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September 30 2013

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Clerk to the Board
State Water Resources Control Board
P.O. Box 100 Sacramento CA 95812-2000
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Subject: Comment Letter – Salinas Nutrient TMDL and Santa Maria Nutrient TMDLs

Dear Sir/Madam:

Thank you for the opportunity to provide comment on the Lower Salinas River and Santa Maria River Nutrient TMDL programs. Comments will primarily be focused on the Salinas River Nutrient TMDL. Nevertheless, all concerns could be extrapolated and may applied to the proposed Santa Maria Nutrient Program.

This TMDL stakeholder process has been protracted for a variety of reasons. Consequently, there is a considerable history of comment letters. I am attaching a few historical comment letters, as many of the questions and concerns echoed in earlier letters and throughout the stakeholder process have not been addressed by the final TMDL.

Unintended and unforeseen consequences are not (and cannot be) considered

First, it is understood that Clean Water Act requires a TMDL program when/if a waterbody is listed for impairment. Next, it is understood that the TMDL process, in and of itself, does not take unintended or unforeseen consequences of the proposed TMDL program into account. Unintended consequence is a consistent concern that has been expressed throughout the comment record. Unfortunately, the TMDL programs, as promulgated by EPA, are grossly inadequate for complex non-point source issues. They were originally designed for point sources and the processes by which "success" is determined are poorly suited for the regulation of non-point source communities.

There is not a California Nutrient Surface Water Policy to give guidance to the Regional Boards on nutrient TMDLS

During verbal testimony on March 41, 2013, concern was expressed about the lack of state policy for Surface Water Nutrients. Furthermore, there are numerous nitrate task forces (CDFA, SWRCB, Governor's office) that have been convened to address nitrate use by the agricultural community. The findings of those task forces have not been reconciled. Therefore, it is uncertain how findings or future policies would be incorporated into this TMDL.

<u>This is not a Drinking Water Program, and in fact, it is rare for TMDLs to consider groundwater at all</u>

Upon making the March 14, 2013 testimony, Central Coast Water Board Members protested that there was enough evidence regarding drinking water impairment in the Salinas Groundwater Basin to justify this TMDL. It should be reiterated, herein, that the TMDL program is largely intended to be a surface water program. Any mention of groundwater is related to upwelling of contaminated groundwater and the potential for contribution to surface water exceedances. This TMDL is NOT a groundwater program per se. While there is a purported connection between surface water management practices and groundwater, neither current technical knowledge nor the existing TMDL has firmly established this connection. There is a lack of knowledge about the degree and sources of drinking water impairments in the TMDL project areas.

<u>If one insists on considering the CNP Report as evidence for adopting this Nutrient TMDL, then, one must consider ambiguities in the analysis</u>

One may point to the UC Davis California Nitrate Project (CNP) Report as evidence of groundwater and drinking water impairment and as subsequent justification for this Salinas Nutrient TMDL. However, there are two basic flaws with the use of the CNP for these purposes.

First, although the UC Davis effort concurred with previous work that groundwater concentrations have generally been increasing with time in the [Tulare and Salinas Groundwater] Basins, trends are really not that obvious when one considers that analysis of each basin independently.

"Some of the [CNP] analyses indicate increasing nitrate concentrations in the Salinas Valley. Other analyses are less clear, and may indicate either decreasing nitrate concentrations, no obvious pattern of concentration change, or insignificant concentration changes for some periods and locations. The results of the UC Davis effort were intended to be spatially unbiased, but it not clear they are. Much of the groundwater nitrate data analyses made in the CMP was conducted separately for the five regions in the CNP study. However, the broadest conclusions regarding groundwater nitrate occurrence in the CNP, including the magnitude of temporal nitrate concentration trends, were based on summary statistics from the combined Tulare Lake Basin and Salinas Valley dataset. It is not completely clear what consequences, if any arise from using the combined dataset for assessing

groundwater nitrate occurrence at the local level" (Abrams, personal communication). The bottom line is that while the CNP is often quoted as demonstrating proof of worsening groundwater quality, there is enough ambiguity in the combined analysis, to lend doubt to these conclusions."

The stated CNP naturally occurring background levels are less than some proposed numeric standards in this TMDL

It is likely, in this political environment; the SWRCB will stand by the CNP Report. In that case, the question becomes whether the SWRCB will also stand behind the 9 mg/L background nitrate concentration range that is posited by the CNP Report. It states, "We did not establish specific background nitrate levels. The U.S. Geological Survey typically uses nitrate levels of 9 mg/L, 13.5 mg/L or 18 mg/L as a threshold to differentiate between what is possibly natural nitrate and what is likely "anthropogenically influenced" nitrate. We developed data for all these thresholds, but have focused on the 9 mg/L [2 mg/L Nitrate-N] threshold, the 22.5 mg/L [5 mg/L Nitrate – N] threshold (half the MCL) and the 45 mg/L threshold (10 mg/L Nitrate-N] (the MCL)."

When one considers the CNP's naturally occurring background levels of 9 mg/L in light of the proposed Salinas numeric targets, one cannot help but be concerned. The proposed nitrate numeric targets range from 1.4 - 6.4 mg/L in the dry season to 8 mg/L during the wet season in the Salinas Valley. Some of these proposed numeric targets are actually lower than the CNP naturally occurring background levels. It is possible that these levels are so low as to make it impossible for currently high-nitrate demand crops or other less nitrate intensive crops to be grown in the TMDL project area. In essence, the agricultural beneficial use is likely to be destroyed by this TMDL program.

While the numeric standards are NOT enforceable, there is concern about how these relate to provisions in the Ag Waiver Order.

The final concern regarding this TMDL is language in the newly adopted SWRCB Central Coast Ag Order. Current provisions read "24. Dischargers must comply with applicable Total Maximum Daily Loads (TMDLs), including any plan of implementation for the TMDL, commencing with the effective date or other date for compliance stated in the TMDL." In essence, while the numeric targets are NOT enforceable standards, there is question whether the language in the Ag Waiver renders them so. If this is not the case, there needs to be some sort of explanation given to the regulated community about the inter-connectedness of the TMDL Program and the Ag Regulatory Program and the Basin Plan. At present, there is much confusion about the mechanism for which the programs and Basin Plan inform each other and how enforcement is triggered.

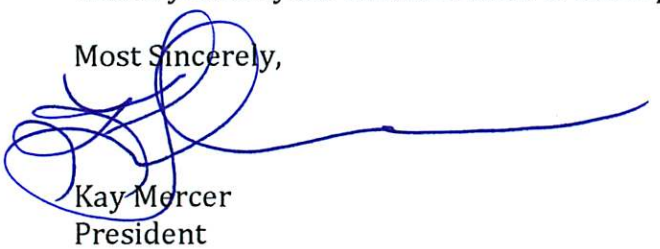
In summary, primary concerns regarding this proposed Salinas Nutrient TMDL are:

- That it is NOT a drinking water program, but political concerns about drinking water will trump an objective review of the proposed program on its own merits.
- The naturally occurring background may be below some proposed numeric targets
- This TMDL does not support the beneficial use of agricultural water
- There is uncertainty about how the proposed numeric targets will inform future regulatory efforts such as Agricultural General or individual Waste Discharge Requirements.
- At every step in this process: there has been insufficient consideration of the unintended and unforeseen consequences. To a certain degree this is an outgrowth of the TMDL program per se. It is also a reflection that the state is still wrestling with the nitrate question and there is insufficient conclusion about the best steps forward.

