CALLEGUAS CREEK

Watershed Management Plan

A COOPERATIVE STRATEGY FOR
RESOURCE MANAGEMENT & PROTECTION

July 10, 2017

Electronic Submission: commentletters@waterboards.ca.gov

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor,
Sacramento, CA 95814

Subject: Comment Letter—303(d) List for waterbodies in the Los Angeles region

Dear Ms. Townsend,

The Stakeholders Implementing Total Maximum Daily Loads (TMDLs) in the Calleguas Creek Watershed (CCW) [hereinafter referred to as the Stakeholders] appreciate the opportunity to provide comments on the proposed revisions to the Clean Water Act Section 303(d) List for waterbodies in the Los Angeles Region [hereinafter referred to as 303(d) List] which was distributed for public review on June 9, 2017.

The development and implementation of TMDLs require a significant investment of resources and it is critical that the 303(d) List be based on sound science and methodologies. The Stakeholders have developed and implemented six effective TMDLs in the CCW and thus have extensive experience with the implications of the 303(d) listing process.

The Stakeholders have actively participated in the public review process since the original 303(d) List was released at the Regional level on February 8, 2017, by providing a comment letter to the Regional Board on March 30 and oral comments at the public workshop on May 4.

The Stakeholders appreciate the efforts the Regional Board has made to correct numerous errors and inconsistencies in the original list including the removal of pollutant listings associated with a P* MUN beneficial use, removal of waterbodies listed based on data from agricultural drains which do not represent receiving waters, and removal of temperature listings for Calleguas Creek Reach 12 which used data from the wrong waterbody segment and applied the wrong beneficial use criteria. These corrections along with other errors noted by the Stakeholders resulted in the correction of 43 listings which would have otherwise been included in the final list resulting in an undue burden on the Stakeholders and significant misspent funds. While we appreciate the efforts made by the Regional Board, the Stakeholders still have concerns with the State Board's proposed 303(d) List and feel that it requires modification before adoption.

The requested modifications fall into the following general categories:

I. **Pollutant-Waterbody segments still incorrectly listed**
II. **CALQWA Mapping should continue to exclude all Agricultural drains**
III. **Newly proposed pH listing for Oxnard Drain does not include evidence that the exceedances are a result of waste discharges**
IV. **Additional remaining issues from the previous comment letter**

The remaining sections of this letter provide the detailed list of requested changes to the 303(d) List and the rationale for the requests.

I. POLLUTANT-WATERBODY SEGMENTS STILL INCORRECTLY LISTED

There are a number of erroneous listings detailed in the original comment letter that the Regional Board Response to Comment[1] stated would be removed however the listings are still present on the current 303(d) List (see **Table 1**). The Stakeholders request that the State Board correct these listings, remove them from the Category 5 list, and update the fact sheets to reflect the response to comments from the Regional Board. The original description of the issues for each of these listings can be found in the Stakeholders' original March 30, 2017, comment letter (attached).

[1] http://www.State Board.ca.gov/losangeles/water_issues/programs/303d/2016/Revised%20RTC.pdf

Table 1. Category 5 Listings that should be removed to reflect the Regional Board's Response to Comments

Waterbody segment	Pollutant	Justification	LA Regional Board Response to Comment[2]
Calleguas Creek Reach 12	Chlorpyrifos	• Data does not appear to be from a station in Reach 12.	The Chlorpyrifos LOE was moved to Calleguas Creek Reach 10. The decision for Calleguas Creek Reach 10/chlorpyrifos has been updated to "do not delist." Calleguas Creek Reach 12 is no longer recommended for a Chlorpyrifos listing.
Calleguas Creek Reach 12	Diazinon	• Data does not appear to be from a station in Reach 12.	The diazinon LOE was moved to Calleguas Creek Reach 10. The decision for Calleguas Creek Reach 10/diazinon has been updated to "do not delist." Calleguas Creek Reach 12 is no longer recommended for a diazinon listing.
Calleguas Creek Reach 12	Malathion	• Data does not appear to be from a station in Reach 12.	The Malathion LOE was moved to Calleguas Creek Reach 10. The decision for Calleguas Creek Reach 10/ Malathion has been updated to "list." Calleguas Creek Reach 12 is no longer recommended for a Malathion listing.
Rio De Santa Clara/Oxnard Drain No. 3	Nitrogen, Nitrate	• Maintained as a brackish waterbody therefore criteria do not apply. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.	The Nitrogen, Nitrate decision has been retired.

Requested Action:

- **Remove all listings in Table 1 from the current 303(d) List based on the decisions reached by the Regional Board in the Response to Comments.**

II. CALQWA MAPPING SHOULD CONTINUE TO EXCLUDE ALL AGRICULTURAL DRAINS

As mentioned previously the Stakeholders thank the Regional Board for correcting listings which were based on data from agricultural drains not representative of the receiving waters. These erroneous listings included either pollutants measured at agricultural drain sites along Calleguas Creek Reaches 2 and 4 or the agricultural drains themselves (i.e., La Vista and Santa Clara Drains). The fact sheets for these listings include the following language:

> "*The decisions for Calleguas Creek Reach 2 have been revised to not use the data from the tributary monitoring site. The Los Angeles Water Board staff will work with the commenter, and other stakeholders, to purposely determine*

[2] These are the responses made after the Los Angeles Water Board workshop on May 4, 2017.

and document the appropriateness of assessing the tributary monitoring site under section 303(d) of the Clean Water Act. If it is determined that the tributary monitoring site is within a waterbody which should be addressed under section 303(d), then this determination requires that a new tributary be added to the CalQWA underlying map, which is maintained by State Board. It is the intention of the Los Angeles Water Board staff to work with State Board staff to resolve mapping issues prior to the State Board approval of the 2016 303(d) list, or prior to the next Listing Cycle that includes the Los Angeles Region." [This excerpt was taken from the dimethoate listing for Calleguas Creek Reach 2, but similar language exists for all agricultural drain listings.]

The Stakeholders maintain that these monitoring sites and waterbodies outlined in the original letter are agricultural drains and, therefore, not subject to listing under the 303(d) List. These agricultural drains are used to collect and transport stormwater or agricultural runoff. The Staff Report and Fact Sheets for such listings do not contain sufficient basis upon which jurisdiction under the CWA can be substantiated. These channels are not traditional navigable waters, and should also not be classified as tributaries to traditional navigable waters subject to CWA jurisdiction. Therefore, while we will participate in the requested discussion to evaluate the monitoring locations, we maintain that there is no need to add any of these waterbodies to the CalQWA underlying map and that these agricultural drains should not be included in the 303(d) List for this cycle or any future 303(d) review cycles. The Stakeholders are willing to provide any necessary information to effectively resolve this issue and welcome both Regional Board and State Board staff to contact us if they have any ongoing concerns.

Requested Action:

- **Agricultural drain listings for Calleguas Creek Reaches 2 and 4, as well as La Vista and Santa Clara Drains, should remain off the 303(d) list and this decision should be updated in the finalized Fact Sheets.**

III. THERE IS NO DEMONSTRATION THAT HIGH PH IS A RESULT OF WASTE DISCHARGE.

The waterbodies listed for high pH do not appropriately demonstrate that the high pH was a result of waste discharge as required in the Basin Plan. The Oxnard Industrial Drain (Oxnard Drain) is proposed to be listed for high pH. As stated in the Fact Sheet and according to the Los Angeles Region Basin Plan[3] "*The pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5* ***as a result of waste discharges***" [emphasis added]. However, it was not demonstrated that the elevated pH levels were a result of waste discharge as opposed to natural causes. Therefore, the Regional Board or State Board should either provide evidence that the elevated pH was a result of waste discharge and detail its findings in the Fact Sheets, or, if no such evidence exists, the listing should be removed.

[3] Water Quality Control Plan Los Angeles Region R4 Basin Plan.

Requested Action:

- **Remove the pH listing for Oxnard Industrial Drain as there is no data provided in the Fact Sheet that demonstrate that these high pH values are the result of waste discharge.**

IV. ADDITIONAL ISSUES FROM PREVIOUS COMMENT LETTER

There were a number of issues which were raised in the Stakeholders' March 30, 2017, letter that either remain unresolved or were stated as still up for debate during the State Board hearing. Therefore, we are reiterating those points so that they will be addressed by the State Board.

1. Correct pollutants listed as Category 5A which should be 5B based on coverage by an existing TMDL.

The Stakeholders' original comment letter detailed many pollutants which were incorrectly listed as 5A despite the fact that they were addressed by an existing TMDL. Many of those listings were changed to 5B as requested but three of them were not. We again request that the pollutant-waterbody segment combinations included in **Table 2** be changed from 5A to 5B since they are already being addressed by an existing TMDL.

The Rio De Santa Clara/Oxnard Drain No. 3 toxicity listing should be changed from 5A to 5B because it is covered by the existing Oxnard Drain #3 Pesticides, PCBs, Sediment Toxicity TMDL.[4] It appears that this original comment was overlooked in the Regional Board Response to Comments. The bifenthrin listings for Duck pond and Honda Barranca should also be changed to 5B since they are covered by the 2006 Toxicity and OC Pesticides, PCBs and Siltation TMDLs.[5,6] However, the Regional Board response to comments states:

> *"The Calleguas Creek Toxicity TMDL specifically addresses the organophosphate pesticides, chlorpyrifos and diazinon, and does not apply to pyrethroids. The Toxicity TMDL would need to be revised to identify pyrethroid targets, and include the other required elements of a TMDL for pyrethroids specifically."*

This statement is incorrect. The Toxicity TMDL was established to address toxicity caused by organophosphate pesticides and unknown toxicity due to other pesticides and/or toxicants. Specifically, the Basin Plan Amendment notes:

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[4] Total Maximum Daily Loads for Pesticides, PCBs, and Sediment Toxicity in Oxnard Drain 3. Approved by USEPA on October 6, 2011.

[5] The Calleguas Creek, Its Tributaries, and Mugu Lagoon Toxicity, Chlorpyrifos and Diazinon TMDL. RS 2005-009. Approved by USEPA on March 24, 2006. [Toxicity TMDL]

[6] Total Maximum Daily Load for Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation in Calleguas Creek, its Tributaries and Mugu Lagoon. RS 2005-010. Approved by USEPA on March 24, 2006.

> "Discharge of wastes containing chlorpyrifos, diazinon, **other pesticides and/or other toxicants** to Calleguas Creek, its tributaries and Mugu Lagoon cause exceedances of water quality objectives for toxicity established in the Basin Plan."

To address the other pesticides and/or toxicants, the Toxicity TMDL included a toxicity target *"to address toxicity in reaches where the toxicant has not been identified."* If the toxicity target or allocation is exceeded, the TMDL includes a trigger to conduct a Toxicity Identification Evaluation (TIE) and implement actions to address the identified toxicant. Additionally, the implementation actions discussed in the Toxicity TMDL implementation plan are designed to address pesticides as a whole and are not specific to diazinon and chlorpyrifos. As a result, the Toxicity TMDL proactively addresses toxicity associated with other pesticides, such as pyrethroids and other organophosphate pesticides (e.g., bifenthrin and malathion).

TIEs conducted in the watershed have resulted in the identification of pyrethroids as a potential cause of toxicity and the Stakeholders have already begun actions to address these pesticides in addition to the organophosphate pesticides included in the TMDL. The structure of the TMDL is designed to proactively prevent toxicity and, therefore, it is not necessary to develop another TMDL for these constituents. There are already sufficient controls in place through the agricultural waiver and MS4 permit. Therefore, the Stakeholders request that the listings shown in **Table 2** be moved to Category 5B.

Table 2. 303(d) Category 5A listings which should be changed to 5B listings

Segment	Pollutant	Proposed 303(d) Category	Requested 303(d) Category	Existing CCW TMDL[1,2,3]
Rio De Santa Clara/Oxnard Drain No. 3	Toxicity	5A	5B	Oxnard Drain #3 Pesticides, PCBs, and Sediment Toxicity TMDL
Duck Pond Agricultural Drains/Mugu Drain/Oxnard Drain No 2	Bifenthrin	5A	5B	Toxicity TMDL
Honda Barranca	Bifenthrin	5A	5B	Toxicity TMDL
Calleguas Creek Reach 10	Malathion	5A	5B	Toxicity TMDL

[1] The Calleguas Creek, Its Tributaries, and Mugu Lagoon Toxicity, Chlorpyrifos and Diazinon TMDL. RS 2005-009. Approved by USEPA on March 24, 2006. [Toxicity TMDL]
[2] Total Maximum Daily Load for Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation in Calleguas Creek, its Tributaries and Mugu Lagoon. RS 2005-010. Approved by USEPA on March 24, 2006.
[3] Total Maximum Daily Loads for Pesticides, PCBs, and Sediment Toxicity in Oxnard Drain 3. Approved by USEPA on October 6, 2011.

Requested Action:

Change all pollutant-waterbody segment combinations in Table 2 from 5A to 5B based on coverage by an existing USEPA approved TMDL.

2. Ensure no J-flagged data were used in the assessment.

The Listing Policy specifically prohibits the use of J-flagged ("estimated") data that fall below the quantitation limit but above the water quality standard. Section 6.1.5.5 of the Listing Policy specifically states:

> *"When the sample value is less than the quantitation limit and the quantitation limit is greater than the water quality standard, objective, criterion, or evaluation guideline, the result shall not be used in the analysis. The quantitation limit includes the minimum level, practical quantitation level, or reporting limit."*

All listings based on the use of J-flagged data should, therefore, be removed from the draft 303(d) List. Specific instances were included in the Stakeholders' original comment letter. Most of these listings were appropriately removed, however, the Response to Comments for all J-Flagged data stated: *"LOEs will be reassessed during the State Board public comment period."* We encourage the State Board to adhere to the Listing Policy and ensure that all J-flagged data are removed from any analyses and that any incorrect listings relying on J-flagged data are appropriately corrected.

Requested Action:

- **Review all Fact Sheets and LOEs for the use of J-flagged data and remove any instances where J-flagged data were used.**
- **Delist all constituents which are incorrectly listed using J-flagged data.**

3. Correct Fact Sheets. The Fact Sheets often include incorrect information and discussion. While most of the identified issues do not appear to impact the listing decisions, they make the review of information difficult. Examples of errors found include:

- Incorrect TMDLs assigned to a pollutant. For example, for chlordane in Calleguas Creek Reach 2, the applicable TMDL is listed as the Calleguas Creek Metals TMDL. It should be the Organochlorine Pesticides, PCBs, and Siltation TMDL.
- Incorrect number of samples evaluated and incorrect number of criteria exceedances. For example, the number of samples evaluated for toxaphene on the Rio de Santa Clara/Oxnard Drain No. 3 is identified as 2 samples, whereas data files obtained from the Regional Board website contain 5 samples for the date range indicated in Fact Sheets, including 3 samples with results of "ND". Stating that a pollutant actually exceeds criteria in only 40% of samples, versus 100% exceedances as presented in Fact Sheets, provides a more accurate picture of the degree of impairment for that pollutant in a waterbody. The inclusion of J-flagged data when enumerating exceedances (e.g., for chlordane in the same waterbodies) further exacerbates these numbering inaccuracies.

Requested Action:

Correct the Fact Sheets for errors such as existing TMDLs and number of samples/number of exceedances.

4. Correct the waterbody assigned Hydrologic Unit (HUCs) and Calwater numbers to reflect those listed in the Basin Plan. There are multiple instances of what appear to be incorrectly Hydrologic Unit numbers (HUCs) and Calwater numbers assigned to the various waterways. For instance, a comparison of the 8-digit HUCs listed in Appendix B of the 303(d) List to the 12-digit HUCs listed in Appendix I of the Basin Plan indicate a number of inconsistencies. For example, waterbodies present in the Santa Clara River watershed (e.g., Santa Clara River Reach 3) are listed with a Calleguas watershed HUC (18070103) while the same reaches are listed as 18070102 in the Basin Plan. This makes identifying the location of unknown waterbodies not previously listed or described in the Basin Plan difficult to assess. A full review of the 303(d) List HUCs should be completed to correct all errors. The Regional Board Response to Comments stated that,

> *"It is the intention of the Los Angeles Water Board staff to work with State Board staff to resolve mapping issues including HUCs for those reaches, as appropriate, prior to the State Board approval of the 2016 303(d) list, or at the next Listing Cycle that includes the Los Angeles Region."*

The Stakeholders appreciate that the Regional Board and State Board intend to fix the issue but find it unacceptable that the change might not come until sometime during the next Listing Cycle planned for 2022. The State Board should not approve any 303(d) List that includes fundamental errors in the location of reaches. If such errors are allowed to remain they will only compound the many issues experienced by the Stakeholders and others when the list is revisited again in 6 years.

Requested Action:
Perform a full review of HUCs and Calwater numbers listed in the Appendices and Fact Sheets and correct any inconsistencies with the Basin Plan.

5. Correct inconsistencies in the Regional Board staff report. There is inconsistent discussion in the staff report about some proposed listings that should be clarified to avoid confusion about the listings. For instance, on page 12 of the Regional Board Staff Report there is discussion about existing TMDLs covering newly proposed pollutants: "*For example, the proposed new listings for **mercury in Calleguas Creek Reach 3** and the proposed DDT listings in Hondo Barranca are being addressed by the Calleguas Creek Metals TMDL and the Organochlorine Pesticides, PCBs and Siltation TMDL.*" However, there is no proposed new listing for mercury for Calleguas Creek Reach 3 because as we noted in our March 30th letter, data used for the proposed mercury listing was incorrectly assessed to be three orders of magnitude higher due to a unit conversion error. While the fact sheets were updated the text of the Staff Report was not.

Requested Action:
Correct language cited above in the Regional Board Staff Report.

6. *Requested Reassessments using Complete Data Set*

The assessments for the Calleguas Creek watershed do not appear to include any of the submitted Calleguas Creek Watershed TMDL monitoring data, monitoring data from the Camarillo Sanitary District, or monitoring data from the Simi Valley Wastewater Treatment Plant, which includes data collected prior to 2010. All of this monitoring data has been provided to the Regional Board in annual monitoring reports and all data were collected using approved QAPPs. As noted in the Response to Comments, the Regional Board only considered data that was submitted during the data solicitation period. However, at the time of the data solicitation, dated January 14th, 2010, Section 6.1.1 of the Listing Policy stated, "*Data and information that shall be reviewed include, but are not limited to: submittals resulting from the solicitation, selected* ***data possessed by the RWQCBs****, and other sources.*"[7] It was assumed that data provided electronically and in annual reports to the Regional Board would be considered "readily available data" per the Listing Policy. As a result, there is no reason why this data should not have been included in the 2016 303(d) listing evaluation. In fact, references show that the Regional Board selectively used discharger data for listing assessments in Ventura County that was not submitted by the dischargers themselves at the time of data solicitation.[8] The Regional Board should have consistently utilized previously available data across all assessed waterbodies, including those in the Calleguas Creek watershed. While we understand that it is challenging at this late date to include additional data, the Stakeholders are providing this comment to highlight the problems with the current listing process and note the progress that has been made in the watershed that is not being acknowledged due to the time frames for assessment and the lack of consideration of this data in the analysis.

In 2013, the Stakeholders did an assessment of the watershed consisting of data collected between 2004 and 2012 and found that multiple waterbody-pollutant combinations could potentially be delisted as shown in **Table 3**. A summary of the assessment is included as an attachment to this letter and the datasets used in the analysis as well as all of the TMDL annual monitoring reports are available upon request.

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[7] State Water Resources Control Board. Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List. Adopted September 30, 2004.

[8] Clean Water Act Sections 303(d) and 305(b) Integrated Report for the Los Angeles Region, Revised Public Review Draft 2016, Revised Appendix J – References, Ref# 4001, 4002, 4003, 4004, and 4072. http://www.waterboards.ca.gov/losangeles/water_issues/programs/303d/2016/Revised%20Appendix_J.shtml

Table 3. Waterbody-Pollutant Combinations to Consider for Delisting

Waterbody segment	Pollutant
Calleguas Creek Reach 1	Copper Dieldrin Endosulfan Mercury Nickel Zinc
Calleguas Creek Reach 2	Ammonia Copper
Calleguas Creek Reach 3	Ammonia Chlordane PCBs
Calleguas Creek Reach 4	Diazinon Dieldrin Endosulfan PCBs
Calleguas Creek Reach 6	Ammonia Chlordane Diazinon Dieldrin
Calleguas Creek Reach 7	Ammonia Diazinon
Calleguas Creek Reach 9A	Chlordane DDT Dieldrin Endosulfan Gamma HCH Nitrate as Nitrate Nitrogen, Nitrate PCBs Toxaphene
Calleguas Creek Reach 9B	Ammonia Chlordane Chlorpyrifos Diazinon Dieldrin Endosulfan PCBs Sulfates
Calleguas Creek Reach 10	Ammonia Chlordane Chlorpyrifos DDT Diazinon Dieldrin Endosulfan Fecal Coliform/Indicator Bacteria Nitrogen, Nitrite PCBs Sulfates Total Dissolved Solids Toxaphene

Waterbody segment	Pollutant
Calleguas Creek Reach 12	Ammonia DDT Dieldrin PCBs Toxaphene
Calleguas Creek Reach 13	Ammonia Chlordane DDT Dieldrin Endosulfan PCBs Toxaphene

While we recognize that this assessment uses two more years of data than the current 303(d) listing analysis, a number of these waterbodies had many more samples than were necessary for delisting. As a result, we feel if all the watershed data were used in the assessment, a number of these waterbodies would be delisted, particularly for metals. We also feel this assessment would demonstrate that several of the proposed listings, particularly for diazinon and chlorpyrifos and a number of organochlorine pesticides, are not warranted. Additionally, a large number of new proposed listings are being added that are already covered by a TMDL. While the list acknowledges that a TMDL does not need to be developed by categorizing these new listings in Category 5B, in several cases, the watershed now has sufficient data to delist, whereas the listing is an artifact of old data being used to make the listing decision. These listings should not be added to the current list only to be removed during the next listing cycle as an artifact of the timing of the listing assessments.

