Comments and Responses for Documents Posted August 24, 2018, to Consider Proposed Copper (Cu) TMDLs and Non-TMDL Action Plans (Action Plans) for Zinc (Zn), Mercury (Hg), Arsenic (As) and Chromium (Cr) (August 24, 2018 deadline)

Comment letters received

City of Newport Beach

Letter from the City of Newport Beach dated August 22, 2018 regarding "Regional Board Meeting on October 19, 2018 to adopt the Basin Plan Amendments to Incorporate Total Maximum Daily Loads for Copper and Non-TMDL Action Plans for other Metals in Newport Bay"

The City of Newport Beach ("City") submits these comments in response to the notice we received on July 10, 2018, advising that the California Regional Water Quality Control Board, Santa Ana Region ("Regional Board") will consider adopting Amendments to the Water Quality Control Plan for the Santa Ana Region ("Amendments") to incorporate Total Maximum Daily Loads ('TMDLs") for copper and non-TMDL Action Plans for other metals in Newport Bay.
However, the pending Amendments continue to have us greatly concerned.

Comment 1 – As you know, the City provided written and oral comments to you on July 24, 2015, when staff included Newport Bay Copper/Metals TMDLs as an informational item on the Regional Board's regular agenda. At that time, we advised the Regional Board the City was concerned about the proposal to require the City and others to restrict or ban the use of legally-available copper-based antifouling paints ("AFP") through a new TMDL. In particular, we outlined to the Regional Board that the implementation plan was both unenforceable and a circumvention of the legal role and rights of the Department of Pesticide Regulation ("DPR"), which is the exclusive California regulator of pesticides, including copper AFP. We urged you to confer with the City and engage in a meaningful dialogue about the current copper levels in Newport Bay and the development of meaningful Amendments.

Our comments and concerns were shared by many affected stakeholders and resulted in a significant number of commenters both in writing and in oral testimony. The planned Regional Board meeting to adopt the TMDL in October 28, 2016 was revised to be a workshop because it was acknowledged by all, including then Executive Officer, Kurt Berchtold, and the Regional Board that this TMDL was not ready for adoption. The Regional Board requested staff develop workshops to hear the community's concerns regarding availability of non-toxic AFP alternatives. At the workshop, Mr. Berchtold, and staff assured the Board the comments would be "thoroughly addressed" and two workshops with the stakeholders in the boating community would be provided. It has been 21 months since the October 28, 2016 workshop and there have been no workshops, no outreach to the boating community, no inclusion of named dischargers in the development of the latest draft TMDL. A very general response to comments was provided, but numerous specific technical comments were not addressed or acknowledged. With the release of the notice for adoption of this revised TMDL, you cannot be surprised by the consistency in our concerns, as this revised draft shares most of the same major substantive defects as the previous draft. We are providing the same comment package as the previous draft, as well as additional comments on the new materials.

To date, we do not believe that our concerns about the practical impacts of the proposed implementation plan to our community and Newport Bay have been acknowledged or appreciated. Our original comments and concerns still stand. We believe the proposed Amendments have the following significant problems:

- The Amendments seem to be underdeveloped, in part because they rely on data that is out-of-date, incorrect and overly conservative;
- The Amendments are impractical if not impossible for the City to effectively implement; and

- Considering the above, we believe if the proposed Amendments are adopted as proposed, the Amendments may result in litigation.

Response 1 - These comments were addressed in the responses to the City's comment 3 - City Letter (Response to Comments Document 2018).

Comment 2 - Generally, our request is as follows:

1. Do not adopt the Amendments at this time.

2. Select an additional review period - up to four (4) years - for the Regional Board staff, the City, DPR, and other stakeholders/dischargers to have a meaningful discussion about additional testing and monitoring, education, best management practices, the implementation timeline for DPR's updated AFP regulations, and more, with the goal of coming back to the Regional Board with more robust data and implementation ideas. This additional monitoring is appropriate and will help determine the effectiveness of the DPR limits on copper leach rate paints.

3. The City commits to participating thoroughly and in good faith in that discussion provided all of the parties do so collaboratively, as has been our collective spirit in the past. To support this request, we developed multiple technical documents to support the needed revisions in the previous draft. The inadequacy of the proposed Amendments span a wide array of legal and technical issues that were summarized in the last comment package, which again, we do not believe has been addressed "thoroughly." Now we are providing another memorandum that summarizes the availably of non-copper AFP and a closer examination of the challenges both Marina del Rey Harbor and Shelter Island have incurred to reduce copper loading.

Response 2 - These comments were addressed in the responses to the City's comment 4 - City Letter (Response to Comments Document 2018).
Santa Ana Water Board staff recommend that the proposed Cu TMDLs be adopted since they are based on newer data and State Water Board policy/guidelines. In addition, USEPA's Cu TMDLs are more restrictive and require a higher percent reduction of Cu discharges from boats than Board staff's proposed Cu TMDLs (92 vs 60%, respectively). As previously noted, in the absence of the adoption of the proposed Cu TMDLs, the Board is required to take regulatory steps to implement USEPA's Cu TMDLs that were established in 2002.

The City's comments appear to focus on Cu. USEPA's TMDLs also include TMDLs and allocations for Zn, Pb and Cd. Board staff's Impairment Assessment supersedes USEPA's data assessment that led to

USEPA's establishment of Metals TMDLs for Newport Bay in 2002. Board staff found no impairment for Zn, Pb or Cd in the Upper Bay, or Cd or Pb in the Lower Bay; therefore, no TMDLs are required for Pb and Cd, or Zn in the Upper Bay.

Comment 3 - Again, the City's primary concerns include, but are not limited to, the following:

- 3.1 The copper TMDL unlawfully attempts to force local agencies to solve a conflict caused by the Regional Board's failure to convince the Legislature or its sister state agencies to ban copper AFP. While DPR has provided additional mitigation measures to reduce copper, these are only recommended, they are not required. DPR still controls the use of pesticides in the state of California. The City cannot control the use of a pesticide.
- *Response 3.1 - This comment was addressed in the response to the City's comments 5.1 – City Letter, and 7.1 through 7.3 - Attachment 7 (Response to Comments Document 2018).*

- 3.2 The copper TMDL is unlawful because alternatives to copper AFP are not effective or available and may have significant adverse environmental impacts. The State of Washington has realized this issue and new legislation is being considered to delay the ban on the use of copper-based AFP that was under consideration because it is feared the alternatives will cause greater environmental harm.
- *Response 3.2 - This comment was addressed in the responses to the City's comments 5.2 – City Letter, 6.51 -Attachment 6, and 7.4 -Attachment 7 (Response to Comments Document 2018).*

- 3.3 The phased implementation schedule is unreasonable, unsupported and would force substantial early investments that may be unnecessary. The Regional Board should let the DPR copper reduction effort take effect so the anticipated reduction in copper loading can be assessed and allow safe alternative paints to be developed and demonstrated.

  Response 3.3 - This comment was addressed in the response to the City's comments 5.4 – City Letter, and 7.6 - Attachment 7 (Response to Comments Document 2018).

- 3.4 The City requests the time be extended to allow the copper reductions from DPR's lower copper AFP leach limits that just started in July of 2018 and the copper brake pad initiative to be implemented over the next 7 years. The brake pad initiative may reduce copper in both the stormwater runoff and in aerial

deposition. It would be appropriate for the compliance schedule to be aligned with these two major policy changes. In addition, time is needed for logistical constraints, while the new paint limits for copper are now in effect, it will take time for older paints to phase out and newer paints to be used. For soft-non-biocidal paint alternatives, longer haul out and painting times are needed for those conversions, which will impact boatyard availability to Newport Bay vessels.

3.4.1 The City requests the time be extended to allow the copper reductions from DPR's lower copper AFP leach limits that just started in July of 2018… In addition, time is needed for logistical constraints, while the new paint limits for copper are now in effect, it will take time for older paints to phase out and newer paints to be used.

Response 3.4.1 – Pursuant to the Implementation Plan for these proposed Cu TMDLs, the dischargers are required to develop their own proposed implementation plan(s) and schedule(s) to achieve the Cu TMDLs as soon as possible but no later than 12 years, and to implement those plans upon approval. The City may propose an implementation plan(s) and schedule(s) that includes consideration of the concerns identified by the City. Santa Ana Water Board staff's Implementation Plan for the proposed Cu TMDLs requires that the tasks relating to the reduction of Cu discharges from Cu AFPs be considered in the development of the City's implementation plan(s), and justification provided if these task(s) are not included. It is unlikely that a plan(s) will be approved that proposes no action by the City pending the implementation of DPR's maximum leach rate for Cu AFPs. Some affirmative action by the City to achieve reductions in Cu discharges from boats must be included, including the development and implementation of BMP program(s) for hull cleaning. Such a program(s) would also implement DPR's expectations that BMPs will be used with the use of lower leach rate Cu AFPs, since DPR's maximum leach rate determination includes the use of BMPs for hull cleaning in order to achieve the CTR chronic criterion for Cu.

The proposed Cu TMDLs include a maximum final compliance schedule of 12 years, with requirements for interim reductions of Cu discharges from Cu AFPs. These reductions may be achieved in a number of ways, e.g., the implementation of BMPs by underwater hull cleaners, diver certification and education program, boater education program, incentive programs for the conversion of boats from Cu AFPs to lower leach rate Cu AFPs and/or non-biocide AFPs. The Cu TMDLs' compliance schedule is intended, in part, to allow boats to be repainted with these alternative paints as a part of the routine repainting schedules for boats. (Note again that boat conversions to non-biocide AFPs are a recommended strategy to reduce Cu discharges from Cu AFPs; the dischargers are required to <u>consider</u> this strategy, but this task is not required to be one of the dischargers' strategies to achieve the TMDLs.)

Reductions of Cu discharges resulting from DPR's implementation of the lower leach rate Cu AFPs could take years, and the decrease in Cu concentrations in Newport Bay from the use of lower leach rate Cu AFPs is dependent on the leach rates of the Cu AFPs currently in use in Newport Bay. In discussions with the City regarding Cu paint conversions, Santa

Ana Water Board staff recommended that an appropriate initial implementation task for the dischargers would be to conduct a survey of the leach rates of Cu AFPs currently in use in the Bay to assess whether and to what extent the implementation of DPR's lower leach rate would reduce Cu discharges to the Bay. It is reasonable and appropriate to conduct such an assessment to determine whether any sort of compliance schedule adjustment, as requested by the City, would be justified. It would be wholly inappropriate in the absence of such justification, to simply await the implementation of DPR's lower leach rate Cu AFPs and hope that Cu water quality conditions will improve as a result.

In the meantime, dissolved Cu concentrations continue to exceed the CTR chronic criterion of 3.1 µg/L, and the Bay is still impaired for Cu. The State Water Board's data assessment for the latest 303(d) list (2014-16) determined that Newport Bay is still impaired for Cu, and the status for Cu in the Bay is DO NOT DELIST. Additional data from Anchor QEA's study for the City (2015, 2016) show that over 30% of the samples exceeded the dissolved Cu CTR chronic criterion of 3.1 µg/L. Data from DPR's latest monitoring study (August 2019) also show impairment as dissolved Cu exceeded the CTR chronic criterion in 50% of the samples taken in Newport Bay. Cu discharges from boats must be reduced since boats are the largest source of Cu to the Bay.

3.4.2 and the copper brake pad initiative to be implemented over the next 7 years.

Response 3.4.2 Implementation of the Cu Brake Pad Initiative is expected to reduce Cu in tributary runoff to the Bay over time. It is not likely, however, that this reduction would have a significant effect with respect to achieving the Cu TMDLs and/or CTR criterion in the Bay, since tributary inputs of Cu are small compared to Cu discharges from Cu AFPs on boats. Cu discharges from AFPs are by far the largest source of Cu to the Bay, and the Cu TMDLs cannot be achieved without significant reductions in those discharges from Cu AFPs. The Cu TMDLs include a Cu allocation for tributary runoff; however, no Cu reduction is needed to achieve this allocation as it is already being met.

3.4.3 For soft-non-biocidal paint alternatives, longer haul out and painting times are needed for those conversions, which will impact boatyard availability to Newport Bay vessels

Response 3.4.3 Santa Ana Water Board staff are aware that the conversion of Cu AFPs to non-biocide AFPs, and the application of those non-biocide AFPs will take longer than the application of Cu AFPs. The implementation schedule allows time for repainting boats with non-biocide AFPs.

The conversion of boats from Cu AFPs to non-biocide AFPs is a potential method of compliance, recommended for consideration by the dischargers as part of their implementation strategies. It is not <u>required</u> by the proposed Cu TMDLs Implementation Plan. The dischargers' proposed implementation strategies can and should account for the considerations discussed above.

- 3.5 Learn from the challenges ongoing at Marina del Rey Harbor and Shelter Island.

Response 3.5 - No examples were given as to what these challenges are that are not being learned from the Marina del Rey Toxics TMDL and the Shelter Island Yacht Basin Cu TMDL. Santa Ana Water Board staff agree that it is appropriate to evaluate and learn from the implementation of other Cu TMDLs, and Board staff are in frequent contact with staff responsible for the Cu TMDLs discussed above to compare strategies and challenges.

- 3.6 The copper TMDL imposes unfunded state mandates.

Response 3.6 - This comment was addressed in the responses to the City's comment 5.5 – City Letter, and 7.7 –Attachment 7 (Response to Comments Document 2018).

- 3.7 The substitute environmental document fails to comply with the California Environmental Quality Act ("CEQA ") and CEQA 's implementingguidelines.
Response 3.7 – The draft SED has been revised and is being recirculated for public review and comment.

- 3.8 However well intended, the revised Amendments seem flawed, preempted, give substandard consideration to current conditions and technical analyses, and do not comply with CEQA. Additionally, the information included in the attachments establishes there may in fact not be a copper impairment (either in the water or sediment), and that no implementation plan is necessary at this time

Response 3.8 –The assertions in this comment summarize other comments and are conclusory. See responses to the technical comments in Attachments 1-6 (Response to Comments Document 2018). The available data confirm that the Bay is still impaired for dissolved Cu. The State Water Board's data assessment for the latest 303(d) list (2014-16) determined that Newport Bay is still impaired for Cu, and the status for Cu in the Bay is DO NOT DELIST. Additional data from Anchor QEA's study for the City (2015, 2016) show that over 30% of the samples exceeded the dissolved Cu CTR chronic criterion of 3.1 µg/L. Data from DPR's latest monitoring study (August 2019) also show impairment as dissolved Cu exceeded the CTR chronic criterion in 50% of the samples taken in Newport Bay. See response to the City's comment 3.4.1 above.

Comment 4 - Again, we are providing this information in recognition of our strong history of collaboration with the Regional Board. Our continued commitment to evaluate and resolve water quality issues of concern is evidenced by our history of voluntary and cooperative efforts in the watershed. Specific to copper, these efforts include, but are not limited to:

- Contracting with (and funding) consultants to provide professional/technical assistance with research/testing/analysis in an effort to better understand and define any potential copper-relatedissues in Newport Bay.

- Conducting two independent harbor-wide water column sample tests for copper (July 2015 & February 2016).
- Conducting five toxicity tests in areas of higher copper concentrations (all showed no toxicity).
- Conducting boat zone testing to better assess copper bottom paint leachate concentration degradation.
- Visiting, observing and reviewing the experimental vessel skirt/vacuum hull bottom cleaning operation in Santa Cruz, California.
- Meeting with bottom paint applicators and shipyards to better understand available paints, application process, re-application rates, and cost of copper and non- copper AFPs.
- Since 2010, and with your assistance, financing and completing significant dredging efforts to remove sediments/legacy contaminants, and to improve flushing and circulation, thus improving the overall water quality of Newport Bay
- Developing a web page to educate boat owners and provide updated copper water quality information.
- Currently assisting Regional Board staff with the vessel skirt/vacuum hull bottom cleaning pilot project at Balboa Yacht Basin in Newport Beach

For these and other reasons, and to continue our history of working cooperatively rather than in adversarial proceedings, we again, respectfully request that you and your Regional Board staff colleagues consider our recommendation that the Regional Board not adopt the Amendments on October 19, 2018. Additional time will allow us to further discuss our concerns and our going-forward ideas to return to the Regional Board at a later date with more robust data and a well-thought out implementation plan.

Response 4 - These comments were addressed in the responses to the City's comment 6 - City Letter (Response to Comments Document 2018).

Attachment 1(2018): City of Newport Beach's October 14, 2016 Comment letter and supporting materials
Attachment 2(2018): Comments for the 2018 version of the Revised Newport Bay Copper (Cu) TMDLs and Non-TMDL Action Plans for Zinc (Zn), Mercury (Hg), Arsenic (As), and Chromium (Cr) and Substitute Environmental Document
Attachment 3(2018): Response to City's comments for the Newport Bay Copper (Cu) TMDLs and

Non-TMDL Action Plans for Zinc (Zn), Mercury (Hg), Arsenic (As), and Chromium (Cr)
Attachment 4(2018): Review of Studies Conducted to Evaluate the Availability and Use of Non-copper Antifouling Paints

Attachment 1(2018): City of Newport Beach's October 14, 2016 Comment letter and supporting materials

Attachment 1(2018) is the comment letter from the City of Newport Beach dated October 14, 2016 regarding the Santa Ana Water Board meeting for October 28, 2016 and the Basin Plan Amendments to Incorporate Total Maximum Daily Loads for Copper and Non-TMDL Action Plans for other Metals in Newport Bay.

Response - ALL comments in this letter were addressed in the responses to the City's October 14, 2016 letter 1-6.8 (Response to Comments Document 2018).

Attachment 2(2018): Comments for the 2018 version of the Revised Newport Bay Copper (Cu) TMDLs and Non-TMDL Action Plans for Zinc (Zn), Mercury (Hg), Arsenic (As), and Chromium (Cr) and Substitute Environmental Document

Attachment 2(2018) is a memorandum from Shelly Anghera, PhD, Latitude Environmental, to the City of Newport Beach (dated August 20, 2018) with new comments on the following documents issued by Santa Ana Water Board staff: a Supplemental Staff Report, a revised Basin Plan Amendment (BPA) and a revised Substitute Environmental Document (SED).

Comment 1 – Supplemental Staff Report, Key Points, Finding 3
The City provided many comments regarding the data and methods applied in the Staffs impairment assessment. The City provided thorough data summaries to provide a more accurate impairment assessment. After 21 months, it does not appear that any of that information was used. However, response to Key Comment #3 implies that newer information would be evaluated in future refinements to the proposed TMDLs. What is the timing for updates to the Impairment Assessment?

Response 1 – Santa Ana Water Board staff have already reviewed the City's 2016 comments on the data and methodology used for the Impairment Assessment, and the additional data provided by the City. Detailed responses to these comments are provided in the Response to Comments Document 2018. The additional data support the findings that the Bay is still impaired due to water column exceedances of the dissolved Cu CTR criterion, and Cu TMDLs are still required for the Bay. This includes data from Anchor QEA's study for the City (2015, 2016) in which over 30% of the samples exceeded the dissolved Cu CTR criterion. The State Water Board's data assessment for the latest 303(d) list (2014-16) also determined that Newport Bay is still impaired for Cu, and the status for Cu in the Bay is DO NOT DELIST. In addition, data from DPR's latest monitoring study (August 2019) also show impairment since dissolved Cu exceeded the CTR criterion in 50% of the samples taken in Newport Bay. See response to the City's comment 3.4.1 and 3.8 – City Letter above.

The proposed Cu TMDLs include requirements for additional monitoring and evaluation, pursuant to the approval of monitoring plans submitted by the dischargers. These data and analysis results will be used to consider the propriety of revisions to the Cu TMDLs. Per Task 6 of Board staff's Implementation Plan for the proposed Cu TMDLs, the Santa Ana Water Board has committed to the reevaluation of the TMDLs in five years after the approval of the Basin Plan Amendment by USEPA, or earlier if warranted by new data, the adoption of site-specific Cu objectives or the Updated TMDLs report to be submitted by the dischargers. Consideration of new data as part of this reevaluation may lead to revisions to Board staff's Impairment Assessment findings.

Comment 2 – Supplemental Staff Report, Key Points, Finding 7

The statement has conflicting guidance in Section 7.1. *"Non-Cu AFPs (other biocides} may also be considered, provided it is demonstrated that the use of these paints would not have a significant adverse environmental impact. Non-Cu AFPs that contain other biocides should not be applied to new boats."*

What is the rational for new boats using different paints? How would that be enforced? Is this something the Regional Board can enforce?

Response 2 –The discussion in Key Points, item 7 refers to language in the draft BPA that has since been revised, as follows:
"Task 1.2.3 Convert boats from current Cu AFPs to lower leach rate Cu AFPs or non-biocide AFPs" reads, in pertinent part "…(The conversion of Cu AFPs to non-Cu biocide AFPs is not recommended.)" Regarding new boats, the Basin Plan amendment language now reads "2) Require new boats to use lower leach rate Cu AFPs (DPR's regulation -leach rates at or below 9.5 µg/cm^2/d) or non-biocide AFPs/coatings. Recommended BMPs for hull cleaning, and label use recommendations should be followed for these paints… (The use of non-Cu biocide AFPs is not recommended);"

Second, per the proposed Cu TMDLs Implementation Plan, the dischargers are required to develop and submit their own proposed implementation plan and strategies, and to implement that plan and strategies upon approval. One of the possible strategies to be considered by the dischargers in developing these plans is to provide incentives for boaters to select an alternative, non-biocide paint (or a lower leach rate Cu AFP) for initial use, rather than applying non-Cu biocide AFPs on new boats. The strategies identified by the dischargers should include actions required to enforce their implementation strategies.

Comment 3 – Supplemental Staff Report, Key Points, Finding 7

Section 7 states " a number of the tasks listed above are included in the mitigation strategies required for the implementation of DPR's leach rate". However, DPR's guidance only provides "Recommendations for Mitigation". It should be noted that none of the mitigation strategies are required. The only required activities that DPR has imposed associated with the use of reduced leach rate copper paints is the use of soft-pile carpet and limiting cleaning to once per month for paints that leach copper at a rate of 9.5 µg/ cm 2/ day.

Lower leach rate paints do not require the use of soft-pile carpet and limited cleaning frequency.

Response 3 – While DPR's mitigation measures are not <u>required</u> (since DPR does not have the authority to enforce these measures), the use of several BMPs is "built into" DPR's determination of the 9.5 µg/cm^2/day maximum leach rate for Cu AFPs. (DPR's language regarding "required vs recommended" mitigation strategies" may be somewhat confusing since DPR <u>recommends</u> that some tasks be <u>required</u> by agencies who have enforcement authorities (e.g. the Water Boards.) DPR's determination of this leach rate included the use of BMPs; therefore, the CTR chronic criterion for Cu cannot be achieved with the use of lower leach rate Cu paints alone. In addition, conversions of boats with Cu AFPs to non-Cu AFPs may be required in marinas with greater than 1270 boats to achieve the CTR criterion.

DPR's determination letter (January 30, 2014) states that "…Besides reformulation of copper AFP products, these recommendations also include: Require in-water hull cleaners to implement BMPs for in-water hull cleaning". In a letter from DPR to the Santa Ana Water Board, DPR also states that "...the use of BMPs for in-water hull cleaners, reduced hull cleaning frequency, and incentives for conversion of copper-based paints to alternatives are consistent with DPR's mitigation recommendations. Whether these actions, when paired with DPR's leach rate cap, will cumulatively result in the continuous compliance with the chronic CTR standard also depends on the size of the marina (i.e., number of boats), and on the specific implementation and effectiveness of the BMPs, hull cleaning frequency management, and conversion to alternatives" (November 16, 2017 letter from George Farnsworth, DPR, to Hope Smythe, Santa Ana Water Board Executive Officer).

Comment 4 – Supplemental Staff Report, Key Points, Finding 3
The Supplemental Staff report states the Regional Board's implementation plan for the action plan is for the City and County to develop their own implementation plan for the action plan. It appears that the required actions are to conduct monitoring and assessment. Doesn't the Regional Board's 13267 investigative order already cover this? The order discusses both organics and metals in sediment and tissue following the State's Enclosed Bay and Estuaries Plan (i.e. Sediment Quality Objectives). The only difference is the inclusion of fish and mussel tissue impacts from metals, in which the comments provided in October 2016 illustrated a lack of any impairment in tissue.

Response 4 – Action Plans are no longer part of the Basin Plan Amendment for the Cu TMDLs.

Comment 5 – Supplemental Staff Report, Key Comments, Comment 1
Regional Board recommends the City or County incentiv[iz]e boaters to convert paints. *What incentives does the Regional Board believe would be effective to incentive boaters to convert from copper paint to non-copper alternative boat* paints?

Text implies the use of BMPs is required by DPR: *"In fact, the implementation strategies of the Cu TMDLs include strategies outlined in DPR's letter of determination which states that BMPs must be used when using Cu AFPs with leach rates of 9.5 µg/cm^2/d to achieve compliance with the dissolved Cu CTR criterion[1]."* The only required BMPs for using paints at at 9.5 µg/cm2/d leach rates is the use of clothes [cloths] for cleaning and a cleaning frequency of once a month. The Supplemental Staff Report text implies that the requirement of BMPs is at the direction of DPR, but DPR has been very clear that they only recommend BMPs, not require them. It is the Regional Board's implementation strategy that requires them.

Response 5 – The Santa Ana Water Board cannot dictate the method or manner of compliance, and the proposed TMDLs do not attempt to do so. Rather, the dischargers, including the City, are required to develop their own implementation plan(s) and schedule(s) whereby compliance with the TMDLs is to be achieved, and to implement their strategies upon approval by the Regional Board. The City could use incentives, such as reduced slip fees or rebates, to encourage boaters to convert from Cu to non-biocide AFPs. Boaters will need to convert to lower leach rate Cu AFPs per DPR's leach rate regulation (which requires the use of Cu AFPs with leach rates at or below 9.5 µg/cm^2/d) and this may be an opportune time to consider conversions from Cu to non-biocide AFPs.

In addition, the use of BMPs is identified in Board staff's proposed Cu TMDLs Implementation Plan as one of the tasks that must be considered by the dischargers in the development of their own proposed implementation plan(s).

