Appendix L – Public Comment Letters For Public Hearing on May 8, 2002

L-1 County of San Diego

L-2 Hines Nurseries

L-3 U.S. Environmental Protection Agency

L-4 San Diego County Farm Bureau

Appendix L – Public Comment Letters

L-1 Gary Erbeck, Director
Department of Environmental Health
County of San Diego
Letter dated April 23, 2002

County of San Diego

GARY W. ERBECK
DIRECTOR

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RICHARD HAAS
ASSISTANT DIRECTOR

April 23, 2002

Mr. John H. Robertus, Executive Officer
California Regional Water Quality Control Board
San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Dear Mr. Robertus:

WRITTEN COMMENTS ON PROPOSED BASIN PLAN AMENDMENT MODIFYING PORTIONS OF CHAPTER 4, IMPLEMENTATION TO INCLUDE RAINBOW CREEK NUTRIENT TMDLS AND IMPLEMENTATION PLAN

Attached are the County of San Diego's written comments on the proposed Basin Plan Amendment, modifying portions of Chapter 4, Implementation, to include Rainbow Creek Nutrient TMDLs and Implementation. The County welcomes any comments on its submission and encourages the California Regional Water Quality Control Board, San Diego Region, to consider a meeting to discuss our response prior to the Public Hearing and Notice of Filing Scheduled on May 8, 2002.

Please contact Jack Miller at (619) 338-2201, if you have any questions concerning our comments or would like to establish a meeting time.

Sincerely,

GARY W. ERBECK, Director
Department of Environmental Health

cc: Lisa Brown, SDRWQCB
Don Steuer, Land Use & Environment Group
Rod Lorang, County Counsel
Jack Miller, DEH
Jon Van Rhyn, DEH

County of San Diego Comments on
Proposed RWQCB Resolution R9-2002-0108
Rainbow Creek TMDL and WLA
(Submitted April 23, 2002)

Introduction

The Rainbow Creek Total Maximum Daily Load (TMDL) proposal addresses Nitrogen (N) and Phosphorus (P) loadings to Rainbow Creek from point source discharges to surface water, non-point source discharges to surface water, and from groundwater discharges into the creek. The current 303(d) listing for Rainbow Creek was put in place in 1996, and is for eutrophic conditions. However, Regional Water Quality Control Board (RWQCB) staff have acknowledged in their draft reports and in response to peer reviewer comments that there is presently no evidence of eutrophic conditions in Rainbow creek. A revised proposed 303(d) listing for Rainbow Creek is scheduled for a hearing before the State Water Resources Control Board (State Board) in late May of this year.

Based on the draft RWQCB staff report that supports this TMDL proposal, the most significant sources of N (in descending order) are undeveloped land, residential septic systems, orchards, agricultural fields, and commercial nurseries. Septic systems are not a significant source of P. The RWQCB proposal includes a Waste Load Allocation (WLA) for N and P for each of these categories of sources.

None of these identified categories of significant sources involves discharges by the County.

Despite the fact that it is not a significant discharger, the County should play a significant part in regional efforts to address water quality in Rainbow Creek. The County is the principle land use authority for this watershed. The County issues or denies permits to install most conventional septic systems County-wide under an existing RWQCB delegation.[1] The County also responds when sewage from septic systems surfaces and poses a health threat. Finally, the County has established working relations with the agricultural community that are

[1] The RWQCB remains the principle agency regulating wastewater system discharges to groundwater; the County's delegated authority is limited. For example, the County cannot issue permits for or require installation of advanced domestic wastewater systems. The RWQCB and the County will need to review their programs for onsite sewage treatment systems to implement A.B. 885, enacted last year. This could results in significant program changes sometime after 2004.

likely to be helpful in seeking to reduce N and P loadings from nurseries, orchards and crops.

The County also has a role to play in this process as a "local agency" subject to Water Code section 13225(c). The County acknowledges that the RWQCB has authority pursuant to that subsection "to require as necessary [the County] to investigate and report on any technical factors involved in water quality control or to obtain and submit analyses of water . . . ." The County notes however that this authority is subject to conditions.[2]

While the County is not a significant discharger in this watershed, the County intends to continue to work with the RWQCB to address water quality issues in this watershed (and County-wide) on a coordinated and cooperative basis. The County has recently demonstrated its resolve to cooperate with the RWQCB in many ways—e.g., by accepting the municipal stormwater permit;[3] by stepping forward as principle copermittee under that permit without seeking reimbursement for coordination costs; by developing model ordinances and program elements that were adapted and used by other copermittees; and by continuing its support for and leadership of Project Clean Water (also without reimbursement). The County is also cooperating with other local governments and state and federal agencies to ensure that appropriate watershed planning is undertaken throughout the County.

Summary of County Position on the Proposed TMDL and WLA

The County as a governmental entity hopes and intends to work with the RWQCB to address water quality issues affecting Rainbow Creek. However, the County will not be able to support the implementation of this TMDL and WLA as currently proposed by RWQCB staff. Significant changes are needed to gain the County's support and to allow effective RWQCB/County cooperation.

County staff have worked with RWQCB staff during the development of this proposal. The County agrees with RWQCB staff on many fundamental points, e.g., that any strategy for improving water quality in Rainbow Creek should

[2] Conditions imposed by the Water Code are included in subsection 13225(c). First, the requirement must be "necessary." Necessary reports can be required "provided that the burden including costs, of such reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained therefrom." State laws concerning unfunded mandates may also require that the state provide funding to the County to carry out any directives issued pursuant to subsection 13225(c). The County does not waive its right to assert in the appropriate forum that directions issued to the County pursuant to this subsection are unfunded state mandates.

[3] The County's decision not to petition or appeal this permit was made only after significant modifications were made to the permit in response to comments by the County and others.

include phased implementation of a TMDL and WLA; that more study is needed to define problems, to track progress and to better inform key decisions; and that an appropriate opportunity should be provided to achieve "voluntary" reductions in loadings before drastic regulatory measures are applied to septic systems, orchards and crops. The County also agrees with RWQCB staff that the County should play a substantial role both in conducting further studies where needed, and in securing load reductions from septic systems and agricultural activities.

The County acknowledges that some of the most significant comments it provided during the development of this proposal were accepted and implemented by RWQCB staff and/or legal counsel. In particular, the County wants to acknowledge that the proposal calls for "requests" that the County take action in many areas where RWQCB staff had formerly proposed to attempt to compel County action.

These areas of agreement are significant and provide a good foundation for cooperation. However, many other significant County concerns were not resolved by RWQCB staff. This TMDL/WLA proposal remains fundamentally flawed for the following reasons:

1. The proposal has not been peer reviewed. (A less stringent proposal was peer reviewed.)

2. The proposal is not consistent with the law or with the available data.

3. The proposal is not realistic in seeking a 50% reduction in releases of N from residential septic systems.

4. The proposal sets policy precedents that are unacceptable to the County, and that are likely to be unacceptable to the San Diego community generally once those policies are understood.

