Comment Summary and Responses
Calleguas Creek Watershed Boron, Chloride, Sulfate and TDS (Salts) TMDL

Public Review
1. Ventura County Agricultural Association
2. Camrosa Water District on behalf of Camarillo Sanitation District, City of Thousand Oaks, City of Simi Valley, Camrosa Sanitary District, and Ventura County Water Works District #1
3. California Department of Transportation
4. Calleguas Creek Watershed Management Plan
5. City of Camarillo
6. City of Moorpark
7. City of Moorpark
8. City of Thousand Oaks
9. County of Ventura
10. Ventura County Watershed Protection District
11. Farm Bureau of Ventura County
12. United States Environmental Protection Agency
Peer Review
13. Ferdi L. Hellweger, Northeastern University, Boston

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Public Review				
1	07/16/07	Robert P. Roy, Ventura County Agricultural Association		
1.1			These comments are being submitted on behalf of the	Comment noted

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			Ventura County Agricultural Association. As part of the CCWMP stakeholder process, we were involved in development of the Calleguas Creek Watershed Boron, Chloride, Sulfate and TDS TMDL (Salts TMDL) and commend the Regional Board staff on the collaborative process used to develop the TMDL. We feel the process serves as a good model for the development of other TMDLs in the future	
1.2			We are submitting these comments to provide full support of the adoption of the Salts TMDL. We feel that the TMDL appropriately protects agriculture in the Calleguas Creek Watershed and supports the collaborative working relationships that have developed between agriculture and municipal agencies in the watershed. We feel that the approach contained in the TMDL will provide a framework for providing agriculture with the water quantity and quality needed to be successful in the watershed. We feel strongly that the Regional Water Board should approve the Salt TMDL with the changes included in the letter from the Camrosa Water District.	Comment noted.
1.3			In summary, we appreciate the opportunity to participate with Regional Board in the collaborative process and find the documents produced through that process are of high quality. We look forward to continuing to work with you on the upcoming TMDLs.	Comment noted
2	07/18/07	Richard H. Hajas, Camrosa Water District		
2.1			**Comments on Tentative Salts BPA** 1) For Urban Runoff and Agricultural Dischargers,	The requested language is already included in the first paragraph of the WLAs and LAs sections for Urban

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			we request that the table titles for the interim and final allocations clearly state that the allocations are receiving water limits (page 8 and 9 respectively). Additionally, we request that text from the paragraphs discussing final allocations on page 7 and page 9 also be included in the paragraphs describing the interim limits to state that the interim limits apply in the receiving water at the base of the subwatersheds.	and Agricultural discharges as follow: "…Permitted stormwater dischargers are assigned a dry weather wasteload allocation equal to the average dry weather critical condition flow rate multiplied by the numeric target for each constituent. Waste load allocations apply in the receiving water at the base of each subwatershed." and, "…Dry weather load allocations are assigned as a group allocation to irrigated agricultural discharges. The load allocation is equal to the average dry weather critical condition flow rate multiplied by the numeric target for each constituent. Load allocations apply in the receiving water at the base of each subwatershed." Staff finds it is unnecessary to include repeated information. The current languages in the BPA specify that the interim limits are assigned as concentration based receiving water limits which have the same description of the proposed language. Changes are not necessary.
2.2			2) The description of the permitted stormwater dischargers that are responsible parties to this TMDL should be clarified. We request the following changes to the Basin Plan Amendment to clarify responsible parties.	Staff agrees and the Basin Plan Amendment is revised accordingly.

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			• On page 7, Waste Load Allocations Section B, please include the following statement: "Permitted stormwater dischargers that are responsible parties to this TMDL include the Municipal Stormwater Dischargers (MS4s) of the Cities of Camarillo, Moorpark, Oxnard, Thousand Oaks, County of Ventura, Ventura Watershed Protection District and Caltrans." • On page 21, please change the footnote to Table 7-22.2 to read as follows: "Permitted Stormwater Dischargers (PSD) includes the Municipal Stormwater Dischargers (MS4) of the Cities of Camarillo, Moorpark, Oxnard, Thousand Oaks, County of Ventura, Ventura County Watershed Protection District, Caltrans, and general industrial and construction permittees."	
2.3			**Minor Typographical Comments** 3) The Simi Valley POTW is incorrectly listed as the Simi Valley Wastewater Treatment Plant. Instead, it should be the Simi Valley Water Quality Control Plant (SVWQCP). Please change the references on pages 4, 6, 7 and 12.	Revised per comment
2.4			4) On page 7, the Moorpark POTW is incorrectly listed as the Moorpark WRP. It should be named the Moorpark WWTP. Additionally, on page 4, the last sentence should state Moorpark WWTP, not just Moorpark to avoid confusion with the City of Moorpark.	Revised per comment

