

**STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place Suite 101
San Luis Obispo, CA 93401-7906**

**PUBLIC COMMENTS AND STAFF RESPONSES
FOR**

**TOTAL MAXIMUM DAILY LOADS FOR NITROGEN COMPOUNDS AND
ORTHOPHOSPHATE FOR THE SANTA MARIA RIVER WATERSHED AND
TRIBUTARIES TO OSO FLACO LAKE, SAN LUIS OBISPO AND SANTA BARBARA
COUNTIES, CALIFORNIA
(DRAFT PROJECT REPORT - OCTOBER 2012)**

Central Coast Water Board staff implemented a process to inform and engage interested persons about these proposed total maximum daily loads (TMDLs). Central Coast Water Board staff's efforts to inform the public and solicit comments included a public notice and written comment period. Public notice of this proposed Basin Plan amendment provided interested parties a public comment opportunity preceding the Central Coast Water Board hearing regarding this matter. The public comment period for these TMDLs commenced on December 13, 2012, and extended through February 11, 2013. Central Coast Water Board staff received comments from:

1. Mr. Marty Wilder, Manager, Laguna County Sanitation District, in an email received December 31, 2012.
2. Mr. Richard E. Adam, Santa Maria Valley farmer, in a letter received January 25, 2013.
3. Ms. Claire Wineman, President, Grower Shipper Association of Santa Barbara and San Luis Obispo Counties, in an email attachment received February 11, 2013.
4. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria, in an email attachment received February 11, 2013.
5. Ms. Janet Parrish, TMDL Liaison, US EPA, in an email attachment received February 11, 2013.
6. Ms. Janet Parrish, Suzanne Marr, and Jamie Marincola, US EPA, detailed comments included in an email attachment from Janet Parrish, received February 11, 2013.

The Central Coast Water Board appreciates the comments provided by these interested parties. Their comments have prompted us to clarify and improve technical information in the TMDL project as noted herein.

Staff responses to these comments are provided in the "Comments and Responses" section beginning on page 2. Note that we reproduce direct transcriptions of the comments from each commenter and insert staff responses using **bold**, *blue*, *italic text*.

Comments and Staff Responses

1. Mr. Marty Wilder, Manager, Laguna County Sanitation District

Upon review I have the following comments to the draft amendment to Central Coast basin Plan for TMDLs for nitrogen compounds and orthophosphate:

Staff report, page 3 – In 3rd sentence of DISCUSSION there is a typo, should read “County of Santa Barbara’s Project Clean Water.”

Staff response: Staff has corrected the typographical error in the Staff Report (pg. 3).

2. Mr. Marty Wilder, Manager, Laguna County Sanitation District

Reference to Greene Valley Creek throughout should be Green Canyon Channel.

For clarification, Orcutt Creek ends at the historical Guadalupe Lake and Solomon Canyon Creek begins where the northwest end of the lake used to exist. As you may know, Guadalupe Lake was drained in the early 1940’s when the channelized canal system was built. Supposedly these two water courses did not originally connect. In many references this overall water course is called Orcutt-Solomon Creek, especially the leg of the original Solomon Canyon Creek.

Staff response: Staff appreciates these clarifications and acknowledges that some of the names used in the TMDL document may differ from the waterbody names known locally or as represented in historical documents and maps. For the sake of consistency, waterbody names used throughout the TMDL documents are consistent with the names referenced in the 303(d) list of impaired waterbodies. However, staff has added information in the Project Report (pg. 3) to clarify that Greene Valley Creek is commonly known as Green Canyon Channel.

In addition, staff has added information in the Project Report (pg. 3) to clarify that Orcutt Creek is commonly known as Orcutt-Solomon Creek.

3. Mr. Marty Wilder, Manager, Laguna County Sanitation District

In the event a POTW were to initiate NPDES discharge to Orcutt-Solomon Creek, what would be the applicable effluent and receiving water limits for nitrate as nitrogen, orthophosphate as phosphorous and unionized ammonia?

Staff response: Note that there are currently no NPDES-permitted discharges from publicly owned treatment works (POTW) within the TMDL project area. The TMDL waste load allocations are expressed as maximum receiving water concentrations, and there are applicable effluent limits pertaining to nitrate, orthophosphate, and un-ionized ammonia as specified in the TMDL. However, if a permit were necessary for a POTW discharge to Orcutt Creek, applicable effluent limits for nitrate, orthophosphate, and unionized ammonia would be no greater than the TMDLs for Orcutt Creek as presented in section 6.3 of the Final Project Report. The TMDLs are presented in the table below for ease of reference.

COMPOUND	CONCENTRATION (mg/L)
Nitrate as N	Dry Season (May 1-Oct. 31): 4.3 Wet Season (Nov. 1-Apr. 30): 8.0
Orthophosphate as P	Dry Season (May 1-Oct. 31): 0.19 Wet Season (Nov. 1-Apr. 30): 0.3
Unionized Ammonia as N	Year-round: 0.025

4. Mr. Richard E. Adam, Santa Maria Valley Farmer

I am a semi-retired farmer in the Santa Maria Valley. I have been reading with some interest the proposals to regulate agricultural activities, (primarily via water application) of drainage, pollutants, estuary degradation, fish populations and other associated factors in the Santa Maria area.

As I read these proposals I am struck with the many inconsistencies and what I think are basically flawed studies which lead to flawed conclusions. I deem the C. Camp study that leads to the conclusion that many (if not all) of the manmade drainways in Santa Maria are impaired waterways a flawed study. It is flawed in the basic elements as they are interpreted in the Santa Maria drainage area. I will take the elements one by one.

Staff response: The commenter suggests that C. Camp (Central Coast Ambient Monitoring Program or CCAMP) conducted a flawed study which led to the determination of impaired waterbodies within the Santa Maria River watershed. Before addressing these comments, staff provides clarification of how impaired waterbodies are determined below.

The federal Clean Water Act (CWA) gives states the primary responsibility for protecting and restoring surface water quality. CWA Section 305(b) (also referred to as the State's Water Quality Assessment), requires each state to report biennially to U.S. EPA on the condition of its surface water quality. Water quality data provided by CCAMP and other public and private monitoring programs, including the Cooperative Monitoring Program (CMP), is used to report water quality conditions in accordance with CWA Section 305(b).

The State Water Resources Control Board and Regional Water Boards then assess water quality monitoring data for California's surface waters to determine if they contain pollutants at levels that exceed protective water quality standards. This determination in California is governed by the Water Quality Control Policy for developing California's Clean Water Act Section 303(d) List (California's Listing Policy). Water bodies with pollutants that exceed protective water quality standards are placed on the state's 303(d) List. States must review, make necessary changes, and submit their CWA Section 303(d) lists of impaired waterbodies to the U.S. Environmental Protection Agency (U.S. EPA). For California, this combined report is called the California 303(d)/305(b)

Integrated Report. U.S. EPA must approve the 303(d) List, after regional and state board approvals, before it is considered final.

In summary, CCAMP collected water quality data in accordance with CWA 305(b), California's Water Quality Assessment. This data was evaluated in accordance with California's Listing Policy to assess whether surface waters contain pollutants that exceed protective water quality standards. Waters that exceed these standards are then placed on the 303(d) list of impaired waters following approval by the State Board and the U.S. EPA.

5. Mr. Richard E. Adam, Santa Maria Valley Farmer

Turbidity: A nonissue with the conversion of agriculture to drip and sprinkler irrigation that keeps irrigated farm drainage on the originating property.

Temperature: Attempts to inject temperature are improper because all non-storm water is extracted from underground aquifers at a temperature on or about 65° F and will over time reach ambient air temperature. The drain ways so designated have no fish population and, in fact, are without water much of the time.

Human Contact: No human water contact has ever been promoted for these water ways because of the intermittent nature of the water, the private ownership of the area, and the liability generated by such use.

Staff response: The proposed TMDLs are for nitrogen compounds (nitrate and unionized ammonia) and orthophosphate, including secondary response indicators such as low dissolved oxygen and chlorophyll a. As such, the comments referring to turbidity, temperature, and human contact are not directly pertinent to the proposed TMDLs.

It should be noted, however, that ambient turbidity conditions within the project area are considered as part of the nutrient numeric endpoint (NNE) approach for developing biostimulatory substance numeric targets. Also, cooler water temperatures (e.g., due to improved shading) are conducive to increased dissolved oxygen concentrations.

6. Mr. Richard E. Adam, Santa Maria Valley Farmer

Nitrate: Farms may or may not generate excess nitrogen, but with modern farming technology, soil testing, water testing and plant tissue testing, it is currently minimal. It should be noted that the three sewer plants and associated urban areas are likely contributors to the degradation of some drainways as well as the underground aquifer.

Staff response: Staff agrees that farms may or may not generate excessive nitrogen and acknowledges that many growers employ modern farming techniques that test nitrogen levels in soil, water, and plant tissue in order to ensure optimal nitrogen utilization for crop production. Staff has provided this acknowledgement in the Project Report (Existing Implementation Efforts, Section 7.16).

However, staff strongly disagrees with the comment that the release of excess nitrogen is minimal. To the contrary, water quality data indicate that nitrate nitrogen concentrations are persistently above toxic levels at most monitoring stations, with

some stations exceeding the toxic level (10 mg/L nitrate nitrogen) eight-fold. In addition, nitrate nitrogen concentrations at many monitoring stations in the lower Santa Maria River watershed also exceed the recommended guideline of 30 mg/L nitrate nitrogen for agricultural irrigation supply water, indicating that waterbodies are impacted by excessive nitrate nitrogen that is detrimental to sensitive crops such as sugar beets, citrus, and avocado. A discussion of excessive nitrate nitrogen conditions that are addressed in this TMDL is contained in the Project Report (Nitrate Exceedances, Section 3.2.1.2).

With regard to the three wastewater treatment facilities (City of Santa Maria WWTP, City of Guadalupe WWTP, and Laguna County Sanitation District), it should be noted that these facilities do not discharge to surface waters within the lower Santa Maria River watershed and therefore do not contribute to the nitrate exceedances observed in streams. In accordance with federal law, these facilities would require an NPDES permit for discharges to surface waters. There are currently no NPDES-permitted wastewater treatment facilities within the TMDL project area. However, these wastewater treatment facilities are permitted by the Central Coast Water Board via waste discharge requirements (WDRs) which provide specific requirements for facility discharges to onsite treatment ponds, percolation ponds, or spray fields. The WDRs also contain facility-specific monitoring and reporting requirements to ensure that their discharges are in compliance with all state and federal water quality standards.

TMDL's specifically address impairment to surface waters, rather than to groundwater, therefore groundwater impacts from the wastewater treatment facilities are not within the scope of the proposed TMDL project.

7. Mr. Richard E. Adam, Santa Maria Valley Farmer

Pesticides: Again, to the extent that they are, in fact, "impaired," the waterways of the North Blosser ditch, West Main Street ditch, Bradley ditch and the Orcutt Creek are all receivers of urban drainage plus car washes, street cleaner activities, etc. However farm applications of pesticides are now controlled by county permit and the manufacturer and universities, as well as the county agricultural offices, are quite aware of their use and associated breakdown schedules.

Staff response: The proposed TMDLs are for nitrogen compounds (nitrate and unionized ammonia) and orthophosphate, including secondary response indicators such as low dissolved oxygen and chlorophyll a. As such, the comment regarding pesticides is not directly pertinent to the proposed TMDLs.

It should be noted that Water Board staff is currently developing TMDLs for pesticides within the lower Santa Maria River watershed as a separate project. Staff will include these comments and provide a response during document preparation for the Lower Santa Maria River Pesticide TMDL.

8. Mr. Richard E. Adam, Santa Maria Valley Farmer

Edible shellfish in the Santa Maria Estuary: The Santa Maria "Estuary" is actually a fresh water lake in the same way that Oso Flaco Lake exists. No edible shellfish have been observed in the Santa Maria River Estuary and the middens that C. Camp refers to as evidence came from

the west (ocean) side of the estuary. As a matter of fact, the so called estuary is not subject to the ebb and flow of tide because of the elevation difference caused by the valley impermeable clay layer under layer and the wind and tide caused sand berm at the exit to the ocean. This blockage explains the absence of a steelhead run in the Santa Maria River and, as far as I can determine not person has recorded or observed any fish (living or dead) in the 20 mile reach between the Highway 1 Bridge north of Guadalupe to the Gary Bridge near the confluence of the Cuyama River and the Sisquoc River. A likely cause is that the velocity necessary for the Santa Maria River to reach the ocean is more than the steelhead (with no resting pools) can overcome. Conversely, if the velocity decreases, the highly permeable sands in the river bed stops the flow.

Staff response: Although water within the Santa Maria River Estuary and Oso Flaco Lake are similarly derived from fresh water tributary streams, the two waterbodies are distinctly different. For example, the Santa Maria River Estuary maintains a sandbar that impounds the estuary when not overcome and breached by storm flows that occur within the roughly 1,860 m² watershed. When the sandbar is breached by these high flows, the Santa Maria River Estuary is “open-mouthed,” providing passage for the federally listed endangered steelhead (*Oncorhynchus mykiss*) between the Pacific Ocean and the abundant spawning and rearing habitat of the Sisquoc River watershed located further inland. By comparison, Oso Flaco Lake is a perennial freshwater lake and due to its smaller drainage area (approximately 20 m²) and significantly smaller storm flows, the lake volume does not overcome the confining sand formations around the lake to provide fish passage.

The report does not include any information that the Santa Maria River Estuary currently contains edible shellfish. However, the Santa Maria Estuary is a natural estuary that flows to the Pacific Ocean, where at the confluence, information available to the Water Board indicates that individuals may have collected and consumed shellfish. Additionally, the Santa Maria Estuary is designated as having the beneficial use of shellfishing.

While staff agrees that the Santa Maria River Estuary is not subject to the ebb and flow of tides, the presence of a seasonal sand berm does not preclude the passage of steelhead during storm events when the berm is breached. It should be noted that nearly the entire Santa Maria River watershed, including its two primary tributaries, the Cuyama and Sisquoc Rivers, is designated critical habitat for steelhead. Although the commenter mentions the absence of an observed steelhead run within the main stem of the Santa Maria River (between Highway 1 Bridge and Gary Bridge), this does not negate the fact that the Santa Maria River watershed supports a self-sustaining population of rainbow trout (the resident life-history form of *Oncorhynchus mykiss*) in the Sisquoc River watershed and also supports anadromous spawning of adult steelhead (the ocean-going life-history form of *O. mykiss*) during some wet years¹.

9. Mr. Richard E. Adam, Santa Maria Valley Farmer

Moving on: Planting of willows and buffer zones will not do much good in the Santa Maria because they tend to restrict the capacity of the drainways in large storm events and cause the waters to leave the ditch/channel and erode adjacent top soil, which then is carried with the

¹ Santa Maria River Instream Flow Study: Flow Recommendations for Steelhead Passage, Final Report. April 13, 2012. Prepared by Stillwater Sciences and Kear Groundwater. Prepared for California Ocean Protection Council and California Department of Fish and Game.

water to the ocean where it cannot be retrieved. Willows and buffer zones also harbor pests and rodents detrimental to farm production.

Staff response: Note that the TMDL does not suggest the planting of willows nor does the TMDL require the planting of willows or buffer zones. Rather, in recognition of spatial variability in ecosystems, land use, the need for flood control management, and other reasons, the TMDL recommends that where and as appropriate, increased riparian canopy shading can help reduce the risk of biostimulation. In addition to increased shading, the TMDL project report identifies a number of other known and published management practices that could potentially achieve a similar performance result, including vegetative buffer zones (see Section 7.8, Suggested Management Measures). Staff maintains that local resource professionals and local stakeholders are in the best position to assess and ultimately find an appropriate mix of tools, practices, and strategies that provide for progress towards and attainment of state water quality standards over time.

For many drainages within the TMDL project area, the Santa Barbara County Flood Control District conducts channel maintenance activities to maintain stream capacity for waters within its jurisdiction and to protect adjacent lands from flooding and erosion.

Staff is aware of the concerns that vegetated treatment systems that may attract pests and rodents and be detrimental to farm production due to food safety. Food safety risk can be reduced through rodent fencing, raptor poles to reduce rodent populations, and proper selection of plant species that deter pest species. In addition, there are several food safety task forces working to develop better guidelines that will address these issues.

10. Mr. Richard E. Adam, Santa Maria Valley Farmer

It should be noted that the prized productive crop land and top soil in the Santa Maria Valley was deposited by watershed drainage as can be readily verified by soil profiles. The drain ways should be kept in such a condition that top soil is preserved.

Staff response: Thank you for this comment. Staff agrees that top soil should be preserved.

11. Mr. Richard E. Adam, Santa Maria Valley Farmer

The prominent hydrology in the Santa Maria ground water basin is that the Santa Maria River is the basic drainway and supplier to the aquifer via riverbed percolation. The underground water then migrates from east to west, (eventually at about 5,000" per year movement) and if not used, under flowing into the offshore Pacific Ocean. Since e coli and other contaminates are diminished or eliminated when committed to the underground, the TMDL is less meaningful, especially coupled with proposed suspect sampling techniques.