These concerns are addressed further in the text that follows.

We appreciate the opportunities for dialog that RWQCB staff and mid-level managers have provided to County staff and legal counsel. The County offers these written comments in the same spirit of cooperation as its prior comments. Many of these comments were offered to RWQCB staff orally after the release of the proposed resolution package. We understand that RWQCB staff are still considering some of those comments, and we do not mean by repeating a comment here to imply that RWQCB staff have finally and firmly determined to oppose the County's position on the point addressed.

While the County will continue to work with RWQCB staff, these formal comments are direct and specific. The County believes that at this stage in the TMDL promulgation process, a clear written statement of its concerns and positions may assist RWQCB senior managers, legal counsel, and Board members. We hope to resolve the issues raised in these comments in a manner that would make continued County / RWQCB cooperation possible. We hope that RWQCB managers and Board members will accept the offer of cooperation that the County is extending with these comments. The County does of course welcome further discussion of its proposals—before, during, or after any public hearing or RWQCB action on this proposal.

The County's efforts to resolve these issues are not based solely on the effects this TMDL would have on the County or on Rainbow Creek. This TMDL will be one of the first TMDLs implemented in this region, and it will be closely watched. Therefore, this TMDL should be crafted and implemented in a manner that will lay a strong foundation for public and stakeholder acceptance of TMDLs in San Diego. As proposed, however, this TMDL would likely have the opposite effect: it is likely to undermine public confidence in the RWQCB's TMDL process, to the ultimate detriment of water quality in the San Diego region.

The specific comments that follow address timing, scientific flaws in the proposed TMDL, and cost sharing and other changes to this proposal that would facilitate continued RWQCB/County cooperation.

This TMDL Should Be Delayed Until a Revised 303(d) Listing is in Place

The current 303(d) listing for Rainbow Creek was put in place in 1996, and is for eutrophic conditions. But, RWQCB staff have acknowledged in their draft reports and in response to peer reviewer comments that there is presently no evidence of eutrophic conditions in Rainbow creek. This may be due in part to reductions in nutrient loadings achieved since 1996.

In response to changed conditions, the RWQCB has proposed to revise the impairment listing for Rainbow Creek. That proposed revision is set for review by the State Board in late May of this year. The revised listing would directly address loadings of N and P that (1) are causing violations of the drinking water standard for nitrate; and (2) are believed to be causing N and P levels in the creek in excess of the Basin Plan's narrative objective for biostimulatory substances. That narrative objective states: "Inland surface waters, . . . shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growths cause nuisance or adversely affect beneficial uses."

As a matter of law, TMDLs must be promulgated after and must be based on impairment listings. Peer reviewers have noted and RWQCB staff have acknowledged that the current impairment listing for Rainbow Creek no longer has a basis in fact. Moreover, it is clear that RWQCB staff are not proposing a TMDL to address the eutrophication-based impairment listing for Rainbow Creek, but are instead proposing a TMDL that *anticipates* the modifications to the Rainbow Creek impairment listing that are now pending at the State Water Resources Control Board. This sequencing is backwards, legally and scientifically. It is an abuse of the public participation processes the law mandates for 303(d) listings and for TMDLs. No TMDL for Rainbow Creek should go forward until a revised impairment listing for Rainbow Creek is in place.

The County recognizes that the RWQCB is committed to promulgating a TMDL for Rainbow Creek in the very near future. This appears to be achievable. Rainbow Creek is assigned an MUN beneficial use in the basin plan, and available data show directly that parts of Rainbow Creek sometimes contain nitrates in excess of the applicable drinking water standard. Therefore, there is little doubt that a revised 303(d) listing will support a TMDL for nitrates based on this drinking water standard. The March 2002 staff report would support this TMDL. Therefore, it should be feasible to promulgate an appropriate TMDL to address this drinking water standard with virtually no delay, once a revised 303(d) listing is in place.

A TMDL for Rainbow Creek should be delayed briefly, and should be limited in its initial scope, for two additional reasons.

First, this basin has not yet reaped the full benefits that can be expected when appropriate technology-based controls have been in place at all commercial nurseries for a reasonable period of time. These nurseries are discrete and significant sources of contamination, and they are still in the process of developing and implementing nutrient control and irrigation control BMPs to limit N and P in their discharges. In addition, the draft Staff Report notes (at pp. 3-4) that one commercial nursery in the watershed has actually placed a dam in Rainbow Creek, and uses the creek to impound and recirculate irrigation water. Restoring the natural flow of the creek may have significant effects. Whether the controls put in place at these sources are "voluntary" or "mandatory" is not the key issue here.[4]

[4] RWQCB staff have asserted to County staff and legal counsel that discharges from these nurseries are "agricultural return flows" and therefore are not point source discharges subject to the federal Clean Water Act. If this were correct, then the Clean Water Act would not require that these nurseries be placed under permit before a TMDL was developed. Without commenting on the assertion that nurseries may be exempt from *federal* discharge permits, the County notes that state Water Code section 13260(a) allows the RWQCB to issue and enforce WDRs to "any person discharging waste," and that Water Code section 13050 defines "waste" to

In either case, it is clear there are further reductions in pollutant discharges that can be attained using cost-effective technology-based measures. It will take some time to see what further effects these reductions in N and P loadings will have on Rainbow Creek. The interim reductions already achieved have had a significant beneficial effect on the creek.

A second reason to limit the scope of an intial TMDL is that the state has just established and is in the process of implementing a new program, complete with financial incentives, that may allow some properly functioning conventional septic systems in this watershed to be replaced with advanced systems, that would discharge less N. TMDL implementation in this watershed should be tied to the phased implementation of AB 885, but those new programs will not be in place until 2004.

The short delay and initial limitations proposed here are consistent with the federal Clean Water Act and the state Water Code. TMDLs are intended to be "second-step" programs, deployed to address water quality problems that persist after technology-based controls have been implemented. TMDLs that are promulgated before reasonable technology-based controls are in place may be unnecessary or poorly calibrated.

It is important to note that the initial TMDL that the County proposes here need not interfere with progress on water quality improvement in Rainbow Creek, in comparison to the TMDL proposed by RWQCB staff. The TMDL proposed by RWQCB staff would allow four years to achieve this drinking water standard. Before these initial efforts to attain the drinking water standard were completed, a revised 303(d) listing would be in place, more would be known about the creek, and the AB 885 program would be taking shape. A revised TMDL for N and P could take this new information into account, and still be promulgated before implementation of an initial TMDL had been completed.