With respect to DPR's letter of determination – DPR recommends that the use of BMPs be required with the use of lower leach rate Cu AFPs (at or below 9.5 µg/cm^2/d), since the use of BMPs was included in the determination of this maximum allowable leach rate[2]. DPR's determination that the CTR chronic criterion for Cu could be achieved in most marinas in the State (marinas with less than 1270 boats) with implementation of their maximum leach rate is contingent on the concurrent implementation of BMPs[3]. DPR itself does not have the authority to require mitigation strategies – they can only recommend that some strategies be required.

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[1] *Department of Pesticide Regulation (DPR) letter from George Farnsworth, dated November 16, 2017, to Hope Smythe, Santa Ana Regional Water Quality Control Board (SARWQCB), response to SARWQCB's letter dated November 8, 2017.*

[2] Zhang, X. and N. Singehasemanon. 2014. Modeling to determine the maximum allowable leach rate for copper-based antifouling products in California marinas. Appendix to DPR 2018.

[3] As part of its Cu AFP leach rate regulation, DPR identified a number of Cu AFP Mitigation Recommendations. Appendix 2 to DPR January 30, 2014 Memorandum: Determination of Maximum Allowable Leach Rate and Mitigation for Copper Antifouling Paints per AB 425.

See response to S. Anghera's (City's consultant) comment 3 – Attachment 2, above. Wholly apart from the TMDLs, requirements to employ BMPs to minimize discharges of pollutants to waters of the United States are appropriate and consistent with the federal Clean Water Act and implementing regulations.

Comment 6 – Supplemental Staff Report, Key Comments, Comment 2

The City does not believe non-toxic alternative paints are readily available to recreational boaters. The City has conducted a literature review to examine the availability of non-toxic alternatives. Please see attachment 4 to this comment package.

Staff claim the alternative boat paints have been investigated in the State of Washington. In the latest alternatives assessment study conducted in 2017 in the State of Washington, the stakeholder team assessed 17 AFP coatings for boats, including 13 biocidal and four non-biocidal coatings (Coval Marine and Hull Coat, CeRam-Kote 54 SST, Aurora Marine VS721, and ePaint EP-21). The alternatives assessment considered hazards to human and environmental health impacts, exposure to workers (do-it-yourself boat maintenance) and exposure to marine environment, paint performance (the likelihood it will be used by boaters) and the cost and availability of the paints.

The alternatives assessment confirmed that less hazardous alternatives to copper AFPs are available, but the report does not recommend any particular paint because of the diversity of boater needs. Of the 4 non-biocidal coatings evaluated, sufficient information was not available to paints; the findings were determined to be a data gap. The four best performing paints were biocidal.

Most importantly, the findings of this study supported recommendations from Ecology to delay the halting of copper-based AFP because the currently available alternatives may provide greater environmental harm. Further, Ecology acknowledged that of the few available non-biocidal AFP, there is little data to show how these paints affect aquatic life or water quality. The legislative report can be found here: https://fortress.wa.gov/ecy/ publications/ documents/1704039.pdf

In summary, the information in Attachment 4 to this comment package makes the following claims:

1) One paint does not fit all vessel types, all environments, and all boat owner needs/uses.
2) Nontoxic (non-biocidal) AFP testing has not been conducted long enough to gain the confidence of the boaters. The earliest paint conversion studies in Southern California began less than 10 years ago.
3) AFP brands and formulations are constantly changing which contributes to the difficulty in gaining boater confidence in alternative AFPs. Not only are the formulas constantly changing, new paints are added to the market and old paints are discontinued. For the studies summarized in Attachment 4, over half of the paints evaluated have been discontinued and most of the ingredients (formulations) have changed.

4) All APF contain hazardous chemicals and their safety to human health or other receptors in the environment should be confirmed prior to forcing the boaters to change to potentially more hazardous alternatives.

5) The most supported non-biocidal paints (soft-non-biocidal) were developed for commercial vessels. These paints use water motion to remove organisms and require specific speeds at certain durations and frequency to sluff off fouling organisms. They now include slime resistant coating composed of fluoropolymers. Intersleek 900 (now Intersleek 1100) and Hempasil X3 are examples of soft-non-biocidal AFP. These paints are expensive to apply, requiring hull to be completely stripped and the product must be applied by professionals. This commercial product may not be cost effective for all recreational boaters. Further, some paints may include slime resistant coatings composed of fluoropolymers (e.g., Intersleek 1100). Fluorocarbon is a general term for a family of substances that are being examined as contaminants of emerging concern (e.g., Teflon). These paints are not regulated as biocides and therefore, have not been tested to determine if high usage of these paints in enclosed waterbodies would result in environmental impacts.

Response 6: The proposed Cu TMDLs require that the dischargers consider, but do not require implementation of, the conversion from Cu AFPs to lower leach rate Cu AFPs and non-biocide paints (and ways to incentivize these conversions) as a strategy for their implementation plan(s), and to identify and consider other methods by which Cu discharges from boats may be reduced (e.g., the use of BMPs during hull cleaning, diver certification and education programs, and boater education programs). DPR's determination of a maximum leach rate for Cu AFPs (9.5 µg/cm^2/d) should result in some reductions to Cu discharges from Cu AFPs, if Cu AFPs now used in the Bay have higher leach rates than the maximum leach rate, and if BMPs are used with these lower leach rate Cu AFPs. It is acknowledged that alternative AFPs may contain ingredients, including fluorocarbons, that could cause potentially significant adverse effects on the biota. (See Substitute Environmental Document 2021, IV. Biological Resources, answer a; X. Hydrology and Water Quality, answer a). Little data are currently available concerning such potential effects. If the dischargers propose to employ conversions to alternative paints as a strategy to achieve compliance with the Cu TMDLs, then the dischargers must consider the potential environmental effects of the alternative(s) selected. Implementation plans proposed by the dischargers, especially those that include conversions to non-Cu biocide AFPs, are not likely to be approved unless the Santa Ana Water Board is satisfied that no violations of water quality standards will occur as the result of implementation of those plans. Mitigation measures (e.g., use of soft cloths, dry dock cleaning, use of a container-filter system) must be employed to reduce adverse impacts.

*Comment 6.1 - The City comment 6 states that "*The City does not believe non-toxic alternative paints are readily available to recreational boaters," *but then later states that "*The alternatives assessment confirmed that less hazardous alternatives to copper AFPs are available, but the report does not recommend any particular paint because of the diversity of boater needs."

Response 6.1 – Santa Ana Water Board staff do not claim that one paint is sufficient for all boaters, only that there are some available non-biocide paints. In addition, the TMDLs do not require conversions to non-biocide paints; however, the conversion from Cu AFPs to non-biocide paints must be considered as part of the strategies to be developed by the dischargers. (Note, however, that DPR states that in larger marinas, at least some conversions may be necessary to achieve the CTR criterion.) Note also that the conversion of boats from Cu to non-biocide AFPs has already been implemented by the Port of San Diego in Shelter Island Yacht Basin, and will be implemented by the County of Los Angeles in Marina del Rey. In fact, LA County submitted a report on appropriate alternative paints[4].

Comment 6.2 - Nontoxic (non-biocidal) AFP testing has not been conducted long enough to gain the confidence of the boaters. The earliest paint conversion studies in Southern California began less than 10 years ago.

Response 6.2 - Agreed. The use of non-biocide paints does not have boater confidence yet. As with any significant change, time and experience are generally needed to gain widespread acceptance of the change. Note, however, that during the Cu Reduction Study (2013), some boaters were willing to try non-biocide paints.

Comment 6.3 - AFP brands and formulations are constantly changing which contributes to the difficulty in gaining boater confidence in alternative AFPs. Not only are the formulas constantly changing, new paints are added to the market and old paints are discontinued. For the studies summarized in Attachment 4, over half of the paints evaluated have been discontinued and most of the ingredients (formulations) have changed.

Response 6.3 - Agreed. Non-biocide AFPs change and are reformulated; however, some paints, such as Intersleek 1100, Hempasil and Ceram-Kote, have been available for a number of years.[5]

Comment 6.4 - All APF[AFP] contain hazardous chemicals and their safety to human health or other receptors in the environment should be confirmed prior to forcing the boaters to change to potentially more hazardous alternatives.

Response 6.4 -
While it's true that there are few studies regarding the extent of potential human health and environmental effects of non-biocide AFPs, the Port of San Diego and the County of Los Angeles have found some non-biocide AFPs that are acceptable for use in their marinas. The

[4] Marina del Rey Harbor Toxic Pollutants TMDL Implementation Plan https://www.waterboards.ca.gov/losangeles/board_decisions/basin_plan_amendments/technical_documents/2005-012/12_0214/CityofLAMdRH-Toxics-TMDL-IP-FinalDraft.pdf

[5] personal communication from S.Sussman, Interlux paint distributor

most popular non-biocide AFP used by the Port and the County has been Intersleek. Cu, on the other hand, is a known toxin that can have harmful effects on aquatic life and other organisms when established thresholds are exceeded.
See response to S. Anghera's (City's consultant) comment 6 -Attachment 2, above.

Note also that the Cu TMDLs are not "forcing" boaters to change paints. Paint conversions would be implemented on a voluntary basis possibly through an incentive program. Further, wholly apart from TMDL considerations, the sale and use of lower leach rate Cu AFPs are required (as of June 30, 2020) to comply with DPR's maximum leach rate for Cu AFPs. See also response to S. Anghera's (City's consultant) comment 6.1 – Attachment 2, above.

Comment 6.5 - The most supported non-biocidal paints (soft-non-biocidal) were developed for commercial vessels. These paints use water motion to remove organisms and require specific speeds at certain durations and frequency to sluff off fouling organisms. They now include slime resistant coating composed of fluoropolymers. Intersleek 900 (now Intersleek 1100) and Hempasil X3 are examples of soft-non-biocidal AFP. These paints are expensive to apply, requiring hull to be completely stripped and the product must be applied by professionals. This commercial product may not be cost effective for all recreational boaters . Further, some paints may include slime resistant coatings composed of fluoropolymers (e.g., Intersleek 1100). Fluorocarbon is a general term for a family of substances that are being examined as contaminants of emerging concern (e.g., Teflon). These paints are not regulated as biocides and therefore, have not been tested to determine if high usage of these paints in enclosed waterbodies would result in environmental impacts.

Response 6.5 - First, it is unclear what the City means by "supported non-biocidal paints (soft-non-biocidal)". Second, while it is true that most non-biocide paints were developed for use by commercial vessels, they can also be used on recreational boats[6]. S. Anghera's (City's consultant) comment 6 – Attachment 2 above. Santa Ana Water Board staff acknowledge that some non-biocide AFPs may contain ingredients, including fluorocarbons, that could potentially cause potentially significant adverse effects on biota. Little data are currently available concerning such potential effects. If the dischargers propose to employ conversions to non-biocide paints as a strategy to achieve compliance with the Cu TMDLs, caution in the selection of suitable alternatives should also be employed. The dischargers must consider the potential environmental effects of the alternative(s) selected. Implementation plans proposed by the dischargers, especially those that include conversions to non-Cu biocide AFPs, are not likely to be approved unless the Santa Ana Water Board is satisfied that no violations of water quality standards will occur as the result of implementation of those plans.

See response to S. Anghera's (City's consultant) comment 6 – Attachment 2 above; draft SED 2021, IV. Biological Resources, answer a) and X. Hydrology and Water Quality, answer a). See also responses to the City's comments 5.2 – City Letter, 6.51 –Attachment 6, and 7.4 - Attachment 7

[6] *personal communication from S.Sussman, Interlux paint distributor*

(Response to Comments Document 2018).

Comments regarding revised Basin Plan Amendment

Comment 7 - Basin Plan Amendment, Page 2

Staff have revised text in the BPA, currently the sediment toxicity assessment states "In addition, sediment toxicity was present in areas where the ERMs were exceeded." We request this statement be removed from BPA because it is misleading. The City provided information that demonstrated sediment toxicity was not occurring in samples with elevated metals. Based on the SLP, sediment toxicity should be delisted.

Response 7 – The statement referred to above "In addition, sediment toxicity was present in areas where the ERMs were exceeded" *is correct a statement for the studies evaluated in Santa Ana Water Board staff's Impairment Assessment.*

The delisting of sediment toxicity is a separate issue from these TMDLs.

Comment 8 - Basin Plan Amendment, Page 2

The use of the Coastkeeper and Candelaria 2007 study is not appropriate in the impairment assessment result section. The data are too old to be relevant and informative for action plans. The City provided numerous paired sediment chemistry/toxicity tests that demonstrate sediment toxicity is not associated with sediment contaminant concentrations of metals. Please revise statement to say "Further monitoring of sediments is warranted due to sediment quality following the State Enclosed Bay and Estuaries assessment methods"

Response 8 – The Impairment Assessment was conducted according to the State Listing Policy methodology, and the statements in this section relating to this Assessment are valid. With this said, the sediment-related requirements in the proposed Cu TMDLs have been revised to require monitoring and evaluation in accordance with the State Water Board's Water Quality Control Plan for Enclosed Bays and Estuaries – Sediment Quality Provisions (Sediment Quality Provisions). Monitoring and evaluation are still required for sediments since Santa Ana Water Board staff's Impairment Assessment found impairment based on original sediment guidelines in the State Listing Policy (which are still used to assess impairment if there are not enough data to conduct a Sediment Quality Objectives (SQOs) assessment), and USEPA's Metals TMDLs are based, at least in part, on exceedances of metals in sediments.

Comment 9 - Basin Plan Amendment, Page 3

The City provided an extensive review of the load allocations calculations. Boat count was only one of multiple errors applied. Staff have not provided any justification for the continued use of incorrect assumptions and formulas. Please revise dissolved Cu loading from boats to 12,000 lbs/ yr.

Response 9 – ALL comments regarding purported errors in Cu loading calculations were addressed in the responses to the City's Attachment 1 (Response to Comments Document 2018).

Comment 10 - Basin Plan Amendment, Page 8
The BPA states *"Compliance with the numeric target for dissolved Cu will be considered to be achieved if the dissolved Cu CTR criterion of 3.1 µg/L is consistently achieved".* Under 40 C.F.R. § 131.38(b)(*303(d) Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (SLP)*), guidance states that "Criteria Continuous Concentration (CCC) equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects". Please provide clear guidance for the definition of "consistently achieved" and its applicability to the use of CTR values. There is no evidence in the record showing any 4-day period when the CCC was exceeded.

Response 10 –The terminology "consistently achieved" has been removed from the draft BPA and replaced with the language shown below:

> *The revised BPA states "Compliance with the Cu TMDLs will be considered to be achieved if the dissolved Cu CTR criterion of 3.1 µg/L* is achieved, i.e. no impairment is demonstrated per the assessment methodology in the State Listing Policy (SLP)[7], and no further reduction in Cu discharges will be required even if the Cu wasteload or load allocation for boats is not yet achieved. If, however, the Cu wasteload or load allocation for boats is achieved, but the CTR criterion* is not achieved, these TMDLs, including the allocations identified for boats and other sources, will be reviewed and revised as needed to ensure CTR compliance and further reduction in Cu discharges from Cu antifouling paints (AFPs) and/or other sources may be required.*
> **(or a chronic CTR criterion adjusted by a Water Effects Ratio)*
> *The percent reductions and schedule for those reductions identified above shall become moot upon the demonstration that compliance has been achieved.*
> *This assessment would need to be revisited based on the continued monitoring and evaluation to be conducted pursuant to the TMDLs.*

See also responses to the City's comments 6.7 – Attachment 6 (Response to Comments Document 2018).

Comment 11 - Basin Plan Amendment, Page 9
The City requests the time be extended to allow the copper reductions from DPR's copper leach limits that just started in July of 2018 and the copper brake pad initiative to be implemented over the next 7 years. The brake pad initiative may reduce copper in both the stormwater runoff and in areal deposition. It would be appropriate for the compliance schedule to be aligned with these two major policy changes. In addition, time is needed for logistical constraints; while the new paint limits for copper are now in effect, boat shops can still sell high copper paints til July 2020; therefore, it will take time for older paints to phase out and newer paints to be used. For soft non-biocidal paint alternatives, longer haul out and painting times are needed for those conversions which will impact boatyard availability to Newport Bay vessels. The City is

[7] *State Water Board's Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (2004, amended 2015)*

requesting the TMDL be extended.

Response 11 – See responses to the City's comments 3.4.1, 3.4.2 and 3.4.3 – City letter above.

Comment 12 - Basin Plan Amendment, Page 3
Please explain why the State Lands Commission was removed as a named discharger?

Response 12 –The State Lands Commission was initially included as a discharger because of the residual interest the Commission has over the submerged lands and tidelands in Newport Bay. The Commission has since clarified that their residual interest in the submerged and tidelands does not give them authority over the day-to-day management of the granted lands necessary to control the discharge of copper.[8] The Legislature granted the State's right, title, and interest in the submerged lands and tidelands in Newport Bay to the City of Newport Beach and the County of Orange. (Ch. 74, Stats. 1978; Ch. 415, Stats. 1975.) As the grantees, the City and County are responsible for administering the trust lands in accordance with the granting statutes. Under their residual authority, the Commission could report to the Legislature a condition or an act that is not consistent with the granting statutes or any other provision or law or bring an action in superior court to revoke the grant or compel requirements with the granting statute or any other provision of law. The Commission, however, cannot direct the City or County to implement the Cu TMDLs or take actions to directly implement the Cu TMDLs. Thus, the Commission was removed from the list of dischargers because it lacks the requisite authority to control the discharge of copper in Newport Bay.

Comment 13 – SED, Page 11
Text States:
An Implementation Plan(s) (tasks and schedules) through which the numeric targets are expected to be achieved. The Implementation Plan includes requirements for the dischargers to develop and implement, upon approval, their own implementation plan to achieve the TMDLs, and to continue to monitor and evaluate water and sediments;
Comment: But there is no TMDLs for these compounds. Perhaps reword to say "achieve other TMDLs"

Response 13 – The proposed Basin Plan amendments have been revised to delete the Action Plans that were proposed initially. The draft SED has been revised and is being recirculated for public review and comment.

Comment 14 – SED, Page 18
Text States:

[8] Reid Boggiano, Granted Lands Representative, State Lands Com., letter to Hope Smythe, Executive Officer, Santa Ana Regional Water Quality Control Board, May 6, 2019.

" ...the conversion of Cu AFPs on vessels to alternative AFPs; requirements for the use of Best Management Practices (BMPs) during hull cleaning and establishment of a diver certification program for underwater hull cleaning; and, review and improvement of relevant educational programs.
Comment: Please confirm these are required actions the Regional Board states will be included in the Implementation Plans.

Response 14 – The Santa Ana Water Board must analyze the reasonably foreseeable methods of compliance in the SED, and the actions referenced in the comment are the reasonably foreseeable methods of compliance with the Cu TMDLs. This comment reflects a fundamental misunderstanding of the nature of the Implementation Plan for the proposed Cu TMDLs. The TMDLs Implementation Plan requires the dischargers, including the City, to propose their own implementation plan(s) to achieve compliance with the TMDLs, and to implement the plan(s) upon Santa Ana Water Board approval. The tasks identified in the comment are items that must be considered by the dischargers in developing their proposed implementation plan(s) and as such are reasonably foreseeable methods of compliance.
See responses to the City's comments 3.4.1, 3.4.3 -City Letter above. See also responses to the City's comments 5.2 - City letter 2.3 and 2.4 – Attachment 2, and 6.55 – Attachment 6 (Response to Comments Document 2018).

Comment 15 – SED, Page 18
Text States:
The Implementation Plans also specify that special investigations may be necessary. The dischargers would be required to implement such investigations upon direction to do so by the Regional Board Executive Officer, likely pursuant to an order issued under Water Code Section 13267. **Comment:** Is this a requirement? The Implementation plans must include special studies?

Response 15 –The recommended Implementation Plan for the Cu TMDLs has been revised to remove the Special Investigation task since any needed investigations would be required to be conducted pursuant to an order(s) authorized under the Water Code. Such orders are not contingent on the existence of TMDLs.

Comment 16 – SED, Page 18
Text States:
Nontoxic alternatives to Cu AFPs are available and cost-effective, and nontoxic AFPs, along with lower leach rate Cu AFPs, are the preferred option to non-Cu AFPs (other biocides).
Comment: The City does not believe non-toxic alternative paints are readily available to recreational boaters. The City has conducted a literature review to examine the availability of non-toxic alternatives. Please see attachment 4

Response 16 –See responses to S. Anghera's (City's consultant) comments 6 and 6.2 – Attachment 2 above.

Comment 17 – SED, Page 19
Text States:

(The conversion of Cu AFPs to non-Cu AFPs (other biocides) may be considered only if no significant adverse environmental impacts associated with their use is demonstrated.)
Comment: Please explain the process in which the use of non-Cu AFP may be considered? What are the bounds of a demonstration project that an individual boater, marina operator, City, or County would have to undertake to be permitted to use a non-Cu AFP? Also please confirm the Regional Board asserts jurisdiction to prohibit the use of non-Cu AFPs, which are registered pesticides.

Response 17 –The language in the BPA was revised to state that "The conversion of Cu AFPs to other biocide AFPs is not recommended." (See response to S. Anghera's (City's consultant) comment 2 - Attachment 2 above.) The expectation is that any strategy proposed by the dischargers, including the use of non-Cu AFPs, to achieve the requisite Cu reductions would be accompanied by consideration of the potential environmental effects and appropriate mitigation measures. For AFP conversions, this is expected to include consideration of AFP ingredients, any data available concerning their potential environmental effects and possible mitigation measures (e.g., use of BMPs such as soft cloths, dry dock cleaning, reduced frequency of cleaning, and or spatial or temporal distribution of conversions) to minimize environmental effects.
With respect to the last statement "the Regional Board asserts jurisdiction to prohibit the use of non-Cu AFPs, which are registered pesticides", *the Regional Board does not have, and does not assert, the authority to prohibit the use of non-Cu biocides; however, the Board does have the authority to regulate the discharge of pollutants, including Cu, and the authority to approve a discharger's proposed implementation plan(s) for the TMDLs. These plans may include incentives for the conversion of boats to non-Cu AFPs.*

Comment 18 – SED, Page 21
Text States: staff's analysis takes into consideration the following: The specific location and nature of all projects and tasks necessary to address impairment due to Cu, and Zn, Hg, As and Cr exceedances of guidelines, cannot be determined at this time; therefore, the evaluation of the potential environmental effects of the implementation of reasonably foreseeable methods of compliance is conducted at a programmatic level. As specific projects are proposed, the local lead agency (ies) need to complete requisite CEQA analysis and certification at the project level.
Comment (1): What if the proposed management action does not meet CEQA? Is it the burden of the dischargers to do a CEQA evaluation as part of the Implementation Plan?
Comment (2): What if the discharger implementing the action is a private entity, such as boat owners, not subject to CEQA? Will there be no CEQA review of the potential environmental impacts of the actions required by the Regional Board's TMDL?
Comment (3): In regard to: "address impairments due to ... exceedances of guidelines", does the exceedance of guidelines infer there is an impairment?

Response 18.1 – The dischargers and/or public agencies approving implementation actions must comply with applicable CEQA regulations when implementing projects to comply with the TMDLs. It is up to the dischargers and/or permitting agencies to determine the steps necessary for CEQA compliance for those projects.

Response 18.2 The revised SED analyzes the potential environmental impacts of reasonably foreseeable methods of compliance for the proposed TMDLs at a programmatic level, which includes analysis of reasonably foreseeable implementing actions by private entities. If the actual compliance actions of a private entity require approval from a state or local agency that triggers CEQA review, then further analysis at a project level may be required under CEQA.

Response 18.3 Impairment for toxicants is determined by State Listing Policy methodology. See Section 3.1 (SLP 2015).

Comment 19 – SED, Page 60
The No Action alternative: The Regional Board would not adopt the revised TMDL and action plan, which leaves the USEPA TMDL in place. It states the Regional Board would be required to implement regulatory actions. These actions would "likely have more environmental impacts" than the revised TMDL and Action plans because the EPA TMDL requires more boats to be converted and dredging of sediments which increases emissions". This argument is confusing . In regard to boat conversions, the EPA TMDL requires attainment of the CTR, regardless of the number of boat conversions, similar to the revised TMDL being considered. In regard to sediment remediation, the same monitoring and data evaluation is needed to determine the need for managing the sediments, for both the EPA TMDL and revised TMDL. Therefore, it appears the No Action alternative has the same impacts as implementing the revised TMDL.

Response 19 – Discussion of the "No Action alternative" has been revised to state that implementation of this alternative would likely have at least the same and possibly greater potential environmental impacts as the proposed TMDLs. (The Action Plans are no longer part of the proposed Basin Plan amendments.) The draft SED has been revised and is being is being recirculated for public review and comment.

First, USEPA's Cu TMDLs, and specifically the Cu allocations assigned to boats, require a higher reduction for Cu discharges from boats (92%) than Board staff's proposed Cu TMDLs (60%), which would result in more implementation actions that may have adverse impacts on the environment. These strategies may include, but are not limited to, the use of BMPs, a diver certification program, a boater education program and boat conversions from Cu to alternative AFPs. (The SED does not state that "the EPA TMDL requires more boats to be converted", *but that USEPA's Cu TMDLs require a higher reduction for Cu discharges from boats (92 vs 60% for the proposed Cu TMDLs.) The reduction of Cu discharges from boats could be accomplished by a number of strategies recommended in the revised BPA, and additional strategies developed by the dischargers.*

Second, USEPA's TMDLs include specific allocations for Cu discharges from boats that must be achieved; there is no specific language in the USEPA TMDLs that states that if compliance with the CTR criterion is achieved, no further reduction in Cu discharges from boats is required to achieve compliance with the allocation specified for boats.