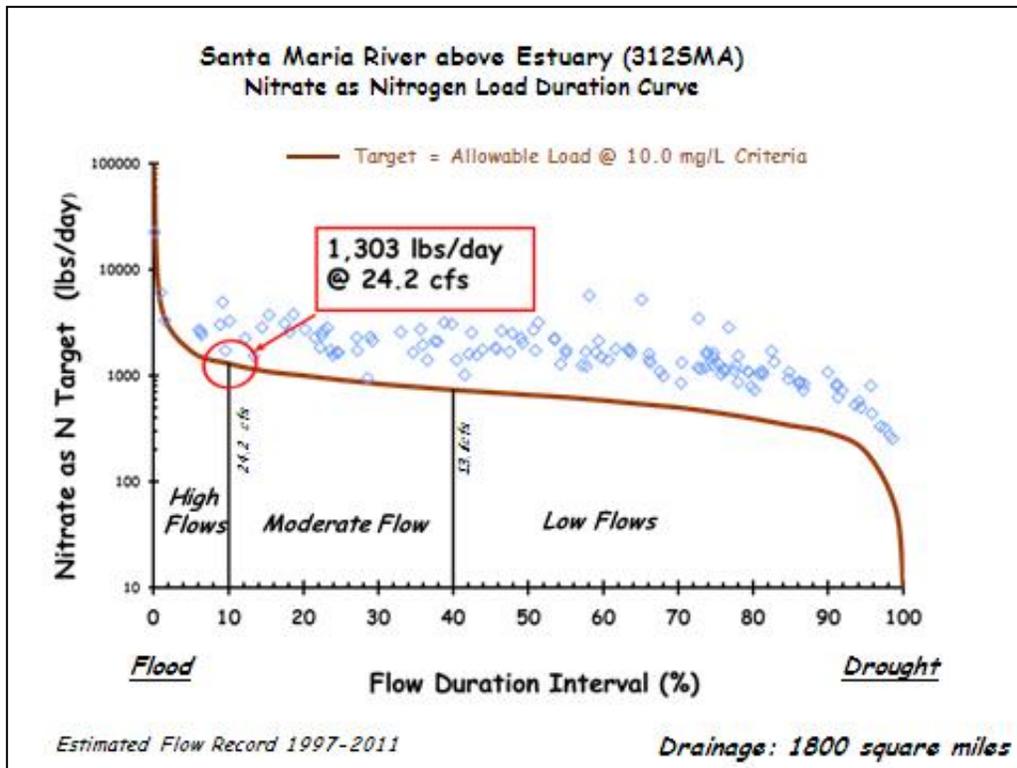
High water samples = Low concentrations. Low water samples = Full percolation and dry sampling sites. Since the ultimate destination of the above sea level underground water profile in a non-over drafted basin (Santa Maria Valley) is underflow into the Pacific and the higher groundwater profile is gradually becoming more similar to the native water values through

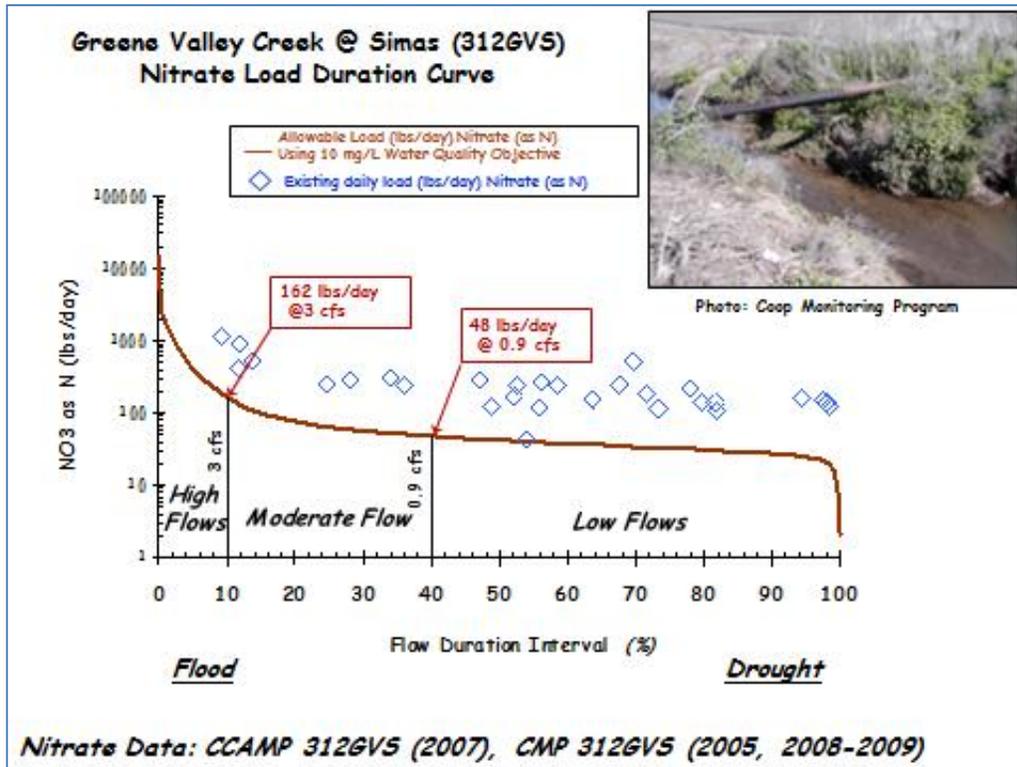
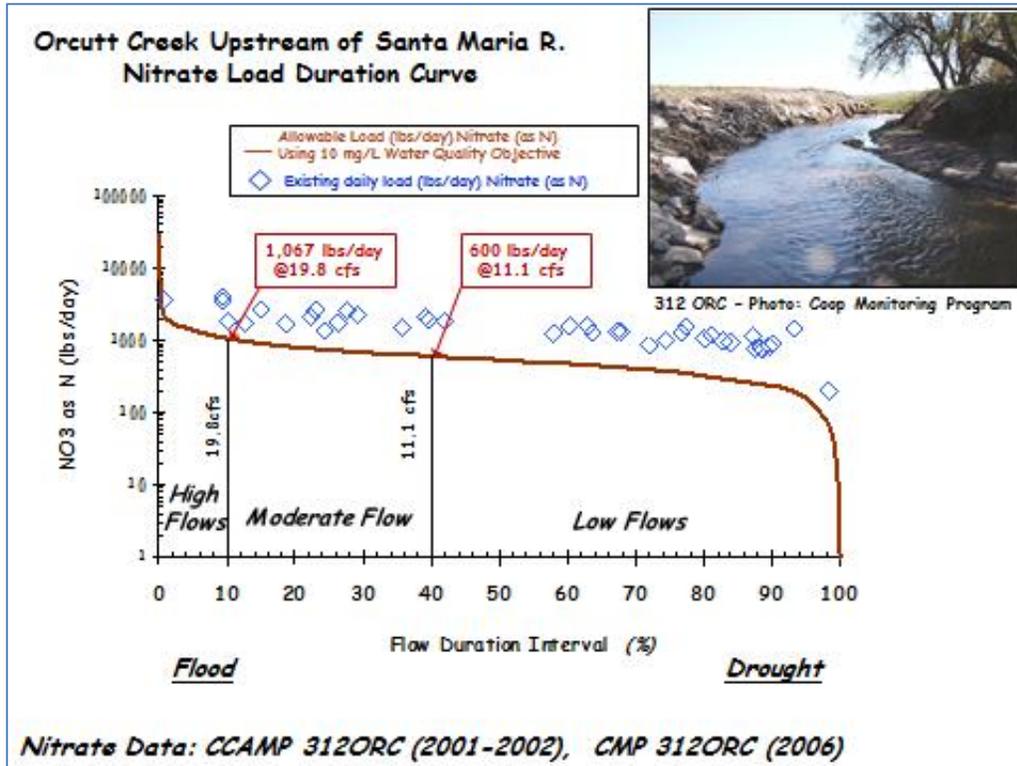
westward water movement, it would seem overkill to devote substantial energy and money to this regulatory project.

I would seem to me that science and sanity could be combined without oppressive regulation.

Staff response: Thank you for these comments. Staff generally agrees with the description of the Santa Maria River regarding percolation to the aquifer and groundwater basin characteristics. Staff believes the comment regarding e coli may be misplaced, as the proposed TMDL pertains to nitrogen compounds and orthophosphate rather than e coli (fecal indicator bacteria or FIB). Note that the Santa Maria River watershed FIB TMDL was approved by the Water Board in March 2012.

The commenter suggests that low nutrient concentrations exist under high flow conditions and that all waters percolate under low flow conditions. However, staff maintains that many waterbodies exceed water quality objectives under a variety of flow conditions, both high and low. The three figures below represent nitrate load duration curves for Santa Maria River above the Estuary, Orcutt Creek, and Greene Valley Creek and demonstrate that nitrate exceedances (blue points) occur within the range of high and low flows.





Staff respectfully disagrees with the comment that it would seem overkill to devote substantial energy and money to the TMDL project. The development of TMDLs for

impaired waters within the Central Coast is not an option, but rather a requirement of both the federal Clean Water Act and the Porter-Cologne Water Quality Control Act (California Water Code). The severity and extent of impacts due to excessive nitrogen compounds (primarily nitrate) is well documented and warrants immediate action on the part of the Water Board, as well as the dischargers.

12. Ms. Claire Wineman, President, Grower Shipper Association of Santa Barbara and San Luis Obispo Counties

Thank you for the opportunity to review and comment on the referenced Basin Plan Amendments. We have actively participated in the TMDL public outreach process for years and have expressed many of the points presented in this letter. The Association has standing concerns about the lack of reasonably foreseeable methods of compliance, use of a concentration-based TMDL, establishing quantitative biostimulatory targets, adopting a TMDL through a Basin Plan Amendment, and the inadequacy of the CEQA "Substitute Document."

No Reasonably Foreseeable Methods of Compliance

Water Board staff has indicated at more than one public workshop on the TMDL that it is unlikely that the biostimulatory targets can be achieved without treating the water. The agronomic methods presented in the CEQA "Substitute Document" (Part 2, I through III, pages 3 to 5) will not likely reduce nutrient levels to meet the TMDL targets, especially for biostimulation, given inherent losses in an agricultural production system, the complexities of the nitrogen cycle and nutrient availability, and extent of agricultural production in the TMDL Project Area. The vegetative methods (Part 2, IV and V, pages 5 to 7) have not been well-documented in terms of the appropriate design (subject to site conditions as well as volume and residence time of flow) and actual nutrient load reductions, are in direct conflict with current industry food safety mandates, and are not feasible to install on an individual farm basis. Farmers also have concerns about the technical feasibility of achieving drinking water targets (MUN).

Action: The Association opposes adopting Basin Plan Amendments with targets that have no reasonably foreseeable methods of compliance.

Staff response: Staff appreciates the active participation of Ms. Wineman and the Grower Shipper Association during development of this TMDL. Staff has provided individual responses to the Association's comments and concerns below.

Staff has commented that treatment of water discharges from irrigated lands may be necessary to obtain biostimulatory targets; however, this was in regard to unique site-specific conditions within the watershed and does not broadly apply to all discharges from irrigated agriculture. Staff recognizes that difficult management conditions may exist within the lower portions of the Santa Maria River and Oso Flaco watersheds, where poorly drained, clay soils prevent adequate soil percolation and shallow groundwater conditions inhibit adequate subsurface percolation and/or drainage. Under these unique conditions water treatment may be necessary to achieve the biostimulatory numeric targets.

The CEQA substitute environmental document (SED) provides foreseeable methods of compliance measures that could reasonably be implemented to comply with this TMDL.

These potential methods are derived from State Water Resources Control Board's Nonpoint Source (NPS) Encyclopedia and U.S. Department of Agriculture-Natural Resources Conservation Service and are not to be viewed as prescriptive. Rather, the potential compliance methods must be evaluated to assess potential environmental impacts associated with the proposed TMDL, in accordance with CEQA requirements. Note that the Central Coast Water Board generally may not specify the manner of compliance and, therefore, dischargers may choose among many ways to comply with the requirement to control discharges of waste. That said, the means of compliance described in the SED are foreseeable means of compliance that might be used to advance towards achievement of the TMDL.

With regards to conflict with current industry food safety mandates, staff has provided a discussion of mitigation strategies in Agricultural Resources (c) section of the SED, noting that food safety risk can be mitigated through rodent fencing, raptor poles to reduce rodent populations, proper selection of plant species that deter pest species, and proper wetland feature design and planting to minimize open water habitat that attracts geese and other waterfowl. It should also be noted that the food safety "mandates" described by the commenter are industry guidelines and not required by regulation. Consequently, implementing parties have some latitude in choosing methods of compliance that could satisfy TMDL requirements and food-safety guidelines.

13. Ms. Claire Wineman, President, Grower Shipper Association of Santa Barbara and San Luis Obispo Counties

Load or Concentration-Based TMDL

The Association strongly supports the use of a load-based TMDL rather than a concentration-based TMDL. A concentration-based TMDL does not create an incentive to reduce total loading, which will have negative surface and ground water quality impacts. If a concentration-based TMDL is adopted then farmers will actually have an incentive to *increase* irrigation discharges to decrease the *concentration* of nitrogen and orthophosphate in waters. A concentration-based TMDL will not capture progress that has been and will continue to be made towards meeting water quality targets.

Action: The Association recommends utilizing a total load-based TMDL and evaluation of progress.

Staff response: Staff acknowledges that reductions in concentration-based allocations, alone, may not be the best indicator to gauge on-the-ground implementation efforts and capture progress in attaining the TMDL. As a result, staff has incorporated flexibility into the TMDL to measure progress and has provided a variety of optional metrics that may be used as well (see Project Report Section 7.7, Metrics to Assess Interim Progress towards TMDL Achievement). For example, other metrics to demonstrate progress in attaining the TMDL could include:

- assessments of mass-based load reductions;***
- improvements in flow-weighted concentrations;***
- estimates of the percent/scope/degree of implementation of management practices capable of ultimately achieving load allocations;***
- improvements in receiving water nutrient-response indicators (i.e., dissolved oxygen, chlorophyll a, microcystins).***

Staff understands that it may be challenging to demonstrate progress toward attaining water quality objectives using a concentration-based TMDL approach alone. In recognition of this challenge, staff has provided alternative pollutant load expressions to facilitate implementation of the concentration-based allocations (see Appendix F). This alternative load-based approach provides an optional metric that may be used to gauge progress towards reducing nutrient discharges.

It should be noted that staff proposes concentration-based targets and allocations because concentrations, rather than loads, are a direct measure of existing water quality objectives contained in the Basin Plan and are directly protective of beneficial uses. Note that expressing TMDLs and allocations as concentrations is particularly important with regard to toxic compounds such as nitrate and unionized ammonia, because toxicity “loads” cannot be effectively translated into protective exposure levels.

As a result of the comments submitted by Ms. Wineman, as well as from the public comments received during the January 31, 2013 and March 14, 2013 Water Board hearings for the Lower Salinas River Nutrient TMDL, staff is proposing revised language in the TMDL Resolution and Project Report, under section “Determination of Compliance with Load Allocations.” The revised language provides flexibility for owners/operators of irrigated lands to demonstrate compliance with load allocations. The revised language is presented below for easy reference.

Determination of Compliance with Load Allocations

Load allocations will be achieved through a combination of implementation of management practices and strategies to reduce nitrogen compound and orthophosphate loading and water quality monitoring. Flexibility to allow owners/operators of irrigated lands to demonstrate compliance with load allocations is a consideration; additionally, staff is aware that not all implementing parties are necessarily contributing to or causing a surface water impairment. However, it is important to recognize that degrading shallow groundwater with nutrients may also degrade surface water quality via baseflow loading contributions to the creek.

To allow for flexibility, Water Board staff will assess compliance with load allocations using one or a combination of the following:

- A. Attaining the load allocations in the receiving water;*
- B. Attaining receiving water TMDL numeric targets for nutrient-response indicators (i.e., dissolved oxygen water quality objectives, chlorophyll a targets and microcystin targets) may constitute a demonstration of attainment of the nitrate, nitrogen, and orthophosphate-based seasonal biostimulatory load allocations. Note that implementing parties are strongly encouraged to maximize overhead riparian canopy, where and if appropriate, using riparian vegetation, because doing so could result in achieving nutrient-response indicator targets before allocations are achieved (resulting in a less stringent allocation);*
- C. Demonstrating quantifiable receiving water mass load reductions.*
- D. Owners/operators of irrigated lands may be deemed in compliance with load allocations by implementing management practices that are capable of achieving interim and final load allocations identified in the TMDL;*
- E. Owners/operators of irrigated lands may provide sufficient evidence to demonstrate that they are and will continue to be in compliance with the load allocations; such evidence could include documentation submitted by the owner/operator to the Executive Officer that the owner/operator is not causing waste to be discharged to impaired waterbodies resulting or contributing to violations of the load allocations.*

It is important to recognize that staff has endeavored to strike a balanced and flexible approach for farmers to demonstrate progress towards achieving the allocations. Demonstrating progress may occur within the context of concentration-based and/or load-based reductions.

14. Ms. Claire Wineman, President, Grower Shipper Association of Santa Barbara and San Luis Obispo Counties

Biostimulatory Numeric Targets

Stream chemistry and ecology strongly influence biostimulatory impact. The biostimulatory impact is much more complex than just the concentration of nitrogen compounds or orthophosphate, or even dissolved oxygen, chlorophyll, and/or microcystin. Other factors such as vegetative cover, turbidity, and water temperature also affect the biostimulatory factors in surface water. Given the complexity of this system and highly localized conditions, the Association does not support the adoption of quantitative numeric targets for this TMDL.

Action: The Association recommends maintaining the *qualitative* nature of the biostimulatory targets for the Basin Plan, rather than adopting *quantitative* targets that are difficult to assess and unlikely to represent the true biostimulatory nature of surface water.

Staff response: Staff agrees that the factors mentioned by Ms. Wineman may influence biostimulatory impacts, with varying degrees of complexity. It is important to recognize the proposed nutrient water quality biostimulatory targets developed in this TMDL are predictions of the nutrient concentration levels necessary to be protective against excessive biostimulatory conditions and that some uncertainty is inherent due to the variety of physical and ecological conditions within the watershed. As such, in recognition of the uncertainties regarding nutrient pollution and biostimulatory impairments, staff has proposed that the Central Coast Water Board reconsider the numeric targets, if merited, by optional special studies and new research, ten years after the effective date of the TMDL. For example, if the biostimulatory indicators, such as dissolved oxygen, are achieved in the presence of nutrient levels greater than those proposed as numeric targets, staff would consider a proposal to revise the nutrient numeric targets, as long as the final nutrient levels did not exceed water quality objectives. One way of achieving the desired dissolved oxygen level might be increased stream shading, which lowers stream temperature and the ability of stream water to retain dissolved oxygen.

15. Ms. Claire Wineman, President, Grower Shipper Association of Santa Barbara and San Luis Obispo Counties

TMDL Adoption Process

The Association advocates for adopting TMDLs that do not involve Basin Plan Amendments. The Association had a very productive and positive experience working with Water Board Staff on the TMDLs for Chlorpyrifos in San Antonio Creek and Nitrate in Los Berros Creek.

Action: The Association encourages the Water Board to adopt the revised TMDLs without a Basin Plan Amendment.

Staff response: Staff appreciates the productive contributions of the Association. The proposed TMDLs require a Basin Plan amendment because multiple actions are required of the Water Board.

The TMDLs for San Antonio Creek and Los Berros Creek were adopted via resolutions that did not require amending the Basin Plan. This is possible because:

According to the Water Quality Control Policy for Addressing Impaired Waters (State Water Board Resolution 2005-0050), “[i]f the solution to an impairment can be implemented with a single vote of the regional board, it may be implemented by that vote. When an implementation plan can be adopted in a single regulatory action, such as a permit, a waiver, or an enforcement order, there is no legal requirement to first adopt the plan through a Basin Plan amendment” (p. 5).

A Basin Plan amendment is required because the proposed TMDL implementation plan requires more than one action (e.g., compliance with NPDES storm water permits and the Agricultural Order).

16. Ms. Claire Wineman, President, Grower Shipper Association of Santa Barbara and San Luis Obispo Counties

Resolution Language

The Association has identified several items of concern on the Draft Resolution (Attachment 1).

- “Shall not exceed.” The use of “shall not” (pages 4 and 5) seems contradictory with the presentation of numeric “targets.” It would be helpful to clarify what is and is not enforceable under the TMDL.
- Agricultural Order INMP. The implementation section (page 10) incorrectly suggests that owners/operators must implement the Irrigation and Nutrient Management Plan (INMP) to comply with the Agricultural Order. The INMP is *only* required for Tier 3 farms/ranches with High Nitrate Loading Risk. Furthermore, this provision (more specifically Provision 68, determination of nitrate loading risk factors) is currently stayed until the petition is resolved on the merits.
- Assessing Compliance. The Association appreciates the variety of tools available to assess compliance with the local allocations (page 11). However, as written, it is unclear whether one or a combination will be used, which creates ambiguity for dischargers. The Association recommends using “a combination of the following” to assess compliance with load allocations.

Action: The Association recommends revising the draft resolution to address the significant concerns presented in this letter.

Staff response: Thank you for these comments that refer to the Basin Plan amendment language provided as Attachment 1 to the Staff Report. Staff has responded to these comments below.

With respect to the first bullet and to clarify what is and what is not enforceable under the TMDL, it is important to realize that the Ag Order is the regulatory mechanism used to implement the TMDL for discharges from irrigated lands. The Agricultural Order is enforceable. The TMDL does not contain enforcement provisions, including against an exceedance of a TMDL numeric target. The proposed TMDL and associated numeric targets are not water quality standards or water quality objectives, even when incorporated into the Basin Plan. Proposed TMDLs and numeric targets are not enforceable numeric limitations, unless approved and adopted as numeric water quality effluent limitations in a Water Board-approved permit. Also note that TMDLs are programs or strategies to implement existing water quality standards, but do not create new bases and authorities for direct enforcement apart from the existing permits and existing water quality standards.

The proposed TMDL biostimulatory numeric targets are not water quality standards themselves; they are quantitative interpretations, predictions, of the levels of pollutants necessary to implement and achieve existing narrative water quality objectives. It is important to recognize that under California law, a “water quality objective” has a very specific legal meaning. “Water quality objectives” are indeed regulatory thresholds/water quality limits. Water quality objectives can only be adopted through a specific legal and administrative process (often referred to as a “water quality standards action”), which exists independently and apart from the TMDL process. California Water Code §13241 establishes the requirements pertaining to a regional board’s adoption of water quality objectives and requires a regional board to consider a number of factors

when establishing water quality objectives. Since TMDLs are not water quality objectives, the requirements for adopting such objectives do not apply to TMDLs or their numeric targets. Even when TMDL numeric targets are incorporated into the Basin Plan, they do not constitute new water quality objectives in and of themselves. TMDLs do not establish a new basis for direct enforcement apart from existing water quality standards they translate, and the proposed biostimulatory water quality targets in this TMDL are not directly enforceable against dischargers.