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2.5			5) On page 16, in the third sentence of the first paragraph under the Implementation Plan section, "TDML" should be changed to "TMDL".	Revised per comment
2.6			6) Throughout the Tentative BPA, the text has inconsistent usage of acronyms and written out words (i.e. wasteload allocations vs. WLA). The use of acronyms should be consistent throughout the document.	Revised per comment
2.7			**Comments on Salts Staff Report** 1) On page 13, first paragraph, second sentence of the Salts Staff Report, the language states "Camarillo WRP, Camrosa WRP and Moorpark WRP are not expected to discharge in excess of minimum flows required for habitat maintenance under NPDES permits." There are currently no requirements that any of these WRPs maintain minimum flows in the stream and we do not expect these requirements to be imposed in the future. The stakeholders recognize that minimum flows for habitat may need to be maintained in the waterbodies. However discharges from these WRPs may not be the most appropriate way to maintain the flows and may not result in compliance with water quality objectives. Therefore, we request that the language be changed to reflect the language in the Basin Plan amendment regarding minimum flows (as quoted below) and that the language be moved to the implementation section. "Responsible agencies and jurisdictions shall consider minimum flow requirements that may be imposed by federal or state regulatory agencies when implementing	Staff agrees and the language in the Staff Report is revised as follow: "At the end of the implementation period, only Simi Valley WWTP and Hill Canyon WWTP are expected to have discharges to surface waters. Camarillo WRP, Camrosa WRP and Moorpark WRP are not expected to discharge. ~~in excess of minimum flows required for habitat maintenance under NPDES permits. However,~~ Dry weather wasteload allocations are included for the cases when discharges may occur. Including wasteload allocations for these POTWs ensures that water quality objectives are not exceeded as a result of their discharge."

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			actions to comply with this TMDL."	
2.8			2) On page 19, Section 8 first paragraph refers to the desalting of wastewater. Although wastewater desalting is an option that may be considered in the future, wastewater desalting is currently not part of the proposed implementation plan. Please remove the reference to desalting wastewater or include a qualification that wastewater desalting may be considered as part of the implementation program, but is currently not proposed.	Regional Board staff believe that wastewater desalting should be a potential implementation action that may be implemented in the future if proposed implementation actions including groundwater desalting, water conservation, water softener reduction, and BMPs for irrigated agriculture and urban runoff are not sufficient to achieve the salt balance and attain water quality objectives. The language in the staff report is revised as follows: "The Calleguas Creek watershed salts TMDL will be implemented by integrating watershed-scale infrastructure projects to desalt groundwater ~~and wastewater~~, and administrative programs to reduce salt loadings to the Calleguas Creek watershed. TMDL implementation will be carried out by water agencies, municipalities, POTWs and non-point dischargers in the Calleguas Creek Watershed to desalt groundwater ~~and wastewater~~. These projects focus on desalting groundwater underlying Calleguas Creek and discharging salts to the Pacific Ocean outside of Southern Ventura County. Water quality will be attained by reducing salts loads from groundwater exfiltration. However, through construction of a brine disposal line and ocean outfall, responsible agencies will have several options for implementing structural and nonstructural BMPs or treatments to attain a salt balance and attain water quality objectives. Wastewater desalting may be considered as part of the

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				implementation program if water quality is not attained by implementation of groundwater desalting alone. Installation of individual wellhead desalters and agricultural desalters might also be economically feasible and desirable when the brine line is available."
2.9			3) Also on page 19, Section 8, the second paragraph, second sentence states, "Additionally, agriculture concentrates salts so that localized effects on surface and groundwater quality are exacerbated." Although there is evidence that agricultural activities concentrates salts, we are unaware of any linkages that have been drawn to this effect "exacerbating" effects on surface and ground water quality. Please revise this language to clarify that the concentrated salts may create effects on surface and groundwater quality.	Staff agrees and the language was revised as follow: "Additionally, irrigation concentrates salts in the shallow soils and groundwater which ~~so that localized effects on surface and groundwater quality are exacerbated~~ may degrade surface and groundwater quality."
2.10			4) The discussion of implementation actions in Section 8 does not appear to be consistent with the most recent version of the *Calleguas Creek Watershed Boron, Chloride, TDS and Sulfate TMDL Public Review Technical Report* (Technical Report). During the stakeholder review period for the Technical Report, a number of comments were received on this section and revisions were made to address the comments. The information provided in the Salts Staff Report is generally consistent with the intent of the implementation plan, but some of the details have been changed and many of the changes were significant to the stakeholders in the watershed. We request that this section be updated to reflect the final Technical Report. We have highlighted below the most significant	Staff agrees and the Staff Report was revised accordingly

