

May 7, 2012

Jay T. Spurgin
Public Works Director

Dr. Kangshi Wang
California Regional Water Quality Control Board, Los Angeles Region
320 W. Fourth St., Ste. 200
Los Angeles, CA 90013

Subject: Comment Letter – Amendment to the Water Quality Control Plan for the Los Angeles Region to Revise the Total Maximum Daily Load for Bacteria in the Malibu Creek Watershed (Attachment A to Resolution No. R12-xxx)

Dear Dr. Wang:

The City of Thousand Oaks (City) appreciates the opportunity to provide comments on the proposed revisions to the Total Maximum Daily Load for Bacteria in the Malibu Creek Watershed (Bacteria TMDL). Regional Board staff met with the City and other responsible agencies on March 19, 2012, to discuss the proposed changes to the Bacteria TMDL. During the meeting, Regional Board staff presented proposed changes that were to be included in the revised Bacteria TMDL. The proposed changes were based on the six items that the Regional Board was required to reconsider three years from the effective date (January 24, 2009), per Table 7-10.3 of the Bacteria TMDL. During the meeting, various items were discussed in detail and Regional Board staff presented elements of the proposed changes to the Bacteria TMDL. However, when Attachment A to Resolution No. R12-xxx was released to the public on March 23, 2012, nearly all the items presented by Regional Board staff were omitted or significantly different from what was discussed at the March 19, 2012 meeting ("meeting"). This extraordinary set of discrepancies between the items presented at this meeting and the items in the revised Bacteria TMDL leads the City to believe that Regional Board staff did not conduct the reopener in a straightforward and transparent manner. The City also believes that the changes in the revised Bacteria TMDL do not appropriately address the six items from Table 7-10.3 of the Bacteria TMDL. Therefore, the City would like to offer the following comments to either improve the revised Bacteria TMDL or postpone the Revision proposal completely to allow for further consideration.

1. Six-Week Rolling Geometric Mean Calculation Method is not Consistent with EPA Guidance or the State's 303(d) Listing Policy

The United States Environmental Protection Agency (EPA), in its 2012 Draft EPA Recreational Water Quality Criteria (Draft Criteria) document, clarified the mechanism for the use and calculation of the geometric mean criteria. Since the epidemiological data that formed the basis for the new criteria were evaluated on a



seasonal basis, EPA now recommends a duration of between 30 and 90 days for calculating the geometric mean on a seasonal basis (e.g., a swimming season). Therefore, the geometric mean objectives in the Draft Criteria are not intended to be calculated over a rolling timeframe, but rather over a set time period (e.g., seasonal basis).

A calculation method was presented by Regional Board staff during the March 19, 2012 meeting for calculating geometric means in the revised Bacteria TMDL that was consistent with EPA guidance from the Draft Criteria document. The scenario involved using seasonal geometric mean calculation timeframes with monthly geometric mean calculations during summer months (May, June, July, August, September, and October), one geometric mean calculation for November and December, one geometric mean calculation for January and February, and another geometric mean calculation for March and April. This scenario is consistent with the Draft Criteria document in that the geometric mean calculation timeframes are between 30 – 90 days and encompass seasonal usage and attributes.

The City fails to understand how the proposed changes to calculating the geometric mean in the Numeric Target section of the revised Bacteria TMDL do not reflect, in any manner, what Regional Board staff presented at the March 19, 2012 meeting.

As currently proposed, the geometric mean is to be calculated weekly as a rolling geometric mean using five or more samples, for six-week periods, starting all calculation weeks on Sunday. The most recent week is added while the seventh week previous is dropped. This “rolling” determination method for calculating the geometric mean does not reflect the guidance from the EPA in the Criteria document that the geometric mean should be calculated on a seasonal basis, and that the geometric mean is not intended to be used as a rolling geometric mean, but rather as an evaluation of data over consecutive determinate seasons.

In addition, using a six-week rolling geometric mean calculation method is not consistent with the State’s 303(d) listing policy. Such a determination leads to revised Bacteria TMDL goals that are inconsistent with the method that is used to determine if a TMDL is necessary. However, using a seasonal geometric mean calculation method would be consistent with the 303(d) listing policy. Furthermore, there is no technical or policy basis for selecting a rolling six weeks as the timeframe for calculating the geometric mean.