With respect to the second bullet regarding the Agricultural Order Irrigation and Nutrient Management Plan (INMP), it should be noted that requirements regarding INMPs have not been stayed and they are currently required under the existing Agricultural Order for Tier 3 dischargers. While Ms. Wineman is correct that Provision 68 (Determination of Nitrate Loading Risk Factors for Tier 2 and Tier 3) was stayed by the State Water Board until it resolves the petitions on the merits, this condition is not referenced in the proposed TMDL documents and revisions or changes are not necessary.

That said, staff has modified the draft resolution (Attachment 1 of the Staff Report at pg. 11), Implementation for Discharges from Irrigated Agricultural Lands. These modifications were made in response to public comments received during the January 31, 2013, and March 14, 2013 Water Board Hearings for the Lower Salinas River Watershed Nutrient TMDL. Staff modified this section of the draft Resolution by removing language and clarifying that the Agricultural Order is the implementation mechanism used to control discharges from irrigated lands. The text below represents the revised text contained in the Implementation Section of the revised draft Resolution. Note that changes have not been made to Element E, Irrigation and Nutrient Management Plans.

Implementation

DISCHARGES FROM IRRIGATED AGRICULTURAL LANDS:

Implementing parties will comply with the Conditional Waiver of Waste Discharge Requirements for Irrigated Lands (Order R3-2012-0011) and the Monitoring and Reporting Programs in accordance with Orders R3-2012-0011-01, R3-2012-0011-02, and R3-2012-0011-03 to meet load allocations and achieve the TMDL.

Current requirements in the Agricultural Order that will achieve the load allocations include:

- A. Implement, and update as necessary, management practices to reduce nutrient loading.*
- B. Maintain existing, naturally occurring, riparian vegetative cover in aquatic habitat areas.*
- C. Develop/update and implement Farm Plans.*
- D. Properly destroy abandoned groundwater wells.*
- E. Develop, and initiate implementation of an Irrigation and Nutrient Management Plan (INMP) or alternative certified by a Professional Soil Scientist, Professional Agronomist, or Crop Advisor certified by the American Society of Agronomy, or similarly qualified professional.*

With regard to the third bullet, Assessing Compliance, staff has revised this section of the Resolution. These revisions are in response to Ms. Wineman's comments and public comments received during the January 31, 2013 and March 14, 2013 Water Board hearings pertaining to the Lower Salinas River Watershed Nutrient TMDL. The revised language in its entirety is contained in the Response to Comment #13. For ease of reference, the revised language is partially presented below:

Determination of Compliance with Load Allocations

Load allocations will be achieved through a combination of implementation of management practices and strategies to reduce nitrogen compound and orthophosphate loading, and water quality monitoring.

emphasis added by staff

17. Ms. Claire Wineman, President, Grower Shipper Association of Santa Barbara and San Luis Obispo Counties

As detailed in this letter, the Association has standing concerns about the lack of reasonably foreseeable methods of compliance, use of a concentration-based TMDL, establishing quantitative biostimulatory targets, adopting a TMDL through a Basin Plan Amendment, and the inadequacy of the CEQA "Substitute Document."

We urge you to take these concerns into account before moving forward with the TMDL or Basin Plan Amendment. As always, we are willing to continue to work with the Water Board to address these concerns. Thank you for your attention to this matter. We remain a very interested party.

Staff response: Staff appreciates the Association's cooperation and participation in the TMDL project, as well as the comments submitted above that include staff responses.

18. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

The City of Santa Maria appreciates the opportunity to provide the Regional Board with the following comments on the Total Maximum Daily Loads for Nitrogen Compounds and Orthophosphate in the Lower Santa Maria River and Oso Flaco Lake Watersheds ("TMDL"). The City shares the Regional Board's goal of reducing the loading of nitrogen compounds and orthophosphate in these watersheds. However, as currently structured, the TMDL will undermine the ability of stakeholders to implement more comprehensive efforts to address these pollutants through integrated, watershed-based approaches. For this reason, the City does not support the TMDL as currently proposed.

The City's comment letter first summarizes the two key concerns the City has with the approach taken by the Regional Board in the TMDL. The letter next provides more detailed comments on the TMDL. Finally, the letter provides detailed comments on the Regional Board's substitute environmental document and analysis. It is hoped that after reviewing these comments, the

Regional Board will agree to work with the City and other stakeholders on a better approach to addressing the loading of nitrogen compounds and orthophosphate in these watersheds.

Staff response: Staff appreciates these comments from the City and has provided individual responses to them below.

19. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

SUMMARY OF THE CITY'S TWO KEY CONCERNS

The City's two key concerns with the TMDL stem from the TMDL's use of concentration-based final allocations, interim allocations, and targets for nitrate and orthophosphate². The concentration-based approach used in the TMDL is not an appropriate regulatory approach to address these two pollutants for at least the following two key reasons:

The Narrow Concentration-Based Approach Undermines a More Comprehensive Solution to the Problem. The use of the concentration-based approach will undermine efforts to address the loading of nitrate and orthophosphate in a comprehensive fashion. In the report entitled "Addressing Nitrate in California's Drinking Water" prepared for the California State Water Resources Control Board in connection with Senate Bill X2 1 (Perata), the use of the "pump-and-fertilize" approach to nitrate contamination in groundwater is identified as a key long-term remediation strategy for large groundwater basins that are nitrate impacted. The "pump-and-fertilize" approach uses existing agricultural wells to gradually remove nitrate-contaminated groundwater and to treat that water through nitrate uptake by crops. Implementing this long-term remediation strategy demands a load-based approach, because nitrate concentrations in some existing agricultural wells will not meet the concentration-based standards used in the TMDL. In contrast, the TMDL's concentration-based approach will inhibit implementation of this "pump-and-fertilize" approach because compliance with the TMDL will likely require reduced usage of nitrate-contaminated groundwater for agricultural irrigation. Thus, even though the "pump-and-fertilize" approach would reduce overall loading of nitrogen compounds and address legacy groundwater problems in a way that is consistent with the State policy, the approach could not be implemented in light of the narrow concentration-based allocations and targets in the TMDL.

The Regional Board, in its response to comments on the Salinas River Nutrient TMDL, has acknowledged that "legacy pollution in groundwater can be considered a beneficial economic resource – it is well established that resource professionals do encourage growers to credit nitrate irrigation water towards their fertilization practices; this certainly could be considered one type of 'viable holistic implementation practice'." (Responses to Comments, p. 6) Further support for this approach is found on page 8 of the University of California's Farm Water Quality Planning Reference Sheet No. 8066. To accommodate such a "viable holistic implementation practice," the Regional Board should express the allocation and targets as mass loads not as concentrations. To do otherwise will undermine the implementation of a "viable holistic implementation practice" that the State Board has identified as a key long-term remediation strategy to address legacy nitrate problems. Indeed, in its responses to comments on the Salinas River Nutrient TMDL, Regional Board staff noted that "staff is aware that a concentration-based load allocation expression may not adequately provide meaningful connection to on-the-ground implementation decisions." (Responses to Comments, p. 14.)

² The City does not object to the use of a concentration-based approach for unionized ammonia because the concentrations of this pollutant and related acute toxicity are directly relevant to the protection of beneficial uses, in contrast to nitrate and orthophosphate.

Since Regional Board staff is aware of this problem, it should address the problem by expressing the TMDL as a mass load allocation.

The concentration-based approach has other impacts on the ability of stakeholders to implement comprehensive solutions to addressing the nutrient problem. For example, use of a concentration-based approach will inhibit the ability of stakeholders to implement nutrient trading approaches that may be a cost-effective way to reduce overall loading. The City requests that the Regional Board change the TMDL from a concentration-based approach to a mass loading approach to allow for these more flexible and comprehensive implementation actions.

Staff response: The City mentions as a footnote that “it does not object to the use of a concentration-based approach for unionized ammonia because the concentrations of this pollutant and related acute toxicity are directly relevant to the protection of beneficial uses, in contrast to nitrate and orthophosphate.” Staff would like to clarify that nitrate is also a toxicant³ and that establishing concentration-based TMDLs, numeric targets, and allocations are warranted in order to protect municipal and domestic water supply (MUN) beneficial use. Drinking water maximum contaminant levels (MCLs) for nitrate are expressed as 10 mg/L nitrate as nitrogen to avoid detrimental human health risks associated with nitrate toxicity. As such, expressing concentration-based TMDLs for nitrate provides a “direct measure” for evaluating protection of the MUN beneficial use. Therefore, the concentration-based approach used in the TMDL is an appropriate regulatory approach.

Staff is cognizant of the City’s concerns regarding use of concentration-based TMDLs. Response to Comment #13 discusses concentration-based TMDLs and the opportunity for agricultural dischargers to use alternative pollutant load expressions to facilitate implementation of the concentration-based allocations. In addition, in response to public comments received during the January 31, 2013 and March 14, 2013 Water Board hearings for the Lower Salinas River Nutrient TMDL, staff has revised language in the TMDL Resolution and Project Report, under section “Determination of Compliance with Load Allocations” to allow greater flexibility for agricultural dischargers to demonstrate compliance (see Response to Comment #13 for specific language) that includes measures other than in-stream concentration assessment.

Staff acknowledges that reductions in concentration-based allocations, alone, may not be the best indicator of on-the-ground implementation efforts and progress in attaining the TMDL. As a result, Project Report Section 7.7, Metrics to Assess Interim Progress towards TMDL Achievement, demonstrates the degree of flexibility that staff has incorporated into the TMDL to measure progress and suggests a variety of optional metrics that may be used. For example, other metrics to demonstrate progress in attaining the TMDL could include:

- assessments of mass-based load reductions;***
- improvements in flow-weighted concentrations;***
- estimates of the percent/scope/degree of implementation of management practices capable of ultimately achieving load allocations;***

³ SWRCB (State Water Resources Control Board). 2004, *Water Quality Control Policy For Developing California’s Clean Water Act Section 303(d) List*, September 2004. Section 7, Definitions (pg. 28). TOXICANTS include priority pollutants, metals, chlorine, and nutrients.

- *improvements in receiving water nutrient-response indicators (i.e., dissolved oxygen, chlorophyll a, microcystins).*

Although not initially mentioned in the Project Report, staff fully supports the “pump-and-fertilize” approach as referenced in the February 12, 2013 report entitled “Recommendations Addressing Nitrate in California’s Drinking Water,” prepared in response to SBX2 1 (Perata). Use of the “pump-and-fertilize” approach to manage nitrate contamination in groundwater is identified as a key, long-term remediation strategy for large groundwater basins that are nitrate impacted. To convey that nitrate concentrations in groundwater irrigation wells are indeed a resource and should be viewed as such in the development of irrigation and nutrient management measures, staff has provided the following additional text in the Project Report, Section 7.8, Suggested Management Measures:

Legacy nitrate concentrations in groundwater should be treated as a resource and long-term remediation through a “pump-and-fertilize” approach would use existing agricultural wells to gradually remove nitrate-contaminated groundwater and treat the water by ensuring nitrate uptake by crops through appropriate nutrient and irrigation water management⁴.

The City mentions that the proposed TMDL will inhibit implementation of nutrient trading (also referred to as water quality trading or WQT) approaches because of the concentration-based approach. As previously stated, staff has developed a tool box of metrics, identified in the TMDL project report and the draft Resolution, including but not limited to water column concentrations, mass loads, flow weighted concentrations, and BMPs to assess progress towards attainment of water quality standards. The Project Report does not discuss nutrient trading as a compliance measure, but the potential exists for such a measure, if stakeholders can present an acceptable plan that meets regulatory requirements. It is important to note that the TMDL is, to a large degree, relying on the implementation of the Agricultural Order. The Agricultural Order regulates nonpoint discharges from many farming operations. Pollutant trading works best when several “facilities” required to reduce pollutant loading in a watershed have significantly disparate costs to achieve that reduced loading. In other words, pollutant trading works best when pollution from discrete point discharges from varying regulated facilities can be readily quantified and predicted, and the cost of reducing the pollutant load to the target level varies greatly between the facilities, thereby driving a trading initiative by dischargers. This is not the case in the Santa Maria Watershed because most of the nutrient loading is from non-point sources.

U.S. EPA has acknowledged that, “(d)espite the theoretical promise of water quality trading and EPA’s efforts, however, WQT to date has met with limited practical success.

⁴ Assessing Nitrate in California’s Drinking Water (SBX2 1). 2012. Center for Watershed Sciences, University of California, Davis.

Only 100 facilities have participated in trading, and 80 percent of trades have occurred within a single trading program.”⁵

That said, Project Report Section 7, Optional Special Studies and Reconsideration of the TMDLs, provides an outline of timelines and options should the City wish to pursue development of a nutrient trading system in the future.

20. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

The Narrow Concentration-Base Approach will Impact the City’s Water Supply

A second reason the TMDL should not contain concentration-based allocations and targets for nitrate and orthophosphate is that the TMDL’s concentration-based approach could result in overuse and possible contamination of the lower aquifer that is relied upon by the City for a portion of its water supply. The lower aquifer does not currently experience the nitrate contamination existing in the shallow groundwater. Because the agricultural community will be unable to satisfy the concentration-based allocations and targets, the community may seek to use the groundwater in the lower aquifer as a substitute for the groundwater they currently use. Increased use of the lower aquifer could impair the City’s rights to use the groundwater in the lower aquifer. It could also cause long-term contamination of the lower aquifer as legacy contaminants in the shallow groundwater migrate to the lower aquifer. To avoid these potentially catastrophic results, the Regional Board should use a mass load-based, rather than concentration-based approach. The load-based approach would allow for the “viable holistic implementation” solutions that are needed to address the existing problem while avoiding these significant impacts on the lower aquifer.

There is ample evidence that there is a distinction between the shallow, upper aquifer and the deeper, lower aquifer. Based on information related to the City’s Well #14S, the general demarcation between the upper and lower aquifer is somewhere between 300 to 500 feet. Several years ago, the city began experiencing nitrate issues at it Well #14S, which pulled from the basin starting at 270 feet. Through the installation of a packer assembly, the City was able to isolate the upper from the lower aquifer and draw only from the lower. The nitrate issues at Well #14S were thus eliminated, demonstrating that the lower aquifer did not face the same contamination issues. However, the City is deeply concerned that the TMDL’s approach will encourage increased use of the lower aquifer, resulting in the two problems noted here.

Staff response: The City has speculated that the concentration-based TMDLs could result in overuse and possible contamination of the lower aquifer because the agricultural community would pursue higher quality groundwater supply to meet the concentration-based TMDLs. The City has not provided any supporting information to justify that concern. However, based on conversations with interested parties, the underlying assumption is that the proposed nitrate allocations assigned to growers will result in a fear of enforcement and fines based on the concentration-based allocations, but that load-based allocations would not result in that same fear. Therefore, to alleviate that fear, growers would drive wells into deeper aquifers that have less nitrate contamination, in order to meet the concentration-based allocations. Staff concludes that the proposed concentration-based TMDLs will not result in the actions described for the following reasons:

⁵ EPA’s Water Quality Trading Evaluation, Final Report. October 2008. Prepared by Industrial Economics, Incorporated (IEc) for EPA’s Office of Policy, Economics and Innovation (OPEI) under Contract EP-W-04-023.

- *TMDL allocations and numeric targets are not enforceable unless included in an enforceable regulatory order, such as a permit or waste discharge requirement. Therefore, the Central Coast Water Board cannot impose fines related to allocations and numeric targets in the TMDLs. To include allocations and numeric targets as enforceable limits, e.g., in the Agricultural Order, would require modification of the Agricultural Order, as a separate and new order, which is not proposed in the TMDL; on the contrary, the TMDL clearly states that the current Agricultural Order will implement the TMDL.*
- *The cost to develop an agricultural production well into the lower aquifer of the basin could be tens of thousands, and in some cases, hundreds of thousands of dollars. Growers will not spend this amount of capital to alleviate a fear that to date is unfounded by example. Staff has been exceedingly clear that failure to achieve water quality standards by growers who are implementing measures to achieve those standards will not result in enforcement action; essentially, growers will not be penalized for trying. Therefore, it does not make sense that growers would spend such a large amount of capital when they cannot point to any of their fellow growers who have been enforced against for trying, in good faith, to protect water quality, even if water quality goals have not been met.*
- *It is important to note that TMDL development and Ag Order implementation could be advanced by dispelling the fear of unwarranted enforcement, such as against growers who are making good-faith efforts to achieve water quality goals, but are falling short of achieving them. Developing load-based allocations to, in essence, dodge that fear, only helps solidify that unwarranted fear. In contrast, continuing to develop and implement concentration-based TMDLs, as we have done in many TMDLs, while acknowledging that the growers will in good faith try to attain the TMDL goals but not succeed in some cases and will not be enforced against, will help us dispel that fear. Continuing this approach will help us all move forward collaboratively.*
- *The commenter states that expressing the allocations in terms of concentration is problematic, and that expressing them in terms of mass-load would not be problematic. Existing numeric water quality objectives for nitrogen compounds are expressed in concentration, and cannot be superseded by load-based allocations or numeric targets. For example, nitrate concentration of 10 mg/L-N to protect the municipal and domestic water supply beneficial use, and unionized ammonia concentration of 0.025 mg/L-N to protect against aquatic toxicity are objectives described in the Basin Plan. Additionally, the Agricultural Order references these existing water quality objectives, and in part bases monitoring requirements on them. Therefore, even if staff developed a load-based TMDL and allocations, the goals and requirements for achieving water quality standards expressed as concentrations would remain the same.*
- *The current water quality objective for the protection of municipal and domestic water supply is a nitrate concentration of 10 mg/L-N. Median nitrate concentrations in project surface waters exceed 50 mg/L-N in some areas, with maximum values exceeding 80 mg/L-N. The proposed wet-weather TMDL allocation for nitrate is 8 mg/L-N, and the dry weather allocation is 4.3 mg/L-N. Staff is not convinced that growers would develop wells in the deeper aquifer, simply because the goal has moved from 10 mg/L-N (current water quality objective), to 8 mg/L-N in the winter and 4.3 mg/L-N in the summer. Staff concludes that there is insufficient evidence to conclude that growers will develop wells in the deeper aquifer as a result of the proposed TMDL allocations.*

- *Achieving the TMDL will necessitate the same reduction of nutrient loading and progress reporting, whether the allocations are expressed as concentration or mass load. As stated above, maximum nitrate concentrations exceed 80 mg/L-N and the goal is 4.8 to 10 mg/L-N. Expressed as mass-load reduction, about an 87% reduction in mass loading of nitrate will be needed to achieve dry weather allocations. The message is clear and perhaps daunting, whether expressed as concentration or mass; to achieve the goals will require significant changes by implementing parties. Expressing the allocations in terms of mass load will not minimize the psychological impact on implementing parties or the work required to achieve them.*
- *Several less-costly implementation options are available to reduce nutrient discharges.^{6,7}*
- *The proposed TMDLs do not require, expect, or contemplate achievement of proposed numeric concentration criteria for up to two to three decades, rendering concerns about immediate or prompt compliance moot.*
- *The proposed TMDLs provide a number of alternative (non-concentration-based) metrics that may be used to demonstrate progress, including alternative mass-based loading expressions that may be used to facilitate implementation. (see Response to Comment 13).*
- *Many agricultural producers are currently accounting for nitrate concentrations in irrigation water as part of their irrigation and nutrient management plans⁸.*
- *Many agricultural producers have converted to micro-irrigation methods that reduce or eliminate their discharges to surface waters (see Project Report, Table 7-15 for a tabulation of irrigation management measures)*
- *Baseflow (shallow groundwater) residence time is estimated to be generally less than five years.*
- *Legacy nitrate impacted shallow groundwater is best considered a resource in the context of a “pump-and-fertilize” approach for groundwater management.*
- *Agricultural producers have suggested that nitrate concentrations in irrigation water should be far greater than 10 mg/L nitrate as nitrogen; therefore, even if growers were to obtain lower concentration irrigation water from deeper aquifers, the growers would still need to bring the nitrate level up to the higher concentration that they believe is necessary to produce a profitable crop. Return water from such actions would continue to be greater than the TMDL numeric targets.*

In addition, should agricultural producers wish to pursue well installations, there are several regulatory provisions in place to protect groundwater quality. In accordance with Section 13801(c) of the Water Code, Santa Barbara County has adopted Ordinance No. 12-4844, County Code Chapter 34A, Wells. County code provides standards for the construction, modification, inactivation and destruction of water wells and adopts by reference, the standards contained in the California Department of Water Resources, Well Standards. Pertinent standards contained in these regulations establish well installation construction to prevent cross-contamination of subsurface water-bearing units. Permits are required for the construction, modification, or destruction of wells,.