In contrast, Santa Ana Water Board staff's proposed Cu TMDLs provide allocation compliance relief: If compliance with the CTR chronic criterion for Cu (or an adjusted water quality standard)

is achieved, strict numeric compliance with allocation for boats is not required. (See also response to S. Anghera's (City's consultant) comment 10 -Attachment 2, above.) This would require fewer actions to achieve compliance, thereby reducing the potential for adverse environmental effects. The revised BPA states, in part, that:

> *"Compliance with the Cu TMDLs will be considered to be achieved if the dissolved Cu CTR criterion of 3.1 µg/L* is achieved (i.e. no impairment is demonstrated per the assessment methodology in the State Listing Policy[9] (SLP)), and no further reduction in Cu discharges will be required even if the Cu wasteload or load allocation for boats is not yet achieved. See revised draft BPA 2021.*

Third, Board staff's Impairment Assessment does not make a finding of sediment impairment and the Cu TMDLs do not require sediment remediation, which would likely include dredging. The proposed Cu TMDLs require sediment assessment using the methodology identified in the State Water Board's Sediment Quality Provisions. The need for sediment TMDLs and remedial actions to address sediment Cu will be considered on the basis of this evaluation . Dredging of sediments may be an implementation strategy for USEPA's TMDLs, which were established, in part, on the basis of sediment quality concerns (exceedances of sediment guidelines). (USEPA's TMDLs were based on assessment conclusions of impairment or potential future impairment.) Dredging, if found to be necessary, would result in a variety of adverse environmental impacts, including impacts to air and water quality, biological resources and greenhouse gases.

For these reasons, the implementation of USEPA's Cu TMDLs would have the same or greater potential environmental impacts as the proposed Cu TMDLs.

Comment 20 – SED, Page 61
3rd para graph, correction needed: ERL values the sediment guidelines, not TEL values

Response 20 –EPA used ERL and TEL guidelines for sediment analysis; therefore, no correction is needed (see Table 4-13 in Staff Report 2016).

Comment 21 – SED, Page 61
Text States: As discussed in 5.1 above, the environmental effects of the reasonably feasible methods of compliance with the proposed TMDLs and Action Plans are expected to have no impact or less than significant impact when standard, available mitigation measures are required and implemented.
Comment: How can this statement be made when the impacts cannot be determined until the dischargers have designed their implementation plans?

Response 21 – The draft SED has been revised to include further analyses of the potential environmental effects of the reasonably feasible methods of compliance and to identify potentially significant environmental impacts. The revised draft SED is being recirculated for public

[9] *State Board's 303(d) Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List*

review and comment.

Comment 22 – SED, Page 62, Paragraph 2
Text States: Reliance on USEPA's Cu, Cd, Zn and Pb TMDLs is no longer scientifically defensible and has the potential to result in unnecessary implementation of tasks and schedules that will use limited resources to achieve unnecessary requirements. This is not in the public interest.
Comment: What specific required actions are named in the EPAs TMDL that are not scientifically defensible compared to the revised TMDL?

Response 22 – USEPA's TMDLs do not include an Implementation Plan, and thus do not require specific actions; however, compliance with the allocations specified in USEPA's Cu TMDLs would require actions by dischargers to achieve a higher reduction of Cu discharges from boats than Board staff's proposed TMDLs (92% vs 60% reduction for USEPA's TMDLs vs the proposed Cu TMDLs, respectively).

USEPA's TMDLs were based on USEPA's impairment assessment that was conducted prior to 2002. Santa Ana Water Board staff's updated Impairment Assessment includes more data collected after USEPA's TMDLs, and also used the newer methodology identified in the State Listing Policy. Board staff's Impairment Assessment, and assessments conducted by State Water Board staff to establish 303(d)lists in 2006, 2010, and 2014-16 (that were approved by USEPA), demonstrated that USEPA's findings of impairment related to Zn, Pb and Cd are no longer supported. However, USEPA's TMDLs for Zn, Pb and Cd remain in place to ensure that the allocations continue to be incorporated into appropriate permits to ensure that impairment from these metals does not occur again. (Note again that the proposed Action Plans for Zn, Hg, As and Cr are no longer a part of the proposed Basin Plan amendments.) With respect to Cu, Santa Ana Water Board staff's assessment confirmed USEPA's finding of water column impairment; however, as noted above, the Cu TMDLs proposed by Board staff require a lower reduction of Cu discharges from boats (60% vs USEPA's 92%) to achieve the proposed Cu TMDLs. The wasteload allocations and load allocations for other Cu sources were also modified based on Board staff's review and application of more recent data.

Comment 23 – SED, Page 63
Text States: The City of Newport Beach provided cost information for the implementation of various Cu TMDLs tasks. The costs presented were provided by a consultant to the City. It is not clear whether and to what extent the costs identified reflect consideration of the potential for coordination with other responsible dischargers (e.g., the County of Orange) or integration of activities (e.g., monitoring and evaluation) with other ongoing or proposed activities .
Comment: The costs provided were to be compliant with the designed monitoring program. None of those monitoring activities relieve the MS4 permittees of their monitoring obligations.

Response 23 - Board staff agree that the monitoring and evaluation required by the proposed Cu TMDLs does not relieve the MS4 permittees of their monitoring obligations. However, this does not prevent the integration of TMDL and MS4 permit monitoring to optimize the use of resources. Furthermore, adjustments to MS4 permit monitoring may be considered to support the TMDL

monitoring requirements for WLAs assigned to MS4 permittees. The draft SED has been revised to include additional cost information. The revised draft SED will be circulated for review and comment.

Comment 24 – SED, Page 65
Text States: The development of a diver certification program would entail an additional cost; however, this cost could be minimized if developed and implemented by City/County staff. The cost may be higher if developed by a contractor. The cost of this program could possibly be offset by certification fees charged to divers.
Comment: The City is concerned that the SED assumes hiring of new City/County staff to implement this program somehow mitigates the costs of implementing this program. Further, charging fees for certification programs is equivalent to developing a new tax. The fee would likely be a significant cost if it is expected to absorb the costs to implement this type of action.

Response 24 – The SED does not assume anything about hiring of City or County staff. Santa Ana Water Board staff agree that some costs would be associated with the development and implementation of this program. Again, dischargers need to develop their own implementation plan(s).

Comment 25 – SED, Page 66, Paragraph 2
Comment: The Regional Board underestimates the costs to evaluate sediment in marinas. The actual costs are expected to be $400,000 a year to implement the monitoring and special studies that were identified in the last draft of the TMDL. This text suggests only $200K for all monitoring. This is not an accurate assessment of effort to be responsive to their data requests.

Response 25 – Clearly, there is disagreement about the anticipated costs of the monitoring. The costs of the monitoring and evaluation required by the proposed Cu TMDLs will depend on the monitoring program proposed by the dischargers and approved by the Santa Ana Water Board. Once again, we point to the opportunities to integrate this monitoring with other ongoing monitoring activities. Cost factors can be considered in the approval of the monitoring proposed by the dischargers.

Note that the City's comment and cost estimates assume that special studies will be required; however, the Special Study task (which entailed requirements for studies only if the TMDLs are not achieved through the implementation of the dischargers' approved implementation plans) has been removed from the draft BPA. This is because the need for and nature of the investigations, and thus their cost, are necessarily speculative. Requirements for to these studies, if needed, would be implemented through appropriate orders under the Water Code and need not be included in the proposed TMDLs.

In addition, a number of the tasks included in these cost estimates have been removed from the proposed Basin Plan amendments reducing the City's total 5 year estimate. Further, costs of the water quality and sediment monitoring, and data analysis and reports would be reduced since the Action Plans for zinc (Zn), mercury (Hg), arsenic (As) and chromium (Cr) were removed from the Basin Plan Amendments. (See Section 6.0 Economic Considerations in the SED 2021 for detailed cost

estimates).

Comment 26 – SED, Page 67, Paragraph 1
Comment: Staff overestimate the value of efficiencies gained by combining monitoring programs. Staff state that monitoring requirements can be easily combined with other monitoring programs. As stated before, the MS4 monitoring program provides no overlap with the requirements proposed in the revised TMDL. That program cannot be changed to match the TMDL monitoring needs until the permit is revised. The sediment monitoring can be combined with the current sediment investigative order. But water column and fish monitoring are not part of that order at this time.

Response 26 – Santa Ana Water Board staff do not allege that there will be no additional costs associated with the monitoring and evaluation required by the TMDLs. We believe that those costs can be reduced by integration with ongoing monitoring efforts, including the annual Bay monitoring conducted by the County, and Southern California Bight monitoring conducted approximately every 5 years. (Also see response to comment 25 above.)

The Executive Officer may approve changes to the MS4 permit monitoring outside the revision of the MS4 permit itself. Moreover, if the proposed Cu TMDLs are approved, changes to the MS4 permit requirements, and corresponding monitoring requirements, will be appropriate and necessary. It is important to bear in mind that in part, the monitoring requirements in the MS4 permit are intended to address MS4 permit requirements related to USEPA's metals TMDLs for the Bay. Again, those monitoring (and permit) requirements can and should be revisited upon approval of revised Cu TMDLs.

See also response to S. Anghera's (City's consultant) comment 23 above.

Attachment 3: Response to City's comments for the Newport Bay Copper (Cu) TMDLs and Non-TMDL Action Plans for Zinc (Zn), Mercury (Hg), Arsenic (As), and Chromium (Cr)

Attachment 3 is a memorandum from Shelly Anghera, PhD, Latitude Environmental, to the City of Newport Beach (dated July 23, 2018). This memorandum summarizes the Santa Ana Water Board's response to the technical comments on the Staff Report for Basin Plan Amendments for Copper Total Maximum Daily Loads (TMDLs) and Non-TMDL Metals Action Plans for Zinc, Mercury, Arsenic, and Chromium in Newport Bay, California (Staff Report 2016). The City's comments were first provided on October 14, 2016. As a response to the City and other stakeholders, and in anticipation of a 2018 Regional Board adoption hearing for these TMDLs/Action Plans, Santa Ana Water Board staff posted revised TMDLs/Action Plan documents on July 10, 2018. These documents included revised Basin Plan Amendments, a revised Substitute Environmental Document, and a Supplemental Staff Report 2018 and were based on comments received. They were not a complete response to the City's comments provided in October 2016. The complete Response to Comments Document 2018 addressing October 2016 comments from all stakeholders was posted on September 27, 2018.
Note also that the comments in the City's Attachment 3 were already submitted in the City's Attachment 6 (October 14, 2016 comments).

Comment 1 – Staff Report (SR) 1.1 *(Comment 6.1 –Attachment 6 in the Response to Comments Document 2018)*

Rhine Channel is included as part of the Lower Newport Bay; however, the U.S. Environmental Protection Agency's (EPA's) 2002 Total Maximum Daily Load (TMDL) identifies it as its own waterbody. Resolution No. RB-2011-0037 states that Rhine Channel TMDLS are not included in organochlorine compound TMDLs because the impairment will be addressed through dredging… The City requests Rhine Channel continue to be managed separately from this metals TMDL.

Regional Board's Response. Based on Response to Key Comment 3, it appears the Regional Board agrees the Rhine Channel is not included in the Copper TMDL.

Addressed. Assumed, yes. However, staff report was not modified. Text includes Rhine as part of Lower Newport Bay.

Response 1 – See Staff Report 2021 (Appendix A of the draft Substitute Environmental Document (SED) 2021), Section 3.2 Toxics TMDLs for Newport Bay and San Diego (USEPA 2002), which discusses the Rhine Channel with respect to the rest of Lower Newport Bay. Metals TMDLs were established by USEPA for dissolved copper (Cu), cadmium (Cd), lead (Pb) and zinc (Zn) for Upper Newport Bay and San Diego Creek; and dissolved Cu, Pb and Zn for Lower Newport Bay (including the Rhine Channel). In addition, mercury (Hg) and chromium (Cr) TMDLs were established by USEPA only for the Rhine Channel. The proposed Cu TMDLs for Newport Bay include the Rhine Channel.

Comment 2 – SR 3.3 State Board Assessment 2006 *(Comment 6.2 –Attachment 6 in the Response to Comments Document 2018)*

Regional Board's Response. Key Comments 5 and 6 discuss sediments and fish tissue data. Regional Board believes it is "pre-mature to make a finding of sediment impairment at this time." The actions require monitoring to determine impairment with the SQO assessment tool and to confirm sediments are not further degrading. If impairments are found, then sediments are to be remediated.

Addressed. No, the analyses in the staff report were not revised and metals in sediments were not delisted. However, the outcome may be sufficient for the City. Sediments are not listed as impaired.

Response 2

Sediments are not considered to be impaired based on the State Water Board's current interpretation of the State Listing Policy (SLP), and the sediment requirements in the proposed Cu TMDLs have been revised. The sediment task in the recommended Implementation Plan now requires continued monitoring and evaluation of sediments in Lower Newport Bay (rather than remediation), based on the State Water Board's Sediment Quality Provisions. In addition, the sediment numeric targets are now based on the sediment quality objectives (SQOs) in the Sediment Quality Provisions. Monitoring and evaluation should be conducted in areas that previously showed exceedances of the sediment ERMs with toxicity, including marinas, Turning Basin and South Lido channel areas that were not dredged. Sediment Cu should also be monitored and evaluated against the Cu ERM (Effects Range Median) to assess trends over time.

Metals in sediments are not 303(d) listed; therefore, they cannot be delisted.
In any case, listing and delisting decisions are determined through a process separate from the

consideration of the proposed TMDLs. The draft Basin Plan Amendments take note of Santa Ana Water Board staff's recommendations regarding listing decisions.

Second, the statement that the revised BPA requires sediment remediation if impairment is found is incorrect. The revised BPA states that stressor identification studies are required if sediments are found to be impacted (based on the SQO assessment); it no longer requires sediment remediation.

The results of the data analyses concerning metals in sediment have been revised in the Staff Report 2021 (Appendix A of the SED 2021). The revised Staff Report 2021 and SED 2021 are being recirculated for public review and comment.
–This comment was also addressed in the response to the City's comment 6.2 – Attachment 6 (Response to Comments Document 2018).

Comment 3 – SR 3.4 Current 303(d) listing and decisions, Table 3.2
(Comment 6.3 - Attachment 6 in the Response to Comments Document 2018)
We believe sufficient data are available to remove sediment toxicity in Upper Newport Bay and Lower Newport Bay waterbodies with the association of metals. See the TMDL Current Data memorandum dated October 13, 2016. Sediment toxicity is listed with organochlorine; compliance with copper TMDL should not be dependent on sediment toxicity because there is no linkage between copper concentrations and the presence of sediment toxicity.
We request the RWQCB staff correct errors and delist general metal categories for Upper Newport Bay. We believe sufficient data are available to remove sediment toxicity in Upper Newport Bay with association of metals. See the TMDL Current Data memorandum dated October 13, 2016. A TMDL listing for sediment toxicity is included with the organochlorine TMDL.
Regional Board's Response. Not addressed, revisions not made.
Addressed. No.

Response 3 – This comment was addressed in the response to the City's comment 6.3 – Attachment 6 (Response to Comments Document 2018). See also response to S. Anghera's (City's consultant) comment 2, above.

Comment 4.1 - SR 4.1.2 *(Comment 6.4 –Attachment 6 in the Response to Comments Document 2018)*
The use of the California Toxic Rule (CTR) copper value is overly conservative as a tool for predicting adverse impacts to marine organisms within Marina del Rey *(sic)*. We believe a site-specific numeric target should be developed for use in the TMDL. The use of CTR values is widely recognized within the scientific community to be overly conservative for use in a regulatory order and does not appear to be directly linked in any way to potential impacts in Newport Bay.

Response 4.1 – This comment was addressed in the response to the City's comment 6.4 – Attachment 6 (Response to Comments Document 2018).

Comment 4.2 *(Comment 6.5 –Attachment 6 in the Response to Comments Document 2018)*
The use of site-specific numeric criteria for metals will allow a clearer and more definitive

demonstration of appropriate numeric standards. The use of strong science to demonstrate the linkage between boat paint and marine quality is necessary and required within the TMDL policy. Furthermore, EPA recommends the use of water-effects ratios (WERs) specifically for copper in marine environments when dissolved organic carbon is present. "When the concentration of dissolved organic carbon is elevated, copper is substantially less toxic and use of Water-Effect Ratios might be appropriate." See EPA's Aquatic Life Criteria Table for copper footnote: http:water.epa.gov/scitech/swguidance/standards/criteria/current/index.cfm#cc.

Response 4.2. This comment was addressed in the response to the City's comment 6.5 – Attachment 6. See responses to the City's comments 6.4 and 6.5 (Response to Comments Document 2018). Both Santa Ana Water Board staff and USEPA employed strong science to confirm that boat paints are the principal source of Cu inputs to the Bay.

Comment 4.3 *(Comment 6.6 –Attachment 6 in the Response to Comments Document 2018)*
We believe the CTR is not being applied appropriately. From the CTR guidance, the 3.1 micrograms per liter (µg/L) value should not be used until a WER is established. Where, as here, the use of the default WER leads to impairment findings that conflict with available toxicity data from the site, it is improper to use the default WER when evidence indicates it is incorrect. (See comments for Section 4.2.4.).

Response 4.3. – This comment was addressed in the response to the City's comment 6.6 – Attachment 6 (Response to Comments Document 2018).

Comment 4.4 *(Comment 6.7 –Attachment 6 in the Response to Comments Document 2018)*
Moreover, though the copper TMDL purports to apply the CTR Criteria Continuous Concentration, it fails to accurately apply the regulation as written and adopted by EPA. Specifically, footnoted to the table set forth under 40 C.F.R. § 131.38(b)(1) provides that "Criteria Continuous Concentration (CCC) equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects." There is no evidence that the RWQCB considered whether locations where instantaneous grab samples exceeded the (unadjusted) CTR CCC would actually exceed the CTR value over a 4-day average. This failure to consider the 4-day averaging period is especially significant because samples taken during different tidal events show variation at numerous locations.
Regional Board's Response. Comments not directly addressed. Regional Board continues to support use of the CTR as the appropriate criteria and uses other TMDLs in Southern California to justify criterion. The Regional Board does acknowledge the dischargers may develop a revised criterion by a WER or an EPA approved biotic ligand model.
Addressed. Comment is not likely to be resolved with the Regional Board but fails to acknowledge it is the Regional Board's obligation to do so before implementing EPA's CTR

Response 4.4. Santa Ana Water Board staff continue to use the CTR criterion as required by law. No justification is needed to use this legally applicable criterion. Other Cu TMDLs in southern California are not used as justification for the use of the criterion, but as examples of similar Cu TMDLs. The Santa Ana Water Board has no legal obligation to develop criteria adjusted by a

WER or EPA approved biotic ligand model before implementing USEPA's CTR criteria. With respect to the 4-day averaging period comment, see response to the City's comment 6.7 – Attachment 6 (Response to Comments Document 2018).

Comment 5 – SR 4.1.5 *(Comment 6.8 –Attachment 6 in the Response to Comments Document 2018)*
The Staff Report provides a discussion regarding federal revisions to the coper [copper] water quality objectives. The City submitted comments to EPA and extended those comments to the RWQCB for consideration in potential revisions to the copper water quality objectives. See the Revised Federal Copper Criteria Standard letter from City of Newport Beach, September 16, 2016.
Regional Board's Response. No acknowledgement.
Addressed. No.

Response 5 – This comment was addressed in the response to the City's comment 6.8 – Attachment 6 (Response to Comments Document 2018). Again, the Santa Ana Water Board has no legal obligation to develop criteria adjusted by a WER or USEPA approved Biotic Ligand Model before implementing USEPA's CTR criteria. If and when USEPA modifies the CTR criteria for Cu, or if WER or other adjustments to the criteria are developed and approved, then suitable adjustments to the proposed/adopted Cu TMDLs must be considered.

Comment 6 – SR 4.1.5 *(Comment 6. 9–Attachment 6 in the Response to Comments Document 2018)*
As stated in the Staff Report, "The CTR criteria for dissolved Cu are expressed as a function of the WER. The WER is generally computed as the acute or chronic toxicity value for a pollutant measured in the affected receiving water, divided by the respective acute or chronic toxicity value in laboratory dilution water. A default WER of one (1) is assumed for the purposes of determining the applicable numeric objectives. This means that the numeric values identified in the CTR for dissolved Cu apply, unless an alternative, scientifically defensible WER is developed, approved and applied to modify the numeric value of the objective. If approved, the revised objectives form the basis for discharge requirements and other regulatory actions."

CCC criterion continuous concentration is based on the assumption that it is multiplied by the WER for site-specific impairment. CTR is not accurately applied as intended with consideration of site-specific conditions, and the RWQCB has not demonstrated the CTR value without adjustment from a WER is not overly conservative.
We believe the CTR is not being applied appropriately. From the CTR guidance, the 3.1 µg/L value should not be used until a WER is established.
Regional Board's Response. See comment 4.
Addressed. Comment is not likely to be resolved with the Regional Board.

Response 6 – This comment was addressed in the responses to the City's comments 6.9 (and 6.4-6.7) – Attachment 6 (Response to Comments Document 2018).
See also responses to S. Anghera's (City's consultant) comments 4.1 – 4.4 above.

Comment 7 – SR 4.1.2 *(Comment 6.10 –Attachment 6 in the Response to Comments Document*

2018)
Sediment impairment should be removed from the TMDL...RWQCB staff did not follow state guidance for [assessing sediment quality]. The preponderance of relevant data does not provide any evidence of a linkage between sediment impairment and metals concentrations.
Regional Board's Response. Sediment impairment removed.
Addressed. Yes.

Response 7 – This comment was addressed in the response to the City's comment 6.10 – Attachment 6 (Response to Comments Document 2018).

Comment 8 - SR 4.2.1 Fish/Mussel Tissue Data
8.1 *(Comment 6.11 –Attachment 6 in the Response to Comments Document 2018)*
Wildlife and human health screening levels used in the Staff Report are not appropriate because they are: (1) not standardized and therefore in some cases were derived differently using different assumptions, depending on the chemical; and (2) not based on recommended screening levels for wildlife and human health screening level evaluations in California.

Response 8.1 - This comment was addressed in the response to the City's comment 6.11 - Attachment 6 (Response to Comments Document 2018).

8.2 *(Comment 6.12 –Attachment 6 in the Response to Comments Document 2018)*
Wildlife screening should be based on a comparison of the total daily intake of contaminated fish by wildlife receptors relative to dose-based toxicity reference values (i.e., Ecological Soil Screening Levels; see Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments, EPA 540-R-97-006, 1997). Background concentrations in mussels and fish collected off the coast of Orange County (as part of regional monitoring programs such as Surface Water Ambient Monitoring Program [SWAMP] and California State Mussel Watch programs) should also be evaluated to determine if tissues from Newport Bay are statistically elevated relative to background concentrations. See the TMDL Current Data memorandum dated October 13, 2016. The fish in Newport Bay are equal to or less than the fish located outside of Newport Harbor during 2009 to 2011 monitoring efforts. Many of the fish evaluated in the Staff Report are not residential and are therefore exposed across a wide area; their exposures can be assumed to be coming from regional sources that are not related to Newport Bay."

Response 8.2 - This comment was addressed in the response to the City's comment 6.12 – Attachment 6 (Response to Comments Document 2018).

8.3 *(Comment 6.13 –Attachment 6 in the Response to Comments Document 2018)*
Human health screening levels were not correctly applied. Screening levels
should be based on regional (California) risk-based screening levels that are available through the EPA Region 9 website, as well as appropriate site-specific information.

Response 8.3 - This comment was addressed in the response to the City's comment 6.13 – Attachment 6 (Response to Comments Document 2018).

8.4 *(Comment 6.14 –Attachment 6 in the Response to Comments Document 2018)*
For evaluation of data for listing purposes, inorganic arsenic in tissue should be measured directly and not estimated when data are being used in a listing determination. The assumption that inorganic arsenic makes up 10% of total arsenic is overly conservative and inappropriate. As indicated by the literature cited in the Staff Report and in many other studies, inorganic arsenic often makes up much less than 10% of the total arsenic. Because inorganic arsenic can be analyzed and quantified, it is imperative that tissue data are collected and analyzed for this arsenic species prior to comparison to screening levels and listing determination.
Regional Board's Response. Not addressed.
Addressed. No.

Response 8.4 - This comment was addressed in the response to the City's comment 6.14 - Attachment 6 (Response to Comments Document 2018).

Comment 9 – SR 4.2.2 *(Comment 6.15 –Attachment 6 in the Response to Comments Document 2018)*
Staff did not accurately characterize current condition in Newport Bay. For a detailed review of relevant data, see the TMDL Current Data memorandum dated October 13, 2016.

Studies older than 5 years should be removed from determining current conditions. In fact, all data presented in the Staff Report with the exception of OC Coastkeeper & Candelaria (2014) should be removed from the analysis of current condition. More recent data are available and should have been included. A summary of the rationale for removing the studies related to water and sediment quality as descriptors of current conditions is summarized below.
List of studies shown in Comment 6.15 (Attachment 6 in the Response to Comments document 2018.)
Regional Board's Response. Key Comment 3 addresses current condition summary.
Addressed. Regional Board did not revise their analyses. The tables in Section 4 are still incorrect. The City provided a detailed current condition report and the Regional Board had over 18 months to revise Section 4 of the Staff Report.

Response 9 – This comment was addressed in the responses to the City's comments 3.1 – Attachment 3, and 6.15 – Attachment 6 (Response to Comments Document 2018). In short, Santa Ana Water Board staff do not agree with the assertion that the tables in Section 4 are incorrect.

Comment 10 - SR 4.2.2 *(Comment 6.16 –Attachment 6 in the Response to Comments Document 2018)*
OC Coastkeeper & Candelaria (2014) support the lack of metals impairment to sediments.
Staff did not accurately summarize the toxicity results for OC Coastkeeper & Candelaria (2014) in Table 4-10 (page 46). Table 4-10 should include the six amphipod toxicity tests that were conducted with no observed toxicity.

The lack of sediment toxicity to amphipods supports the lack of benthic impairment caused by metals. As stated in Section 4.2.1, sediment impairment is determined when there is an exceedance

of effects range medians (ERMs) along with sediment toxicity. Therefore, this study supports the lack of sediment impairment related to metals and negates any actions to support sediment remediation actions (Implementation Task 2), monitoring in sediments (Implementation Task 5), and non-TMDL action plans (Table 6.1 of the Basin Plan Amendment [BPA]).
Regional Board's Response. Not addressed.
Addressed. No.

Response 10 – This comment was addressed in the responses to the City's comments in Attachment 3, and the City's comment 6.16– Attachment 6 (Response to Comments Document 2018).
The finding of sediment impairment based on older State Listing Policy methodology has been removed; the revised draft BPA requires sediment assessments in accordance with the Sediment Quality Provisions. The Staff Report has been revised to reflect these changes and is being recirculated for public review and comment.

