

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

Date Received	Author
8/4/16	1. County of Los Angeles, Department of Public Works (LACDPW)
8/5/16	2. Lakes Town Council (LTC)
8/4/16	3. Ventura County Watershed Protection District (VCWPD)

No.	Author	Comment	Response
1.1	LACDPW	<p>The Proposed TMDL Is Not Consistent With The State Water Resources Control Board OWTS Policy</p> <p>The proposed TMDL is not consistent with the State Onsite Wastewater Treatment System (OWTS) Policy adopted on June 19, 2012. The OWTS Policy, Section 4.7 states “The Regional Water Boards will implement any notifications and enforcement requirements for OWTS determined to be in Tier 3 of this Policy.” On page 11 of the proposed TMDL’s Basin Plan Amendment, the Regional Water Board assigns load allocations generally to all OWTS in the watershed, but does not specify which, if any, OWTS must reduce discharges to meet the load allocations.</p> <p>Furthermore, the TMDL requires the County to “conduct a study to refine the area subject to the load allocations and determine which OWTS are contributing to nutrient loading to the lakes.” However, the County owns only one OWTS out of the 847 OWTS in the area, which was recently upgraded to an advanced system. With the exception of this one OWTS, which does not require any further action, the County’s only involvement with the OWTS is that, pursuant to an MOU with the Regional Water Board, the County fulfills the Regional Water Board’s obligations to issue permits for the installation of any new or upgraded OWTS. Placing a new monitoring and analysis obligation solely on the County is therefore improper.</p>	<p>The proposed TMDL is consistent with the OWTS Policy.</p> <p>The TMDL’s approach of assigning load allocations generally to all OWTS in the watershed does not contradict Section 4.7 of the OWTS Policy. A TMDL is not an enforcement requirement and, because the TMDL has not determined which, if any, OWTS are subject to Tier 3 requirements at this time, the Los Angeles Water Board does not need to implement any notifications.</p> <p>The Los Angeles Water Board wishes to continue the cooperative approach with the County of Los Angeles to regulate OWTS through the MOU and a Local Agency Management Program allowed for by the OWTS Policy. As such, the TMDL assigns load allocations to all OWTS in the watershed and proposes that the County conduct a special study to refine that area. The Los Angeles Water Board will assist the County in pursuing funding for this special study in light of the fact that the study is expected to reduce the number of OWTS that may need to upgrade in order to meet the TMDL load allocations.</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
			<p>Previous TMDLs, including the Malibu Creek Bacteria TMDL and the Ventura River Algae TMDL, have required similar special studies. The County of Los Angeles submitted their special study for the Malibu Creek Bacteria TMDL in 2007 and Ventura County is currently conducting the special study for the Ventura River Algae TMDL. The Los Angeles Water Board diligently worked to help Ventura County receive a federal nonpoint source grant to fund the study.</p>
1.2	LACDPW	<p>In addition, the Substitute Environmental Document indicates in Section 5.4 that construction of an OWTS typically includes a groundwater monitoring well. This is incorrect as only OWTS approved by the Regional Water Board and subject to a WDR are required to provide a groundwater monitoring well. OWTS at single family homes are not required to have a groundwater monitoring well.</p>	<p>The substitute environmental document discusses general construction procedures for OWTS so that potential environmental impacts of OWTS upgrades, if upgrades are necessary, can be evaluated at a program level. The inclusion of a particular implementation alternative in the substitute environmental document does not indicate that it is required by the TMDL. The substitute environmental document describes the reasonably foreseeable environmental impacts of the TMDL as an overall program, and reasonably foreseeable environmental impacts of the various potential methods of implementing the TMDL.</p>
1.3	LACDPW	<p>The Impact Of OWTS On Lake Hughes Is De Minimis Compared To The Costs Of Upgrading OWTS In The Area</p> <p>In Section IV.C – Summary of Source Assessment, the Regional Water Board indicates that “OWTS are possible sources of nutrient loading to groundwater affecting both Elizabeth Lake and</p>	<p>The comment is correct that, according to the TMDL analysis, OWTS in the Lake Hughes vicinity contribute a very small portion of the load. This is because the load from the in-lake sediments contributes over 99% of the load. Once the sediments are restored, the loading from the sediments will be</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

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		<p>Lake Hughes.” However, in Section VI.B.2 – Onsite Wastewater Treatment Systems, only 12 OWTS are estimated to be within the Lake Hughes watershed. These 12 OWTS are estimated to be responsible for 2 pounds of Total Phosphorous per year out of a total load of 54,936 pounds per year and 14 pounds of Total Nitrogen per year out of a total load of 8,245,498 pounds per year (Table 4). This means, the OWTS in Lake Hughes watershed contribute less than 0.004% of the total load of phosphorous and less than 0.0002% of the Total Nitrogen load to the lake.</p> <p>In addition, the Load Allocation for OWTS assigned to Lake Hughes requires the Total Phosphorous to be reduced to 1.9 pounds per year and the Total Nitrogen to be reduced to 11.1 pounds per year. This amounts to a total reduction in Phosphorous of 0.1 pounds per year and a reduction in Total Nitrogen of 2.9 pounds per year. These amounts of nutrients are inconsequential to the restoration of Lake Hughes. In order to comply with any requirement to reduce discharges, these homeowners would be required to spend between \$30,000 and \$50,000 to upgrade their OWTS to achieve these minimal reductions.</p>	<p>reduced or eliminated and the relative contribution of OWTS and other remaining sources will increase. The goal of the TMDL is to prevent the lakes from being re-contaminated once the sediments are restored. Thus, the TMDL includes equitable load allocations for all remaining sources to Lake Hughes, including OWTS, equal to a 3.2% reduction in phosphorus loading and a 20.7% reduction in nitrogen loading. Because of the significant cost of potentially upgrading the OWTS to meet these reductions, the TMDL proposes that the County of Los Angeles conduct a study to refine the number of OWTS that may need to be upgraded or, for OWTS located within the Lake Hughes Wastewater Treatment Facility (WWTF) service area, connected to the sewer system, in order to reduce costs. The results of the special study could also be used to refine the TMDL allocations, or redistribute load reductions among sources, and revise the schedule and other elements when it is reconsidered. The Los Angeles Water Board will assist the County in pursuing funding for this special study.</p>
1.4	LACDPW	<p>“Responsible Parties” Should Be Clarified</p> <p>For Elizabeth Lake, the proposed TMDL assigns [a] load allocation for non-point source runoff to a “drainage area within County of Los Angeles unincorporated area” and “drainage area encompassed by Angeles National Forest” (Basin Plan</p>	<p>Neither the County nor private landowners in the watershed are named as a responsible party for the load allocations for nonpoint source runoff from the watershed to the lakes. Consistent with EPA Guidance¹ and 40 CFR 130.2(g) and 130.7(c), the TMDL expresses the load allocation for nonpoint</p>

¹ Guidance for Developing TMDLs in California, EPA Region 9, January 7, 2000.