Requested Action:

- **Reassess all Calleguas Creek waterbodies using all available data.**
- **Remove all listings based on old data that the assessment provided shows could be delisted if the complete dataset were used.**

The Stakeholders appreciate the opportunity to comment on the 303(d) List and look forward to continuing to work with the Regional Board and State Board to address these concerns. Thank you for your time and consideration of these comments. If you have questions, please contact Ashli Desai at (310) 394-1036 / AshliD@lwa.com or me at (805) 388-5334.

Sincerely,

Lucia McGovern
Chair of Stakeholders Implementing TMDLs in Calleguas Creek Watershed

Attachment A: March 30, 2017 Stakeholder comment letter

Attachment – Calleguas Creek Watershed Comments 7-10-2017

CALLEGUAS CREEK

A COOPERATIVE STRATEGY FOR
RESOURCE MANAGEMENT & PROTECTION

March 30, 2017

Electronic Submission: losangeles@waterboards.ca.gov

California Regional Water Quality Control Board
Los Angeles Region
ATTN: Jun Zhu
320 W 4th Street, Suite 200
Los Angeles, CA 90013

Subject: Comment Letter – Revisions to the Los Angeles Region 303(d) List

Dear Dr. Zhu,

The Stakeholders Implementing Total Maximum Daily Loads (TMDLs) in the Calleguas Creek Watershed (Stakeholders) appreciate the opportunity to provide comments on the proposed revisions to the Clean Water Act Section 303(d) List of impaired waterbodies in the Los Angeles Region [hereinafter referred to as 303(d) List] which was distributed for public review on February 8, 2017.

The development and implementation of TMDLs is a significant investment of resources and it is critical that the 303(d) List be based on sound science and methodologies. The Stakeholders understand that the Los Angeles Regional Water Board (Water Board) is proposing over 200 new waterbody-pollutant segment combination 303(d) listings, of which 95 changes fall within the Calleguas Creek Watershed (CCW). The Stakeholders have developed and implemented six effective TMDLs in the CCW and thus have extensive experience in the area. The Stakeholders have serious concerns with the Region's Proposed 303(d) List and feel that it requires significant review and modification before adoption. The Stakeholders request that the issues identified in this letter be addressed and the proposed 303(d) List be released for another 60-day comment period prior to adoption. Several of the issues identified herein have resulted

in the inability of the proposed 303(d) List to be fully vetted and reviewed by the Stakeholders.

The requested modifications fall into four general categories:

1. New Category 5 listings that should not be listed due to incorrect thresholds being applied for the beneficial use and incorrect interpretation of the data (e.g., mismatched units, incorrectly assigned sample locations)
2. Potential delistings that may exist if all watershed data were evaluated (e.g., TMDL monitoring program and all wastewater treatment plant NPDES monitoring).
3. New Category 5A listings that should be categorized as Category 5B because TMDLs already exist to address the pollutants.
4. Errors in the listing information that make it difficult to fully evaluate the listings. Examples include inconsistencies between the Category 5 list (Appendix B) and the Proposed updates to the 303(d) List (Appendix A), incorrect HUC/Calwater designations, incorrect beneficial uses listed for the applicable water quality objectives, and inconsistent use of thresholds for interpreting narrative objectives.

The remaining sections of this letter provide the detailed list of requested changes to the 303(d) List and the rationale for the requests. In summary, the Stakeholders request that all waterbody-pollutant combinations in **Table 1** not be listed on the 303(d) List, the waterbody-pollutant combinations in **Table 3** be considered for delisting through analysis of all available watershed data, waterbody-pollutant combinations in **Table 4** and **Table 5** be designated as being addressed by a TMDL if they remain on the 303(d) List after the reassessment, and the errors and inconsistencies identified in Comment IV be addressed for all waterbodies.

I. REQUESTED MODIFICATIONS TO THE LISTING STATUS

Based on a review of the proposed Category 5 waterbody-pollutant combinations, the Stakeholders have identified a number of waterbodies that we feel should either be delisted based on available data or proposed listings that should not be listed based on errors in the evaluation. The requested modifications are shown in **Table 1**, below, with a summary of the justifications for the requested change. A detailed discussion of each of the justifications follows the table.

Table 1. Waterbody-pollutant combinations that should not be listed

Waterbody segment	Pollutant	Justification
Calleguas Creek Reach 2 (estuary to Potrero Rd)	DDD	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.

Table 1. Waterbody-pollutant combinations that should not be listed

Waterbody segment	Pollutant	Justification
Calleguas Creek Reach 2 (estuary to Potrero Rd)	DDE	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.
Calleguas Creek Reach 2 (estuary to Potrero Rd)	Dimethoate	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.
Calleguas Creek Reach 2 (estuary to Potrero Rd)	Nitrogen, Nitrate	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.
Calleguas Creek Reach 2 (estuary to Potrero Rd)	Specific Conductivity	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.
Calleguas Creek Reach 2 (estuary to Potrero Rd)	Total Dissolved Solids	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.
Calleguas Creek Reach 3 (Potrero Road upstream to Conejo Creek confluence)	Mercury	• Data and objectives have different units (ng/L vs. µg/L); data do not exceed objectives.
Calleguas Creek Reach 4 (was Revolon Slough Main Branch)	Ammonia	• Data from agricultural drain rather than waterbody used as basis for listing decision. • TMDL data demonstrates delisting possible.
Calleguas Creek Reach 4 (was Revolon Slough Main Branch)	Bifenthrin	• Data from agricultural drain rather than waterbody used as basis for listing decision.
Calleguas Creek Reach 4 (was Revolon Slough Main Branch)	Chloride	• Data from agricultural drain rather than waterbody used as basis for listing decision.
Calleguas Creek Reach 4 (was Revolon Slough Main Branch)	Cyfluthrin	• Data from agricultural drain rather than waterbody used as basis for listing decision.
Calleguas Creek Reach 4 (was Revolon Slough Main Branch)	Cypermethrin	• Data from agricultural drain rather than waterbody used as basis for listing decision.
Calleguas Creek Reach 4 (was Revolon Slough Main Branch)	Malathion	• Data from agricultural drain rather than waterbody used as basis for listing decision.
Calleguas Creek Reach 4 (was Revolon Slough Main Branch)	Mercury	• Data and objectives have different units (ng/L vs. µg/L); data do not exceed objectives.

Table 1. Waterbody-pollutant combinations that should not be listed

Waterbody segment	Pollutant	Justification
Calleguas Creek Reach 4 (was Revolon Slough Main Branch)	Nitrogen, Nitrate	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.
Calleguas Creek Reach 4 (was Revolon Slough Main Branch)	Permethrin	• Data from agricultural drain rather than waterbody used as basis for listing decision. • This pollutant is already covered by the Calleguas Toxicity TMDL.
Calleguas Creek Reach 4 (was Revolon Slough Main Branch)	Specific Conductivity	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.
Calleguas Creek Reach 4 (was Revolon Slough Main Branch)	Sulfates	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.
Calleguas Creek Reach 4 (was Revolon Slough Main Branch)	Total Dissolved Solids	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.
Calleguas Creek Reach 12 (was Conejo Creek/Arroyo Conejo North Fork)	Chlorpyrifos	• Data does not appear to be from a station in Reach 12.
Calleguas Creek Reach 12 (was Conejo Creek/Arroyo Conejo North Fork)	Diazinon	• Data does not appear to be from a station in Reach 12.
Calleguas Creek Reach 12 (was Conejo Creek/Arroyo Conejo North Fork)	Malathion	• Data does not appear to be from a station in Reach 12.
Calleguas Creek Reach 12 (was Conejo Creek/Arroyo Conejo North Fork)	Temperature, water	• Inappropriately applied beneficial use criteria (see temperature comment below).
Duck Pond Agricultural Drains/Mugu Drain/Oxnard Drain No 2	Sulfate	• Maintained as a brackish waterbody therefore criteria do not apply. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody. *
Duck Pond Agricultural Drains/Mugu Drain/Oxnard Drain No 2	Specific Conductivity	• Maintained as a brackish waterbody therefore criteria do not apply. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.*

Table 1. Waterbody-pollutant combinations that should not be listed

Waterbody segment	Pollutant	Justification
Duck Pond Agricultural Drains/Mugu Drain/Oxnard Drain No 2	Total Dissolved Solids	• Maintained as a brackish waterbody therefore criteria do not apply. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.*
Duck Pond Agricultural Drains/Mugu Drain/Oxnard Drain No. 2	Toxaphene	• J-flagged data incorrectly used in assessment.
Rio De Santa Clara/Oxnard Drain No. 3	Nitrogen, Nitrate	• Maintained as a brackish waterbody therefore criteria do not apply. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.*
Rio De Santa Clara/Oxnard Drain No. 3	Sulfate	• Maintained as a brackish waterbody therefore criteria do not apply. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.*
Rio De Santa Clara/Oxnard Drain No. 3	Specific Conductivity	• Maintained as a brackish waterbody therefore criteria do not apply. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.*
Rio De Santa Clara/Oxnard Drain No. 3	Total Dissolved Solids	• Maintained as a brackish waterbody therefore criteria do not apply. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.*
Rio De Santa Clara/Oxnard Drain No. 3	Toxicity	• Insufficient exceedances to warrant listing.
La Vista Drain (Ventura County)	Chlordane	• Data from agricultural drain rather than waterbody used as basis for listing decision. • J-flagged data incorrectly used in assessment.
La Vista Drain (Ventura County)	Chlorpyrifos	• Data from agricultural drain rather than waterbody used as basis for listing decision.
La Vista Drain (Ventura County)	Copper	• Data from agricultural drain rather than waterbody used as basis for listing decision.
La Vista Drain (Ventura County)	DDD	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.

Table 1. Waterbody-pollutant combinations that should not be listed

Waterbody segment	Pollutant	Justification
La Vista Drain (Ventura County)	DDE	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.
La Vista Drain (Ventura County)	DDT	• Data from agricultural drain rather than waterbody used as basis for listing decision.
La Vista Drain (Ventura County)	Indicator Bacteria	• Data from agricultural drain rather than waterbody used as basis for listing decision.
La Vista Drain (Ventura County)	Mercury	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Data and objectives have different units (ng/L vs. µg/L); data do not exceed objectives.
Santa Clara Drain	Chlordane	• Data from agricultural drain rather than waterbody used as basis for listing decision.
Santa Clara Drain	Chlorpyrifos	• Data from agricultural drain rather than waterbody used as basis for listing decision.
Santa Clara Drain	Cypermethrin	• Data from agricultural drain rather than waterbody used as basis for listing decision.
Santa Clara Drain	DDD	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using COMM criteria; public access is prohibited by chain link fencing and locked gates.
Santa Clara Drain	DDE	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using COMM criteria; public access is prohibited by chain link fencing and locked gates.
Santa Clara Drain	DDT	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using COMM criteria; public access is prohibited with chain link fencing and locked gates.
Santa Clara Drain	Nitrogen, Nitrate	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.
Santa Clara Drain	Specific Conductivity	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.

Table 1. Waterbody-pollutant combinations that should not be listed

Waterbody segment	Pollutant	Justification
Santa Clara Drain	Sulfates	• Data from agricultural drain rather than waterbody used as basis for listing decision.
Santa Clara Drain	Total Dissolved Solids	• Data from agricultural drain rather than waterbody used as basis for listing decision. • Incorrectly listed using guideline for MUN beneficial use that is not applicable to waterbody.
Santa Clara Drain	Toxaphene	• Data from agricultural drain rather than waterbody used as basis for listing decision.

*Duck Pond Agricultural Drains/Mugu Drain/Oxnard Drain No 2 and Rio De Santa Clara/Oxnard Drain No. 3 are not listed in the Basin Plan and therefore do not have assigned beneficial uses but they are tributaries to Mugu Lagoon which does not have a MUN beneficial use and are brackish waterbodies that would not support the MUN beneficial use.

1. Agricultural Drain monitoring data incorrectly used as basis for listing decisions. There are multiple instances where listing decisions are based on data from the Ventura County Agricultural Irrigated Lands Group (VCAILG) which include monitoring data from agricultural drains. In several cases, data from agricultural drains that discharge to waterbody reaches were used to list the waterbody reach. The drains are not listed tributaries or waterbodies in the Basin Plan and are not located within the waterbody that is being listed. As a result, the data should not be used for the listing decisions for these waterbodies. Calleguas Creek Reach 2 and Reach 4 were listed using data from the VCAILG monitoring sites 02D_BROOM (Reach 2) and 04D_ETTG (Reach 4), which are the locations of agricultural drains which drain to Reach 2 and 4. These agricultural monitoring sites were selected to be representative of agricultural discharges to Calleguas Creek Reaches 2 and 4 and are not representative of receiving water conditions. Therefore, any data collected from these sites cannot be used to list the downstream Calleguas Creek Reaches. All listings should be evaluated to ensure that the monitoring locations were in receiving waters rather than agricultural drains.

In addition, La Vista Drain and Santa Clara Drain were listed as new waterbodies never before included in the previous 303(d) List even though data have been collected on both agricultural drains by the MS4 program since the early 1990s. These waterbodies are not designated in the Basin Plan or listed as a tributary in the Basin Plan appendices. The La Vista Drain is an agricultural drain designed to convey excess irrigation water from agricultural lands, and as such, it is predominantly an open ditch that flows alongside W. Los Angeles Avenue and then along Santa Clara Avenue where it becomes the Santa Clara Drain. Additionally, inclusion of the COMM beneficial use for the Santa Clara Drain is inappropriate, as public access is prohibited because of fencing and locked gates maintained by the Ventura County Watershed Protection District. Inclusion of the MAR and EST beneficial uses are also inappropriately applied to the Santa Clara Drain because the drain is located upstream of Highway 101 and is not tidally influenced. The monitoring location on each drain was selected to represent agricultural discharges for the Agricultural Waiver and was not designed to characterize

receiving waters. Because these are agricultural drains and not tributaries, they should be removed from the Draft Category 5 list.

Requested Action:

- **Remove all listings shown in Table 1 that were based on Ag monitoring data from agricultural drains not representative of the listed waterbody and evaluate remaining listings to ensure no other listings are based on agricultural drain monitoring rather than receiving water monitoring.**
- **Remove the La Vista Drain and the Santa Clara Drain from the List as they are agricultural drains and not waterbodies that fall under the jurisdiction of the 303(d) List.**

2. Remove any pollutant listing based on municipal drinking water objectives where the MUN beneficial use does not apply.

Numerous listings were made using water quality objectives for the protection of the municipal drinking for waterbodies that do not have applicable municipal drinking water beneficial uses. Many of the waterbodies listed are brackish waterbodies for which no beneficial uses are designated or waterbodies designated for the municipal beneficial use with an asterisk (i.e., P*) in the Basin Plan. The asterisked MUN beneficial use should not be used to propose new 303(d) listings. Fact Sheets for previous 303(d) listing cycles have clearly noted that the asterisked MUN beneficial uses should not be used for 303(d) listing purposes.

State Board Resolution No. 88-63 (Sources of Drinking Water) and Regional Board Resolution 89-03 (Incorporation of Sources of Drinking Water Policy into the Water Quality Control Plans (Basin Plans)), state that "All surface and ground waters of the State are considered to be suitable, or potentially suitable, for municipal or domestic waters supply and should be so designated by Regional Boards... [with certain exceptions which must be adopted by the Regional Board]." The Regional Board adopted a Water Quality Control Plan for the Los Angeles Region (Basin Plan) on June 4, 1994, that included provisions to implement State Water Board Resolution 88-63. On May 26, 2000, the USEPA approved the revised Basin Plan except for the implementation plan for potential MUN-designated water bodies. On August 22, 2000, the City of Los Angeles, City of Burbank, City of Simi Valley, and the County Sanitation Districts of Los Angeles County challenged USEPA's water quality standards action in the U.S. District Court. On December 18, 2001, the court issued an order remanding the matter to USEPA to take further action on the 1994 Basin Plan consistent with the court's decision. On February 15, 2002, USEPA revised its decision and approved the 1994 Basin Plan in whole. In its February 15, 2002 letter, USEPA stated:

"EPA bases its approval on the court's finding that the Regional Board's identification of waters with an asterisk ("") in conjunction with the implementation language at page 2-4 of the 1994 Basin Plan, was intended "to only conditionally designate and not finally designate as MUN those water bodies identified by an ('*') for the MUN use in Table 2-1 of the Basin Plan, without further action." Court Order*

> *at p. 4. Thus, the waters identified with an ("*") in Table 2-1 do not have MUN as a designated use until such time as the State undertakes additional study and modifies its Basin Plan. Because this conditional use designation has no legal effect, it does not constitute a new water quality standard subject to EPA review under section 303(c)(3) of the Clean Water Act ("CWA"). 33 U.S.C. § 1313(c)(3)."*[1]

In addition to the above decision, the Basin Plan states that until the additional study is undertaken and the Basin Plan is modified "no new effluent limitations will be placed in Waste Discharge Requirements as a result of these designations". The Regional Board has also determined that water quality objectives applicable to the MUN beneficial use will not be used to assess impairments under the 303(d) listing programs. For constituents that only have objectives that are applicable to the MUN beneficial use, the decision Fact Sheets for the 303(d) listing process state that there are no applicable water quality objectives in waterbodies designated with an asterisk ("*"). In the 2010 listing cycle, a number of 303(d) listings were actually removed based on this determination. Below is an example of the language from a listing decision for Los Angeles River Reach 1:

> *"The listing for aluminum in this water body was originally based on data assessed using the MCL for aluminum. Since MUN is a "potential" beneficial use, it is not appropriate to use the MCL to evaluate aluminum data from this reach. Thus, there is no aluminum objective for this reach and the original listing is faulty."*

Based on this evidence, it is clear that for waterbodies with a MUN designation that includes an asterisk ("*"), water quality objectives specific to the MUN beneficial use are not applicable. As such, water quality data collected in these receiving waters should not be compared to water quality objectives applicable to the MUN beneficial use.

The listings of total dissolved solids, sulfates, and conductivity are all based on secondary maximum contaminant levels applied to protect the MUN beneficial use. In addition, Duck Pond Agricultural Drains/Mugu Drain/Oxnard Drain No 2 and Rio De Santa Clara/Oxnard Drain No. 3 are maintained as fresh/brackish water via tide gates on both drains and do not have designated MUN beneficial uses. Therefore, the listing of TDS, sulfate, and specific conductivity is inappropriate as naturally occurring levels of these three constituents in groundwater entering both drains within the footprint of Naval Base Ventura County far exceed the secondary MCLs upon which these listings are based. USEPA validated this reasoning in its "TMDLs for Pesticides, PCBs and Sediment Toxicity for Oxnard Drain 3",[2] where the MUN beneficial use was not considered to be "relevant to the impairments" addressed by the TMDL and so was not included in the TMDL. Additionally, Calleguas Creek Reach 2 and Reach 4 are considered brackish waterbodies according to the California Toxics Rule thresholds and

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[1] Language adapted from the 2014 National Pollutant Discharge Elimination System permit findings for wastewater treatment plants in the Calleguas Creek Watershed.

[2] Total Maximum Daily Loads for Pesticides, PCBs, and Sediment Toxicity in Oxnard Drain 3. Approved by USEPA on October 6, 2011.

are designated with an asterisked MUN beneficial use. Due to the brackish nature of these waterbodies, other Basin Plan objectives for TDS and sulfate are not considered to be applicable to Reach 2 or Reach 4 below Laguna Road. For all of these reasons, these proposed listings summarized in **Table 1** should not be listed.

The proposed Calleguas Creek Reach 2 dimethoate listing was based on three lines of evidence which the Fact Sheet states all show no exceedances (this appears to be a typo). However, it appears that the only line of evidence that shows an exceedance is based on the potential (P*) MUN, which as described above, cannot be used to justify a listing. Furthermore, the Fact Sheet cites a guideline from the California Department of Health Services Notification Levels (1 µg/L) which has not yet gone through the formal MCL regulatory process and it is not clear that this threshold would meet the Listing Policy requirements.

Requested Action:

- **Revise all of the new listings in the Fact Sheets to ensure that none are based on municipal drinking water objectives when the MUN beneficial use does not apply.**
- **Remove the segment-pollutant combinations for total dissolved solids, specific conductivity, sulfates, nitrogen, nitrate, dimethoate, and other MUN-based pollutants listed in Table 1 above from the 303(d) List.**

3. Reassess mercury listings using correct objective and correct units

The data used to assess mercury for Calleguas Creek Reach 3, Reach 4, and La Vista Drain are in ng/L and the objective is µg/L. The data have to be converted to the same units as the objective before an exceedance can be determined. The Stakeholders expect that after this calculation has been performed the waterbodies will no longer meet the listing guidelines for mercury. Additionally, although a California Toxics Rule objective exists for mercury, an EPA nationally recommended criterion was used for the assessment. An explanation for the use of a recommended criterion when an established water quality objective exists should be provided.