⁶ State Water Resources Nonpoint Source (NPS) Encyclopedia. Online linkage: http://www.waterboards.ca.gov/water_issues/programs/nps/encyclopedia/

⁷ NRCS Conservation Practice Standard Code 590. Online Linkage: <http://www.aces.edu/departments/aawm/NutrientManagement/590.pdf>.

⁸ Water Board Agricultural Program Staff

The county permit fee is a minimum of \$740 for construction or modification of a water well. In addition, installation costs are around \$26,000 for a 100-300-foot-deep well (8-inch casing, 200 gallon per minute yield target).⁹

21. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

DETAILED COMMENTS ON THE TMDL

In addition to the two key concerns expressed above, the City also has the following detailed comments on the TMDL:

Project Area Description (Draft Project Report, pp. 1-3)

The TMDL indicates that Regional Board staff scoped the entire 1.2 million acre project area of the Santa Maria River watershed, but eventually decided to narrow the scope of the TMDL to the lower portion of the Santa Maria River watershed downstream from the Sisquoc River confluence including Oso Flaco Lake watershed. The TMDL further indicates that information necessary to develop a nutrient TMDL for Oso Flaco Lake is not currently available. Thus Regional Board staff has recognized that the Santa Maria River watershed contains components that require individualized analysis.

Despite Regional Board staff's conclusion that the Santa Maria River watershed contains distinct components, the TMDL is based in large measure on the Lower Salinas River Watershed Nutrient TMDL Draft Project Report. This includes, as described on page 9 of the Draft Staff Report, reliance on the scientific peer review for the Salinas River Nutrient TMDL. Given the unique nature of the Santa Maria River watershed and its individual components, the Regional Board's reliance on the Salinas River Nutrient TMDL is not appropriate. The TMDL fails to establish a factual and legal basis to support the use of the Salinas River Nutrient TMDL for the unrelated Santa Maria River watershed. The Regional Board has therefore not satisfied its obligations under Health & Safety Code section 57004 to perform an external scientific peer review of the TMDL. The Regional Board must comply with Section 57004 by obtaining an external scientific peer review of the TMDL prior to adoption by the Regional Board.

Staff response: Staff has neither suggested nor recognized that the Santa Maria River watershed contains components that require individualized analysis.

Staff would like to clarify that its use of the term "scoped" is synonymous with the term "assessed." Staff used the term "scoped" to describe the geographic extent of nutrient-related impaired waterbodies within the greater Santa Maria River watershed (1.2 million acres) and to define the TMDL project area (e.g., geographic extent of impaired waterbodies). Staff used available water quality data to conduct an assessment of nutrient-related water quality impairments within the greater Santa Maria River watershed and concluded that impaired waterbodies are limited (e.g., narrowed) to the lower portion of the Santa Maria River watershed, including tributaries to Oso Flaco Lake. Details of this water quality impairment assessment are contained in the Project Report in Section 3, Data Analysis, and a summary of all data used in the assessment is contained in Appendix B – Data Analysis. Staff has added clarifying language to the first paragraph of Section 1.2, Project Area, in ~~strikeout~~ and underline below:

⁹ NRCS, 2012. Electronic Field Office Technical Guide (eFOTG). File name [P642cafy12_wat.well.xlsx](#), Sheet name Frost Protection well 100-300 feet, available at: <ftp://ftp-fc.sc.egov.usda.gov/Economics/Costs/eFOTG/California/FY2012%20Payment%20Schedules/>

Staff initially ~~scoped~~ assessed nutrient-related water quality impairments within the entire 1.2 million acre ~~project area of the~~ Santa Maria River watershed which included the three counties of San Luis Obispo, Santa Barbara and Ventura as shown in Figure 1-1. ~~However, after an~~ Based on this assessment of nutrient-related water quality impairments within the greater Santa Maria River watershed area, staff concluded that impaired waters, and hence the TMDL project area, should be limited to the lower portion of the Santa Maria River watershed downstream from the Sisquoc River confluence, including the Oso Flaco Lake watershed. The project area generally corresponds to the extent of the Guadalupe Hydrologic Area (312.10) as contained in the Basin Plan and shown in Figure 1-2.

While staff has indicated that the data necessary to develop a nutrient TMDL for Oso Flaco Lake is not currently available, this does not preclude staff from developing nutrient TMDLs for streams as proposed in this project. Staff has performed the individual analysis necessary to develop TMDLs for Oso Flaco Lake tributary streams as contained in the proposed TMDL documents.

Staff maintains that the “scientific portions” of the proposed TMDLs have already undergone the scientific peer review required by the Health and Safety Code; please see Appendix A, memo from staff counsel with subject line “PEER REVIEW FOR TOTAL MAXIMUM DAILY LOADS TO ADDRESS NITROGEN COMPOUNDS AND ORTHOPHOSPHATE IN THE LOWER SANTA MARIA RIVER WATERSHED AND TRIBUTARIES TO OSO FLACO LAKE. As a result, the Regional Board has fulfilled the requirements of Health and Safety Code section 57004, and the proposed Santa Maria River Nutrient TMDLs do not require further peer review. Health and Safety Code section 57004 requires the scientific portion of Basin Plan amendments to undergo external scientific peer review before the Regional Board takes final action on the amendment. (Id., § 57004, subd. (d)).

The scientific portion of a rule consists of “foundations of a rule that are premised upon, or derived from, empirical data or other scientific findings, conclusions, or assumptions establishing a regulatory level, standard, or other requirements for the protection of public health or the environment.” (Health & Saf.Code, § 57004, subd. (a)(2).) The California Environmental Protection Agency (Cal/EPA) has described this review as “an objective, critical review of a draft Agency scientific work product.” (Memorandum from Peter M. Rooney (Secretary of Cal/EPA) to John Caffrey (Chairman of State Board) (Jan. 22, 1998).) Taken together, it is clear that Health and Safety Code section 57004 is designed to ensure that the scientific assumptions of a rule are tested by external peer review.

The proposed TMDLs contain a scientific approach to regulating nitrogen compounds and orthophosphate which are drawn from the TMDLs for Nitrogen Compounds and Orthophosphate in the Salinas River and Reclamation Canal Basin, and the Moro Cojo Slough Subwatershed (Salinas River Nutrient TMDLs). In the Santa Maria River Nutrient TMDLs, staff evaluated empirical data and articulated a scientific basis for expressing numeric targets, methodology employed to derive numeric targets for biostimulatory substances, load capacity, and load and waste load allocation methodology. The table below contains a summary of scientific element equivalencies for the proposed TMDLs and the peer-reviewed Salinas River Nutrient TMDLs.

SUMMARY OF SCIENTIFIC ELEMENT EQUIVALANCIES

Santa Maria River Nutrient TMDLs (Proposed Amendment Element)	Scientific Equivalency Related to peer reviewed Salinas River Nutrient TMDLs
Numeric Targets for Unionized Ammonia and Nitrate	Numeric targets equivalent (identical) to the source document <u>and</u> the Water Quality Control Plan for the Central Coastal Basin, Numeric Water Quality Objectives
Methodology to Derive Numeric Targets for Nitrate and Orthophosphate (Biostimulatory Substances)	Methodology used to derive numeric targets for nitrate and orthophosphate (biostimulatory substances) is equivalent (identical) to the source document
Loading Capacity	Loading capacity equivalent (identical) to the source document whereby loading capacity is equal to the numeric targets
Allocation methodology	Allocations equivalent (identical) to the source document whereby allocations are set equal to the loading capacity

22. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

Beneficial Uses (Draft Project Report, pp. 10-15)

The TMDL acknowledges that the Basin Plan does not identify beneficial uses for Bradley Channel, Blosser Channel, and the Main Street Canal. Nevertheless, the TMDL assumes that these waterbodies have the beneficial uses of REC-1, REC-2, and MUN, along with all beneficial uses associated with aquatic life. This approach is not warranted for these three flood control channels.

The Bradley Channel, Blosser Channel, and the Main Street Canal were constructed in or about the 1960s in areas where no previous watercourse existed. The three channels are fully or partially concrete. They are not open to the public and are not (and have not been) used for recreational purposes. They are therefore not appropriately designated by default with the beneficial uses of REC-1, REC-2, and MUN, along with all beneficial uses associated with aquatic life.

The TMDL’s treatment of these three flood control channels as having these beneficial uses is inconsistent with the law and the facts. First, recent case law makes clear that a Regional Board has a mandatory duty to assess whether “default” beneficial uses are appropriate. (*California Association of Sanitation Agencies v. State Water Resources Control Board* (2012) 208 Cal.App. 4th 1438.) The Regional Board has failed to perform its mandatory duty here. The TMDL simply assumes, without analysis, that the beneficial uses apply to these three channels. In addition, the Regional Board’s approach to the beneficial uses for these three channels is inconsistent with State Board Resolution 2005-0050, which make clear that a key starting point for the development of a TMDL is to assess the water quality standards applicable to the waters in question. Regional Board staff should assess whether the application of these beneficial uses to the three channels in question is appropriate prior to moving forward with the TMDL. Either through the Use Attainability Process or through the De-Listing process, the Regional Board staff should assess whether the TMDL should have any application to these three channels. Failure to engage in such an assessment will perpetuate an improper default

designation that has no basis in reality and is not consistent with the Regional Board's mandatory duties.

Staff response: Staff has considered whether the beneficial uses designated to Blosser Channel, Bradley Channel, and the Main Street Canal are appropriate on several occasions. For example:

- **The city questioned the beneficial use designation during the last listing cycle, but staff and the Central Coast Water Board concluded that the uses are correct.**
- **During development of the Santa Maria River Watershed Fecal Indicator Bacteria (FIB) TMDL, staff and Central Coast Water Board considered these uses again and the Water Board concluded the uses were correct.**
- **During the State Board hearing for the Santa Maria River Watershed FIB TMDL, the City commented orally at the hearing and the State Board again considered these beneficial uses. The State Board concluded that these uses are appropriate, as did the Office of Administrative Law (OAL), and U.S. EPA during their subsequent approvals.**

Staff appreciates the City's concerns regarding beneficial use designations of the Blosser Channel, Bradley Channel, and the Main Street Canal. While Table 2-1 of the Basin Plan does not specifically reference beneficial uses for Blosser Channel, Bradley Channel, and the Main Street Canal, the Basin Plan does contain the beneficial use designations for all waterbodies not specifically identified in Table 2-1. The Central Coast Water Board's Basin Plan (1994, chp. 2, pg. 1) states:

"Surface water bodies within the Region that do not have beneficial uses designated for them in Table 2-1 are assigned the following designations:

- **Protection of both recreation and aquatic life**
- **Municipal and Domestic Water Supply"**

As such, the designated beneficial uses for these waterbodies are definitive and staff has made no assumptions pertaining to beneficial use designations.

In addition, under the Porter-Cologne Act, "water quality objectives" are "the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area" (§ 13050, subd. (h)); and "beneficial uses" are "uses that may be protected against quality degradation [which] include but are not limited to domestic, municipal, agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife and other aquatic resources or preserves." (§ 13050, subd. (f).)

Regarding protection of both recreation and aquatic life, the Clean Water Act established a national goal of "...water quality which provides for the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water [emphasis added]..." The REC-1 beneficial use described in the Basin Plan refers to "Uses of water for recreational activities involving body contact with water..." The REC-2 beneficial use refers to "Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water..." The intent of the Basin Plan language for waterbodies that do not have uses specified in Table 2-1 is to provide the protection

consistent with the national goals of the Clean Water Act, i.e. for recreation "...in and on the water..." which is consistent with the REC-1 and REC-2 beneficial uses.

With regard to protection of the municipal and domestic water supply (MUN) designated use, the Basin Plan has incorporated by reference the "Sources of Drinking Water" Policy (State Board Resolution 88-63. In 1988, in order to implement Proposition 65, the State Board adopted Resolution No. 88-63, the "Sources of Drinking Water" policy. The policy provided that all surface waters and groundwaters of the State are considered to be suitable, or potentially suitable, for municipal or domestic water supply and should be so designated by the Regional Boards.

With regards to the assignment of recreation, aquatic life, and drinking water supply beneficial uses to these man-made flood control channels not being appropriate, staff concludes that the water quality standards and the beneficial uses assigned to the waterbodies in question are correct. While it may be that Bradley Channel, Blosser Channel, and Main Street Canal were designed to function as drainage systems and are not natural systems, they are nevertheless subject to the environmental protection described above. Additionally, these waterbodies/drainage channels eventually flow into the Santa Maria River. Staff notes that these waterbodies are open drainages, i.e., they are accessible for public contact, and in some cases have downstream receiving waters where water contact and non-contact recreation is probable (e.g., Bradley Lake). Staff understands the City's position that Bradley Channel, Blosser Channel and the Main Street Canal were constructed channels and are not natural waterbodies. However, contact recreation is likely in these channels because it is feasible that individuals (likely children) would either cross the channel and/or have access to play in these channels in certain reaches. For example, Blosser Channel before it enters the Santa Maria River is accessible and adjacent to a housing development where children might be playing.

It is important to note that the Santa Maria River receives drainage waters from these three tributaries. Consequently, even if the beneficial uses were not assigned to Bradley Channel, Blosser Channel, and Main Street Canal, the City would nevertheless need to address nutrient loading into these channels in order to protect corresponding beneficial uses in the Santa Maria River.

Staff has previously recommended (Santa Maria River Watershed FIB TMDL) that, should the City wish to pursue a UAA on its own and bring it back to Water Board staff so that we may review the documentation, then that action is the City's prerogative. Even if the City drafts a UAA, staff can only recommend approval by the Central Coast Water Board if it is legally defensible. Staff maintains that a UAA is not justifiable in this situation and does not want to spend resources on an issue that is not defensible.

The case law cited by the City pertains to the tributary rule. The beneficial uses applied to the channels in questions are not applied through a tributary rule in the Basin Plan, because the Basin Plan does not contain a tributary rule. The uses were applied because the Basin Plan designates minimum uses including REC and MUN. Furthermore, even if California Association of Sanitation Agencies v. State Water Resources Control Board does apply in this instance, the Central Coast Water Board's decision fully complies with the holding of the case. As demonstrated above, the Central Coast Water Board did analyze whether REC-1, REC-2, and MUN uses were appropriate and have determined that the uses were accurately applied to Blosser Channel, Bradley Channel, and the Main Street Canal.

23. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

3030(d) Listings (Draft Project Report, p. 19)

Table 3-3 of the TMDL identifies waterbodies in the Santa Maria River and Oso Flaco Lake watersheds that are listed as impaired on the 2008-2010 3030(d) list. Table 3-3 shows Blosser Channel as listed as being impaired for nitrate. However, Table 6-2 on page 108 of the Draft Project Report shows that Blosser Channel has a 0% reduction goal for nitrate, indicating that it is not impaired for that pollutant. Rather than including Blosser Channel in the TMDL's nitrate requirements, it should be de-listed for that pollutant.

Staff response: Table 3-3 shows the 303(d)-listed waterbodies addressed in the TMDL and includes the nitrate listing for Blosser Channel. The nitrate listing for Blosser Channel is based on the exceedance criteria set forth in the Water Quality Control Policy for developing California's Clean Water Act Section 303(d) List (Listing Policy); nitrate concentrations in Blosser Channel exceeded the number and sample size shown in Table 3-1 of the Project Report for toxicants. This listing is based on exceedance of nitrate numeric water quality objectives protective of the municipal and domestic water supply (MUN) beneficial use (10 mg/L-N). For Blosser Channel, nitrate concentrations exceeded the water quality objective 3 times out of a total of 21 samples (see Table 3-6 of Project Report). This marginally exceeded the listing criteria of 2 samples in a sample size of 2 to 24 needed to assert impairment (Listing Policy); therefore Blosser Channel is impaired due to excessive nitrate nitrogen concentrations.

Table 6-2 (pg. 108 of Project Report) shows estimated mean annual nitrate nitrogen loads, estimated loading capacities, and estimated percent reduction goals. The percent reduction goal is 0 because the mean (average) annual nitrate nitrogen concentration at Blosser Channel is relatively low and the estimated mean annual load is below the estimated mean annual loading capacity. However, this does not indicate that the waterbody is not impaired because, in accordance with the Listing Policy, three samples exceeded the nitrate nitrogen water quality objective.

The criteria necessary to remove a Blosser Channel from the 303(d) list is contained in Table 4-1 of the Listing Policy (Table 4-1, Maximum Number of Measured Exceedances allowed to Remove a Water Segment from the Section 303(d) list for Toxicants). If the City wishes to pursue delisting of Blosser Channel, staff will work with the City to ensure consistency with the Listing Policy.

24. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

Groundwater Conditions (Draft Project Report, pp. 54-55)

The TMDL discusses groundwater conditions in the Santa Maria Basin, but does not differentiate between the upper and lower aquifer. There are significantly different conditions within the upper and lower aquifer. The Draft Project Report should include a discussion of the different portions of the basins, and assess how the concentration-based approach in the TMDL could impact the lower aquifer through both increased groundwater demands on the lower aquifer (as growers seek cleaner water) and the migration of contaminants from the upper to the lower aquifer.

Staff response: TMDLs specifically pertain to surface waters. Therefore, a comprehensive analysis of subsurface hydrogeologic conditions was not within the scope of this project. However, with respect to upper and lower aquifers, staff has added the below text to the Groundwater Conditions section of the Project Report.

Regarding aquifer depth zones, there is a shallow zone consisting of the Quaternary Alluvium, Orcutt formation, and uppermost Paso Robles formation and a deep zone comprising the remaining Paso Robles formation and Careaga Sand. In the eastern portion of the basin where these formations are much thinner and composed of coarser materials, particularly in the Sisquoc Valley, the aquifer system is essentially uniform without distinct aquifer depth zones. In the coastal area where the surficial deposits (upper members of Quaternary Alluvium and Orcutt formation) are extremely fine-grained, the underlying formations (lower members of Quaternary Alluvium and Orcutt formation, Paso Robles formation, and Careaga Sand) comprise a confined aquifer¹⁰.

Also see Response to Comment 20 with respect to potential increased demand on lower aquifer and potential migration of contaminants.

25. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

Groundwater/Surface Water Connectivity (Draft Project Report, pp. 56-58)

The TMDL discusses the general connectivity between shallow groundwater and surface water flow, and the potential loading from groundwater. However, the Draft Project Report should more fully address this relationship in the context of the use of the concentration-based approach to the final allocations, interim allocations, and targets. The concentration-based approach will likely increase the loading to surfaces from shallow groundwater underflows as agricultural users reduce the use of shallow groundwater for irrigation purposes. The TMDL should assess this possibility and account for increased loading from shallow groundwater. The City believes that the concentration-based approach will ultimately make it difficult to meet the final allocation, interim allocations, and targets, because it will not allow stakeholders to comprehensively address the legacy groundwater problem.

Staff response: The City has speculated that the concentration-based approach will likely increase the loading to surface waters due to shallow nitrate impacted groundwater underflows because agricultural producers will no longer use impacted groundwater for irrigation purposes. The underlying assumption of the City's concern is addressed in staff's Response to Comment 20. Staff concludes that agricultural users will continue to utilize the upper aquifer for irrigation purposes, and that this proposed TMDL would not be a catalyst for driving into the deeper aquifer. Therefore, the concern the City raises regarding loading from the upper aquifer that is unaccounted for in the Draft TMDL Project Report is unwarranted. It is also important to note that staff provided an estimate of the current nitrate loading to surface waters from the shallow aquifer in the Draft TMDL Project Report, which accounts for as much as 50% of the loading.