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
		<p>Amendment p.5). The responsible parties for non-point sources within the Elizabeth Lake drainage area include private land owners surrounding the lake, such as Lake Elizabeth Golf and Ranch Club, Ridgetop Ranch Properties Inc., etc. The County of Los Angeles has no control over these private lands. However, the language “drainage area within County of Los Angeles unincorporated area” in the proposed TMDL could easily be misinterpreted as “the County of Los Angeles as the sole responsible party for those areas”. To avoid any misunderstanding or uncertainty, the proposed TMDL should identify private land owners as responsible parties for the load allocations assigned to runoff from the watershed.</p>	<p>source runoff by subdrainage area according to jurisdictional subdivisions within the area. It does not name responsible parties for the load allocations for nonpoint source runoff from the watershed. The terms “drainage area within County of Los Angeles unincorporated area” and “drainage area encompassed by Angeles National Forest” are geographical descriptions. Further, the term responsible party is not used in the load allocation tables in the TMDL. This notwithstanding, the Board has clarified the discussion in the Staff Report, Section VI.B.2, and the language in the Basin Plan Amendment, Table 7-41.1, under “Implementation.”</p>
1.5	LACDPW	<p>The Lake Hughes Community Wastewater Treatment Facility Should Not Be Required To Reduce Phosphorus Loading Because It is Already Meeting The TMDL Target</p> <p>While we understand that conservative assumptions can be used to estimate the nutrient loading to the lakes to provide an implicit Margin of Safety (MOS) for the proposed TMDL, MOS should not be used to implicate impairment for unimpaired waterbody or exceedance for a discharge that is not causing exceedance. As summarized on p.6 of the draft Basin Plan Amendment, several conservative assumptions are used as a MOS. Some of these are not assumptions, rather technical deficiencies that should be corrected instead of being used as a MOS.</p> <p>For example, while the actual measured phosphorus concentration in Munz Lake (0.065 mg/L) is much lower than</p>	<p>The TMDL does not require the Lake Hughes WWTF to reduce phosphorus loading until a special study investigates why the facility’s reporting data show low nutrient concentrations in effluent, but elevated nutrient concentrations in groundwater downgradient from the spray irrigation field. If the special study demonstrates that the WWTF is contributing to the nutrient loading in groundwater, the facility will be required to implement source controls and/or upgrade to reduce phosphorus loading. If the special study indicates that the WWTF is not contributing to the nutrient loading, the facility may continue to operate as constructed, and the TMDL will be revised to reallocate the required reductions among other sources or to revise the loading capacity, if appropriate, when the TMDL is reconsidered six years from its effective date.</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
		<p>the TMDL target (0.113 mg/L), (i.e., the lake is clearly unimpaired), the TMDL still requires an 11.7% reduction in phosphorus. The same is true for the Lake Hughes Community Wastewater Treatment Facility, where measurements in the groundwater wells downstream of the discharge location show phosphorus concentrations much lower than the TMDL target, and yet the TMDL requires a 3.2% phosphorus reduction. These requirements are unwarranted and appear to be a result of technical deficiency associated with the watershed model used for estimating loadings into the lakes. It shows that the model was not calibrated.</p> <p>Therefore, although there are many uncertainties in the proposed TMDL due to limited information and data, the MOS should not be used to compensate for technical deficiencies to the level where a load reduction is required in the waterbody or discharge that is already meeting the TMDL target.</p>	<p>These requirements are not unwarranted and are not a result of a technical deficiency in the model. The model was calibrated for Munz Lake using the recommended range of model calibration factors for the BATHTUB model. The calibration factor for phosphorus net sedimentation rates was set at 2, which resulted in a predicted concentration of 0.12 mg/L for phosphorus in Munz Lake. The range of sedimentation rates is based on empirical relationships derived from field data from many different lakes in the nation and cover a wider range of expected environmental conditions that may affect the phosphorus concentration in the lake than are captured by available sampling data from Munz Lake. There were three phosphorus samples collected in 2014 and the measured value of phosphorus from those samples may not represent all current and potential future conditions. The fact that the predicted phosphorus value is higher than measured phosphorus values provides a conservative estimate of the required load reduction and is similar to how phosphorus concentrations were simulated in previous TMDLs in the Region (Los Angeles Area Lakes TMDLs).</p> <p>The TMDL's approach to the margin of safety is consistent with 40 CFR 130.7(c), which requires a margin of safety to account for a lack of full knowledge concerning the relationship between effluent limitations and water quality.</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
1.6	LACDPW	<p>Since the OWTS and Wastewater Treatment Facility Contribute, At Most, Less Than 1% to Loading, Requiring Studies and Costly Upgrades Is Not Warranted.</p> <p>As discussed in paragraphs II and IV, above, the contribution to the nutrient loading in the lakes from either the OWTS or the Lake Hughes Community Wastewater Treatment Facility is de Minimis. As recognized on page 4 of the draft TMDL, "[t]he major source of nutrients... is internal nutrient loading (nutrient flux from sediments). This source constitutes over 99% of the total phosphorous and total nitrogen loading..." Thus, at most, the OWTS and Treatment facility contribute less than 1% to the total nutrient loading of the lakes. Further, as recognized by the Staff Report, the costs of any upgrades to either or both the Treatment Facility or the OWTS are extremely high. Given the high economic costs and the de Minimis benefit it would bring, it is improper to impose the costs of either the special studies or the upgrades for the OWTS and the Treatment Facility.</p>	<p>See response to comments 1.1, 1.3, and 1.5. Because of the significant cost of potentially upgrading OWTS and the WWTF, the TMDL proposes that the County of Los Angeles conduct a study to refine the number of OWTS that may need to be upgraded and to determine if WWTF is in fact contributing to the nutrient loading in groundwater, in order to reduce costs. The study may also be used to reallocate the required reductions among other sources, if necessary when the TMDL is reconsidered six years from its effective date. The Los Angeles Water Board will assist the County in pursuing funding for these special studies.</p>
1.7	LACDPW	<p>The Compliance Timeline for WLAs Needs Correction</p> <p>Page 13 of the Basin Plan Amendment and pages 20 and 33 of the Staff Report all indicate that the compliance timeline for WLAs is 15 years. Page 8 of the Basin Plan Amendment, on the other hand, mistakenly state it as "seven" years. We believe the one on page 8 is a typo error and should be revised to state "fifteen" years.</p>	<p>The typo has been corrected.</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