The Proposed TMDL is Scientifically Flawed

The proposed TMDL has not been peer reviewed. The RWQCB's peer reviewers examined a November, 2001 draft staff report. That report proposed a TMDL for N of 3,400 kg/yr, plus a 2,400 kg/yr allowance for undeveloped land and margin of safety. (November, 2001 draft staff report at pp. 25-27.) No peer

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include discharges from "any producing operation." Commercial nurseries that discharge polluted water from a pipe into a creek could therefore be required under state law to obtain WDRs, whether or not the nurseries are required to have permits under the federal Clean Water Act.

reviewer has endorsed the much more stringent TMDLs actually proposed in the draft Basin Plan Amendment.

A TMDL program for Rainbow Creek is also subject to two special complications that increase the importance of basing the TMDL on sound science.

First, because this is one of the first TMDLs in San Diego, it will receive extra scrutiny as an indicator of RWQCB's intentions and standards for the TMDL program in San Diego generally. Stakeholders with no interest in Rainbow Creek itself will review this TMDL looking for flaws in the RWQCB's use of data, adherence to the law, scientific process, and decision-making process. If this TMDL is to advance the cause of water quality region-wide, it should merit the support of stakeholders broadly as a model for future TMDLs. It must have a strong scientific foundation, must set reasonable goals that will be broadly acknowledged to be appropriate and important, and must allocate costs and other pain in a manner that is generally acknowledged to be fair. It must be capable of being implemented at a reasonable cost, i.e., at a cost that can be justified by the benefits that will be obtained.

Second, a Rainbow Creek TMDL is unlikely to be limited to imposing more stringent numerical limits on effluent discharges by significant point sources. Instead, people will be affected where they live, and agriculture will be affected. Success in reducing loading of pollutants from existing septic systems, from agricultural activities, and from land uses such as parks and preserves is not merely a matter of governments wanting to do the right thing and having the political will to impose necessary regulations. Success in these areas will ultimately depend on the consent of the governed. Therefore, a Rainbow Creek TMDL must also be a tool for building consensus among those directly affected.

These aspects of this process increase the importance of proposing a TMDL that is both well founded scientifically, and well calibrated. The TMDL proposed by staff does not appear to be calibrated to fit the available science, or fundamental policies for TMDLs.

<u>The Proposed TMDL Is Not Realistic in Seeking a 50% Reduction in Releases of N from Residential Septic Systems</u>

Achieving a 50% reduction in septic system-derived loadings of N to Rainbow Creek is almost certainly not feasible, and is probably physically impossible under the most ideal of soil conditions, unless significant numbers of properly functioning conventional septic systems are replaced with very costly alternative systems. Properly functioning conventional septic systems are not designed to remove large quantities of N. They are designed to convert organic N and

ammonia to nitrate, to remove some N altogether through denitrification, and to remove all pathogens. Additional N is removed by plant assimilation in the septic system leach field. While failing septic systems would undoubtedly add more N to the subsurface than functioning systems, most of the systems in the Rainbow Creek watershed are functioning properly.

The AB 885 program will provide new tools to address releases of N from septic systems, where those releases impair beneficial uses. Those tools may include a revolving, low-interest loan fund. The determination of a realistic WLA for septic systems should be deferred until further progress is made in defining and implementing programs based on AB 885.

If reduction in loadings from onsite wastewater treatment systems must be achieved more quickly than would be the case under AB 885, or if ultimate reductions must exceed what AB 885 programs would achieve, then the RWQCB must take the responsibility to secure those reductions. As noted above, the regulation of discharges to ground water from onsite wastewater treatment systems is primarily an RWQCB responsibility, and the delegation that County has accepted (i.e., to administer a permit program for new conventional septic systems) is limited in scope. The County should not be asked to accept responsibility to secure greater reductions in septic system loadings of N than AB 885 programs will achieve.

The Proposed TMDL Is Not Internally Consistent

The proposed TMDL is scientifically and mathematically flawed. In recent discussions with County staff and legal counsel, RWQCB staff were unable to explain how the allowable loadings proposed in this TMDL are related to estimated natural loadings to Rainbow Creek, or to estimated loadings required to reach the staff's numerical water quality targets.

A simple table that is not contained in the draft staff report or the proposed Resolution or Basin Plan Amendment, but which is based entirely on the numbers included in those documents, is enlightening:

How Much Nitrogen?

Item	Value	Source
N loading from remaining undeveloped land	1,507 kg/yr	Staff Report, p. 13
% of land in the basin that is still undeveloped	63 %	Staff Report, p. 13
Total N loading if all land was undeveloped	2,403 kg/yr	calculated[5]
Total N nominally[6] allowed by the TMDL	≤1,507 kg/yr	Plan, p. 2
Total N to achieve target of 1.0 mg N/L	≤402 kg/yr	Plan, p. 2, note 1
Total N actually allowed by the Resolution	≤402 kg/yr	Plan, pp. 2-3

Even though pre-human nitrogen loadings to Rainbow Creek were likely to have been about 2,400 kg/yr, this TMDL package proposes a nominal TMDL for N that would require total N loadings to be reduced to less than two-thirds that level. Under this scenario, undeveloped land could be left to nature and could continue to release N to the creek, but all N discharges from land touched by man (even if only touched by designation as a "preserve") would eventually have to be eliminated. It would *not* be sufficient merely to reduce discharges back to natural levels.

Moreover, RWQCB staff's proposed approach to actually implementing this TMDL would not treat the TMDL itself as a stopping point. Instead, the draft Basin Plan Amendment proposes that incremental reductions in N loading must continue to be achieved somehow until the numerical objective of 1.0 mg N/L is met in the creek. (See draft Amendment at pp. 2-3.) If RWQCB staff are correct that meeting these targets will require reducing loadings to 402 kg N/yr as stated in footnote 1 to the Resolution, then the effective TMDL for N is 402 kg/yr, not

[5] Calculated at 1507 kg/yr divided by 0.627. This applies the loading rate for remaining undeveloped land to the entire land area of the basin, to approximate the "natural" or "baseline" load of N to Rainbow Creek prior to any human intervention. The calculation is potentially inaccurate to the extent already developed land would have had a different natural loading factor than remaining undeveloped lands.

[6] The draft Resolution nominally sets a Nitrogen TMDL of 1,507 kg/yr. (Resolution, p. 2.) However, the Resolution also states that incremental reductions of 10% every four years will be required "*until the biostimulatory targets for nitrogen and phosphorus are met.*" (Resolution, pp. 2-3.) In other words, it is these numeric targets for water quality, not the nominal TMDL that would define the stopping point for further controls.

1,507 kg/yr. This would require total loadings of nitrogen to be reduced to 402 kg/yr—*less than one fifth of estimated natural levels.*

Efforts to reduce N to these levels would themselves have environmental consequences for the lands affected. Reducing loadings of N and P to Rainbow Creek to below the level of natural loadings could also have environmental impacts on Rainbow Creek—under the plan proposed by RWQCB staff, Rainbow Creek would receive less N and P than it did in its natural condition. The environmental effects of driving nutrient loadings down to these unnatural levels were not disclosed or addressed in the environmental checklists and analyses prepared for this project.