Consequent to the above concerns, please refrain adopting these TMDL programs as written. It is requested that the State Board stay adoption until the SWRCB Expert Panel has convened and there is a state-level surface water nutrient policy to guide the regions in development of nutrient TMDLs.

Thank you for your consideration of these points.

Most Sincerely,



Kay Mercer
President

November 26, 2012

Mr. Pete Osmolovsky
Central Coast Regional Water Quality Control Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906
Lower Salinas Nutrient TMDL

Re: Draft Salinas Nutrients TMDL

Dear Mr. Osmolovsky,
Thank you for the opportunity for comment on the Lower Salinas draft Nutrient TMDL project report.

Overall, RWQCB Staff should be commended for stating the problem clearly and thoroughly gathering information. This draft report is an important step towards clearly articulating impairments and potential mitigations.

The following comments are set forth in an effort to improve the report, suggest methods to enhance the TMDL process and implementation plan, and to set forth concerns that may or may not be addressable through the TMDL program, as set forth by US EPA and administered by State Water Resources Control Board (SWRCB) and and the Central Coast Regional Water Quality Control Board (RWQCB).

1. INTRODUCTION

1.2 Geographic Area

As per the Nutrient TMDL: "There is limited hydrologic connection between the Reclamation Canal watershed and the lower Salinas River watershed". Not only is this a true statement, but, likewise, while both watersheds have crop production and nitrate and/or ammonia impairments, the two watersheds have little in common relative to physiography, hydromorphology, hydrogeology, topography, soil types or ecosystem levels functions. At a problem analysis level, the nutrient impairment indicators/stressors have very different responses as will be further discussed. For non-point sources, at the field level, implementation practices may be similar, however, at the watershed level, mitigation measures may vary tremendously. Should these two watersheds should be included in one TMDL? Might the probabilities of successfully addressing water quality be better achieved by separating these TMDLs?

1.3 Pollutants Addressed and Environmental Impacts:
Staff states that the TMDL is consistent with CCRWQBC's highest priorities of protecting human health and addressing aquatic habitat as per July 2012. This is a true statement. In addition, the following were adopted in July 2012: preventing degradation of hydrologic processes, preventing/reversing seawater intrusion, preventing further degradation of groundwater basins from salts. Furthermore, the CCRWQCB Board members asked that the following be included:

- The importance of education, outreach, and collaboration in achieving results, and that these approaches should also be a priority. The Board also discussed the interests of other stakeholders.
- The ongoing controversy over the Ag Order and the need to communicate well with dischargers and the public to minimize controversy as much as possible.
- The need to prevent degradation of water resources and habitat before it occurs, rather than trying to restore degradation after it occurs, as defined by the CCRWQCB's mission and the law.

2. PHYSICAL SETTING AND WATERSHED DESCRIPTION

2.4 Land Use and Land Cover:

Please note that **Figures 2-4 and Table 2.3** do not establish the timeframe for the data presented. **Table 2-4** would have been more useful if it had incorporated land use changes over time.

These data do not take rural residential land uses into account. This type of land use has expanded significantly in the TMDL project area in recent decades. There are a number of references regarding the impact of septic systems on nitrate groundwater loading. The 1988 SWRCB report (Anton et al., 1988) identified agricultural fertilization, animal operations (i.e. waste from dairy, feedlot, and poultry operations), and septic disposal systems as the three dominant sources of nitrate to impacted groundwater. Urban runoff and municipal waste treatment were cited as lesser sources. In 2001, the Natural Resources Defense Council highlighted nitrate contamination of groundwater in "California's Contaminated Groundwater" (Helperin et al., 2001) and concluded that agriculture and septic systems are major sources of nitrate contamination.

Rural residential areas could be a significant cause of impairments by redirecting surface water flows, contributing to reduced land ethic and stewardship knowledge, and through increased nitrate groundwater loading. Omission of rural residential areas as a potential source of impairment could compromise loading estimates. Additionally, while the anomalous nature of this land use creates difficulties in regulation and enforcement, the exclusion of this land use could seriously impede future mitigation efforts.

We suggest that Staff include another set of data necessary for multi-variant analysis of impairments, bio-indicator assessments and development of meaningful implementation strategies. It is critical that historical land use changes be noted and included in any sort of multi-variant analysis. If fish habitat over-time and legacy nitrate and phosphorous

loading over-time are significant when evaluating impairments and/or implementation plans, then land use over-time (e.g. the presence of dairies and land use conversions from ag or open space to urban and rural residential developments) is likely to be as critical a variable.

2.5 Hydrology
It would be helpful if data cited in the report timeframes during which the data were collected were dated. . For example, what is the basis for estimating the mean annual discharge in Table 2.5? Other tables, charts and text that could benefit from more specific data include Table 2.7: Estimated percentage of land area subject to artificial drainage practices (ditches & drainage). These data are too old to be useful. There have been significant efforts made in the Monterey Bay area since 1992 to improve production and water quality management practices. Water use trends, as reported by Monterey County Water Resource Agency. These data and this report do not account for these changes to agricultural management practices that are already in place.

2.7 Climate and Precipitation
For the purposes of addressing nutrient use by agricultural sources, the precipitation gradient present in the Salinas Valley is critical. Precipitation, along with fog, wind, temperature and solar radiation have a tremendous impact on the use of nutrient inputs (i.e. fertilizer use) in order to produce a consistent and quality end-product.

The use of average annual precipitation corrected for orographic effects is confusing. What is the purpose of this information? From the perspective of agriculture, this statistic has little value.

2.9 Groundwater
It is important to understand the inter-relationship between surface water leaching to groundwater quality and groundwater upwelling to surface water quality. It is important that this inter-relationship be modeled in an effort to improve implementation efforts and the CCRWQCB is encouraged to add this as a task to be performed by Staff as part of the TMDL Implementation Plan.

Figures 2-15 and 2-16
The comparison between agriculture, urban, and undeveloped land has been absent from previous analyses. It would have been helpful if ranges of measured nitrate concentrations were provided to compare to modeled nitrate concentrations. Is it assumed that predicted and estimated nitrate concentrations are the same factor? Also, please note that these figures as well as **Figure 2-17** do not include a date or timeframe.

Natural Background Levels
The TMDL draft Project report refers to a GAMA special study conducted by Moran et al (2011). Please find a direct quote from that report regarding groundwater nitrate concentration background levels: “A comparison between surface water and groundwater shows that nitrate is somewhat higher in groundwater (mean of 1.21 mg/L) than in surface water (mean of 0.11 mg/L), suggesting that nitrate found in these samples comes

from rain, with a small additional contribution of nitrate from the soil zone in groundwater samples. Very low nitrate concentrations are likewise observed in wells screened in the 400 Foot aquifer of the Pressure zone (only 38 out of 116 wells tested had nitrate concentrations >3 mg/L; MCWRA, 1997). Thus, an estimated background nitrate concentration of <4 mg/L is consistent between these [Arroyo Seco and Lower Salinas watersheds] which are unlikely to be affected by anthropogenic nitrate."