2.1	LTC	<p>We, the Board Members of the Lakes Town Council, have reviewed your report and have a number of questions and concerns. The Lakes Town Council is a duly elected board, representing constituents of our community, and serving in an advisory capacity to the Los Angeles County Board of Supervisors. We are volunteers who neither receive remuneration nor legal assistance from the County.</p> <p>Issue #1: Costs: On June 4, 2016 representatives from the Los Angeles Regional Water Quality Control Board gave a presentation at the Lakes Town Council (LTC) meeting and assured us all that homeowners would not be held financially responsible for any costs related to improvements of Lake Hughes and Elizabeth Lake. They informed the LTC Board and members of the community that funding would be obtained from the United States Forest Service (USFS) and from State and Federal grants.</p>	<p>The Los Angeles Water Board understands the importance of community involvement in developing the TMDL, and appreciates the ongoing input of the residents and the Lakes Town Council. Throughout ongoing meetings and conversations, the Los Angeles Water Board has addressed, and will continue to address the community's questions and concerns.</p> <p>The Los Angeles Water Board staff made a presentation at the June 4, 2016 Lakes Town Council meeting, and assured the residents that they would not be responsible for funding lake restoration projects to address the in-lake sources of nutrients. The Lakes Town Council's understanding of what was presented by the Los Angeles Water Board staff at the meeting is correct. The lake restoration will be the responsibility of lake bed owners, named as cooperative parties (USFS, US Government, Ridgetop Properties, and Peterson Ranch). The Los Angeles Water Board will work with cooperative parties to pursue the various State and federal funds that are available for restoration projects. In the case of the Peterson Ranch portion of Elizabeth Lake, this area is already being restored as a mitigation bank and will contribute to overall lake restoration.</p>
2.2	LTC	<p>The Total Maximum Daily Load (TMDL) report states that special studies will need to be carried out to determine nutrient levels of septic systems in Elizabeth Lake and the Lake Hughes Community Wastewater Treatment Facility (WWTF). Each</p>	<p>Also at the June 4, 2016 Lakes Town Council meeting, Los Angeles Water Board staff stated that the only potential costs for residents around the lakes would be to address potential nutrient loading from</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
		<p>study is estimated to be in the range of \$200,000-\$300,000. Once the studies have been completed, property owners whose septic systems that may be identified as contributing nutrients to the lakes will be required to upgrade at a cost of \$20,000 - \$50,000. (Los Angeles County approved all septic systems in the Lakes and should be held responsible for the replacement costs.) These figures may well underestimate additional and costly logistical problems that might occur. If the Lake Hughes Community WWTF requires upgrades it could cost users of that facility anywhere from \$5 to \$10 million. (It should also be pointed out that Elizabeth Lake residents are opposed to a sewer system.)</p>	<p>their septic systems and the Lake Hughes WWTF. In order to ensure that unnecessary upgrades and costs are avoided, the TMDL proposes that the County of Los Angeles conduct a study to determine which, if any, septic systems may need to be upgraded. In addition to septic systems, the TMDL proposes that the County of Los Angeles conduct a study on the Lake Hughes Community WWTF to investigate the elevated nutrient concentrations in groundwater downstream from the spray irrigation field, and the possible nutrient contributions to the nutrient loading in the lakes. These studies will refine information on the contributions of nutrients from the WWTF and from septic systems and help determine whether and how much of a reduction is needed from each of these sources. The County of Los Angeles can apply for State and federal grants to fund the studies. At the Town Council Meeting on August 6, 2016, the County of Los Angeles assured the residents that they will make every effort to secure grants for these studies. In addition, if the studies show that upgrades are needed for any septic systems in the area or the WWTF, there are State and federal funding and low interest loans available to help offset the costs to residents. The Los Angeles Water Board will assist the County in pursuing funding for the special studies and any potential upgrades. The existence of a TMDL will, in many cases, open up opportunities for certain funding sources and make funding easier to obtain.</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
2.3	LTC	<p>Certain property owners whose land is in close proximity to the lakes may be held liable for stormwater runoff originating on their land or will have to become involved with a Lake Water Quality Management Program, which could involve dredging of the lake. Property owners will be held financially responsible.</p>	<p>This information is incorrect. The lake restoration will be undertaken by the lake bed owners, not property owners in close proximity to the lakes. Restoration efforts in and around the lakes, such as shoreline buffering to decrease the flow, treat the runoff, and keep sediments and nutrients from flowing into the lakes, will be undertaken by cooperative parties (lake bed owners only). These efforts will address the TMDL load allocations established for runoff from the watershed surrounding the lakes. Individual property owners surrounding the lakes will not have to become involved with a Lake Water Quality Management Program and will not be held financially responsible for costs associated with the Lake Water Quality Management Program that is developed to restore the lakes.</p>
2.4	LTC	<p>The Lakes Town Council respectfully requests that the requirements set forth by the California Regional Water Quality Control Board be contingent on the full receipt of Federal, State, and County funds to cover the costs for ALL of the implementation actions.</p>	<p>The Los Angeles Water Board understands the financial concerns that the residents and the Lakes Town Council have regarding implementation costs. The lake restoration will be the responsibility of cooperative parties (lake bed owners) through a memorandum of agreement (MOA) and the special studies will be carried out by the County of Los Angeles. The County of Los Angeles may apply for various State and federal grants and funding sources. At the Lakes Town Council meeting on August 6, 2016, the County of Los Angeles assured residents that they will make every effort to secure funding for the special studies. The Los Angeles Water Board will diligently work with cooperative parties and the</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
			County to obtain funding for the special studies and TMDL implementation, as we have done in the past for several similar TMDLs and projects, such as the Ventura River Algae TMDL, the Machado Lake Nutrient TMDL, and the Colorado Lagoon Pesticides, PCBs, PAHs, and Metals TMDL.