Requested Action:

- **Repeat the mercury analysis after correcting the units error.**

4. Incorrect location and data were used for listings in Reach 12

The name of the monitoring site presented in the Fact Sheet for the chlorpyrifos, diazinon and malathion listings in Calleguas Creek Reach 12 is unclear. The University site is in Reach 3, not 12 and TO1 is an MS4 discharge characterization site, not a receiving water monitoring location. Therefore, TO1 should not be used for a 303(d) listing decision and University data is not from Reach 12. A review of the datasets provided in the link on the Fact Sheet only show data from University (ME-CC) and the number of samples appears to match up with the sample numbers shown in the Fact Sheet. As a result, it appears that the chlorpyrifos, diazinon and malathion listings do not apply to Reach 12.

In addition, the Stakeholders request that only data collected *after* the implementation of applicable pesticide use restrictions were in place for these pesticides be considered in the listing decisions. Data from the Calleguas Creek TMDL watershed monitoring program that were not used in the assessment (see Comment II) demonstrates a marked reduction in these pesticides in receiving water since the use restrictions were implemented (approximately 2009 to present), particularly for receiving waters downstream of urban areas (e.g., Reach 12). Given the changed condition resulting from the pesticide use restrictions, monitoring data collected prior to 2009 is not representative of waterbody conditions for these constituents. Therefore, these constituents should not be listed unless data collected after the use restrictions were implemented demonstrates a continued impairment.

Requested Action:

- **Remove listings for Reach 12 that are not based on receiving water data from that reach.**
- **Remove listings for chlorpyrifos, diazinon, and malathion based on historic data that are not representative of conditions after implementation of pesticide use restrictions.**

5. Correct the proposed temperature listing for Calleguas Creek Reach 12 (was Conejo Creek/Arroyo Conejo North Fork on 1998 303d list) which is based on incorrect criteria.

The temperature listing for Reach 12 uses an evaluation guideline of 13-21°C as the optimum growth range for rainbow trout. However, the beneficial use listed for Reach 12 is WARM. The rainbow trout growth range threshold used for the listing is only applicable to the COLD beneficial use. This guideline should be removed and the number of exceedances recalculated based on the Basin Plan criteria for WARM. [3]

The basin plan criteria for WARM beneficial uses states the following: "*For waters designated as WARM, water temperature shall not be altered more than 5 degrees F above the natural temperature. At no time shall these WARM designated waters be raised above 80 degrees F as a result of waste discharges.*" The Fact Sheet states that of 567 samples there were 3 instances of the downstream sample exceeding 80°F and in some cases a 30°F difference between upstream and downstream reaches. The Fact Sheet statement is unclear because Reach 12 is the upstream location and is not downstream of a waste discharge. Reach 12 drains a portion of the City of Thousand

[3] Notwithstanding that the evaluation guideline of 13-21°C is inappropriate for Calleguas Creek Reach 12 given the water body's beneficial uses, the manner in which the evaluation guideline is applied is also inappropriate. Line of Evidence (LOE) 85933 references Moyle 1976 as the source of the evaluation guideline. Moyle 1976 was revised and expanded by Moyle 2002[1]. Moyle 2002 states: "Rainbows are found where daytime temperatures range from nearly 0°C in winter to 26-27°C in summer, although extremely low (<4°C) or extremely high (>23°C) temperatures can be lethal if the fish have not previously been gradually acclimated. Even when acclimation temperatures are high, temperatures of 24-27°C are invariably lethal to trout, except for very short exposures (25, 26)." As such, while temperatures above 21°C may not be optimal according to Moyle 1976, Moyle 2002 clearly states that lethal temperatures are those greater than 23°C which indicates that the evaluation guideline of 21°C is more appropriately applied as a chronic guideline (necessitating the establishment of an averaging period) and 23°C is the more appropriate "not-to-exceed" guideline if used for listing.

Oaks and open space areas and is located upstream of the Thousand Oaks Wastewater Treatment Plant. Therefore, it is unclear if the exceedances discussed in the Fact Sheet actually occur in Reach 12 and if exceedances do occur, whether they are a result of waste discharge or are a natural condition. The data provided for review was not compiled in a way that made it possible to easily review the assessment to determine if the exceedances were observed in Reach 12 (upstream) or Reach 10 (downstream).

Regardless of the location of the samples, if there were 3 instances of temperature above 80°F and if they can be confirmed to be a result of waste discharge and not natural temperature conditions, according to the SWRCB 2015 303(d) Listing Policy[4] three samples out of 567 would not meet the minimum number of measured exceedances needed to place a water segment on the 303(d) List (see Listing Policy table 3.2). According to the binomial test, with a sample size of 500+ there would need to be well over 20 exceedances in order to be added to the 303(d) List, however, the Fact Sheet mentions only three exceedances of the Basin Plan criteria. According to the SWRCB's own guidance, this proposed listing should be removed.

Requested Action:

- **Do not use the 13-21°C rainbow trout evaluation guideline which only applies to COLD beneficial use segments.**
- **Remove the temperature listing for Reach 12 as it does not meet the minimum listing requirements based on the binomial test described above and ensure that the analysis is applied to the correct reach.**

6. Ensure no J-flagged data were used in the assessment.

The Listing Policy specifically prohibits the use of J-flagged ("estimated") data that fall below the quantitation limit but above the water quality standard. Section 6.1.5.5 of the Listing Policy specifically states:

> *"When the sample value is less than the quantitation limit and the quantitation limit is greater than the water quality standard, objective, criterion, or evaluation guideline, the result shall not be used in the analysis. The quantitation limit includes the minimum level, practical quantitation level, or reporting limit."*

All listings based on the use of J-flagged data should, therefore, be removed from the draft 303(d) List. Specific instances are included in **Table 1** and further explained in **Table 2** below, but this list is by no means inclusive; this significant error will have to be addressed by a thorough review of all listing data to confirm that no J-flagged data were used to justify listings.

[4] State of California State Water Resources Control Board (SWRCB) Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List. Amended February 3, 2015.

Table 2. Incorrect use of J-flagged data

Segment	Pollutant	Comment
Duck Pond Agricultural Drains/Mugu Drain/Oxnard Drain No. 2	Toxaphene	The Lines of Evidence (LOE) for Toxaphene lists the number of exceedances incorrectly at two. However, only one of six samples exceeded the indicated criterion. The other sample was reported by the laboratory as "estimated" (J-flagged). Because only one of six samples showed an exceedance this listing should be removed as it does not meet the binomial test limits set forth in the Listing Policy.
Rio de Santa Clara/Oxnard Drain No. 3	Chlordane	The LOE for Chlordane erroneously states that four out of five samples exceed the objectives. A review of the data shows that only 3 out of 5 samples exceed indicated criteria. The remaining 2 results were (1) not detected and (2) "estimated" (J-flagged) by the laboratory because results were below the reporting limit.
La Vista Drain	Chlordane	The LOE for chlordane shows that one of the samples used to justify the listing is based solely on estimated (J-flagged) data because results were below the reporting limit. Because Chlordane has only one detected value for two sampling events, more monitoring data are needed to justify the listing and the proposed listing should be removed.

Requested Action:

- **Review all Fact Sheets and LOEs for the use of J-flagged data and remove any instances where J-flagged data were used.**
- **Delist toxaphene for Duck Pond Agricultural Drains/Mugu Drain/Oxnard Drain No. 2, chlordane for La Vista Drain, and any other pollutants listed in Tables 1 and 2 that lack the minimum number of exceedances required to justify a listing.**

7. Remove listings where a waterbody assessment does not meet listing thresholds based on data provided.

Finally, the toxicity listing for Rio De Santa Clara/Oxnard Drain No. 3 does not meet the minimum requirements to be listed according to the Listing Policy (pg. 9). According to the Listing Policy, a waterbody can be listed only when the number of exceedances meets the binomial test; in the case of this waterbody, four samples were collected and only one sample showed an exceedance. However, two exceedances would be required for the waterbody to be added to the 303(d) List. Therefore, toxicity was incorrectly listed for this waterbody and should be removed entirely from the 303(d) List.

Requested Action:

- **Remove the toxicity listing for Rio De Santa Clara/Oxnard Drain No. 3 based on meeting listing threshold requirements in the Listing Policy.**

II. REQUESTED REASSESSMENTS USING COMPLETE DATA SET

The assessments for the Calleguas Creek watershed do not appear to include any of the submitted Calleguas Creek Watershed TMDL monitoring data, monitoring data from the Camarillo Sanitary District, or monitoring data from the Simi Valley Wastewater Treatment Plant. All of this monitoring data has been provided to the Regional Board in annual monitoring reports and all data were collected using approved QAPPs. As a result, there is no reason why this data should not be included in the 303(d) listing process.

In 2013, the Stakeholders did an assessment of the watershed using all watershed data through 2012 and found that multiple waterbody-pollutant combinations could potentially be delisted as shown in **Table 3**. A summary of the assessment is included as an attachment to this letter and the datasets used in the analysis as well as all of the TMDL annual monitoring reports are available upon request.

Table 3. Waterbody-Pollutant Combinations to Consider for Delisting

Waterbody segment	Pollutant
Calleguas Creek Reach 1	Copper
	Dieldrin
	Endosulfan
	Mercury
	Nickel
	Zinc
Calleguas Creek Reach 2	Ammonia
	Copper
Calleguas Creek Reach 3	Ammonia
	Chlordane
	PCBs
Calleguas Creek Reach 4	Diazinon
	Dieldrin
	Endosulfan
	PCBs
Calleguas Creek Reach 6	Ammonia
	Chlordane
	Diazinon
	Dieldrin
Calleguas Creek Reach 7	Ammonia
	Diazinon
Calleguas Creek Reach 9A	Chlordane
	DDT
	Dieldrin
	Endosulfan
	Gamma HCH
	Nitrate as Nitrate
	Nitrogen, Nitrate
	PCBs
	Toxaphene
Calleguas Creek Reach 9B	Ammonia
	Chlordane
	Chlorpyrifos

Waterbody segment	Pollutant
	Diazinon
	Dieldrin
	Endosulfan
	PCBs
	Sulfates
Calleguas Creek Reach 10	Ammonia
	Chlordane
	Chlorpyrifos
	DDT
	Diazinon
	Dieldrin
	Endosulfan
	Fecal Coliform/Indicator Bacteria
	Nitrogen, Nitrite
	PCBs
	Sulfates
	Total Dissolved Solids
	Toxaphene
Calleguas Creek Reach 12	Ammonia
	DDT
	Dieldrin
	PCBs
	Toxaphene
Calleguas Creek Reach 13	Ammonia
	Chlordane
	DDT
	Dieldrin
	Endosulfan
	PCBs
	Toxaphene

While we recognize that this assessment uses two additional years of data than the current 303(d) listing analysis, a number of these waterbodies had many more samples than were necessary for delisting. As a result, we feel if all the watershed data were used in the assessment, a number of these waterbodies (particularly for metals) would be delisted. We also feel this assessment would demonstrate that several of the proposed listings, particularly for diazinon and chlorpyrifos and a number of organochlorine pesticides, are not warranted. A large number of new proposed listings are being added that are already covered by a TMDL. While the list acknowledges that a TMDL does not need to be developed by categorizing these new listings in Category 5B, in several cases, the watershed now has sufficient data to delist, whereas the listing is an artifact of old data being used to make the listing decision. These listings should not be added to the current list only to be removed during the next listing cycle as an artifact of the timing of the listing assessments.

Requested Action:

- **Reassess all Calleguas Creek waterbodies using all available data.**

III. REQUESTED CATEGORY ASSIGNMENT CHANGES

8. Correct pollutants listed as Category 5A which should be 5B based on coverage by an existing TMDL.

There are a number of proposed new listings for pollutants that are already covered by an existing TMDL and are incorrectly categorized as 5A. While the Stakeholders maintain that all of these listings should be removed entirely because of the issues detailed in Comment I, if they are not removed they should, at a minimum, be changed from 5A to 5B, as applicable.

A nutrient TMDL addressing nitrogen has been in effect since 2003, including for Reach 9A where a new 5A listing for nitrite is proposed. In 2006, the Toxicity and OC Pesticide and PCBs TMDLs for the Calleguas Creek watershed were established to address chlordane, chlorpyrifos, DDT, DDE, DDD, dieldrin, PCBs, sediment toxicity, and toxaphene. The La Vista Drain and Santa Clara Drain ultimately flow into Calleguas Creek Reach 4 (was Revolon Slough Main Branch), which is already addressed by an OC Pesticides and PCBs TMDL, the Toxicity TMDL, the Salts TMDL, and the Metals TMDL and therefore all of these proposed listings should be Category 5B. Furthermore, two other segments were listed for Chlorpyrifos – Honda Barranca and Duck Pond Agricultural Drains – but were correctly listed as Category 5B, citing the 2006 Toxicity TMDL. The Stakeholders request that any listings in **Table 4** and **Table 5** that are maintained after addressing the issues in Comment I should also be corrected to be designated as Category 5B.

Table 4. 303(d) Category 5A listings which should be changed to 5B listings

Segment	Pollutant	Proposed 303(d) Category	Requested 303(d) Category	Existing CCW TMDL[5,6,7,8,9,10]
Calleguas Creek Reach 2 (estuary to Potrero Rd)	Specific Conductivity	5A	5B	Salts TMDL
	Total Dissolved Solids	5A	5B	Salts TMDL
Calleguas Creek Reach 3 (Potrero Road upstream to Conejo Creek)	Mercury	5A	5B	Metals TMDL
Calleguas Creek Reach 4	Mercury	5A	5B	Metals TMDL
	Specific Conductivity	5A	5B	Salts TMDL
	Total Dissolved solids	5A	5B	Salts TMDL
	Sulfates	5A	5B	Salts TMDL
Calleguas Creek Reach 9A	Nitrogen, Nitrite	5A	5B	Nitrogen TMDL
Calleguas Creek Reach 12	Chlorpyrifos	5A	5B	Toxicity TMDL
	Diazinon	5A	5B	Toxicity TMDL
Honda Barranca	DDT	5A	5B	OC Pesticides and PCBs TMDL
Rio De Santa Clara/Oxnard Drain No. 3	Toxicity	5A	5B	Oxnard Drain #3 Pesticides, PCBs, Sediment Toxicity TMDL
La Vista Drain (Ventura County)	Chlorpyrifos	5A	5B	Toxicity TMDL
	Chlordane	5A	5B	OC Pesticides and PCBs TMDL
	DDT	5A	5B	OC Pesticides and PCBs TMDL
	DDE	5A	5B	OC Pesticides and PCBs TMDL
	DDD	5A	5B	OC Pesticides and PCBs TMDL
Santa Clara Drain	Copper	5A	5B	Metals TMDL
	Mercury	5A	5B	Metals TMDL
	Chlordane	5A	5B	OC Pesticides and PCBs TMDL
	Chlorpyrifos	5A	5B	Toxicity TMDL
	DDD	5A	5B	OC Pesticides and PCBs TMDL
	DDE	5A	5B	OC Pesticides and PCBs TMDL
	DDT	5A	5B	OC Pesticides and PCBs TMDL
	Nitrogen, Nitrate	5A	5B	Nutrients TMDL
	Specific Conductivity	5A	5B	Salts TMDL

[5] The Calleguas Creek Watershed Metals TMDL. RS 2006-012. Approved by USEPA on March 26, 2007.

In addition, we feel that the Toxicity TMDL should cover all new listings in the watershed for pyrethroids and organophosphate pesticides (e.g., malathion) if they are not removed as requested in the first comment. The Toxicity TMDL includes a trigger for additional investigation if ongoing toxicity is identified in the watershed. The toxicity trigger has resulted in the identification of pyrethroids as a potential cause of toxicity and the Stakeholders have already begun actions to address these pesticides in addition to the organophosphate pesticides included in the TMDL. The structure of the TMDL is designed to proactively prevent toxicity and therefore it is not necessary to develop another TMDL for these constituents. There are already sufficient controls in place through the agricultural waiver and MS4 permit. As a result, if the waterbodies are placed on the 303(d) List as new listings, we request that the waterbodies in **Table 5** be changed from 5A to 5B.

Table 5. Pyrethroid and Organophosphate listings which covered by the existing Toxicity TMDL[11]

Segment	Pollutant	Proposed 303(d) Listing Category	Requested 303(d) Listing Category
Calleguas Creek Reach 4 (was Revolon Slough Main Branch)	Bifenthrin	5A	5B
	Cyfluthrin	5A	5B
	Cypermethrin	5A	5B
	Malathion	5A	5B
	Permethrin	5A	5B
Calleguas Creek Reach 12 (was Conejo Creek/Arroyo Conejo North Fork)	Malathion	5A	5B
Duck Pond Agricultural Drains/Mugu Drain/Oxnard Drain No 2	Bifenthrin	5A	5B
Honda Barranca	Bifenthrin	5A	5B
Santa Clara Drain	Cypermethrin	5A	5B

Requested Action:

- **Change all pollutant-waterbody segment combinations in Table 4 and Table 5 from 5A to 5B or 4A based on coverage by an existing USEPA approved TMDL.**

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[6] The Calleguas Creek, Its Tributaries, and Mugu Lagoon Toxicity, Chlorpyrifos and Diazinon TMDL. RS 2005-009. Approved by USEPA on March 24, 2006.
[7] The Calleguas Creek Nitrogen TMDL. RS 2002-017. Approved by USEPA on June 20, 2003.
[8] Total Maximum Daily Load for Organochlorine Pesticides, Polychlorinated Biphenyls, and Siltation in Calleguas Creek, its Tributaries and Mugu Lagoon. RS 2005-010. Approved by USEPA on March 24, 2006.
[9] The Calleguas Creek Watershed Salts TMDL. RS 2007-016. Approved by USEPA on December 2, 2008.
[10] Total Maximum Daily Loads for Pesticides, PCBs, and Sediment Toxicity in Oxnard Drain 3. Approved by USEPA on October 6, 2011.
[11] The Calleguas Creek, Its Tributaries, and Mugu Lagoon Toxicity, Chlorpyrifos and Diazinon TMDL. RS 2005-009. Approved by USEPA on March 24, 2006.

IV. ADDRESS ALL OTHER INCONSISTENCIES AND ERRORS IN LIST

In reviewing the list the Stakeholders identified a large number of inconsistencies and issues in the list that should all be addressed prior to adoption. The summary below provides examples of issues identified and is not a comprehensive list as in many cases the information provided made it challenging to provide comprehensive comments.

9. Correct Appendix G Fact Sheets. The Appendix G Fact Sheets often include incorrect information and discussion. While most of the identified issues do not appear to impact the listing decisions, they make the review of information difficult. Examples of errors found include:

- Incorrect beneficial uses assigned to a waterbody. For example, MUN beneficial uses assigned to a tidally-influenced waterbody (e.g., Duck Ponds Agricultural Drain).
- Incorrect beneficial uses assigned to objectives. For example, MUN beneficial uses listed when aquatic life objectives are presented in the Fact Sheet.
- Incorrect TMDLs assigned to a pollutant. For example, for chlordane in Calleguas Creek Reach 2, the applicable TMDL is listed as the Calleguas Creek Metals TMDL. It should be the Organochlorine Pesticides, PCBs, and Siltation TMDL.
- Incorrect QAPPs identified. For example, the VCAILG QAPP is often referenced for the Ventura County MS4 monitoring data set.
- Incorrect number of samples evaluated and incorrect number of criteria exceedances. For example, the number of samples evaluated for toxaphene on the Rio de Santa Clara/Oxnard Drain No. 3 is identified as 2 samples, whereas data files obtained from the Regional Board website contain 5 samples for the date range indicated in Fact Sheets, including 3 samples with results of "ND". Stating that a pollutant actually exceeds criteria in only 40% of samples, versus 100% exceedances as presented in Fact Sheets, provides a more accurate picture of the degree of impairment for that pollutant in a waterbody. The inclusion of J-flagged data when enumerating exceedances (e.g., for chlordane in the same waterbodies) further exacerbates these numbering inaccuracies.

Requested Action:
Correct the Appendix G Fact Sheets for errors such as incorrectly assigned beneficial uses, existing TMDLs, QAPPs, and number of samples/number of exceedances.

10. Correct the Appendices and Fact Sheet Categories. Appendix A, Appendix B, Appendix C, and Appendix G are inconsistent which makes the analysis of new additions very difficult since it is unclear which segment-pollutant combinations actually are new listings. Following are examples of a number of identified issues that need to be corrected to allow the Stakeholders to fully vet and understand the proposed listings.

A number of proposed "name changes" in Appendix A are not shown in Appendix B and there are not associated Fact Sheets describing the name change (e.g., Reach 4 listings for chlorpyrifos and total DDT). This makes it very challenging to assess the

validity or basis for the name change. In other instances, listed name changes are found in Appendix B or C but not supported by an explanation for the name change in Appendix G. The Fact Sheets for the following name changes should provide justification or explanation for the name change as many appear to be switching tissue or sediment listings to water listings. If this is, in fact, the change being made, the justification for the water listing needs to be provided in the Fact Sheet. It is not appropriate to modify the medium that is the basis for the listing as a name change.

Table 6. Listed as Name Changes in Appendix A

CCW Segment	Pollutants
Reach 1	Toxicity
Reach 2	Chlordane, Endosulfan, Toxaphene
Reach 4	Chlorpyrifos (tissue), Fecal Coliform, Total DDT
Reach 12	DDT (tissue), Ammonia
Rio De Santa Clara/Oxnard Drain No. 3	Toxicity
Duck Pond	ChemA

There are a number of inconsistencies where Appendix A does not include all of the new 2014 listings found in Appendix B. Below are a few examples of such inconsistencies.