Furthermore, Moran reports in a separate 2011 GAMA report that the National Water-Quality Assessment (NAWQA) demonstrated that a large fraction of the nation's ground water supply is impacted by anthropogenic nitrate contamination, where impact is defined as the presence of nitrate above a threshold value of 3-4 mg/L nitrate-N (Nolan et al., 2002; Nolan et al., 1997; Squillace et al., 2002).

There is a significant discrepancy in reported background levels between this TMDL project report and Dr. Moran's reports. If, indeed, background nitrate concentration levels are 3-4 mg/L, then, these reported background levels potentially exceed TMDL established dry season numeric targets in the Alluvial Valley River Flood Plain, Upper Alluvial Valley Tributaries, and Moro Cojo Slough. This discrepancy coupled with the fact that surface water/groundwater inter-relationships need further modeling should create enough doubt as to delay the adoption of this order until further groundwater modeling has been done.

In the absence of a delay in adoption, we not only encourage the Board to direct that a surface water/groundwater inter-relationship model be created by Staff as part of the implementation plan, but, also, that the completion of this model would trigger a review of the TMDL numeric targets in light of new data.

We agree that it is important to consider the possibility of existing legacy pollution on shallow groundwater. This is particularly critical in light of the fact that dairies were prevalent on the Central Coast. Why wasn't legacy nitrate included as a part of the load estimates?

2.14 Fish Habitat and Distribution

Historical land uses and conversions over time are critical factors when considering loss of fish habitat and potential mitigations that may be implemented. We do not believe that the collective implementations of management practices by individual landowners are sufficient to overcome chronic hydromodification of the Salinas River watershed over the past 100 years as it relates to healthy fish habitat and viable fish populations. While it is important for individual landowners to address excessive nitrate discharges and to improve watershed functions, within the bounds of what is agronomically sound, we believe it will require long-term, region-wide, conjunctive and collaborative efforts that have been thwarted by the regulatory process associated with the 2012 Agricultural Regulatory Program.

PROBLEM IDENTIFICATION

3.1 Water Quality Standards

There is some uncertainty about the legal status of numeric targets once they are adopted into the Basin Plan as part of the TMDL. Are these numeric targets elevated to the status of Water Quality Objectives so that subsequent regulatory actions must adopt them making them actionable and enforceable standards?

3.2 Beneficial Uses

The discussion in this section was very helpful in better understanding beneficial use designations. More information about what type of information is necessary to change beneficial uses during the Triennial Bain Plan review process would be helpful. We request that Staff clearly post such information on the CCRWQCB TMDL web-site to determine the feasibility of taking advantage of such options.

A TMDL is the maximum amount of a pollutant that a waterbody can assimilate while still meeting water quality standards. (SWRCB S.B. 469 TMDL Guidance, A Process for Addressing Impaired Waters in California, 2005) However, what if the assimilative capacity of the river to support certain uses is below the background levels found naturally in the watershed? This is a valid question considering reported background levels appear to be lower than several proposed numeric targets. Conversely, what happens if the numeric targets are so low that a beneficial use cannot be supported? There is a strong potential this may be the case for the production of cool season vegetables. The ground on which they are grown is considered the best economic use of that soil. The nitrate water quality objectives/standards/numeric targets are much lower than the soil nitrate levels needed to grow vegetables (4-5 mg/L NO3-N in soil solution or 20-25 mg/L NO3-N in an acre foot of soil). Would it not follow, then, that the agricultural beneficial use couldn't be supported? The overarching question here is: "What if beneficial uses cannot be attained/retained in this watershed?"

"If the water quality standards are not being achieved because the applicable standards are not appropriate, an appropriate regulatory response may be to correct the standards through mechanisms such as use attainability analysis (UAA), a site-specific objective (SSO) or other modification of the water quality standards. In addition an anti-degradation finding may authorize the lowering of water quality to some degree, which may address the impairment. This should not be construed as implying that standards may be changed as a convenient means of "restoring' waterbodies. To the contrary, federal and state law contains numerous detailed requirements that in many cases would prevent modification of the standards especially if it would result in less stringent control. Modification of standards may be appropriate however, to make uses more specific, to manage conflicting uses, to address site-specific conditions, and for other such reasons." (SWRCB S.B. 469 TMDL Guidance, A Process for Addressing Impaired Waters in California, 2005)

The regulations at 40 CFR 131.10(g) specify six factors that may provide a legal basis for changing or removing a designated use:

1. Naturally occurring pollutant concentrations prevent the attainment of the use.
2. Natural, ephemeral, intermittent, or low-flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating state water conservation requirements to enable uses to be met.
3. Human-caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place.
4. Dams, diversions, or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the waterbody to its original condition or to operate such modification in a way that would result in the attainment of the use.
5. Physical conditions related to the natural features of the waterbody (e.g. the lack of a proper substrate, cover, flow, depth), unless these conditions may be compensated, unrelated to water quality preclude attainment of aquatic life protection uses.
6. Controls more stringent than those required by Sections 301(b)(1)(A) and (B) and 306 of the Clean Water Act would result in substantial and widespread economic and social impact.

There is some concern that factors 1, 2, 3, 4, and 6 may apply to this TMDL. Factor 1 has been previously discussed. Relative to Factors 2 and 3, there have been numerous stakeholder discussions about the cumulative impacts from decreased irrigation water flows and associated increased nitrate concentrations and increased water temperatures. Further, efforts to curtail sediment could result in increased light penetration. Collectively, these could be conducive to *increased,* rather than decreased, algal blooms. Factor 4 may apply if using aquatic life as a biological nutrient-response indicator when one considers the extensive hydrologic, and subsequent, habitat modifications that have occurred throughout the 20th century in the Salinas River Watershed. And finally, there is concern regarding the unintended consequences of this TMDL, and its associated permit, on land values, the resiliency of individual farms to be self-sustaining, industry viability and impacts to labor. Consequently, we recommend that TMDL adoption be delayed until further discussion, stakeholder input, and impact assessment may occur relative to the factors enumerated above.

3.3 Water Quality Objectives and Criteria

Table 3-2. While we understand the listing of nitrate and ammonia impairments, we do not understand the ramifications of the imposition of nutrient-related response factors as numeric targets. We understand that Basin Plan numeric and narrative water quality objectives are the authority under which all listed constituents are regulated. However, it is less clear how phosphorous (i.e. orthophosphate) and other nutrient-related response factors may be inserted into this TMDL process where they are not listed and there is no currently available, tangible evidence to connect of impairment. We suggest that further stakeholder outreach needs to be conducted to better explain this process.

3.7.3 Water Quality Spatial and Temporal Trends

Data qualifications and trend analysis presented by Central Coast Water Quality Preservation, Inc. should be considered in this TMDL. Please find data analysis from the following documents: 2010 Final Follow-up Water quality Monitoring Report: Continuous Monitoring of Flows, and 2010 and the Central Coast Water Quality Preservation, Inc. Draft Cooperative Monitoring Program Five-Year Evaluation Report: Monitoring Program Effectiveness and Efficiency, 2010.