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			changes that should be addressed. Additionally, we have included an attachment that provides suggested changes to address the concerns with the staff report.	
2.11			• On page 22, Section 8.1.3 Water Softeners, the discussion should be revised to reflect the current Technical Report. During earlier drafts of the Technical Report, significant comments were provided on this section and the discussion was revised to reflect stakeholder concerns. The current Technical Report highlights that water softeners are not a significant source of salts to the CCW based on information received during the comment period and therefore the goals set in earlier drafts of the Technical Report have been revised.	Staff agrees and the language was revised as follow: "Programs will be implemented by responsible parties to provide education and incentives and/or disincentives to reduce the use of self-regenerative water softeners in the watershed with a goal of reducing the overall load to the POTWs from softeners by 10 percent ~~in the Southern Reaches and 25 percent in the Northern Reaches~~. The focus of the implementation efforts for water softeners in the CCW will be to improve the quality of the supply water in Camarillo and publicize this information to encourage residents to remove self-regenerating water softeners. Additionally, opportunities to work with water softener companies to provide incentives for residents to switch from self-regenerating water softeners to portable exchange softeners will be investigated. Finally, opportunities to pursue additional legislative remedies will be explored. ~~The water softener programs will be coordinated with existing public outreach and education programs in the watershed. Public outreach will be the first step in the program followed by incentives and/or disincentives as necessary to achieve the goals of the implementation plan.~~ Responsible parties shall report on the status of the water softener reduction program in annual monitoring reports."
2.12			• On page 23 and 24, Section 8.2.1, the discussion of the RWRMP has different elements and different	The Staff Report was revised to reflect the current implementation actions and phasing. However, the

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			phasing from the implementation actions currently proposed in the Technical Report. The current implementation plan in the Technical Report was revised to more accurately reflect steps that will be taken in the Thousand Oaks area and the Salts Staff Report should be updated to reflect the current implementation actions and phasing.	language regarding the requirement to release replenishment water to maintain instream beneficial uses, if necessary, was retained in the final Staff Report. Regional Board staff believe that the proposed implementation actions to reduce salts concentration in surface water through treatment of groundwater and reduction of wastewater discharges to surface waters may have adverse effects to existing beneficial uses as certain segment of the Calleguas Creek are at risk of out of compliance. The releasing of replenishment water should be included in the list of implementation options to ensure that the water quality objectives for salts are obtained and maintained throughout the watershed.
2.13			• On page 31, the staff report discusses the results of model runs to determine compliance with the water quality objectives. The final technical report includes an updated model analysis of compliance with water quality objectives that resulted from model upgrades to more accurately account for the impacts of achieving a salt balance in the watershed and based on achieving compliance with the wasteload and load allocations. This section should be updated to reflect the more recent model output presented in the Technical Report.	Revised per comment
2.14			**Minor Typographical Comments** 5) On page 11, fifth sentence in Section 5.3, please change the first "calibrated" to "validated". 6) On page 29, Section 8.3.2, the current acronym describing the TMDL monitoring program is CCWTMP rather than CCWCMP. Please revise the	Revised per comment

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			acronyms in this section accordingly.	
2.15			**Comments on Supplemental Environmental Document (SED)** We would like to note that many of the citations included in the SED are from the Certified EIRs developed by the Camrosa Water District (Final Program Environmental Impact Report / Environmental Assessment for the Renewable Water Resource Management Program for the Southern Reaches of the Calleguas Creek Watershed (SCH No. 2004061159)), and the Calleguas Municipal Water District (Final Program Environmental Impact Report / Environmental Assessment for the Calleguas Regional Salinity Management Project (SCH No. 2000101104)). For the purposes of the administrative record, we feel that the inclusion of the two EIR documents should be sufficient. The CEQA Guidelines recognize the appropriateness of using EIRs prepared for earlier projects in assessing the impacts of projects if the circumstances of the projects are essentially the same (See CEQA Guidelines Section 15153, http://www.ceres.ca.gov/topic/env_law/ceqa/guidelines/art10.html). This extends even to incorporation by reference. Additionally, CEQA encourages the use of previously developed EIR information to reduce the use of resources that "may be better applied toward the mitigation of actual significant effects on the environment" (See CEQA Section 21003 (d)(e)(f),	Staff agrees that the two final EIR documents should be included in the administrative record.

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			http://www.ceres.ca.gov/ceqa/stat/Ch_1.html). Consequently, we feel that the inclusion of the two certified EIRs in the administrative record is sufficient and additional resources should not be expended to obtain all references cited in the SED.	
2.16			In summary, we appreciate the support that the Regional Board has given to the collaborative process and believe that the documents produced through that process are of high quality. We look forward to continuing to work with you on the upcoming Bacteria TMDL.	Comment noted.
3	07/18/07	G. Scott McGowen, California Department of Transportation		
3.1			The current draft report for "Calleguas Creek Watershed Boron, Chloride, Sulfate, and TDS (Salts) Total Maximum Daily Load (TMDL)" and proposed Basin Plan Amendment includes provisions pertaining to the responsibility of the California Department of Transportation (Department), along with other stakeholders, for reducing Boron, Chloride, Sulfate, and TDS loads to Calleguas Creek The TMDL draft staff report and the Basin Plan Amendment acknowledge that Wastewater Treatment Plans (POTWs), permitted stormwater dischargers, and other NPDES dischargers are assigned wasteload allocations for this TMDL. These WLAs apply during dry weather conditions. Staff finds that existing water quality objectives are attained during wet weather	Comment noted.