None of these numbers are certain, of course. But it is nonetheless clear that the RWQCB should not launch the TMDL process in San Diego by proposing to set TMDLs for Rainbow Creek at levels that are two-thirds to one-fifth of natural loadings, based on an impairment listing that staff concedes has no basis in fact. To do so would be scientifically unsupportable, inconsistent with the Water Code, and politically unwise. Any such proposal would be damaging to the successful implementation of TMDLs in San Diego and elsewhere.

Whether the Basin Plan Water Quality Objective for Biostimulatory Substances in Rainbow Creek is Exceeded or Not is Still Uncertain

The Basin Plan's narrative water quality objective for biostimulatory substances prohibits substances in concentrations that promote growth "to the extent such growths cause nuisance or adversely affect beneficial uses."

RWQCB staff consider the algal and emergent plant growth they have visually observed in Rainbow Creek to be excessive. (See draft Staff Report, p. 7.) This observed condition is not creek-wide. Rainbow Creek is about five to six miles long. Much of it is shaded by a plant canopy, and no excess algae have been observed in shaded areas. The growth of algae was visually judged by staff to be excessive at only two locations in 1999, and at only four locations in 2000. All of these areas have shallow slow moving water and no overhanging canopy. (Draft Staff Report at p. 7-8, and attached photos.)

Moreover, these visual characterizations may not be reliable even as to the locations called out by staff. Two of the RWQCB's three peer reviewers have questioned the use of visual observations alone to determine whether algae and plant growth is "excessive." Dr. Rhea Williamson notes that determining visually whether there is excessive algae growth "can be misleading." (Attachment F.2, at second [unnumbered] page, first comment re page 5 of the staff report.) Dr. David Jenkins asks, "where are the data on emergent plant and algal numbers to support

your statement that both are 'excessive'." RWQCB staff were unable to respond with data, as no data are available yet to make this showing. (Attachment F. 3 at "Summary of asterisked comments" for page 8 of the staff report).

Another factor not explicitly considered in the draft Staff Report is that the Basin Plan water quality objective is not violated merely by accelerated or "excessive" growth of algae or emergent plants. The plan narrative objective is violated only if growth is so excessive it is a nuisance, or so excessive it adversely affects beneficial uses.

A principle reason RWQCB staff have not made a convincing scientific case for impairment by biostimulatory substances may be that staff misconstrue the Basin Plan as also setting numerical Water Quality Objectives for N and P. The Basin Plan states that "a desired goal for total phosphorus appears to be 0.1 mg/L total P." Staff would style this as creating a Water Quality Objective. Staff admit that no "analogous threshold value" for N is set in the Basin Plan. (Staff Report at p.7.) They nevertheless derive a limit of 1.0 mg/L for N from a discussion in the Basin Plan of natural ratios of N to P that should be used as default values in the absence of any water-body-specific data. Staff characterize even this constructed number, which is derived from rather than called out in the Basin Plan, as a "Water Quality Objective." (Draft Staff Report p.6, and draft Resolution p.1, Finding No. 5).

The scientific basis for both of these targets is weak. Dr. David Jenkins of U.C. Berkeley, one of the RWQCB's peer reviewers for the draft staff report, addressed these targets as follows: "An arbitrary assumption that the P limit should be one-tenth of the N limit is absolutely insupportable, bordering on the ridiculous! Reductions in P and further reductions in NO_3-N must be justified on the basis of determining which limits algal growth in the Creek." (Attachment F.3, transmittal letter at page 1.)

In the RWQCB staff's response to this comment, "absolutely insupportable, bordering on the ridiculous" becomes merely "unfounded." Staff's more substantive response is essentially that the Basin Plan allows the use of a 0.1 mg/L target for P, and a ratio-based 1.0 mg/L target for N, when no data are available. (Response to comments at page 2.) RWQCB staff have chosen to respond to a stinging scientific objection by a designated peer reviewer by (1) softening the true force of that comment in their summary, and (2) by offering up a legal rather than a scientific response to the comment.

But, RWQCB staff are also incorrect on the application of the law. The "apparent" or "desired" "goal" for phosphorus that staff would rely on was not identified during the Basin Plan amendment process as a numerical Water Quality

Objective, for informed public comment and RWQCB adoption. It is therefore not a Water Quality Objective, but is only what the Basin Plan says it is: a number that appears to be a desirable goal. Similarly, the limit of 1.0 mg/L total N that staff derive by applying a 10:1 ratio to this apparent desirable goal is also not legally a Water Quality Objective, or even an identified "desirable goal." It is a default in the absence of any data. The RWQCB should be gathering the data to avoid a resort to such defaults, rather than proclaiming default values to be Water Quality Objectives that should drive the TMDL process.

Any TMDL for biostimulatory substances in inland surface waters in San Diego must be based on the Basin Plan narrative standard as the applicable Water Quality Objective. Staff's targets of 0.1 and 1.0 mg/L for P and N respectively should be properly identified as interim numerical targets, rather than as Water Quality Objectives. Basic studies should be completed in the near future to allow replacement of these default values with numerical targets that reflect actually going on in Rainbow Creek.

The evidence currently available to the RWQCB to establish and characterize a biostimulatory impairment of Rainbow Creek is weak and equivocal. It does not provide an adequate basis for the public to accept the very stringent TMDL that RWQCB staff have proposed.

County Proposals for TMDL Amendments and Inter-Agency Cooperation

TMDL programs for Rainbow Creek should be implemented on a phased basis, both to sequence regulatory actions properly and to ensure that appropriate science is in place to support policy decisions.

Phase one of this process is underway, and should continue with promulgation of an interim TMDL for nitrates based on the applicable drinking water standard for nitrates. This interim TMDL should be put in place after completion of the 303(d) listing amendment process for Rainbow Creek.

During the early stages of implementing this interim TMDL, appropriate studies should be pursued on a cooperative and shared-cost basis to determine whether and if so where Rainbow Creek is actually impaired for biostimulatory substances based on the narrative standard in the Basin Plan. These studies should also determine the actual levels of N and P that are limiting for biostimulatory effects in the potentially impaired portions of this creek. The studies should confirm or refine estimates of natural N and P loadings to Rainbow Creek, and should determine the characteristics the creek would have if only natural loadings entered the creek.

During this period the County and the RWQCB should also cooperate to pursue the best available opportunities to reduce incremental man-made loadings of N and P to Rainbow Creek. This should include securing all appropriate additional reductions at commercial nurseries.

The County and RWQCB should also cooperate to implement AB 885 programs for onsite wastewater treatment systems.