> "The presence [of nitrate and ammonia are directly relevant to beneficial uses such as municipal and domestic water supply, agricultural water supply, and freshwater habitat and aquatic life. Although these parameters are clearly related to potential agricultural sources, there are also other significant sources for each of these parameters that complicate evaluation of agricultural impacts. Specifically, irrigation supply water, natural geological sources, urban runoff, treated municipal wastewater, and septic systems are all potentially significant sources of some of these parameters. Nitrate, total ammonia, and unionized ammonia all have clear numeric objectives that provide unambiguous regulatory interpretation of water quality status relative to support of specific Beneficial Uses. However, orthophosphate and chlorophyll-a do not have numeric objectives that support straightforward interpretation of their status related to Beneficial Uses. Chlorophyll-a is particularly problematic because it cannot be directly related to agricultural influences due to the many other environmental factors that influence ambient algae growth and species composition. Chlorophyll-a is intended to be an indicator of primary productivity and potential impairment from eutrophication, but there are no objective measures of "ideal" or "impaired" conditions. Additionally, trends in chlorophyll-a concentrations cannot be simply interpreted as protective or detrimental for Beneficial Uses. So, although chlorphyll-a is relatively inexpensive to monitor as a field parameter, it is not necessarily cost-effective because it provides little value in interpreting Beneficial Use support, agricultural influence, or progress towards CMP objectives. An additional consideration is that chlorophyll-a generally indicates only the presence of phytoplankton suspended in the water column and does not address the benthic/attached algaes that are generally more important in flowing streams, which represent the majority of CMP sites.
>
> Dissolved oxygen and pH are field-measured parameters. Both are most directly relevant to support of aquatic life Beneficial Uses and have numeric objectives in the Basin Plan. However, interpretation of Beneficial Use support related to these parameters is not always straightforward and determining the relative contribution of agriculture is difficult. There is often a high level of natural variability, and local geology can impact pH. A significant challenge with both parameters is considering the role of relatively high seasonal and diurnal variation due to temperature and algal and other microbiological respiratory processes. In spite of this, these parameters are essential to assessing aquatic life support, and can be measured in the field with conductivity at very little additional cost.
>
> Water temperature and flow are most directly related to aquatic life Beneficial Uses. They can be directly influenced by agricultural practices, including irrigation management, and hydrological and habitat modifications. There are also many other

natural and anthropogenic, non-agricultural factors that influence these parameters, which complicates interpretation by adding "noise" not related to agricultural influences. Substantial natural variability in these parameters occurs at multi-year, annual, seasonal and daily time scales and is more extreme in smaller water bodies. The high natural variation makes it difficult to characterize the status of these parameters relative to Beneficial Use support and to determine an appropriate management objective. The non- perennial nature and extreme hydromodification of most CMP water bodies also make it difficult to assess the relevance of agricultural discharges. Identification of real long- term trends in flows and the influence of agriculture are also very challenging. In spite of these limitations, monitoring of both of these parameters is essential for interpretation of other indicators. Water temperature is essential for interpreting dissolved oxygen data, and flow data are needed to evaluate loads of parameters such as nitrate. They are reliably, accurately, and cost-effectively quantified by the CMP, and there are no reasonable alternative parameters.

The primary value of air temperature is in interpreting other water quality indicators such as water temperature and dissolved oxygen.

The highest number of trends was observed for flow and chlorophyll-a. The decreasing trend in flow was more often significant for dry season events, but was also observed for wet season events. Trends in flow were similar in both regions [Northern and Southern parts of the Central Coast]. In contrast, chlorophyll-a exhibited only decreasing trends at [Northern] sites, and only increasing trends at [Southern] sites. Most of the increasing trends at [Southern] sites were observed for dry season events. Several trends in air temperature and water temperature were identified, with many more decreasing trends than increasing trends. There were few trends in ammonia and nitrate. In the [Northern] sites there were more increasing trends (10) than decreasing trends (2) for these two parameters, and they were evenly split between wet and dry seasons. In the [Southern] sites the numbers of decreasing (8) and increasing (6) trends were similar, with nearly all decreasing trends observed during the dry season. There were few trends in dissolved oxygen and pH. Of those that were significant, there were more increasing trends in both parameters for [Northern] sites, and more decreasing trends for [Southern] sites.

The most frequently observed flows on Quail Creek during the study period were between 0 and 0.4 cfs. Flows above 2 cubic feet per second (cfs) were rare (Figure 7). Flows on Quail Creek had the highest coefficient of variation of any site in the project, and also dropped to 0 cfs on a greater number of days than any other site, on 35% of days in the study period. Flows were generally higher during June, July and August than in other months. Periods of more constant and somewhat higher flows occurred over three- to five-day stints throughout the study period, as did a few periods of a week or more when flows showed high daily fluctuations but never dropped to 0 cfs. Quail Creek also showed a strong pattern of nighttime peak flows. There were some daytime peak flows as well, however, the highest flows during most 24-hour periods appeared to occur predominantly between the hours of 9 p.m. and 3 a.m.

Flows on Chualar Creek were reported as follows: The most frequently observed flows on Chualar Creek during this study were around 1.0 cfs, and flows were rarely below 0.5 cfs or above 2.5 cfs. On a weekly or monthly basis, flows in Chualar Creek did not fluctuate much except to increase slightly from July to August, and to decline somewhat after October. Variability was higher on a daily basis, with peak and low flows evident during most 24-hour periods. Daily peak flows occurred at all times of day, but appeared to occur more frequently in the middle of the day. This pattern was somewhat different than in nearby Quail Creek. The magnitude of daily changes in flow appeared to decline after October.

In summary, if discussed in semi-quantitative or qualitative terms, monthly "grab sampling" of flows over a period of several years has provided a useful characterization of stream flows at the monitoring sites. In more quantitative terms, single monthly monitoring events do not provide the same information as monitoring which captures flows on a sub-daily basis. Thus, it may be inaccurate to extrapolate "grab sampled" flow data beyond the parameters under which they were collected. Perhaps more importantly, chemical water quality parameters may exhibit the same kinds of fluctuation and variability as stream flows. If that is the case, then while monthly grab sampling may provide a useful characterization of water quality in general, it may be inaccurate to extrapolate results beyond the conditions under which they were collected without significant additional research.

The magnitude of flow rates in tributary streams is important when considering regional hydrology and loading to downstream water bodies. Whether or not these tributary streams are important sources of constituent loads to downstream waters depends on the interaction of stream flow with concentration-based water quality. When flows are negligible or non-existent, loads to downstream waters may be small (or zero). On the other hand, small flows may contain very high concentrations of nutrients, sediment, or toxicants that can contribute significant loads (i.e. cause impairments to cleaner downstream water bodies with higher flows).

Though very low, flows at study sites for this project rarely dropped to 0 cfs, even during the driest part of the year. The major exception to this was Quail Creek, where 0 cfs occurred on a regular basis (0 cfs calculations for San Juan are not supported by field observations). Flows at all study sites exhibited somewhat regular daily patterns, with obvious peak- and low-flows in most 24-hour periods. Peak flows often (though not exclusively) occurred at night.