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			conditions.	
3.2			We are supportive of efforts to improve water quality in the Calleguas Creek, but are concern with the waste load allocations assigned to the Department. The Department does not routinely discharge water during dry weather. Rather, Department actively employs institutional or maintenance BMPs to prevent irrigation-triggered dry weather flows from leaving Department right-of-way. The Department owns approximately 85 miles of highway, two maintenance stations, and eight park-and-ride facilities within the Region 4 that drain to Calleguas Creek . This area represents approximately 0.4% of the total watershed (343 square miles). Given both the small percentage of the watershed and the absence of dry weather runoff, it is clear that the Department's roadways and facilities are not contributors of salts to this watershed	Regional Board Staff agrees that salt loading from Department's roadways and facilities is not a major source. The provided information is included in the Staff Report.
4	07/19/07	Donald R. Kendall, Calleguas Creek Watershed Management Plan		
4.1			These comments are being submitted on behalf of stakeholders participating in the Calleguas Creek Watershed Boron, Chloride, Sulfate, and TDS TMDL (Salts TMDL) and commend Regional Board staff on the collaborative process used to develop it. We feel the process serves as a good model for the development of other TMDLs in the future.	Comment noted.
4.2			We are submitting these comments to provide full support of the adoption of the Salts TMDL. We feel it appropriately protects beneficial uses in the Calleguas Creek Watershed while allowing the flexibility needed	Comment noted.

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			by responsible parties to address complex issues associated with addressing salts. We feel strongly that the Regional Water Board should approve the Salts TMDL with the following changes to the Tentative Basin Plan Amendment to clarify the responsible parties.	
4.3			• On page 7, Waste Load Allocation Section B, please include the following statement: "Permitted stormwater discharges that are responsible parties to this TMDL include the municipal stormwater dischargers (MS4s) of the cities of Camarillo, Moorpark, Oxnard, Thousand Oaks, County of Ventura, Ventura Watershed Protection District and Caltrans."	Revised per comment.
4.4			• On page 21, please change the footnote to table 7-22.2 to read as follows: "Permitted Stormwater Dischargers (PSD) includes the Municipal Stormwater Dischargers (MS4s) of the cities of Camarillo, Moorpark, Oxnard, Thousand Oaks, County of Ventura, Ventura County Watershed Protection District, Caltrans, and general industrial and construction permittees."	Revised per comment.
4.5			In summary we appreciate the opportunity to participate with regional board in this collaborative process and find the documents produced through that process are of high quality. We look forward to continuing to work with you on the upcoming TMDLs.	Comment noted.

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5	07/19/2007	Tom Fox, City of Camarillo		
5.1			These comments are being submitted on behalf of the city of Camarillo. As part of the Calleguas Creek Watershed Management Plan stakeholder process, we were involved in development of the Calleguas Creek Watershed Boron, Chloride, Sulfate, and TDS TMDL (salt TMDL) and commend Regional Water Quality Control Board staff on the collaborative process used to develop the TMDL. We feel the process serves as good model for the development of other TMDLs in the future.	Comment noted.
5.2			We are submitting these comments to provide full support of the adoption of the Salts TMDL. We feel that the TMDL appropriately protects the beneficial uses in the Calleguas Creek Watershed while allowing the flexibility needed by responsible parties to address complex issues associated with addressing salts. We feel strongly that the Regional Water Board should approve the Salts TMDL with the following changes to the Tentative Basin Plan Amendment to clarify the responsible parties	Comment noted.
5.3			• On page 7, Waste Load Allocation Section B, please include the following statement: "Permitted stormwater discharges that are responsible parties to this TMDL include the municipal stormwater dischargers (MS4s) of the cities of Camarillo, Moorpark, Oxnard, Thousand Oaks, County of Ventura, Ventura Watershed	Revised per comment.

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			Protection District and Caltrans."	
5.4			• On page 21, please change the footnote to table 7-22.2 to read as follows: "Permitted Stormwater Dischargers (PSD) includes the Municipal Stormwater Dischargers (MS4s) of the cities of Camarillo, Moorpark, Oxnard, Thousand Oaks, County of Ventura, Ventura County Watershed Protection District, Caltrans, and general industrial and construction permittees."	Revised per comment.
5.5			In summary we appreciate the opportunity to participate with regional board in this collaborative process and find the documents produced through that process are of high quality. We look forward to continuing to work with you on the upcoming TMDLs.	Comment noted.
6	07/19/2007	Yugal K. Lall, City of Moorpark		
6.1			The City of Moorpark (City), as part of the Calleguas Creek Watershed Management Plan (CCWMP) stakeholder process, participated in the development of the Calleguas Creek Watershed Boron, Chloride, Sulfate, and TDS TMDL (salt TMDL) and commend the Regional Water Quality Control Board (Regional Board) staff on the collaborative process used to develop the salt TMDL. The collaborative process is a good model for the development of other TMDLs in the future.	Comment noted.
			The City supports the adoption of the salts TMDL. The TMDL appropriately protected beneficial uses in Calleguas Creek Watershed while allowing the	Revised per comment.