Table 7. Incorrectly listed waterbody segment-pollutant combinations

Segment	Pollutant	Issue
La Vista Drain	DDT	Not included as a new change in Appendix A but listed as a new 2014 5A listing in Appendix B.
Honda Barranca	Bifenthrin	Not included as a new change in Appendix A but listed as a new 2014 5A listing in Appendix B.
Rio De Santa Clara/Oxnard Drain No. 3	Total Dissolved Solids	Not included as a new change in Appendix A but listed as a new 2014 5A listing in Appendix B.
	Toxicity	Listed only as a "name change" in Appendix A but listed as a new 2014 5A listing in Appendix B.
	Indicator Bacteria	Not included as a change in Appendix A but listed as a new 5A listing in Appendix B. Clarify if this is a new listing or a "coliform bacteria" name change as described for Calleguas Reaches 6, 9A, 10, and 11.
Calleguas Creek Reach 2 (estuary to Potrero Rd)	PCBs	Not included as a new change in Appendix A but listed as a new 2014 5B listing in Appendix B.
	Toxicity	Not included as a new change in Appendix A but listed as a new 2014 5B listing in Appendix B.
	ChemA	Not included as a new change in Appendix A but listed as a new 2014 5B listing in Appendix B despite cited as a historical use of pesticides and lubricants.
Calleguas Creek Reach 4	Cyfluthrin	Not included as a new change in Appendix A but listed as a new 2014 5A listing in Appendix B.

There are also a number of instances where existing waterbody-pollutant listings from the 2010 303(d) List were not stated as delisted in Appendix A and do not appear in Appendix B, C, or G under the waterbodies to delist. The Stakeholders would like clarification if these listings are in fact being delisted as some align with the assessment shown in **Table 3.**

Table 8. Not described as delisted in Appendix A but not found Appendix B or C

CCW Segment	Pollutants
Reach 2	Ammonia
Reach 3	Ammonia
Reach 4	Chlordane (tissue & sediment), DDT (tissue & sediment), PCBs (tissue), Toxaphene (tissue & sediment)
Reach 5	Chlordane (tissue & sediment), Chlorpyrifos (tissue), DDT (tissue & sediment), Dieldrin (tissue), Endosulfan (tissue & sediment), Nitrogen, PCBs (tissue), Toxaphene (tissue & sediment)
Reach 6	DDT (sediment)
Reach 9A	Chlorpyrifos, DDT (tissue), Dieldrin (tissue), Endosulfan (tissue), PCBs (tissue), Toxaphene (tissue & sediment)
Reach 9B	Endosulfan (tissue), Toxaphene (tissue & sediment)
Reach 10	DDT (tissue)
Reach 11	DDT (tissue), Endosulfan (tissue), Toxaphene (tissue & sediment)

Requested Action:
Correct the numerous inconsistencies described above in Table 6, Table 7, and Table 8 and ensure that all of the proposed 303(d) List appendices are internally consistent.

11. Correct the waterbody assigned Hydrologic Unit (HUCs) and Calwater numbers to reflect those listed in the Basin Plan. There are multiple instances of what appear to be incorrectly Hydrologic Unit numbers (HUCs) and Calwater numbers assigned to the various waterways. For instance, a comparison of the 8 digit HUCs listed in Appendix B of the 303(d) List to the 12 digit HUCs listed in Appendix I of the Basin Plan indicate a number of inconsistencies such that waterbodies present in the Santa Clara River Watershed (e.g., Santa Clara River Reach 1, 2, and 3) are listed with a Calleguas watershed HUC (18070103) while the same reaches are listed as 18070102 in the Basin Plan. This makes identifying the location of unknown waterbodies not previously listed or described in the Basin Plan to assess if they are receiving waters that should be assessed especially difficult. A full review of the 303(d) List HUCs should be completed to correct all errors.

Requested Action:
Perform a full review of HUCs and Calwater numbers listed in Appendix B through F and correct any inconsistencies with the Basin Plan.

12. Correct or clarify inconsistencies in the staff report. There is inconsistent discussion in the staff report about some proposed listings that should be clarified to avoid confusion about the listings. For instance, on page 10 of the Staff Report there is a discussion about existing TMDLs covering newly proposed pollutants "*For example, the proposed new listings for DDE and DDD in Calleguas Creek Reach 3 … are being addressed by the Calleguas Creek Organochlorine Pesticides, PCBs and Siltation TMDL … and would then be in Category 4A.*" However, we could find no listings of DDE and DDD for Reach 3 in any Appendix of the report including Appendix C – Category 4A Waterbody Segments. Furthermore, the Fact Sheets in Appendix G state that DDE and DDD should *not* be listed for Reach 3. We ask the RWQCB to either clarify or remove the above referenced statement and clarify any other inconsistencies between the staff report and the list.

Requested Action:
Correct or remove language cited on page 10 of the staff report regarding DDE and DDD listing of Calleguas Creek Reach 3 and clarify any other identified inconsistencies within the staff report.

13. Ensure that all thresholds being used for assessment are consistent and valid under the Listing Policy. In many cases, the same pollutant is assessed using different thresholds without any explanation for the basis of the threshold. Additionally, in several cases, an LC50 or threshold for individual species were used for the assessment, which is inconsistent with the Listing Policy which states that it must be demonstrated that an evaluation guideline is *"applicable to the beneficial use, protective of the beneficial use, scientifically-based and peer reviewed, and well described"*. Because it has not been demonstrated that the individual species response to these pollutants is applicable and protective of the beneficial use these guidelines should not be used to make a listing. The Stakeholders ask that the Board review all assessments for consistency, especially for the pesticides (bifenthrin, cyfluthrin, cypermethrin, malathion, permethrin) as well as applicability to the beneficial use as described in the Listing Policy.

Table 9. 303(d) Pollutants Using Thresholds for Interpreting Narrative Objectives

Pollutant	Segment	Objective Used
Bifenthrin	CCW Reach 4	0.0006µg/L (4-day average) from UC Davis[1]
	Honda Barranca	0.0006µg/L (4-day average) from UC Davis[1]
	Duck Pond Agricultural Drains/Mugu Drain/Oxnard Drain No 2	0.00397µg/L mean acute value for mysid from Cal Dep of Fish and Game[2]
Cyfluthrin	CCW Reach 4	LC50: 29000µg/L from the USEPA OPP Pesticide Ecotox database
Cypermethrin	CCW Reach 4	0.002µg/L from the Cal Dep of Fish and Game[2]

Malathion	CCW Reach 4	0.28µg/L (4-day average) from UC Davis[1]
	CCW Reach 12	0.1µg/L USEPA[3]
Permethrin	CCW Reach 4	0.0002µg/L from UC Davis[1]

[1]Aquatic life water quality criteria derived via the UC Davis method: II. Pyrethroid insecticides. Reviews of Environmental Contamination and Toxicology 216:51-103.
[2] Hazard Assessment of the Synthetic Pyrethroid Insecticides Bifenthrin, Cypermethrin, Esfenvalerate, and Permethrin to Aquatic Organisms in the Sacramento-San Joaquin River System; 2000. Cal Dept. of Fish and Game. Report 00-6.
[3] USEPA National Recommended Water Quality Criteria (Red Book). 1976. United States Environmental Protection Agency. Office of Water. Office of Science and Technology.

The 303(d) List includes new listings for bifenthrin, cyfluthrin, cypermethrin, malathion, and permethrin in CCW. Currently, no water quality objectives have been promulgated by USEPA or the State of California for these pollutants and so the criteria listed are from a variety of studies. Some issues with these criteria include the following (this list is by no means inclusive; a thorough review of all listings for these pollutants should be undertaken):

- The criterion used for listing bifenthrin on Duck Pond Agricultural Drains/Mugu Drain/Oxnard Drain No 2 is 0.00397 µg/L based on the CDFG criteria. The selective use of a saltwater genus mean acute value is inappropriate when the CDFG study clearly states in the "Conclusions and Recommendations" section that "insufficient freshwater and saltwater acute toxicity data were available to calculate CMC values for bifenthrin." The same use of a criterion unsupported by the study author(s) applies to cypermethrin on the Santa Clara Drain.
- Use of LC50 for listing of cyfluthrin for CCW Reach 4 is inappropriate. LC50s do not meet the standard set forth in the Listing Policy as stated on page 20 " *the evaluation guideline… identifies a range above which impacts occur and below which no or few impacts are predicted.*" By definition, an LC50 is simply the concentration at which half of the population of the tested species has died. The LC50 should not be used as the evaluation guideline.
- The criterion used for listing permethrin for Calleguas Creek Reach 4 is 0.0002µg/L based on the UC Davis[12] criteria. However, upon reviewing the UC Davis source the listed chronic standard for permethrin is 2 ng/L (page 92) which is 0.002µg/L, not 0.0002µg/L as listed in the 303(d) List.
- In many instances the incorrect evaluation guideline and guideline reference are used. For example, the evaluation guideline (i.e., criterion) provided for cyfluthrin (a pyrethroid) in LOEs 84065, 83200, and 88712 is for the chlorinated herbicide 2,4,5-TP. The stated criterion (29 mg/L) was not found in the cited guideline reference. Many additional instances were noted in LOEs for phorate, dimethoate, disulfoton, endosulfan sulfate, and many other LOEs. Because the numeric guidelines (and reference documents from which these are obtained)

[12] Aquatic life water quality criteria derived via the UC Davis method: II. Pyrethroid insecticides. Reviews of Environmental Contamination and Toxicology 216:51-103.

form the basis for any listing, it is critical that these be carefully reviewed and verified prior to issuing the final Fact Sheets and 303(d) List.

Requested Action:

- **Review the guidelines used for interpreting narrative objectives and ensure that they are consistently applied and use correct unit conversions.**
- **Remove all guidelines that do not comply with the stated Listing Policy as described above.**

The Stakeholders appreciate the opportunity to comment on the 303(d) List and look forward to continuing to work with the Water Board to address these concerns. Thank you for your time and consideration of these comments. If you have questions, please contact Ashli Desai at (310) 394-1036 / AshliD@lwa.com or me at (805) 388-5334.

Sincerely,

Lucia McGovern
Chair of Stakeholders Implementing TMDLs in Calleguas Creek Watershed

Attachment A: Data Tables from CCW Water Quality Priorities Memorandum

Calleguas Creek Watershed Assessment

1. Data Sources

In order to fully evaluate the progress of TMDL implementation, as well as the general state of the watershed, data was collected from a variety of CCW stakeholders. Data sources include NPDES monitoring data from three Publicly Owned Treatment Works (POTWs) in the watershed along with long-term MS4 monitoring data from the County of Ventura. Ventura County Agricultural Irrigated Lands Group (VCAILG) monitoring data and available Navy data was also provided. Water, sediment, fish tissue, and toxicity data from ongoing TMDL and data was also retrieved from the State Water Quality Control Board's California Environmental Data Exchange Network (CEDEN).

Overall, a data set of over 375,000 data points gathered between 2003 and 2014 was compiled. The data set was then refined by focusing the analysis on receiving water samples and removing POTW effluent, MS4 outfalls, and agricultural discharge data.

The aggregation of data spanning the ten year study period revealed varying levels of completeness in the monitoring data; therefore several conservative assumptions were necessary to carry out the analysis. Where appropriate, constituents sampled under unknown wet/dry conditions were assumed to be sampled during dry weather conditions and were thus subject to dry weather criteria. POTW metals data reported without indication whether they were in the dissolved or total fraction were assumed to be reported in their dissolved fraction for constituents with dissolved targets (copper, nickel, and zinc). Mercury and selenium targets are for the total fraction; undesignated data for these constituents was assumed to be total. These assumptions were intended to provide the most conservative analysis of the data in light of the uncertainty related to the incomplete data.

Table 1. Summary of Receiving Water Data Used in Analysis

Monitoring Program/ Data Source	Date Range		Number of Samples by Reach														Total
			1	2	3	4	5	6	7	8	9A	9B	10	11	12	13	
Camarillo POTW Monitoring	1/22/2003	11/5/2013									7221	237					7458
CCW Characterization Study DBF	1/1/2003	5/3/2005			125				799			238					1162
CCW Salts TMDL	1/31/2011	12/5/2013			296				154		151	135					736
CCW TMDL DBF	2/6/2002	2/3/2014	2593	120	1221	1237	119	596	726		66	525	494		110	414	8221
CCW TMDL Work Plan Monitoring	8/26/2003	10/27/2004	291	292	371	465	208	209	261	158	231	209	231	6	155	207	3294
Navy Monitoring	5/3/2003	1/7/2005	91	59		59											209
RWB4 So. CA Stormwater Monitoring Coalition	5/5/2008	5/13/2008						15		5	15	15			28		78
Simi Valley POTW Monitoring	1/8/2008	6/3/2014							4808								4808
SWAMP Perennial Stream Surveys	5/21/2008	5/21/2008			5												5
Thousand Oaks POTW Monitoring	1/15/2002	10/9/2013											4200		4250		8450
Ventura County MS4 Monitoring	2/12/2003	4/25/2014			4811	541	541							1			5894
Total:			**2975**	**471**	**6829**	**2302**	**868**	**820**	**6748**	**163**	**7684**	**1359**	**4925**	**7**	**4543**	**621**	**40315**

1.1 METALS AND SELENIUM TMDL

The Los Angeles Regional Water Quality Control Board (RWQCB) adopted Resolution No. R4-2006-012 to address water quality issues related to metals and selenium in Calleguas Creek, its tributaries and Mugu Lagoon.

Table 2 summarizes the analysis of available receiving water data for constituents included in the Metals TMDL, as well as the number of exceedances of the final numeric targets. The table illustrates that in most cases a sufficient number of samples is available and the data supports a delisting of the metals. It is important to note that compliance with metals and selenium targets in reach 2 was assessed using data from CCW TMDL monitoring site 01_RR_BR, which is located at the break between reach 1 and 2. Much of the POTW data did not distinguish between the dissolved and total fraction for metals constituents. For metals with dissolved targets (copper, nickel, and zinc) a conservative approach was used by comparing undistinguished metals samples to the dissolved targets. Mercury and selenium have established targets for total metals, in these instances all total and undistinguished samples were compared to these targets. For conservative analysis, available fish tissue mercury data was compared to the lowest fish tissue target for all samples.

Table 2. Analysis of Metals TMDL Constituents in Receiving Water by Reach

Copper (Dry)		303(d) Listed Reaches			Un-listed Reaches with TMDL Targets and Available Data								
Reach		1	2	4	3	5	6	7	9A	9B	10	11	12
Date Range Available		5/3/2003	6/10/2003	6/10/2003	6/5/2003	NS	5/13/2008	2/5/2003	2/19/2003	2/19/2003	2/6/2002	8/13/2013	2/6/2002
		11/5/2013	11/11/2008	11/5/2013	4/25/2014	NS	5/13/2008	5/6/2014	8/7/2013	5/7/2008	10/9/2013	8/13/2013	10/9/2013
TMDL Targets (ug/L):		4.7	11.4	3.1	25.9	3.1	29.3	29.3	27.9	27.9	27.9	27.9	27.9
Previous 10 Years	N	172	102	43	88	NS	1	71	41	2	127	1	129
	N Detect	166	94	41	88	NS	1	61	28	1	126	1	126
	N Exceed	26	30	13	19	NS	0	5	0	0	0	1	1
Previous 5 Years	N	100	29	28	36	NS	NS	44	18	NS	58	1	58
	N Detect	96	29	28	36	NS	NS	44	18	NS	58	1	58
	N Exceed	0	0	5	0	NS	NS	5	0	NS	0	1	1

Copper (Wet)		303(d) Listed Reaches			Un-listed Reaches with TMDL Targets and Available Data								
Reach		1	2	4	3	5	6	7	9A	9B	10	11	12
Date Range Available		10/27/2004	2/26/2004	2/13/2003	2/12/2003	2/13/2003	NS	NS	NS	NS	NS	NS	NS
		1/25/2013	10/27/2004	1/25/2013	2/28/2014	11/26/2008	NS	NS	NS	NS	NS	NS	NS
TMDL Targets (ug/L):		7.2	17.2	4.8	26.3	4.8	29.8	29.8	41.6	41.6	41.6	41.6	41.6
Previous 10 Years	N	NS	12	18	46	7	NS	NS	NS	NS	NS	NS	NS
	N Detect	NS	12	18	46	7	NS	NS	NS	NS	NS	NS	NS
	N Exceed	NS	0	3	0	7	NS	NS	NS	NS	NS	NS	NS
Previous 5 Years	N	NS	8	8	25	NS	NS	NS	NS	NS	NS	NS	NS
	N Detect	NS	8	8	25	NS	NS	NS	NS	NS	NS	NS	NS
	N Exceed	NS	0	0	0	NS	NS	NS	NS	NS	NS	NS	NS

Copper (Wet and Dry Data)	303(d) Listed Reaches			Un-listed Reaches with TMDL Targets and Available Data								
Reach	1	2	4	3	5	6	7	9A	9B	10	11	12
N (previous 5 years)	100	37	36	61	NS	NS	44	41[1]	NS	58	1	58
N Exceed	0	0	5	0	NS	NS	5	0	NS	0	1	1
	Potential for Delisting?			Achieving Targets per Listing Policy?								
	Yes	Yes	No	Yes	No[1]	NE[1]	No	Yes	NE[1]	Yes	ID[1]	Yes

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis.

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

ID (Insufficient Data) – Insufficient data to inform listing decision, however a single exceedance was detected and the potential for listing may exist.

Nickel (Dry)	303(d) Listed Reaches	Un-listed Reaches with TMDL Targets and Available Data

Reach		1	2	4	3	5	6	7	8	9A	9B	10	12
Date Range Available		5/3/2003	6/10/2003	6/10/2003	6/5/2003	NS	5/13/2008	2/5/2003	NS	2/19/2003	2/19/2003	2/6/2002	2/6/2002
		11/5/2013	11/11/2008	11/5/2013	4/25/2014	NS	5/13/2008	5/6/2014	NS	8/7/2013	5/7/2008	8/7/2013	8/7/2013
TMDL Target (ug/L):		8.2	8.2	8.2	149	8.2	168	168	168	160	160	160	160
Previous 10 Years	N	138	61	43	63	NS	1	71	1	41	2	44	46
	N Detect	138	59	43	63	NS	1	62	1	25	1	43	43
	N Exceed	0	11	6	0	NS	0	0	1	0	0	0	0
Previous 5 Years	N	100	29	28	36	NS	NS	44	NS	18	NS	19	19
	N Detect	100	29	28	36	NS	NS	44	NS	18	NS	19	19
	N Exceed	0	1	3	0	NS	NS	0	NS	0	NS	0	0

Nickel (Wet)		303(d) Listed Reaches			Un-listed Reaches with TMDL Targets and Available Data								
Reach		1	2	4	3	5	6	7	8	9A	9B	10	12
Date Range Available		10/27/2004	2/26/2004	2/13/2003	2/12/2003	2/13/2003	NS	NS	NS	NS	NS	NS	NS
		1/25/2013	1/25/2013	1/25/2013	2/28/2014	11/26/2008	NS	NS	NS	NS	NS	NS	NS
TMDL Targets (ug/L):		74	74	74	856	74	958	958	958	1292	1292	1292	1292
Previous 10 Years	N	NS	12	18	46	7	NS	NS	NS	NS	NS	NS	NS
	N Detect	NS	12	18	46	7	NS	NS	NS	NS	NS	NS	NS
	N Exceed	NS	0	0	0	0	NS	NS	NS	NS	NS	NS	NS
Previous 5 Years	N	NS	8	8	25	NS	NS	NS	NS	NS	NS	NS	NS
	N Detect	NS	8	8	25	NS	NS	NS	NS	NS	NS	NS	NS
	N Exceed	NS	0	0	0	NS	NS	NS	NS	NS	NS	NS	NS

Nickel (Wet and Dry Data)	303(d) Listed Reaches			Un-listed Reaches with TMDL Targets and Available Data								
Reach	1	2	4	3	5	6	7	8	9A	9B	10	12
N (previous 5 years)	100	37	36	61	NS	NS	44	NS	41[1]	NS	44[1]	46[1]
N Exceed	0	1	3	0	NS	NS	0	NS	0	NS	0	0
	Potential for Delisting?			Achieving Targets per Listing Policy?								
	Yes	Yes	No[2]	Yes	NE	NE	Yes	ID	Yes	NE	Yes	Yes

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis.
2. Single exceedance over the number of allowable exceedances for the given sample size. Constituent is likely to have potential for delisting.

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.
ID (Insufficient Data) – Insufficient data to inform listing decision, however a single exceedance was detect and the potential for listing may exist.