Comment 11 – SR 4.2 Data Analysis *(Comment 6.17 –Attachment 6 in the Response to Comments Document 2018)*
Sediment data presented in the Staff Report are not reflective of current condition. See the TMDL Current Data memorandum dated October 13, 2016.

Data representative of current conditions were not included in the Staff Report and should be include the following studies. These studies (with the exception of Rhine Channel) support the lack of impairment to sediment quality by metals and, therefore, support the removal of non-TMDL action plans for zinc, mercury, arsenic, and chromium, as well as and, therefore, support the removal of non-TMDL action plans for zinc, mercury, arsenic, and chromium, as well as sediment quality evaluations and remediation from copper sources in this copper TMDL. Details of all studies are provided in the TMDL Current Data memorandum dated October 13, 2016, and summarized as follows:
A list of studies are shown in Comment 6.17 -Attachment 6 (Response to Comments Document 2018).
Regional Board's Response. See Comment 9.
Addressed. No.

Response 11 – This comment was addressed in the response to the City's comment 6.17 – Attachment 6 (Response to Comments Document 2018). See also response to S. Anghera's (City's consultant) comment 9 above.

Comment 12 – SR 4.2.2, Table 4-4 *(Comment 6.23 –Attachment 6 in the Response to Comments Document 2018)*
The tissue data presented in the Staff Report are too old and not reflective of current condition.
Food Web Study in Fish (Allen et al. 2008)
Department of Fish and Game Monitoring Data (Frueh & Ichikawa 2007)
Bioaccumulation Fish Tissue Study (Allen et al. 2004)
[Details of these studies are shown in Comment 6.23 -Attachment 6 (Response to Comments

Document 2018).]

Further, metals, with the exception of mercury, are not known to bioaccumulate or biomagnify to levels of concern in the Southern California Bight. The old data that are presented in the Staff Report do not indicate that copper or other metals were ever elevated to levels of potential concerns within Newport Bay. For more details on the most recently available tissue data, see the TMDL Current Data memorandum dated October 13, 2016.

More recent studies should be used to support TMDL listing actions. Fish and mussel data from Newport Bay collected after 2006 are available from the State's database, CEDEN (http://www.ceden.org/), and were collected as part of the Newport Bay Watershed Bio Trend Monitoring Program from 2007 through 2010.
Regional Board's Response. See Comment 9.
Addressed. No.

Response 12 – This comment was addressed in the response to the City's comment 6.23 – Attachment 6 (Response to Comments Document 2018). See also response to S. Anghera's (City's consultant) comment 9 above.

Comment 13 - SR 4.2.3 Fish/Mussel Tissue summary
13.1 *(Comment 6.24 –Attachment 6 in the Response to Comments Document 2018*) Insufficient data are available to support a listing. In accordance with the State's Listing Policy, "A water segment shall be placed on the section 303(d) list if the tissue pollutant levels in organisms exceed a pollutant-specific evaluation guideline (satisfying the requirements of section y.1.3) using the binomial distribution as described in section 3.1." (SWRCB 2004). In accordance with the binomial approach, a minimum sample size of 16 is required to evaluate whether there are exceedances of pollutant-specific guidelines.

Response 13.1 - This comment was addressed in the response to the City's comment 6.24 – Attachment 6 (Response to Comments Document 2018).

13.2 *(Comment 6.25 –Attachment 6 in the Response to Comments Document 2018)*
There are insufficient mussel and fish data available for human health and wildlife (fish tissue) listing purposes that are representative of exposure to current sediment conditions; all data collection occurred more than 10 years ago and, therefore, are not representative of current exposures to Newport Bay sediment. For human health, there are fewer than ten samples (and all older than 10 years) upon which listing recommendations are being made.

Response 13.2 - This comment was addressed in the response to the City's comment 6.25 – Attachment 6 (Response to Comments Document 2018).

13.3 *(Comment 6.26 –Attachment 6 in the Response to Comments Document 2018)*
Fish tissue listings are inappropriate because there was no consideration of background fish tissue concentrations of metals prior to listing recommendations. This is critical because background concentrations of mercury, arsenic, and cadmium in fish are elevated above the

screening levels used in the Staff Report, based on ocean-collected fish data collected as part of the 2009 SWAMP program (see the TMDL Current Data Memorandum dated October 13, 2016).
Regional Board's Response. Key Comment 6 discusses fish tissue data support or lack of support for tissue impairment determination. Regional Board still asserts that fish tissue is impaired for arsenic, chromium, and zinc. The technical comments were not addressed and the analyses were not revised to include recent data and exclude older data.
Addressed. No.

Response 13.3 - This comment was addressed in the response to the City's comment 6.26 – Attachment 6 (Response to Comments Document 2018).

Comment 14 – SR 4.2.2
14.1 *(Comment 6.18 –Attachment 6 in the Response to Comments Document 2018)* Sufficient sediment and toxicity data are available to assess impairment from metals.
Thirty-nine sediment/water interface toxicity tests with 48-hour Mytilus development tests have been conducted in Upper and Lower Newport Bay in the last 5 years. No toxicity was observed in any of the tests. The lack of toxicity in the sediment/water interface test supports the lack of impairment from copper in sediments to overlying water. Therefore, this study supports the lack of sediment impairment related to metals fluxing from sediments and supports the removal of special studies related to copper loading from sediment (Implementation Task 6.1).

Response 14.1 - This comment was addressed in the response to the City's comment 6.18 – Attachment 6 (Response to Comments Document 2018). The Special Studies task has been removed from the draft BPA.

14.2 *(Comment 6.19 –Attachment 6 in the Response to Comments Document 2018)*
One hundred twenty-two sediment toxicity tests with 10-day amphipod acute tests have been conducted in Upper and Lower Newport Bay in the last 5 years. A toxic response (i.e., survival less than 80%) was detected in 22 samples. However, the toxic response does not co-occur with ERM exceedance in metals, except for two instances in the Rhine Channel where mercury exceeds the ERM. The lack of sediment toxicity to amphipods supports the lack of benthic impairment caused by metals. As stated in Section 4.2.1, sediment impairment is determined when there is an exceedance of ERMs along with sediment toxicity. Therefore, this study supports the lack of sediment impairment related to metals and supports removal of known sediment copper impairment actions (Implementation Task 2), monitoring in sediments (Implementation Task 5), and all the recommended actions within the non-TMDL action plans (Table 6.1 of the BPA).

Response 14.2 - This comment was addressed in the response to the City's comment 6.19 – Attachment 6 (Response to Comments Document 2018). The Non-TMDL Action Plans are no longer a part of the proposed Basin Plan amendments.

14.3 *(Comment 6.20 –Attachment 6 in the Response to Comments Document 2018)*
Wildlife and human health screening levels used in the Staff Report are not appropriate because

they are: (1) not standardized and therefore in some cases were derived differently using different assumptions, depending on the chemical; and (2) not based on recommended screening levels for wildlife and human health screening level evaluations in California. A review of available fish tissue does not indicate any accumulation of metals at levels higher than regional concentrations. Therefore, these studies support lack of tissue impairment related to in-bay sources for metals and supports removal of all the recommended actions within the non-TMDL action plans (Table 6.1 of the BPA).

Response 14.3 - This comment was addressed in the responses to the City's comments 6.20 and 6-11-6.14 –Attachment 6 (Response to Comments Document 2018).

14.4 *(Comment 6.21 –Attachment 6 in the Response to Comments Document 2018)*
We believe Rhine Channel should be managed outside of a metals TMDL.

Response 14.4 – The Rhine Channel is being managed separately for some pollutants, but was included by USEPA in their Cu TMDLs and in the proposed Cu TMDLs. See response to S. Anghera's (City's consultant) comment 1 above.

14.5 *(Comment 6.22 –Attachment 6 in the Response to Comments Document 2018*)
The entire Section 4 needs to be revised to include only current information.
Regional Board's Response. See Comment 9.
Addressed. No.

Response 14.5 - This comment was addressed in the response to the City's comment 6.22 – Attachment 6 (Response to Comments Document 2018). See also response to S. Anghera's (City's consultant) comment 9 above.

Comment 15 – SR 4.2.4
15.1 *(Comment 6.27 –Attachment 6 in the Response to Comments Document 2018)* The data do not demonstrate copper or any other metals are causing impairment in the water, sediment, and tissue in Upper and Lower Newport Bay.

Response 15.1 - This comment was addressed in the response to the City's comment 6.27 – Attachment 6 (Response to Comments Document 2018).
The available data confirm that the Bay is still impaired for dissolved Cu. The State Water Board's data assessment for the latest 303(d) list (2014-16) determined that Newport Bay is still impaired for Cu, and the status for Cu in the Bay is DO NOT DELIST. Additional data from Anchor QEA's study for the City (2015, 2016) show that over 30% of the samples exceeded the dissolved Cu CTR chronic criterion of 3.1 µg/L. Data from DPR's latest monitoring study (August 2019) also show impairment as dissolved Cu exceeded the CTR chronic criterion in 50% of the samples taken in Newport Bay.

See response to the City's comment 3.4.1 -City Letter above.

15.2 *(Comment 6.28 –Attachment 6 in the Response to Comments Document 2018)*
1) Although there have been exceedances of the CTR in localized areas of the harbor, there

are no toxic responses to suggest that dissolved copper concentrations are causing impacts to the most sensitive of marine organisms. There are 39 sediment/water interface tests conducted in the last 5 years as well as five water column toxicity tests in the last 6 months. No toxicity to the most sensitive toxicity test (48-hour Mytilus development) has been observed.

Response 15.2 - This comment was addressed in the response to the City's comment 6.28 – Attachment 6 (Response to Comments Document 2018).

15.3 *(Comment 6.29 –Attachment 6 in the Response to Comments Document 2018)*
2) More than 215 sediment samples that represent the current sediment surface condition were evaluated. There are only two instances of a metal ERM exceedance occurring in the 122 sediment toxicity (10-day amphipod acute) tests. Therefore, the sediment and toxicity data do not support the determination of impairment based on the listing policy.

Response 15.3 - This comment was addressed in the response to the City's comment 6.29 (6.18, 6.19) –Attachment 6, and the City's comments in Attachment 3 (Response to Comments Document 2018).

15.4 *(Comment 6.30 –Attachment 6 in the Response to Comments Document 2018)*
3) Wildlife and human health screening levels used in the Staff Report are not appropriate because they are: (1) not standardized and therefore in some cases were derived differently using different assumptions, depending on the chemical; and (2) not based on recommended screening levels for wildlife and human health screening level evaluations in California. Tissue does not appear to be elevated above regional concentrations. There is an insufficient number of samples to support a fish tissue listing for wildlife or human health.

Response 15.4 - This comment was addressed in the responses to the City's comments 6.30 (6.11-6.14, 6.20, and 6.23-6.25) –Attachment 6, and the City's comments in Attachment 3 (Response to Comments Document 2018)

15.5 *(Comment 6.31 –Attachment 6 in the Response to Comments Document 2018)*
We believe sufficient data are available to delist sediment toxicity.

Regional Board's Response. Not addressed.
Addressed. No.

Response 15.5 The delisting of sediment toxicity is a separate issue from these TMDLs. This comment was addressed in the response to the City's comment 6.31–Attachment 6 (Response to Comments Document 2018).

Comment 16 – SR 4.2.4, Table 4-13
16.1 *(Comment 6.33 –Attachment 6 in the Response to Comments Document 2018)*
Table 4-13 is difficult to follow. It is unclear what actions the RWQCB are taking. Table 4-14 provides a clear understanding of the RWQCB's intent to add new listings to the 303(d) list. The

Staff Report does not accurately assess the sediment, water, and tissue impairments related to metals and does not support the RWQCB assessment for listing.

Response 16.1 - This comment was addressed in the response to the City's comment 6.33 – Attachment 6 (Response to Comments Document 2018).
Note that in Santa Ana Water Board staff's Impairment Assessment, sediment metals were assessed with older guidelines based on the State Water Board's interpretation of the State Listing Policy at that time. Sediments need to be assessed by SQO methodology, which is required in the proposed Cu TMDLs. The revised Staff Report 2021 and draft SED 2021 are being recirculated for public review and comment.

16.2 *(Comment 6.34 –Attachment 6 in the Response to Comments Document 2018)* Copper, zinc, and mercury in sediments should not be listed on the 303(d) list for Lower Newport Bay. There are insufficient exceedances of ERMs with the presence of toxicity. Only two instances in the last 5 years have found ERM exceedance of a metal with toxicity; both occurred in the Rhine Channel where multiple organic contaminants are also elevated above their respective ERM values.

Response 16.2 - This comment was addressed in the response to the City's comment 6.34 – Attachment 6 (Response to Comments Document 2018).

16.3 *(Comment 6.35 –Attachment 6 in the Response to Comments Document 2018)* There are exceedances of dissolved copper CTR; we recommend keeping dissolved copper on the 303(d) list, but a TMDL is not needed. Evidence suggests the Department of Pesticide Regulation (DPR) guidance and regional improvements in water quality will continue to support a healthy marine habitat and provide significant reductions into the future. Water column toxicity has not been demonstrated to be associated with CTR exceedances; therefore, impairment has not been shown.

Response 16.3 - This comment was addressed in the response to the City's comment 6.35 – Attachment 6 (Response to Comments Document 2018).

16.4 *(Comment 6.36 –Attachment 6 in the Response to Comments Document 2018)*
Arsenic, zinc, copper, and mercury have no reason to be listed on the 303(d) and should be delisted.

Response 16.4 - This comment was addressed in the response to the City's comment 6.36 – Attachment 6 (Response to Comments Document 2018).

16.5 *(Comment 6.37 –Attachment 6 in the Response to Comments Document 2018)*
Arsenic, zinc, copper, and mercury for fish tissue in either Upper or Lower Newport Bay should not be listed on the 303(d) list. RWQCB staff have not applied appropriate screening criteria and have not demonstrated any potential sources for these compounds to Newport Bay that do not exist off the coast. Levels in the fish are similar to fish in coastal zones outside the influence of Newport Bay sources.

Regional Board's Response. See Comment 9.
Addressed. No.

Response 16.5 - This comment was addressed in the response to the City's comment 6.37 – Attachment 6 (Response to Comments Document 2018).
See also response to S. Anghera's (City's consultant) comment 9 above.

Comment 17 – SR 4.3 *(Comment 6.38 –Attachment 6 in the Response to Comments Document 2018)*
The Staff Report does not accurately assess the sediment, water, and tissue impairments related to metals and does not support the RWQCB assessment for problem statement.
Regional Board's Response. See Comment 9.
Addressed. No.

Response 17 – This comment was addressed in the responses to the City's comments 6.38 (and 6.3 –6.37) – Attachment 6 (Response to Comments Document 2018). See also response to S. Anghera's (City's consultant) comment 9 above.

Comment 18 - SR 4.3, Table 4-15 *(Comment 6.39 –Attachment 6 in the Response to Comments Document 2018)*
Toxicity in water and sediment have not demonstrated impairment and therefore should be removed from table.
Regional Board's Response. Not addressed.
Addressed. No.

Response 18 – This comment was addressed in the response to the City's comment 6.39 – Attachment 6 (Response to Comments Document 2018).

Comment 19 – SR 5
19.1 *(Comment 6.40 –Attachment 6 in the Response to Comments Document 2018)*
A copper TMDL is not needed. There are ongoing programs that will continue reductions of metals to the marine environment for the next 15 years*. The effectiveness of ongoing source reductions should be evaluated to determine if additional actions are required.
*[*Board staff now propose a maximum compliance schedule time of 12 years.]*

Response 19.1 - This comment was addressed in the response to the City's comment 6.40 – Attachment 6 (Response to Comments Document 2018). See also response to S. Anghera's (City's consultant) comment 15.1 above.

19.2 *(Comment 6.41 –Attachment 6 in the Response to Comments Document 2018)*
Past actions have made a lot of progress
- Dredging in Upper and Lower Newport Bay
- Ongoing municipal separate storm sewer systems (MS4s), source reductions
- Clean boating programs
- Regional air quality improvements

Response 19.2 - This comment was addressed in the response to the City's comment 6.41 – Attachment 6 (Response to Comments Document 2018).

19.3 *(Comment 6.42 –Attachment 6 in the Response to Comments Document 2018)*
Anticipated and expected future actions that will reduce copper in the coming years include:
Continued MS4 reductions/controls
Brake pad initiative will reduce copper and zinc throughout California
Future maintenance dredging may contribute to deepening of harbor and increases in circulation.

Regional Board's Response. Key Comment 4 addresses the need for a new copper TMDL. The City still stands by this comment. As the Regional Board have stated, there is an existing TMDL that includes metals. There are management actions currently being implemented that, with time to evaluate, may be sufficient to reduce copper in the water to levels that meet beneficial uses.

Addressed. Comment addressed, but City does not agree with response.

Response 19.3 - See response to the City's comment 6.42 –Attachment 6 (Response to Comments Document 2018).

Comment 20 – SR 5.3.1 *(Comment 6.45 –Attachment 6 in the Response to Comments Document 2018)*
The loadings from copper antifouling paints (AFPs) were incorrectly calculated (see technical memorandum: Newport Bay TMDL Copper Leachate Draft Memo_101216_v2.PDF).
The Staff Report incorrectly calculated loading from copper AFP and failed to consider a range of leach rates from currently available copper AFP on the market, appropriate vessel counts, conditional best management practice (BMP) requirements.
List of calculation errors and other considerations are detailed in Comment 6.45 – Attachment 6 (Response to Comments document 2018).
After adjusting for the incorrect calculations and considering reasonable alternative approaches to the loading calculation, a more accurate loading rate of approximately 11,000 pounds per year (lbs/yr) is expected, rather than a loading rate of approximately 36,000 lbs/yr as stated in the Staff Report.

Regional Board's Response. The calculations were not corrected as requested. The revised approach taken by the Regional Board is to disregard the importance of the calculations (e.g., number of boats to be converted) and focus TMDL compliance on attainment of the copper CTR in the water column. So, regardless of the number of boats converted, the water must be below the CTR.

Addressed. No, but it is now a moot point because the Regional Board will not use the calculations to justify implementation actions.

Response 20 – This comment was addressed in the response to the City's comment 6.45 - Attachment 6 (Response to Comments Document 2018). Santa Ana Water Board staff do not agree that the calculations are incorrect. Further, it is incorrect to assert that the Santa Ana Water Board is disregarding the importance of the calculations. The purpose of the Cu TMDLs is to achieve the applicable water quality standard, i.e., the CTR chronic criterion for Cu.

Comment 21 – SR 5.3.4 *(Comment 6.46 –Attachment 6 in the Response to Comments Document 2018)*
Bay sediments are not elevated in metals at concentrations above the ERM and are not associated with the presence of sediment toxicity or overlying water toxicity. This section should be removed.

Regional Board's Response. Not addressed, Staff Report not revised as requested.

Addressed. No.

Response 21 –This comment is incorrect and has been addressed in the response to the City's comment 6.46 - Attachment 6 (Response to Comments Document 2018). The Staff Report and draft BPA are being revised to reflect revised findings regarding sediment impairment. These documents are being recirculated for public review and comment.

Comment 22 - SR 5.3.6 *(Comment 6.47 –Attachment 6 in the Response to Comments Document 2018)*
Algae and other vegetation have not been shown to be a concern or a pathway for metals uptake in higher trophic organisms in Newport Bay.

Regional Board's Response. Not addressed.

Addressed. No.

Response 22 – This comment was addressed in the response to the City's comment 6.47 - Attachment 6 (Response to Comments Document 2018). (Note though that Task 6 in the Implementation Plan (Conduct Special Studies) has been removed from the recommended Implementation Tasks in the BPA.)

Comment 23 – SR 5.4 *(Comment 6.48 –Attachment 6 in the Response to Comments Document 2018)*
The City has a hydrodynamic model that can more accurately assess the loading capacity for copper. It should be used.

Regional Board's Response. Not addressed.

Addressed. No.

Response 23 – This comment was addressed in the response to the City's comment 6.48 - Attachment 6 (Response to Comments Document 2018). The BPA language has been slightly modified to:
"Compliance with the Cu TMDLs will be considered to be achieved if the dissolved Cu CTR criterion of 3.1 µg/L is achieved, i.e. no impairment is demonstrated per the assessment methodology in the State Listing Policy (SLP)[10], and no further reduction in Cu discharges will be required even if the Cu*

[10] *State Board's 303(d) Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (2004, amended 2015)*

wasteload or load allocation for boats is not yet achieved. If, however, the Cu wasteload or load allocation for boats is achieved, but the CTR criterion is not achieved, these TMDLs, including the allocations identified for boats and other sources, will be reviewed and revised as needed to ensure CTR compliance and further reduction in Cu discharges from Cu antifouling paints (AFPs) and/or other sources may be required.
**(or a chronic CTR criterion adjusted by a Water Effects Ratio)*
The percent reductions and schedule for those reductions identified above shall become moot upon the demonstration that compliance has been achieved.

Comment 24 – SR 5.5 *(Comment 6.49 –Attachment 6 in the Response to Comments Document 2018)*
A margin of safety (MOS) was not calculated correctly; therefore, load allocations were not accurately calculated for boats within Newport Bay (see technical memorandum: Newport Bay TMDL Copper Leachate Draft Memo_101216_v2.PDF).
MOS. The MOS was incorrectly calculated as 20% of the TMDL, rather than more appropriately calculated as 20% of the sum of the waste load allocation (WLA) and load allocations (LAs). This approach overestimates the MOS and simultaneously underestimates the allocation for one or more types of WLAs or LAs. See other comments provided by the City about the overly conservative use of 20% MOS in the TMDL calculation.

LA for boats. Because the MOS was overestimated, in order to make the TMDL equation equitable (TMDL = WLA + LA + MOS), one or more WLAs or LAs were underestimated. The Staff Report appears to be solving for the copper LA for boats (all other WLA or LA values had corresponding references supporting the development of those values). Therefore, it is reasonable to assume the difference in the overestimated MOS should have been applied to the underestimated LA for boats. As such, the LA for boats should be 6,448 lbs/yr instead of 6,060 lbs/yr.

Alternative MOS. The Staff Report failed to justify a MOS of 20%. Considerations should be made for the use of an alternative MOS value of 10%. Using a similar approach for recalculating the LA for boats as stated above, a 10% MOS would suggest LAs for boats should be 7,330 lbs/yr.
Regional Board's Response. Key Comment 7 discusses MOS. The MOS was revised to be 10%. Boat count was revised.
Addressed. Yes.

Response 24 – The Margin of Safety was reduced to 10%.
This comment was addressed in the response to the City's comment 6.49 - Attachment 6 (Response to Comments Document 2018).

Comment 25 – SR 5.5, Table 5.5 *(Comment 6.50 –Attachment 6 in the Response to Comments Document 2018)*
Please confirm how the boat LA was calculated. It appears to have been back- calculated from known values for the TMDL, WLAs (for MS4 permittees, CalTrans, Other NPDES permittees, and boatyards), and LAs (for Agricultural runoff, open space runoff, and air deposition).
Regional Board's Response. Not addressed.

Addressed. No.

Response 25 – This comment was addressed in the response to the City's comment 6.50 - Attachment 6 (Response to Comments Document 2018). (See also Table 5.5, Staff Report 2021.)

Comment 26 - SR 5.6.1.3.1.4 *(Comment 6.51 –Attachment 6 in the Response to Comments Document 2018)*
Conversion to alternative paints is not as easy as RWQCB staff suggest. See other comments provided by the City about the difficulty in purchasing and applying proven paints that are non-toxic.

Regional Board's Response. Key Comment 2 addresses the availability of nontoxic paints and uses other TMDLs as examples to support feasibility. The response does not appear to be sufficient in addressing the boating community's concerns.
Additional materials have been provided to summarize the availability of nontoxic paints through a literature review of work conducted by other agencies.
Addressed. Not sufficiently to address the boating community's concerns.

Response 26 – Some non-biocide AFPs (such as Intersleek) have already been used by boaters in Shelter Island Yacht Basin and the County of Los Angeles for use in Marina del Rey. (As a matter of information, see links to studies below.)
This comment was also addressed in the response to the City's comment 6.51 - Attachment 6 (Response to Comments Document 2018).
Port of San Diego alternative paint study
https://www.portofsandiego.org/environment/copper-reduction-program.html
County of Los Angeles Cu Proposed Plan
http://www.waterboards.ca.gov/losangeles/board_decisions/basin_plan_amendments/technical_documents/96_New/Revised_SIPJustificationReport_041817_final_RB.PDF

Comment 27– SR 5.6.2.1 *(Comment 6.52 –Attachment 6 in the Response to Comments Document 2018)*
Regional Board outreach was not sufficient. The TMDL was a surprise to most named responsible parties.

Regional Board's Response. Key Comment 11 discusses outreach. The Regional Boards' response misses the point of the comment. While the City knew of the pending TMDL, "most named responsible parties" did not.
The TMDL names Dischargers/Responsible Parties as: City of Newport Beach (City), County of Orange (County), Marina owners/operators, Individual boat owners, and Underwater hull cleaners. All dischargers other than the City and County were not notified. Further, Staff agree to hold workshops to discuss boat paints with the community and no workshops were held.
Addressed. No.

Response 27 – This comment was addressed in the response to the City's comment 6.52 -

Attachment 6 (Response to Comments Document 2018).
The statements above are not correct. A number of meetings were held for public participation including: two CEQA Scoping Meetings and the Santa Ana Water Board informational meeting in July 2015, the Regional Board meeting on October 28, 2016, and proper public and agency notification was given. (A Santa Ana Water Board hearing was also scheduled in October 2018 but was later postponed.) Notification was sent to everyone on the Cu TMDLs email list for these meetings, posted on the Santa Ana Water Board's website, and published in the newspaper.
All pertinent documents were posted on the Santa Ana Regional Water Quality Board's website at https://www.waterboards.ca.gov/santaana/water_issues/programs/tmdl/tmdl_metals.html

Santa Ana Water Board staff also held public workshops on May 9 and May 10, 2019. At the workshops, Board staff provided an overview of the Cu TMDLs and Metals Actions Plans and received comments from the public, including boat owners. Staff has prepared written responses to the comments received during the two workshops. These responses will be made available for public review. Department of Pesticides (DPR) staff also presented at the workshop and discussed DPR's leach rate regulation for Cu AFPs.