The City believes that calculating the geometric mean using the six-week rolling average method does not appropriately characterize risks to human health and unnecessarily increases the number of potential exceedances without altering the risk to public health. Use of such a formula would seem intended to continue to factor in outlier data points in multiple determinations, strictly for escalating enforcement opportunities. This formula is not a benefit to managers or regulators in efforts to control water quality or to potential users of water recreational



opportunities. Changing the language in the revised Bacteria TMDL from the six-week rolling average geometric mean calculation method to a seasonal calculation method will not decrease human health protection or even the number of potential beach posting and closure procedures which are governed by California Code of Regulations, not the revised Bacteria TMDL. Changing the language in the revised Bacteria TMDL would also bring the revised Bacteria TMDL into alignment with the EPA Criteria document and with the State's 303(d) listing policy. Therefore, the City recommends that Regional Board staff change the geometric mean calculation language of the Numeric Target section of the revised Bacteria TMDL to include seasonal geometric mean calculations and remove the six-week rolling geometric means.

2. Proposed Monitoring Requirements are not Conducive to Guiding Management Decisions Related to Improving Water Quality

The City believes the proposed monitoring requirements included in the revised Bacteria TMDL are outside the scope of the items the Regional Board was to reconsider during the reopener period as documented in Table 7-10.3. In addition, there was absolutely no mention of revising the compliance monitoring requirements during the March 19, 2012 meeting with Regional Board staff.

Under the revised Bacteria TMDL, if a creek location is out of compliance, then the responsible agencies must initiate daily sampling in the receiving water body, or existing monitoring location, within 24 hours of receiving the analytical data, until all single samples meet the bacteria water quality objectives. Based on available water quality data, the daily sampling requirement in the revised Bacteria TMDL would require the responsible agencies and jurisdictions to start daily monitoring at the onset of the revised Bacteria TMDL. The discretionary authority of the Regional Board to require daily monitoring has been intentionally omitted.

The seven-day-a-week daily sampling as trigger is punitive, grossly expensive, and serves no benefit to water quality managers attempting to marshal scarce public resources to control bacterial exceedances. Sampling within the receiving water body or at an existing monitoring location in this manner merely provides a 24-hour old, brief snapshot of the water quality at that specific location at that particular point in time. The revised Bacteria TMDL provides no justification or explanation on how daily sampling would help improve water quality, as this type of sampling does not provide useful information, such as identifying the bacterial sources that may have caused or contributed to the exceedance(s). To actually improve water quality, it would be better to focus the City's, and other agencies' modest resources to determine the cause of the water quality problem through upstream source identification monitoring rather than determining in-situ and momentary water quality aspects through daily indicator bacteria sampling. The underlying assumption inherent in the reopener and in this resampling requirement is that the quality of storm drain flows is controllable. In as they are not treated and are composed of a



multitude of residential and natural sources, it must be recognized that these flows are not always controllable.

Additionally, the revised Bacteria TMDL includes outfall monitoring for demonstrating compliance, which the 2012 Staff Report (pg. 33) states is consistent with the Los Angeles River Bacteria TMDL. However, this is not consistent with the Los Angeles River Bacteria TMDL, as outfall monitoring is optional and only required if a responsible party chooses to utilize an outfall-based Load Reduction Strategy (LRS). The prescriptive monitoring requirements in the revised Bacteria TMDL, including routine outfall monitoring, will force the City to conduct repetitive monitoring that will not help protect or improve water quality. Outfall monitoring to determine possible sources of bacteria in the case of an exceedance(s) is a better use of the City's resources than routine outfall monitoring. The City is currently planning to conduct some investigative monitoring in the City's drainage area where the largest numbers of exceedances are being observed to guide management actions. Due to the high cost of daily monitoring, the City would be limited in their ability to conduct both types of monitoring. Therefore, outfall monitoring should only occur as needed by the discharger to inform management decisions to protect and improve water quality, and should not be a required part of routine compliance monitoring.

The City recommends that Regional Board staff modify the language in the compliance monitoring section of the revised Bacteria TMDL to remove daily sampling in the case of a single sample exceedance or surpassing of the exceedance days, since this type of sampling provides no guidance or direction for management decisions related to improving water quality. Instead, the revised Bacteria TMDL could include a requirement to submit a revised CMP that includes a process for evaluating the cause of consistent exceedances. The investigation could include monitoring or other approaches as appropriate to evaluate contributions to the exceedances. This approach would allow for the guidance of management decisions related to improving water quality and focus the use of resources on solving the water quality problem.