A second phase of TMDL implementation should be based on a revised 303(d) listing and on the results of phase one studies. This could mean that more stringent TMDLs for N and P would be put in place. However, because the numbers in the draft Staff Report do not add up, the RWQCB should also be open to revising the designated beneficial uses of Rainbow creek, or numerical targets for N and P to support those uses, to reflect conditions in the creek that would be consistent with natural loadings. Any numerical targets for N and P concentrations in the creek, and any revised TMDLs, should be set at levels that will allow N and P loadings to remain at levels at least equal to base-line or natural loadings. Higher loadings should be tolerated if those existing loadings do not cause a nuisance or impair valid beneficial uses. Unless the RWQCB agrees that the results of future studies will be used appropriately during the regulatory process, the County would have little interest in coordinating and in helping to fund such studies.

Some specific actions that would be needed to implement this two-phased strategy are as follows:

1. Respect the Basin Plan. Staff's numeric targets for N and P should not be characterized anywhere in the Resolution, Basin Plan Amendment, or Staff Report as Water Quality Objectives. Only the narrative standard for biostimulatory substances actually established by the Basin Plan, after clear public notice and an opportunity to comment, has this status.

2. Cooperate to practice good science. The RWQCB must progress beyond invocations of the Basin Plan in ways that peer reviewers can characterize as scientifically "absolutely insupportable, bordering on the ridiculous," to solid science. Impairments must be verified and localized. The RWQCB must determine how N and P interact to stimulate algal growth in specific parts of the creek. TMDL implementation must be focused on these specific problems. The County is prepared to participate in this study process.

3. Set realistic TMDLs. In phase two, TMDLs must not be set lower than estimated natural loadings for the basin, and should be set higher if that is consistent with protecting the beneficial uses of Rainbow Creek that are identified as being achievable after further study.

4. Give the County more flexibility re study designs, monitoring, and reporting. The County remains willing to *coordinate and to contribute* to the cost of the studies and monitoring that are needed in this watershed.[7] However, read together, the draft Basin Plan amendment and draft Staff Report set very specific mandatory parameters for this work. Those specifications would lock in future research for a four-year period, and would require the County (or the County and others) to spend more than $1.0 million for studies, monitoring and reports. Much more flexibility is needed for the County to willingly undertake this work.[8]

5. Do not characterize the County as a "responsible party" or as a "discharger" for this watershed. The County acknowledges that is a "local agency" that is subject to RWQCB direction related to studies and monitoring, under certain conditions, pursuant to Water Code section 13225(c). The County also acknowledges that it has a significant role to play in this watershed as a land use authority, a public health agency, and a permitting agency for some new septic system installations. However, these various roles do not make the County a "discharger" or a "responsible party" for N and P loadings to Rainbow Creek.

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[7] The draft Resolution (at page 2, item 8.a) proposes to direct the County to "undertake an investigation to access [sic] nutrient loadings to Rainbow Creek from groundwater and septic systems." This section further states that the County "has indicated a willingness to undertake this investigation." That statement is incorrect. The County indicated a willingness to coordinate this study effort. County staff also provided basic study parameters and a cost estimate for an "ideal" study effort, including not only a study of loadings from septic systems but also other research. RWQCB staff have proposed to transform these study parameters and cost estimates into mandatory requirements—including a requirement that the County in fact spend the amounts it estimated would be needed for an ideal study of all issues. The County did not state that it was willing to do this work in exactly the manner postulated in its cost estimate, and thereafter specified in the draft Staff Report. The County did not indicate that it was willing to pay the entire cost of this work. The County is not willing to be locked into an inflexible four-year research plan, and is not willing to bear the entire cost of any studies of Rainbow Creek by itself.

[8] In the absence of an agreement concerning this work, the County would consider whether to challenge directives based on Water Code section 13225(c) as being inconsistent with the Water Code, and as unfunded state mandates. See footnote 2.

6. Make and support required findings before imposing investigation, reporting or analysis requirements on the County. Water Code section 13225(c) allows the RWQCB to impose these requirements on a local agency only if the requirements are "necessary" and only provided the burdens of the imposition including costs are reasonable in comparison to the need for the report and the benefits to be obtained therefrom. RWQCB staff have not done the work required to support the imposition of study requirements on the County under these standards. They have reported the costs of an ideal study as reported to them by County staff, but analysis and findings concerning necessity, burden, and benefits are lacking. The draft Resolution includes proposed Finding No. 17, but that is a general finding concerning all benefits and all costs of the TMDL, not a finding that addresses the requirements of section 13225(c).

7. Share study costs equitably, including a substantial state contribution. The County is not a significant discharger in this watershed, and is not the principle governmental agency with responsibility for promulgating and implementing TMDLs. The studies the RWQCB is seeking would provide basic data and science that should underlie any TMDL. This work should be the RWQCB's job. The County is willing to contribute to needed study efforts, but will not bear the entire cost of needed studies, plans and monitoring. The RWQCB or state, and major dischargers in the watershed, must also provide significant funding. The County's obligations to do work pursuant to section 13225(c) must be contingent on receipt of funds from those sources.

8. Set realistic load reduction targets for onsite wastewater treatment systems, tied to AB 885 program implementation. As discussed above, achieving a 50% reduction in septic system loadings watershed-wide is almost certainly not feasible and is probably physically impossible under the most ideal of soil conditions, unless properly functioning systems are replaced. Replacement are only likely to be achievable to the extent state financial subsidies are provided under the AB 885 program. Waste load allocations and implementation schedules must reflect these limitations.

9. Don't require reduced discharges of N or P from preserves. Discharges from preserves are natural, background discharges. They cannot be reduced without interfering with preservation of the land in its natural state. Yet, the proposed TMDL would require the same

proportional reductions in N and P loadings from these lands as from agriculture and septic systems.

10. Take reasonable technology-based reductions in loadings from nurseries into account. The RWQCB should secure reasonable further reductions in loadings from commercial nurseries (by voluntary means or through regulation) and should observe the effects of those reductions on Rainbow Creek, before promulgating a TMDL to address biostimulatory impairment of Rainbow Creek. When TMDLs are promulgated, waste loads allocated to these nurseries should begin from their discharges after reasonable technology-based controls are in place.

11. Evaluate alternatives to "proportional" waste load allocations. RWQCB staff have proposed to reduce allowable loads from significant categories of sources in proportion to baseline loads. That approach does not take into account the feasibility, costs, or cost-effectiveness of further controls, and does not address fairness issues. The resulting WLA for septic systems is infeasible, as discussed above. The resulting allocation for other categories of sources may not take advantage of opportunities to secure further reductions in loadings at modest cost.

Appendix L – Public Comment Letters

L-2 E. G. (Bud) Summers Ph.D.
Hines Nurseries
Letter dated April 23, 2002

Testimony of E.G. (Bud) Summers, Ph.D.
Hines Nurseries
Before the SDRWQCB on May 8, 2002

Testimony of Richard A. Watson
For Hines Nurseries
Before the SDRWQCB on May 8, 2002

Hines Nurseries
A Hines Horticulture, Inc. Company

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.