¹⁰ Luhdorff and Scalmanini Consulting Engineers. 2008. Monitoring Program for the Santa Maria Valley Management Area.

26. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

Biostimulatory Conditions in Bradley and Blosser Channels (Draft Project Report, pp. 68)

The City appreciates the Regional Board's decision not to propose numeric targets, TMDLs, or allocations to protect against biostimulatory conditions in these two channels. As the Regional Board is aware, the City is working with all stakeholders within the Santa Maria Valley to pursue treatment systems to improve water quality within these flood control structures that will provide significant pollutant reduction within the watershed. This includes an agricultural tailwater denitrification system for the treatment of flows conveyed within the Bradley Channel. However, just as with biostimulatory conditions, neither should concentration-based nitrate allocations and targets be applied to these channels. The concentration based allocations and targets will also likely prevent the implementation of these valuable treatment systems. Consistent with the Regional Board's approach to the biostimulatory conditions, the Regional Board should not impose a concentration-based allocation that will undermine the potential to implement these treatment systems.

Staff response: Staff appreciates that the City has been proactive in pursuing the use of treatment systems within their storm water conveyance systems and staff will continue to assist the City in facilitating the implementation of these treatment systems. Although the TMDL allocations are expressed as concentrations, it is very important to note that the Basin Plan amendment language contains alternative (non-concentration based) metrics that may be used to demonstrate compliance with waste load allocations using one or a combination of the following (reproduced from page 12 of the Basin Plan amendment):

- Demonstrate reduction of nutrient concentrations in storm water outfalls or, optionally, where storm water is conveyed through managed flood protection facilities that also serve to treat and improve water quality (e.g., treatment wetlands, bioreactors, etc.), compliance may be demonstrated by measuring storm water quality before entering the receiving water body;***
- Demonstrate load reductions on mass basis at storm drain outfalls and/or downstream of treatment systems.***

The TMDL therefore provides ample flexibility for demonstrating nutrient reductions using load-based or concentration-based methods.

Finally, as contained in Section 7.4.3, "Determination of Compliance with Wasteload Allocations (c)", staff has recommended that a single monitoring site be used to demonstrate compliance. This monitoring site location is prior to confluence with the Santa Maria River and monitoring is not required unless there is flow from these channels into the Santa Maria River. The City likely recalls that this is the similar approach proposed and accepted at the State Board hearing to consider the Santa Maria Fecal Indicator Bacteria TMDL.

27. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

Numeric Targets (Draft Project Report, pp. 71-85)

Consistent with the City's other comments, the City believes that the numeric targets (other than for unionized ammonia) should be expressed in terms of mass load rather than concentrations. While the City understands that the numeric targets expressed in a TMDL are

derived from the Basin Plan and are not enforceable through the TMDL alone, the numeric targets and interim allocations of a TMDL drive implementation options. Here, as noted above, the concentration-based approach will impair viable implementation options.

Staff response: See Response to Comments 13, 19, and 20.

28. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

Annual Loads (Draft Project Report, pp. 85-103)

Based upon comments from Regional Board staff at the public workshop on the TMDL, the City understands that the Regional Board staff may be reluctant to express the allocations and targets in the TMDL as mass loads because of technical difficulties in quantifying such allocations and targets. However, this section of the Draft Project Report, as well as the TMDL Allocations section discussed in the following comment, appears to contain more than sufficient information to express the allocations and targets as mass loads rather than concentrations. The City urges the Regional Board to use this existing information to express the TMDL in terms of mass loads.

Staff response: The City's comment refers to Section 5 of the Project Report, Source Analysis, where the STEPL (Spreadsheet Tool for Estimating Pollutant Load) Model was used to estimate nutrient loads from different land uses and source categories. It should be emphasized that nutrient load estimates calculated by STEPL are non-flow and non-concentration derived estimates and, as such, subject to a relatively high degree of uncertainty.

Staff has prepared load estimates that are based on stream-specific nutrient concentrations and estimated flows which may be more representative of current conditions within the watershed. These load estimates are contained in the Project Report, Section 6.2, Existing Loading and Loading Capacity and are also subject to a degree of uncertainty. This uncertainty is due the limited amount of instantaneous flow data, or NHDplus modeled flow data and, as such, reflect coarser temporal load representations (annual and seasonal loads). In the absence of reliable continuous or daily flow data (i.e., USGS gages or hydrologic modeling), there could be a high degree of error associated with estimated daily flows due to the limited amount of instantaneous flow data. Therefore, the "technical difficulties" the city refers to is the lack of continuous or daily flow records needed to derive loading analysis. Finally, as discussed at the stakeholder workshop referred to by the City, concentration-based TMDLs and allocations are consistent with existing water quality objectives and regulations in place to implement the TMDL, which is another reason why staff is proposing concentration-based TMDLs.

Staff prepared Alternative Pollutant Load Expressions to Facilitate Implementation of Concentration-based Allocations (see Appendix F) using stream-specific nutrient concentrations and flow estimates as an alternative to the concentration-based load expression. Staff is not averse to using the STEPL estimated loads for guidance; however, the stream-specific nutrient concentration and flows provide a better metric for the reasons stated above.

29. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

TMDL Allocations (Draft Project Report, pp. 104-119)

The Draft Project Report asserts on page 104 that “[e]xpressing the TMDL as a nitrate concentration equal to the water quality objectives and numeric targets provides a direct measure of the nitrogen compounds and orthophosphate levels in the watershed to compare with water quality objectives and provides a measurable target for sources to monitor and which to comply.” There are several reasons why the City disagrees with this statement. First, as the Regional Board staff itself acknowledged on page 14 of its responses to comments on the Salinas River Nutrient TMDL, “a concentration-based load allocation expression may not adequately provide meaningful connection to on-the-ground implementation decisions.” It may not tell “us much about how much pollution is being reduced or the efficacy of implementation practices.” Since the fundamental goal of a TMDL is to reduce the overall load of pollutants to impaired waters, the concentration-based approach will not help stakeholders measure the load reduction and efficacy of their implementation practices. Second, and for similar reasons, the concentration-based approach may actually impair meaningful implementation measures that would result in better overall load reduction as concentrations increase with decreased flow. It may force implementation approaches that are designed to achieve the concentration targets, but that do not reduce overall loading. Third, the Regional Board staff has the information to express allocations as mass loads, and such mass load allocations and interim reduction targets would provide meaningful measurable targets for sources to monitor and with which to comply.

Staff response: See Response to Comment 13, 19, and 28.

30. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

Implementation for Discharges from Irrigated Lands (Draft Project Report, pp. 129-131)

As the Draft Project Report identifies on page 101, cropland and groundwater sources are the dominant sources of nutrient loading in the TMDL project area. Therefore, the TMDL and its implementation options must be fashioned in a holistic way to allow the maximum reduction in loads from irrigated lands. This will provide the most ‘bang for the buck’. Without load reductions from cropland and groundwater sources, it will be infeasible to address the impairment. In this regard, the City is concerned about the statement that the “current Agricultural Order provides the requirements necessary to implement this TMDL.” The City is concerned that the concentration-based approach of the TMDL may ultimately drive regulatory decisions, including decisions about the Agricultural Order, that are not in the overall best interests of all the stakeholders in the watershed. For example, the City questions whether the use of the “pump-and-fertilize” approach will ultimately be consistent with the concentration-based allocations in the TMDL. The City recognizes that page 131 of the Draft Project Report allows staff to assess compliance with the load allocations using, among other things, “annual and seasonal receiving water mass load reductions consistent with the current load reduction estimates...” However, that same page indicates that compliance may also be measured by achievement of the concentration-based allocations and targets alone. Since the measurement of compliance is phrased to give the Regional Board, not the discharger, flexibility in this compliance assessment, dischargers have no assurance that compliance with mass load reductions alone will be sufficient for compliance purposes. This will, in turn, drive the poor implementation decisions discussed throughout this letter. To avoid this result, the Regional Board should be specific that compliance with the mass load reductions will be sufficient to establish compliance with the TMDL even if the concentration-based allocations are not achieved.

Staff response: Staff agrees that reduction in loads from irrigated lands is an important objective of the proposed TMDLs. As such, the TMDL utilizes the existing Agricultural

Order as the sole implementation mechanism for controlling discharges from irrigated agricultural lands.

The Agricultural Order requires dischargers to achieve compliance with applicable water quality standards, and the TMDL describes expectations and water quality goals pertaining to nutrient pollution to be achieved consistent with the Agricultural Order. For example, finding 10 of the Agricultural Order states:

“This Order requires compliance with water quality standards. Dischargers must implement, and where appropriate update or improve, management practices, which may include local or regional control or treatment practices and changes in farming practices to effectively control discharges, meet water quality standards and achieve compliance with this order.”

Note that existing numeric water quality standards include the nitrate standard protective of drinking water, the unionized ammonia standard protective against toxicity, and dissolved oxygen standards protective of aquatic life that are also indicative of compliance with the biostimulatory substances objective. Note that these standards are expressed in units of concentration. The City suggests that demonstrating reduction of mass load be sufficient to show compliance with the TMDLs, and therefore allocations and water quality standards. However, mass load reduction cannot be used as a proxy for these water quality standards. It is true, however, that mass load reductions can be used as demonstration of an “individual’s” progress towards achieving allocations. Many of the nutrient impairments identified in the proposed TMDL are driven from multiple non-point sources of loading. Additionally, many impaired waters receive loading from various sources. Consequently, in many cases, there is a lack of discrete loading points from which to measure nutrient loading and contribution. Therefore, “individual” compliance could be measured through BMP analysis and estimated loading from these areas. However, staff will still need to assess resulting water quality in receiving waters to determine whether TMDLs and water quality standards are being achieved.

Also see Response to Comment 13 and 19.

31. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

Implementation for Discharges from MS4 Stormwater Entities (Draft Project Report, pp. 132-136)

The City has the same concerns about the implementation actions and compliance options for MS4s as expressed above with regard to irrigated lands. First, the City requests that the Regional Board revise the TMDL to make it clear that BMP implementation or the demonstration of load reductions on a mass basis is sufficient, standing alone, to demonstrate compliance. Second, the City believes that more time to develop the Wasteload Allocation Attainment Program should be provided. The City believes that the WAAP would best achieve its purpose if developed in the context of a more comprehensive approach to load reduction. This will likely require more than one year to develop. Finally, the City requests that the Regional Board confirm that the allocations in the TMDL will be incorporated into applicable NPDES permits, if at all, only through a BMP-based approach.

Staff response: The City and other implementing parties may use a wide range of metrics to demonstrate progress towards achieving allocations, including an account of

BMP implementation. However, attaining water quality objectives may not be superseded by such an approach. All implementing parties must show progress towards achieving existing water quality objectives which includes attainment of the 10 mg/L nitrate nitrogen objective protective of the MUN beneficial use.

Regarding more time to develop the WAAPs, staff endeavors to maintain flexible and accommodating timeframes that are consistent with state and federal law. This would include timing and scheduling associated with reopening the state Phase II Small Municipal Separate Storm Sewer System (MS4) General Permit and incorporating TMDL requirements into the MS4 permit.

Also see Response to Comments 26, 30 and 62 for demonstrating compliance.

32. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

Non-Regulatory Interim Reduction Goals (Draft Project Report, pp. 136-137)

The City thanks the Regional Board staff for establishing a 30 year TMDL achievement date. The City also understands that the interim reduction goals set forth on page 137 are not waste load allocations or enforceable water quality standards. However, in practice, these interim goals often are used by the Regional Boards or third-parties as a measuring stick akin to enforceable requirements. Therefore, care should be taken in how they are expressed and measured. The City therefore requests that the TMDL be revised to make it clear that achievement of the interim reduction goals will not be measured through a concentration-based approach. Rather, achievements should be measured through BMP implementation or mass load reductions only. The City acknowledges that on page 138 of the Draft Project Report the Regional Board provides that “measures of TMDL implementation process will not necessarily be limited to receiving water column concentration-based metrics...” However, this does not provide sufficient flexibility for the City to measure its achievement of the interim goals through only a BMP based or mass load based approach.

Staff response: During development and approval of the lower Salinas River Nutrient TMDL, staff received public comments mentioning that this section of the Project Report and Resolution was duplicative and unnecessary. As a result this section was removed in its entirety from the Lower Salinas River Nutrient TMDL. In recognition of these earlier comments and to be consistent with the Lower Salinas River Nutrient TMDL, staff has deleted the section titled “Non-regulatory Interim Reduction Goals” from the Project Report and Resolution. The entire section has been removed because the language is duplicative and may be interpreted as inconsistent with the MS4 permits or the Agricultural Order.

33. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

Suggested Management Measures (Draft Project Report, pp. 138-141)

The City believes that the Regional Board should add a discussion of “pump-and-fertilize” as a management measure for agricultural sources.

Staff response: In concurrence with the City’s recommendation, staff has added the “pump-and-fertilize” language to the Project Report as a suggested management measure (See Response to Comment 19).

34. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

Monitoring (Draft Project Report, pp. 141-148)

The City believes that the monitoring requirements should focus on mass load reductions and not on concentration-based approaches.

Staff response: This section of the Project Report is titled “Proposed Monitoring Requirements” and it is important to note that specific monitoring requirements are contained in the orders that implement the TMDLs (e.g., Agricultural Order and MS4 permits). The proposed monitoring requirements, as contained in the Project Report, are merely suggestions for appropriate nutrient compounds, locations, and frequencies. The City can propose the same or different monitoring locations and strategies in its Wasteload Allocation Attainment Plan.

With reference to load-based monitoring it should be noted that the Cooperative Monitoring Program (CMP) is obtaining flow measurements coincident with water quality measurements in an effort to assess loading characteristics. In addition, staff of the CMP have indicated their desire to pursue load-based metrics to demonstrate progress in attaining the TMDLs. Likewise, the City is invited to propose monitoring strategies that demonstrate progress through mass-load analysis.

35. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

Timeline and Milestones (Draft Project Report, pp. 144-148)

As noted above, the City appreciates the 30 year timeframe for achievement of the allocations. However, even this period of time may be insufficient to achieve the concentration-based allocations. For this reason, the City believes that the TMDL’s allocations should be expressed only in terms of mass loads. If the TMDL’s allocations are expressed only in terms of mass loads, the 30 year timeline may be sufficient to address the impairment.

Staff response: Staff has concluded that, regardless of whether the allocations are expressed as concentration or mass load, the reductions necessary to achieve the TMDL will necessitate the same amount of time and effort. Please see staff Response to Comments 13, 19, and 20.

36. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

Review of Water Quality Standards/Delisting Decisions (Draft Project Report, pp. 150-151)

As noted already in this comment letter, the City urges the Regional Board to address the water quality standards and potential delisting of the Blosser Channel, Bradley Channel, and Main Street Canal now. Addressing these issues now, rather than later, will allow the City and other stakeholders to focus on the real problems and comprehensive solutions to them. Also, addressing these issues now may facilitate treatment approaches that could rely upon these flood control facilities for conveyance purposes.

Staff response: See Responses to Comment 22 regarding water quality standards, Comment 23 regarding the Blosser Channel listing and Comment 26 regarding treatment approaches.

37. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

Nutrient Trading

The Draft Project Report does not address nutrient trading in any detail and the concentration-based approach taken in the TMDL will undermine nutrient trading approaches. The Draft Project Report should address nutrient trading as a compliance approach. If the Regional Board does not convert the allocations to a mass load basis only, the Draft Project Report should also assess the impacts of the concentration-based approach on a nutrient trading system and allow for exceptions from the concentration-based allocations if necessary to achieve load reductions through nutrient trading.

Staff response: With regard to the concentration-based TMDL and nutrient trading, see Response to Comments 19 and 20.

38. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

Cost Estimate (Draft Project Report, pp. 152-161)

The cost estimates contained in the Draft Project Report do not take into account the groundwater treatment costs that will be required because of the TMDL's concentration-based approach. Because the TMDL's approach will impair the ability to implement a "pump-and-fertilize" approach, legacy contamination in shallow groundwater will not be addressed. The costs associated with addressing this contamination should be assessed as a direct result of TMDL implementation. Similarly, the cost of alternative groundwater supply for municipal purposes must be assessed as a direct result of the TMDL. As noted in this comment letter, the concentration-based approach will cause increased demands on groundwater currently used for municipal supply and could also cause contamination of that water. To assess the true costs of the TMDL, these costs should be estimated and included in the Draft Project Report.

Staff response: Staff has not included potential groundwater treatment costs or alternative ground water supply costs in the Project Report because these actions are not associated with implementation of the Agricultural Order which is used to implement the TMDL. See Response to Comment 19 for discussion regarding concentration-based and load-based TMDL approach and Response to Comment 20 with regard to the assertion that the TMDL will impact groundwater quality.

Note that staff has included load-based alternative expressions and referenced the “pump-and-fertilize” remediation approach in the Project Report.

39. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

COMMENTS ON THE SUBSTITUTE ENVIRONMENTAL DOCUMENT AND ANALYSIS

As the Regional Board correctly acknowledges, it is exempt from certain aspects of CEQA compliance pursuant to its status as a certified regulatory program. (Pub. Res. Code, § 21080.5, Cal. Code of Reg., tit. 14 [“State CEQA Guidelines”], § 15251(g); Cal. Code Regs., tit. 23, § 3720 et seq.) Accordingly, the Regional Board may use a substitute document (“SED”) instead of preparing and Environmental Impact Report (“EIR”). (*San Joaquin River Exch. Contractors Water Auth. v. SWRCB* (2010) 183 Cal.App.4th 1110, 1125.) However, the Regional Board remains subject to all of those aspects of CEQA outside the scope of the exemption for certified regulatory programs, including CEQA’s policy goals and substantive standards. (State CEQA Guidelines, § 15250: *City of Arcadia v. SWRCB* (2006) 135 Cal.App.4th 1392, 1422; *Env’l Protection Info. Ctr. v. Johnson* (1985) 170 Cal.App.3d 604, 616; *Californians for Native Salmon & Steelhead Assn. v. Dept. of Forestry* (1990) 221 Cal.App.3d 1419, 1422.).

Accordingly, CEQA’s basic policy goal to “[i]nform governmental decision makers and the public about the potential, significant environmental effects of proposed activities’ still applies. (State CEQA Guidelines, § 15002(a)(1).) SEDs, like EIRs, achieve this objective by, among other things, eliminating or minimizing a proposed action’s significant effects by identifying reasonable alternatives and mitigation measures. In assessing the impact of a proposed project on the environment, an agency normally examines the changes in existing environmental conditions in the affected area that would occur if the proposed activity is implemented. (*San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 660.) In evaluating the significance of environmental effects of a project, the lead agency must consider direct and reasonably foreseeable indirect physical changes in the environment which may be caused by the project. (Pub. Res. Code, § 21065; *Citizens for Responsible & Open Gov’t v. City of Grand Terrace* (2008) 160 Cal.App.4th 1323, 1333.)¹¹

While a substitute environmental review document is exempt from some of the formatting and procedural requirements of EIRs, ultimately it must include the same types of basic environmental information as an EIR would. (*Friends of Old Trees v. Dept. of Forestry & Fire Protection* (1997) 52 Cal.App.4th 1383, 1393; *Laupheimer v. State* (1988) 200 Cal.App.3d 440, 462.) For example, the SED must still: (1) describe the proposed project; (2) disclose and analyze potentially significant adverse project-specific environmental impacts; (3) consider cumulative impacts; (4) discuss alternatives and mitigation measures that could reduce or eliminate the project’s significant impacts; (5) be made available for review and comment by the public and other agencies; and (6) be justified based on specific benefits, including economic, social, or other conditions. (Pub. Res. Code, § 21080.5(d)(3); State CEQA Guidelines, § 15252(a); *Sierra Club v. State Bd. of Forestry* (1994) 7 Cal.4th 1215, 1229; *Ebbetts Pass Forest Watch v. Dept. of Forestry & Fire Protection* (2008) 43 Cal.4th 936, 943; *Katzeff v. Dept. of Forestry & Fire Protection* (2010) 181 Cal.App.4th 601, 608; *County of Santa Cruz v. State Bd. of Forestry* (1998) 64 Cal.App.4th 826, 830.) Just as for EIRs, the conclusions of substitute environmental documents must be based on scientific and other empirical evidence. (*Ebbetts*

¹¹ “Direct impacts” are those occurring at the same time or place as the project, while “indirect impacts” are those that are reasonably foreseeable to occur at some distance or at a later time. (State CEQA Guidelines, § 15358.)