The size of the drainage contributing flow to an individual monitoring site can impact water quantity and hydrological patterns. Under natural conditions, smaller drainages and tributaries tend to have greater variability of flows and are more influenced by short-term climatic variation. However, this typical pattern is less applicable or apparent in systems with a high degree of flow manipulation or management, as is the case for many of the water bodies monitored for the CMP. This is most apparent for the Salinas and Santa Maria regions. These two watersheds are the largest of the six hydrologic units and have main stem river

monitoring sites with large contributing drainage areas. However, the hydrology of water bodies at the bottom of these two watersheds are highly influenced by diversions and drainage and supply management, and do not reflect natural flow patterns.

NUMERIC TARGETS

As discussed previously, there are serious concerns in the agricultural community about the ability to achieve proposed numeric targets and simultaneously produce cool season vegetables. There is also concern that proposed targets may exceed background standards in some watersheds.

One concern that arises is the appropriateness of using the SWRCB draft Statewide Nutrient Policy recommendations to craft numeric targets in this TMDL. Until this policy is adopted, it is not the controlling guidance, and we recommend that Staff constrain the TMDL to currently adopted policies, procedures, and regulations.

Another concern that exists is the use of surrogates for reference stream populations when those surrogates are derived from nutrient ecoregions significantly different from the Salinas Valley. The use of data from Minnesota lakes and Tennessee streams are not appropriate surrogates. We suggest the development of alternative surrogates using locally pertinent data or the abandonment of the use of the 25th percentile surrogates as proposed by the EPA.

A final concern regarding numeric targets is the insertion of Microcystins as a target for all watersheds in the TMDL project area when they have not been routinely sampled and analyzed and no watersheds are listed for this nutrient response indicator. We see the value in this parameter as a direct measure of potential human health effects. We recommend that it be further developed and incorporated as "new data" upon the proposed review of this TMDL project.

SOURCE ANALYSIS

5.1 Introduction: Source Assessment using STEPL Model

We would like to express a similar concern regarding the use of local data in the STEPL modeling approach. If the data or models have not been generated in the similar nutrient eco-regions, we question the scientific applicability. Furthermore, we also question the uses of the following sources of data in the STEPL calculations: the use of Santa Maria Weather Station data, the lack of rural residential land cover estimates, the use of estimated national median N values from the GWLF User's Manual instead of local and measured estimates, and the use of nutrient concentration runoff data generated by the Southern California Coast Water Research Project.

Furthermore, several potential sources of nitrate are not incorporated into these source estimates. As previously stated, rural residential properties and legacy loading calculations are not integrated. Mineralization also has not been included and could lead

to nitrate pulses during the warmer seasons resulting in anomalies examined in a vacuum that could be enormously misleading when determining source attributions or calculating loads.

5.3 Cropland, Figure 5-6, Table 5-3, Figure 5-7

Here, it should be reiterated, in section 3.7.3 Staff emphasized there were no statistically significant associations between fertilizer sales and water column nitrate concentrations: "Undoubtedly, there are many other confounding actors besides the magnitude of fertilizer sales that impacts average water column nitrate concentrations, including, but not limited to, substantial interannual variability in runoff and precipitation and water and irrigation management."

6.2.1 Estimates of Existing Loading

Percent reduction goals for Chualar Creek, Quail Creek and Esperanza Creek appear to be disproportionate to mean annual existing load. In addition to the comparative small loads to this system, these sub-tributaries demonstrate minimal biostimulatory nutrient responses. We suggest that Staff engage stakeholders in these sub-watersheds to further discuss percent wet season and dry season percent reduction goals.

7.6 Non-regulatory Interim Reduction Goals

The Interim Goals, in concept, are the first step in creating and allowing a certain amoung of flexibility to address nutrient loading over the long-term. However, there is some confusion about the applicability of these goals as the TMDL does not specify against what baseline or data the goals will be measured. From a practical of view, since the TMDL regulatory and enforcement authority is derived from permit such as the Conditional Ag Waiver, it would seem that the baseline created through that program would be the appropriate receiving water baseline. That baseline was created through the Agricultural Cooperative Monitoring Program between 2004 to 2009.

Data Analysis

Staff has done a commendable job of parsing data. However, we would recommend that Staff review the draft report with the following questions in mind:

Does this proposed TMDL actually address when, where, what, why and how much impairment exists in this Watershed? We contend that Staff has focused on why and how much but could improve analysis of the other factors.

Does this TMDL explain how the current levels of nutrient impairments evolved and how they can be addressed within a historical context? In order to "fix" the problem, the problem must first be understood. The TMDL project report does not consider the following:

- Historical flood control efforts (e.g. reservoir impoundments, creek channelization)(See discussion below)
- Historical groundwater recharge efforts to offset impacts of drought (e.g. year round reservoir releases
- The impacts of year-round water releases for the purposes of water recharge and

aquatic habitat
- Increased land conversion (e.g. from crop or grazing lands to rural residential and/or urban land uses)
- Degraded riparian habitat resulting from bygone watershed management efforts
- Excessive and unmanaged riparian habitat resulting from present-day curtailed management efforts

Validity of Nutrient Objectives in the Context of Modified Hydrology and Land Use:

As is the case in most of the developed world, land uses and river hydrology have been highly modified in the Central Coast of California. Salinas Valley agricultural development and activity is not unique in this respect. Nor is it unique that the water quality has been affected. The bizarre comment from the scientific peer review that the standards are not over or under protective does not spur confidence that meeting these numeric targets will improve water quality to meet beneficial uses, thus delist the river and tributaries. It is not clear that the scientific review actually evaluated the models used to determine the numeric objectives (in terms of validity of assumptions, appropriate use of data, and interpretation). What is of most concern is the capacity of agricultural land uses to ever meet these numeric objectives, thus never be able to delist the water body. Furthermore, we foresee that the use of the agricultural waiver, which has limited capacity to address these impairments (with a significantly flawed risk assessment) is touted as the implementation tool. Given the rather aggressive timetable, the Regional Board will be compelled to further disenfranchise growers in the next agricultural waiver to meet a new set of statutory requirements (i.e. meeting TMDL goals).

Furthermore, while commendable efforts were made by Staff to differentiate numeric targets per variable geomorphology or stream characteristics site, it appears that all other aspects of the TMDL are broadly applied. Difficulty arises because of the unique watershed characteristics of the sub-tributaries and the unique nutrient responses within each sub-tributary. For example, in spite of elevated nitrate levels found in the eastside watersheds, no biostimulation response factors were graphed in the TMDL draft project report.

TMDL Adoption Timeframe:

We understand that there is considerable pressure on the SWRCB and the Water Boards to develop, implement, and finalize TMDL programs. However, we are somewhat puzzled as to the proposed deadline for adoption of the Lower Salinas Nutrient TMDL in light of numerous state and regional pending decisions and initiatives. It would appear prudent to postpone further decisions until 1) SWRCB makes recommendations to the California legislation regarding nitrate management as per SBX2 1, 2) SWRCB finalizes decisions regarding petitions of the 2012 Region 3 adopted Agricultural Regulatory Program, and 3) findings and recommended actions from the SWRCB mandated Salinas Valley Salt and Nutrient Basin Planning process may be incorporated into the program. For CCRWQCB to move forward in a vacuum without regard for how these pending initiatives will impact the TMDL is precipitous.