Selenium (Dry)		303(d) Listed Reaches					Un-listed Reaches with TMDL Targets and Available Data					
Reach		1	2[3]	4	3	5	6	7	9A	9B	10	12
Date Range Available		8/26/2003	8/27/2003	8/28/2003	6/5/2003	3/29/2004	5/13/2008	8/5/2003	5/8/2008	5/7/2008	8/12/2003	5/5/2008
		11/5/2013	11/11/2008	11/5/2013	4/25/2014	9/7/2004	5/13/2008	6/3/2014	5/8/2008	5/7/2008	8/7/2013	5/13/2008
TMDL Targets (ug/L):		71	5	5	5	5	5	5	5	5	5	5
Previous 10 Years	N	138	64	55	66	7	1	199	1	1	41	43
	N Detect	113	51	51	63	7	1	190	1	1	32	41
	N Exceed	0	18	48	2	6	1	156	0	0	0	2
Previous 5 Years	N	100	29	29	36	NS	NS	132	NS	NS	19	19
	N Detect	75	25	29	36	NS	NS	132	NS	NS	18	19
	N Exceed	0	5	29	0	NS	NS	111	NS	NS	0	0

Selenium (Wet)		303(d) Listed Reaches					Un-listed Reaches with TMDL Targets and Available Data					
Reach		1	2[3]	4	3	5	6	7	9A	9B	10	12
Date Range Available		NS	2/26/2004	2/13/2003	2/12/2003	2/13/2003	NS	NS	NS	NS	NS	NS
		NS	1/25/2013	1/25/2013	2/28/2014	11/26/2008	NS	NS	NS	NS	NS	NS
TMDL Targets(ug/L):		290	290	290	--	290	--	--	--	--	--	--
Previous 10 Years	N	NS	12	18	46	7	NS	NS	NS	NS	NS	NS
	N Detect	NS	12	18	46	7	NS	NS	NS	NS	NS	NS
	N Exceed	NS	0	3	--	0	NS	NS	NS	NS	NS	NS
Previous 5 Years	N	NS	8	8	25	NS	NS	NS	NS	NS	NS	NS
	N Detect	NS	8	8	25	NS	NS	NS	NS	NS	NS	NS
	N Exceed	NS	0	3	--	NS	NS	NS	NS	NS	NS	NS

Selenium (Wet and Dry Data)	303(d) Listed Reaches			Un-listed Reaches with TMDL Targets and Available Data							
Reach	1	2[3]	4	3	5	6	7	9A	9B	10	12
N (previous 5 years)	100	37	37	36	NS[1]	NS[1]	132	NS[1]	NS[1]	41	43[1]
N Exceed	0	5	32	0	NS	NS	111	NS	NS	0	2
	Potential for Delisting?			Achieving Targets per Listing Policy?							
	Yes	No	No	Yes[2]	NE	ID	No	NE	NE	Yes[2]	Yes

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis.
2. In reaches where wet weather targets were not established, only dry weather data were compared to dry weather targets
3. Data may not be representative of conditions in reach 2 due to the consideration of data that includes the influence of reach 4.

NE – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.
ID – Insufficient data to inform listing decision, however a single exceedance was detect and the potential for listing may exist.

Zinc (Dry)		303(d) Listed Reaches			Un-listed Reaches with TMDL Targets and Available Data								
Reach		1	2	4	3	5	6	7	9A	9B	10	11	12
Date Range Available		5/3/2003	6/10/2003	6/10/2003	6/5/2003	NS	5/13/2008	2/5/2003	2/19/2003	2/19/2003	2/6/2002	8/13/2013	2/6/2002
		11/5/2013	11/5/2013	11/5/2013	4/25/2014	NS	5/13/2008	5/6/2014	8/7/2013	5/7/2008	8/7/2013	8/13/2013	8/7/2013
TMDL Targets (ug/L):		81	81	81	338	81	382	382	365	365	365	365	365
Previous 10 Years	N	138	61	43	63	NS	1	77	41	2	44	1	46
	N Detect	124	57	35	63	NS	1	70	41	2	44	1	15
	N Exceed	1	0	1	0	NS	0	0	0	0	0	1	0
Previous 5 Years	N	100	29	28	36	NS	NS	48	18	NS	19	1	19
	N Detect	89	26	20	36	NS	NS	48	18	NS	19	1	1
	N Exceed	0	0	1	0	NS	NS	0	0	NS	0	1	0

Zinc (Wet)		303(d) Listed Reaches			Un-listed Reaches with TMDL Targets and Available Data								
Reach		1	2	4	3	5	6	7	9A	9B	10	11	12
Date Range Available		NS	2/26/2004	2/13/2003	2/12/2003	2/13/2003	NS	NS	NS	NS	NS	NS	NS
		NS	1/25/2013	1/25/2013	2/28/2014	11/26/2008	NS	NS	NS	NS	NS	NS	NS
TMDL Targets (ug/L):		90	90	90	214	90	240	240	324	324	324	324	324
Previous 10 Years	N	NS	12	18	46	7	NS	NS	NS	NS	NS	NS	NS
	N Detect	NS	12	18	45	6	NS	NS	NS	NS	NS	NS	NS
	N Exceed	NS	0	0	0	0	NS	NS	NS	NS	NS	NS	NS
Previous 5 Years	N	NS	8	8	25	NS	NS	NS	NS	NS	NS	NS	NS
	N Detect	NS	8	8	25	NS	NS	NS	NS	NS	NS	NS	NS
	N Exceed	NS	0	0	0	NS	NS	NS	NS	NS	NS	NS	NS

Zinc (Wet and Dry Data)	303(d) Listed Reaches			Un-listed Reaches with TMDL Targets and Available Data								
Reach	1	2	4	3	5	6	7	9A	9B	10	11	12
N (previous 5 years)	100	37	36	61	NS	NS	48	41[2]	NS	44	NS	46[2]
N Exceed	0	0	1	0	NS	NS	0	0	NS	0	NS	0
	Potential for Delisting?			Achieving Targets per Listing Policy?								
	Yes	Yes	Yes	Yes	NE	NE	Yes	Yes	NE	Yes	ID	Yes

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis.

NE – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

ID – Insufficient data to inform listing decision, however a single exceedance was detect and the potential for listing may exist.

Mercury		303(d) Listed Reaches			Un-listed Reaches with TMDL Targets and Available Data					
Reach		1	2	4	3	5	7	9A	10	12
Date Range Available		8/26/2003	8/27/2003	2/12/2003	2/12/2003	2/12/2003	8/5/2003	8/5/2003	8/15/2003	8/15/2003
		11/5/2013	11/5/2013	11/5/2013	4/25/2014	11/26/2008	5/6/2014	8/7/2013	10/9/2013	10/9/2013
TMDL Targets (ug/L):		0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051	0.051
Previous 10 Years	N	136	75	61	114	7	66	39	123	123
	N Detect	102	60	55	103	7	59	5	24	23
	N Exceed	0	6	7	18	6	26	5	3	2
Previous 5 Years	N	100	37	37	65	NS	44	18	58	58
	N Detect	68	31	35	55	NS	44	2	12	12
	N Exceed	0	2	3	10	NS	29	2	0	0
		Potential for Delisting?			Achieving Targets per Listing Policy?					
		Yes	Yes	Yes	No	No	No	No	Yes	Yes

Table 3. Analysis of Metals TMDL Constituents in Sediment by Reach

Reach	Constituent	Date Range Available		TMDL target (ppb)[1]	Previous 10 Years			Previous 5 Years			Potential for Delisting
					N	N Detect	N Exceed	N	N Detect	N Exceed	
1	Copper	5/3/2003	8/18/2011	34,000	18	18	1	5	5	0	PD[2]
	Nickel	5/3/2003	8/18/2011	20,900	18	18	6	5	5	0	PD[2]
	Zinc	5/3/2003	8/18/2011	150,000	18	18	3	5	5	0	PD[2]
2	Copper	2/3/2004	8/22/2013	34,000	11	11	4	3	3	0	PD[2]

1. TMDL target only applies if sediment toxicity occurs.
2. No exceedances in most recent five years with a significant number of samples. Considering the exceedances that occurred more than five years ago would inappropriately categorize this as a higher priority.

PD (Potential Delisting) - Insufficient data to information listing decision, however a significant number of the most recent 5 years of monitoring are non-detect. The potential for delisting the reach may exist.

Table 4. Analysis of Metals TMDL Constituents in Fish Tissue by Reach

Mercury		1	2	3	4	5	6	7	9A	9B	10	12	13
Date Range Available		8/19/2008	5/6/2004	12/19/2003	12/18/2003	NS	12/16/2003	12/16/2003	12/19/2003	12/19/2003	12/18/2003	12/17/2003	12/17/2003
		8/21/2008	8/24/2004	8/24/2004	8/27/2013	NS	8/23/2004	8/23/2004	8/26/2004	8/26/2004	8/25/2004	8/25/2004	8/25/2004
TMDL Target (mg/kg MeHg)[1]:		0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Previous 10 Years	N	9	2	10	23	NS	2	7	5	8	6	3	6
	N Detect	9	1	8	21	NS	1	7	5	8	6	3	6
	N Exceed	0	0	2	13	NS	0	6	4	5	6	0	6
Previous 5 Years	N	NS	NS	NS	13	NS	NS	NS	NS	NS	NS	NS	NS
	N Detect	NS	NS	NS	13	NS	NS	NS	NS	NS	NS	NS	NS
	N Exceed	NS	NS	NS	13	NS	NS	NS	NS	NS	NS	NS	NS
Potential for Delisting:		NE	NE	No	No	--	NE	No	No	No	No	NE	NE

1. Mercury was compared against Methyl-Mercury final numeric targets.

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data

1.2 NUTRIENT TMDL

The Calleguas Creek Nitrogen Compounds and Related Effects (Nitrogen TMDL) was incorporated into the Water Quality Control Plan for the Los Angeles Region (Basin Plan) through the RWQCB adoption of Resolution No. R4-2002-017. An update to the Nitrogen TMDL has since been adopted (Resolution No. 2008-009) and went into effect on October 15, 2009. **Table 5** summarizes the comparison of available receiving water data to numeric objectives identified in the Nitrogen TMDL. The data supports the delisting of Ammonia-N and Nitrite-N in many of the river reaches where sufficient data is available.

Table 5. Analysis of Nitrogen TMDL Constituents in Receiving Water by Reach

Ammonia-N		303(d) Listed Reaches											Un-listed Reaches with TMDL Targets and Available Data
Reach		1	2	3	4	5	6	9A	9B	10	12	13	7
Date Range Available		8/26/2003	8/28/2003	2/12/2003	2/12/2003	2/12/2003	8/28/2003	1/22/2003	1/22/2003	1/15/2002	1/15/2002	8/28/2003	1/8/2003
		11/5/2013	11/5/2013	4/25/2014	11/5/2013	11/6/2013	11/5/2013	11/6/2013	11/5/2013	11/6/2013	11/6/2013	11/5/2013	6/3/2014
TMDL Targets (mg/L)		8.1	5.5	8.4	5.7	5.7	8.7	9.5	9.5	8.4	3.2	5.1	4.7
Previous 10 Years	N	53	27	108	49	48	40	252	54	178	171	31	289
	N Detect	43	25	105	47	41	39	214	49	175	53	24	254
	N Exceed	0	0	0	0	0	0	0	0	1	10	0	32
Previous 5 Years	N	28	20	52	28	28	27	114	34	86	78	20	188
	N Detect	28	20	47	27	26	27	72	32	80	74	19	185
	N Exceed	0	0	0	0	0	0	0	0	0	0	0	0
		Potential for Delisting?											Achieving Targets per Listing Policy?
		Yes	Yes[1]	Yes	Yes	Yes	Yes[1]	Yes	Yes	Yes	Yes	Yes[1]	Yes

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis.

Nitrate-N		303(d) Listed Reaches											Un-listed Reaches with TMDL Targets and Available Data
Reach		1	2	3	4	5	6	9A	9B	10	12	13	7
Date Range Available		8/21/2008	8/7/2008	1/1/2003	2/13/2003	2/13/2003	5/13/2008	1/22/2003	1/1/2003	1/15/2002	1/15/2002	8/7/2008	1/8/2003
		11/5/2013	11/5/2013	4/25/2014	11/5/2013	11/6/2013	11/5/2013	11/6/2013	11/5/2013	11/6/2013	11/6/2013	11/5/2013	6/3/2014
TMDL Targets (mg/L):		10	10	10	10	10	10	10	10	10	10	10	10
Previous 10 Years	N	31	22	115	38	38	31	242	93	168	171	22	284
	N Detect	31	22	113	37	38	31	242	93	167	169	22	284
	N Exceed	14	20	36	30	31	14	28	48	1	0	0	13
Previous 5 Years	N	28	20	52	28	28	27	114	34	86	78	20	188
	N Detect	27	19	51	27	27	26	72	31	77	62	20	188
	N Exceed	13	13	5	23	26	12	3	0	1	0	0	10
		Potential for Delisting?											Achieving Targets per Listing Policy?
		No	No	No	No	No	No[1]	Yes	Yes	Yes	Yes	Yes[1]	Yes

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis.

Nitrite-N		303(d) Listed Reaches												Un-listed Reaches with TMDL Targets and Available Data	
		1	2	3	4	5	6	9A	9B	10	11	12	13	7	8
Date Range Available		8/21/2008	8/7/2008	1/1/2003	2/13/2003	2/13/2003	5/13/2008	1/22/2003	1/1/2003	1/15/2002	NS	1/15/2002	8/7/2008	1/8/2003	NS
		11/5/2013	11/5/2013	11/5/2013	11/5/2013	11/6/2013	11/5/2013	11/6/2013	11/5/2013	11/6/2013	NS	11/6/2013	11/5/2013	6/3/2014	NS
TMDL Targets (mg/L):		1	1	1	1	1	1	1	1	1	1	1	1	1	1
Previous 10 Years	N	32	22	96	38	38	31	242	93	168	NS	171	22	284	NS
	N Detect	21	22	79	37	36	31	217	70	65	NS	50	22	276	NS
	N Exceed	0	0	11	1	2	0	4	19	2	NS	2	0	12	NS
Previous 5 Years	N	29	20	32	28	28	27	114	34	86	NS	78	20	188	NS
	N Detect	28	18	30	28	27	26	55	31	69	NS	69	18	186	NS
	N Exceed	0	0	0	0	1	0	0	0	0	NS	0	0	0	NS
		Potential for Delisting?												Achieving Targets per Listing Policy?	
		Yes	NE	Yes	Yes	Yes	Yes[1]	Yes	Yes	Yes	–	Yes	NE	Yes	--

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis.
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Nitrite-N + Nitrate-N		303(d) Listed Reaches												Un-listed Reaches with TMDL Targets and Available Data	
		1	2	3	4	5	6	9A	9B	10	11	12	13	7	8
Date Range Available		8/12/2008	8/7/2008	2/13/2003	2/13/2003	2/13/2003	5/13/2008	1/22/2003	1/1/2003	1/15/2002	NS	1/15/2002	8/7/2008	1/8/2003	5/7/2008
		11/5/2013	11/5/2013	11/5/2013	11/6/2013	11/6/2013	11/5/2013	11/6/2013	11/5/2013	11/6/2013	NS	11/6/2013	11/5/2013	6/3/2014	5/7/2008
TMDL Targets (mg/L)		10	10	10	10	10	10	10	10	10	10	10	10	10	10
Previous 10 Years	N	31	22	116	38	38	31	242	93	168	NS	166	22	284	1
	N Detect	31	22	115	37	38	31	242	93	167	NS	164	22	284	1
	N Exceed	14	21	37	31	31	14	30	48	0	NS	1	0	18	1
Previous 5 Years	N	28	20	52	28	28	27	114	34	86	NS	78	20	188	NS
	N Detect	28	20	52	28	28	27	114	34	85	NS	76	20	188	NS
	N Exceed	13	19	5	23	26	12	3	0	0	NS	0	0	12	NS
		Potential for Delisting?												Achieving Targets per Listing Policy?	
		No	No	No	No	No	No	Yes	Yes	Yes	–	Yes	NE	Yes	ID[1]

1. Historical monitoring data available; however, no samples in previous 5 years. Insufficient number of samples to inform a listing decision.
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.
ID (Insufficient Data) – Insufficient data to inform listing decision, however a single exceedance was detect and the potential for listing may exist.

1.3 OC PESTICIDES AND PCBS TMDL

The RWQCB adopted Resolution No. R4-2005-010 to incorporate the OC Pesticides and PCBs TMDL in Calleguas Creek, its Tributaries, and Mugu Lagoon into the Basin Plan. The TMDL became effective on March 24, 2006. Final numeric targets are specified for water, fish tissue, and/or sediment depending on the constituent. The TMDL also specifies load reductions for sediment and habitat preservation in Mugu Lagoon. **Table 6** summarizes the evaluation of receiving water concentrations in the watershed to TMDL targets. However, when TMDL numeric targets were found to be greater than the Human Health Consumption Criteria for Organisms Only, as outlined in Table (b)(1) §131.38 of 40 CFR Part 131, the Human Health Criteria were used in the analysis. Overall, constituents covered by the OC Pesticides and PCBs TMDL have not been detected in the previous ten years in water samples. DDT compounds, chlordane, and toxaphene are the exception, with exceedances within the past 5 years.

Table 6. Analysis of OC Pesticides and PCBs TMDL Constituents in Receiving Water by Reach.

4,4'-DDD		Un-listed Reaches with TMDL Targets and Available Data												
Reach		1	2	3	4	5	6	7	8	9A	9B	10	12	13
Date Range Available		6/10/2003	6/10/2003	2/12/2003	2/13/2003	2/13/2003	8/28/2003	8/28/2003	12/9/2003	2/19/2003	2/19/2003	2/6/2002	2/6/2002	8/28/2003
		5/13/2014	1/7/2005	5/29/2014	5/29/2014	11/26/2008	2/19/2014	5/29/2014	8/23/2004	8/7/2013	5/29/2014	5/29/2014	10/9/2013	5/29/2014
WQO (ng/L):		0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Previous 10 Years	N	41	18	108	68	20	45	80	10	164	48	167	137	35
	N Detect	19	2	22	35	10	9	10	0	10	2	1	0	1
	N Exceed	17	1	22	35	10	9	10	0	10	2	1	0	1
Previous 5 Years	N	29	NS	54	31	NS	28	53	NS	68	30	80	58	19
	N Detect	11	NS	7	19	NS	8	8	NS	2	2	1	0	1
	N Exceed	11	NS	7	19	NS	8	8	NS	2	2	1	0	1
		Achieving Targets per Listing Policy												
		No	ID	No	No	No	No	No	NE	Yes	Yes	Yes	Yes	Yes[1]

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data
ID (Insufficient Data) – Insufficient data to inform listing decision, however a single exceedance was detect and the potential for listing may exist

4,4'-DDE		Un-listed Reaches with TMDL Targets and Available Data												
Reach		1	2	3	4	5	6	7	8	9A	9B	10	12	13
Date Range Available		6/10/2003	6/10/2003	2/12/2003	2/13/2003	2/13/2003	8/28/2003	8/28/2003	12/9/2003	2/19/2003	2/19/2003	2/6/2002	2/6/2002	8/28/2003
		5/13/2014	1/7/2005	5/29/2014	5/29/2014	11/26/2008	2/19/2014	6/3/2014	8/23/2004	8/7/2013	5/29/2014	5/29/2014	10/9/2013	5/29/2014
WQO (ng/L):		0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
Previous 10 Years	N	41	18	108	68	20	45	247	10	164	48	167	137	35
	N Detect	30	8	65	57	15	9	178	0	24	11	1	0	4
	N Exceed	30	5	65	57	15	9	178	0	24	11	1	0	4
Previous 5 Years	N	29	NS	54	31	NS	28	162	NS	68	30	80	58	19
	N Detect	18	NS	31	30	NS	8	150	NS	6	7	1	0	4
	N Exceed	18	NS	31	30	NS	8	150	NS	6	7	1	0	4
		Achieving Targets per Listing Policy												
		No	No	No	No	No	No	No	NE	Yes	No	Yes	Yes	No

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data

4,4'-DDT		303(d) Listed Reach	Un-listed Reaches with TMDL Targets and Available Data											
Reach		2[2]	1	3	4	5	6	7	8	9A	9B	10	12	13
Date Range Available		6/10/2003	NS	2/12/2003	2/13/2003	2/13/2003	8/28/2003	8/28/2003	12/9/2003	2/19/2003	2/19/2003	2/6/2002	2/6/2002	8/28/2003
		5/13/2014	NS	5/29/2014	5/29/2014	11/26/2008	2/19/2014	5/29/2014	8/23/2004	8/7/2013	5/29/2014	5/29/2014	8/5/2013	5/29/2014
WQO (ng/L):		0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
Previous 10 Years	N	59	NS	108	68	20	45	80	10	92	48	62	33	35
	N Detect	19	NS	24	29	8	10	7	0	10	1	2	0	1
	N Exceed	19	NS	24	29	8	10	7	0	10	1	2	0	1
Previous 5 Years	N	29	NS	54	31	NS	28	53	NS	34	30	31	9	19
	N Detect	6	NS	10	13	NS	8	6	NS	2	1	2	0	1
	N Exceed	6	NS	10	13	NS	8	6	NS	2	1	2	0	1
		Potential for Delisting	Achieving Targets per Listing Policy											
		No	--	No	No	No	No	No	NE	Yes	Yes	Yes	Yes[1]	Yes[1]

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
2. Station 01_RR_BR is located immediately downstream of the boundary between Reach 1 and Reach 2. The monitoring station was included in analysis of Reach 2 for this constituent due to its 303(d) listing.