Pass, supra, at 957-958; *Joy Rd. Area Forest & Watershed Assn. v. Dept. of Forestry & Fire Protection* (2006) 142 Cal.App.4th 656, 677; *Mountain Lion Coalition v. Fish & Game Com.* (1989) 214 Cal.App.3d 1043, 1047.)

Staff response: In preparing the substitute environmental documents, staff has considered the requirements of Public Resources Code section 21159 and California Code of Regulations, title 14, section 15187. This analysis is not intended to be an exhaustive analysis of every conceivable impact, but an analysis of the reasonably foreseeable consequences of the adoption of this TMDL, from a programmatic perspective. Compliance obligations will be undertaken directly by public agencies that may have their own obligations under CEQA. Project level impacts may need to be considered in any subsequent environmental analysis performed by other public agencies, pursuant to Public Resources Code section 21159.2. The Central Coast Water Board analyzed the potential impacts to the environment based on the proposed project and the reasonably foreseeable methods of compliance and made the significance determinations based on the scientific and factual data.

It should be noted that Section 15126.2(c) of the CEQA Guidelines requires a discussion of potential significant, irreversible environmental changes that could result from a proposed project.

A significant effect on the environment is defined in regulation as:

“a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. A social or economic change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant”

(14 CCR section 15382)

(emphasis added by Water Board staff)

Therefore, consistent with 14 CCR § 15382, staff endeavored to consider environmental effects that could reasonably be expected to result in significant effects.

40. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

The TMDL appropriately acknowledges that the Regional Board must comply with CEQA when it considers the TMDL, and the Board has accordingly prepared the SED. Unfortunately, the City has several concerns with the SED's sufficiency as a CEQA document, and is concerned that the SED does not sufficiently assess and analyze the TMDL's impacts in, among other things, the areas of water resources, agricultural resources, biological resources, cumulative impacts, and mitigation measures. In addition, the SED fails to consider feasible alternatives that could reduce the TMDL's significant environmental impacts and eliminate some of the above-described problems. The City's specific comments on the SED are set forth below:

3.1 **Baseline.** The SED does not appear to identify what baseline is being used to measure the impacts of the Project. (See, e.g., SED at 3.) Because an understanding of the existing environmental baseline/current conditions is necessary to measure the impacts of a project, a disclosure of the baseline being used to assess the different environmental impacts is

vital. The SED is deficient as currently drafted because it fails to identify the environmental baseline/current conditions.

Staff response: The City is correct that the SED does not contain a complete description of current conditions; instead the SED incorporates by reference (Section 1, General Environmental Comments), the Project Report titled, "Total Maximum Daily Loads for Nitrogen Compounds and Orthophosphate in Santa Maria River and Oso Flaco Lake Watersheds." The Project Report contains a description of the proposed project including current baseline conditions and satisfies California Code of Regulations, Title 23, section 3777(a), which requires a written report that includes a description of the proposed activity.

41. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

3.2 Water Resources. The TMDL concentration-based approach will likely have a significant impact on water resources that has not been disclosed or analyzed in the SED. Under the TMDL as proposed, it is reasonably foreseeable that many farmers will not continue to irrigate using nitrate-contaminated shallow groundwater, but will instead install deeper wells. This will, in turn, create two interrelated impacts to water resources. First, it will impact current use of the lower aquifer by the City for municipal supply purposes. By increasing demand for the water in the lower aquifer, the TMDL may create water rights issues and impact supply. Second, increased use of the lower aquifer will result in the migration of nitrate-contaminated shallow groundwater into the lower aquifer. This will reduce the value of the lower aquifer for water supply purposes and create expensive clean-up requirements. These reasonably foreseeable impacts need to be disclosed and analyzed in the SED, and the conclusion of impact significance for Hydrology and Water Quality Issue (f) changed accordingly.

In addition, the SED notes that "[r]easonably foreseeable structural compliance methods that involve land disturbance could cause increases in turbidity and suspended sediment loads . . . episodically and at local-scales, which may violate Basin Plan water quality standards for turbidity and suspended [solids]." (SED at 37.) Additional analysis should be included in the SED explaining why short term violations of Basin Plan standards as to turbidity and suspended solids do not constitute a violation of water quality standards or a significant impact, and how those violations are fully counter-balanced by long-term improvements to nutrient contamination, a completely different kind of environmental issue.

Staff response: With regard to potential groundwater impacts, see Response to Comment 20. The City has speculated that the concentration-based TMDLs could result in overuse and possible contamination of the lower aquifer because the agricultural community would pursue higher quality groundwater supply to meet the concentration-based TMDLs. The City has not provided enough information to justify that concern. In accordance with CEQA, changes that are speculative in nature do not require environmental review.

With regard to potential violations of Basin Plan water quality objectives for turbidity and suspended sediment, the SED states that short-term, infrequent, localized water quality violations should be acceptable in cases where long-term benefits to the beneficial uses of surface waters outweigh episodic and ephemeral local impacts based on site-specific findings and information. Based on this conclusion, staff anticipates that there will be no substantial adverse impacts that result in violation of water quality standards or waste discharge requirements.

42. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

3.3 Agriculture. Adoption and implementation of the TMDL may also have negative impacts on agricultural resources in the region. In the SED, the Regional Board expresses a concern about the pollution of surface and ground waters caused by irrigation (SED at 4) and has proposed aspects of the TMDL accordingly. While the SED states that the TMDL does not “require” that any agricultural lands be taken out of production (SED at 25), that is not CEQA’s standard. It is a reasonably foreseeable result of the Project that some agricultural operations may cease in response to the limitations of the TMDL and the expense of complying. The SED does not recognize this foreseeable, potentially adverse impact, and has no discussion of the potential cost of compliance or the foreseeable impacts of such. If the Project results in farmland being fallowed, which is a reasonably foreseeable result of discontinuation of use, that could lead to additional indirect impacts to air quality, biological resources, and geology and soils (due to loss of topsoil). (See, e.g., *Westlands Water Dist. v. U.S.* (E.D. Cal. 1994) 1994 U.S. Dist. LEXIS 6260, *7-8 [increased land fallowing has attendant increases in fugitive dust emissions]; Brian E. Gray, *The Market and the Community: Lessons from California’s Drought Water Bank* (2008) 14 *Hastings W.-N.W. J. Env. L. & Pol’y* 41, 87 [fallowing land reduces food and nesting habitat for wildlife]; *Westlands Water Dist. v. United States* (E.D. Cal. 1994) 1994 U.S. Dist. LEXIS 6276, *52 [finding lack of water for farmland could result in soil erosion and depletion of quality soil]; Sharratt et al., *Loss of Soil and PM10 from Agricultural Fields Associated With High Winds on the Columbia Plateau* (2006) 32 *Earth Surf. Process, Landforms*, 621-630 [fallowing leads to increased levels of soil erosion]; *Soil Erosion: A Food and Environmental Threat* (2006) 8 *Environment, Development and Sustainability* 119-137, 124 (2006) [leaving cropland unplanted exposes soil to erosion; soil erosion in the United States costs billions of dollars in loss of productivity].) Increased fallowing can also result in aesthetic impacts relating to the degradation of the visual character of the land if it is converted from verdant farmland to weed-choked, barren fields, belying the SED’s conclusion of “no impact” at all in this area. (SED at 24.) The SED should be revised to recognize and analyze these potential direct and indirect impacts.

While the SED does recognize that 233 acres of land could be taken out of production if all growers choose to install buffer strips, it finds that conversion of 233 acres to a non-agricultural use is not a significant project-specific impact. However, nowhere does the SED disclose the past, present, or reasonably foreseeable future projects that may also be resulting in the conversion of farmland to non-farm uses or evaluate the cumulative impacts of the loss of 233 acres in addition to these other losses. The County of Santa Barbara alone lost more than 10,000 acres of agricultural land between 2006-2008 (http://www.conservation.ca.gov/dlrp/fmmp/pubs/2006-2008/Documents/0608appendix_a.pdf) and this loss of agricultural land has continued. Loss of much less farmland than is anticipated in the SED has been found to be a significant environmental impact in published CEQA cases. (*Citizens for Open Govt. v. City of Lodi* (2012) 205 Cal.App.4th 296, 320-21 [conversion of 40 acres of prime farmland to non-agricultural uses a cumulatively considerable impact]; *Cherry Valley Pass Acres v. Sunny-Cal Egg & Poultry Co.* (2010) 190 Cal.App.4th 316, 347-350 [conversion of 200-acre site to non-farm uses a significant impact on agricultural resources].) This section, or at least the cumulative impacts analysis, should be revised accordingly and the impact conclusion revisited.

Staff response: The City has speculated that the economic impacts would be so large as to result in large scale termination of agriculture and that land would be sold for other

uses or abandoned as fallowed land that would result in impacts on the environment. No significant information was provided to justify this concern.

Nutrient management strategies in agricultural watersheds have been underway for many years across the nation as well as in Europe; staff is unaware of any examples of nutrient water quality management strategies, including TMDLs, having a substantial, adverse economic impact resulting in the cessation of farming. That said, staff recognizes the proposed water quality goals are challenging, and has endeavored to provide for flexibility, adaptation, and re-consideration of the water quality targets and timelines.

CEQA states that economic or social effects of a project shall not be treated as significant effects on the environment (Pub. Res. Code § 21083.), and therefore the cost of compliance is not appropriate in the SED. Central Coast Water Board staff did analyze the foreseeable environmental impacts of removing agricultural lands from production. With mitigation, staff concluded that these impacts are less than significant. For example, the SED acknowledges that some structural treatment practices identified in SED Section 2, such as riparian buffers and vegetated treatment systems (e.g., wetlands), could result in conversion of farmland to non-agricultural uses. The SED references the Final Subsequent Environmental Impact Report (March 17, 2011) for the Agricultural Order, and states that if all growers in Tier 3 chose to install buffer strips to comply with the Agricultural Order, approximately 82 to 233 acres or 0.002 to 0.004% of the 540,000 acres of agricultural lands within the Central Coast Region, would be taken out of production. The City incorrectly interpreted that 233 acres could be taken out of production as a result of this TMDL project when in fact this number represents the entire Central Coast Region, not the Lower Santa Maria River watershed. As such, a more relevant metric is that an estimated 0.004% of cropland could potentially be removed from agricultural production where growers in Tier 3 install treatment buffers. With approximately 101 square miles (64,640 acres) of farmland in the TMDL project, this would equate to about 3 acres (64,640 x 0.004%).

Considering that a small area may be taken from production, the SED (pg. 25) states that the impact on acres farmed does not constitute a substantial adverse conversion of farmland to non-agricultural uses. The SED provides mitigation strategies to reduce the adverse impacts of these structural treatment systems to less than significant with mitigation incorporated (see SED pg. 26).

The City has commented that between 2006-2008, 10,000 acres of agricultural land in Santa Barbara County has been lost and references the Farmland Mapping and Monitoring Program (FMMP) (see comment link above). FMMP Table A-33, Santa Barbara County, 2006-2008 Land Use Conversion shows that of 10,605 acres of farmland converted to other uses, 9,439 acres was designated "Farmland of Local Importance." While CEQA pertains to conversion of "Prime Farmland, Unique Farmland, or Farmland of Statewide Importance," it makes no reference to "Farmland of Local Importance," so this estimate of lost farmland is inaccurate. The FMMP defines "Farmland of Local Importance" as:

"All dryland farming areas and permanent pasture (if the soils were not eligible for either Prime or Statewide). Dryland farming includes various cereal grains (predominantly wheat, barley, and oats), sudan, and many varieties of beans. (Although beans can be high value crops the production areas are usually

rotated with grain, hence the decision to include them under Local rather than Unique. Also, bean crop yields are highly influenced by climate, so there can be a wide variance in cash value.)”¹²

In addition, FMMP Table A-33 indicates that of the 9,439 acres of “Farmland of Local Importance” converted, 8,550 acres were converted to grazing lands, noting that “Conversion to Grazing Lands due to non irrigated agricultural areas left fallow for four or more update cycles.”

In summary, even if all dischargers who could be subject to the condition to use vegetated buffers or some other method to control discharges in the Agricultural Order (Tier 3 dischargers) chose to use vegetated buffers or converted to other uses, the total acreage is quite small compared to the total amount of acreage used for farming. Even if the effects could be more severe, they can be mitigated due to actions by dischargers. Therefore, the Central Coast Water Board’s determination that the impact on agricultural resources will be less than significant with mitigation is appropriate.

43. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

3.4 Air Quality. For Air Quality Issue (c), the SED states that " The implementation of structural BMPs that could result in fine particulate matter and vehicle emissions, such as the BMPs [for] land disturbance and excavation[,] could contribute to the problems with these pollutants. However, any contribution would be very small, and nominal given both the temporary nature of any such impacts and the fairly small nature of any such construction activity given the size of the basin." (SED at 27.) The SED then comes to a conclusion of less than significant for Air Quality Issue (c), as well as for Issue (d).

Unfortunately, little or no evidence is given that supports these conclusions. How much would the contribution be? Is the air basin in compliance with all the pollutants of concern that could be generated? What is the extent of the structural BMPs that might be implemented, resulting in how much construction and how much air pollution/traffic? The discussion as to these impacts is too conclusory, with no substantial evidence put forth to support the conclusions of no impact. It also appears to conflict with the analysis in other sections of the SED, including the Biological Resources section, which states that there are structural compliance methods that “involve significant earth-moving or land disturbance” (*id.* at 28) and the cultural resources section, which recognizes that the Project may result in “construction of large-scale infrastructure.” (*id.* at 33.) These sections should be made consistent, and the facts and estimates supporting the conclusion of less than significant should be disclosed and the conclusions revisited. In addition, the air quality standard for issue (e) is whether the Project will create any objectionable odors. (*id.* at 28.) However, the analysis of this impact appears to have been cut and pasted wholesale from the analysis in air quality issue (d), without any discussion of odors at all.

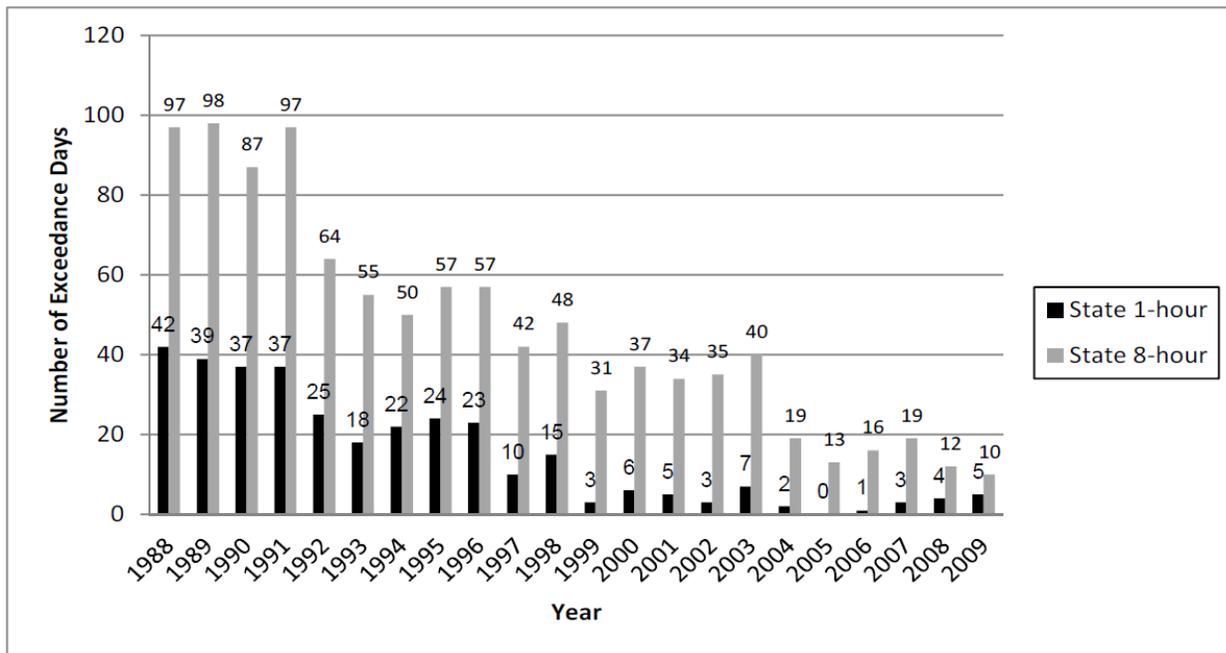
Staff response: Reasonably foreseeable methods of compliance for the proposed TMDL may include small-scale construction projects for the installation of structural BMPs. Small-scale construction for implementation of structural BMPs (e.g., swales, vegetative buffers, retention basins, and constructed wetlands) might include a small number of earthmoving vehicles (backhoes, dump trucks, bull dozers, and other construction

¹² California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2008, Santa Barbara County. Metadata associated with GIS dataset.

vehicles. Significant large-scale earth moving or land disturbance activities have not been identified as potential compliance methods. The SED states “any contribution would be very small, and nominal given both the temporary nature of any such impacts and the fairly small nature of any such construction activity given the size of the basin.” Therefore, with respect to Air Quality Issues (c) and (d), the SED concludes these impacts are less than significant.

The U.S. Environmental Protection Agency (USEPA) and CARB develop and implement air quality standards, and, using the ambient air monitoring data collected within Santa Barbara County, determine the attainment classification for the county, or whether air in the county is in attainment of certain air quality standards.

Santa Barbara County is an attainment area for the federal 1-hour ozone standard. For the purposes of the federal 8-hour ozone standard, Santa Barbara County has been designated attainment. The County’s air quality has improved enough to be considered in attainment of the federal 8-hour ozone standard and the state 1-hour ozone standard. Although the County does not attain the state 8-hour ozone standard, a long-term declining trend suggests emission reduction programs have been effective in reducing the exceedances of both 1-hour and 8-hour ozone standards¹³.



Santa Barbara County Number of Days Exceeding State 1-hour and 8-hour Ozone Standards

With regard to the Biological Resources and Cultural Resources sections, staff made reference to large scale land disturbance in passing and to highlight that project-level CEQA analysis may be required of lead agencies. As stated previously, foreseeable means of compliance do not include large-scale or significant land disturbances. Therefore, staff has removed all references to potential large-scale excavation and land disturbance activities in these sections of the SED to avoid any misunderstanding.

¹³ 2010 Clean Air Plan, Triennial Update to the 2007 Clean Air Plan-State Ozone Standard (pg. EX-2).

Staff edited Air Quality (e) to state “Potential compliance measures would not involve the construction of any permanent sources of odor and therefore would not create objectionable odors affecting a substantial number of people. No odor impacts would result from the project.”

44. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

3.5 Biological Resources. Adoption and implementation of the TMDL could also have potentially adverse impacts to biological resources. Because the Project may result in the discontinuation of agriculture on some land within the Project area, it is reasonably foreseeable that some owners of this land could choose to develop that land into residential or commercial uses. More intense land uses could result in adverse impacts upon wildlife. Birds, rodents, and listed and special status species have historically used wildlands and farmlands as habitat, and this fauna could be displaced upon land use conversion. While the SED recognizes potentially significant impacts to biological resources due to implementation of structural compliance and other measures (SED at 29), it does not analyze or mitigate for this additional impact to biological resources.