Concentration-based Approach as Straight-Jacket:

The intent of the TMDL Process is designed to allow stakeholders in a watershed to address water quality using a flexible approach. Namely, to estimate load and to assign load reduction for various sources and use types. Using this framework, stakeholders should have the flexibility to address nutrient impairments by reducing loads, or to provide incentives by developing pollutant trading programs to address overall load reductions. However, the proposed TMDL is focused on concentration based-criteria and spends only a token amount of attention to on alternatives. .

TMDL Setting is a Process:

The release of draft documents in excess of 500 pages of technical writing does not provide a good foundation for a process. While we appreciate Staff's considerable efforts at stakeholder outreach, we suggest that the Regional Board develop a more predictable collaborative process, where stakeholders are continually engaged and know when to provide valuable input during "fact finding", goal setting and implementation planning phases. The region is desperate for this type of approach and GSA has worked hard to develop the foundation for that process to build upon.

This TMDL's Affect on the Conditional Waiver for Irrigated Agriculture:

We also find it necessary to provide comments on the proposed implementation program for irrigated agriculture. While the TMDL Draft Report indicates that implementation will be achieved through compliance with the Conditional Waiver for Irrigated Agriculture, we are concerned that the more detailed information in the Project Report suggests that the TMDL Implementation Requirements would be imposed regardless of the status of the Conditional Waiver for Irrigated Agriculture. (See Project Report, p. 250, "Implementing Parties will comply with the Agricultural Order, and … owners/operators of irrigated lands in the project area will implement management measures as identified in Table 7-2.")

As the CCRWQCB is well aware, the Conditional Waiver for Irrigated Agriculture is currently under review by the State Water Board, and that certain nutrient-related provisions of the Conditional Waiver have been stayed pending that review. Many of the provisions subject to the stay, and subject to review, are specific implementation provisions identified in the Project Report. Specifically, Table 7-2 (Implementation Actions for Irrigated Lands) includes measures that are subject to the stay and/or review by the State Board. Such measures include, for example, the determination of crop nitrogen uptake, development and implementation of an Irrigation and Nutrient Management Plan, calculation of nitrate loading risk levels, and progress towards meeting nutrient balance ratio targets. It would be highly inappropriate if CCRWQCB were to use the TMDL Implementation Program to undermine the SWRCB's stay, and its review of the pending petitions. Thus, the independent applicability of these measures outside of the Conditional Waiver must be removed.

Uncertainty and Unintended Consequences:

Overall, our concern is that while arguably the TMDL process may be sufficient for addressing nutrient-related water quality, it is insufficient for assessing watershed health within the context of a healthy community, economy and environment. It is intriguing that the Clean Water Act's TMDL framework emphasizes the need for adequate assessment, then, in turn, narrowly limits assessments to solely focus on the achievement of water quality objectives (standards).

This TMDL programs lack a mechanism to do comprehensive risk assessments of unintended, but foreseeable, consequences. For example, by requiring the promulgation of riparian habitat without conducting adequate modeling it is not known if there is the potential for increased incidence of mosquito-borne human illness, or more reservoirs for human food-safety pathogens, or augmented flooding of civil infrastructure, agricultural fields and homes. This TMDL has no provisions for assessing nutrients from a historical perspective, or assessing the impact of historical watershed modifications to the attainability of TMDL goals. Also, this program does not assess the consequences of the impacts of nutrient loading variability over time (past or future, short- or long-duration), nor the consequences of cumulative and intersecting regulatory outcomes (e.g. short-term, albeit dramatic, increases in eutrophication). There's too much uncertainty about how to mitigate nutrients across crop types, different areas within the same watershed, and between differing irrigation regimes. Best Management Practice implementation

achievability and effectiveness and field-generated data variability are not taken into account. For example, it has been found, through routine soil sampling, that there is an inexplicable degree of variability of nitrate concentrations in both soil and groundwater. Uncertainty about management practice effectiveness and availability is prevalent, despite research, because practices have not been sufficiently tested against these challenges.

The TMDL process also lacks provisions when implementation fails to achieve water quality standards. Adaptive management, the application of the scientific method to decision-making, is a critical missing step. This process of taking actions of limited scope, commensurate with available data and information to continuously improve our understanding of the problem and its solutions, while at the same time making progress toward attaining water quality standards, is an essential missing element in this overall TMDL program.

According to the SWRCB, because an implementation plan will often identify actions that have unknown or uncertain efficiencies, it is important that it be flexible to the need for change over time. If monitoring and surveillance during the implementation process indicate that the interim milestones are not being achieved, 3 options are possible: 1) the implementation can continue, 2) the implementation practices can be adjusted or new practices initiated and 3) the regulatory actions can be revised by revisiting phases 1-7 (State of California, A process for Addressing Impaired Waters in California, S.B. 469 Guidance, June 2005).

The SWRCB Policy for Implementation and Enforcement of NPS Pollution Control Program states four key elements, the last of which is critical to this TMDL: 4) feedback mechanisms must be designed to track and evaluate progress. If a TMDL or other regulatory acting is being adopted with sufficient information to develop a complete implementation plan the implementation plan can be developed consistent with an adaptive approach that outlines the various stages of implementation that are expects and a the process for fully realizing the regulatory actions. The implementation plan may adopt initial stages such as a study program or may contain a commitment by the RWQB to reconsider the implementation play at a specified time. However, RWQCB shall require itself to produce a full implementation plan (SWRCB, Implementation and Enforcement of the Nonpoint Source Pollution Control Program, May 20, 2004).

According to the same SWRCB Policy, steps in designing an implementation plan should include identifying current activities, identifying common interests and overlapping objectives, engaging stakeholders, indentifying opportunities for management practices and considering alternatives and costs. In our opinion, the following processes have not been fully addressed when designing this TMDL: SBX21; the Agriculture Alternative Ag Waiver Proposal, the Salt and Nutrient Basin Planning Process and Monterey County Water Resources Agency's nitrate management activities. There should also be actions taken to resolve key uncertainties and verify assumptions.

The SWRCB Guidance also provides that technical considerations should be made to consider sources and load delivery mechanisms, linkages of management needs to the sources, and availability of appropriate techniques, management measures and individual practices for the impairment and source categories. This has not been sufficiently addressed, as stated previously in this letter.

The SWRCB Guidance (State of California, A process for Addressing Impaired Waters in California, S.B. 469 Guidance, June 2005) considers these three triggers for consideration of economics or cost in basin planning: Before implementing any agricultural water quality control program (i.e. before adopting any agricultural related Basin Plan amendments); In establishing WQOs that ensure the reasonable protection of beneficial uses; and In analyzing reasonable foreseeable methods of compliance with proposed performance standards and treatment requirements. This must include economic factors (enumerating potential funding sources does not constitute a cost estimate). Additionally, collective impacts and unintended consequences of crop loss, yield loss, quality loss, business failure, the election of growers to discontinue their businesses, and the costs of exacerbated environmental negative impacts must be included.

We're asking that this process be given more time, and created in a way that will allow for a phased approach that brings science, BMP modeling, adaptive management and a strong implementation plan, in line with the SWRCB's Policy for Implementation and Enforcement of NPS Pollution Control Program (May 20, 2004) and supports future state and regional initiatives. We are committed to water quality improvements in the Salinas Valley and dedicated to remaining active in this effort to encourage a TMDL that will substantively improve water quality.