Hines Nurseries
A Hines Horticulture, Inc. Company

Testimony of E.G. (Bud) Summers, Ph.D.
Hines Nurseries

Before the

California Regional Water Quality Control Board, San Diego Region

8 May 2002 (06 May Draft)

Good morning, Chairman Minan and members of the Board. My name is Bud Summers. I am Hines Nurseries' Vice President of the Nursery Division and General Manager of the Fallbrook and Irvine, California nurseries. I have both Ph.D. and Masters degrees in Horticulture, as well as a Bachelor of Science degree in Biology. I have over 25 years' experience in horticulture, including teaching horticulture at the university level and serving as a Statistical Analyst and Consultant for the U.S. Department of Agriculture. I am here today to comment on the Draft Nutrient Total Maximum Daily Load for Rainbow Creek.

Hines Nurseries

First, I would like to briefly review our relation to Rainbow Creek and the proposed TMDL. Last May we closed the purchase of a 256-acre nursery that straddles Rainbow Creek in the Rainbow Valley area upstream from I-15. We have managed the site since 1996, but were only able to secure title to the property last year.

Barbara Biernacka, our Propagation Manager in Fallbrook, has participated on the TMDL Technical Advisory Committee since 1999, although that committee has not met since December 2001. Earlier, other staff members also attended TAC meetings. We also participated in the supplemental monitoring program during the year 2000.

Hines Nurseries has been commended for our efforts with respect to our tailwater recovery and recycling systems, and we continue to do more. Through the existing recycling system, we currently recycle up to 80% or more of our irrigation waters. This system was originally installed by Flynn-Rainbow Nurseries to help reduce nutrients in Rainbow Creek, and Hines Nurseries continues to operate this tailwater recovery system today. The effectiveness of this system was discussed in the Regional Board-funded Final Report of the Rainbow Creek Non-Point Source Nitrate Reduction Program dated January 31, 1997. This system was noted as a demonstration of the "potential for reducing nursery runoff with an irrigation system retrofit." We presently utilize the Creek as part of the recycling system, but have no dry-weather discharges off site.

However, we agree that we now need to discontinue discharging into the creek, and we are proceeding to do so. Hines has now committed to implementing a new recycling system that will be completed in the next two to three years at a cost of between $ 1.5 and 2 million. The new recycling system, the plans for which have been already reviewed with your staff and County staff, will recycle more than 95% of our irrigation waters. We are currently working with the County of San Diego in order to expedite implementation of the system. Hines Nurseries is committed to working with

the Regional Board to achieve its nutrient goals for Rainbow Creek, and continues taking responsible action toward those goals.

Statements Regarding Hines Nursery are Inaccurate

I would like thank the Board for steps it has already taken to improve the factual content of the document. We appreciate the efforts Staff has made to address our concerns. Some of the required changes have been addressed in the circulated draft, and staff has informed us that they propose to make others.

The two most important statements about Hines that remain to be corrected are in Section 9.5.1.4. Specifically, the first sentence of the third paragraph regarding a condition of pollution and nuisance should be deleted as it is inaccurate. We firmly believe that Hines Nurseries has not caused or contributed to a condition of pollution, contamination, or nuisance. To the contrary, Hines' actions, and those of its predecessor, have significantly improved the condition of Rainbow Creek downstream from the nursery.

In addition, the last sentence in the same paragraph should be deleted because it also is inaccurate. We have reviewed the plans with staff and they indicated their support for the project. However, as a regulatory agency, I do not believe the Regional Board would normally approve specific construction plans. We have addressed these issues with staff, and understand that they intend to correct these sentences in the next draft.

General Comments on the Proposed TMDL

Further, we firmly believe it would have been more appropriate to have deferred this hearing until we and the other members of the regulated community were able to see how staff proposed to respond to both the comments made at the workshop and the written comments received by the date specified in the hearing notice. We were under the impression that this hearing would focus on a revised draft – not a draft that is in the process of being revised.

In addition, there are numerous problems inherent in this TMDL that make it inappropriate for adoption . Today, I will review only a few key points concerning the proposed TMDL. Additional comments are in our previous written statement that I have attached and distributed for your review.

The Board is clearly under pressure to do something, and considering the lack of data, this constitutes a valiant attempt – however, it is not what we understand to be a valid TMDL. What this document succeeds in demonstrating is the lack of any need for a TMDL and the lack of sufficient technically valid data to establish a TMDL.

We are particularly concerned with the unreasonably restrictive load allocations. For example, Table 4–Y specifies a daily load allocation of 1.8 pounds of nitrogen for all commercial nurseries in the watershed. Using the municipal drinking water criterion of 10 mg Nitrate as N per liter, a discharge of approximately 21,580 gallons of potable water would exceed the total daily nitrogen allocation for all commercial nurseries in the watershed. That is only about 1.7 per cent of Hines' average daily water use. A small malfunction in the irrigation system or even a small storm event could put us over the

allocation for all commercial nurseries in the watershed if you assume drinking water standard levels of nitrogen in the discharges. The TMDL needs to be more flexible to permit us to comply in a manageable way.

I will conclude my statement today with a few suggestions for making the TMDL more workable, if there is going to be one adopted in the near future, but first I want to briefly review some of our concerns with the draft.

Inappropriateness of the TMDL

The proposed TMDL is billed as a draft "Nutrient TMDL" in the Staff Report and in the Draft Resolution, but Rainbow Creek is not listed as impaired for nutrients. The assertion in Attachment A to Resolution No. R9-2002-0108 that "Rainbow Creek is currently identified on the Clean Water Act Section 303(d) list of impaired waters due to excessive nutrient concentrations" is incorrect. The Staff Report itself notes in the very first sentence of the Executive Summary that Rainbow Creek's listing is for "eutrophication." A paragraph later it is noted that, "eutrophic conditions have not been observed in the creek . . ." This fact is repeated in the last paragraph of page 9, where it is also noted that "Rainbow Creek is not stagnant or experiencing fish kills or excess decomposition of plant matter and their related adverse impacts."

A "Nutrient TMDL" is being proposed to address "eutrophication," not nutrient load, and "eutrophic conditions have not been observed in the creek." On what grounds, then, could the Board propose adoption of any TMDL – either for nutrients or eutrophication? TMDLs must be based on impairment listings -- they should not anticipate listings. Only if the State Water Resources Control Board revises the listing

for Rainbow Creek following its hearing currently scheduled for September should a Nutrient TMDL for Rainbow Creek be considered. Since there is no eutrophication, and nutrient concentrations have been greatly reduced since the 1980s, it would be more appropriate to delist the Creek for eutrophication and put it on a watch list for nutrients.