2.5	LTC	Issue #2: Valley Fever: We see no mention anywhere in your report of Valley Fever(coccidioides). When land is disturbed these microscopic, airborne fungal spores can be released, causing very serious illness. What testing does the Water Quality Board plan to do? What strategies will be set in place to control the massive amounts of dust that is known to contribute to or exacerbate other pulmonary illnesses? Where will the water come from? If dredging operations occur, and Valley Fever is assumed to be present, how will the soil be disposed of if it contains an airborne health hazard? There may also be a further risk to families if many homeowners in the area must replace each individual septic system. Increased exposure increases the likelihood of contracting an infection.	The Substitute Environmental Document has analyzed, at a program level, possible air impacts due to dust and other emissions (pages 39-40), the effect on sensitive receptors (page 41), as well as possible generation of hazardous materials (page 56). This analysis applies to coccidioides as well. Dredging and septic system construction activities can potentially aerate dust, coccidioides, or other airborne health hazards from the lake bed or construction areas. The SED includes potential mitigation measures that can be implemented, such as dust suppression and covering piles of dredged material. Exposed areas can be revegetated or covered to reduce fugitive dust. These mitigation measures will keep dust, as well as fungal spores and other hazardous materials from being airborne. At this time, specific project-level information about where water for dust suppression will come from has not been developed. Prior to any lake restoration projects, including dredging, a full project-level CEQA analysis must occur. As part of project pre-design, a sampling and analysis plan will be developed that will include testing of the lake bed sediments for any hazardous materials. If hazardous

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
			<p>materials are detected at levels that exceed triggers for hazardous waste, then the materials will be handled, transported, and disposed of in accordance with all applicable laws and regulations.</p> <p>The implementation alternatives are evaluated at a program level in the Los Angeles Water Board’s environmental analyses. The Los Angeles Water Board does not specify the actual means of compliance by which cooperative parties (lake bed owners) will restore the lakes. The cooperative parties that will implement the TMDL are responsible for completing a project level analysis.</p>
2.6	LTC	<p>Issue #3: Quality of Life: Having - among other things - huge earth-moving machinery digging up the lake beds in Elizabeth Lake and Lake Hughes, all of the activities necessary to complete the TMDL standards will severely and detrimentally impact the quality of life of residents of Elizabeth Lake and Lake Hughes. The Lakes communities enjoy a quiet atmosphere and beautiful vistas, all around. Not only will there be unprecedented noise (with vibrations) and dust and potential health hazards from these activities, but there will also be a visual blight.</p>	<p>The Los Angeles Water Board understands the inconvenience and unpleasant conditions that may take place during implementation of the lake restorations. However, these conditions are temporary, and the long-term quality of life will improve with the restoration of the lakes. The Los Angeles Water Board addressed this concern in the Substitute Environmental Document in the “Air Quality”, “Noise”, “Aesthetics”, “Transportation/Traffic”, and “Hazards and Hazardous Materials” sections. A project-level environmental impact analysis will also be completed by cooperative parties, which will analyze specific impacts of the implementation alternatives that they choose to pursue in complying with the TMDL.</p> <p>Please also see response to comment 2.5</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
2.7	LTC	<p>Issue #4: Community Involvement and Notification: Since your organization has been conducting studies of the lakes since the early 1990s, why was the Lakes Town Council not kept informed and updated regarding this situation? During those decades, measures might have been taken to mitigate both point and nonpoint sources of nutrient loading to the lakes. Since 1990, an additional 184 houses have been built in the 93532 ZIP code. The golf course in Elizabeth Lake was in operation and using large amounts of fertilizers during that time. It is imperative that the LTC is actively involved in all discussions.</p>	<p>The Los Angeles Water Board agrees and understands the importance of the involvement of the Lakes Town Council. Although the lakes were first listed on the 1996 Clean Water Act Section 303(d) List of impaired waters, the Los Angeles Water Board did not begin development of a TMDL for these listings until recently. The Los Angeles Water Board will continue to make efforts to notify and keep the community involved in the TMDL development and implementation process. To that end, the Board has established a dedicated email subscription list targeted to the Santa Clara River Lakes in addition to the Board's existing email subscription list for the Santa Clara River watershed.</p> <p>The Los Angeles Water Board has outreached to the community in the following ways:</p> <ul style="list-style-type: none"> • Spoke at a community meeting on 5/5/16 to inform the community about the development of the Santa Clara River Lakes Nutrients TMDL. • Mailed out a Santa Clara River Lakes Nutrients TMDL fact sheet on 5/19/16 to 1,256 property owners (mailing list acquired from Los Angeles County Assessor's parcel information). • Published an article in the June 2016 issue (Volume 1, Number 8) Lakes & Valleys Gazette announcing the notice of public hearing and discussing TMDL development. The article also stated that the Los Angeles

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
			<p>Water Board would be attending and presenting at the 6/4/16 Town Council meeting.</p> <ul style="list-style-type: none"> • Presented at the Lakes Town Council meeting on 6/4/16. Background on the TMDL, water quality problems in the lakes, sources of nutrients, requirements of the TMDL, and next steps were discussed. • Published the Notice of Public Hearing and Board Meeting in the Santa Clarita Valley Signal and Antelope Valley Press on 6/21/16. • Attended the 8/6/16 Town Council meeting and gave a presentation and answered questions/ participated in discussions. Los Angeles County also attended this meeting and made a presentation to the community regarding the County's role in implementing the TMDL. • Met with several Town Council and community representatives on 8/18/16 as a follow-up to the Town Council meetings. <p>In addition, the Town Council and/or other community representatives can be included as third party beneficiaries in the MOA with cooperative parties. This will ensure that residents have input on the restoration of the lakes, but will not assign any financial responsibility to the Town Council or residents.</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