Sincerely,

Abby Taylor-Silva
Grower-Shipper Association of Central California

Kay Mercer
KMI

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SOUTHERN SAN LUIS OBISPO AND
SANTA BARBARA COUNTIES

October 31, 2008

Katie McNeil
Central Coast Regional Water Quality Control Board
895 Aerovista Pl Suite 101
San Luis Obispo, CA 93401-7906

Dear Katie:

Thank you for the opportunity to comment on the May 29, 2008, Nutrient TMDL Draft Project Report. It is obvious from the Draft Report that Water Board staff has considered and incorporated previous input from diverse stakeholders. Please find my comments to specific Draft Report sections below.

Project Scope: This TMDL targets the Santa Maria Watershed. In defining this watershed the Water Board refers to Main Street Canal, Blosser Channel, Bradley Canyon Creek and Bradley Channel as tributaries to the Santa Maria River and as waterbodies. As stated by Santa Barbara County Public Works staff during the October 16, 2008 CEQA scoping meeting, these do not constitute waterbodies; but rather are drainages created for flood control purposes. Each of these drainages has been artificially modified and in some cases are cement lined water conveyances. Hence, there is some question about the appropriateness of their inclusion in this TMDL. If in the end it is determined that they are appropriately included, then, at the very minimum, they should be treated differently from other "waterbodies" by this TMDL and in this report. Furthermore, please note that each of these drainages with the exception of Bradley Canyon Creek are mixed use sites that have as much urban influence as Agricultural influence.

Watershed Description: Please note as you discuss the use of high-nitrate levels in irrigation water that some growers in the watershed have developed new irrigation wells at deeper depths in the attempt to avoid possible contamination by pathogens. The result to this TMDL is that those growers now have irrigation water with lower levels of nitrate.

Problem Statement: Table 2. Fourth column: What do you mean when you state that each waterbody and drainage listed in the table is "Impaired by Nutrients"? What other nutrients than nitrate and un-ionized ammonia have exceeded numeric targets? Please footnote this column to clarify the intent of this information.

Numeric Targets: The Coalition does not support the use of TMDL targets that have not been peer reviewed and are not customarily accepted standards. The Coalition recognizes the utility of models and supports the continued refinement of scientific approaches. Therefore, The Coalition encourages Water Board Staff to utilize models such as the Nutrient Numeric Endpoints and the Biostimulatory Model as guidance and checkpoints of aquatic health rather than as regulatory targets.

3.2.1 Nutrient Numeric Endpoints (NNE)

The use of models developed for extremely different topographies and ecosystems such as the TetraTech model for Malibu Creek is always problematic. Water Board Staff are encouraged to recalibrate this model by using input from diverse members of the scientific community as well as the collection of periphyton densities. One question - who will pay for the collection of this information?

Please clarify the first sentence of the second paragraph to indicate what type of "designated uses" you are referencing: do you mean "beneficial uses? Will the NNE approach support designated "land uses" or actually be detrimental to land uses in the watershed?

The Coalition is concerned about how the use of percent aerial cover as a component of the EPA Benthic algal Biomass numeric target will be reconciled with Food Safety requirements that eliminate vegetation at the edge of fields. Is it the Water Board's intent to establish riparian corridors along 100% of the waterbodies and drainages named in this TMDL? If not, it would be helpful if Water Board staff would delineate which reaches of TMDL waterbodies and drainages will be required to meet these numeric targets. Additionally, The Coalition recommends that Water Board interface directly with Santa Barbara County Flood Control to model the unintended flooding consequences of increased riparian vegetative cover along these named waterbodies and drainages.

The Coalition further encourages Water Board Staff to model the unintended consequences of the Water Board's recent move to reduce irrigation run-off in the watershed by 60%. This immediate and drastic reduction of fresh water flow will have a dramatic impact on the short-term survivability of endangered species in coastal lagoons and estuaries associated with this watershed.

Furthermore, prior to implementation of wide spread irrigation run-off reductions, The Coalition encourages Water Board staff to have endangered species protection plans in place with natural resource agencies such as USFWS and California Department of Fish and Game and California Department of Parks and Recreation to mitigate impacts of reduce freshwater flow to endangered species.

3.3 Numeric Targets Summary: As part of the CEQA process, The Coalition recommends that Water Board Staff calculate the economic impact of utilizing the Benthic Algal Biomass as a regulatory target. The use of the target will signify that irrigated agriculture must do more than comply with the Conditional Waiver. This will require substantial planting and support of

riparian cover species. These costs are not currently considered in this Draft Report. Also, The Draft Report should clearly specify the regulatory authority for this implementation, as the Conditional Waiver does not provide that authority.

4. Data Analysis: Please add to this section a more detailed discussion of the endangered plant species' nitrate and un-ionized sensitivities and nutrient requirements. The Draft Report is not clear as to whether the sensitivities and nutrient requirements are known or if there is conjecture on the part of natural resource protection agencies. The discussion in section 4.1.13 seems to contradict statements in other sections of the Draft Report, particularly *Potential Impacts to Freshwater Wetland Plants in Oso Flaco Watershed,* regarding the sensitivities of these endangered plant species to nitrate and ammonia.

4.1.13 Black Lake Canyon Field Survey, Last Paragraph: by "aggressive" species, are you referring to willows? In a previous USFWS presentation to the Water Board, there was an inverse relationship demonstrated between the presence of willows and the viability of Gambel's watercress and Marshy sandwort populations. Are not willows precisely the type of riparian cover that would be needed in order to have sufficient percent aerial cover to meet the Benthic Algal Biomass targets? How does the Water Board propose to handle these inherent conflicts in the TMDL?

4.1.14 Agricultural groundwater and field run-off monitoring: The Coalition has objected to the use of these data in previous comments and in public meetings. The purpose of this aborted sampling program was to determine whether current farming practices ameliorate the levels of nitrate when high-nitrate irrigation water was used. The data were inconclusive in regards to this purpose and the use of these data for any other purpose is not appropriate. The inclusion of these data in this report is not helpful to this TMDL.

Table 17: Please note the higher levels of ambient un-ionized ammonia in mixed use waterways such as 312 GVS, 312 BCJ, and 312MSD.

4.1.16 Nutrient data comparison to aquatic life criteria

Dissolved oxygen: The Coalition encourages Water Board Staff to calculate models for the unintended consequences of oxygen depletion in waterbodies in this watershed when irrigation water is reduced by a factor of 60% as recommended by Water Board Staff.

CCAMP Index of Biotic Integrity (CCAMP IBI) What is the basis for this scoring system? Is this a tool that was developed internally by CCAMP staff?

Potential Impacts to Freshwater Wetland Plants in Oso Flaco Watershed: The Coalition recommends that discussion of endangered plants and other aquatic species be treated separately in the TMDL Draft Report as entirely different sets of monitoring data and conditions are needed to substantiate their inclusion in this TMDL. The Coalition encourages more discussion among all stakeholders about whether a separate TMDL should be developed for protection of aquatic species.

4.1.17 Nitrate Impacts to Sensitive Crops: Please list the sensitive crops which you are referencing.

4.2 Flow Data: Please clarify the purpose of including this information.

5.1 Potential Influence of Groundwater on Nitrate Concentrations: The Coalition would like to know more about the pilot study being conducted by Water Board staff regarding groundwater protection within the project area.