Scientific/Technical Problems with the Draft TMDL

The Staff Report is rife with scientific and technical problems. From the first page of the Executive Summary, Staff attempts to substitute assumptions for data: "nutrient concentrations appear to be contributing to excessive algal growth which can lead to eutrophic conditions that may result in decreased water clarity…" Speculation does not amount to science. We have been told that staff is going to revise the methodology to reduce the emphasis on nutrient concentrations through the use of flow data that was brought to their attention by EPA Region IX, however we have not seen the revised methodology. Any new methodology should moreover be peer reviewed. In fact, as the County has pointed out in their written comments, the current draft has yet to be peer reviewed.

The revised draft that staff proposes should be distributed for peer review and then re-circulated for public comment. When it is peer reviewed, we recommend that the aerial deposition assumptions and estimates also be reviewed. We understand that Dr. Keith Stolzenbach at UCLA is currently doing work on aerial deposition of nutrients in the Santa Monica Bay watershed and has indicated a willingness to review the aerial deposition aspects of this proposed Nutrient TMDL.

There are additional technical and regulatory problems with the TMDL as proposed by staff. I will ask our consultant, Mr. Richard Watson, to address these. However, before I do, I want to make a few recommendations to make the TMDL more workable should you decide to proceed with the TMDL despite the technical deficiencies with the draft.

Recommended Revisions to the TMDL

1. The initial target should be the drinking water standard, for which there is a more solid scientific basis. At a specified review date, numeric biostimulatory criteria could be added, if required.

2. 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.

3. If the stated or inferred desired goals taken from the explanation of the narrative water quality objective in the Basin plan for biostimulatory substances are to be used as numeric targets in a nutrient TMDL, another part of the explanatory material should also be included. The TMDL should specify that the defined "values are not to be exceeded more than 10% of the time unless studies of [Rainbow Creek] clearly show that water quality objective changes are permissible and changes are approved by the Regional Board." This would be consistent with the Basin Plan and provided needed flexibility in the proposed TMDL.

4. The daily load allocations specified in Table 4 – Y should be enforced based on running 30-day averages. This would provide an allowance for irrigation system malfunctions or other problems while meeting the objectives of the TMDL. Since the proposed biostimulatory criteria are so low and there is no actual nutrient impairment, this should more that protect beneficial uses.

5. The two incorrect references to Hines should be deleted from the TMDL.

Thank you for this opportunity to comment on the proposed TMDL. Hines Nurseries recognizes its responsibilities and has committed to spend more than $1.5 million to replace the tailwater system that we inherited with a state-of-the-art recycling system.

I would be pleased to answer any questions you might have concerning the operation of our nursery facility, but before I do, I would like to ask Mr. Watson to address other technical and regulatory concerns that we have with the TMDL as proposed.

Testimony of Richard A. Watson

For Hines Nurseries

Before the

California Regional Water Quality Control Board, San Diego Region

8 May 2002

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.

Appendix L – Public Comment Letters

L-3 Peter Kozelka, Ph.D.
U.S. Environmental Protection Agency
Letter dated May 7, 2002

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

MAY 07 2002

David Barker, Supervising Engineer
San Diego Regional Water Quality Control Board
9174 Sky Park Court, Suite 100
San Diego, CA 92123

EPA Region 9 has received the *Draft* staff report for Nutrient Total Maximum Daily Loads (TMDL) for Rainbow Creek and *Draft* Basin Plan Amendment, dated March 22, 2002. These documents address impairment to Rainbow Creek, which is currently on the 303(d) list. This TMDL is designed to ensure attainment of water quality objectives and restore designated beneficial uses.

Here are some specific comments or other areas for revision.

1. The *Draft TMDL*, in section 5.1, states the biostimulatory TMDL for total nitrogen is set at 1507 kg/yr, based on this current load from undeveloped [or background sources] land.

   The Regional Board must change its approach to defining the loading capacity and TMDL for total nitrogen. As presented, EPA cannot approve the Rainbow Creek Nutrient TMDL since it has not utilized water quality objectives to establish the loading capacity which ultimately affects the allowable allocations. (See future actions outlined in #5 below.) Therefore the proposed TMDL will not result in attainment of all applicable water quality objectives.

2. Also, the *Draft TMDL*, in section 5.1, utilizes an indirect approach to calculating the loading capacity for total nitrogen. This indirect approach relies on interpretation of the current loading estimate and proportional reduction to define the biostimulatory loading capacity.

   EPA Region 9 urges Regional Board staff to *directly* determine the loading capacity by starting with the desired water quality objective(s) and using stream flow records to calculate the loading capacity and TMDLs for total nitrogen and total phosphorus.

3. As a consequence to modifying the loading capacity, the Draft TMDL will also need to modify the allocations and margin of safety. These values are dependent on the quantity defined as the assimilative or loading capacity.

   EPA Region 9 would support interim allocation levels as part of implementation, as long as the TMDL clearly documents quantitative performance levels associated with desired water quality conditions and potential responses to achieving these interim levels. The attainment of all applicable water quality objectives must be clearly presented in the document.

4. The *Draft TMDL* needs some written revisions. As presented, section 5 does not clearly define the loading capacity for total nitrogen and total phosphorus and present these bottom line values in a

table. Section 5 should be titled "Loading Capacity and Linkage Analysis" to clarify its contents. Also, Table 5-1 should be modified to remove information about current load and interim loading capacity or postpone this table until a later section of the document. Instead Table 5-1 shall define the loading capacity for biostimulatory total nitrogen and total phosphorus.

The first sentence of Section 6.0 is misleading. It could be changed to…..A TMDL is less than or equivalent to the loading capacity after taking into account "allocations for all sources and a margin of safety."

5. The *Draft TMDL* implies the quantity of nutrients from undeveloped land is sufficient to determine the loading capacity and to interpret applicable water quality objectives. This assumption conflicts with 40 CFR 130.2(f) which defines loading capacity as "the greatest amount of loading that a water can receive without violating water quality standards." TMDLs are based on the existing water quality standards. We do not believe the Basin Plan provides an exemption from application of water quality objectives based on the idea that naturally occurring pollutant levels exceed other applicable objectives.

   In the future, the Regional Board could address this issue via two options; both would require a Basin Plan amendment:
   a) adopt a different water quality objective for Rainbow Creek, presumably a site-specific value based on credible data, or
   b) define an exclusion for Rainbow Creek from meeting water quality objectives due to naturally occurring sources; again with sufficient rationale.

EPA recognizes the complexity of establishing TMDLs and the desired expediency for developing such strategies for improving water quality in freshwater systems like Rainbow Creek. We anticipate working collectively to produce a coherent and acceptable nutrient TMDL, both to Regional Board members and staff and for EPA approval.

Our most recent discussions (on May 2nd) with you and Lisa Brown, regarding modifications outlined above, provide more confidence that San Diego Regional Board will produce a TMDL that meets requirements outlined in the Clean Water Act and will be approved by EPA Region 9. Please keep us informed with subsequent revisions of the TMDL and appropriate attachments sent to Regional Board members.