In addition, boaters were made aware of Cu issues in the Bay during a number of projects conducted by Coastkeeper to support the Cu TMDLs including a Cu-Metals Marina Study (2007), Newport Bay Stormdrain Metals Study (2010), and the Copper Reduction in Lower Newport Bay Study (2013). Furthermore, as part of the Copper Reduction Study (2013), the City passed Resolution No.2010-53 to encourage boaters to convert from Cu to non-Cu hull paints (at a public City Council meeting).

Comment 28 – SR 6.2 *(Comment 6.53 –Attachment 6 in the Response to Comments Document 2018)*
Recent sediment chemistry data from the QC Monitoring Program (Mass Loading Station, and Wetland and Estuary elements), Bight '13 Regional Monitoring Program, QC Coastkeeper & Candelaria (2014) study, Federal Dredging Post Sediment Condition study, and Rhine Channel Post Remediation study do not support the justification for arsenic, chromium, mercury, and zinc impairments; therefore, these non-TMDL action plan should be removed from the Staff Report (see TMDL Current Data memorandum dated October 13, 2016). Only Rhine Channel shows elevated metals concentrations relative to ERM guidance values, but the Rhine Channel is subject of an ongoing Cleanup and Abatement Order.
Regional Board's Response. See Comment 9.
Addressed. No.

Response 28 – This comment was addressed in the response to the City's comment 6.53 - Attachment 6 (Response to Comments Document 2018). See also response to S. Anghera's (City's consultant) comment 9 above.

Comment 29 – SR 7.0 BPA and Implementation Plan *(Comment 6.54 –Attachment 6 in the Response to Comments Document 2018)*
As provided, the TMDL calculations to estimate harbor loading from boat paint are inaccurate and do not accurately assess the copper AFP reduction measures needed to comply with the CTR. The

City or any other discharger cannot develop an implementation plan for copper reductions until the impairment has been defined accurately. The implementation actions have not been proven to be necessary to protect beneficial uses because impairment has not been accurately assessed and demonstrated.

Regional Board's Response. Regional Boards response is partially defined in Comment 20. In addition, the revised approach puts the dischargers in charge of developing an implementation plan, therefore we cannot comment on the Regional Boards recommended implementation plan.

Addressed. No, but it is now a moot comment.

Response 29 – This comment was addressed in the response to the City's comment 6.54 - Attachment 6, and Attachment 1 (Response to Comments Document 2018). See also response to S. Anghera's (City's consultant) comment 9 above.
Santa Ana Water Board staff's Impairment Assessment confirms USEPA's finding of water column impairment in the Bay due to Cu. The State Water Board's data assessment for the latest 303(d) list (2014-16) determined that Newport Bay is still impaired for Cu, and the status for Cu in the Bay is DO NOT DELIST. Additional data from Anchor QEA's study for the City (2015, 2016) show that over 30% of the samples exceeded the dissolved Cu CTR chronic criterion of 3.1 µg/L. Data from DPR's latest monitoring study (August 2019) also show impairment as dissolved Cu exceeded the CTR chronic criterion in 50% of the samples taken in Newport Bay.
See response to the City's comment 3.4.1 – City Letter, and S. Anghera's (City's consultant) 15.1 above.

We do not understand why comments on Santa Ana Water Board staff's Implementation Plan for the proposed Cu TMDLs cannot be provided because this plan requires the dischargers (in particular, the City and County) to assume a lead role in developing specific implementation strategies.

Comment 30 – SR 8.3 Cost Considerations *(Comment 6.55 –Attachment 6 in the Response to Comments Document 2018)*
For a summary of the 5-year cost to implement the program without any cost considerations to the boat owners and marina operators, see the TMDL Cost Estimate memorandum dated October 13, 2016.
The cost considerations fail to address the full spectrum of requirements under the TMDL, including implementation plan development; compliance monitoring and special studies; in-water hull cleaning diver certification; and continuing education programs for boaters, boatyards, and marinas. Furthermore, a more rigorous economic accounting should be conducted, including providing a range of costs for the specific items mentioned, such as dredging to remediate copper in Lower Newport Bay, ongoing maintenance costs associated with more frequent boat hull painting, and costs to implement specific BMPs.

The potential cost impacts were only considered for individual boat owners and not the financial impact to marina operators and the local marina industry. Banning the use of copper-based AFPs may cause most boaters to move to nearby harbors or leave boating because of this financial (and perceived as unnecessary) hardship. Only the wealthiest boaters will be able to afford to stay involved with boating, and they may choose nearby harbors and hurt the local economy by

creating unfair impacts on marina owners and businesses. Other harbors are scheduled for copper TMDL considerations, but those TMDLs are years away from being enacted, and when enacted will have years to become compliant. Thereby, the requirements set forth for Newport Bay will affect our community more than 10 years before other harbors are impacted by this legislation.

Regional Board's Response. Staff report was not modified to include consideration of costs noted in this comment.

Key comment 12.3 discusses costs to implement TMDL in the SED. Only costs provided in the SED included monitoring costs. A separate comment is provided for SED monitoring cost assumptions.

Addressed. No.

Response 30 –The economic analysis in the draft SED was revised to include estimated costs provided by the City. The draft SED 2021 is being recirculated for public review and comment.

Comment 31 – SR 9.0 *(Comment 6.56 –Attachment 6 in the Response to Comments Document 2018)*

This TMDL was not peer reviewed. The RWQCB cannot assume review for the EPA 2002 TMDL that included organics is either reflective or relevant to this copper TMDL.

Regional Board's Response. Key Comment 9 discusses peer-review. The Regional Board disagrees with the City's concern that the material in the staff report is not sufficiently reviewed.

Staff claim the studies they included were peer-reviewed. While that may be true, many of the comments are critical of the methods in which those peer-reviewed studies were included in the Staff report (e.g., inaccurate calculations of copper loading from boats). Therefore, the comment still stands.

Addressed. Comment addressed, but City does not agree with response.

Response 31 – Pursuant to Health and Safety Code Section 57004 proposed rules that have a scientific basis or components generally must be submitted for external scientific peer review. However, per the Unified California Environmental Protection Agency Policy and Guiding Principles for External Scientific Peer Review (March 13, 1998), this peer review is <u>not required</u> if a new application of an adequately peer-reviewed product does not depart significantly from its scientific approach. Santa Ana Water Board management is responsible to determine whether or not a work product must be submitted for external scientific peer review (see Exhibit F, California Environmental Protection Agency (Cal/EPA) External Scientific Peer Review Guidelines, Gerald W. Bowes, PhD, November 2006).

Santa Ana Water Board staff prepared a memorandum for Board management consideration, documenting the application of peer reviewed scientific work products, methods and approaches in developing the proposed Basin Plan amendments. (Memorandum to Hope Smythe, Justification for No Additional Peer Review for the Proposed Basin Plan Amendments to Incorporate Copper (Cu) TMDLS and Action Plans for Zinc (Zn), Mercury (Hg), Arsenic (As) and Chromium (Cr) for Newport Bay, California November 2, 2020.) This memo provides justification for Board staff's determination that no additional external scientific peer review of the proposed Basin Plan amendments is required. Santa Ana Water Board management concurred with Board staff's determination. In short, it was

determined, pursuant to the applicable guidance cited above, that the proposed Basin Plan amendments do not require further external scientific peer review. The Staff Report is being revised to update the peer review discussion, and the revised Staff Report 2021 is being recirculated for public review and comment.

See also the response to the City's comment 6.56 - Attachment 6 (Response to Comments Document 2018).

Comment 32 – SR 9.2 *(Comment 6.57 –Attachment 6 in the Response to Comments Document 2018)*

The City does not believe the RWQCB has actively or has been willing to work with City. The City has provided comments multiple times and provided data for the last 5 years and the RWQCB has not incorporated the City's opinions or current data. Further Reginal Board outreach was not sufficient. The TMDL was a surprise to most named responsible parties.

Regional Board's Response. This comment was not addressed, and it provides an example of the original concern. The City has waited 21 months for a response to comments and a revised set of TMDL documents. The Regional Board did not provide appropriate responses within a reasonable time.

Executive Officer and staff assured the Board the comments would be "thoroughly addressed" and two workshops with the stakeholders in the boating community would be provided. It has been 21 months since the October 28, 2016 workshop and there have been no workshops, no outreach to the boating community, no inclusion of named dischargers in the development of the latest draft TMDL. A very general response to comments was provided, but numerous specific technical comments were not addressed or acknowledged.

The City's October 14, 2016 letter requests the Regional Board work with the City numerous times. There has been no efforts on the Regional Board's behalf to work with the City.

Addressed. No.

Response 32 – This comment was addressed in the response to the City's comment 6.57 - Attachment 6 (Response to Comments Document 2018).

All comments were comprehensively reviewed and "thoroughly addressed" *including all calculations. Revisions were made to the Basin Plan Amendment (BPA) and the Substitute Environmental Document (SED), if warranted, and a Supplemental Staff Report 2018, and the revised Staff Report were developed to review and explain the revisions and responses to Key Comments. The revisions were based on comments received in October 2016 and from meetings after October 2016. Moreover, the responses were timely — responses to comments on the SED from public agencies must be provided at least 10 days prior to approval of the SED; all other responses to comments must be made available prior to (which could be at the adoption hearing) the Regional Board's approval of the SED and the proposed basin plan amendment. (Cal. Code Regs., tit. 23, § 3779; 40 C.F.R. § 25.8.)*

*The statement "*There has been no efforts on the Regional Board's behalf to work with the City" *is not true. Multiple meetings were conducted with the City, the County, Irvine Company and Coastkeeper to discuss the revised BPA, Supplemental Staff Report and the revised SED prior to posting the revised BPA documents. ALL original comments were also addressed in the Response*

to Comments Document 2018 that was posted on September 27, 2018. Meetings/conference calls were also held with the City, County and Irvine Company after the revised BPA documents were posted (these included, but were not limited to: January 17, 2019 (Irvine Company); January 22, 2019 (City, County); and February 28, 2019 (City, County, Irvine Company).

In addition, Santa Ana Water Board staff held two public workshops in the City of Newport Beach on May 9 and 10, 2019 to discuss the proposed Basin Plan Amendments and to solicit comments. On June 19, 2019, Board staff gave a presentation concerning the proposed Amendments to the Newport Bay Executive Committee, which includes policy-level representatives from the City, County, and Irvine Company, as well as the Santa Ana Water Board.

Attachment 4: Review Non-copper-based Alternative Antifouling Paints to Support Discussion on Implementation Strategies Identified in the Revised Newport Bay Copper TMDLs and Non-TMDL Action Plans for Zinc (Zn), Mercury (Hg), Arsenic (As), and Chromium (Cr)

Attachment 4 is a memorandum from Shelly Anghera, PhD, Latitude Environmental, to the City of Newport Beach (dated August 21, 2018) that discusses a review of non-copper-based Alternative Antifouling Paints to support implementation strategies identified in the revised Newport Bay Copper TMDLs and Non-TMDL Action Plans for Zinc (Zn), Mercury (Hg), Arsenic (As), and Chromium (Cr). Note that currently only proposed Copper (Cu) TMDLs are included in these Basin Plan Amendments.

The pending revised Newport Bay Copper (Cu) total maximum daily load (TMDLs) and Non-TMDL Action Plans for Zinc, Mercury, Arsenic, and Chromium (Copper TMDL) requires boat owners to reduce the use of copper-based antifouling paints (AFP) through the conversion of paints to non-copper AFP to meet water quality objectives. Conversion to lower leach copper paints is not sufficient based on the loading calculations provided in the Regional Water Quality Control Board's (Regional Board) proposed Basin Plan Amendment. The City of Newport Beach (City) maintains concerns heard from the residents that alternative nontoxic boat paints are not yet proven to be dependable alternatives. The Regional Board continues to assert nontoxic alternative AFP are readily available. Key response to comments #2 addresses the concerns on the availability of nontoxic AFPs…

In response to both the claims of the availability of nontoxic (i.e., non-biocidal) paints and the potential for use of alternative biocide AFPs, a summary of the findings from four studies commissioned by USEPA, CalEPA Department of Toxic Substances Control (DTSC), and Washington State Department of Ecology (Ecology) are provided here.

This summary will demonstrate continued concerns regarding the availability and proven effectiveness and safety of alternative AFP.

1) One paint does not fit all vessel types, all environments (temperature ranges, seasons, types of fouling organisms), and all boat owner needs/uses. The studies presented here suggest AFP effectiveness can vary from boat to boat, year to year, and place to place.
2) Nontoxic (non-biocidal) AFP testing has not been conducted long enough to

gain the confidence of the boaters. The earliest paint conversion studies in Southern California began less than 10 years ago.

3) AFP brands and formulations are constantly changing which contributes to the difficulty in gaining boater confidence in alternative AFPs. Not only are the formulas constantly changing, new paints are added to the market and old paints are discontinued. For the studies summarized in this paper, over half of the paints evaluated have been discontinued or the ingredients (formulations) have changed.
4) All AFP contain hazardous chemicals and their safety to human health or other receptors in the environment should be confirmed prior to forcing the boaters to change to potentially more hazardous alternatives.
5) The most supported non-biocidal paints (soft-non-biocidal) were developed for large commercial vessels. These paints use water motion to remove organisms and require specific speeds at certain durations and frequency to sluff off fouling organisms. Intersleek 900 (now Intersleek 1100) and Hempasil X3 are examples of soft-non-biocidal AFP. These paints are expensive to apply, requiring hull to be completely stripped and the product must be applied by professionals. This commercial product may not be cost effective for all recreational boaters. Further, some paints may include slime resistant coating composed of fluoropolymers (e.g., Intersleek 1100). Fluorocarbon is a general term for a family of substances that are being examined as contaminants of emerging concern (e.g., Teflon). These paints are not regulated as biocides and therefore, have not been tested to determine if high usage of these paints in enclosed waterbodies would result in environmental impacts.

Response regarding Attachment 4 – These comments have been addressed in responses to S. Anghera's (City's consultant) comments 6.1 – 6.5 -Attachment 2 above. Note that the Non-TMDL Action Plans have since been removed from the proposed Basin Plan amendments. A revised draft SED 2021, including a Staff Report 2021, have been prepared and is being recirculated to interested parties for review and comment.

SUMMARY OF ALTERNATIVE PAINT EVALUATIONS

Overall, findings concluded that only a few of the paints tested have the potential to be effective in replacing copper-based paints.

- In the USEPA 2011 study, only two paints were found to be effective in replacing copper-based paints: Intersleek 900 and Hempasil X3. Since the study was completed, the manufacturer of Intersleek 900, International Paint Company, LLC, has changed formulations and the exact Intersleek 900 that was tested is no longer available in the U.S. market. At the time of the study, the manufacturer did not recommend the Intersleek paint for recreational vessels because the product is designed for oceangoing commercial vessels, such as tanker or container ships that continuously move through oceans at high

speeds, providing the needed self-cleaning effect. This also applies to Hempasil X3, the other soft non-biocidal paint recommended in the study. Thus, both paints tested in the study are not designed for small, and mostly stationary, recreational vessels.

- In the CalEPA 2011 study, the researchers found that XP-A101, Hempasil XA 278, BottomSpeed, and Sher-Release performed the best. However, XP-A101, Hempasil XA278, and BottomSpeed have since been removed from the market and only Sher-Release remains as a potential alternative to copper-based paint.
- In the Ecology 2014 study, two currently available non-biocidal paints, lntersleek 900 and Surface Coat Part A - Black (Sher-Release), showed somewhat positive results. However, a hazard assessment of the study conducted as a part of the same study revealed that all formulations tested contained hazardous chemicals that could pose human health and/or environmental risks as a result of their use. Further, the hazard assessment was limited and incomplete due the undisclosed chemicals in the primers and the paints. Thus, the study concluded that the safety of the test paints was uncertain, and none of the test non- biocidal paints were ideal alternatives to copper-based paint.

The alternatives assessment confirmed that less hazardous alternatives to copper AFPs are available, but the report does not recommend any particular paint because of the diversity of boater needs. Of the 4 non-biocidal coatings evaluated, sufficient information was not available to confirm performance of these four paints; the findings were determined to be a data gap. Further, Ecology acknowledged that of the few available non-biocidal AFP, there is little data to show how these paints affect aquatic life or water quality. The findings of this study supported recommendations from Ecology to delay the halting of copper-based AFP (Ecology 2017) because the currently available alternatives may provide greater environmental harm.

In summary, (1) there are only three non-biocide paints tested in these studies that are still available (Table 5) and were recommended in one or more studies. All three paints are designed for commercial vessels. (2) All three paints must be applied by professionals. (3) Even though the paints are recommended alternatives to copper, Ecology (2014 and 2017) maintains concerns over hazardous chemicals within the paint that could pose a risk to humans and the marine environment. Many of the paints evaluated do not have full disclosure of ingredients because of the proprietary rights and many of the compounds being used have not been tested for use in marine systems.

Response – The proposed Cu TMDLs do not require the conversion of boats from Cu AFPs to alternative AFPs. Rather, the proposed Implementation Plan requires that the recommended strategies for the reduction of Cu discharges from Cu AFPs (including incentives to convert from Cu to

alternative AFPs) be considered by the dischargers in developing their own proposed implementation plan(s) to meet the Cu reduction requirements. An analysis of the potential impacts has been added to the revised SED 2021 based on the limited data available. The revised draft SED 2021 and Staff Report 2021 are being is being recirculated for public review and comment.
The concerns identified in these comments should be considered by the dischargers in developing their own proposed implementation plan(s).

Discussion of Commercial Paints for Recreational Boating USE

Concerns regarding the applicability of these paints (which were designed for commercial use) to the recreational boating industry remains. These paints were designed to be self-cleaning and manufacturers assume the vessels are underway a significant portion of the time and at specified speeds. Hard coatings can tolerate bumping and scratching, but soft-coatings **will** be damaged. These three recommended paints are soft coatings.

Further, these paints have not been assessed to determine impacts of high concentration of use on vessels in enclosed areas . The same processes that are leading to the buildup of copper in the water column could lead to a buildup of lesser understood chemicals. It is the opinion of the author, that these compounds are likely not a concern for commercial vessels that are continuously moving across large waterbodies. However, it could be an environmental concern if a larger number of vessels that reside in a specific area use the same AFP that has not been tested for impacts in a recreational harbor. The fluoropolymer paints serve as an example. Though not evaluated in the NCG study, the report discusses specialized coatings that include highly fluorinated compounds (e.g., Intersleek). The report states that highly fluorinated compounds tend to be extraordinarily persistent in the environment. It is believed most of the highly fluorinated compounds are bound up in the polymer matrix, but residual monomers may be free to leach. The potential for new contaminants of concern in enclosed marinas has not been fully studied and therefore, advocates for specific paints should be cautious until more studies can demonstrate they are truly safe for human and environmental resources.

Response – Comments noted and see responses to the comments above for the Summary of Alternative Paint Evaluations.

Gregory Newmark (attorney for City of Newport Beach)

Letter from Gregory Newmark (Meyers Nave) dated August 24, 2018 regarding "City of Newport Beach Supplemental Comments on Proposed Basin Plan Amendments to Incorporate Total Maximum Daily Loads (TMDLs) for Copper (Cu) and Non-TMDL Action Plans for other Metals in Newport Bay".

In spite of the revisions made since 2016, the Copper TMDL and its supporting documents still suffer

from major legal deficiencies.
First, it still unlawfully fails to heed the Legislative prohibition against local governments attempting to regulate the sale and use of registered pesticides.
Second, since the City cannot lawfully control the use of registered pesticides, it has no control over the primary pollutant loading mechanism and is therefore not properly considered a discharger.
Third, the deletion of the State Lands Commission from the list of dischargers is arbitrary when the City was originally identified as a discharger for the same reasons.
Fourth, the Regional Board's conclusion that the implementation schedule provides sufficient time is unsupported.
Fifth, the RSED is replete with numerous and serious violations of the California Environmental Quality Act. For all these reasons, the Copper TMDL cannot be adopted in compliance with the law.

Response - The above points are listed in detail below with responses.
A number of comments below reiterate comments submitted by Mr. Newmark on behalf of the City of Newport Beach (Attachment 7 to City letter dated October 14, 2016), and have been addressed in the Response to Comments Document 2018.

Comment 1

I. The Copper TMDL Still Requires Unlawful City Regulation of the Sale and/or Use of Registered Pesticides

The revised Copper TMDL documents attempt to conceal the fact that, if adopted, the Regional Board will be requiring the City to regulate the sale and/or use of registered pesticides, which is prohibited by state law. The Supplemental Staff Report states that: "The proposed Cu TMDLs do not require or recommend that the City or County ban the use of Cu antifouling paints. (The proposed Implementation Plan does recommend providing incentives to boaters to convert from Cu AFPs to nontoxic AFPs.)" (Supplemental Staff Report, p. 5). Thus, the Regional Board still intends to require the City to undertake actions that would violate state law. Food and Agriculture Code section 11501.1, subdivision (a), forbids any action by local government to "prohibit or in *any way attempt* to regulate *any matter relating to* the registration, sale, transportation, or use of pesticides . . . ." (Italics added.) The Regional Board appears to believe its "incentive" approach is a way to skirt the preemption issue identified by the City. The Legislature could hardly have written its preemption language to sweep more broadly. The Regional Board's suggestion that "incentives" to influence the sale and use of registered pesticides constitute a loophole to subvert the Legislature's intent is without merit.

Response 1 – This comment was addressed in the responses to the City's comments 1, 2 – City letter, and 7.1 - 7.3 – Attachment 7 (Response to Comments Document 2018).

Comment 2

II. The City is Not a Discharger

The Regional Board's assumption that the City is a discharger with regard to Copper Anti- Fouling Boat Paint ("Cu AFP") is incorrect, and therefore the Cooper TMDL and its Implementation Plan are based upon incorrect assumptions. The Regional Board contends the City is a discharger in this regard because the City has been delegated authority over certain tidelands: "The City and County

thereby have the ability to exert control over Cu discharges from Cu AFPs due to passive leaching from boat hulls and/or hull cleaning activities." If it were true that the City could regulate the sale and use of Cu AFP, then the Regional Board's position would arguably be consistent with State Water Resources Control Board decisions. (See, e.g., *In the Matter of Petition of San Diego Unified Port District*, State Water Resources Control Board Order No. WQ 89-12, p. 6 ["This Board has consistently taken the position that a landowner who has knowledge of the activity taking place *and has the ability to control the activity*, has "permitted" the discharge within the meaning of Section 13304."] (Italics added).)

As the City has previously demonstrated, however, it does not have the ability to control the sale, use or transportation of Cu AFP due to the Legislature's determination to occupy the entire field of such regulation. Because the City lacks the ability to control the discharge of copper from Cu AFP, it therefore follows that the City is not a discharger by virtue of its administration of certain tidelands, the Regional Board's assumptions to the contrary are incorrect, and the Copper TMDL and its Implementation Plan are fundamentally flawed.

Response 2 –

As the City notes, a series of State Water Resources Control Board (State Water Board) decisions established criteria for determining landowner liability: (1) ownership of the land on which an activity occurs that results in the discharge of waste; (2) knowledge of the activity causing the discharge, and (3) the ability to control the activity. (See e.g., State Water Board Order Nos. WQ 87-5, 86-18, 86-15, 86-11, 84-6, 90-03.) The City is a discharger based on their authority over the tidelands—the City is the grantee of the tidelands and submerged lands and as such holds the lands in trust for the public and has control over the land; the City has knowledge that copper is being discharged from Cu AFPs used on boats in Newport Bay; and the City has the ability to control the discharge. Contrary to the City's comment, the City can control the discharge by requiring hull cleaning BMPs in lease agreements or in marina regulations, requiring diver certification for hull cleaning, and incentivizing the conversion to non-biocide AFPs and lower leach rate Cu AFPs. These actions do not require the City to control the sale, use, or transportation of Cu AFPs or otherwise implicate the preemption clause under Food and Agricultural Code section 11501.1.

See also responses to the City's comments 1, 2 – City letter, and 7.1 - 7.3 – Attachment 7 (Response to Comments Document 2018).

Comment 3

III. The Deletion of the State Lands Commission is Unexplained and Inconsistent with the Justification for Naming Other Dischargers

In the prior draft of the Copper TMDL, the Regional Board identified the State Lands Commission as a discharger for essentially the same reasons as the City and the County of Orange. In the latest draft, the State Lands Commission no longer appears as a discharger. The Supplemental Staff Report does not provide any explanation or justification for this change. Indeed, no strikethrough version of the Basin Plan Amendments is provided, so many stakeholders may not have even noticed this substantive change to the proposed regulatory action. This lack of transparency should be addressed and explained.

Moreover, since the Regional Board previously concluded that the State Lands Commission and the City are dischargers for nearly identical reasons, it is arbitrary for the Regional Board to delete the

State Land Commission from the list of Dischargers without also deleting the City and County. Indeed, the State Lands Commission likely has greater ability to control Cu AFPs on the tidelands than the City since the preemption provisions of Food and Agriculture Code section 11501.1 are targeted at local governments, not state agencies.

Response 3 – See response to S. Anghera's (City's consultant) comment 12 -Attachment 2 above.

Comment 4

IV. The Regional Board's Conclusion that the Implementation Schedule Provides Enough Time is Unsupported by Evidence or Analysis

The latest draft Copper TMDL allows just 12 years to fully implement the TMDL. The City previously commented that the implementation period (which was then longer) was too short to allow for the effect of the new lower-copper AFPs to be observed, would require potentially unnecessary actions and costs and would allow collection of better data. In the Supplemental Staff Report, the Regional Board states that the recommended compliance schedule is "adequate for this purpose." (Supplemental Staff Report, p. 3.) This conclusion is unsupported by any analysis or factual support, and the schedule should be significantly lengthened.