The Coalition recommends that both the Santa Maria Estuary Plan and the Oso Flaco Nutrient and Sediment Assessment Plan be updated to include the uncertainties of the proportional impact and influence of groundwater on surfacewater. Likewise, both plans should be updated to reflect the impacts of Food Safety requirements on management practice implementation recommendations.

5.2 Source of Nutrients, Page 65, last paragraph: The Coalition recommends that Water Board staff outline how they will collect information so that they may better define nitrate, un-ionized ammonia and nutrient contributions from rural residential properties. Similarly, The Coalition would like to see more detail in the Draft Report about Water Board outreach to and regulation of this source.

7. TMDL Calculation and Allocations: The Coalition is concerned about the achievability of these stated TMDLs when so little is known about contributions from rural residential properties. Also, there needs to be substantially more discussion about the use of biotic targets when there is still much not known about the sensitivities of endangered plant species. The Coalition does not support TMDLs that are not based on currently peer reviewed and customarily adopted standards; subsequently, The Coalition finds the use of the Biostimulatory Risk Index of 4.0 to be inappropriate.

7.1 Timeline, Milestones, and Criteria for Evaluating TMDL Progress, Page 81: Please better develop the measureable goal criteria. Provide information on the sources of the monitoring and the implementation of tracking programs that will be utilized for these criteria.

9.2.4 Integrated Regional Watershed Management Plans: This entire section should be revised relative to agriculture. Water Board staff needs to better understand the process by which both San Luis Obispo and Santa Barbara Counties developed their IRWMPs. SLO County limited their program to a few targeted projects that did not include agricultural projects. Santa Barbara County required IRWMP participants to pay $10,000 each in order to participate. Agriculture did not have the resources to participate; however, The Coalition provided comments on IRWMP reports. The Coalition did propose the formation of watershed working groups as a project under the Santa Barbara IRWMP. This project was ultimately not selected and will not occur under the IRWMP.

The stakeholder recommended implementation measures should be moved to another section in the draft report. It is misleading to include this list in this section.

9.3.1 Irrigated Agricultural Run-off: There is considerable discomfort in the agricultural community with the current Nutrient and Irrigation Management Program Grant workplan. The Coalition recommends that Water Board staff amend the last paragraph in this section to create flexibility in case there is poor participation in this program.

9.3.4 Domestic Animals (Small Animal Operations): How will Water Board staff do outreach to this group? How will Water Board staff ensure that commercial cattlemen are not included on this list?

9.5 Feasibility of Achieving TMDLs: Water Board staff should consider the results of the Management Practice Checklist for the entire Santa Maria watershed basis and present the information in for the entire watershed rather than the region or a subset of the watershed.

9.7 CEQA Alternatives Analysis: It was requested during the October 16, 2008 CEQA hearing that staff send out the form they were using to determine if proposed mitigations would have environmental impacts and how those impacts could be mitigated. Please distribute that form for more complete input from stakeholders.

Please include a discussion of TMDL feasibility in this section.

10.2 Monitoring Sites, Frequency, and Responsible Parties: Please clarify who will be responsible for the various proposed monitoring programs.

Last paragraph on page 105: Is Water Board staff proposing habitat assessments of sensitive freshwater wetland plants on private land in the project area which includes Oso Flaco Creek and Lake?

In summary, The Coalition is dedicated to improving water quality throughout the Santa Maria Watershed. In the end, The Coalition has concerns that efforts to meet requirements for water quality and/or food safety will exacerbate conditions for aquatic plant and animal protection. The Coalition recommends that the Water Board staff slow the pace of this TMDL in an effort to have adequate discussion of priorities and implementation measures and to better anticipate the unintended consequences of protection of water quality, food safety and aquatic species.

Again, thank you for your consideration of these comments. Please feel free to contact me for clarification.

Regards,

Kay Mercer
Executive Director
Central Coast Agricultural Water Quality Coalition

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October 31, 2008

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Central Coast Regional Water Quality Control Board
895 Aerovista Place, Suite 101
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RE: Total Maximum Daily Loads for Nutrients in Santa Maria and Oso Flaco Creek Watersheds

Dear Ms. McNeill:

This Association submits the following written comments to the above draft project report dated September 9, 2008. This office represents vegetable and strawberry growers with farming locations within the Santa Maria River and Oso Flaco Creek watersheds. We are particularly concerned with that part of the TMDL program relating to irrigated agricultural runoff.

Expansion of Beneficial Uses

The Association does not agree with the decision to expand the scope of the program to include recommended nutrient TMDLs protective of **aquatic habitat**. We think this decision should have been fully vetted at a public hearing and not made at staff level. This is not a beneficial use set forth in the basin plan we question staff's interpretation to justify designating aquatic habitat as a beneficial use. U.S. Fish & Wildlife concerns with nutrient levels adversely impacting sensitive species within Oso Flaco Lake should not be applied to other water bodies that do not support those species. For instance, many of the water bodies proposed to be targeted are concrete lined drainage channels. Others are man made agricultural ditches that drain agricultural runoff. These open channels are periodically cleared of accumulated debris and trash and devoid of any riparian cover. There are significant periods when there is no water within the channels. These drainage ditches and channels do not support aquatic habitat and do not support **contact recreation uses** such as swimming. Such uses should not be included in the TMDL process.

Expansion of Water Bodies
The TMDL project proposes to include a significant number of water bodies that have not been listed on the 303(d) list as impaired. The Board is not compelled to develop TMDLs for non-impaired waters. Yet the board has used fecal coliform impairment in Oso Flaco as a pretext to create TMDLs for a wide range of creeks, channels and drainage ditches within the Santa Maria valley that address constituents such as nitrates and unionized ammonia. This project expansion apparently was decided at the staff level. The Association believes the policy decision to expand the TMDL process was unwarranted and should have been vetted through a public review process.

Feasibility of Achieving Numeric Targets
The report establishes numeric targets based upon the expansion of beneficial uses. These proposed **new targets cannot be achieved** within the 2025 date set forth in the report. The report set up a scenario where water quality thresholds cannot be met thus leading to prohibitions and other regulatory enforcement actions. **Groundwater nitrate levels,** especially west of Bonita School Road, exceed the nitrate numeric targets. The relationship between irrigation practices and groundwater concentration needs to be better understood. The report also assumes that significant nitrate reductions can be achieved by **installing vegetative buffers on riparian corridors** in agricultural areas. Such buffers are not economically feasible due to concerns over microbial contamination of food crops.

Conclusion:
In summation, the scope of the nutrient TMDL program needs to be scaled back to include only those bodies of water that have been determined to be impaired under the Clean Water Act and only for those constituencies that have contributed that impairment determination. The plan needs to recognize the beneficial uses as being drinking water and non-contact recreational uses. Aquatic habitat should not be included as a beneficial use. Regulatory thresholds should not be established based upon unproven models that haven't been peer reviewed. The Association recommends the development of TMDLs proceed in a more deliberative fashion. Meetings with stakeholders need to occur on a regular basis to discuss and hopefully resolve specific components of the project. Public hearings before the Board need to be conducted at this point in the process to determine if the proposed scope is supported by the Board.

Sincerely,

Richard S. Quandt
President