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			flexibility needed by the responsible parties to address complex issues associated with addressing salts. The city recommends that the Regional Board approve the salt TMDL with following changes: • On page 3, Waste Load Allocations section A , please modify the following statement: "Dry weather wasteload allocations are included for the case when Camarillo WRP, Camrosa WRP, and Moorpark need to discharge to the stream…" to read: "Dry weather wasteload allocations are included for the case when Camarillo WRP, Camrosa WRP, and Moorpark WWTP need to discharge to the stream…" • On page 17, Summary Of Proposed Implementation Action Table, please change the responsible agency from "Moorpark" to "Moorpark WWTP"	
6.2			Additionally, the City support the changes presented in the July 19, 2007 letter from the Camrosa Municipal Water District and the July 19, 2007 letter from the CCWMP.	See responses to comments 3.1-3.16.
7	07/19/2007	Mike Sedell, City Of Simi Valley		
7.1			On behalf of the City of Simi Valley, we support the proposed Basin Plan amendments. We helped develop the Calleguas Creek Watershed Boron, Chloride, Sulfate, and TDS TMDL (salt TMDL) and commend the Regional Board staff on the collaborative process used to develop the TMDL. The process we initiated	Comment noted.

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			would serves as a good model in developing future TMDLs.	
7.2			We fully support adopting the Salts TMDL. The TMDL appropriately protects the beneficial uses in the Calleguas Creek Watershed while allowing the water users the flexibility needed to address complex salt related issues. The City strongly recommends the Regional Water Board approve the proposed Salts TMDL, with the minor changes requested by the "Joint Powers Agencies"	See responses to comments 3.1-3.16.
7.3			In summary the City appreciates the collaborative process employed by the Regional Board and our collective agencies to produce this high quality TMDLs	Comment noted.
8	07/19/2007	Mark D. Watkins, City of Thousand Oaks		
8.1			This letter is submitted on behalf of City of Thousand Oaks. As one of the key stakeholders in the Calleguas Creek Watershed Management Plan (CCWMP) process, we were involved in the development of the Calleguas Creek Watershed Boron, Chloride, Sulfate, and TDS TMDL (salt TMDL) and commend the Regional Board staff on the collaborative process used to develop the salt TMDL. We feel the process serves as a good model for the development of other TMDLs in the future.	Comment noted.
8.2			We submitted this letter to indicate our full support of the adoption of the Salts TMDL. We feel that the TMDL appropriately protects the beneficial uses in the Calleguas Creek Watershed while allowing the	Comment noted and see responses to comments 3.1-3.16.

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			flexibility needed by the responsible parties to address the complex issues associated with addressing salts. We feel strongly that the Regional Water Board should approve the salt TMDL with the changes included in the letter from the Camrosa water district.	
8.3			In summary we appreciate the opportunity to participate with Regional Board in the collaborative process and find the documents produced through that process are of high quality. We look forward to continuing to work with you on the upcoming TMDLs	Comment noted.
9	07/19/2007	Gerhardt Hubner, County of Ventura		
9.1			These comments are submitted on behalf of County Of Ventura, as part of the CCWMP stakeholder process. We were involved in the development of the Calleguas Creek Watershed Boron, Chloride, Sulfate, and TDS TMDL (salt TMDL) and commend the Regional Board staff on the collaborative process used to develop the salt TMDL. We feel the process serves as a good model for the development of other TMDLs in the future	Comment noted.
9.2			We are submitting these comments to provide full support of the adoption of the Salts TMDL. We feel that the TMDL appropriately protects the beneficial uses in the Calleguas Creek Watershed while allowing the flexibility needed by the responsible parties to address the complex issues associated with addressing salts. We feel strongly that the Regional Water Board should approve the salt TMDL with the changes/comments included in the letter from the	Comment noted.

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			Camrosa Water District, and our comments below: Page 12, "Special Studies and Monitoring Plan" Special Study #2 – " Develop Natural Background Exclusion" – We would like to acknowledge the importance of this project being completed. The identification of background TDS levels is critical in understanding the potential for natural TDS contribution that may exceed standards set for the TMDL. This information will be very useful in construction of accurate and equitable WLAs/LAs for all parties involved. Page 19, "Urban Stormwater Dischargers" The adjustment factor for the POTWs allocations (when imported water chloride concentrations exceed the 80mg/L and exports exceed WLA) is a viable and appreciated tool in this process. However the implementation plan lacks any acknowledgment that when these POTWs are potentially out of compliance this inherently may create a situation when MS4 stakeholders may also exceed compliance standard measured in receiving waters. It is our point of view that this potential conflict, at a minimum, be acknowledged in the document.	Urban and agricultural runoff to surface waters occurs during dry weather as a result of over irrigation or applying irrigation water to impervious surfaces. The increase in salt concentration in imported water would not cause significant change in salt loading from urban runoff as the loading from urban runoff during dry weather are minimal relative to the loading from POTWs. The TMDL provides that BMPs can be implemented to reduce the loading from urban runoff during drought condition. During wet weather, the loading capacity from urban runoff is significantly increased by stormwater flows with very low salt concentrations. Urban runoff during wet weather would be assimilated by these large storm flows and would not cause exceedances of water quality objectives. MS4 stakeholder should provide data regarding the effect of the changes in chloride concentration in imported water on salt concentration