Response 4 –The original compliance schedule specified in the 2016 draft Cu TMDLs stated that compliance was to be achieved as soon as possible but no later than 15 years from the date the TMDLs become effective (i.e., the date of final approval of the TMDLs by USEPA), as described in the response to the City's comment 7.6 – Attachment 7 (Response to Comments Document 2018). This proposed schedule was based on consideration of the schedules established in other Cu TMDLs in southern California and on the time reasonably expected to be needed to implement the reasonably foreseeable methods of compliance (including hull cleaning BMPs, a diver certification program, a boater education program, conversions to lower leach rate Cu AFPs, and, possibly, conversions of boats from Cu AFPs to alternative AFPs), to comply with the TMDLs and achieve the CTR criterion of 3.1 µg/L. Subsequent revisions to the draft Cu TMDLs (including a reduction in the estimated number of boats (from 10,000 to 5,000) and margin of safety (20 to 10%)) resulted in a decreased percent reduction required for Cu discharges from boats[11] (from 83 to 60%) to meet the TMDLs. Since the original compliance schedule of 15 years was based on an 83% reduction in Cu discharges from boats, a reduction in the compliance schedule from 15 to 12 years to achieve a 60% reduction is reasonable and appropriate.

A maximum of 12 years provides ample time to collect and consider additional data and to evaluate the effects of the implementation of DPRs' maximum leach rate regulation for Cu AFPs. The argument that potentially unnecessary and costly actions would be necessary given the 12-year time frame is without merit. First, hull cleaning BMPs must be used with the lower leach rate Cu AFPs

[11] In the 2021 proposed Cu TMDLs, the percent reduction required for boats was reduced from 83 to 60% due to the decrease in the estimated number of boats and the decreased margin of safety. See Section 5.5 and Table 5-5 regarding load allocations in Staff Report 2021.

required by DPR to achieve the CTR chronic criterion for Cu. In short, irrespective of any TMDL implementation plan, hull cleaning BMPs will need to be implemented. (See responses to S. Anghera's (City's consultant) comments 3 and 5 -Attachment 2 above.) Second, diver certification and education programs, and boater education programs would also be appropriate strategies, under any circumstances, to complement the implementation of the hull cleaning BMPs. Irrespective of requirements imposed by Cu TMDLs, or consistent with the implementation of DPR's maximum leach rate, measures to reduce or eliminate the discharge of pollutants to waters of the United States should be implemented in accordance with the Clean Water Act and implementing regulations.

The City's argument here relies on the premise that no action should be taken by the City until the full effects of the implementation of DPR's maximum leach rate for Cu AFPs can be determined. This approach does not provide reasonable assurance that the objective of the proposed Cu TMDLs to achieve the Cu CTR chronic criterion will be achieved; nor, as described above, is this approach consistent with DPR's expectation that BMPs will be implemented in conjunction with the use of lower leach rate Cu AFPs to meet the CTR criterion of 3.1 ug/L.

Comment 5

V. Relevant CEQA Law

The California Environmental Quality Act ("CEQA") "compels government first to identify the environmental effects of projects, and then to mitigate those adverse effects through the imposition of feasible mitigation measures or through the selection of feasible alternatives." (*Sierra Club v. State Board of Forestry* (1994) 7 Cal.4th 1215, 1233.) Public agencies, such as the Regional Board, must "refrain from approving projects with significant environmental effects if there are feasible alternatives or mitigation measures that can substantially lessen or avoid those effects." (*City of Arcadia v. State Water Resources Control Board* (2006) 135 Cal.App.4th 1392, 1421 ["Arcadia"] (citing *Mountain Lion Foundation v. Fish & Game Com.* (1997) 16 Cal.4th 105, 134.) "CEQA requires a governmental agency to prepare an EIR whenever it considers approval of a proposed project that '*may* have a *significant* effect on the environment.'" (*Arcadia*, *supra*, (2006) 135 Cal.App.4th 1392, 1421 (citations omitted.) "If there is no substantial evidence a project 'may have a significant effect on the environment' or the initial study identifies potential significant effects, but provides for mitigation revisions which make such effects insignificant, a public agency must adopt a negative declaration to such effect and, as a result, no EIR is required. [Citations.] However, the Supreme Court has recognized that CEQA requires the preparation of an EIR 'whenever it can be fairly argued on the basis of substantial evidence that the project may have significant environmental impact.' [Citations.] Thus, if substantial evidence in the record supports a 'fair argument' significant impacts or effects may occur, an EIR is required and a negative declaration cannot be certified." (*Ibid*.) A "significant effect on the environment" is defined as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant." (CEQA Guidelines, § 15382.)

The Water Quality Control (Basin)/Section 208 Planning Program of the State and Regional Water Boards has been certified by the Secretary for Resources, which allows the Regional Board to prepare an SED instead of an Environmental Impact Report ("EIR") or Initial Study/Negative Declaration ("IS/ND") for the Project. "Documents prepared by certified programs are considered the 'functional equivalent' of documents CEQA would otherwise require." (*Arcadia*, *supra*, 135 Cal.App.4th at 1422.) Though exempt from the requirement to prepare an EIR or an Initial Study/ND, "[c]ertified regulatory programs remain subject, however, to other CEQA requirements" including CEQA's "broad policy goals and substantive standards." (*Arcadia*, *supra*, 135 Cal.App.4th at 1421–22.) Moreover, the SED must include "at least the following:

1. An analysis of reasonably foreseeable environmental impacts of the methods of compliance;

2. An analysis of reasonably foreseeable feasible mitigation measures relating to those impacts; and

3. An analysis of reasonably foreseeable alternative means of compliance with the rule or regulation, which would avoid or eliminate the identified impacts."

(CEQA, § 21159; CEQA Guidelines, § 15187(c).) In addition the "environmental analysis shall take into account a reasonable range of environmental, economic, and technical factors, population and geographic areas, and specific sites. *The agency may utilize numerical ranges and averages where specific data is not available*, but is not required to, nor should it, engage in speculation or conjecture." (CEQA Guidelines, § 15187(d) (emphasis added).)

In reviewing the RSED, a court will "undertake an equivalent review" to the type of environmental document for which the RSED is a substitute. (*California Sportfishing Protection Alliance v. State Water Res. Control Bd.* (2008) 160 Cal.App.4th 1625, 1644.)

Response 5 –The draft SED has been revised to include a more robust analysis of 1) reasonably foreseeable environmental impacts of the methods of compliance, 2) reasonably foreseeable feasible mitigation measures relating to those impacts, and 3) reasonably foreseeable alternative means of compliance. The revised draft SED 2021 is being recirculated for public review and comment.

Comment 6

VI. What is the Functional Equivalent Document?

The primary difficulty with analyzing the RSED is that it is far from clear what type of CEQA document the Regional Board believes the RSED is substituting. It appears that the Regional Board intends the document to act as a programmatic EIR. However, the SED claims that the Board has no authority to impose mitigation measures and, as is discussed further below, the alternatives discussion is highly truncated based on the claim that there are no significant environmental impacts of the Project. The Regional Board should make it clear whether it intends the RSED to act as the functional equivalent of a Program EIR, or whether it intends the document to act as the functional equivalent of a program level ND. The Regional Board should clarify the type of CEQA

document for which the RSED is a functional equivalent.

Response 6 – The basin planning process has been certified as an exempt regulatory program and as such is exempt from certain requirements of CEQA, including the preparation of an environmental impact report (EIR) and a negative declaration (ND). The draft SED was prepared in accordance with the State Water Board's regulations for exempt regulatory programs (Cal. Code Regs. §§ 3775 et seq.) and is neither an EIR nor an ND.

Comment 7

VII. The RSED Fails To Comply With CEQA's Requirements.

The RSED claims that it contains "a good faith effort at full disclosure of the reasonably foreseeable environmental impacts that could accompany implementation of the reasonably foreseeable methods of compliance with the proposed Cu TMDLs and Zn, Hg, As and Cr Action Plans for Newport Bay." However, the RSED falls well short of this standard in numerous instances. The primary issue with the RSED is that it uses the provision of CEQA Guidelines section 15187(d), which states that the Regional Board should not engage in speculation, as an excuse not to conduct necessary environmental analysis. Thus, the RSED fails to evaluate and disclose the potentially significant environmental impacts of the Project in multiple resource categories, as set forth below.

The Regional Board attempts to avoid analyzing the impacts of the Copper TMDL, among other reasons, because it claims to be "prohibited from specifying the . . . particular manner of compliance." (RSED, p. 7.) Still, it is absolutely foreseeable that many boats will have to be converted to non-Cu AFPs if the Copper TMDL is adopted. As the Regional Board previously stated, "***[t]his TMDL cannot be met unless Cu loading from boats is reduced or eliminated***." (Staff Report, p. 68, emphasis in original.) This result is not only foreseeable, it is intended by the Regional Board. Furthermore, the Regional Board is contradicting positions successfully taken by other Regional Boards on this very issue. (See *Conway v. State Water Resources Control Board* (2015) 235 Cal.App.4th 671, 679-80 [". . .Conway's argument has two fatal flaws: First, Water Code section 13360, subdivision (a) does not apply on its face. The TMDL is neither a 'waste discharge requirement or other order.' It does not require or order anything. Second, where lack of available alternatives is a constraint imposed by present technology and the law of nature, rather than the Board specifying a particular manner of compliance, there is no violation of Water Code section 13360."].) The Regional Board cannot avoid analyzing the environmental impacts of actions it clearly intends to result from the Copper TMDL.

Response 7 – The draft SED has been revised to include additional analyses of the potential significant environmental impacts of reasonably foreseeable methods of compliance. The revised draft SED 2021 is being recirculated for public review and comment.

Comment 7.1 - (A) Air Quality

The RSED correctly notes that the conversion of boats from the current copper paints has the potential to increase the emissions of air contaminants, including volatile organic compounds ("VOCs"). However, there is no attempt made to provide a "numeric range" of the potential for VOC emissions, or even to provide an "average" of the per-boat VOC emissions expected by the conversions as required by CEQA Guidelines section 15187(d). Clearly, it would neither be

speculation nor conjecture for the Regional Board to provide an estimate of the amount of VOC emissions from a single boat conversion, which could then be extrapolated into a range of potential impacts from VOCs based on the estimated range of the number of boats to be converted. Studies summarized in the City Staff's separate comments indicate that some non-Cu AFPs are less durable than Cu AFPs, and/or frequent re-painting is necessary to maintain effectiveness, which suggests the Regional Board should analyze the impacts of more frequent painting.[1] This would provide the public and the decision makers with at least some information regarding whether the impact would be significant and whether available measures in the SCAQMD Air Quality Management Plan would sufficiently mitigate these impacts to a less than significant level. As it stands, the RSED now states, in essence, there may be an impact, we do not know how big of an impact, but trust us, it will be reduced to a less than significant level. Such an analysis does not comport with CEQA.

The same concerns apply to the RSED's discussion of impacts from increased emissions from vehicular/vessel traffic for monitoring and investigations and increased emissions from generator use during hull cleaning. No average for emissions from these vehicles/vessels is provided; no average emissions from generator use is provided; and no estimate of a range for the increased traffic or for the hours of generator operation is provided. The RSED could, and should, for example, provide average emissions from a typical generator used in hull cleaning, the hours of operations, on average, needed to clean a hull, and a range of the numbers of increased hull cleanings that will be necessary because of the Project. As established in comments and evidence submitted by City staff, many non-Cu AFPs are not as effective as Cu AFPs, which will require more frequent maintenance. From this information, a determination of the significance of the potential impacts can be made. Absent this information, the RSED lacks a good faith effort at full disclosure of the potential environmental impacts of the Project.

Moreover, there is no analysis whatsoever regarding whether changing the types of AFPs used would change the fuel efficiency of existing boats. Do either the proposed nontoxic AFPs or existing alternative toxic AFPs decrease the fuel efficiency of boats by themselves? By how much? Even if the Regional Board incorrectly believes alternative AFPs are effective, the question the Regional Board must analyze is whether they are *as effective as* Cu AFPs. What are the air quality impacts of any decrease in fuel efficiency on an average basis? Are the nontoxic AFPs as good at preventing fouling as the currently used AFPs?
The Biological Resources section of the RSED (p. 41) indicates that the nontoxic AFPs could result in an increased growth of fouling organisms. If this is correct, would the increase in fouling decrease fuel efficiency? By how much? What are the estimated air quality impacts of any such decrease in fuel efficiency? The RSED must answer these questions in order to provide a true picture of the potential environmental impacts of the Project.

In short, the RSED lacks substantial evidence to support its conclusion that the Project will result in less than significant impacts to Air Quality.

Response 7.1 - (A) The Air Quality section of the draft SED has been revised to include an analysis of potential environmental impacts to air quality from reasonably foreseeable methods of compliance and includes recommended mitigation measures. The revised draft SED 2021 is being recirculated for public review and comment.

Comment 7.2 – (B) Biological Resources
The Biological Resources section of the RSED indicates that the use of nontoxic AFPs could result in the increased growth of nonnative fouling organisms. This appears to be a potentially significant impact for which mitigation is required.[2] However, the RSED provides no threshold of significance from which the public or decision makers can make this determination. Moreover, the RSED notes that the Regional Board cannot impose mitigation for this, or any other issue.

The appropriate response in a CEQA document is not to "sweep the problem under the rug," by simply making a finding of a less than significant impact. Rather, the RSED should first establish a threshold of significance for a potential impact. What increase in nonnative fouling organisms would be considered significant? Once this threshold is established, the RFD should determine whether the expected increase in nonnative fouling organisms is potentially significant. If the Project would result in a potentially significant impact, the RSED should determine whether there are any potential mitigation measures that the Regional Board can implement to reduce the impact to a less than significant level. If there are no such mitigation measures, or if those potential mitigation measures are outside of the Regional Board's jurisdiction, the RSED should conclude that the impact is significant and unavoidable. The Regional Board can then choose whether to adopt a statement of overriding considerations for the Project. The Regional Board cannot, however, fail to set a threshold of significance, disclose a potentially significant impact but not evaluate its significance, fail to require any mitigation for the impact, and then declare that the impact is less than significant. This would be a wholesale abdication of the Regional Board's responsibilities under CEQA.

Similar concerns pertain to the use of alternative biocide AFPs. The RSED concludes that the use of such paints "is likely to be approved only if it is demonstrated that there would be no significant adverse environmental effect" associated with the use of such AFPs.
However, the Regional Board has not prohibited the use of these alternative, biocide AFPs through any mitigation measure. Therefore, it is reasonably foreseeable that conversion to toxic AFPs could be a result of the Project and a potentially significant impact. The RSED should evaluate what other biocide AFPs may be used if boats are converted from copper AFPs, establish a threshold of significance for any such impacts, and determine the potential significance of impacts to biological resources should these alternative, biocide AFPs be used. If that analysis concludes there may be potentially significant impacts, the RSED should include mitigation measures to mitigate the impacts. If no such mitigation measures are available, or are not within the jurisdiction of the Regional Board, the RSED should conclude that the impacts are significant and unavoidable and, if the Regional Board decides to approve the Project, it would need to adopt a statement of overriding considerations.

Response 7.2 - (B) The Biological Resources section of the draft SED has been revised to include an analysis of potential environmental impacts to biological resources from reasonably foreseeable methods of compliance and includes recommended mitigation measures, including potential environmental impacts due to the increase of fouling organisms and the potential use of non-Cu biocide AFPs. The revised draft SED 2021 is being recirculated for public review and comment.

Under the CEQA Guidelines, agencies are encouraged—but not required—to establish thresholds of significance. (Cal. Code Regs., tit. 14, § 15064.7)

Comment 7.3 – (C) Greenhouse Gas Emissions
Like the Air Quality analysis, this section of the RSED makes no effort to disclose average emissions from monitoring, generator use for hull cleaning, or from potential decreases in fuel efficiency. As set forth above, for monitoring, the RSED should provide estimated average emissions on a per trip basis and a range of the emissions based on the estimated number of trips required by the Project and compare these to a threshold of significance.
Likewise, the RSED should provide average emissions from generators on a per boat basis and a range of emissions based on the estimated number of increased boat cleanings as a result of the Project. The RSED should also estimate any emissions increases from decreased fuel efficiency and provide a range of emissions based on the number of boats affected. Once these averages and ranges are disclosed, the RSED can compare the impacts to a threshold of significance, determine the potential significance of the impacts, and adopt any feasible mitigation measures.

Response 7.3 - (C) The Greenhouse Gas Emissions section of the draft SED has been revised to include an analysis of potential environmental impacts from greenhouse gas emissions from reasonably foreseeable methods of compliance and includes recommended mitigation measures. The revised draft SED 2021 is being recirculated for public review and comment.

Under the CEQA Guidelines, agencies are encouraged—but not required—to establish thresholds of significance. (Cal. Code Regs., tit. 14, § 15064.7.) *The revised draft SED 2021 includes thresholds of significance for air quality and greenhouse gas emissions.*

Comment 7.4 – (D) Hazards and Hazardous Materials
There are at least two issues with the RSED's analysis of hazards and hazardous materials. First, as noted above, the use of alternative biocide AFPs is a reasonably foreseeable consequence of the Project. The RSED should evaluate the potential hazards and hazardous waste impacts from the use of these AFPs against a threshold of significance and determine whether such impacts are potentially significant.

The RSED also discloses that hull cleaning through the container/filter method will result in the increase in hazardous wastes "that will be deposited in appropriate landfills." However, the RSED does not disclose whether there are any such landfills in the vicinity of the Project, or whether those facilities have the capacity to accept such materials. The RSED should be revised to include this information.

Response 7.4 – (D) The Hazards and Hazardous Materials section of the draft SED has been revised to include a significance threshold and an analysis of potential environmental impacts from hazards and hazardous materials from reasonably foreseeable methods of compliance and includes recommended mitigation measures, including the analysis of potential impacts associated with conversions from Cu to non-Cu AFPs (including non-biocide AFPs and non-Cu biocide AFPs) and those associated with the use of the container-filter hull cleaning method. The revised draft SED 2021 is being recirculated for public review and comment.

Comment 7.5 – (E) Hydrology and Water Quality
With regards to Water Quality, the RSED states, in full "None of the reasonably foreseeable methods of compliance are expected to violate water quality standards or waste discharge requirements (WDRs). In addition, the methods of compliance are intended and expected to reduce Cu discharges and improve water quality." There is no disclosure of any potential impacts here, and no analysis of those impacts. The RSED should be revised to include analysis of the potential impacts from the use of alternative biocide and non-biocide AFPs and determine whether such impacts are significant against a threshold of significance.

Recent evaluations of alternative non-Cu AFPs convinced the Washington Department of Ecology to recommend that the State Legislature delay any ban of Cu AFPs because the currently available alternatives may cause greater environmental harm.[3] It is concerning that the State of Washington acknowledged the potential adverse impacts to the environment, but the Regional Board's RSED does not.

Response 7.5 – (E) The Hydrology and Water Quality section of the draft SED has been revised to include an analysis of potential environmental impacts to hydrology and water quality from reasonably foreseeable methods of compliance and includes recommended mitigation measures, including an analysis of the potential impacts associated with non-Cu biocide AFPs and non-biocide AFPs. The thresholds of significance are the applicable numeric and narrative water quality objectives. The revised draft SED 2021 is being recirculated for public review and comment.

Comment 7.6 – (F) Cumulative Impact Analysis
The RSED's cumulatives analysis is almost non-existent. The RSED simply declares, without analysis, that the Project's impacts are of "limited duration and spatial extent, and would not contribute to the effects of other projects, past, current or future." First, the statement is obviously incorrect as the Implementation Schedule is 12 years, and then presumably implementation will continue indefinitely. Second, as noted above, the RSED's impacts analysis in several resource categories is lacking, so this statement is not supported by substantial evidence. Third, there is no effort made by the RSED to disclose the cumulative condition either on a "plan" level or on a "project" level. The RSED must disclose the cumulative condition before any analysis of how the Project's impacts may contribute to that cumulative condition. The RSED should be revised to include the cumulative condition either on a project basis or on a plan level basis. Finally, the RSED's cumulative impacts analysis ignores current and ongoing efforts to implement copper TMDLs in other Basin Plans. What are the cumulative impacts of these several efforts, especially with regards to the uses of non-Cu AFPs? Is there, or would there be an increase in the use of alternative biocide AFPs and what are the cumulative impacts of such use? If non-toxic AFPs are used, what is the increase in the occurrence of invasive organisms transported by boats using such paints? Does the fact that boats may commonly travel between harbors where copper AFPs are no longer in use increase this risk? In other words, would the fact that boats using non-toxic AFPs and would travel between relatively close geographic locations such as Newport Bay and San Diego likely increase the potential for the transport of invasive organisms? These and other questions regarding the cumulative impacts of the Project must be answered in a revised RSED.

Response 7.6 - (F) The analysis of cumulative impacts in the draft SED has been revised. The revised draft SED 2021 is being recirculated for public review and comment.

Comment 7.7 – (G) Alternatives Analysis

The RSED's alternatives analysis has not changed substantially from the SED and the problems with that analysis remain. The RSED is invalid for failing to analyze a reasonable range of alternatives, as it is required to do under CEQA's provisions for Regulatory Programs. Apart from the No Project alternative, the RSED analyzes only one "action" alternative – a purported "Adopt modified Cu TMDLs and Zn, Hg, As and Cr Action Plans" alternative. The RSED's discussion of this alternative is completely without value, however, as it does not actually describe an alternative to the proposed project. Rather, the discussion of that alternative simply states that "[s]ince the recommended action would not have a significant adverse effect on the environment, the consideration of an additional alternative(s) that would reduce significant/potentially significant environmental impacts is not required."

Since the RSED does not actually describe any "action" alternative to the proposed Project, it also fails to disclose the potential environmental impacts and benefits of such an alternative. The failure of the RSED to identify or analyze any actual "action" alternative to the proposed Project fatally undercuts the requirement that the document adequately inform decision makers and the public of a reasonable range of alternatives to the Project.

In particular, the RSED should describe and analyze an alternative under which reduction in copper loading would be achieved on a statewide basis, by the state of California, pursuant to the exclusive authority of the California Department of Pesticide Regulation (DPR) to regulate pesticides, including Cu AFPs. The RSED additionally should describe and analyze an alternative under which implementation methods would be targeted at the limited areas of Newport Bay that even arguably exceed California Toxics Rule requirements for copper, rather than regulating the entire Bay. Such focused implementation must be discussed as an alternative, as it is likely to result in fewer environmental impacts than the project as proposed. Similarly, an extended implementation period should also be considered as an alternative.

Response 7.7 (G) – The draft SED has been revised to include a more robust alternatives analysis. The revised draft SED 2021 is being recirculated for public review and comment.

Comment 8 - Summary of CEQA Violations

While CEQA does not require perfection, it does require a good faith effort at full disclosure of environmental impacts of the Project. The current RSED falls far short. The Regional Board cannot escape its duties to provide, at the least, averages and numerical ranges of potential impacts, nor to determine the significance of those impacts base
d on disclosed thresholds of significance by simply claiming that such an analysis would be speculative.
The City looks forward to reviewing a further revised RSED that fully analyzes the potential impact of this Project.

Response 8 – The draft SED has been revised. The revised draft SED 2021 provides a good faith

effort at full disclosure of potential environmental impacts of the proposed Project at a programmatic level; the revised draft SED 2021 does not include a project-level analysis. While the Santa Ana Water Board may use numerical ranges and averages in its analysis, it is not required to engage in speculation or conjecture. The revised draft SED 2021 is being recirculated for public review and comment.

Comment 9 - Conclusion
Because of the numerous legal defects in the most recent Copper TMDL and Implementation plan, it cannot be adopted in its current form.

Response 9 - See responses 1-8 above.

Gregory Newmark (attorney for City of Newport Beach) - Letter - September 24, 2018

Letter from Gregory Newmark (Meyers Nave) dated September 24, 2018 regarding "City of Newport Beach Supplemental Comments on Proposed Basin Plan Amendments to Incorporate Total Maximum Daily Loads (TMDLs) for Copper (Cu) and Non-TMDL Action Plans for other Metals in Newport Bay".

Please find attached a report authored by Dr. Whittaker, one of the authors of a study relied upon by the Regional Board in its environmental analysis of the Project. This report supplements the City's comments submitted to the Regional Board on August 24, 2018. Dr. Whittaker's report identifies the impracticalities of substituting copper antifouling paints (Cu AFPs) in the current marketplace and discusses a number of changes that must first occur to effect industry-wide movement to alternate AFPs/coatings that are safer than, and equally efficacious to, Cu-based AFPs. The Report also indicates that the Regional Board must consider the dangers of forcing a " regrettable substitution," and causing new environmental problems with its proposed regulation. Most importantly, Dr. Whittaker concludes "there are **zero** commercially available non-Cu AFPs that are safer and perform as well asCu AFPs."
As I am sure you are aware, the Regional Board must consider these comments even though the public comment period on the Regional Board's CEQA document has closed. "[A] party can litigate issues that were timely raised by others, but only if that party objected to the project approval on any ground during the public comment period or *prior to the close of the public hearing* on the project." *(Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1200 (citing Pub. Res. Code sec. 21177, subd. (b)) (emphasis added).) "[I]f a public hearing is conducted on project approval, then new environmental objections [can] be made until close of this hearing. [Citations.] If the decision making body elects to certify the EIR without considering comments made at this public hearing, it does so at its own risk. If a CEQA action is subsequently brought, the EIR may be found to be deficient on grounds that were raised at any point prior to close of the hearing on project approval." *(Id.* at 1201.) Comments may be "presented to the public agency either orally or in writing by any person during the public comment period or during the hearing on project approval." *(Porterville Citizens for Responsible Hillside Development v. City of Porterville* (2007) 157 Ca l.App.4th 885, 909; see also *POET, LLC v. State Air Resources Bd.* (2013) 218 Cal.App.4th 681, 704 (ARB received 290 pages of

written comments presented after the close of the public comment period during the hearing); *Tracy First v. City of Tracy* (2009) 177 Cal.App.4th 912, 926 (comments contained in letters hand-delivered to the city council at meeting in which city council certified the EIR); *Bakersfield, supra,* 124 Cal.App.4th at 1200-1201 (written comments submitted after public comment period on adequacy of the EIR).) This is especially true where the Regional Board has continued the hearing and should have ample time to consider the importance of Dr. Whittaker's report to the proposed Project.