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Aldrin		Un-listed Reaches with TMDL Targets and Available Data												
Reach		1	2	3	4	5	6	7	8	9A	9B	10	12	13
Date Range Available		8/21/2008	12/4/2003	2/12/2003	2/13/2003	2/13/2003	8/28/2003	8/28/2003	12/9/2003	2/19/2003	2/19/2003	2/6/2002	2/6/2002	8/28/2003
		5/13/2014	8/24/2004	5/29/2014	5/29/2014	11/26/2008	2/19/2014	5/29/2014	8/23/2004	8/7/2013	5/29/2014	5/29/2014	8/7/2013	5/29/2014
WQO (ng/L):		0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	300
Previous 10 Years	N	32	11	108	61	20	45	80	10	92	48	84	55	35
	N Detect	0	0	1	0	0	0	1	0	6	0	0	0	0
	N Exceed	0	0	1	0	0	0	1	0	6	0	0	0	0
Previous 5 Years	N	29	NS	54	31	NS	28	53	NS	34	30	41	19	19
	N Detect	0	NS	0	0	NS	0	1	NS	3	0	0	0	0
	N Exceed	0	NS	0	0	NS	0	1	NS	3	0	0	0	0
		Achieving Targets per Listing Policy												
		Yes	NE	Yes	Yes	NE	Yes	Yes	NE	Yes	Yes	Yes	Yes[1]	Yes[1]

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Endosulfan I		Un-listed Reaches with TMDL Targets and Available Data												
Reach		1	2	3	4	5	6	7	8	9A	9B	10	12	13
Date Range Available		8/21/2008	12/4/2003	2/12/2003	2/13/2003	2/13/2003	8/28/2003	8/28/2003	12/9/2003	2/19/2003	2/19/2003	2/6/2002	2/6/2002	8/28/2003
		5/13/2014	8/24/2004	5/29/2014	5/29/2014	11/26/2008	2/19/2014	5/29/2014	8/23/2004	8/7/2013	5/29/2014	5/29/2014	8/5/2013	5/29/2014
TMDL Targets (ng/L):		8.7	56	56	56	56	56	56	56	56	56	56	56	56
Previous 10 Years	N	32	11	108	61	20	45	80	10	92	48	62	33	35
	N Detect	0	0	0	0	0	0	0	0	6	0	1	0	0
	N Exceed	0	0	0	0	0	0	0	0	0	0	1	0	0
Previous 5 Years	N	29	NS	54	31	NS	28	53	NS	34	30	31	9	19
	N Detect	0	NS	0	0	NS	0	0	NS	0	0	1	0	0
	N Exceed	0	NS	0	0	NS	0	0	NS	0	0	1	0	0
		Achieving Targets per Listing Policy												
		Yes	NE	Yes	Yes	NE	Yes	Yes	NE	Yes	Yes	Yes	Yes[1]	Yes[1]

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Endosulfan II		Un-listed Reaches with TMDL Targets and Available Data												
Reach		1	2	3	4	5	6	7	8	9A	9B	10	12	13
Date Range Available		8/21/2008	12/4/2003	2/12/2003	2/13/2003	2/13/2003	8/28/2003	8/28/2003	12/9/2003	2/19/2003	2/19/2003	2/6/2002	2/6/2002	8/28/2003
		5/13/2014	8/24/2004	5/29/2014	5/29/2014	11/26/2008	2/19/2014	5/29/2014	8/23/2004	8/7/2013	5/29/2014	5/29/2014	8/5/2013	5/29/2014
TMDL Targets (ng/L):		8.7	56	56	56	56	56	56	56	56	56	56	56	56
Previous 10 Years	N	32	11	108	61	20	45	80	10	92	48	62	33	35
	N Detect	0	0	0	0	0	0	0	0	0	0	0	0	0
	N Exceed	0	0	0	0	0	0	0	0	0	0	0	0	0
Previous 5 Years	N	29	NS	54	31	NS	28	53	NS	34	30	31	9	19
	N Detect	0	NS	0	0	NS	0	0	NS	0	0	0	0	0
	N Exceed	0	NS	0	0	NS	0	0	NS	0	0	0	0	0
		Achieving Targets per Listing Policy												
		Yes	NE	Yes	Yes	NE	Yes	Yes	NE	Yes	Yes	Yes	Yes[1]	Yes[1]

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Chlordane (Total)		Un-listed Reaches with TMDL Targets and Available Data												
Reach		1	2	3	4	5	6	7	8	9A	9B	10	12	13
Date Range Available		8/21/2008	12/4/2003	2/12/2003	2/13/2003	2/13/2003	8/28/2003	8/28/2003	12/9/2003	2/19/2003	2/19/2003	2/6/2002	2/6/2002	8/28/2003
		5/13/2014	8/24/2004	5/29/2014	5/29/2014	11/26/2008	2/19/2014	5/29/2014	8/23/2004	8/7/2013	5/29/2014	5/29/2014	8/23/2004	5/29/2014
WQO (ng/L):		0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59	0.59
Previous 10 Years	N	32	11	108	58	20	45	50	10	92	48	43	14	35
	N Detect	9	0	10	11	5	1	3	0	0	3	3	0	1
	N Exceed	9	0	10	11	5	1	3	0	0	3	3	0	1
Previous 5 Years	N	29	NS	54	31	NS	28	30	NS	34	30	22	NS	19
	N Detect	8	NS	3	6	NS	1	3	NS	0	3	3	NS	1
	N Exceed	5	NS	3	6	NS	1	3	NS	0	3	3	NS	1
		Achieving Targets per Listing Policy												
		No	NE	Yes	No	No[1]	Yes	Yes	NE	Yes	Yes	Yes[1]	NE	Yes[1]

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Dacthal		Un-listed Reaches with TMDL Targets and Available Data												
Reach		1	2	3	4	5	6	7	8	9A	9B	10	12	13
Date Range Available		8/21/2008	12/4/2003	12/3/2003	12/3/2003	12/4/2003	12/5/2003	12/5/2003	12/9/2003	12/4/2003	12/19/2003	12/4/2003	12/9/2003	12/5/2003
		6/26/2010	8/24/2004	4/25/2014	8/17/2010	11/26/2008	8/17/2010	8/17/2010	8/23/2004	8/23/2004	8/17/2010	8/17/2010	8/23/2004	8/17/2010
TMDL Targets (ng/L):		–[1]	3500000	3500000	3500000	3500000	3500000	3500000	3500000	3500000	3500000	3500000	3500000	3500000
Previous 10 Years	N	12	11	54	31	12	25	28	10	13	25	24	11	21
	N Detect	8	10	45	18	9	19	21	0	7	9	3	0	5
	N Exceed	–	0	0	0	0	0	0	0	0	0	0	0	0
Previous 5 Years	N	9	NS	34	10	NS	10	10	NS	NS	10	8	NS	7
	N Detect	6	NS	34	6	NS	8	9	NS	NS	4	3	NS	3
	N Exceed	–	NS	0	0	NS	0	0	NS	NS	0	0	NS	0
		Achieving Targets per Listing Policy												
		–	NE	Yes	Yes[2]	NE	NE	Yes[2]	NE	NE	NE	NE	NE	NE

1. TMDL does not establish salt water numeric targets that would apply to this reach.
2. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Dieldrin		Un-listed Reaches with TMDL Targets and Available Data												
Reach		1	2	3	4	5	6	7	8	9A	9B	10	12	13
Date Range Available		8/21/2008	12/4/2003	2/12/2003	2/13/2003	2/13/2003	8/28/2003	8/28/2003	12/9/2003	2/19/2003	2/19/2003	2/6/2002	2/6/2002	8/28/2003
		5/13/2014	8/24/2004	5/29/2014	5/29/2014	11/26/2008	2/19/2014	5/29/2014	8/23/2004	8/7/2013	5/29/2014	5/29/2014	8/7/2013	5/29/2014
WQO (ng/L):		0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Previous 10 Years	N	32	11	108	61	20	45	80	10	92	48	84	55	35
	N Detect	0	0	0	0	0	0	0	0	1	0	0	0	0
	N Exceed	0	0	0	0	0	0	0	0	1	0	0	0	0
Previous 5 Years	N	29	NS	54	31	NS	28	53	NS	34	30	41	19	19
	N Detect	0	NS	0	0	NS	0	0	NS	0	0	0	0	0
	N Exceed	0	NS	0	0	NS	0	0	NS	0	0	0	0	0
		Achieving Targets per Listing Policy												
		Yes	NE	Yes	Yes	NE	Yes	Yes	NE	Yes	Yes	Yes	Yes[1]	Yes[1]

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Endrin		Un-listed Reaches with TMDL Targets and Available Data												
Reach		1	2	3	4	5	6	7	8	9A	9B	10	12	13
Date Range Available		8/21/2008	12/4/2003	2/12/2003	2/13/2003	2/13/2003	8/28/2003	8/5/2003	12/9/2003	2/19/2003	2/19/2003	2/6/2002	2/6/2002	8/28/2003
		5/13/2014	8/24/2004	5/29/2014	5/29/2014	11/26/2008	2/19/2014	5/29/2014	8/23/2004	8/7/2013	5/29/2014	5/29/2014	8/7/2013	5/29/2014
TMDL Targets (ng/L):		2.3	36	36	36	36	36	36	36	36	36	36	36	36s
Previous 10 Years	N	32	11	108	61	20	45	116	10	92	48	84	55	35
	N Detect	0	0	0	0	0	0	52	0	4	0	0	0	0
	N Exceed	0	0	0	0	0	0	1	0	0	0	0	0	0
Previous 5 Years	N	29	NS	54	31	NS	28	74	NS	34	30	41	19	19
	N Detect	0	NS	0	0	NS	0	44	NS	1	0	0	0	0
	N Exceed	0	NS	0	0	NS	0	1	NS	0	0	0	0	0
		Achieving Targets per Listing Policy												
		Yes	NE	Yes	Yes	NE	Yes	Yes	NE	Yes	Yes	Yes	Yes[1]	Yes[1]

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

gamma-BHC (Lindane)		Un-listed Reaches with TMDL Targets and Available Data												
Reach		1	2	3	4	5	6	7	8	9A	9B	10	12	13
Date Range Available		8/21/2008	12/4/2003	2/12/2003	2/13/2003	2/13/2003	8/28/2003	8/5/2003	12/9/2003	2/19/2003	2/19/2003	2/6/2002	2/6/2002	8/28/2003
		5/13/2014	8/24/2004	5/29/2014	5/29/2014	11/26/2008	2/19/2014	6/3/2014	8/23/2004	8/7/2013	5/29/2014	5/29/2014	8/7/2013	5/29/2014
WQO (ng/L):		63	63	63	63	63	63	63	63	63	63	63	63	63
Previous 10 Years	N	32	11	108	61	20	45	247	10	92	48	84	55	35
	N Detect	0	0	1	0	1	0	156	0	4	0	2	1	0
	N Exceed	0	0	0	0	0	0	0	0	0	0	1	1	0
Previous 5 Years	N	29	NS	54	31	NS	28	162	NS	34	30	41	19	19
	N Detect	0	NS	0	0	NS	0	132	NS	1	0	1	0	0
	N Exceed	0	NS	0	0	NS	0	0	NS	0	0	0	0	0
		Achieving Targets per Listing Policy												
		Yes	NE	Yes	Yes	NE	Yes	Yes	NE	Yes	Yes	Yes	Yes[1]	Yes[1]

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Heptachlor		Un-listed Reaches with TMDL Targets and Available Data												
Reach		1	2	3	4	5	6	7	8	9A	9B	10	12	13
Date Range Available		8/21/2008	12/4/2003	2/12/2003	2/13/2003	2/13/2003	8/28/2003	8/28/2003	12/9/2003	2/19/2003	2/19/2003	2/6/2002	2/6/2002	8/28/2003
		5/13/2014	8/24/2004	5/29/2014	5/29/2014	11/26/2008	2/19/2014	5/29/2014	8/23/2004	8/7/2013	5/29/2014	5/29/2014	8/7/2013	5/29/2014
WQO (ng/L):		0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Previous 10 Years	N	32	11	108	61	20	45	80	10	92	48	84	55	35
	N Detect	0	0	0	0	0	0	0	0	1	0	0	0	0
	N Exceed	0	0	0	0	0	0	0	0	0	0	0	0	0
Previous 5 Years	N	29	NS	54	31	NS	28	53	NS	34	30	41	19	19
	N Detect	0	NS	0	0	NS	0	0	NS	0	0	0	0	0
	N Exceed	0	NS	0	0	NS	0	0	NS	0	0	0	0	0
		Achieving Targets per Listing Policy												
		Yes	NE	Yes	Yes	NE	Yes	Yes	NE	Yes	Yes	Yes	Yes[1]	Yes[1]

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Heptachlor Epoxide		Un-listed Reaches with TMDL Targets and Available Data												
Reach		1	2	3	4	5	6	7	8	9A	9B	10	12	13
Date Range Available		8/21/2008	12/4/2003	2/12/2003	2/13/2003	2/13/2003	8/28/2003	8/28/2003	12/9/2003	2/19/2003	2/19/2003	2/6/2002	2/6/2002	8/28/2003
		5/13/2014	8/24/2004	5/29/2014	5/29/2014	11/26/2008	2/19/2014	5/29/2014	8/23/2004	8/7/2013	5/29/2014	5/29/2014	8/7/2013	5/29/2014
WQO (ng/L):		0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
Previous 10 Years	N	32	11	108	61	20	45	80	10	92	48	84	55	35
	N Detect	0	0	0	0	0	0	0	0	2	0	0	0	0
	N Exceed	0	0	0	0	0	0	0	0	1	0	0	0	0
Previous 5 Years	N	29	NS	54	31	NS	28	53	NS	34	30	41	19	19
	N Detect	0	NS	0	0	NS	0	0	NS	0	0	0	0	0
	N Exceed	0	NS	0	0	NS	0	0	NS	0	0	0	0	0
		Achieving Targets per Listing Policy												
		Yes	NE	Yes	Yes	NE	Yes	Yes	NE	Yes	Yes	Yes	Yes[1]	Yes[1]

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Total PCBs		Un-listed Reaches with TMDL Targets and Available Data												
Reach		1	2	3	4	5	6	7	8	9A	9B	10	12	13
Date Range Available		8/21/2008	12/4/2003	8/28/2003	8/28/2003	8/28/2003	8/28/2003	8/28/2003	12/9/2003	2/19/2003	2/19/2003	2/6/2002	2/6/2002	8/28/2003
		5/13/2014	8/24/2004	5/29/2014	5/29/2014	11/26/2008	2/18/2014	5/29/2014	8/23/2004	8/7/2013	5/29/2014	5/29/2014	8/5/2013	5/29/2014
WQO (ng/L):		0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
Previous 10 Years	N	32	11	104	58	19	45	80	10	96	49	62	33	35
	N Detect	5	0	2	0	1	0	0	0	1	0	1	0	0
	N Exceed	5	0	2	0	1	0	0	0	0	0	0	0	0
Previous 5 Years	N	29	NS	54	32	NS	28	53	NS	37	31	31	9	19
	N Detect	5	NS	1	0	NS	0	0	NS	0	0	0	0	0
	N Exceed	5	NS	1	0	NS	0	0	NS	0	0	0	0	0
		Achieving Targets per Listing Policy												
		No	NE	Yes	Yes	ID	Yes	Yes	NE	Yes	Yes	Yes	Yes[1]	Yes[1]

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.
ID (Insufficient Data) – Insufficient data to inform listing decision, however a single exceedance was detect and the potential for listing may exist

Toxaphene		Un-listed Reaches with TMDL Targets and Available Data												
Reach		1	2	3	4	5	6	7	8	9A	9B	10	12	13
Date Range Available		8/21/2008	12/4/2003	2/12/2003	2/13/2003	2/13/2003	8/28/2003	8/5/2003	12/9/2003	2/19/2003	2/19/2003	2/6/2002	2/6/2002	8/28/2003
		5/13/2014	8/24/2004	5/29/2014	5/29/2014	11/26/2008	2/19/2014	5/29/2014	8/23/2004	8/7/2013	5/29/2014	5/29/2014	8/7/2013	5/29/2014
WQO (ng/L):		0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Previous 10 Years	N	31	11	108	61	20	45	116	10	92	48	84	55	35
	N Detect	15	0	16	23	1	10	59	0	0	4	1	0	1
	N Exceed	15	0	16	23	1	10	59	0	0	4	1	0	1
Previous 5 Years	N	28	NS	54	31	NS	28	74	NS	34	30	41	19	19
	N Detect	13	NS	11	19	NS	9	51	NS	0	3	1	0	1
	N Exceed	13	NS	11	19	NS	9	51	NS	0	3	1	0	1
		Achieving Targets per Listing Policy												
		No	NE[1]	No	No	ID[1]	No	No	NE[1]	Yes	No	Yes	Yes[1]	Yes[1]

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.
ID (Insufficient Data) – Insufficient data to inform listing decision, however a single exceedance was detect and the potential for listing may exist

Table 7. Analysis of OC Pesticides and PCBs TMDL Constituents in Sediment by Reach

4,4'-DDD		303(d) listed Reaches					Un-listed Reaches with TMDL Targets and Available Data				
Reach		1	2	4	5	6	3	7	9A	9B	10
Date Range Available		8/19/2008	8/27/2003	8/25/2003	NS	8/28/2003	8/25/2003	8/28/2003	8/27/2003	8/5/2008	8/27/2003
		8/18/2011	8/22/2013	8/21/2013	NS	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/27/2003
TMDL Targets (ng/dry kg):		2000	3500	3500	3500	3500	3500	3500	3500	3500	3500
Previous 10 Years	N	10	7	7	NS	7	7	7	7	6	1
	N Detect	5	2	5	NS	1	0	1	0	0	0
	N Exceed	4	1	4	NS	0	0	0	0	0	0
Previous 5 Years	N	5	5	5	NS	5	5	5	5	5	NS
	N Detect	0	1	4	NS	1	0	0	0	0	NS
	N Exceed	0	0	3	NS	0	0	0	0	0	NS
		Potential for Delisting					Achieving Targets per Listing Policy				
		No	ID	No	–	NE	NE	NE	NE	NE	NE

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.
ID (Insufficient Data) – Insufficient data to inform listing decision, however a single exceedance was detect and the potential for listing may exist

4,4'-DDE		303(d) listed Reaches					Un-listed Reaches with TMDL Targets and Available Data				
Reach		1	2	4	5	6	3	7	9A	9B	10
Date Range Available		8/19/2008	8/27/2003	8/25/2003	NS	8/28/2003	8/25/2003	8/28/2003	8/27/2003	8/5/2008	8/27/2003
		8/18/2011	8/22/2013	8/21/2013	NS	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/27/2003
TMDL Targets (ng/dry kg):		2200	1400	1400	1400	1400	1400	1400	1400	1400	1400
Previous 10 Years	N	10	7	7	NS	7	7	7	7	6	1
	N Detect	10	6	7	NS	4	5	3	7	6	0
	N Exceed	9	6	7	NS	4	5	3	7	6	0
Previous 5 Years	N	5	5	5	NS	5	5	5	5	5	NS
	N Detect	5	5	5	NS	4	4	2	5	5	NS
	N Exceed	4	5	3	NS	4	4	2	5	3	NS
		Potential for Delisting					Achieving Targets per Listing Policy				
		No	No	No	–	No	No	No	No	No	NE

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data

4,4'-DDT		303(d) listed Reaches					Un-listed Reaches with TMDL Targets and Available Data				
Reach		1	2	4	5	6	3	7	9A	9B	10
Date Range Available		8/19/2008	8/27/2003	8/25/2003	NS	8/28/2003	8/25/2003	8/28/2003	8/27/2003	8/5/2008	8/27/2003
		8/18/2011	8/22/2013	8/21/2013	NS	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/27/2003
TMDLTargets (ng/dry kg):		1000	–[1]	–[1]	–[1]	–[1]	–[1]	–[1]	–[1]	–[1]	–[1]
Previous 10 Years	N	10	7	7	NS	7	7	7	7	6	1
	N Detect	4	0	2	NS	0	0	1	0	0	0
	N Exceed	4	–	–	–	–	–	–	–	–	–
Previous 5 Years	N	5	5	5	NS	5	5	5	5	5	NS
	N Detect	0	0	1	NS	0	0	0	0	0	NS
	N Exceed	0	–	–	–	–	–	–	–	–	–
		Potential for Delisting					Achieving Targets per Listing Policy				
		No	–	–	–	–	–	–	–	–	–

1. The TMDL does not establish numeric targets for freshwater reaches.

BHC-gamma		303(d) listed Reaches		Un-listed Reaches with TMDL Targets and Available Data							
Reach		4	5	1	2	3	6	7	9A	9B	10
Date Range Available		8/25/2003	NS	8/19/2008	8/27/2003	8/25/2003	8/28/2003	8/28/2003	8/27/2003	8/5/2008	8/27/2003
		8/21/2013	NS	8/18/2011	8/22/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/27/2003
TMDLTargets (ng/dry kg):		940	940	–[1]	940	940	940	940	940	940	940
Previous 10 Years	N	7	NS	10	7	7	7	7	7	6	1
	N Detect	0	NS	0	0	0	0	0	0	0	0
	N Exceed	0	NS	–	0	0	0	0	0	0	0
Previous 5 Years	N	5	NS	5	5	5	5	5	5	5	NS
	N Detect	0	NS	0	0	0	0	0	0	0	NS
	N Exceed	0	NS	–	0	0	0	0	0	0	NS
		Potential for Delisting		Achieving Targets per Listing Policy							
		NE	–		NE	NE	NE	NE	NE	NE	NE

1. The TMDL does not establish numeric targets for saltwater reaches.
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data

Chlordane (Total)		303(d) listed Reaches		Un-listed Reaches with TMDL Targets and Available Data							
Reach		4	5	1	2	3	6	7	9A	9B	10
Date Range Available		8/25/2003	NS	8/19/2008	8/27/2003	8/25/2003	8/28/2003	8/28/2003	8/27/2003	8/5/2008	8/27/2003
		8/21/2013	NS	8/18/2011	8/22/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/27/2003
TMDLTargets (ng/dry kg):		4500	4500	500	4500	4500	4500	4500	4500	4500	4500
Previous 10 Years	N	7	NS	10	7	7	7	7	7	6	1
	N Detect	2	NS	3	0	0	0	0	0	0	0
	N Exceed	0	NS	3	0	0	0	0	0	0	0
Previous 5 Years	N	5	NS	5	5	5	5	5	5	5	NS
	N Detect	2	NS	0	0	0	0	0	0	0	NS
	N Exceed	0	NS	0	0	0	0	0	0	0	NS
		Potential for Delisting		Achieving Targets per Listing Policy							
		NE	–	No	NE	NE	NE	NE	NE	NE	NE