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				in urban runoff.
9.3			In summary, we appreciate the opportunity to participate with Regional Board in the collaborative process and find the documents produced through that process are of high quality. We look forward to continuing to work with you on the upcoming TMDLs	Comment noted.
10	07/19/2007	Gerhardt Hubner, Ventura County Watershed Protection District		
10.1			These comments are being submitted on be half of the Ventura County Watershed Protection Division (WPD). We concur with the changes included in the Calleguas Creek Watershed Management Plan Stakeholder Group (Collectively referred to as the JPA) attached comment letter, submitted July 18. 2007. However, the Watershed Protection District request that the "Ventura County Watershed District" be omitted from the list of "Responsible Permitted Dischargers" for this TMDL. The District has no land use authority and therefore cannot implement strategies as may be described in future TMDL implementation plans.	See responses to comments 3.1-3.16.
10.2			In summary, we appreciate the opportunity to participate with Regional Board in the collaborative process and find the documents produced through that process are of high quality. We look forward to continuing to work with you on the upcoming TMDLs	Comment noted.
11	07/19/2007	Rex Laird, Farm Bureau of Ventura County		
11.1			These comments are being submitted on behalf of the Ventura County Farm Bureau. As part of the CCWMP stakeholder process, we were involved in development of the Calleguas Creek Watershed Boron, Chloride,	Comment noted.

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			Sulfate, and TDS TMDL (Salts TMDL) and commend the Regional Board staff on the collaborative process used to develop the TMDL. We feel that the [process serves as a good model for the development of others TMDLs in the future.	
11.2			We are submitting these comments to provide full support of the adoption of the Salts TMDL. We feel that the TMDL appropriately protects agriculture in the Calleguas Creek Watershed and supports the collaborative working relationship s that have developed between agriculture and municipal agencies inn the watershed. We feel strongly that the Regional Water Board should approve the Salts TMDL with the changes included in the letter from the Camrosa Water District.	Comment noted. See responses to comments 3.1-3.16.
11.3			In summary, we appreciate the opportunity to participate with Regional Board in the collaborative process and find the documents produced through that process are of high quality. We look forward to continuing to work with you on the upcoming TMDLs. If you have any questions regarding this letter, please do not hesitate to contact me.	Comment noted.
12	07/20/2007	Peter Kozelka, United States Environmental Protection Agency		
12.1			EPA appreciates the opportunity to review and comment on the proposed Calleguas Creek salt TMDLs. We support the adoption of thee TMDLs and the proposed Basin Plan amendment.	Comment noted.
12.2			The proposed TMDLs meet all regulatory requirements and will be approvable upon submittal to EPA. We find	Comment noted.

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			these TMDLs provide reasonable technical analysis using the available data, information and scientific tools. The selected numeric targets are appropriate to address the impairments in the waters and restore beneficial uses established in the Basin Plan.	
12.3			These TMDLs address 11 waters in Calleguas Creek Watershed, which were identified on California's 2002 303(d) list for boron, chloride, sulfate and/or total dissolved solids. The 2002 listing for this water body - pollutant combinations are consistent with those identified in California's 2004-2006 303(d) list as approved by EPA on November 30, 2006. Regional Board staff have proposed to not develop TMDLs for portions of Calleguas Creek (especially Revolon Slough below Wood Road) as they are tidally influenced and therefore, they are not subject to assessments with freshwater numeric criteria. EPA generally concurs with these non-impairment findings and supporting information and we encourage the state to pursue delisting the appropriate water body-pollutant combinations as part of the 2008 303(d) list decisions.	Comment noted.

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12.4			We endorsed the proposed TMDL implementation plan, which identifies both infrastructure projects as well as reasonable pollutant reduction measure. The plan also takes an adoptive management approach to reviewing and, if necessary, revising the TMDLs, allocations, and/or implementation actions based on future data and information. We appreciate your staff's hard work on these TMDLs. We urged the Regional Board to adopt these TMDLs, consistent with the state's commitment to submit final TMDLs for these waters for EPA approval for 2007.	Comment noted.
Peer Review				
13	04/23/07	Ferdi L. Hellweger, Northeastern University, Boston		
13.1			The TMDL addresses high salts concentrations in the watershed. The general approach is to construct models of instream salts concentrations and a watershed-wide salts mass balance, and then use those models to develop appropriate management actions (e.g. load allocations). The TMDL is complicated for two reasons. First, the loading and assimilative capacity are intimately linked. The TMDL regulatory framework is based on the traditional conceptual model of a point source with high concentration and low flow discharging to a receiving water with low concentration and high flow. This is difficult to reconcile with the present condition, where a POTW discharge may actually dilute instream concentrations and increase export from the watershed. Second, the watershed	Comment noted.