3. Monitoring and Other TMDL Elements for the City should only be Required for Upper Lindero Creek Subwatershed and Lindero Creek Reach 2

The City is hydrologically separated from the majority of the water bodies within the Malibu Creek watershed, including most of those on the 303(d) list for bacterial impairments. The City's MS4 primarily discharges to three subwatersheds¹ of the Malibu Creek watershed: 1) Potrero Canyon Creek; 2) Westlake Lake; and 3) Upper Lindero Creek. The only water body the City directly discharges to that is on the 303(d) list for bacterial impairments is Lindero Creek Reach 2. Discharges from the City, especially during dry weather, do not affect water bodies downstream of Lake

¹ A small portion of the City is also located within the Upper Medea Creek subwatershed, but this portion of the City only comprises approximately 55 acres of mostly undeveloped land.



Lindero or Westlake Lake, as all discharge from the City either flow directly into Lake Lindero or into Westlake Lake. Per the 2008 303(d) list, neither Lake Lindero nor Westlake Lake are impaired for bacteria. Westlake Lake and Lake Lindero act as hydrologic breaks between the City and any downstream water bodies, including Lindero Creek Reach 1, Medea Creek Reach 1, Malibu Creek and Malibu Lagoon. In addition to Lake Lindero and Westlake Lake acting as hydrologic breaks, Malibou Lake also acts as a hydrologic break between the City and Malibu Creek and Malibu Lagoon. As a result, flows from Westlake Lake discharge to Malibou Lake through Triunfo Canyon Creek and flows from Lake Lindero discharge to Malibou Lake through Medea Creek. Per the 2008 303(d) list, Malibou Lake is not impaired for bacteria.

The Source Assessment section of the Staff Report did not identify the lakes within the Malibu Creek watershed as sources of bacteria and the model (HSPF) used under the Linkage Analysis section to predict bacteria concentrations in the 303(d) listed water bodies did not include lakes because they were not considered sources of bacteria (Staff Report, pg. 29).

Since the lakes within the Malibu Creek watershed historically have not been sources of bacteria and continue to not be sources of bacteria, and Westlake Lake, Lake Lindero, and Malibou Lake act as hydrologic breaks between the City and downstream water bodies, monitoring as well as the other Bacteria TMDL elements for the City should only be required for the Upper Lindero Creek subwatershed and Lindero Creek Reach 2.

4. Cold Creek Subwatershed should be used as the Freshwater Reference Watershed for the Revised Bacteria TMDL

The revised Bacteria TMDL uses the single sample *E. coli* exceedance probabilities of 0.016 and 0.19 for dry and wet weather respectively, to determine the number of single sample allowable exceedance days. The exceedance probabilities were determined using data from three SCCWRP studies whose goals were to update the freshwater exceedance probabilities for use in the reference watershed approach for allowable exceedance days. Information from all three studies was chosen to provide the most "robust data set," even though the most robust data set does not always equal the most correct data set. Data from reference watershed sites specific to Malibu Creek watershed or the Northern Santa Monica Bay were not solely used to create a data set, because these sites "may not be representative of natural conditions throughout the Malibu Creek watershed" (Staff Report for revised Bacteria TMDL, pg. 15). However, no further justification was provided for this statement. In general, reference sites will not be representative of all conditions in a watershed, because they can only represent one type of water body. This criterion does not seem sufficient to exclude the use of data that is potentially more reflective of local conditions than the grouped data set. One site that has been utilized by SCCWRP in several studies as a reference watershed, the Cold Creek



subwatershed located in the Malibu Creek watershed, is representative of the individual subwatersheds that collectively make up the Malibu Creek watershed and should be considered for use as the reference watershed for determining the allowable exceedance days in the revised Bacteria TMDL.

Compliance monitoring data for the period of March 2008 to September 2011 from Cold Creek (MCW-5) indicate that single sample exceedances of applicable water quality objectives occurred 39 percent of the time during summer dry weather, 27 percent of the time during winter dry weather, and 57 percent of the time during wet weather (Staff Report for revised Bacteria TMDL, pg. 12). If the Cold Creek subwatershed is used as the reference watershed, then the exceedance probabilities for dry and wet weather are 0.33 (average of summer dry and winter dry values) and 0.57 respectively, leading to adjusted dry weather and wet weather allowable exceedance days of 96 and 43 respectively, for daily sampling and 14 days and six days respectively, for weekly sampling (Table 1).