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2.8	LTC	<p>Issue #5: Munz Lake as a Model: On page 10 of your report, it states that “Munz Lake was used as a reference for acceptable conditions in Elizabeth Lake and Lake Hughes. The BATHTUB tool was applied to Munz Lake to set numeric targets for total nitrogen and total phosphorus in all three lakes.” Page 2 observes, “It is possible that supplemental water is added to Munz Lake, but no information is available to evaluate this as a potential source of nutrients or to explain why Munz Lake is deeper than Elizabeth Lake and Lake Hughes.”</p> <p>Munz Lake was, in fact, dug out and is filled with well water. The Painted Turtle has also well-maintained catch basins. This is one possible explanation of why the nitrogen and phosphorus levels are significantly lower than in the other two lakes. (Table 4, Summary of Nutrient Loading to the Santa Clara River Lakes) Elizabeth Lake and Lake Hughes are completely dry at present, representing a natural, cyclical event. It also must be noted that Munz lake is not surrounded by homes. Munz Lake does not appear to be an appropriate model unless the lakes were to also receive supplemental water, which your report states would be an extremely costly endeavor. Point of clarification, how was the one-foot-deep dredging requirement concluded?</p>	<p>The information provided by this comment has been incorporated into the administrative record for the TMDL. It is likely that supplemental water additions and well maintained catch basins are the reason that Munz Lake has significantly lower nitrogen and phosphorus levels than Lake Hughes and Elizabeth Lake. This is why Munz Lake was used to calibrate the model. The Staff Report has been revised to clarify how Munz Lake was used to help set allocations for the other two lakes. The allocations for Lake Elizabeth and Lake Hughes recognize their site-specific characteristics, which include natural, cyclical, drying up.</p> <p>The one-foot-deep dredging assumption was made solely for estimating potential costs and is not intended to indicate a required depth for TMDL implementation. One foot was assumed based on previous lake TMDLs and lake dredging projects in the region.</p>
2.9	LTC	<p>Table 4 indicates that Elizabeth Lake has an OWTS (septic) flow of 38 ac-ft/yr which seems excessive to us because the lake is currently bone dry. How did the report arrive at that figure? We would greatly appreciate a copy of the Tetra Tech 2015 report Nutrient TMDL Support for Santa Clara River Watershed Lakes: Elizabeth Lake, Munz Lake, and Lake Hughes, that was referenced in the TMDL.</p>	<p>The Tetra Tech 2015 Technical Support Document can be found along with all of the other documents on our website at: http://www.waterboards.ca.gov/losangeles/board_decisions/basin_plan_amendments/technical_documents/bpa_115_R16-XXX_td.shtml</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
			<p>The report arrived at the figure for OWTS flow based on default literature values for per capita flow. The amount of that flow that is not evaporated or lost to deep groundwater and that actually reaches the lakes was approximated using the proportion of spray irrigation flow from the Lake Hughes WWTF that reaches Lake Hughes. This is a commonly accepted approach for estimating loads from OWTS in TMDLs and other watershed studies. The resulting value of 38 acre-feet per year is not excessive and is less than the estimated flow from storm drains in dry weather, for example. This amount of flow could remain below the lake sediments or could evaporate at the lake surface, which would explain why Lake Elizabeth is currently dry.</p>
2.10	LTC	<p>Additional Concerns for Consideration: Other concerns include infrastructure, such as damaged roads from heavy trucks and equipment; noise pollution; air quality from heavy equipment exhaust emissions; emergency access, road access, etc. How will these activities affect wildlife?</p>	<p>The Los Angeles Water Board understands these concerns and has discussed them in the Substitute Environmental Document. The Los Angeles Water Board has balanced the environmental, economic, legal, social, technological, and other benefits of the TMDL against potential environmental impacts. The TMDL will result in improved water quality and will have significant positive impacts to the environment, including wildlife, and the economy over the long term. Enhancement of the recreational, aquatic life, and wildlife beneficial uses will have positive social and economic effects by decreasing potential hazards and increasing the aesthetic experience at the lakes over the long term. Any potential impacts will be mitigated by the project proponents at the subsequent</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
		<p>We are also deeply concerned that property values will be negatively affected with mandatory septic improvements and monitoring as property owners are obligated to disclose these facts to potential buyers.</p> <p>How can the contractors that are contracted to do the work be trusted to comply with rules and regulations for health and safety? Will they need to have special licenses or operational permits in place?</p> <p>“If chosen as the implementation strategy, cooperative parties shall develop and enter a Memorandum of Agreement (MOA) with the Regional Water Board to implement LAs.” The costs outlined places not only an undue burden on property owners, but would be impossible to fulfill, given that the median household income is relatively low. Again, we ask that Federal, State and County funds be obtained prior to any implementation.</p>	<p>project level prior to and during implementation once specific sites and methods have been identified. Please also see also response to comments 2.5 and 2.6.</p> <p>The TMDL includes studies that will determine if specific septic systems need to be upgraded and/or replaced. The results of the studies will determine which, if any, need to be upgraded and/or replaced. The TMDL does not require mandatory septic improvements. Please see response to comment 2.2.</p> <p>There will be many subsequent permitting and environmental compliance procedures that must take place prior to TMDL implementation. Through this process, cooperative parties will hire contractors with proper credentials and licensing to conduct work under thoroughly vetted plans.</p> <p>The cooperative parties are the lake bed owners, not the residents and property owners next to or near the lakes. For Elizabeth Lake, the cooperative parties are the US Forest Service, Ridgetop Properties, and Petersen Ranch. For Lake Hughes, the cooperative party is the US Government. The Los Angeles Water Board will work with the cooperative parties to obtain various State and federal funds for the restoration. In the case of the Peterson Ranch portion of Elizabeth Lake, this area is already being restored as a mitigation bank and will contribute to overall lake restoration. Please also see response to comment 2.1.</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