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			considered is so complex that the definition of the receiving water for the purpose of the TMDL is not clear. Whereas a traditional TMDL would consider the surface water body (e.g. lake, river) as the receiving water, the control volume chosen in this TMDL encompasses the urban water (drinking water, wastewater) system. Nevertheless, the conceptual model is appropriate for the present condition.	
13.2			1. Methodology for assessing sources of salts in the watershed. What constitutes a source depends on the definition of the control volume. If the control volume is considered, in the traditional way, to be the stream(s), then the only sources may be POTWs and runoff. If the control volume is extended to encompass the water supply and wastewater collection system and shallow groundwater, then other sources exist, like what consumers add to the water at the point of use. For the control volume used in the TMDL, the later case, sources considered include (1) salts in imported water (State Water Project, Freeman Diversion, Deep Aquifer), (2) salts added by water users ("Urban Wastewater Sources"), (3) salts added by POTWs ("Treatment Chemicals"), and (4) salts added by farmers ("Pesticides, Fertilizers"). Atmospheric deposition is considered, but determined to be negligible. In general, the list of sources appears to be complete and the methodology for quantifying them is appropriate. However, the assumption that all groundwater comes from deep aquifers is inappropriate	Comment noted. The model is based on the assumption that all groundwater used for water supply originated from

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			in this context. The purpose of the source assessment is to identify and quantify the major sources of salts to the watershed, which constitutes a model of existing conditions. In other words, the source assessment would be used as input to an “existing conditions” model run and compared to measurement data. Conservative assumptions are not appropriate in this context. In addition, the input of some treatment chemicals (ferric chloride, alum) is neglected because “no information is readily available”. For the source assessment, all sources need to be quantified, even if due to limited information, the error associated with the load from a certain source may be large.	deep aquifers. This assumption was used to determine the amount of "introduced salts" that enter the watershed. Shallow groundwater salts are primarily a result of "introduced salts" (i.e. imported SWP water and deep aquifer groundwater) in water that is applied to the ground surface and percolates into the shallow groundwater or is recharged from surface water. As a result, these salts do not represent a source of "introduced salts". The source of salt from shallow groundwater is considered as a "transport mechanism" in the salt source assessment. Shallow groundwater is included in the model as part of the groundwater exfiltration and irrigation runoff from urban and agricultural areas. Although information on the input of some treatment chemicals is unknown, the total added load from the WWTPs is known and is equal to the difference in salt load in the source water (SWP) and WWTP effluent. The source assessment attempted to quantify the individual contributions to this added load to the extent possible. However, identification of this source is only necessary to evaluate the loading of salts directly attributable to WWTPs. The salt load in WWTP effluent is well characterized by the monitoring of effluent quality and those are the values that are used in the model.
13.3			2. Estimation of groundwater baseflow quantity and concentration	

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			Groundwater baseflow quantity is estimated by correlating baseflow, calculated as gaged flow minus POTW and other flows, to the previous year's precipitation. Groundwater baseflow concentrations are based on data from wells. This approach is generally acceptable. However, it should be kept in mind that the empirical equations are based on current conditions and practices in the watershed (shallow groundwater pumping, agricultural practices, etc.) and may not be applicable when they change. This may complicate future data interpretation and management. A more mechanistic modeling approach would be preferable from a long-term perspective.	Staff agrees. However, a practical application of mechanistic modeling of the groundwater/surface water interaction would involve linking a groundwater and surface water models. While a linked groundwater-surface water model is an option to evaluate future groundwater contributions, changes in groundwater responses would likely be due to manipulation of the watershed and underlying aquifers. Even a more mechanistic model may not be applicable to the watershed manipulations. The approach is to utilize a combined watershed manipulation/monitoring results/modification of model to affect change in salt flow through the watershed.
13.4			3. Linkage Analysis to show how sources of salts loading to the waterbody are linked to surface water quality The "linkage analysis" consists of two models. The first model is a surface water quality model based on a mass balance around surface water bodies (i.e. streams). The model accounts for the input and output of salts to each mass balance segment and computes the resulting concentration assuming the salts are conservative. The model construct is appropriate, but direct comparison of model-predicted and observed salts concentrations are not presented. The appendix presents probability plots of modeled and observed concentrations. However, to fully evaluate the skill of the model, time series of modeled and observed	Staff agrees and time series plots was added to the modeling document (See revised Technical Report).