Table 1. Revised Bacteria TMDL and Adjusted Allowable Exceedance Days for Freshwater Locations

	Dry Weather				Wet Weather			
	Daily Sampling		Weekly Sampling		Daily Sampling		Weekly Sampling	
	TMDL	Adjusted	TMDL	Adjusted	TMDL	Adjusted	TMDL	Adjusted
Freshwater Locations	5	96	1	14	15	43	2	6

The City recommends that, as Cold Creek subwatershed has been utilized as a Southern California reference watershed, and since it is located with the Malibu Creek watershed, the dry weather and wet weather exceedance probabilities for Cold Creek should be used to determine the freshwater allowable exceedance days for the revised Bacteria TMDL.

5. The TMDL should be Modified to Allow for Equivalent Conditions when Determining Compliance

The revised Bacteria TMDL states that the stormwater permittees are individually responsible for the discharges from their MS4s to Malibu Creek, Malibu Lagoon, or tributaries. However, the revised Bacteria TMDL does not contain language in the waste load allocations (WLAs) section that allows the responsible agencies and jurisdictions to demonstrate individual compliance with the WLAs. In addition, compliance should be determined either through WLAs being met in-stream or at outfalls discharging to Malibu Creek, Malibu Lagoon, or tributaries. The following paragraph provides example language, based on language from the Los Angeles River Bacteria TMDL, which could be incorporated into the WLA section of the revised Bacteria TMDL to clarify how responsible parties can comply with the WLAs.



MS4 dischargers can demonstrate compliance with the final WLAs by demonstrating that the final WLAs are met in-stream, or by demonstrating **one** of the following conditions at outfalls to receiving waters:

1. Zero discharge;
2. Flow-weighted concentration of *E. coli* in MS4 discharges is less than or equal to 235 MPN/100mL, based on a weighted average using flow rates from all measured outfalls; or
3. Demonstration of compliance as specified in the MS4 NPDES permit which may include the use of BMPs where the permit's administrative record supports that the BMPs are expected to be sufficient to attain the WLA in the revised Bacteria TMDL, the use of the calculated loading rates such that loading of *E. coli* to the receiving water is less than or equal to a calculated loading rate that would not cause or contribute to exceedances based on a loading capacity representative of conditions in the receiving water at the time of compliance or other appropriate method.

In addition, individual or subgroups of MS4 dischargers can differentiate their discharges from other dischargers or upstream contributions by demonstrating one of the following conditions at outfalls to receiving waters or jurisdictional boundaries:

1. Zero discharge from individual or subgroup MS4 dischargers;
2. Flow-weighted concentration of *E. coli* in individual or subgroup MS4 discharges is less than or equal to 235 MPN/100mL, based on a weighted average using flow rates from all measured outfalls; or
3. Demonstration that the MS4 loading of *E. coli* to the receiving water is less than or equal to a calculated loading rate that would not cause or contribute to exceedances based on the loading capacity representative of conditions in the receiving water at the time of compliance.

The City recommends that the WLAs section of the revised Bacteria TMDL be revised to allow for equivalent conditions when determining compliance. Additionally, the City would like to request consideration of an additional equivalency based on the lack of hydrologic connectivity between the City of Thousand Oaks and the downstream listed water bodies. Suggested language is as follows:

4. No flow or hydrologic conductivity to a listed reach.

6. The Regional Board Should Conduct Another Reopener to Reconsider Current and Future Issues Not Covered by This Reopener

The Regional Board was required to reconsider six items per Table 7-10.3 three years from the effective date (by January 24, 2009). For the revised Bacteria TMDL,



the Regional Board reconsidered the majority of the required items except for a Natural Sources Exclusion Approach (NSEA) for Malibu Lagoon. In the 2004 Staff Report, Regional Board staff acknowledged that natural sources of bacteria in the lagoon (e.g., birds) may contribute to bacterial loading and that the contribution may be sufficient alone to cause an exceedance of water quality standards, yet Regional Board staff did not reconsider the NSEA. Regional Board staff, in the 2012 Staff Report, stated the reason they did not reconsider the NSEA, was that not all anthropogenic sources of bacteria have been controlled to date. However, the concept of only applying a NSEA after all anthropogenic sources of bacteria have been controlled is thought to be based on misinterpretation of language contained in the SMBBB Wet-Weather TMDL adopted by the Regional Board in December 2002. The basin plan amendment states:

