release fertilizers are used even though liquid fertilizers can better improve plant growth, and make certain plants more resistant to diseases and pests.

The primary reason Hines has decided to use dry slow release fertilizers at its Fallbrook facility as the predominant means of fertilizing its plants, is because of its desire to minimize the discharge of nutrients into Rainbow Creek. (It should be recognized that adjacent and nearby nurseries, to the best of Hines' knowledge, continue to regularly use liquid fertilizers in their operations).[3]

In conclusion, Hines appreciates the efforts of the Regional Board in developing a Nutrient TMDL for Rainbow Creek, and is committed to continuing to work with the Regional Board to reduce the discharge of nutrients to the Creek, and to developing a TMDL that is based on sound data and analysis. Hines thanks the Regional Board for its cooperation to date, and looks forward to assisting the Regional Board in developing proper technical conditions, and appropriate load reductions to remove Rainbow Creek as a 303(d) listed water body for eutrophication and/or nutrients.

Please do not hesitate to contact the undersigned should you have any questions with respect to the above or need any additional information in connection with any of the comments provided herein.

Sincerely,

HINES HORTICULTURE

E.G. (Bud) Summers, Ph.D.
Vice President, General Manager

[3] Another important best management practice adopted by Hines is the use of a drip irrigation system in areas around the perimeter of the nursery and along those areas requiring heavier fertilization. The drip irrigation system has resulted in a significant reduction in water usage as well as a reduction in fertilizer usage, and is one of several BMPs that Hines has already installed to reduce the discharge of nutrients in its runoff.