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			concentrations should be presented and discussed. This will validate the model and possibly point to shortcomings in the loading estimates or other features of the overall analysis. The second model is based on a mass balance around a larger control volume, consisting of the surface water, drinking and wastewater systems and shallow groundwater. This overall mass balance model allows for comparison of import and export masses, the difference of which would be considered to be stranded in the watershed, a condition that is to be avoided. The model is appropriate, but it would be valuable to present a validation of the model for present conditions, for the same reasons described above. This may have been done and presented in previous reports for chloride, but it should be presented for the update of the model to other salts as well. In general, the two-model approach used is acceptable. However, a single watershed model based on an integrated watershed-receiving water framework (e.g. HSPF) may be more versatile and appropriate, especially as conditions change in the watershed.	The amount of salts stranded in the watershed is not measurable and is, in fact, best estimated by the overall mass balance model. The current conditions are put in the model to determine the current rate of stranding salts in the watershed. The Calleguas Creek Modeling System (CCMS) represents the current degree in understanding in watershed behavior. Any model representing the watershed in a more sophisticated manner will further rely on calibration of unknown and unmeasureable parameters. Because further refinement would result in further reliance on calibration, there is no real additional level of confidence gained in modeling future conditions.
13.5			4. Identifying the critical conditions and loading capacity	

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			The critical condition is identified as dry weather with higher precipitation in the previous year. The reasoning is that this condition results in higher groundwater discharge and lower export, which makes sense. The actual years identified are based on analysis of the model results. However, this should be confirmed with data. Were higher salts concentrations also observed in those years?	The critical years identified from the model occur with conditions similar to what occurred in 1978, 1979, 1983 and 1998. Higher salts concentrations were observed in those years. These were years immediately following wets years.
			One of the objectives of the TMDL was the achievement of a salts balance. It may be appropriate to also consider this when discussing the critical condition. What is the critical condition for stranding salts in the watershed?	From the perspective of the salt balance, the critical condition is when salts are most likely to be stranded in the watershed. This occurs during dry periods when introduced water salt concentrations are highest. The critical conditions for a salt balance are during drought. The critical condition is already addressed in the allocations and accounted for by the adjustment factor.
13.6			5. Derivation of the allocation of allowable load and related adjustment factor The load allocation for each POTW is calculated as the in-stream objective times the POTW flow rate. The allocation is reduced when the in-stream concentration exceeds the objective (reductions in background load are not met) or when the export is below the objective. The allocation is increased if the salts concentration in the water supply is so high as to prevent attainment of the allocation. In general, the approach is acceptable. However, it maybe useful to explicitly considered the contribution of the POTW flow to the assimilative	TMDL regulations require that the TMDL result in compliance with water quality objectives. Although we recognize the scenario discussed as a concern, the allocations must result in compliance with the existing water quality objectives for the waterbody. The TMDL Implementation Plan provides mechanism to increase salts exports to attain water quality objectives. Additionally, the TMDL provides for the development of site-specific objectives that could address the scenario provided. Further, any implementation action

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			capacity of the receiving water. For dry conditions, the POTW flow may contribute significantly to the baseflow of the receiving water, and their flow contributes to the assimilative capacity. Consider the scenario where the TDS concentration in the receiving water is 2,000 mg/L. A POTW discharge with a concentration of 1,000 mg/L, although above the allocation, would reduce the in-stream concentration and export from the watershed. However, the proposed allocation would not allow it, so the regulation can be counter-productive for some scenarios. The underlying reason for this problem is that the regulatory framework is based on the traditional scenario of a continuous point source with relatively high concentration and low flow rate discharging to a receiving water. However, since a likely response of the POTW would treatment, rather than diversion of the discharge, this issue may not be of practical importance in this case.	will need to be considered in the context of meeting the requirements of the TMDL to meet water quality objectives
13.7			6. Estimation of a margin of safety based on implicit assumptions in the development of the numeric target In general, determination of a proper margin of safety requires a formal uncertainty analysis on the model and inputs. This is not presented and may be difficult or impossible to do given the present data and time constraints. In light of that, the MOS provided is reasonable and in agreement with other TMDL development practices. However, some discussion	The CCMS is a first-order perturbation model allowing confidence limits to be calculated, however the uncertainties of most concern were related to the salt balance, not the calculation of salt concentrations in the CCMS model. As such, the MOS was developed to address this uncertainty, which does not lend itself to a formal uncertainty analysis.

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			presented in this section is inappropriate. The bullet starting with "The water quality model was developed…", for example, simply supports the validity of the model, but does not constitute a "conservative assumption" or in any way translate into a margin of safety.	Staff agrees and the bullet was removed from this section of the Technical Report
13.8			7. Development of a proposed monitoring program to assess effectiveness of the TMDL and attainment of water quality standards The proposed monitoring program includes tracking of concentrations in the input (water supply) and measurements at POTW discharges and several in-stream locations. The approach is appropriate, but the use of in-situ sensors should be considered, as those allow for real-time measurements at high temporal resolution. A sensor network could potentially provide data at higher spatial and temporal frequency than the proposed network based on automated samplers and should be considered.	Comment noted, the feasibility of applying a sensor network to the watershed is currently being evaluated and will be considered during the development of the monitoring program.
13.9			8. Evaluation of implementation plan and allocations The implementation plan takes into account other ongoing and planned actions within the watershed (e.g. brine line). A monitoring plan is included to track the progress, and a mechanism for revising implementation actions during the course of the overall implementation period based on information that becomes available. Overall, the implementation plan is reasonable.	Comment noted.