Response

As previously stated, the proposed TMDLs do not require the conversion of boats from Cu AFPs to alternative AFPs; however, the conversion of boats from Cu to non-biocide AFPs is a reasonably foreseeable strategy for compliance with the TMDLs and must be considered by the City for inclusion in the City's implementation plan(s). Santa Ana Water Board staff agree that it would be important for the City to ensure that the use of such alternative AFPs would not result in greater environmental harm. The draft SED has been revised to include an analysis of potential environmental impacts of non-biocide AFPs. The revised draft SED 2021 is being recirculated for public review and comment. See S. Anghera's (City's consultant) comments in Attachment 4 above, and responses to those comments.

Board staff are aware that the conversion of Cu AFPs to non-biocide AFPs, and the application of non-biocide AFPs, will take longer than the application of Cu AFPs. This may result in some minor delays at boatyards in completing the repainting process. Such delays would not be significant in the context of the proposed 12-year TMDL compliance schedule, which allows time for repainting boats with non-biocide AFPs (Staff Report 2021).

While it may be true that "there are zero commercially available non-Cu AFPs that are safer and perform as well as Cu AFPs" [emphasis added], *if performance is determined solely by the effectiveness of the AFP itself in keeping fouling organisms off the hull; there are other measures available, apart from the AFP itself, to prevent/reduce/eliminate fouling, including cleaning hulls more frequently. Such measures could be used in conjunction with a non-biocide paint to achieve fouling reductions as effective as Cu AFPs (or other non-Cu biocide AFPs). Indeed, such other measures are likely to be an expected protocol for the use of non-biocide AFPs. In short, non-biocide paints are not designed to act like Cu or other biocide AFPs; non-biocide AFPs must be cleaned more frequently than Cu AFPs to prevent/decrease fouling of the hulls. Direct comparisons of the effectiveness of Cu AFPs (or other non-Cu biocide AFPs) to non-biocide AFPs paints are inappropriate, unless the expected protocols for application and maintenance are taken into account. See also response to S. Anghera's (City's consultant) comment 6 – Attachment 2, above.*

Orange County Coastkeeper

Letter from Orange County Coastkeeper dated August 22, 2018 regarding "Re: Comments on Draft Newport Bay Copper TMDL and Non TMDL Action Plans".

Comment 1 - The proposed timeline for compliance is too long. The draft TMDL includes a twelve-year timeline for compliance. This is arbitrary and not supported by facts. The Marina Del Rey Copper TMDL has a ten-year timeline, the Shelter Island Copper TMDL has a ten-year timeline (after a five-year voluntary compliance period) and a ten-year timeline for Newport Bay is appropriate. The 2018 Supplemental Staff Report states, "the City estimated the boat count to be 4,470, but this number does not include empty slips or smaller boats. (Coastkeeper estimates were somewhat higher than 5,000 boats/slips.)" (pg. 10, sect 7.2) This boat count is essentially identical to that of Marina Del Rey. In a November 6' 2015, Regional Board Response to Comments to Coastkeeper, the Regional Board justified a longer timeline for the Newport Bay TMDL on an estimated boat count of 10,000. Therefore, the argument that Newport has a significantly greater number of boats compared to Marina Del Rey is erroneous and a TMDL of ten-years is not only appropriate, but necessary for Newport Bay's health.

Response 1 - The proposed compliance schedule states that compliance should be achieved as soon as possible but no later than 12 years from the effective date of the TMDLs, i.e. upon USEPA approval. Santa Ana Water Board staff believe that a 12- year timeline is appropriate to reach a 60% reduction of Cu discharges from Cu AFPs. In light of arguments by the City that dissolved Cu concentrations in the Bay are close to or at the CTR criterion of 3.1 µ)g/L, the expectation is that compliance could be achieved in less than 12 years. (See also response to G. Newmark's comment 4 -August 24, 2018 letter, above.

Comment 2 - Also, the ten-year TMDL should begin from the date of its adoption by the Regional Board. TMDL history in Orange County has shown that longer timelines result in longer delays in implementation. The argument that action will occur as soon as possible but no later than the compliance date has been repeatedly disproven. There is no requirement to use a compliance date that corresponds to approval of the TMDL by the USEPA. Voluntary compliance measures ended in 2012, without success. Since that time, the development of this TMDL has dragged on for six years, during which, NO PROGRESS has been made in reducing copper concentrations in Newport Bay. Allowing a twelve year timeline, plus two years of waiting for additional approvals in addition to the six year delay in developing the TMDL, results in a twenty year TMDL. This is unacceptable! Copper bottom paint is replaced at an interval of three years. A ten-year time period means that there are three opportunities for the average boater to switch to alternative boat bottom paints. Even using a five-year operational life for copper bottom paint means that every boat in Newport Bay will replace its bottom paint twice in a ten-year time frame. The fact is that alternatives to copper boat bottom paint and the boatyard capacity to apply them exist now. The TMDL being developed should have effective timeline of ten years or less.

Response 2 - It would be improper to establish a compliance schedule based on Santa Ana Water Board approval since the Cu TMDLs would not become effective legally until approved by other agencies (including the State Water Board, Office of Administrative Law and USEPA), and the Santa Ana Water Board cannot dictate or accurately predict the schedules for requisite consideration of the Cu TMDLs by these other agencies.

Comment 3 - It is important the TMDL recognize that Upper Newport Bay is designated both as a State Marine Conservation Area as well as an Ecological Reserve. The 2016 staff report mentions

"The Upper Bay estuary contains a State Ecological reserve in the upper half with habitat designated for sensitive species …" (pg. 8) However, there is no mention of Upper Newport Bay designation as a State Marine Conservation Area (SMCA). This is a significant issue since the boundary of the SMCA includes the entire Upper Bay, including the Newport Dunes and De Anza marina. The Ecological Reserve does not. The October 16, 2012, Supplemental Environmental Document for State Board Resolution 2012- 0056 states "… marine water quality would play a role in the success of MPAs." In section 5.7.2 it states "If these newly designated MPAs require additional protection from potential impacts associated with degraded water quality, the State and Regional Water Boards under the authority of Porter Cologne would be responsible for developing and adopting more stringent permits or discharge conditions, including prohibitions within these areas." The Marine Protected Area designations were created due to the critical ecological functions of the Upper Bay and its significance to the state and local community. State Marine Conservation Areas need to be prioritized. The SMCA needs and deserves the highest level of protection from all forms of pollution. The TMDL should specifically address this issue and the boats in the upper bay should be prioritized for copper reduction activities within six years.

Response 3 - Comment noted. Santa Ana Water Board staff recognize that the Upper Bay is both a State Marine Conservation Area as well as an Ecological Reserve, and that these areas are a high priority for actions relating to Cu impairment. The largest source of Cu to the Bay, however, is Cu discharges from Cu AFPs on boat hulls, and the majority of boats in Newport Bay are located in the Lower Bay and the lower part of the Upper Bay (De Anza and Dunes marinas). Reducing Cu discharges from Cu AFPs should reduce Cu concentrations in the Upper Bay since tidal action reaches far into the Upper Bay.

Prioritization of Cu reduction activities in the Upper Newport Bay can and should be considered as part of the approval of the implementation plan(s) developed by the dischargers.

Comment 4 - In the November 6th 2015 Regional Board Response to Comments to Coastkeeper the Regional Board suggested that because the bay is tidally influenced "…it is likely that at least some of the copper in the Upper Bay comes from boats in the Lower Bay". There is no data provided to support this suggestion. We do know that a model of bacteria transport by Everest Engineering[1] suggests that it takes twelve days for water from the Newport Dunes area to flush out of the bay, and it takes up to 30 days for water in the upper reaches of the bay to flush. Copper from boat bottom paints is an ongoing significant threat to the SMCA. The Regional Board can and should require copper concentrations in the upper bay come into compliance in an expedited timeframe to protect the SMCA and Ecological Reserve.

Response 4 –It is likely that at least some of the Cu in the Upper Bay is from Cu discharges from Cu AFPs on boats in the lower Upper Bay (Dunes and De Anza marinas) and the Lower Bay since the Bay experiences daily tides; this assertion is made based on known tidal flows and hydrodynamics in the Bay. In any case, irrespective of the likelihood that the Upper Bay is influenced by Cu discharges from boats in the Lower Bay, the proposed Cu TMDLs require compliance with the CTR chronic criterion of 3.1 µg/L in both the Upper and Lower Bay. See also response to G. Newmark's comment 3 -September 24, 2018 letter above.

Comment 5 - The TMDL should also include monitoring requirements for metals or biocides found in alternatives to traditional copper bottom paints. This will ensure that the transition away from copper paints does not result in a new threat to the bay from other biocides.

Response 5 - Comment noted and will be considered when the dischargers submit, and the Santa Ana Water Board considers approval of their proposed implementation plan(s), including monitoring and evaluation programs.

Comment 6 - In conclusion Coastkeeper supports the immediate implementation of a Copper TMDL and Non TMDL Action Plans for Zinc, Mercury, Arsenic and Chromium that includes a date specific start and end with a ten-year timeframe. We also support an expedited six-year compliance schedule for the Upper Bay, in recognition of its status as a State Marine Conservation Area. As always, Coastkeeper supports the use of the best available science to determine the compliance requirements for this or any regulatory activity.

Response 6 - Comments noted. See responses above. Note that the Basin Plan Amendments now include only Cu TMDLs – the Action Plans have been removed.

County of Orange

Letter from the County of Orange dated August 24, 2018 regarding "Comments on Proposed Basin Plan Amendments to Incorporate Total Maximum Daily Loads for Copper and Non-TMDL Action Plans for Other Metals in Newport Bay".
Attachments: 2 maps; original comment letter from the County of Orange dated October 17, 2016 w/Attachment of Specifics Comments

After reviewing the revised draft documents listed above and the comments on the prior documents, it is evident that many comments have not been fully addressed. In addition, Regional Board staff at the workshop stated that additional workshops would be held to discuss the issues related to the copper TMDLs and to address stakeholder concerns. However, no such workshops have taken place and we would strongly encourage the Board to conduct such workshops before any other actions are considered. We are also concerned that Regional Board staff has not provided detailed responses to the written comments nearly two years after their submission.

A summary of responses to comments was provided in the Supplemental Staff Report, but it was difficult to see whether or not and how certain comments were addressed. We are therefore attaching the comment letter we submitted in 2016 as part of our current comments. Below are our general comments.

Comment 1 - The County generally supports delisting Newport Bay for the general 303(d) category of "Metals" and replacing the *Total Maximum Daily Loads for Toxic Pollutants - San Diego and Newport Bay, California,* promulgated in 2002 by the US Environmental Protection Agency (EPA).

Response 1 – The general category of "metals" was delisted for Upper Newport Bay in the 2014-16 listing/delisting cycle.

Comment 2 - The County supports a longer implementation schedule for the copper TMDLs. We do not agree that the compliance period should be reduced from 15 to 12 years. The County is not convinced that the copper TMDLs in Shelter Island Yacht Basin (SIYB) in San Diego Bay and Marina del Rey (MdR) are necessarily success stories. Both made certain progresses but found it challenging to achieve the TMDL targets within the corresponding compliance schedule. Both SIYB and MdR required substantial state/federal funding to conduct research/outreach. In the case of MdR, where the copper TMDL was promulgated in 2005, substantial reduction is still yet to be achieved and many more years are needed.

Response 2 – The Port of San Diego is currently meeting the compliance schedule for the SIYB Cu TMDL. The Marina del Rey Toxics TMDL (that includes Cu) is also proceeding on schedule, and implementation plans are underway by the County of Los Angeles.
See response to the City's comment 3.4.1 -City Letter, G.Newmark's comment 4 – August 24, 2018 letter, - and Coastkeeper's comments 1 and 6 above. See also response to the City's comments 5.4 - City Letter, and 7.6 -Attachment 7 (Response to Comments Document 2018).

Comment 3 - Many oral comments provided by the boat owners and shipyard operators at the October 28, 2016 workshop comments have not been addressed clearly or adequately (e.g. see Supplemental Staff Report, page 2, items 7.1 through 7.4). These comments include:

a. There will be financial difficulty for many low-income boat owners if they were to switch to more expensive, less effective low- or non-copper antifouling boat paints (AFPs) that need more frequent application;

Response 3a. Responses to the comments from the Santa Ana Water Board's October 28, 2016 meeting have been prepared and will be available for review.
With respect to financial issues, the proposed Cu TMDLs <u>do not require</u> the conversion of boats from Cu AFPs to non-biocide AFPs; however, this recommended strategy should be considered by the dischargers as part of the development of their implementation plan(s) to achieve the TMDLs. See response to the City's comments 3.4.1 and 3.4.3 -City Letter above.

Santa Ana Water Board staff are aware that there will be an additional cost to convert Cu AFPs to non-biocide paints, and that additional cleaning is required for non-biocide paints. For low-income boaters, strategies other than boat conversions, such as the use of lower leach rate Cu AFPs, and the use of BMPs during hull cleaning, should be considered to reduce Cu discharges from boats as required by the proposed Cu TMDLs.

b. There is no regulatory authority by the County, the City, and shipyard operators over the boat owners to compel them to use non-copper AFPs. The regulatory authority sits with the Department of Pesticide Regulations (DPR), which recently set new requirements for AFPs;

Response 3b. The Cu TMDLs <u>do not require</u> the County, the City, or marina owner/operators to compel boat owners to convert to non-Cu AFPs. See response to G. Newmark's comment 1 -August 24, 2018 letter above. See also responses to the City's comments 1, 2 – City letter, and 7.1–7.3 –

Attachment 7 (Response to Comments Document 2018).

c. Non-Cu AFPs are not necessarily better. Not only are they more expensive, they are less effective in preventing fouling of the boat, increasing greenhouse gas emission and posing a greater threat to the propagation of some invasive species. Therefore, we need to look at life cycle costs and all environmental impacts of different alternatives.

Response 3c. Non-biocide AFPs are more expensive to apply initially, but, in general, they last longer than Cu AFPs. Non-Cu biocide AFPs are not recommended in Santa Ana Water Board staff's Implementation Plan for these proposed TMDLs.
See the Port of San Diego study on alternative paints at:
https://www.portofsandiego.org/environment/copper-reduction-program.html

Additional greenhouse gases can be reduced with more frequent cleaning of hulls painted with non-biocide AFPs. The draft SED has been revised to include environmental analysis of the impacts of the use of alternative AFPs. The revised draft SED 2021 is being recirculated for public review and comment.

Comment 4 - As shown in the attachments, the State owns large swaths of lands around Upper and Lower Newport Bay. However, state Lands is not named as a responsible party.

Response 4 –The State Lands Commission (Commission) does not have management authority over the submerged lands and tidelands in Newport Bay. As explained above, the Commission has limited residual authority in submerged lands and tidelands granted to the County and City in Lower Newport Bay. See response to S. Anghera's (City's consultant) comment 12 -Attachment 2 above).

With respect to Upper Newport Bay, the tidelands and submerged lands the County identified as managed by the State are part of an ecological reserve managed by the Department of Fish and Wildlife. (Ch. 415, Stat. 1975; Ch. 361, Stat. 2004.) If the Department of Fish and Wildlife no longer uses the lands for this purpose, the lands revert back to the County and City. As with the lands in Lower Newport Bay, the Commission has limited residual authority in these lands and thus is not included as a discharger in the Cu TMDLs. The Department of Fish and Wildlife does not conduct activities on the lands it manages that result in discharges of Cu to the Bay and is thus not named as a discharger in the proposed TMDLs.

Comment 5 - Recent sediment quality assessments using the Sediment Quality Objectives (SQO) triad approach consistently show that conditions in the Bay have been improving. In the rare occasions where toxicity was identified or suspected, copper has never been identified as the cause of toxicity. As a result, the Supplemental Staff Report (page 18) concludes that "sediments are no longer considered to be impaired based on State Board's current interpretation of the State Listing Policy...".

Response 5 – Comments noted. Monitoring and evaluation are still required, however, due to exceedances of the sediment guideline (ERM) in some areas, especially marinas. (These sediment

guidelines are used with the presence of toxicity to determine impairment per the State Listing Policy, if there are insufficient data to assess sediments by the SQO method.
See responses to the City's comments 6.10 and 6.16 – Attachment 6 (Response to Comments Document 2018).

Comment 6 - The Draft BPA and Staff Report are inherently in conflict with the recent actions taken by the Department of Pesticide Regulation (DPR) to reduce copper leaching rates from boat paint to 9.5 µg/cm^2/day. Given the current early implementation phase of the new Department of Pesticide Regulation (DPR) AFP requirements, the lack of peer review of the calculations by the Regional Board or by the USEPA (on its 2002 Metals TMDL) on the leach rate, and the potential significant economic and other impacts to the boating community in Newport Bay, it would be prudent to address these significant issues in the workshop process discussed above.

Response 6 – No explanation is provided for the argument that the draft BPA, to incorporate the proposed Cu TMDLs in the Basin Plan, and the Staff Report are inherently in conflict with DPR's determination of a maximum allowable leach rate for Cu AFPs. Neither the draft BPA nor the Staff Report are in conflict with DPR's determination.
See response to the City's comment 3.4.1 –City letter above, and DPR's response to Regional Board letter.[12]

The draft Staff Report has been revised to include a more detailed explanation of why additional peer review of the calculations used for the proposed Cu TMDLs is not required. The revised draft SED 2021 and revised Staff Report 2021 are being recirculated for public review and comment. Regarding the statement ", the lack of peer review of the calculations by the Regional Board or by the USEPA (on its 2002 Metals TMDL) on the leach rate", *it is not clear which calculations the County is referring to. With respect to scientific peer review, see response to S. Anghera's (City's consultant) comment 3 -Attachment 2 above. See also the response to the City's comment 6.56 - Attachment 6 (Response to Comments Document 2018).*

The nature of impacts to the boating community, including economic impacts, will depend on the implementation strategies employed by the dischargers to achieve the TMDLs. The potential economic impacts are discussed in the revised draft SED 2021, which is being recirculated for public review and comment. See also response to S. Anghera's (City's consultant) comment 30 – Attachment 3 above.

Finally, Santa Ana Water Board staff have discussed the above issues in numerous calls and meetings with the dischargers, including the City and the County. These include, but are not limited to,

[12] *Department of Pesticide Regulation (DPR) letter from George Farnsworth, dated November 16, 2017, to Hope Smythe, Santa Ana Regional Water Quality Control Board (SARWQCB), response to SARWQCB's letter dated November 8, 2017.*

meetings on December 12, 2018 (with the City of Newport Beach and Regional Board managers), and February 28, 2019 (with the County, City, Irvine Company, and Board managers). Two public workshops were also conducted on May 9 and 10, 2019 (attended by the public, and Board managers and staff).

In addition, comments provided in the County's letter of October 17, 2016, were responded to in the Response to Comments Document 2018.

Irvine Company Letter, Letter from Exponent , Letter from Garner & Rusk

Letter from the Irvine Company dated August 24, 2018 regarding the proposed Cu TMDLs.
Attachments: Letter from Exponent; Letter from Garner and Rusk

We are writing to request that the Regional Board decline to adopt the proposed TMDL for copper at the current time, and instead work collaboratively with stakeholders, per the commitments made at the October 2016 Regional Board hearing, to update the evaluation of the current condition of the Bay, to define clearly any problems that require action, and to develop an effective, efficient, and collaborative solution for Newport Bay. We commend the Regional Board for updating its impairment assessment of the sediments in Newport Bay. Because the Regional Board has concluded that the sediments are not impaired for copper and because sampling efforts are underway to characterize the sediments of the Bay using the State's Sediment Quality Objectives policy, we request that the sediment targets and implementation tasks be deleted from the Copper TMDL.

As detailed in comments we provided on October 13, 2016, our primary concerns involve the impairment assessment used to determine that the water column is currently impaired for copper. We request that the Regional Board convene workshop(s), as it committed to do in October 2016, for the purpose of reviewing available data and identifying data that should be collected to characterize the current condition of the Bay. Those workshops should also be used to evaluate the effectiveness of management actions, including regulations requiring significant reductions in the amount of copper in brake pads (which became effective on January 1, 2017 and will involve phased
implementation) and the conversion to copper anti-fouling paints with lower leach rates (requiring a reduction from leach rates as high as 29 µg/cm^2/yr to a leach rate of 9.5 µg/cm^2/yr or less), as required by the State Department of Pesticide Regulation in regulations adopted this year.

Because it is not clear that the Bay is current impaired with respect to copper, we continue to believe the appropriate course of action is to revisit the impairment assessment and conduct targeted data collection as needed to evaluate the extent of any problem, and then to determine appropriate regulatory endpoints and actions.
Consistent with our commitment in our October 2016 comments, we are willing to participate in a stakeholder program or working group to characterize current conditions and develop appropriate regulatory endpoints and implementation actions in lieu of adopting the Regional Board TMDL for copper. We are also willing to work with other stakeholders to develop and implement a boater education and hull cleaning training program.

Technical comments are detailed in the memorandum prepared by Susan C. Paulsen, Ph.D., P.E., of Exponent. Legal comments are included in the memorandum prepared by Keith Garner and Jim Rusk of Sheppard Mullin. Both are attached to this letter.

We look forward to continuing to work with the Santa Ana Regional Board members and staff.

Comment 1 - The Regional Board should delay consideration of the proposed Cu TMDLs pending a collaborative effort to update current Cu conditions, identify problems that require action and develop an efficient and collaborative solution for the Bay. The Irvine Company is willing to participate in a stakeholder program/working group and to work with other stakeholders to develop and implement a boater education and hull cleaning training program.

Response 1 - As discussed below, there is no compelling reason to delay adoption of the proposed Cu TMDLs.

As Santa Ana Water Board staff have pointed out in the Staff Reports (2016, 2018), Response to Comments Document 2018 and in multiple discussions of these proposed Cu TMDLs with the Santa Ana Water Board and stakeholders at past meetings, that Cu TMDLs for both Upper and Lower Newport Bay were established by USEPA in 2002 as part of the Toxics TMDLs for Newport Bay. The proposed Cu TMDLs, if approved by USEPA, would supersede the Cu TMDLs established by USEPA. Absent the adoption of the proposed Cu TMDLs, the Board is obligated to fully implement USEPA's TMDLs. To date, USEPA's TMDLs have been implemented in relevant permits, e.g., the MS4 permit for Orange County. However, no specific regulatory action has yet been taken to address Cu discharges from Cu AFPs, the largest source of Cu to the Bay. (Note though that Board staff have worked with Coastkeeper and the City to convert boats to non-biocide AFPs in one marina in Newport Bay. In addition, the City passed Resolution No.2010-53 to encourage boaters to convert from Cu to non-Cu hull paints. (The resolution was passed at a public City council meeting.))
Note also that USEPA's Cu TMDLs do not include an implementation plan or compliance schedule. This means that immediate compliance with the USEPA TMDLs would be required by future regulatory actions.

The Implementation Plan in Santa Ana Water Board staff's proposed Cu TMDLs includes a compliance schedule that can accommodate the investigation and collaboration recommended by the Irvine Company. Further, the proposed Implementation Plan identifies a number of reasonably foreseeable methods of compliance to which the Irvine Company has already indicated its commitment, i.e., boater education and hull cleaning training programs, and monitoring to evaluate current conditions. Note that under any circumstances, whether or not related to Cu TMDLs compliance, the implementation of actions such as these to reduce or eliminate the discharge of pollutants to waters of the United States is appropriate and consistent with the goals of the federal Clean Water Act and implementing regulations.

As stated in the proposed Implementation Plan (Task 6), the Santa Ana Water Board is committed to review and refine the Cu TMDLs based on new information and data. The preamble to this comment

includes the request for Santa Ana Water Board workshops as committed to in October 2016. Two public workshops to address the proposed Cu TMDLs and Action Plans, including relevant data and findings of Cu impairment, were conducted on May 9 and 10, 2019. Responses to comments from those workshops, including comments concerning data and analyses, have been prepared and will be available to all interested parties as part of the consideration of the proposed Cu TMDLs.
In short, there is no compelling reason to delay adoption of the proposed Cu TMDLs. Further, actions such as those identified by the Irvine Company, e.g., monitoring, development of hull cleaning and boater education programs, need not and should not await the adoption and approval of the proposed Cu TMDLs. We encourage the dischargers to initiate actions to reduce Cu discharges to the Bay as soon as possible.

Comment 2 – "we request that the sediment targets and implementation tasks be deleted from the Copper TMDL"

Response 2 – See responses to S. Paulsen's comment 2 below.

Comment 3 - "We request that the Regional Board convene workshop(s)"

Response 3 – Santa Ana Water Board staff have had a number of meetings and calls with the dischargers since August 2018. These include, but are not limited to, meetings on December 12, 2018 (with the City of Newport Beach), February 28, 2019 (with the County, City and Irvine Company), and two public workshops on May 9 and 10, 2019. Comments on all matters pertaining to the TMDLs, including data and analyses, were welcomed, received and responded to.

Comment 4 - it is not clear that the Bay is current impaired with respect to copper

Response 4 – The available data confirm that the Bay is still impaired for dissolved Cu. The State Water Board's data assessment for the latest 303(d) list (2014-16) determined that Newport Bay is still impaired for Cu, and the status for Cu in the Bay is DO NOT DELIST. Additional data from Anchor QEA's study for the City (2015, 2016) show that over 30% of the samples exceeded the dissolved Cu CTR chronic criterion of 3.1 µg/L. Data from DPR's latest monitoring study (August 2019) also show impairment as dissolved Cu exceeded the CTR chronic criterion in 50% of the samples taken in Newport Bay.
See response to the City's comment 3.4.1 and 3.8, and S. Anghera's (City's consultant) 15.1 – Attachment 3 above. See also response to the City's comment 6.27 –Attachment 6 (Response to Comments Document 2018).

Letter from Exponent to Irvine Company
Letter from Exponent (Susan Paulsen, PhD, PE) to Dean S. Kirk, V.P. Environmental Affairs (Irvine Company) dated August 23, 2018 regarding Technical comments on July 9, 2018 Supplemental Staff Report and Basin Plan Amendments for Copper TMDLs and Non-TMDL Metals Action Plans for Zinc, Mercury, Arsenic and Chromium in Newport Bay, California; and Attachment A –Regional Board's response to Exponent's October 13, 2016 comments.

General Comment 1 - Both the SSR [Supplemental Staff Report] and the BPA have been amended to include changes in response to comments provided by stakeholders, including re-evaluating the sediments for impairment, modifying sediment targets to use Sediment Quality Objectives (SQOs)[3], and modifying (in part) the calculations of copper leach rates from boats.