Under the natural sources exclusion implementation procedure, after all anthropogenic sources of bacteria have been controlled ***such that they do not cause or contribute to an exceedance of the single sample objectives*** and natural sources have been identified and quantified, a certain frequency of exceedance of the single sample objectives shall be permitted based on the residual exceedance frequency in the specific water body. The residual exceedance frequency shall define the background level of exceedance due to natural sources. The 'natural sources exclusion' approach may be used if an appropriate reference system cannot be identified due to unique characteristics of the target water body. These approaches are consistent with the State Antidegradation Policy (State Board Resolution No. 68-16) and with federal antidegradation requirements (40 CFR 131.12).

The key statement often left out of consideration of the applicability of the NSEA is that anthropogenic sources of bacteria have to be controlled ***such that they do not cause or contribute to an exceedance of the single sample objectives***. When one considers the complete statement, including the cause or contribute language, the NSEA does not require that all anthropogenic sources of bacteria be controlled. This is important for instances where anthropogenic sources of bacteria are not significant when compared to natural sources. For example, in reaches of a watershed where natural sources are sufficient to cause exceedances and control of anthropogenic sources will not bring the reach into compliance, a NSEA may be appropriate.

An issue not listed in Table 7-10.3 and not covered by this reopener, which should be reconsidered in a future reopener, is the suspension of REC-1 beneficial uses due to high flows. The Regional Board has developed an approach whereby REC-1 beneficial uses associated with the swimmable goal as expressed in the Federal Clean Water Act are suspended through the High Flow Suspension (HFS) Basin Plan amendment. For certain water bodies (all of which are concrete-lined channels), the HFS has been applied in the Los Angeles Region during days with



greater than or equal to 0.5 inches of rain and the following 24 hours, but not for any water bodies in Ventura County. In the Los Angeles Region, the HFS is only applicable to channels that are concrete lined. However, the Santa Ana Regional Water Quality Control Board is currently considering a broader application of the same concept to remove the rainfall amount requirement and to include channels that have been modified or engineered in some manner, but are not necessarily concrete lined. Additionally, the expansion of the HFS to cover Ventura County water bodies was included in the 2012 Triennial Review priorities.

Inclusion of a HFS provision essentially provides an upper limit on the storm size that would be considered in the implementation planning process (e.g., BMP sizing would not have to incorporate considerations for storms that would result in unsafe conditions). This allows responsible jurisdictions and agencies to focus on storms that result in runoff volumes that may be manageable through reasonable BMP implementation. Incorporation of a HFS approach for Ventura County water bodies and natural channels into the Basin Plan could potentially affect targets, allocations, implementation approaches, as well as compliance determination.

In addition, the Regional Board is currently engaged in a Recreational Use Re-Evaluation (RECUR) of the engineered channels in the Los Angeles River watershed to evaluate the level of recreational usage; part of which includes evaluation of recreational usage in low depth waters. The outcome of the RECUR process may lead to use changes and/or policies that will likely be applicable to the Malibu Creek watershed and Bacteria TMDL, and should be considered as part of a reopener.

Finally, the Regional Board should reopen the Bacteria TMDL to reconsider any scientific advancement related to bacteria. As the science related to bacteria continues to evolve and develop, it is important that regulations evolve as well. For example, bacteria detection methods are becoming more sophisticated and refined; source tracking methods are continuing to be more reliable; epidemiological studies are becoming more robust; and forecasting water quality problems and predictive modeling, such as Quantitative Microbial Risk Assessments (QMRAs), are emerging as informative ways to aid management decisions.

The City recommends that the Regional Board conduct another reopener three years after the effective date of the current amendment to reconsider a NSEA for Malibu Lagoon, the inclusion of Ventura County water bodies and channels that have been modified or engineered in the HFS of the REC-1 beneficial use, use changes and/or policies resulting from the RECUR process, and any new scientific methods/ideas related to bacteria that may affect targets, allocations, implementation approaches, as well as compliance determination.