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Dieldrin		Un-listed Reaches with TMDL Targets and Available Data								
Reach		1	2	3	4	6	7	9A	9B	10
Date Range Available		8/19/2008	8/27/2003	8/25/2003	8/25/2003	8/28/2003	8/28/2003	8/27/2003	8/5/2008	8/27/2003
		8/18/2011	8/22/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/27/2003
TMDLTargets (ng/dry kg):		20	2900	2900	2900	2900	2900	2900	2900	2900
Previous 10 Years	N	10	7	7	7	7	7	7	6	1
	N Detect	0	0	0	0	0	0	0	0	0
	N Exceed	0	0	0	0	0	0	0	0	0
Previous 5 Years	N	5	5	5	5	5	5	5	5	NS
	N Detect	0	0	0	0	0	0	0	0	NS
	N Exceed	0	0	0	0	0	0	0	0	NS
		Achieving Targets per Listing Policy								
		NE	NE	NE	NE	NE	NE	NE	NE	NE

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Endrin		Un-listed Reaches with TMDL Targets and Available Data								
Reach		1	2	3	4	6	7	9A	9B	10
Date Range Available		8/19/2008	8/27/2003	8/25/2003	8/25/2003	8/28/2003	8/28/2003	8/27/2003	8/5/2008	8/27/2003
		8/18/2011	8/22/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/27/2003
TMDL Targets (ng/dry kg):		–[1]	2700	2700	2700	2700	2700	2700	2700	2700
Previous 10 Years	N	10	7	7	7	7	7	7	6	1
	N Detect	0	0	0	0	0	0	0	0	0
	N Exceed	–	0	0	0	0	0	0	0	0
Previous 5 Years	N	5	5	5	5	5	5	5	5	NS
	N Detect	0	0	0	0	0	0	0	0	NS
	N Exceed	–	0	0	0	0	0	0	0	NS
		Achieving Targets per Listing Policy								
		–	NE	NE	NE	NE	NE	NE	NE	NE

1. The TMDL does not establish numeric targets for saltwater reaches.
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Heptachlor Epoxide		Un-listed Reaches with TMDL Targets and Available Data								
Reach		1	2	3	4	6	7	9A	9B	10
Date Range Available		8/19/2008	8/27/2003	8/25/2003	8/25/2003	8/28/2003	8/28/2003	8/27/2003	8/5/2008	8/27/2003
		8/18/2011	8/22/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/27/2003
TMDL Targets (ng/dry kg):		–[1]	600	600	600	600	600	600	600	600
Previous 10 Years	N	10	7	7	7	7	7	7	6	1
	N Detect	0	0	0	0	0	0	0	0	0
	N Exceed	–	0	0	0	0	0	0	0	0
Previous 5 Years	N	5	5	5	5	5	5	5	5	NS
	N Detect	0	0	0	0	0	0	0	0	NS
	N Exceed	–	0	0	0	0	0	0	0	NS
		Achieving Targets per Listing Policy								
		–	NE	NE	NE	NE	NE	NE	NE	NE

1. The TMDL does not establish numeric targets for saltwater reaches.
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

PCBs (Total)		Un-listed Reaches with TMDL Targets and Available Data								
Reach		1	2	3	4	6	7	9A	9B	10
Date Range Available		8/19/2008	8/27/2003	8/25/2003	8/25/2003	8/28/2003	8/28/2003	8/27/2003	8/5/2008	8/27/2003
		8/18/2011	8/22/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/21/2013	8/27/2003
TMDL Targets (ng/dry kg):		23000	34000	34000	34000	34000	34000	34000	34000	34000
Previous 10 Years	N	10	7	7	7	7	7	7	6	1
	N Detect	3	0	0	0	0	0	0	0	0
	N Exceed	0	0	0	0	0	0	0	0	0
Previous 5 Years	N	5	5	5	5	5	5	5	5	NS
	N Detect	0	1	0	1	0	0	0	0	NS
	N Exceed	0	0	0	0	0	0	0	0	NS
		Achieving Targets per Listing Policy								
		NE	NE	NE	NE	NE	NE	NE	NE	NE

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Table 8. Analysis of OC Pesticides and PCBs TMDL Constituents in Fish Tissue by Reach.

4,4'-DDD		303(d) listed Reaches										Un-listed Reaches with TMDL Targets and Available Data		
Reach		1	2	4	5	9A	9B	10	11	12	13	3	6	7
Date Range Available		8/19/2008	5/6/2004	12/18/2003	NS	12/19/2003	12/19/2003	12/18/2003	NS	12/17/2003	12/17/2003	12/19/2003	12/16/2003	12/16/2003
		8/27/2008	8/24/2004	8/27/2013	NS	8/26/2004	8/28/2013	8/25/2004	NS	8/25/2004	8/25/2004	8/27/2013	9/3/2009	8/28/2013
TMDL Targets (ng/kg):		45000	45000	45000	45000	45000	45000	45000	45000	45000	45000	45000	45000	45000
Previous 10 Years	N	9	2	23	NS	5	22	6	NS	3	6	28	9	16
	N Detect	7	2	20	NS	4	17	0	NS	1	0	23	8	10
	N Exceed	1	1	15	NS	0	8	0	NS	0	0	9	6	5
Previous 5 Years	N	NS	NS	13	NS	NS	13	NS	NS	NS	NS	17	6	8
	N Detect	NS	NS	10	NS	NS	11	NS	NS	NS	NS	14	6	7
	N Exceed	NS	NS	10	NS	NS	4	NS	NS	NS	NS	8	6	5
		Potential for Delisting										Achieving Targets per Listing Policy		
		ID	ID	No	--	NE	No	NE	--	NE	NE	No	No	No

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.
ID (Insufficient Data) – Insufficient data to inform listing decision, however a single exceedance was detect and the potential for listing may exist

4,4'-DDE		303(d) listed Reaches										Un-listed Reaches with TMDL Targets and Available Data		
Reach		1	2	4	5	9A	9B	10	11	12	13	3	6	7
Date Range Available		8/19/2008	5/6/2004	12/18/2003	NS	12/19/2003	12/19/2003	12/18/2003	NS	12/17/2003	12/17/2003	12/19/2003	12/16/2003	12/16/2003
		8/21/2008	8/24/2004	8/27/2013	NS	8/26/2004	8/28/2013	8/25/2004	NS	8/25/2004	8/25/2004	8/27/2013	9/3/2009	8/28/2013
TMDL Targets (ng/kg):		32000	32000	32000	32000	32000	32000	32000	32000	32000	32000	32000	32000	32000
Previous 10 Years	N	9	2	23	NS	5	22	6	NS	3	6	28	9	16
	N Detect	9	2	23	NS	5	22	4	NS	3	3	28	9	15
	N Exceed	9	2	23	NS	5	20	0	NS	3	0	28	9	11
Previous 5 Years	N	NS	NS	13	NS	NS	13	NS	NS	NS	NS	17	6	8
	N Detect	NS	NS	13	NS	NS	13	NS	NS	NS	NS	17	6	7
	N Exceed	NS	NS	13	NS	NS	13	NS	NS	NS	NS	17	6	7
		Potential for Delisting										Achieving Targets per Listing Policy		
		No	No	No	--	No	No	NE	--	No	NE	No	No	No

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

4,4'-DDT		303(d) listed Reaches										Un-listed Reaches with TMDL Targets and Available Data		
Reach		1	2	4	5	9A	9B	10	11	12	13	3	6	7
Date Range Available		8/19/2008	5/6/2004	12/18/2003	NS	12/19/2003	12/19/2003	12/18/2003	NS	12/17/2003	12/17/2003	12/19/2003	12/16/2003	12/16/2003
		8/21/2008	8/24/2004	8/27/2013	NS	8/26/2004	8/28/2013	8/25/2004	NS	8/25/2004	8/25/2004	8/27/2013	9/3/2009	8/28/2013
TMDL Targets (ng/kg):		32000	32000	32000	32000	32000	32000	32000	32000	32000	32000	32000	32000	32000
Previous 10 Years	N	9	2	23	NS	5	22	6	NS	3	6	28	9	16
	N Detect	4	0	19	NS	2	9	0	NS	0	0	17	0	3
	N Exceed	2	0	10	NS	0	4	0	NS	0	0	11	0	1
Previous 5 Years	N	NS	NS	13	NS	NS	13	NS	NS	NS	NS	17	6	8
	N Detect	NS	NS	11	NS	NS	8	NS	NS	NS	NS	14	0	3
	N Exceed	NS	NS	9	NS	NS	3	NS	NS	NS	NS	9	0	1
		Potential for Delisting										Achieving Targets per Listing Policy		
		No	NE	No	–	NE	No	NE	–	NE	NE	No	NE	No[1]

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.
ID (Insufficient Data) – Insufficient data to inform listing decision, however a single exceedance was detect and the potential for listing may exist

Aldrin		303(d) listed Reaches								Un-listed Reaches with TMDL Targets and Available Data				
Reach		2	4	5	9A	9B	10	11	13	1	3	6	7	12
Date Range Available		5/6/2004	12/18/2003	NS	12/19/2003	12/19/2003	12/18/2003	NS	12/17/2003	8/19/2008	12/19/2003	12/16/2003	12/16/2003	12/17/2003
		8/24/2004	8/27/2013	NS	8/26/2004	8/28/2013	8/25/2004	NS	8/25/2004	8/18/2011	8/27/2013	9/3/2009	8/28/2013	8/25/2004
TMDL Targets (ng/kg)		50	50	50	50	50	50	50	50	50	50	50	50	50
Previous 10 Years	N	2	23	NS	5	22	6	NS	6	9	28	9	16	3
	N Detect	0	0	NS	0	0	0	NS	0	0	0	0	0	0
	N Exceed	0	0	NS	0	0	0	NS	0	0	0	0	0	0
Previous 5 Years	N	NS	13	NS	NS	13	NS	NS	NS	NS	17	6	8	NS
	N Detect	NS	0	NS	NS	0	NS	NS	NS	NS	0	0	0	NS
	N Exceed	NS	0	NS	NS	0	NS	NS	NS	NS	0	0	0	NS
		Potential for Delisting								Achieving Targets per Listing Policy				
		NE	NE	–	NE	NE	NE	–	NE	NE	Yes[1]	NE	NE	NE

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

BHC-alpha		303(d) listed Reaches									Un-listed Reaches with TMDL Targets and Available Data			
Reach		1	2	4	5	9A	9B	10	11	13	3	6	7	12
Date Range Available		NS	5/6/2004	12/18/2003	NS	12/19/2003	12/19/2003	12/18/2003	NS	12/17/2003	12/19/2003	12/16/2003	12/16/2003	12/17/2003
		NS	8/24/2004	8/27/2013	NS	8/26/2004	8/28/2013	8/25/2004	NS	8/25/2004	8/27/2013	9/3/2009	8/28/2013	8/25/2004
TMDL Targets (ng/kg):		1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Previous 10 Years	N	NS	2	23	NS	5	22	6	NS	6	28	9	16	3
	N Detect	NS	0	0	NS	0	0	0	NS	0	0	0	0	0
	N Exceed	NS	0	0	NS	0	0	0	NS	0	0	0	0	0
Previous 5 Years	N	NS	NS	13	NS	NS	13	NS	NS	NS	17	0	8	NS
	N Detect	NS	NS	0	NS	NS	0	NS	NS	NS	0	0	0	NS
	N Exceed	NS	NS	0	NS	NS	0	NS	NS	NS	0	0	0	NS
		Potential for Delisting									Achieving Targets per Listing Policy			
		–	NE	NE	–	NE	NE	NE	–	NE	NE	NE	NE	NE

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

BHC-beta		303(d) listed Reaches									Un-listed Reaches with TMDL Targets and Available Data			
Reach		1	2	4	5	9A	9B	10	11	13	3	6	7	12
Date Range Available		NS	5/6/2004	12/18/2003	NS	12/19/2003	12/19/2003	12/18/2003	NS	12/17/2003	12/19/2003	12/16/2003	12/16/2003	12/17/2003
		NS	8/24/2004	8/27/2013	NS	8/26/2004	8/28/2013	8/25/2004	NS	8/25/2004	8/27/2013	9/3/2009	8/28/2013	8/25/2004
TMDL Targets (ng/kg):		6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000
Previous 10 Years	N	NS	2	23	NS	5	22	6	NS	6	28	9	16	3
	N Detect	NS	0	0	NS	0	0	0	NS	0	0	0	0	0
	N Exceed	NS	0	0	NS	0	0	0	NS	0	0	0	0	0
Previous 5 Years	N	NS	NS	13	NS	NS	13	NS	NS	NS	17	6	8	NS
	N Detect	NS	NS	0	NS	NS	0	NS	NS	NS	0	0	0	NS
	N Exceed	NS	NS	0	NS	NS	0	NS	NS	NS	0	0	0	NS
		Potential for Delisting									Achieving Targets per Listing Policy			
		–	NE	NE	–	NE	NE	NE	–	NE	NE	NE	NE	NE

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

BHC-gamma		303(d) listed Reaches									Un-listed Reaches with TMDL Targets and Available Data			
Reach		1	2	4	5	9A	9B	10	11	13	3	6	7	12
Date Range Available		NS	5/6/2004	12/18/2003	NS	12/19/2003	12/19/2003	12/18/2003	NS	12/17/2003	12/19/2003	12/16/2003	12/16/2003	12/17/2003
		NS	8/24/2004	8/27/2013	NS	8/26/2004	8/28/2013	8/25/2004	NS	8/25/2004	8/27/2013	9/3/2009	8/28/2013	8/25/2004
TMDL Targets (ng/kg):		8200	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200	8200
Previous 10 Years	N	NS	2	23	NS	5	22	6	NS	6	28	9	16	3
	N Detect	NS	0	0	NS	0	0	0	NS	0	0	0	0	0
	N Exceed	NS	0	0	NS	0	0	0	NS	0	0	0	0	0
Previous 5 Years	N	NS	NS	13	NS	NS	13	NS	NS	NS	17	6	8	NS
	N Detect	NS	NS	0	NS	NS	0	NS	NS	NS	0	0	0	NS
	N Exceed	NS	NS	0	NS	NS	0	NS	NS	NS	0	0	0	NS
		Potential for Delisting									Achieving Targets per Listing Policy			
		–	NE	NE	–	NE	NE	NE	–	NE	Yes[1]	NE	NE	NE

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Chlordane (Total)		303(d) listed Reaches						Un-listed Reaches with TMDL Targets and Available Data					
Reach		1	2	4	5	9A	12	3	6	7	9B	10	13
Date Range Available		8/19/2008	5/6/2004	12/18/2003	NS	12/19/2003	12/17/2003	12/19/2003	12/16/2003	12/16/2003	12/19/2003	12/18/2003	12/17/2003
		8/21/2008	8/24/2004	8/27/2013	NS	8/26/2004	8/25/2004	8/27/2013	9/3/2009	8/28/2013	8/28/2013	8/25/2004	8/25/2004
TMDL Targets (ng/kg):		830	830	830	830	830	830	830	830	830	830	830	830
Previous 10 Years	N	9	2	22	NS	5	3	27	9	16	22	6	6
	N Detect	7	1	15	NS	1	0	17	6	5	13	0	0
	N Exceed	7	1	15	NS	1	0	17	6	5	13	0	0
Previous 5 Years	N	NS	NS	12	NS	NS	NS	17	6	8	13	NS	NS
	N Detect	NS	NS	10	NS	NS	NS	15	6	5	11	NS	NS
	N Exceed	NS	NS	10	NS	NS	NS	15	6	5	11	NS	NS
		Potential for Delisting						Achieving Targets per Listing Policy					
Potential for Delisting:		No	ID	No	–	ID	NE	No	No	No	No	NE	NE

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.
ID (Insufficient Data) – Insufficient data to inform listing decision, however a single exceedance was detect and the potential for listing may exist

Dieldrin		303(d) listed Reaches								Un-listed Reaches with TMDL Targets and Available Data				
Reach		2	4	5	9A	9B	10	11	13	1	3	6	7	12
Date Range Available		5/6/2004	12/18/2003	NS	12/19/2003	12/19/2003	12/18/2003	NS	12/17/2003	8/19/2008	12/19/2003	12/16/2003	12/16/2003	12/17/2003
		8/24/2004	8/27/2013	NS	8/26/2004	8/28/2013	8/25/2004	NS	8/25/2004	8/21/2008	8/27/2013	9/3/2009	8/28/2013	8/25/2004
TMDL Targets (ng/kg):		650	650	650	650	650	650	650	650	650	650	650	650	650
Previous 10 Years	N	2	23	NS	5	22	6	NS	6	9	28	9	16	3
	N Detect	0	0	NS	0	0	0	NS	0	0	0	0	0	0
	N Exceed	0	0	NS	0	0	0	NS	0	0	0	0	0	0
Previous 5 Years	N	NS	13	NS	NS	13	NS	NS	NS	3	17	6	8	NS
	N Detect	NS	0	NS	NS	0	NS	NS	NS	0	0	0	0	NS
	N Exceed	NS	0	NS	NS	0	NS	NS	NS	0	0	0	0	NS
		Potential for Delisting								Achieving Targets per Listing Policy				
		NE	NE	–	NE	NE	NE	–	NE	NE	Yes[1]	NE	NE	NE

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Endosulfan I		303(d) listed Reaches								Un-listed Reaches with TMDL Targets and Available Data				
Reach		2	4	5	9A	9B	10	11	13	1	3	6	7	12
Date Range Available		5/6/2004	12/18/2003	NS	12/19/2003	12/19/2003	12/18/2003	NS	12/17/2003	8/19/2008	12/19/2003	12/16/2003	12/16/2003	12/17/2003
		8/24/2004	8/27/2013	NS	8/26/2004	8/28/2013	8/25/2004	NS	8/25/2004	8/21/2008	8/27/2013	9/3/2009	8/28/2013	8/25/2004
Targets (ng/kg):		65000000	65000000	65000000	65000000	65000000	65000000	65000000	65000000	65000000	65000000	65000000	65000000	65000000
Previous 10 Years	N	2	23	NS	5	22	6	NS	6	9	28	9	16	3
	N Detect	0	0	NS	1	0	0	NS	0	0	0	0	0	0
	N Exceed	0	0	NS	0	0	0	NS	0	0	0	0	0	0
Previous 5 Years	N	NS	13	NS	NS	13	NS	NS	NS	3	17	6	8	NS
	N Detect	NS	0	NS	NS	0	NS	NS	NS	0	0	0	0	NS
	N Exceed	NS	0	NS	NS	0	NS	NS	NS	0	0	0	0	NS
		Potential for Delisting								Achieving Targets per Listing Policy				
		NE	NE	–	NE	NE	NE		NE	NE	Yes[1]	NE	NE	NE

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Endosulfan II		303(d) listed Reaches								Un-listed Reaches with TMDL Targets and Available Data				
Reach		2	4	5	9A	9B	10	11	13	1	3	6	7	12
Date Range Available		5/6/2004	12/18/2003	NS	12/19/2003	12/19/2003	12/18/2003	NS	12/17/2003	8/19/2008	12/19/2003	12/16/2003	12/16/2003	12/17/2003
		8/24/2004	8/27/2013	NS	8/26/2004	8/28/2013	8/25/2004	NS	8/25/2004	8/21/2008	8/27/2013	9/3/2009	8/28/2013	8/25/2004
TMDL Targets (ng/kg):		65000000	65000000	65000000	65000000	65000000	65000000	65000000	65000000	6500000	6500000	6500000	6500000	6500000
Previous 10 Years	N	2	23	NS	5	22	6	NS	6	9	28	9	16	3
	N Detect	0	0	NS	1	0	0	NS	0	0	0	0	0	0
	N Exceed	0	0	NS	0	0	0	NS	0	0	0	0	0	0
Previous 5 Years	N	NS	13	NS	NS	13	NS	NS	NS	NS	17	6	8	NS
	N Detect	NS	0	NS	NS	0	NS	NS	NS	NS	0	0	0	NS
	N Exceed	NS	0	NS	NS	0	NS	NS	NS	NS	0	0	0	NS
		Potential for Delisting								Achieving Targets per Listing Policy				
		NE	NE	–	NE	NE	NE	–	NE	NE	Yes[1]	NE	NE	NE

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Endrin		303(d) listed Reaches								Un-listed Reaches with TMDL Targets and Available Data				
Reach		2	4	5	9A	9B	10	11	13	1	3	6	7	12
Date Range Available		5/6/2004	12/18/2003	NS	12/19/2003	12/19/2003	12/18/2003	NS	12/17/2003	8/19/2008	12/19/2003	12/16/2003	12/16/2003	12/17/2003
		8/24/2004	8/27/2013	NS	8/26/2004	8/28/2013	8/25/2004	NS	8/25/2004	8/21/2008	8/27/2013	9/3/2009	8/28/2013	8/25/2004
TMDL Targets (ng/kg):		3200000	3200000	3200000	3200000	3200000	3200000	3200000	3200000	3200000	3200000	3200000	3200000	3200000
Previous 10 Years	N	2	23	NS	5	22	6	NS	6	9	28	9	16	3
	N Detect	0	0	NS	1	0	0	NS	0	0	0	0	0	0
	N Exceed	0	0	NS	0	0	0	NS	0	0	0	0	0	0
Previous 5 Years	N	NS	13	NS	NS	13	NS	NS	NS	NS	17	6	8	NS
	N Detect	NS	0	NS	NS	0	NS	NS	NS	NS	0	0	0	NS
	N Exceed	NS	0	NS	NS	0	NS	NS	NS	NS	0	0	0	NS
		Potential for Delisting								Achieving Targets per Listing Policy				
		NE	NE	NS	NE	NE	NE	–	NE	NE	Yes[1]	NE	NE	NE