Staff response: The City has speculated that agricultural land will be removed from production and converted to urban uses (residential or commercial), thereby removing farmland as biological habitat. See Response to Comment 42 for a discussion of agricultural resources and mitigation strategies.

Staff does not concur with the City’s assertion that agricultural lands will be converted to urban lands. Table A-33, Santa Barbara County, 2006-2008 Land Use Conversion shows that of the 113,903 acres of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, only 45 acres (0.04%) were converted to urban during the period. In addition, from 2006-2008 these three farmland types had a net gain of 377 acres.

45. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

3.6 Greenhouse Gases (“GHGs”). The SED concludes that there will be a less-than-significant impact related to the generation of GHG emissions as a result of the Project. (SED at 35.) The SED admits that short-term increases in traffic during the construction and installation of structural compliance methods are a foreseeable impact of the Project, but states that they “would not be anticipated to rise to the level of a substantial adverse change on the climate.” (*Ibid.*) However, this discussion is largely conclusory, with little or no facts or data supporting the conclusion of less than significant and no impact. How much GHGs may be generated as a result of the Project upon wide-spread adoption of the structural compliance method? Are there any applicable thresholds of significance? Would the amount of GHGs violate any threshold that has been set? In order to understand and fully support the conclusions as to significance, this section should be revised and additional data and analysis added.

Staff response: With regard to Greenhouse Gas Emissions VII (a), reasonably foreseeable methods of compliance are likely to require additional motor vehicle trips and increased traffic during construction and maintenance of structural BMPs, which would increase greenhouse gas emissions from mobile sources. Considering the likely small contributions of the reasonably foreseeable methods of compliance relative to

major facilities (i.e., cement plants, oil refineries, fossil-fueled electric-generating facilities/providers, cogeneration facilities, hydrogen plants, and other stationary combustion sources), the contribution from structural BMP implementation is small in scale and is not cumulatively considerable and would not result in a significant impact on the environment.

An estimation of the amount of greenhouse gas emissions generated from foreseeable compliance methods is consistent with project-level CEQA analysis, rather than planning level CEQA analysis required of certified regulatory programs. Although not foreseen, should implementation projects reach such a scale then project level CEQA analysis would be used to estimate GHG's to address this issue.

46. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

3.7 Transportation/Traffic. The Traffic section of the SED states that the Project will not result in any potentially substantial adverse increase in traffic. (SED at 43.) However, the GHG section admits that a short-term increase in traffic during construction and installation of the structural compliance methods is a foreseeable impact of the Project. (*Id.* at 35.) This potential level of increase in traffic should be disclosed in the traffic section as well, and the impacts analyzed in both sections.

Staff response: With regard to traffic, methods of compliance for the proposed TMDL may include small-scale construction projects for the installation of structural BMPs. A significant increase in traffic due to large-scale earth moving or land disturbance activities has not been identified as potential means of compliance.

To be consistent with the GHG section, staff has added the following sentence to Transportation/Traffic (a):

“There could be short-term increases in traffic during the construction and installation of structural compliance methods, but these activities would be the same as typical construction and maintenance activities in urbanized or rural areas, such as ordinary road and infrastructure maintenance and building activities, or farm operations, and would not be anticipated to rise to the level of a substantial adverse change to existing traffic load and capacity of the street system.”

47. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

3.8 Cumulative Impacts. CEQA requires a reasonable analysis of the cumulatively considerable impacts of a proposed project, and this requirement applies to SEDs as well. (Pub. Res. Code, § 21083(b); *Env'l Protection Info. Ctr.*, *supra*, 170 Cal.App.3d at 616.) “Cumulatively considerable” impacts means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. (State CEQA Guidelines, § 15064(h).)

The SED has less than half a page devoted to cumulative impacts, and comes to a conclusion of less than significant. However, the support for this conclusion appears insufficient, as the analysis does not identify any other past, present, or future projects that the Project's impacts

are being evaluated with. In addition, its conclusion of “Less than Significant” is puzzling, since the Project itself will result in two identified, project-specific significant impacts. (See SED at 16, 23.) The SED does not support how the Project alone can have a significant impact, but, when the impact is added to the impacts of all other past, present, and future projects, the impacts are less than significant. In addition to the two identified project-specific impacts that should also be found to be cumulatively significant, as discussed above the Project will also likely result in significant cumulative impacts to agriculture, even if the potential loss of 233 acres of agricultural land is not significant on a project-specific level. This is especially true because of the insufficiency of the mitigation for reducing those impacts (discussed below).

Staff response: The City is correct; the SED identified potential significant impacts associated with Biological Resources – CEQA Checklist Category IV(a); which are also discussed as potentially significant impacts to habitat of fish or wildlife species in the Mandatory Findings of Significance – CEQA Checklist Category XVIII.(a). Therefore, staff has added additional text to the cumulative impact discussion in the SED as follows:

“The SED concludes that reasonably foreseeable methods of compliance may result in potentially significant impacts to biological resources (see Biological Resources – CEQA Checklist Category IV(a) and Mandatory Findings of Significance – CEQA Checklist Category XVIII.(a) for the discussion). In examining the potential for cumulatively considerable effects, impacts to these biological resources together with the effects of other known projects in or near the project area were considered that also involve reduced flows and minor construction and earthmoving. The contribution of the proposed TMDL could be relatively major due to the wide distribution of reasonably foreseeable methods of compliance throughout the watershed. However, as discussed in the checklist, these impacts could be fully offset if adequately mitigated on the project level by the lead agency. Therefore, the proposed Basin Plan amendment will have a less than significant cumulative biological resources.

While some impacts could occur due to reduced flows, earth moving, or from implementing other actions to comply with the TMDL, the benefits, which include contributing to the present and future restoration of beneficial water uses, and reducing or eliminating pollution, nuisance and contamination, warrant approval of the TMDL, despite each and every unavoidable impact.

When the agencies and responsible parties responsible for implementing these TMDLs determine how they will proceed, then agencies responsible for those parts of the project can and should incorporate such alternatives and mitigation into any subsequent projects or project approvals.”

See Response to Comment 42 regarding the City’s comment on the potential loss of 233 acres of agricultural land.

48. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

3.9 Mitigation. The Regional Board has an independent obligation to rely upon substantial evidence to support its conclusion that impacts are mitigated to a less-than-significant level. (*Communities for a Better Env’t v. Cal. Resources Agy.* (2002) 103 Cal.App.4th 98.) For the two impacts to agricultural resources that are identified as less than

significant with mitigation, the Regional Board provided no such evidence. Mitigation measures must be enforceable and mandatory, but the Regional Board merely identifies “[p]ossible mitigation strategies” rather than enforceable mitigation. It does not fully define what these measures consist of, much less make them mandatory and enforceable, or analyze any potential environmental impacts that the mitigation measures themselves may have. (SED at 26.)

The fact that mitigation is outside the jurisdiction of the lead agency does not excuse the agency from meaningfully analyzing and mitigating for an impact if information is available to determine the impact. (*County of San Diego v. Grossmont-Cuyamaca Community College Dist.* (2006) 141 Cal.App.4th 86, 104.) In *County of San Diego*, a community college district indicated in its environmental document that off-campus intersections and roadways would be affected by a Master Plan project, which would result in significant impacts unless mitigation were imposed. The district then concluded that mitigation was infeasible because the district lacked jurisdiction over the affected roads and could not ensure that the needed road improvements would actually be implemented. (*Id.* at 97.) The court rejected the finding of infeasibility based on a claimed lack of jurisdiction. (*Id.* at 104.) Merely because the Regional Board may be “prohibited from specifying the manner of compliance with its regulations” (SED at 2) does not signify that mitigation measures can be overlooked, not analyzed, or not adopted as part of the Project approvals.

Staff response: Staff provided meaningful discussion of mitigation in the SED in the discussion of Agricultural Resources (a), (c), and Biological Resources (a).

For example, staff provided a meaningful analysis of potential impacts to Agricultural Resources (c) and has identified potential mitigation measures. The potential impacts are from purported food safety issues associated with the installation of vegetated treatment systems. Potential mitigation measures are stated in the SED as, “Food safety risk can be mitigated through rodent fencing, raptor poles to reduce rodent populations, proper selection of plant species that deter pest species, and proper wetland feature design and planting to minimize open water habitat that attract geese and other waterfowl. Also, because these are isolated systems within the landscape they cannot be used as migration corridors by animals.”

Additional discussion regarding agricultural resources is contained in Response to Comment 42. Note that staff may not prescribe “enforceable mitigation” because the Central Coast Water Board may not specify the manner of compliance with its orders; dischargers may comply in any lawful manner. (Wat. Code § 13360). The Court in San Joaquin River Exchange Contractors Water Authority v. State Water Resources Control Board (2010) 183 Cal.App.4th 1110, upheld the SED document at issue in that case and found that the Regional Board had listed options for implementing the TMDL but that the CEQA analysis on the implementation options could not be performed until the dischargers chose the methods they wished to use.

49. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

3.10 Alternatives Analysis. In a SED, the Regional Board is required to include “[a]n analysis of reasonable alternatives to the project.” (Cal. Code Regs., tit. 23, § 3777(b)(3); *Friends of the Old Trees, supra*, 52 Cal.App.4th at 1403-1405.) However, in analyzing only the proposed Project, a No Action alternative, and a patently infeasible alternative that would require the elimination of all farming and other activities that contribute to discharge of nutrients,

the alternatives analysis does not comport with CEQA's requirements. Other alternatives could avoid some of the significant environmental impacts of the Project, and these should be included and analyzed.

For example, the Regional Board should include a mass load based approach as an alternative to the concentration-based approach of the Project. This alternative would allow for the implementation of "pump-and-fertilize" approaches that would reduce some or all of the impacts associated with the Project. This alternative would study a more "holistic" approach to the impairment, not the narrow, concentration-based approach taken in the TMDL. This alternative could also include an assessment of alternative treatment approaches that are designed to significantly reduce the mass loading of nitrate.

The City acknowledges that in its responses to comments on the Salinas Nutrient TMDL, the Regional Board staff took the position that it is "not required in a CEQA-SED to consider alternatives [to] the concentration-based numeric targets and TMDLs for biostimulatory substances." (Response to Comments, p. 21.) The City believes that the Regional Board's position is not consistent with the requirements of CEQA. The City further believes that if the Regional Board were to analyze the mass load approach, it would conclude that such an approach is significantly better from both the CEQA and pollutant reduction perspectives.

Staff response: Staff did not provide a massbased alternative in the CEQA analysis because this alternative would not fulfill the Water Boards mandated obligation to attain concentration based numeric water quality objectives for nitrate and unionized ammonia consistent with state and federal law. Staff has concluded that a load based TMDL is simply an alternative "expression" for the proposed concentration-based TMDL and not an alternative to the project itself. In addition, regardless of whether the TMDL is expressed as concentrations or loads, the reasonable means of compliance are the same and CEQA analysis of a load based TMDL is not a proper alternative.

Additional discussion of the concentration based and load based TMDL approach is contained in Response to Comments 13 and 19.

50. Mr. Richard G. Sweet, P.E., Director of Utilities, City of Santa Maria

I. CONCLUSION

For all the reasons expressed above, the City requests that the Regional Board not move forward with the TMDL as currently proposed. To achieve the shared goal of load reductions, the City urges the Regional Board to prepare and consider adoption of a TMDL using a mass load approach that will allow for more "holistic" implementations options. The City stands ready to work with the Regional Board on such an approach.

Staff response: Staff appreciates the City's comments, as well as the City's proactive and cooperative approach in improving water quality. Staff has endeavored to provide a flexible and balanced TMDL project that will accommodate the City's concerns, while also fulfilling the responsibilities of the Water Board.

51. Ms. Janet Parrish, TMDL Liaison, US EPA

U.S. Environmental Protection Agency (EPA) recommends and supports your Board's adoption of the proposed Total Maximum Daily Load (TMDLs) for Nitrogen Compounds and Orthophosphate for the Lower Santa Maria River and Oso Flaco Lake Watersheds. The proposed TMDLs meet federal regulatory requirements under the Clean Water Act and appropriately set numeric targets, waste load and load allocations, and load reduction milestones to meet water quality standards. The TMDLs address impairments for Nitrate, Unionized Ammonia, Total Nitrogen, and Orthophosphate.

EPA supports the use of the recommended Nutrient Numeric Endpoints (NNEs) analysis to develop the TMDLs. We appreciate that these TMDLs have identified loads that are appropriate to support all relevant beneficial uses related to nutrients, including those related to municipal and domestic supply and full range of aquatic habitat beneficial uses. In addition, these TMDLs address impairments related to the toxicity and biostimulatory substances water quality objectives, which are critical for restoring and protecting nutrient-related water quality.

We have attached some detailed comments addressing issues that could benefit some clarification or changes in the final documents.

Staff response: Staff appreciates the comments.

52. Ms. Janet Parrish, Suzanne Marr and Jamie Marincola, US EPA

Waterbody Names 303(d) Listings and TMDL Assignments

It may be helpful to identify the TMDL as "Lower Santa Maria River and Tributaries to Oso Flaco Lake Watersheds" to avoid the implication that TMDLs are also included for Oso Flaco Lake.

Staff response: As suggested, staff has changed the title of the TMDL documents to "Total Maximum Daily Loads for Nitrogen Compounds and Orthophosphate for the Lower Santa Maria River Watershed and Tributaries to Oso Flaco Lake."

53. Ms. Janet Parrish, Suzanne Marr and Jamie Marincola, US EPA

We would like some clarification over which waterbodies have TMDLs included; clarifications could eliminate confusion that might otherwise imply that a needed TMDL for a waterbody has been overlooked, or that others are included extraneously. Specifically:

Unionized ammonia. North Main Street Channel, Nipomo Creek, Little Oso Flaco Creek, Santa Maria River, and Santa Maria Estuary are not identified on the 2008-2010 303(d) list as impaired and needing TMDLs for unionized ammonia, but TMDLs are included. We believe that you are being proactive and protective by including TMDLs for these waterbodies. It would be helpful to say so if that is the case.

Nitrate. Bradley Canyon Creek, Greene Valley Creek, Orcutt Creek, Oso Flaco Creek, and Little Oso Flaco Creek are identified on the 2008-2010 303(d) list as impaired and needing TMDLs

for nitrate, but they are not included in the list of waterbodies for which nitrate TMDLs are included. It appears as though they are not included for the MUN beneficial use (10 mg/l), but that more restrictive nitrate TMDLs (ranging from 4.3 to 8 mg/l) are included to address the biostimulatory substances impairment. It would be helpful to clarify this in both the project report and the resolution, and to state that the nitrate impairment for the MUN beneficial use for these waterbodies will be addressed through the more restrictive biostimulatory substances TMDLs, if that is the case.

Staff response: Staff has revised the Project Report, Table 3-22, "Water body and Pollutant Combinations Addressed in this TMDL," to clarify that unionized ammonia TMDLs are established proactively for the protection of the unlisted waterbodies (North Main Street Channel, Nipomo Creek, Little Oso Flaco Creek, Santa Maria River, and Santa Maria Estuary) and to clarify the waterbodies receiving numeric targets and allocations associated with biostimulatory substances. This revised Table 3-2 has been added to the Project Report and is provided below for reference.

Note that, as a result of these revisions, the total number of water body/pollutant combinations address in the TMDL is increased from 30 to 35.

Table 3-22. Water body and Pollutant Combinations Addressed in this TMDL.

Water Body Name	SB Water Body ID	Impairment Pollutant			Biostimulatory Substances
		Unionized Ammonia	Nitrate	Low Dissolved Oxygen	
<i>Blosser Channel</i>	<i>CAR3121003020011121135941</i>	X	X		
<i>Bradley Canyon Creek</i>	<i>CAR3121003020011121144840</i>	X	X ¹	X ¹	O
<i>Bradley Channel</i>	<i>CAR3121003020021002233532</i>	X	X		
<i>Greene Valley Creek</i>	<i>CAR3121003020080611165954</i>	X	X ¹	X ¹	O
<i>Little Oso Flaco Creek</i>	<i>CAR3121003020080611165546</i>	--	X ¹		O
<i>Main Street Canal</i>	<i>CAR3121003020020819110803</i>	X	X		
<i>Nipomo Creek</i>	<i>CAR3121001120011129124911</i>	--	X ²		
<i>North Main Street Channel</i>	<i>CAR3121003020080620111045</i>	--	X		
<i>Orcutt Creek</i>	<i>CAR3121003020011129154708</i>	X	X ¹	O	O
<i>Oso Flaco Creek</i>	<i>CAR3121003020020124122144</i>	X	X ¹		O
<i>Oso Flaco Lake</i>	<i>CAL3121003020011121102545</i>		X ³	O ³	
<i>Santa Maria River</i>	<i>CAR3121003020011228103528</i>	--	X ⁴		O ⁵
<i>Santa Maria River Estuary</i>	<i>CAE3121003020020311125938</i>	--		O	O
	Totals	12	12	5	7
	Total Water Body/Pollutant Combinations	36			

- X* Included on 2008-2010 303(d) list of impaired waterbodies and addressed in this TMDL.
- Not listed or impaired, however TMDLs proactively established using targets and allocations consistent with Basin Plan numeric water quality objectives (WQO's) for associated pollutant (0.025 mg/L unionized ammonia, 10 mg/L nitrate as nitrogen).
- O* Not included on 2008-2010 303(d) list of impaired waterbodies, however impairment asserted due to exceedance of WQO's and addressed in this TMDL using more restrictive biostimulatory nitrate and orthophosphate targets and allocations.
- ¹ Nitrate and/or low dissolved oxygen impairment addressed in this TMDL using more restrictive biostimulatory nitrate and orthophosphate targets and allocations.
- ² Listed but not exceeding WQO's. TMDL proactively established for Nipomo Creek using targets and allocations consistent with Basin Plan nitrate numeric WQO of 10 mg/L nitrate as nitrogen.
- ³ Oso Flaco Lake impairments will be addressed in a future, separate, lake-specific TMDL
- ⁴ Santa Maria River (upstream of Highway-1) nitrate TMDL established using targets and allocations consistent with Basin Plan nitrate WQO of 10 mg/L nitrate as nitrogen
- ⁵ Lower Santa Maria River (downstream of Highway-1 to the Santa Maria Estuary) impairment addressed in this TMDL using more restrictive biostimulatory nitrate and orthophosphate targets and allocations.

54. Ms. Janet Parrish, Suzanne Marr and Jamie Marincola, US EPA

Nipomo Creek is identified on the 2008-2010 303(d) list as impaired for nitrate, but the TMDL analysis concluded, using available data, that Nipomo Creek is not impaired for nitrate. A TMDL for nitrate is included nevertheless. Again, if this is included to be proactive and protective, it would be helpful to state so.

Staff response: *This clarification has been added to the revised Table 3-22. See Response to Comment 53 above.*

55. Ms. Janet Parrish, Suzanne Marr and Jamie Marincola, US EPA

It would be helpful to include a table or two in the TMDL section of the project report (Section 6.3, pp. 113 ff.) similar to Table 3-22, which lists the waterbodies and their impairments on the 2008-2010 303(d) list, new impairments that were identified in the analysis, impairments that should no longer be included in the next 303(d) list update (i.e., Nipomo Creek nitrate), impairments that will be addressed in future TMDLs (Oso Flaco Lake), impairments such as low dissolved oxygen that may be addressed by reducing nutrient impairments, but are not directly addressed in this action, and the TMDLs that are set for unionized ammonia and nitrate. The table(s) should make clear what TMDLs are included. If two tables, the first table can focus on the unionized ammonia and nitrate TMDLs that address the MUN beneficial use, and specifically identify the waterbodies that are included in the biostimulatory substances TMDLs, which address lower concentrations of nitrate as well as orthophosphate concentrations. In this way, it will be clear that TMDLs have been included for all the impairments that have been identified. Because the nitrate and orthophosphate TMDLs for the biostimulatory effects impairments are more complicated (two each for wet conditions, two for dry conditions for Bradley Canyon Creek, Greene Valley Creek, Orcutt Creek, Santa Maria River and Santa Maria River Estuary; and two for all seasons for Oso Flaco Creek and Little Oso Flaco Creek), having the second table providing the TMDLs for the biostimulatory nitrate and orthophosphate TMDLs will simplify the presentation.