2.11	LTC	<p>Elizabeth Lake and Lake Hughes are home to many indigenous and migratory wildlife species, including Special Status Species, such as the Tri-Colored Blackbird and Southwestern Pond Turtle. When full of water, these wonderful lakes provide residents and visitors with opportunities for swimming, kayaking, sailing and fishing. The residents of Elizabeth Lake and Lake Hughes are not opposed to improvements to the lakes, but we lack the financial resources to accomplish what has been recommended.</p>	<p>The Los Angeles Water Board values the wildlife and recreational activities supported by the Santa Clara River Lakes and purpose of the TMDL is to protect these beneficial uses.</p> <p>To address concerns about what financial burden the TMDL would place on residents, the parts of the TMDL that will cost money are summarized and explained here. The first part is lake restoration. In this case, lake bed owners, not the property owners next to or near the lakes, are named as cooperative parties for lake restoration. The TMDL includes ample time for cooperative parties to secure State and federal funding for the restoration. The other two parts of the TMDL that could cost money are the potential upgrades to septic systems and the Lake Hughes WWTF. For these parts of the TMDL, special studies are included to minimize the need for any costly upgrades. The Los Angeles Water Board has committed to help find funding for those studies so that the cost of the studies is not passed on to residents. Source control may also be a cost-effective means to achieve reductions in phosphorus loads from the WWTF. If upgrades are ultimately required, the Los Angeles Water Board has also committed to help find funding to offset the costs of upgrades. In fact, the State Water Board's policy for regulating septic systems (the OWTS Policy) includes an entire section on how to fund potential septic system upgrades.</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
			<p>The Los Angeles Water Board appreciates the input from the Town Council and the residents of the area, and looks forward to working with the Town Council, the residents, and cooperative parties in implementing the TMDL. For example, if the Town Council and/or other community representatives are interested, they can be included as third party beneficiaries in the MOA with cooperative parties for the lake restoration. This will ensure that residents have input on the restoration of the lakes, but will not assign any financial responsibility to the Town Council or residents.</p>
3.1	VCWPD	<p>The County of Ventura and Ventura County Watershed Protection District appreciate the opportunity to provide comments on the proposed Total Maximum Daily Load for Nutrients for the Santa Clara River Lakes (Elizabeth Lake, Munz Lake, and Lake Hughes) (SCR Lakes TMDL). We have reviewed the tentative Basin Plan Amendment, the June 21, 2016 draft Staff Report, and the associated Technical Support Document. Based on our review, we have three main comments that can be summarized as follows:</p> <ol style="list-style-type: none"> 1) The Suite of Targets Should Not Restrict Management Solutions. The TMDL should be structured such that regulated parties can choose to address the biostimulatory substances impairments using methods other than nutrient load reduction. The TMDL should not include targets for TN and TP. 2) The Targets Should be Achievable. Several lines of evidence suggest that the chlorophyll-a and nitrogen 	<p>Comment noted. See response to three main comments in the following specific responses.</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
		<p>targets may not be achievable or scientifically appropriate. The targets should be modified to reflect the conditions in the lake and surrounding watershed rather than literature values.</p> <p>3) The Loads Should be Estimated using More Representative Watershed Conditions. The modeling performed to estimate internal loads (and consequently the required load reductions) was distorted by sole use of data from an apparent post-wildfire nutrient pulse and an associated large algal bloom. The load reductions should be modified to account for the post-fire conditions modeled.</p>	
3.2	VCWPD	<p>The Suite Of Targets Should Not Restrict Management Solutions.</p> <p>Regulated parties should be able to address the biostimulatory substances impairments in one or more of the three lakes using methods other than nutrient load reduction. The draft Staff Report for the SCR Lakes TMDL acknowledges that the State Board is in the process of developing a statewide regulatory approach for biostimulatory substances. As part of this process, the State Board is prioritizing assessment of beneficial use attainment based on biological response indicators (such as algal biomass and DO), not nutrient concentrations.</p> <p>"Waterbody assessment of beneficial use support is based on biological response indicators, rather than nutrients alone. The NNE would include a suite of numeric endpoints based on the biological response indicators of an aquatic waterbody to nutrient over-enrichment (e.g., algal biomass, DO). The intent of the NNE framework is to assess and control excess nutrient loads to levels such that the risk or probability of impairing the</p>	<p>The numeric targets do not restrict management solutions. The proposed TMDL offers flexibility in how allocations set to achieve the numeric targets can be attained. For example, the load allocations for the internal loading may be implemented through a voluntary cooperative lake restoration effort by lake bed owners and the Regional Water Board.</p> <p>The commenter seems to be confusing a waterbody assessment with a TMDL. The waterbody assessment that led to the 303(d) listing of these lakes was based on response indicators – the “Problem Statement” in the BPA, Table 7-41.1 identifies the response indicators that were used in the assessment of each lake. A TMDL is not a waterbody assessment. It is a regulatory plan to restore a waterbody that has been assessed and identified as impaired. The TMDL numeric targets include both nutrient targets and</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
		<p>beneficial uses is low. If the nutrients present, regardless of magnitude, have a low probability of impairing uses, then water quality standards can be considered met." (State Board Focus Group Outreach Document, February 2016)</p> <p>Consistent with this viewpoint, the State Board intends to offer a pathway in the biostimulatory policy (the "watershed approach") that allows for correction of biostimulatory impairments using management actions other than nutrient controls:</p> <p>"The watershed approach focuses on the overall health of a watershed and the cumulative effects of biostimulatory substances on the watershed's environment. The effects of nutrients may vary depending on the environmental conditions. The watershed approach focuses not only on the total amounts of nutrients that are being added to the system, but also takes a comprehensive look at the watershed's health and its ability to assimilate the nutrient load ... [An] enhanced watershed management plan could include traditional control mechanisms -such a nitrification and denitrification for Publicly Owned Treatment Works (POTWs) as well as watershed restoration actions that could increase the assimilative capacity of the watershed... <u>Control action options within a program of implementation for improving the watershed health and restoring beneficial uses would not be limited to simply putting limits or targets on nutrient sources.</u>" (State Board Focus Group Outreach Document, February 2016; emphasis added)</p> <p>The SCR Lakes TMDL should not include targets for TN and TP. This will allow the regulated parties to implement a larger variety of management solutions to attain chlorophyll-a, DO, and pH</p>	<p>response indicator targets. The nutrient targets are those that are deemed necessary, based on the modeling, to achieve the response indicator targets.</p> <p>The State Water Board nutrient control program is under development. Los Angeles Water Board staff serves on the regulatory advisory group for the program. The watershed approach referenced in the comment was included in a draft outreach document and is one of several options for consideration. Our reading of the document reveals that the watershed approach includes the use of watershed management actions <i>in addition to</i> nutrient targets, not <i>instead of</i> nutrient targets. In the case of the SCR Lakes, lake restoration to address the reservoir of nutrients within the lakes is identified as a key "control action," which is wholly consistent with the State Water Board's watershed approach. However, due to their characteristics, which include periodic drying, the broader suite of in-lake management solutions for lakes with a constant supply of water may not be as feasible or effective in the long-term in the case of the SCR Lakes. In addition, while the watershed approach is indicated as the preferred option for implementation provisions, the use of numeric nutrient endpoints is the preferred option for the water quality objectives. Thus, the TMDL is in line with the draft outreach document and the direction of the nutrient control program at this time. When the nutrient control program is finalized, the Board will take the necessary policy steps to revise water quality standards, if</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