7. The Compliance Timeline should be Extended due to the Delay in the Reopener Process

The Bacteria TMDL was supposed to be reconsidered by the Regional Board no later than January 24, 2009. However, since the Bacteria TMDL was not reconsidered until now, and as the results from the reconsideration process directly affect compliance, the compliance timeline should be extended to reflect the delay in the reconsideration of the Bacteria TMDL. An extension period of three years from the effective date of the current amendment for the dry weather and wet weather compliance goals would allow the responsible jurisdictions and agencies adequate time to comply with the updated compliance requirements of the revised Bacteria TMDL. The extension of the compliance milestones by three years would also be consistent with the timing of a second reconsideration of the Bacteria TMDL, which is important as the outcome of the second reconsideration is likely to affect how responsible jurisdictions and agencies comply with the Bacteria TMDL. As outlined above, the science and regulatory requirements surrounding bacteria TMDLs is continuing to evolve, and there are numerous activities that will be completed in the next few years that could have significant impacts on compliance requirements for the City and other municipal agencies. As a result, the Regional Board should take a truly phased approach to addressing this TMDL, and structure the TMDL to allow agencies to take reasonable steps to identify and control bacteria, but avoid significant expenditures of funds that may not be necessary depending on the uses and standards modifications that could be considered in the next few years.

Summary

In summary, the City believes that Regional Board staff did not conduct the reopener in a straightforward and transparent manner, and that changes in the revised Bacteria TMDL neither reflect discussions with Regional Board staff nor appropriately address the six items from Table 7-10.3 of the Bacteria TMDL. The City requests the following modifications be made to address the City's concerns:

1. Remove six-week rolling geometric mean calculation method from the revised Bacteria TMDL and replace it with a seasonal geometric mean calculation method, which is consistent with EPA guidance and the State's 303(d) listing policy.
2. Alter language in the compliance monitoring section of the revised Bacteria TMDL to remove daily sampling in the case of a single sample exceedance or a surpassing of the exceedance days. Instead, the revised Bacteria TMDL could require upstream source identification monitoring to determine the causes, if any, of the water quality objective exceedances, which would allow for the guidance of management decisions related to improving water quality.
3. Only require monitoring and other revised Bacteria TMDL elements for Upper Lindero Creek subwatershed and Lindero Creek Reach 2, due to Westlake Lake, Lake Lindero, and Malibou Lake acting as hydrological breaks between the City and the 303(d) listed water bodies in the revised Bacteria TMDL.



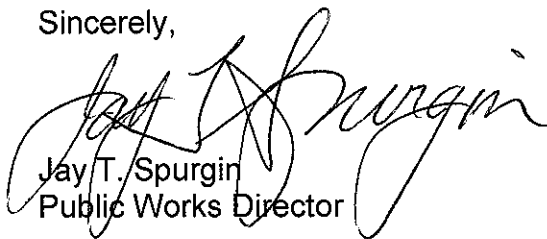
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4. Modify Table 7-10.2 of the revised Bacteria TMDL to include the adjusted allowable exceedance days for freshwater locations, which are based on the exceedance frequencies of the single sample freshwater objectives from the Cold Creek subwatershed.
5. Revise the TMDL to allow for equivalent conditions when determining compliance, so MS4 discharges can demonstrate compliance in-stream or at outfalls discharging to receiving waters, and so responsible jurisdictions and agencies can demonstrate individual compliance.
6. Include another reopener three years after the revised effective date to reconsider a NSEA for Malibu Lagoon, the inclusion of Ventura County water bodies and natural channels in the HFS of the REC-1 beneficial use, and any new scientific methods/ideas related to bacteria that may affect targets, allocations, implementation approaches, as well as compliance determination.
7. Extend the compliance timeline to reflect the delay in the reconsideration of the Bacteria TMDL. An extension period of three years from the revised effective date for the dry weather and wet weather compliance goals would allow the responsible jurisdictions and agencies adequate time to comply with the updated compliance requirements of the revised Bacteria TMDL. The extension of the compliance milestones by three years would also be consistent with the timing of the requested second reconsideration of the Bacteria TMDL, and allow for consideration of the many ongoing regulatory and scientific changes that could impact compliance requirements.

Thank you for consideration of these comments. If you have any questions, please contact Bob Carson at 805/449-2424 or me at 805/449-2399.

Sincerely,


Jay T. Spurgin
Public Works Director

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