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Heptachlor		303(d) listed Reaches								Un-listed Reaches with TMDL Targets and Available Data				
Reach		2	4	5	9A	9B	10	11	13	1	3	6	7	12
Date Range Available		5/6/2004	12/18/2003	NS	12/19/2003	12/19/2003	12/18/2003	NS	12/17/2003	8/19/2008	12/19/2003	12/16/2003	12/16/2003	12/17/2003
		8/24/2004	8/27/2013	NS	8/26/2004	8/28/2013	8/25/2004	NS	8/25/2004	8/21/2008	8/27/2013	9/3/2009	8/28/2013	8/25/2004
TMDL Targets (ng/kg):		2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400
Previous 10 Years	N	2	23	NS	5	22	6	NS	6	9	28	9	16	3
	N Detect	0	0	NS	0	0	0	NS	0	0	0	0	0	0
	N Exceed	0	0	NS	0	0	0	NS	0	0	0	0	0	0
Previous 5 Years	N	NS	13	NS	NS	13	NS	NS	NS	NS	17	6	8	NS
	N Detect	NS	0	NS	NS	0	NS	NS	NS	NS	0	0	0	NS
	N Exceed	NS	0	NS	NS	0	NS	NS	NS	NS	0	0	0	NS
		Potential for Delisting								Achieving Targets per Listing Policy				
		NE	NE	--	NE	NE	NE	--	NE	NE	Yes[1]	NE	NE	NE

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Heptachlor Epoxide		303(d) listed Reaches								Un-listed Reaches with TMDL Targets and Available Data				
Reach		2	4	5	9A	9B	10	11	13	1	3	6	7	12
Date Range Available		5/6/2004	12/18/2003	NS	12/19/2003	12/19/2003	12/18/2003	NS	12/17/2003	8/19/2008	12/19/2003	12/16/2003	12/16/2003	12/17/2003
		8/24/2004	8/27/2013	NS	8/26/2004	8/28/2013	8/25/2004	NS	8/25/2004	8/21/2008	8/27/2013	9/3/2009	8/28/2013	8/25/2004
TMDL Targets (ng/kg):		1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Previous 10 Years	N	2	23	NS	5	22	6	NS	6	9	28	9	16	3
	N Detect	0	0	NS	0	0	0	NS	0	0	0	0	0	NS
	N Exceed	0	0	NS	0	0	0	NS	0	0	0	0	0	0
Previous 5 Years	N	NS	13	NS	NS	13	NS	NS	NS	NS	17	6	8	NS
	N Detect	NS	0	NS	NS	0	NS	NS	NS	NS	0	0	0	NS
	N Exceed	NS	0	NS	NS	0	NS	NS	NS	NS	0	0	0	NS
		Potential for Delisting								Achieving Targets per Listing Policy				
		NE	NE	--	NE	NE	NE	--	NE	NE	Yes[1]	NE	NE	NE

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis
NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

PCBs		303(d) listed Reaches									Un-listed Reaches with TMDL Targets and Available Data			
Reach		1	2	4	5	9A	9B	10	11	13	3	6	7	12
Date Range Available		8/19/2008	5/6/2004	12/18/2003	NS	12/19/2003	12/19/2003	12/18/2003	NS	12/17/2003	12/19/2003	12/16/2003	12/16/2003	12/17/2003
		8/21/2008	8/24/2004	8/27/2013	NS	8/26/2004	8/28/2013	8/25/2004	NS	8/25/2004	8/27/2013	9/3/2009	8/28/2013	8/25/2004
TMDL Targets (ng/kg):		5300	5300	5300	5300	5300	5300	5300	5300	5300	5300	5300	5300	5300
Previous 10 Years	N	9	2	22	NS	5	22	6	NS	6	27	9	16	3
	N Detect	9	2	10	NS	2	9	0	NS	0	15	6	2	0
	N Exceed	9	2	9	NS	2	7	0	NS	0	12	6	1	0
Previous 5 Years	N	NS	NS	12	NS	NS	13	NS	NS	NS	17	6	8	NS
	N Detect	NS	NS	9	NS	NS	9	NS	NS	NS	11	6	2	NS
	N Exceed	NS	NS	0	NS	NS	0	NS	NS	NS	0	0	0	NS
		Potential for Delisting									Achieving Targets per Listing Policy			
		No	No	PD[1]	–	No	PD[1]	NE	–	NE	PD[1]	PD[1]	PD	NE

1. No exceedances in most recent five years with a significant number of samples. Considering the exceedances that occurred more than five years ago would inappropriately categorize this as a higher priority.

PD (Potential Delisting) – Insufficient data to information listing decision, however a significant number of the most recent 5 years of monitoring are non-detect. The potential for delisting the reach may exist.

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

ID (Insufficient Data) – Insufficient data to inform listing decision, however a single exceedance was detect and the potential for listing may exist.

Toxaphene		303(d) listed Reaches								Un-listed Reaches with TMDL Targets and Available Data				
Reach		2	4	5	9A	9B	10	11	13	1	3	6	7	12
Date Range Available		5/6/2004	12/18/2003	NS	12/19/2003	12/19/2003	12/18/2003	NS	12/17/2003	8/19/2008	12/19/2003	12/16/2003	12/16/2003	12/17/2003
		8/24/2004	8/27/2013	NS	8/26/2004	8/28/2013	8/25/2004	NS	8/25/2004	8/21/2008	8/27/2013	9/3/2009	8/28/2013	8/25/2004
TMDL Targets (ng/kg):		9800	9800	9800	9800	9800	9800	9800	9800	9800	9800	9800	9800	9800
Previous 10 Years	N	2	22	NS	5	22	6	NS	6	9	27	9	16	3
	N Detect	0	18	NS	0	7	0	NS	0	4	10	3	0	0
	N Exceed	0	18	NS	0	7	0	NS	0	4	10	3	0	0
Previous 5 Years	N	NS	12	NS	NS	13	NS	NS	NS	NS	16	6	8	NS
	N Detect	NS	12	NS	NS	7	NS	NS	NS	NS	10	3	0	NS
	N Exceed	NS	12	NS	NS	7	NS	NS	NS	NS	10	3	0	NS
		Potential for Delisting								Achieving Targets per Listing Policy				
		NE	No	–	NE	No	NE	–	NE	No	No	No	NE	NE

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

1.4 TOXICITY TMDL

The RWQCB adopted Resolution No. R4-2005-009 to incorporate the Toxicity, Chlorpyrifos and Diazinon (Toxicity) TMDL in Calleguas Creek, its Tributaries, and Mugu Lagoon into the Basin Plan. The TMDL was effective as of March 25, 2006. Chlorpyrifos and diazinon have been phased out from non-agricultural uses and it was recently announced that additional restrictions on the use of chlorpyrifos on farms may be enacted.

Table 9. Analysis of Toxicity TMDL Constituents in Receiving Water by Reach.

Chlorpyrifos (Dry)		303(d) listed Reaches			Un-listed Reaches with TMDL Targets and Available Data									
Reach		4	5	7	1	2	3	6	8	9A	9B	10	12	13
Date Range Available		8/28/2003	8/28/2003	8/28/2003	8/21/2008	3/24/2004	6/5/2003	8/28/2003	3/24/2004	8/28/2003	8/28/2003	2/6/2002	2/6/2002	8/28/2003
		11/5/2013	8/23/2004	11/5/2013	11/5/2013	8/24/2004	4/25/2014	11/5/2013	8/23/2004	8/23/2004	11/5/2013	8/21/2013	8/23/2004	11/5/2013
TMDL Targets (ug/L):		0.014	0.014	0.014	0.009	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014	0.014
Previous 10 Years	N	34	9	30	21	7	54	29	6	9	30	26	9	21
	N Detect	19	6	12	7	0	13	12	0	0	4	0	0	0
	N Exceed	14	6	7	4	0	5	6	0	0	0	0	0	0
Previous 5 Years	N	20	NS	19	19	NS	26	18	NS	NS	19	12	NS	11
	N Detect	13	NS	7	6	NS	6	7	NS	NS	2	0	NS	0
	N Exceed	9	NS	4	3	NS	1	3	NS	NS	0	0	NS	0

Chlorpyrifos (Wet)		303(d) listed Reaches			Un-listed Reaches with TMDL Targets and Available Data									
Reach		4	5	7	1	2	3	6	8	9A	9B	10	12	13
Date Range Available		2/13/2003	2/13/2003	2/3/2004	12/15/2008	2/3/2004	2/12/2003	2/3/2004	2/3/2004	2/3/2004	2/3/2004	2/3/2004	NS	12/15/2008
		1/25/2013	11/26/2008	1/25/2013	1/25/2013	2/26/2004	2/28/2014	1/25/2013	2/25/2004	2/25/2004	1/25/2013	3/17/2012	NS	3/17/2012
TMDL Targets (ug/L):		0.025	0.025	0.025	0.02	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
Previous 10 Years	N	22	9	12	9	3	49	10	3	3	10	11	NS	8
	N Detect	19	7	9	9	2	32	8	0	0	4	0	NS	1
	N Exceed	18	7	9	9	2	24	7	0	0	3	0	NS	0
Previous 5 Years	N	8	NS	8	8	NS	25	8	NS	NS	8	7	NS	7
	N Detect	8	NS	7	8	NS	19	7	NS	NS	3	0	NS	1
	N Exceed	7	NS	7	8	NS	13	6	NS	NS	2	0	NS	0

Chlorpyrifos (Wet and Dry Data)	303(d) Listed Reaches			Un-listed Reaches with TMDL Targets and Available Data									
Reach	4	5	7	1	2	3	6	8	9A	9B	10	12	13
N (previous 5 years)	28	18[1]	42[1]	30[2]	10[1]	51	39[1]	NS	NS	40[1]	37[1]	NS	29[1]
N Exceed	16	13	14	13	3	14	13	NS	NS	3	0	NS	0
	Potential for Delisting?			Achieving Targets per Listing Policy?									
	No	No	No	No	No	No	No	NE	NE	Yes	Yes	NE	Yes

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis.

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Diazinon (Dry)		303(d) listed Reaches	Un-listed Reaches with TMDL Targets and Available Data											
Reach		7	1	2	3	4	5	6	8	9A	9B	10	12	13
Date Range Available		8/28/2003	8/21/2008	3/24/2004	6/5/2003	8/28/2003	8/28/2003	8/28/2003	3/24/2004	2/19/2003	2/19/2003	2/6/2002	2/6/2002	8/28/2003
		11/5/2013	11/5/2013	8/24/2004	4/25/2014	11/5/2013	8/23/2004	11/5/2013	8/23/2004	8/23/2004	11/5/2013	8/21/2013	8/23/2004	11/5/2013
TMDL Targets (ug/L):		0.1	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Previous 10 Years	N	30	21	7	55	34	9	29	6	10	31	26	9	21
	N Detect	9	3	6	17	10	2	9	0	5	8	5	2	4
	N Exceed	1	0	3	4	0	1	1	0	2	2	3	0	0
Previous 5 Years	N	19	19	NS	27	20	NS	18	NS	NS	19	12	NS	11
	N Detect	2	3	NS	5	5	NS	2	NS	NS	2	0	NS	0
	N Exceed	0	0	NS	1	0	NS	0	NS	NS	1	0	NS	0

Diazinon (Wet)		303(d) listed Reaches	Un-listed Reaches with TMDL Targets and Available Data											
Reach		7	1	2	3	4	5	6	8	9A	9B	10	12	13
Date Range Available		2/3/2004	12/15/2008	2/3/2004	2/12/2003	2/13/2003	2/13/2003	2/3/2004	2/3/2004	2/3/2004	2/3/2004	2/3/2004	NS	12/15/2008
		1/25/2013	1/25/2013	2/26/2004	2/28/2014	1/25/2013	11/26/2008	1/25/2013	2/25/2004	2/25/2004	1/25/2013	3/17/2012	NS	3/17/2012
TMDL Targets (ug/L):		0.1	0.82	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Previous 10 Years	N	12	9	3	51	22	9	10	3	3	10	11	NS	8
	N Detect	5	4	1	25	9	1	3	0	1	1	0	NS	0
	N Exceed	2	0	0	6	3	0	1	0	1	0	0	NS	0
Previous 5 Years	N	8	8	NS	27	8	NS	8	NS	NS	8	7	NS	7
	N Detect	4	4	NS	10	5	NS	3	NS	NS	1	0	NS	0
	N Exceed	1	0	NS	3	2	NS	1	NS	NS	0	0	NS	0

Diazinon (Wet and Dry Data)	303(d) Listed Reaches	Un-listed Reaches with TMDL Targets and Available Data											
Reach	7	1	2	3	4	5	6	8	9A	9B	10	12	13
N (previous 5 years)	42[1]	30[1]	10[1]	54	28	18[1]	39[1]	NS	13[1]	41	37	NS	28
N Exceed	3	0	3	4	2	1	2	NS	3	2	3	NS	0
	Potential for Delisting	Achieving Targets per Listing Policy											
	Yes	Yes	No	Yes	Yes	ID	Yes	NE	No	Yes	Yes	NE	Yes

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

ID (Insufficient Data) – Insufficient data to inform listing decision, however a single exceedance was detect and the potential for listing may exist.

1.5 SALTS TMDL

The Boron, Chloride, Sulfate, TDS (Salts) TMDL was incorporated into the Basin Plan through the RWQCB's adoption of Resolution No. R4-2007-016. **Table 10** summarizes the comparison of available receiving water grab sample data to the final numeric targets established in the Salts TMDL. This evaluation does not include consideration of continuous monitoring for salts at the receiving water compliance points, however, grab samples collected at these locations to calibrate and verify the sensors are a part of the dataset. Additionally, reaches 1 and 2 are tidally influenced and salts targets do not apply, therefore, those reaches are not considered.

Table 10. Analysis of Salts TMDL Constituents in Receiving Water by Reach

Boron		303(d) Listed Reaches			Un-listed Reaches with TMDL Targets and Available Data								
Reach		4	7	8	3	5	6	9A	9B	10	11	12	13
Date Range Available		2/25/2004	2/5/2003	NS	2/26/2004	2/25/2004	NS	2/19/2003	2/19/2003	2/15/2002	NS	2/15/2002	NS
		11/5/2013	6/3/2014	NS	11/5/2013	2/25/2004	NS	11/6/2013	11/5/2013	10/9/2013	NS	10/9/2013	NS
TMDL Targets (mg/L):		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Previous 10 Years	N	65	235	NS	27	1	NS	237	25	124	NS	133	NS
	N Detect	65	235	NS	27	1	NS	237	25	124	NS	133	NS
	N Exceed	65	55	NS	0	1	NS	1	0	0	NS	0	NS
Previous 5 Years	N	64	162	NS	26	NS	NS	116	23	58	NS	58	NS
	N Detect	64	162	NS	26	NS	NS	116	23	58	NS	58	NS
	N Exceed	64	55	NS	0	NS	NS	1	0	0	NS	0	NS
		Potential for Delisting			Achieving Targets per Listing Policy								
		No	No	–	NE	ID	–	Yes	NE	Yes	–	Yes	–

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.
ID (Insufficient Data) – Insufficient data to inform listing decision, however a single exceedance was detect and the potential for listing may exist.

Chloride		303(d) Listed Reaches						Un-listed Reaches with TMDL Targets and Available Data					
Reach		6	7	8	9B	10	13	3	4	5	9A	11	12
Date Range Available		NS	1/8/2003	NS	1/1/2003	1/15/2002	NS	1/1/2003	2/13/2003	2/13/2003	1/22/2003	NS	1/15/2002
		NS	6/3/2014	NS	12/5/2013	10/9/2013	NS	4/25/2014	12/5/2013	11/26/2008	12/5/2013	NS	10/9/2013
WQOs (mg/L):		150	150	150	150	150	150	150	150	150	150	150	150
Previous 10 Years	N	NS	281	NS	116	126	NS	206	99	7	282	NS	135
	N Detect	NS	278	NS	116	126	NS	206	99	7	282	NS	135
	N Exceed	NS	205	NS	31	40	NS	144	75	0	247	NS	125
Previous 5 Years	N	NS	194	NS	63	58	NS	144	92	NS	156	NS	58
	N Detect	NS	193	NS	63	58	NS	144	92	NS	156	NS	58
	N Exceed	NS	142	NS	16	11	NS	102	73	NS	138	NS	56
		Potential for Delisting						Achieving Targets per Listing Policy					
		–	No	–	No	No	–	No	No	NE[1]	No	–	No

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.

Sulfate		303(d) Listed Reaches										Un-listed Reaches with TMDL Targets and Available Data	
Reach		4	6	7	8	9A	9B	10	11	12	13	3	5
Date Range Available		2/25/2004	5/13/2008	2/5/2003	NS	2/19/2003	1/1/2003	2/15/2002	NS	2/15/2002	NS	1/1/2003	2/25/2004
		11/5/2013	5/13/2008	6/3/2014	NS	11/6/2013	11/5/2013	10/9/2013	NS	10/9/2013	NS	11/5/2013	2/25/2004
WQOs (mg/L):		250	250	250	250	250	250	250	250	250	250	250	250
Previous 10 Years	N	44	1	237	NS	250	86	125	NS	136	NS	103	1
	N Detect	44	1	237	NS	250	86	125	NS	136	NS	103	1
	N Exceed	42	1	235	NS	51	5	0	NS	116	NS	31	0
Previous 5 Years	N	43	NS	164	NS	128	36	58	NS	58	NS	74	NS
	N Detect	43	NS	164	NS	128	36	58	NS	58	NS	74	NS
	N Exceed	42	NS	161	NS	22	1	0	NS	54	NS	27	NS
		Potential for Delisting										Achieving Targets per Listing Policy	
		No	ID	No	–	No	Yes	Yes	–	No	–	No	NE

NE (No Exceedances) – Insufficient data to inform listing decision, however no exceedances were reported in the available monitoring data.
ID (Insufficient Data) – Insufficient data to inform listing decision, however a single exceedance was detect and the potential for listing may exist.

TDS		303(d) Listed Reaches											Un-listed Reaches with TMDL Targets and Available Data
Reach		3	4	6	7	8	9A	9B	10	11	12	13	5
Date Range Available		1/1/2003	2/13/2003	5/13/2008	2/5/2003	NS	2/19/2003	1/1/2003	2/15/2002	NS	2/15/2002	NS	2/13/2003
		4/25/2014	11/5/2013	5/13/2008	11/5/2013	NS	11/6/2013	11/5/2013	10/9/2013	NS	10/9/2013	NS	11/26/2008
WQOs (mg/L):		850	850	850	850	850	850	850	850	850	850	850	850
Previous 10 Years	N	172	70	1	80	NS	244	89	113	NS	124	NS	8
	N Detect	172	70	1	80	NS	244	89	113	NS	112	NS	8
	N Exceed	101	61	1	74	NS	133	26	1	NS	87	NS	2
Previous 5 Years	N	100	44	NS	31	NS	127	37	46	NS	46	NS	NS
	N Detect	100	44	NS	31	NS	127	37	46	NS	34	NS	NS
	N Exceed	61	43	NS	27	NS	77	5	0	NS	33	NS	NS
		Potential for Delisting											Achieving Targets per Listing Policy
		No	No	ID	No	–	No	No	Yes	–	No	–	No

ID (Insufficient Data) – Insufficient data to inform listing decision, however a single exceedance was detect and the potential for listing may exist.

1.6 INDICATOR BACTERIA/ FECAL COLIFORM

Reaches in the CCW are listed for Indicator Bacteria and Fecal Coliform. The recent revision to bacteria objectives in the Basin Plan replaced limits on Fecal and Total Coliforms in REC1 designated waters with geometric means and instantaneous limits on *E. coli*. This analysis compared available *E. coli* monitoring data to the updated instantaneous objectives of 235 MPN/100mL. Table 11 summarizes the findings of the analysis.

Table 11. Analysis of 303(d) listed Reaches for Bacteria

E. coli		1	2	3	4	5	6	7	8	9A	9B	10	11	12
Currently 303(d) Listed:			X		X		X	X		X	X	X	X	
Date Range Available		5/27/2004	8/28/2003	2/12/2003	2/12/2003	2/12/2003	8/28/2003	8/28/2003	12/2/2003	8/28/2003	8/28/2003	8/15/2003	2/26/2004	8/15/2003
		1/7/2005	5/5/2005	4/25/2014	11/26/2008	11/26/2008	3/29/2006	5/5/2005	5/5/2005	5/5/2005	1/7/2005	2/22/2014	8/13/2013	10/27/2013
WQOs (MPN/100mL):		235	235	235	235	235	235	235	235	235	235	235	235	235
Previous 10 Years	N	7	24	88	38	21	32	23	22	23	15	180	4	161
	N Detect	7	24	87	38	21	30	23	22	23	15	150	4	158
	N Exceed	3	15	62	24	12	20	9	12	7	6	6	4	62
Previous 5 Years	N	NS	NS	24	NS	NS	NS	NS	NS	NS	NS	92	1	96
	N Detect	NS	NS	24	NS	NS	NS	NS	NS	NS	NS	69	1	94
	N Exceed	NS	NS	16	NS	NS	NS	NS	NS	NS	NS	0	1	38
Potential for Delisting:		LP[1]	No[1]	LP	No[1]	LP[1]	No[1]	No[1]	LP	No[1]	No[1]	**Yes**	No[1]	No

1. Previous 5 years of data was insufficient to inform a listing decision, however historical monitoring data was available and used in analysis

LP (Listing Possible) – Considering current and/or earlier data there is potential for this reach to be listed based on the number of observed exceedance