		<p>targets, regardless of whether the solutions result in nutrient concentrations in the lake below those that the BATHTUB model predicted were needed. This seems especially important given that (1) Tetra Tech was not able to recommend nutrient targets for Elizabeth Lake and Lake Hughes based on site-specific nutrient data (they could not calibrate the BATHTUB model using the available monitoring data for these two lakes), (2) Tetra Tech applied N and P targets developed for Munz Lake to the other two lakes, although they differ in several respects from Munz Lake (e.g., regarding surrounding land use, lake area, depth, lake area to watershed ratio), and (3) that potential distortions in TMDL provisions stem from sole use of scant monitoring data from an anomalous post-wildfire year to assess loads and load capacity.</p>	<p>appropriate. In the meantime, the proposed Lakes TMDL follows the same technical approach as several previous TMDLs in the region, including the Machado Lake Nutrient TMDL, the Ventura River Algae TMDL, and The Los Angeles Area Lakes Nutrient TMDLs.</p> <p>The SCR Lakes TMDL should include targets for nitrogen and phosphorus because the lakes are impaired due to eutrophication. Eutrophication, by definition, means a condition resulting from excessive nutrients. The TMDL allows for cooperative parties and responsible agencies to implement a variety of solutions to attain the numeric targets. This notwithstanding, the Board has added language to the Basin Plan amendment and staff report that if the numeric targets for the response indicators are achieved and maintained in the lakes, and nutrient allocations are being implemented and attained, then the TMDL is considered achieved regardless of whether the total nitrogen and total phosphorus targets are being achieved. Additionally, the TMDL includes a provision to reconsider various elements, including revising the numeric targets, revising or redistributing the LAs and WLAs among sources, and revising the implementation schedule and any other elements of the TMDL based on the results of any new information or data after six years. This will provide an opportunity to revisit the nutrient targets for Elizabeth Lake and Lake Hughes based on any additional monitoring data.</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
3.3	VCWPD	<p>The Targets Should be Achievable</p> <p>As indicated above, the draft Staff Report for the SCR Lakes TMDL acknowledges the current development of the State Board's biostimulatory substances strategy and numeric guidance. As stated by the State Board: "the primary goal of the proposed Biostimulatory Substances Amendment is to protect the 60 percent of streams in good condition and restore to the maximum extent possible the other 40 percent (State Board Focus Group Outreach Document, February 2016). Inherent in the State Board's approach is the acknowledgement that waterbodies in poorer shape will not be expected to attain reference conditions through application of the numeric guidance.</p> <p>The chlorophyll-a target in the SCR Lakes TMDL (20 µg/L) was not developed based on the particular characteristics of the three lakes, naturally occurring biota or historic habitat condition, or the relationship between chlorophyll-a levels and actual episodes of impairment of aquatic life or recreation in these lakes. The target is based on Tetra Tech's (2006) general recommendations that summer average chlorophyll-a concentrations be not greater than 25 µg/L to support WARM uses and not greater than 20 µg/L to support REC-1 uses. The BATHTUB model was then used to derive water column N and P concentrations for the three lakes that are presumably necessary to meet the chlorophyll-a target (as summarized above). However, the load capacities associated with the chlorophyll- a target are scientifically unrealistic and imply that the TMDL targets are not attainable.</p> <p>The source assessment acknowledges that the N concentration in runoff from naturally vegetated open space (3.2 mg-N/L from</p>	<p>The numeric targets are achievable and scientifically appropriate. They are not based on literature values but site-specific information for the watershed.</p> <p>This quotation in this comment excludes other relevant information from the draft outreach document, which states that the goal would be achieved by establishing numeric translators for biostimulatory substances, which would then be used to develop numeric targets for nutrients in TMDLs. Thus, the State Water Board's current draft approach includes numeric targets for nitrogen and phosphorus.</p> <p>The chlorophyll a target in the SCR Lakes TMDL was chosen based on the California Nutrient Numeric Endpoints framework (Tetra Tech, 2006). This is the current approach for setting chlorophyll a targets and has been used in several previous lakes TMDLs for our region and is the recommended approach in the draft State Water Board nutrient control program. A numeric target of 20 µg/L for chlorophyll <i>a</i> is appropriate for naturally eutrophic lakes such as the SCR Lakes. The TMDL is not requiring the SCR Lakes to be restored to pristine reference conditions but rather to be restored to natural conditions expected for lakes in hot, arid climates and with these physical characteristics. By way of comparison, the chlorophyll a target for Big Bear Lake is 5 µg/L. The target for chlorophyll <i>a</i> is reasonable and achievable. The load capacities associated with the chlorophyll <i>a</i> target are scientifically realistic and attainable as well.</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