Sincerely,

Peter Kozelka, Ph.D.
TMDL Liaison, Water Division

Appendix L – Public Comment Letters

L-4 Eric Larson
San Diego County Farm Bureau
Letter dated May 8, 2002

FARM BUREAU SAN DIEGO COUNTY

1670 East Valley Parkway, Escondido, CA 92027-2409
Phone: (760) 745-3023 • Fax: (760) 489-6348 • E-mail: sdcfb@sdfarmbureau.org

May 8, 2002

Mr. John Minan, Chair
California Regional Water Quality Control Regional Board San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Dear Chairman Minan:

The Farm Bureau of San Diego County has had an opportunity to review the Staff Report for Nutrient Total Maximum Daily Loads for Rainbow Creek (TMDL) under consideration by your Regional Water Quality Control Regional Board (Regional Board). That review has generated a number of questions and concerns regarding content, assumptions, policies, and methodology. Our comments follow, corresponding to the sections of the draft TMDL.

Executive Summary

Page two of the executive summary indicates that there are no wasteload allocations made for this TMDL, however, there are urban areas within the watershed. If the urban areas are served by publicly (or privately) owned treatment facilities (i.e. Oak Crest Mobile Estates, Rainbow Conservation Camp) then there are point sources within the watershed that must be considered.

2.0 Problem Statement

We are unclear as to whether the listed beneficial uses are specifically designated to Rainbow Creek or are they designated by the Regional Board pursuant to the tributary rule because the Santa Margarita River is so designated. If designated pursuant to the tributary rule, we would ask for evidence as to the appropriateness of the listed beneficial uses within the watershed.

2.3 Historical Information

Monitoring data clearly shows significant decreases in nutrient levels following the 1996 303(d) listing. This improvement calls into question the need to make Rainbow Creek a priority TMDL. Because a 96% reduction was achieved through the program of education administered by the Mission Resource

Conservation District we question why the Regional Board did not pursue a similar approach before choosing to pursue a TMDL.

2.5 Water Quality Objectives

The document states that nutrients are likely contributing to the excessive algal and emergent plant growth. The next sentence then recognizes that where the growth occurred there was no riparian canopy yet where there was riparian canopy there was no algal growth. The Regional Board must be able to make the easy assumption based on actual observation that sunlight has a direct effect on the algal growth. Perhaps the easier solution to the problem is to increase the riparian canopy throughout the watershed and should be addressed.

2.6 Beneficial Uses

Page nine discusses how Dissolved Oxygen (DO) concentrations were not low enough to cause an adverse effect and that DO is not expected to be depressed below the water quality standard. Yet, it then states that there are no results to support that assumption. However, there are clearly no results to not support the assumption either. Since there is not reason to suspect DO problems, then DO monitoring is not necessary. The TMDL is specific to nutrients and algal growth and should therefore stay focused on the problem statement and not go looking for other issues.

Also, it appears that the arroyo chubs need algae. If this TMDL has a detrimental effect on the chubs there is a risk of environmental law conflicts.

4.0 Source Identification

The source identification incorrectly characterizes undeveloped land contributions as small when in fact Figure 4-1 identifies undeveloped land as the single biggest contributor at 33%. Also, the draft TMDL is relying on a CalTrans document to state that their contribution was not significant. Perhaps there should be further review on CalTrans' actual contribution. Individual farmers may have insignificant contributions but they will be subject to the provisions of the TMDL. No one should be exempt in that cumulative impacts do add up.

6.2 Initial Total Nitrogen Load Allocations

The stated inability to reduce loads from parks, preserves, and urban areas places an additional burden on agricultural uses, among others. Any load generated by human activity can be reduced and should carry its fair share, even if its contribution is small.

8.0 Public Review

In reviewing the fifty-two listed events on Attachment D preceding today's public hearing, three involved public participation. Two in 1999, and one on April 11th of

this year. While technically meeting the letter of the law, it is our hope that the Regional Board feels that every means available has been used to notify and engage the residents, property owners, farmers and nurserymen of the Rainbow Creek Watershed.

9.0 Implementation Plan and Monitoring Strategy

The primary implementation component for this TMDL is a county prepared Nutrient Reduction and Management Plan (NRMP). It is our belief that this is a new implementation approach, not seen in other TMDLs. We would like assurances that agriculture will have a place at the table when the County prepares the plan, but see no such mention in the TMDL. We also believe it would be appropriate to have participation by the University of California Cooperative Extension Service. There should also be assurances that the plan will be subject to public review and Regional Board approval.

Page 39, Land Use Planning, indicates the Regional Board's desire to direct and evaluate county land use ordinances and their provisions. We must state our concern with the Regional Board injecting itself into land use decision making. It is one thing for the Regional Board to make the County the lead agency for the NRMP, but quite another to have the County answer to the Regional Board on land use matters. We can think of no other regulatory agency that assumes such a role.

Page 40, CEQA Responsibilities Section, also raises concerns about Regional Board participation in local land use decisions. A reading of this paragraph implies that the Regional Board is asking the County to apply CEQA requirements and mitigation measures on agricultural operations, a condition that does not currently exist. As in the preceding paragraph, the Regional Board's concern should be meeting water quality objectives, not influencing land use decision making.

11.0 Economic Considerations

This section fails to adequately address the costs that may be incurred by agricultural operations to implement Best Management Practices (BMPs). For example, the Table 11-5 statement that BMPs may offer costs savings as a result of lower fertilizer and water usage is contrary to the fact that the Hines Nursery investment may be as much as $2 million.

When the document discusses the cost of BMPs, it does not consider whether the BMPs will actually help to meet the load allocations given. There must be some evaluation of the suggested BMPs and their effectiveness.

General Comments

We are unclear whether this document is the Regional Board's basin plan amendment or just the TMDL that is to be submitted to the U.S. Environmental

Protection Agency. This must be clear. The U.S. Environmental Protection Agency (U.S. EPA) has no implementation authority over nonpoint sources of pollution. Therefore, it is not necessary for the state to submit the implementation components of a TMDL to U.S. EPA. We suggest that the Regional Board not submit such implementation components to U.S. EPA in that the U.S. EPA has no authority or jurisdiction and there is no reason to give them the opportunity to review and comment on such implementation plans.

Finally, we have found that this TMDL is overburdened with data gaps. In many instances data is incomplete, leading to numerous comments about re-evaluating the TMDLs, adjusting allocations, and the need for better data. These data gaps create a situation where the Regional Board is considering a TMDL that sets an unachievable allocation of zero nutrient loads and explains it away by stating better data will be collected at a future date. Successful implementation of any plan needing the cooperation of stakeholders must show that the goals and remedies are reasonable, achievable, and based on reliable information.

Sincerely,

Eric Larson
Executive Director