We appreciate that your analysis is thorough, identifies protective TMDL levels, considers biostimulatory effects as well as microcystin impairments, and considers the full range of beneficial uses and water quality standards. Moreover, we support your inclusion of additional numeric targets for biostimulatory substances, nutrient response indicators, dissolved oxygen, and microcystins.

Staff response: *Staff recommends using the revised Table 3-22 to summarize these characteristics, particularly with reference to existing impaired waterbodies contained on the 2008-2010 list and waterbodies where new impairments are found. Note that unionized ammonia TMDLs are established for all waterbodies in the project area, nitrate TMDLs protective of the MUN beneficial use are established for waterbodies that do not exhibit biostimulatory conditions, and where low dissolved oxygen and biostimulatory substance impairments are found TMDLs are established using more restrictive nitrate and orthophosphate targets and allocations.*

56. Ms. Janet Parrish, Suzanne Marr and Jamie Marincola, US EPA

TMDL Implementation

EPA does not have authority to require TMDL implementation, nor to direct implementation plans. However, we do encourage effective implementation and tracking of implementation efforts, in order to facilitate our partnerships toward the ultimate goal of improved water quality condition. We applaud your efforts at developing effective implementation plans. Accordingly, the following comments are provided in the spirit of continued facilitation of effective implementation efforts. Overall, it is clear that the Water Board has developed a sound and effective Implementation Plan.

Staff response: *Staff appreciates the comments.*

57. Ms. Janet Parrish, Suzanne Marr and Jamie Marincola, US EPA

Section 7.3 Implementation for Discharges from Irrigated Lands

In referencing the Agricultural Order, it may be helpful to state (or reference another section) timing for monitoring components. How often, and how far into the future after TMDL adoption, is it likely that a) monitoring and reporting data will be turned in; and b) other monitoring and/or reporting data will be turned in? What are examples of other monitoring and reporting data? Throughout this section, it would be helpful to be consistent in how the Agricultural Order and its renewals and revisions are referred to (e.g., singular v. plural).

Staff response: *Timing for the monitoring components of the Orders include quarterly surface receiving water monitoring (with quarterly electronic data submittal), which is currently underway, and annual surface receiving water reporting. The Orders, adopted March 15, 2012, may not exceed five years (Wat. Code § 13269); therefore it is anticipated that these monitoring and reporting requirements will remain through 2016 and renewed or replaced at that time.*

Note that there are three Orders (one each for Tiers 1, 2, and 3) that specify monitoring and reporting requirements unique to each Tier. In addition to the quarterly monitoring and annual reporting mentioned above, groundwater quality monitoring and reporting is required for all tiers. Monitoring and reporting for Tier 2 and Tier 3 also include submission of an Annual Compliance Form containing information that will be helpful in assessing BMPs and waste discharge characteristics for each operation. Additional information pertaining to monitoring and reporting elements of the Orders may be obtained from the Central Coast Water Board website here:

http://www.waterboards.ca.gov/centralcoast/water_issues/programs/ag_waivers/index.shtml

Numerous examples of agricultural program monitoring reports may be obtained from the Central Coast Ambient Monitoring Program (CCAMP) website here:

<http://www.ccamp.org/ccamp/Reports.html#AqReports>

58. Ms. Janet Parrish, Suzanne Marr and Jamie Marincola, US EPA

Section 7.3.2 Priority Areas & Priority Pollutant

In stating that the Agricultural Order should (our emphasis) prioritize implementation and monitoring efforts, does this mean that it does, or is likely to? Or does this mean that Water Board staff is recommending that it do so? Clarification will help those subject to the order to comprehend the process.

Staff response: *The priority areas, as contained in the Project Report, are merely recommended locations within the TMDL project area where Agricultural Program staff and agricultural producers may focus or prioritize implementation efforts in accordance with the Order. These priority areas were derived from analysis conducted as part of the TMDL and are based on the severity and extent of water quality impacts due to excessive nutrients.*

59. Janet Parrish, Suzanne Marr and Jamie Marincola, US EPA

Section 7.3.4 Determination of Compliance with Load Allocations

In the first paragraph of this section, you state that “load allocations will be achieved through ... water quality monitoring” as one measure. Do you mean that water quality monitoring will measure whether or not actions were successful in meeting the load allocation, and provide feedback to help affected parties meet load allocations?

Staff response: Yes. To be clear, elements contained in the Orders provide the necessary implementation mechanisms to reduce nutrient discharges and also provide the necessary reporting (feedback) mechanisms to measure and inform whether or not actions to meet load allocations are successful and when allocations are met.

It should be noted that, in addition to monitoring and reporting elements of the Orders, the CCAMP also provides supplemental monitoring information that may be used to evaluate success of implementation efforts and attainment of TMDL allocations. The CCAMP is funded for the foreseeable future.

60. Ms. Janet Parrish, Suzanne Marr and Jamie Marincola, US EPA

In the list of options for assessing compliance, do you also mean to add that they are required to demonstrate attainment through monitoring?

Staff response: No. To be clear, the list contained in section 7.3.4, Determination of Compliance with Load Allocations, describes the options that will be considered by Water Board staff to assess compliance with load allocations. Monitoring requirements to demonstrate attainment of allocations are not prescribed in the TMDL, but rather in the monitoring and reporting requirements as contained in the Orders.

61. Ms. Janet Parrish, Suzanne Marr and Jamie Marincola, US EPA

Can you state whether there is Water Board authority for the Wasteload Allocation Attainment Program Required Elements?

Staff response: On February 5, 2013, the Phase II Small MS4 General Permit was adopted by State Board and will become effective on July 1, 2013. Note that the General Permit number and the State Board Order number have yet to be assigned. The State Board will incorporate any necessary revisions through a reopener, which could include Wasteload Allocation Attainment Programs. The State Board may additionally revise the Order through a reopener to incorporate any modifications or revisions to the TMDLs, or to incorporate any new TMDLs adopted during the term of this Order that assign a WLA to a Regulated Small MS4 or that identify a Regulated Small MS4 as a responsible party.

Additionally, Water Code § 13267 provides authority for the Water Board to request Wasteload Allocation Attainment Programs.

62. Ms. Janet Parrish, Suzanne Marr and Jamie Marincola, US EPA

Section 7.4.3 Determination of Compliance with Wasteload Allocations

The draft TMDL allows the Water Board to assess compliance with Wasteload Allocations (WLAs) using one or a combination of six different options (7.4.2, p.135). This approach could be improved by requiring permittees to meet numeric limitations. As stated, it appears that permittees could claim that the WLAs allow them to meet requirements without any numeric limitations. Although the implementation plan may allow for interim compliance through implementation and assessment of pollutant loading reduction projects or even offsets, including a requirement to meet the numeric WLAs in either the receiving water or in stormwater would be consistent with the permit renewal process and would improve the effectiveness of the implementation plan.

Preferred Solution: Waterboard staff should specify which options must be met in order to fully satisfy the WLAs. EPA believes that option A, B, or C must be satisfied in order for an entity to be deemed fully in compliance with a WLA. Option D would be acceptable if a baseline mass load or a method for establishing baseline mass loads were established in the TMDL. Options E and F could be interim progress markers.

Alternative Solutions:

- Rank or tier the requirements from most desirable to least desirable.
- Remove 'compliance' and replace with 'attainment' for allocations, especially WLAs, since TMDL cannot define permit compliance, only permits can.
- Eliminate the language identifying that compliance will be assessed "using one or a combination of the following," since the MS4 permit will include Option B at minimum, and will probably include more stringent compliance measures.
- Avoid providing the possible interpretation of a stormwater permit "safe harbor," whereby a permittee could be considered "in compliance" as long as they implement BMPs, demonstrate (an unspecified degree of) load reductions, or take other unspecified actions that would be assumed, but not demonstrated, to achieve compliance.

Preferred Language Suggestion:

Waste load allocation will be achieved through a combination of implementation of management practices and strategies to reduce nitrogen compound and orthophosphate loading. Water quality monitoring will be included as well.

To be consistent with waste load allocations in this TMDL, Water Board staff will evaluate compliance with wasteload allocations using one or a combination of the following:

- A. Attaining the waste load allocation in the receiving water;
- B. Attaining receiving water TMDL numeric targets for nutrient-response indicators (i.e. dissolved oxygen water quality objectives, chlorophyll a targets and microcystin targets) may constitute a demonstration of the attainment of the nitrate, nitrogen and orthophosphate-based seasonal biostimulatory waste load allocations. Note that implementing parties are strongly encouraged to maximize overhead riparian canopy using riparian vegetation, as appropriate, because doing so could result in achieving nutrient-response indicator targets before allocations are achieved (resulting in a less stringent allocation);
- C. Demonstrate reduction of nutrient concentrations in storm water outfalls. Optionally, where storm water is conveyed through managed flood protection facilities that also serve to treat and

improve water quality (e.g., treatment wetlands, bioreactors, etc.), compliance may be demonstrated by measuring storm water quality before entering the receiving water body. In order to achieve attainment of waste load allocations, Water Board staff may additionally consider:

D. Load reduction demonstrations on mass basis at stormdrain outfalls and/or downstream of treatment systems;

E. Implementation and assessment of pollutant loading reduction projects (BMPs), capable of achieving interim and final waste load allocations identified in this TMDL in combination with water quality monitoring for a balanced approach to determining program effectiveness;

F. Any other effluent limitations and conditions which are consistent with the assumptions and requirements of the waste load allocation.

Staff response: Staff agrees with U.S. EPA's comment and has revised Section 7.4.3 of the Project Report as well as pertinent portions of the Resolution (Attachment 1) to include the suggested language.

63. Ms. Janet Parrish, Suzanne Marr and Jamie Marincola, US EPA

Section 7.5 Implementation for discharges from Domestic Animals

How will the Water Board determine whether additional information will be merited? Is it possible to be more specific about the trigger points?

Staff response: Staff has edited this section of the Project Report to read:

"More information will be obtained, if merited, during the implementation phase of the TMDL to further assess the level of nutrient contribution from these source categories, and to identify any actions if necessary to reduce loading. Additional information will include water quality monitoring data obtained through the Agricultural Order, CCAMP, as well as information obtained during implementation of the Santa Maria River Watershed Fecal Indicator Bacteria TMDLs to demonstrate compliance with the Domestic Animal Waste Discharge Prohibition."

64. Ms. Janet Parrish, Suzanne Marr and Jamie Marincola, US EPA

Section 7.6 Non-Regulatory Interim Reduction Goals

Is this for MS4s and for irrigated agriculture as well? Is it possible to clarify?

Staff response: Note that this section has been removed from the Project Report in its entirety. See Response to Comment 32.

65. Ms. Janet Parrish, Suzanne Marr and Jamie Marincola, US EPA

Section 7.8.1 Potential Management Measures for Agricultural Sources

Regarding Nutrient Management Plans (NMPs), Consider revising text such as the following to add clarity: "The Agricultural Order, or its revision, may require nutrient management plan implementation, which may be voluntary in some cases. Where needed an appropriate, nutrient management plan implementation may be an effective management option...." If this applies only to irrigated agriculture, or if it also applies to MS4s, then it would be helpful to say so here. Is it possible to give examples of where NMP implementation may be voluntary? The final bullet

of items that should be included in NMP goals should state “Vegetated Treatment systems, which are discussed....” (add “which”).

Staff response: Staff has edited this section of the Project Report to include these recommended revisions.

66. Ms. Janet Parrish, Suzanne Marr and Jamie Marincola, US EPA

Section 7.9 Proposed Monitoring Requirements

It sounds as though Water Board staff are confident that this monitoring will continue. Is there an alternative if monitoring programs are reduced or eliminated?

Staff response: Staff is confident that the monitoring and reporting components presented in this section will continue into the foreseeable future. These actions are currently ongoing in accordance with existing Orders and permits and the Water Board maintains a number of additional regulatory tools to ensure that these efforts continue. Also see Response to Comment 59.

In addition to monitoring and reporting conducted in accordance with existing Orders and permits, the Water Board has contracted with Coastal San Luis Resource Conservation District (RCD) for monitoring and reporting of the nutrient-related parameters for Oso Flaco Lake as outlined in this section of the Project Report. The RCD contract has been funded and monitoring is currently underway.

Based on this information, staff does not foresee the need for additional or alternative monitoring programs.

Appendix A

Memo from staff counsel

***“PEER REVIEW FOR TOTAL MAXIMUM DAILY LOADS TO
ADDRESS NITROGEN COMPOUNDS AND
ORTHOPHOSPHATE IN THE LOWER SANTA MARIA RIVER
WATERSHED AND TRIBUTARIES TO OSO FLACO LAKE”***

Central Coast Regional Water Quality Control Board

TO: Chris Rose
TMDL Program Manager
Central Coast Regional Water Quality Control Board

FROM: Jessica Jahr
Senior Staff Counsel
State Water Resources Control Board

DATE: April 22, 2013

SUBJECT: PEER REVIEW FOR TOTAL MAXIMUM DAILY LOADS TO ADDRESS
NITROGEN COMPOUNDS AND ORTHOPHOSPHATE IN THE LOWER
SANTA MARIA RIVER WATERSHED AND TRIBUTARIES TO OSO
FLACO LAKE

Introduction

Central Coast Water Board staff will propose adoption of total maximum daily loads (TMDLs) for Nitrogen Compounds and Orthophosphate in the Santa Maria River and Oso Flaco Lake watersheds (Santa Maria River Nutrient TMDLs). As TMDLs that will be incorporated into state water quality control policy, the Santa Maria River Nutrient TMDLs are subject to the scientific peer review provisions of Health and Safety Code section 57004. However, the “scientific portions” of the Santa Maria River Nutrient TMDLs have already undergone the scientific peer review required by the Health and Safety Code. As a result, the Regional Board has fulfilled the requirements of Health and Safety Code section 57004, and the proposed Santa Maria River Nutrient TMDLs do not require further peer review.

Discussion

Certain water quality policies adopted pursuant to the Porter-Cologne Water Quality Control Act are subject to the peer review requirements of Health and Safety Code section 57004. (Health & Saf. Code, § 57004, subd. (a)(1)(B).) Historically, the State Water Resources Control Board (State Board), which must approve all revisions to water quality control plans, has construed section 57004 to cover Basin Plan amendments. Health and Safety Code section 57004 requires the scientific portion of Basin Plan amendments to undergo external scientific peer review before the Regional Board takes final action on the amendment. (*Id.*, § 57004, subd. (d).)

The *Unified California Environmental Protection Agency Policy and Guiding Principles for External Scientific Peer Review (Policy)* describes Cal/EPA’s policy for Boards, Departments, and Offices (BDOs) to implement requirements related to scientific peer review. The policy describes implementation of legislative mandates related to Sher 1320 (SB1320). SB1320 requires peer review of the portions of work products that constitute the scientific basis of the rule “...establishing a regulatory level, standard, or other requirement for the protection of public health or the environment.”

The scientific portion of a rule consists of “foundations of a rule that are premised upon, or derived from, empirical data or other scientific findings, conclusions, or assumptions establishing a regulatory level, standard, or other requirements for the protection of public health or the environment.” (SB1320 and Health & Saf.Code, § 57004, subd. (a)(2).) The California Environmental Protection Agency (Cal/EPA) has described this review as “an objective, critical review of a draft Agency scientific work product.” (Memorandum from Peter M. Rooney (Secretary of Cal/EPA) to John Caffrey (Chairman of State Board) (Jan. 22, 1998).) Taken together, it is clear that Health and Safety Code section 57004 is designed to ensure that the scientific assumptions of a rule are tested by external peer review.

The *Policy* also describes “Work Projects Not Requiring External Scientific Peer Review” as consistent with SB1320. Such products “include but are not limited to the following:”

“A particular work product that has been peer reviewed with a known record by a recognized expert or expert body. Additional review is not required if a new application of an adequately peer reviewed work product does not depart significantly from its scientific approach.”

The proposed TMDLs contain a scientific approach to regulating nitrogen compounds and orthophosphate which are drawn from the TMDLs for Nitrogen Compounds and Orthophosphate in the Salinas River and Reclamation Canal Basin, and the Moro Cojo Slough Subwatershed (Salinas River Nutrient TMDLs). An external, scientific peer review of the Salinas River Nutrient TMDLs was completed to evaluate the scientific bases of the Salinas River Nutrient TMDLs. The peer review found that the scientific bases of the Salinas River Nutrient TMDLs were found to be reasonable and fundamentally sound.¹⁴ The Santa Maria River Nutrient TMDLs evaluated empirical data and articulated a scientific basis for expressing numeric targets, the methodology employed to derive numeric targets for biostimulatory substances, load capacity, and load and waste load allocation methodology. Table 1 contains a summary of scientific element equivalencies for the proposed Santa Maria River Nutrient TMDLs and the peer reviewed Salinas River Nutrient TMDLs.

TABLE 1
SUMMARY OF SCIENTIFIC ELEMENT EQUIVALANCIES

Santa Maria River Nutrient TMDLs (Proposed Amendment Element)	Scientific Equivalency Related to peer reviewed Salinas River Nutrient TMDLs
Numeric Targets for Unionized Ammonia and Nitrate	Numeric targets equivalent (identical) to the source document <u>and</u> the Water Quality Control Plan, Central Coast Region, Numeric Water Quality Objectives
Methodology to Derive Numeric Targets for Nitrate and Orthophosphate (Biostimulatory Substances)	Methodology used to derive numeric targets for nitrate and orthophosphate (biostimulatory substances) is equivalent (identical) to the source document
Loading Capacity	Loading capacity equivalent (identical) to the source document whereby loading capacity is equal to the numeric targets

¹⁴ The Scientific Peer Review Comments on the Salinas River Nutrient TMDL are available at http://www.waterboards.ca.gov/centralcoast/water_issues/programs/tmdl/docs/salinas/nutrients/sal_nuts_tmdl_att5_peerreview.pdf.

Allocation methodology	Allocations equivalent (identical) to the source document whereby allocations are set equal to the loading capacity
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As demonstrated in Table 1, the scientific portions of the Santa Maria River Nutrient TMDLs are drawn from the Salinas River Nutrient TMDLs. As a result, the scientific portions of the Santa Maria River Nutrient TMDLs have already undergone external, scientific peer review. The remaining portions of the TMDLs, such as the implementation strategy, are not scientifically based, and therefore, not subject to the peer review requirements of section 57004.

The foregoing conclusion is consistent with discussions held between staff of the Regional Board, the State Board's Division of Water Quality, and the Office of Chief Counsel. At that time, staff concurred that the Santa Maria River Nutrient TMDLs did not require further external, scientific peer review. The letter and spirit of Health and Safety Code section 57004 has been satisfied by the existing scientific peer review.

The *Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options (Impaired Waters Policy, State Board resolution 2005-0050)* outlines requirements and options for addressing impaired waters. The *Impaired Waters Policy* states "This Policy is intended to ensure that the impaired waters of the state are addressed in a timely and meaningful fashion," and "Regional Boards have wide latitude, numerous options, and some legal constraints that apply when determining how to address impaired waters." The *Impaired Waters Policy* goes on to describe various ways to address impaired waters, including through TMDL development and adoption through a basin plan amendment, through a Regional Board approval of a single regulatory action, e.g. a permit, or even through a certification by the executive officer certifying that another non-regulatory entity will address the impairment. The *Impaired Waters Policy* makes clear that the state has, and should, exercise efficient means of addressing impaired waters. State resources expended on independent scientific review is significant, both in terms of state time and monetary cost. Using a single scientific peer review for both the Santa Maria River and Salinas River nutrient TMDLs, as described above, is efficient use of state resources and is consistent with state policy. Furthermore, other Regional Boards have successfully utilized this approach for approved TMDLs.

Conclusion

The Regional Board has complied with the external peer review requirements of section 57004 by relying on previously peer-reviewed scientific bases of the Salinas River Nutrient TMDLs. It is unnecessary for the Santa Maria River Nutrient TMDLs to undergo further peer review.