		<p>forest, grassland, or chaparral shrubland) is three times higher than the N target obtained for the lakes obtained by fitting the BATHTUB model for Munz Lake to a chlorophyll-a target of 20 µg/L (1.13 mg-N/L). If one accepts the BATHTUB model outcomes, the algal target is not achievable unless the lake become significantly more diluted than runoff from naturally vegetated open space. Given that each SCR lake functions much like a closed basin lake, receiving only water from local runoff in all but the wettest years (when there can be some exchange between the lakes), and that naturally vegetated open space occupies a very high percentage of the land area draining to each of the lakes (96% for Munz Lake, 82% for Lake Hughes and 94% for Elizabeth Lake), the chlorophyll-a target would appear to be unattainable even if all of the land area draining to the lakes reverted to undeveloped wild land.</p> <p>The load capacities generated by the BATHTUB model further indicate that the chlorophyll-a target is not attainable in two of the lakes unless nutrient exchanges with lake sediment are (essentially) prevented altogether - an infeasible and scientifically inappropriate goal (the load allocations require 99.97% and 99.99% reductions in nutrient releases from Elizabeth Lake and Lake Hughes, respectively). According to the modeled load capacities, if all of the available load capacity was assigned to sediment loading (i.e., if zero nitrogen loading was allowed from open space, MS4 acreage, septic tanks, the WWTF (Lake Hughes only), and atmospheric deposition) the chlorophyll-a target would still not be attainable in Elizabeth Lake without a 99.97% reduction in sediment N and would not be attainable in Lake Hughes without a 99.98% reduction in N release from the sediment.</p>	<p>The comment's conclusions regarding the relationship between the concentration of nutrients in the inputs to the lake and the in-lake concentrations of nitrogen are incorrect and demonstrate a misunderstanding of how the BATHTUB model works. BATHTUB, while simplified, is not a mass balance model, where input equals output, but rather accounts for the various physical, chemical, and biological processes that transform nutrients within lakes by including established empirical relationships between algal biomass and nutrients in the model, as well as physical parameters of the lake such as lake volume, surface area, depth, mixing depth, and inflow.</p> <p>The load allocations assigned to nutrient releases from the lake sediments are both scientifically appropriate and feasible to achieve. Over 99% the nutrient loading to the lakes is coming from the sediments at the bottom of the lake. Thus, over 99% of the required reductions are assigned to the in-lake sediments. The TMDL identifies possible ways of achieving the load allocations, including dredging of the lake sediments.</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
		<p>Finally, given that: (1) no historic chlorophyll-a data are available for any of the lakes, except for two sampling dates in 2014 following major wildfire in 2013, (2) the lakes are in quasi-closed basins in which nutrient export is absent except in wet years, and (3) the lakes are very shallow and naturally prone to drying and resuspension of sediments, it is not clear that a chlorophyll-a target of 20 µg/L (ultimately based on literature review in the 2006 TetraTech report), is appropriate or achievable for these lakes even if their watersheds were completely pristine. The targets should be modified to reflect the conditions in the lake and surrounding watershed rather than literature values.</p>	<p>This comment is incorrect. There are historical chlorophyll a data available from these lakes, including the original listing data from 1992-1993, which are included in the TMDL technical support document. This comment appears to misunderstand the TMDL. The TMDL assigns 99% of the required reductions to the in-lake sediments. The TMDL does not assume that the targets will be achieved by reducing external loading alone. The numeric targets do reflect the conditions in the lake and surrounding watershed.</p>
3.4		<p>The Loads Should be Estimated Using More Representative Watershed Conditions</p> <p>The BATHTUB model used to estimate internal and external loads was calibrated using lake water data for nutrients and chlorophyll-a obtained in the aftermath of a major wildfire. The only chlorophyll-a data used to inform the model and compute load capacities was from two sampling dates in 2014 (July 8, 2014 and October 8, 2014). This was shortly after the June 2013 Powerhouse Fire which burned about half of the drainage area to all three of the lakes. In addition, the lakes were especially shallow in 2014. Anomalously high chlorophyll-a and suspended nutrient concentrations were observed in Lake Hughes and Elizabeth Lake on those two dates, and affected the computation of load and load capacity. The technical support document acknowledges this feature of the data used, as follows:</p>	<p>The inputs used in the BATHTUB model are based on the accumulation of nutrients in the lakes over decades. The lakes have been impaired due to nutrients at least since 1992. Any inputs to the lake caused by historical fires or other sources are accounted for in the TMDL by the estimates for the in-lake sediments.</p> <p>It is scientifically unsound to conclude that the chlorophyll a and nutrient concentrations were anomalously high without any other recent data for comparison. It is reasonable however to assume that the chlorophyll <i>a</i> concentrations were collected during the critical condition. In fact, this is what the TMDL does, as it is required to do.</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
		<p>"It is hypothesized that conditions in the watershed following wildfires and firefighting, including the 2013 Powerhouse fire, contributed to the nutrients that have accumulated in the sediments. For example, it is understood that the fire retardant used by fire fighters during the 2013 Powerhouse fire was the commercial product Phos-Check, which contains 76-82 percent Monoammonium Phosphate and 8-12 percent Diammonium Phosphate, which are soluble forms of nitrogen and phosphorus and are frequently used as ingredients in commercial fertilizer (ILC Performance Products LP, 2011)." (Technical Support Document, p. 4-1)</p> <p>"The Lake Elizabeth BATHTUB model could not be calibrated to the extremely high nutrient concentrations observed in 2014 because the calibration factors would need to be set well beyond their recommended ranges." (Technical Support Document, p. 5-3)</p> <p>"Similar to Lake Elizabeth, the Lake Hughes BATHTUB model could not be calibrated to the extremely high nutrient concentrations observed in 2014 because the calibration factors would need to be set well beyond their recommended ranges." (Technical Support Document, p. 5-4)</p> <p>Sustained elevated dissolved nutrient and sediment export from watersheds after wildfire is well documented in the literature. Extremely high in-lake concentrations of nutrients and chlorophyll-a in 2014 in Elizabeth Lake and Lake Hughes were almost certainly linked to post-fire nutrient pulses and an associated algal bloom. This means that the computed internal loads and required load reductions for Elizabeth Lake and Lake</p>	<p>The quotation from the TMDL support document in this comment is correct.</p> <p>The quotation from the TMDL support document in this comment is correct.</p> <p>The quotation from the TMDL support document in this comment is correct.</p> <p>While the comment has correctly quoted the technical support document, the interpretation is incorrect. The elevated levels of nutrients in the lake sediments are likely due to the Powerhouse Fire, as well as other fires and activities that have occurred in the watershed over decades. The exact contribution from each of these historical sources is unknown. Regardless, the nutrients in the lake are not a pulse. As the comment letter states, these lakes have no significant outlets. As</p>

Comment Summary and Responses
Santa Clara River Lakes Nutrients TMDL
Comment Due Date: August 5, 2016

No.	Author	Comment	Response
		Hughes were overestimated. The load reductions should be modified to account for the post-fire conditions modeled.	a result, the historical nutrients loaded to the lakes remain stored in the lake sediments. The purpose of the TMDL is to restore the lake sediments and buffer the lake shorelines to prevent future contamination.