However, additional comments have not been addressed. First, the water column impairment assessment in the SSR and BPA continues to use data collected prior to 2014 and has not been updated to include newer data. Stakeholders provided data and information in 2016 that appeared to indicate that the CTR criteria used as TMDL targets were overly protective, as even when CTR criteria were exceeded, toxicity was not observed. Stakeholders therefore requested that additional data be collected both to characterize the current condition and to evaluate whether toxicity was occurring within the Bay. Although the Regional Board committed to workshops or meetings to discuss these data and develop a path forward, those meetings have not occurred.

[3] *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality, SWRCB 2009 (EBE Plan-Part 1).*

General Response 1 –The SSR (Supplemental Staff Report 2018) was intended to address major comments/issues, and was not intended to address all comments submitted in October 2016. A Response to Comments Document 2018, which responded to all comments in detail, was posted on our website in August 2018.

With respect to the data analyzed by Santa Ana Water Board staff, see responses to the City's comment 3.1 - City letter, 3.1 – Attachment 3; Irvine Company's comment 1.1, and Exponent's comments M4.3, M9 and M12 (Response to Comments Document 2018). The CTR chronic and acute criteria, established by USEPA in 2000, are the legally applicable water quality objectives that are to be achieved through the Cu TMDLs, whether USEPA's established Cu TMDLs or Board staff's proposed Cu TMDLs are implemented. The presence of toxicity is not required for the determination of impairment based on the CTR criterion of 3.1 ug/L (using SLP methodology). The CTR also provides the option for adjustments to those criteria through a Water Effects Ratio (WER) investigation. Such an investigation is not a prerequisite to the adoption of the proposed Cu TMDLs. The compliance schedule recommended for the proposed TMDLs will allow the dischargers to conduct such an investigation, if the dischargers believe that the CTR criteria are overly protective. If a WER- adjusted Cu water quality criterion is approved, then the Cu TMDLs would need to be reviewed and likely revised. Note, however, that Santa Ana Water Board staff have already run the Biotic Ligand Model (BLM) for Newport data, and data from late summer yielded Cu BLM criteria that were close to the CTR criterion (when DOC (dissolved organic carbon concentrations were less than 1 mg/L).
See also response to the City's comment 6.4 – Attachment 6 (Response to Comments Document 2018).

Two public workshops were held on May 9 and May 10, 2019. Comments concerning all matters relevant to the proposed Cu TMDLs, including data and analyses, were solicited and received. Responses to those comments have been prepared and will be distributed to all interested parties

prior to Santa Ana Water Board consideration of the proposed Cu TMDLs. In addition, Board staff met repeatedly with City of Newport Beach staff and their consultants to review data and other expressed concerns.

General Comment 2 - Second, although the Regional Board modified its impairment assessment for sediments and concluded that sediment is not impaired, the SSR and BPA continue to include TMDL targets for sediment. Because sediment is not impaired, the TMDL should be modified to eliminate TMDL targets and implementation tasks for sediment from both the Copper TMDL and the Non-TMDL Action Plans. If the Regional Board wishes to retain these tasks, it should replace the sediment-related provisions in the Copper TMDL with a Non-TMDL Action Plan for copper in sediment. Of note, sampling efforts to evaluate sediment quality using the requirements of the State's SQO Policy are already in progress, and additional efforts are planned.

General Response 2 - See response to comment 2, below. See also responses to Exponent's comments M8 and M11 (Response to Comments Document 2018).

General Comment 3 - Third, the Regional Board does not appear to have considered requirements imposed since 2016 for boat owners and operators to move to lower leach rate anti-fouling paints (AFPs), which are expected to result in lower copper concentrations in Bay waters over time. The Regional Board similarly does not appear to have considered how obstacles to the greater use of non-copper bottom paints can be addressed, including TMDL requirements that non-copper AFPs "may be considered only if no significant adverse environmental impacts associated with their use is demonstrated."

General Response 3 – Santa Ana Water Board staff did consider the potential effects of the implementation of DPR's maximum leach rate for Cu AFPs. The effects of the implementation of DPR's leach rate for Cu AFPs on Cu concentrations in Newport Bay depends on the leach rates of the current Cu AFPs in use in the Bay, which may be higher or lower than DPR's maximum leach rate of 9.5 µg/cm^2/d. The percent reduction of Cu discharges from boats that might result from the implementation of DPR's lower leach rate for Cu AFPs could be estimated with a survey of the Cu AFPs currently in use in the Bay and their leach rates.
See responses to the City's comment 3.4.1 -City Letter above.

Santa Ana Water Board staff did consider obstacles to the use of non-biocide and non-Cu biocide AFPs, but again, the dischargers are <u>not required</u> to convert from Cu to non-biocide AFPs; they are only required to <u>consider</u> the conversion of Cu AFPs to non-biocide AFPs as a potential implementation strategy (including the use of incentives to encourage the conversion to non-biocide AFPs).

Note that the Port of San Diego already implemented a boat conversion project (Cu AFPs to non-biocide AFPs) in the Shelter Island Yacht Basin[13], and the County of Los Angeles is examining the use of a similar boat conversion project in Marina del Rey.
See also responses to the City's comments 5.2 –City Letter above; and 6.51 – Attachment 6, and 7.4 – Attachment 7 (Response to Comments Document 2018).

*The statement that "*non-copper AFPs *[other biocides]* may be considered only if no significant adverse environmental impacts associated with their use is demonstrated" *has been revised. Task 1.2.3, 1.3 reads "(The conversion of Cu AFPs to non-Cu biocide AFPs is not recommended.) Recommended BMPs for hull cleaning, and label use recommendations should be followed for these paints." The expectation is that any strategy proposed by the dischargers, including the use of non-Cu AFPs, to achieve the requisite Cu reductions would be accompanied by consideration of the potential environmental effects and appropriate mitigation measures. For conversions from Cu to non-Cu AFPs (non-biocide and non-Cu biocide AFPs, this is expected to include consideration of AFP ingredients, available data concerning potential environmental effects of these chemicals and possible mitigation measures (e.g., use of BMPs such as soft cloths, dry dock cleaning, reduced frequency of cleaning, and or spatial or temporal distribution of conversions) to minimize environmental effects.*

General Comment 4 - Finally, as detailed in Comment 6 (below), the existing USEPA TMDL for Newport Bay includes waste load and load allocations for copper that are derived from (and equivalent to) CTR criteria for copper. Although the USEPA TMDL does not include an implementation plan, the Regional Board could adopt an implementation plan for the USEPA TMDL rather than adopting a new TMDL.

General Response 4 – USEPA's Cu TMDLs include both mass-based and concentration-based allocations for Cu and show that boats are the major source of Cu to Newport Bay. The adoption of an implementation plan for USEPA's Cu TMDLs is an alternative considered in the draft revised SED 2021 (see Section 5.2). As discussed in the draft revised SED 2021, there is no benefit to this approach since the potential adverse environmental impacts are expected to be greater than those of the proposed Cu TMDLs.

Santa Ana Water Board staff's proposed Cu TMDLs improve on USEPA's Cu TMDLs for the following reasons:
1-The data analyzed in USEPA's Cu TMDLs are much older than the data evaluated in the proposed

[13] *Port of San Diego's Copper Reduction projects*
https://www.portofsandiego.org/environment/copper-reduction-program.html

Cu TMDLs, and new studies were conducted to fill data gaps. These include, but are not limited to, the Cu-Metals Marina Study [14], the County of Orange monitoring data[15], the Newport Bay Storm drain Study[16] and the Metals Sediment Study[17], and Anchor QEA's study (2015-2016), State Water Board's 303(d) assessment (2014-16) and DPR's monitoring study (2019)[18].

2-USEPA's estimate for the Cu load from boats was based on an estimate of 10,000 boats (new boat counts have determined an estimate of 5,000 boats in the Bay). Based on the estimate of 10,000 boats and USEPA's Cu load calculations, USEPA's Cu TMDLs require a 92% percent reduction for Cu discharges from boats.
The Cu load estimate in the proposed Cu TMDLs is based on an estimate of 5,000 boats (based on new boat counts from both the City and Coastkeeper), which reduces the required percent reduction of Cu discharges from boats to 60%. (In addition, the margin of safety was also reduced from 20 to 10%.)

3- USEPA's Cu TMDLs are based, in part, on findings of metal exceedances of older sediment guidelines. (USEPA's TMDLs were based on assessment conclusions of impairment or potential future impairment.) As discussed in the Staff Report 2021 and reflected in the revised draft BPA[19], Santa Ana Water Board staff's analysis indicates that sediments are no longer considered to be impaired based on the State Water Board's current interpretation of the State Listing Policy (SLP).
See response to S. Anghera's (City's consultant) comment 2 – Attachment 3 above.
See response to the City's comment 6.17, 6.32, 6.34, 6.39 –Attachment 6 (Response to Comments Document 2018).

If the revised Cu TMDLs are not approved by the Santa Ana Water Board, the Board is required to implement USEPA's TMDLs for Cu, including sediment-related requirements, through appropriate regulatory actions on dischargers, including the City and the County. This may include actions, such as dredging, to address USEPA's findings of sediment quality concerns. Compliance would be expected immediately, since USEPA's TMDLs do not include a compliance schedule, unless the Santa Ana Water Board adopts an enforcement order that includes a compliance schedule.
See also responses to the City's comments 1 (response 1(4)), 4 -City Letter; and 7.9.1 - Attachment 7 (Response to Comments Document 2018).

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[14] Orange County Coastkeeper and L.M.Candelaria. July 2007. Lower Newport Bay Copper-Metals Marina Study. Report for Santa Ana Regional Water Board.
[15] Orange County Stormwater DATA 2006-09, 2009-11
[16] Orange County Coastkeeper and L.M. Candelaria. January 2010. Newport Bay Stormdrain Metals study. Report for Santa Ana Regional Water Board.
[17] Orange County Coastkeeper and L.M. Candelaria. March 2014. Metals Sediment Study in Lower Newport Bay (Post-dredging) Final Report. Report for Santa Ana Regional Water Board.
[18] DPR Copper Monitoring Data from 2019. A.Burant. Presentation to Marina Interagency Coordinating Committee (Marina IACC) Workgroup.

[19] BPA

Additional detailed technical comments are provided below.

Comment 1. Regional Board staff have made several appropriate changes to the Supplemental Staff Report and proposed Basin PlanAmendment.

a. Regional Board staff have amended the TMDL to discontinue the use of sediment quality guidelines (e.g., "effects range medium" or ERM and "effects range low" or ERL) as TMDL targets. Regional Board staff have acknowledged that the Sediment Quality Objectives (SQOs) adopted by the State Water Resources Control Board are the appropriate targets for sediments (BPA at p. 3). See also Comment 4 below.

b. Regional Board staff have concluded within the Supplemental Staff Report that sediments are not impaired for copper. See also Comment 2 below.

c. The calculations in the Supplemental Staff Report and BPA have been amended to more accurately reflect the number of boats present in Newport Bay.

Response 1a – Comment noted.
Response 1b – See responses to comment 2 below.
Response 1c – Comment noted. See also response to the City's comment 1.3 – Attachment 1(Response to Comments Document 2018).

Comment 2. Because the sediments are not impaired for copper, TMDLs should not be developed for sediments as part of the copper TMDL.

The Supplemental Staff report indicates both that "it is premature to make a finding of sediment impairment at this time" (p. 9) and, with respect to copper, "Sediments are no longer considered to be impaired based on State Board's current interpretation of the State Listing Policy" (p. 18).

As described in our October 13, 2016 comments, the State's SQO Policy requires that sediment quality be evaluated using three lines of evidence (LOEs)—chemistry, toxicity, and benthic community health. The sediment chemistry LOE requires that the concentration of multiple pollutants be assessed, including copper, lead, mercury, zinc, polycyclic aromatic hydrocarbons (PAHs), chlordane, DDT (including total DDTs, DDEs, and DDDs), total PCBs, cadmium, dieldrin, and trans nonachlor. Concentrations of these pollutants are then integrated into a combined score, which is used, together with the toxicity and benthic community LOEs, to determine sediment quality at a station. Once SQOs have been determined to be exceeded, the SQO Policy requires that stressor identification evaluations be performed to determine if a pollutant, and which pollutant(s), are responsible for failure to meet SQOs.

Efforts are underway (Bight '18)[4] and planned (pursuant to the 13267 Investigative Order issued on July 11, 2018) to evaluate sediment quality within Upper and Lower Newport Bay. It is expected that the condition of sediments within Newport Bay will be evaluated through this process, and, if an impairment is found, that stressor identification studies will be required to determine the

pollutant(s) responsible for the impairment. Thus, at this time it is premature to conclude either that the sediments are impaired or that copper is a pollutant responsible for the impairment.

[4] *Southern California Coastal Water Research Project (SCCWRP). 2018. Southern California Bight 2018 Regional Monitoring Program.*

Because the Regional Board has determined that the sediments are not impaired for copper, it is inappropriate to regulate sediment quality within the Copper TMDL, and the Regional Board should eliminate TMDL targets for sediment within the Copper TMDL. Similarly, the Regional Board should also eliminate the numeric targets for sediment for zinc, mercury, arsenic, and chromium in the Non-TMDL Action Plans. [In the alternative, if the Regional Board wishes to continue to include sediment targets in the BPA, the sediment targets (SQOs) for copper should be eliminated from the Copper TMDL and included only within the Non-TMDL Action Plans.

Response 2 – There is no technical or legal basis for the argument that a finding of impairment is necessary to address sediment quality within the proposed Cu TMDLs. The numeric target for sediment Cu identified in the proposed Cu TMDLs is an interpretation of the Sediment Quality Objectives (SQOs) established in the State Water Board's Sediment Quality Provisions. (This policy must be implemented and the proposed Cu TMDLs provide a reasonable and appropriate venue for recognizing the need to do so.)

In accordance with the State Water Board policy, the sediment-related provisions in the proposed Cu TMDLs require monitoring and evaluation, including stressor identification studies where needed. This monitoring and evaluation can and should be coordinated with other monitoring requirements, including those established by the 13267 Investigative Order (R8-2018-0075)[20]. Findings regarding sediment impairment, and further actions, if any, that are appropriate, will be considered as a separate matter, outside the context of these TMDLs. In addition, evaluation of sediment Cu concentrations with respect to the sediment ERM is required for trend analyses; and this data is already collected as part of

[20] *The SQO Investigative Order (R8-2018-0075) the commenter refers to requires the use of the Sediment Quality Provisions for Aquatic Life (Phase 1 SQOs) to evaluate narrative sediment quality, for Newport Bay as a whole, and the order further requires permittees to assess historical waste discharges in terms of quantified load and impacts on beneficial uses. The sediment Cu target included in the Cu TMDLs is derived from the SQOs to assess impacts from Cu on benthic organisms, particularly in areas of the Bay that previously exceeded the sediment Cu ERM. If there is overlap in the SQO sampling locations within the target locations for the Cu TMDLs sampling, then data from the SQO order sampling may potentially be used in lieu of additional sampling if approved by Santa Ana Water Board staff. The same would apply to SQO data whether collected under other monitoring programs. (If sediments in these areas are found to be possibly impacted, likely impacted, or clearly impacted per the State's Sediment Quality Provisions, then conclusive stressor identification studies would be required to determine if Cu or some other definitively identifiable pollutant is causing or contributing to the impact on benthic infauna.)*

the SQO assessment methodology.
Note that USEPA's TMDLs are based in part on findings regarding sediment impairment (see the Assessment Summary - Part H, USEPA's Toxics TMDLs (2002)); requirements in the proposed Cu TMDLs for sediment monitoring and evaluation are appropriate to assess sediment quality concerns.

Note also that there are limited studies that include water and sediment sampling within marinas, and while Bight monitoring includes "marina" data, most "marina" samples are actually collected outside marinas, rather than within. The Cu-Metals Marina Study is one of the few studies where samples were collected inside the marinas (Coastkeeper & Candelaria, 2007). This was followed by the Metals Sediment Study which included sampling in some marinas (Coastkeeper & Candelaria, 2014). Continued sediment monitoring without and within the marinas is required.

Comment 3. The Supplemental Staff Report does not address many of the comments raised in 2016.

The SSR provides a generalized response to comments and does not provide specific responses to individual comments. While the SSR generally addresses some of the concerns raised by stakeholders, many comments have remained unaddressed. Attachment A provides a summary of the comments submitted by Exponent on October 13, 2016, together with a summary of the Regional Board's response to those comments.

Of greatest importance, the SSR and proposed BPA have not been amended to consider new data, or to evaluate whether the CTR criteria used as TMDL targets are overly protective and thus not reliable indicators of impairment within Newport Bay. See also Comment 6 below.

In addition, Exponent's 2016 comments recommended that the leach rates from copper anti-fouling paints (AFPs) be adjusted to use the average (not maximum) leach rate and to consider the reformulation of copper AFPs. Using an average AFP leach rate would result in a more realistic estimate of the contribution of boats to copper loads in the Bay and would also indicate that we are much closer to attaining CTR criteria than indicated by the calculations in the SSR and BPA. See detail in Exponent's October 13, 2016 comment letter and in Attachment A.

Response 3 – With respect to comments on the data evaluated by Santa Ana Water Board staff and use of the CTR criteria, see response to General Comment 1, above.
The available data confirm that the Bay is still impaired for dissolved Cu. The State Water Board's data assessment for the latest 303(d) list (2014-16) determined that Newport Bay is still impaired for Cu, and the status for Cu in the Bay is DO NOT DELIST. Additional data from Anchor QEA's study for the City (2015, 2016) show that over 30% of the samples exceeded the dissolved Cu CTR chronic criterion of 3.1 µg/L. Data from DPR's latest monitoring study (August 2019) also show impairment as dissolved Cu exceeded the CTR chronic criterion in 50% of the samples taken in Newport Bay. See response to the City's comment 3.4.1 -City Letter, and S. Anghera's (City's consultant) comment 15.1 -Attachment 3 above.

With respect to the leach rate and attainment of the CTR criteria, see response 1(4) to the City's comment 1– City letter (Response to Comments Document 2018).

Comment 4. Sediment quality guidelines such as ERLs and ERMs should not be used within the TMDL or Non-TMDL Action Plans.

The Supplemental Staff Report (p. 2) and draft Basin Plan Amendment (p. 3) require that "sediment Cu must be evaluated against the ERM/ERL guidelines for trend and antidegradation analyses." However, as described in the Basin Plan Amendment (p. 3), the three LOEs of the State's SQO Policy are the appropriate approach to determining sediment quality and compliance with SQOs, and the BPA replaces ERMs/ERLs with SQOs. In addition, as detailed in Exponent's October 13, 2016 comments (p. 3), ERMs/ERLs were not intended to be used as regulatory endpoints and cannot reliably be used to indicate impairment in sediments. This is true for both copper and the pollutants that are regulated by the Non-TMDL Action Plans.

Because both trends over time and anti-degradation requirements can be evaluated without using ERLs and ERMs, ERLs and ERMs should be deleted from the Copper TMDL and Non- TMDL Action Plans.

Response 4 – The proposed Cu TMDLs now specify a numeric interpretation of the SQOs as the sediment Cu target, rather than ERMs and ERLs. The ERM is to be used as the basis for comparison for trend analysis, rather than as regulatory endpoints driving sediment Cu reductions or remediation actions, if needed.

Comment 5. DPR now requires the manufacture of AFPs with lower leach rates, which should be considered by the Regional Board. In addition, the Regional Board should provide guidance regarding the use of non-copper AFPs, as the requirements of the TMDL pose an obstacle to their use.

Comment 5.1 The California Department of Pesticide Regulation (DPR) finalized a new regulation that establishes copper leach-rate data submission requirements for new and amended copper AFPs (as of January 1, 2018) and that requires all copper AFPs to have a leach rate of 9.5 $\mu g/cm^2$/day or less (as of July 1, 2018). The benefits of these newer paints will be observed over time, as the existing supply of AFPs is exhausted and as boats are re-painted with newer, low leach-rate AFPs. The Regional Board should evaluate the likely rate at which the newer AFPs will result in reductions in ambient copper concentrations.

Response 5.1 – First, DPR's leach rate regulation for Cu AFPs went into effect on July 1, 2018, and the date for compliance was June 30, 2020 for most paints. Compliance is now expected. Santa Ana Water Board staff have taken into consideration DPR's regulation for a lower maximum leach rate for Cu AFPs in the development of the proposed Implementation Plan tasks. (DPR's regulation requires the use of leach rates at or below 9.5 $\mu g/cm^2/d$ for Cu AFPs for recreational boats, and recommends that BMPs and management measures be used with lower leach rate Cu AFPs to achieve the CTR criterion of 3.1 µg/L.) See also response to the City's comment 3.4.1 - City Letter, above.

Comment 5.2 The proposed BPAs also include a requirement that "Non-Cu AFPs (other biocides)

may be considered only if no significant adverse environmental impacts associated with their use is [sic] demonstrated" (p. 11). It is unclear who would make this determination, how such a determination would be made, or what information or data would be required to support such a finding. Determinations such as this normally fall under the purview of a government agency, such as the California DPR. Thus, the TMDL appears to impose a significant obstacle (and may effectively prevent) the use of non-copper AFPs. The Regional Board should provide additional clarification regarding how, and by whom, this requirement could be addressed.

Response 5.2 - The language regarding consideration of the use of non-Cu biocide AFPs has been modified in the draft BPA, draft SED 2021 and Staff Report 2021. See responses to S. Anghera's (City's consultant) comments 2 and 17 – Attachment 2 above.

Comment 6. The USEPA TMDL uses CTR criteria as allocations. The Regional Board could simply adopt an implementation plan for the USEPA TMDL rather than adopting a new TMDL.

The USEPA TMDL adopted in 2002 included concentration-based waste load and load allocations (WLAs and LAs) for copper that were equivalent to the CMC (acute) and CCC (chronic) values from the California Toxics Rule (CTR) (see Table 5.7b on p. 49 of USEPA 2002[5]). The WLAs and LAs for copper in the 2002 USEPA TMDL are identical to those contained in the proposed Copper TMDL developed by the Regional Board.

[5] *USEPA 2002. Total Maximum Daily Loads for Toxic Pollutants in San Diego Creek and Newport Bay, California. Established June 14, 2002.*

However, the SSR asserts (at p. 1) that the Regional Board's TMDL should be adopted to replace the existing USEPA Copper TMDL, as the SSR asserts that the USEPA Copper TMDL requires a 92% reduction in the loading from boats, regardless of whether the CTR values have been attained. After reviewing the USEPA TMDL, we have not been able to determine the basis for a required "92% reduction" or for the assertion that additional load reductions will be required even if CTR levels are attained. In addition, the copper loading from boats is a calculated value that cannot be practically or directly measured. Thus, under the USEPA TMDLs, attainment would be determined using the concentration-based WLAs and LAs—i.e., if copper concentrations in the water column are below the CTR values, the water body would be in attainment, regardless of the amount of loading from boats.

Further, as described in Exponent's October 13, 2016 comments, available data indicate that the CTR values are likely overprotective of aquatic life, and thus may not be reliable indicators of impairment in the waters of Newport Bay. USEPA understood that this would be the case in many water bodies, and the CTR as promulgated by USEPA allows for adjustments to be made using Water Effects Ratio (WER) studies.[6]

[6] *California Toxics Rule, Fed. Reg. Vol. 65 , No. 97, p31691: "The WER is a more comprehensive mechanism for addressing bioavailability issues than simply expressing the criteria in terms of dissolved metal. Consequently, expressing the criteria in terms of dissolved metal, as done in today's rule for California, does not completely eliminate the utility of the WER. This is particularly true for copper, a metal that forms reduced-toxicity complexes with dissolved organic matter." See also footnote 20 on p. 12 of Exponent's October 13, 2016 technical comments.*

Because the USEPA TMDL expresses allocations for copper in the same manner as the Regional Board's proposed Copper TMDL, and because sediments are not impaired for copper (see Comment 2 above), it appears that the Regional Board could simply adopt an implementation plan for the USEPA TMDL rather than adopt a new TMDL. At a minimum, it appears that further data evaluation and discussion between the stakeholders, the Regional Board, and the environmental community is warranted before a new TMDL is adopted for copper in Newport Bay.

Response 6 –Santa Ana Water Board staff believe that it is not scientifically defensible to just add an implementation plan/schedule to USEPA's TMDLs. See response to Exponent's General Comment 4 above.

Attachment A – Regional Board's response to Exponent's October 13, 2016 comments

Comment 1 p3 – The sediment thresholds used in the impairment assessment as TMDL targets are not appropriate.

RB Response in Suppl. Staff Report or BPA 2018
The Regional Board has used SQOs as sediment targets in the Copper TMDL and Non-TMDL Action Plans. Although Sediment Quality Guidelines (ERLs and ERMs) are no longer used as targets, they are retained for use in trend and antidegradation analyses.
Addressed - In part. The SSR and BPA use SQOs as sediment targets and conclude sediments are not impaired. However, ERLs and ERMs continue to be used in the BPA. See Exponent's 2018 Comment 4.

Response 1 – See responses to Exponent's comments 2 and 4 above. See also the response to Exponent's comment M1 (Response to Comments Document 2018).

Comment 2 p4 - Data used for impairment assessment are not representative of current conditions in the Bay. The impairment assessment does not present the data used to evaluate impairment. Significant improvement has occurred over time.

RB Response in Suppl. Staff Report or BPA 2018
The SSR re-evaluates sediment impairment and concludes that the sediments are not impaired. The SSR did not update data used to evaluate water column impairment, stating that current data "will be evaluated in future refinements to the proposed TMDLs, if adopted." The Regional Board notes that the City of Newport Beach's data support the finding of impairment in the water column, but do not add these data to the impairment dataset.
Addressed - Addressed for sediments but not for water column impairment evaluations. Data from 2014-2018 should be added to the dataset used to evaluate impairment prior to the adoption of the Copper TMDLs. Neither the SSR nor the BPA present the actual data used to evaluate water column impairments.

Response 2 – The available data confirm that the Bay is still impaired for dissolved Cu. The State Water Board's data assessment for the latest 303(d) list (2014-16) determined that Newport Bay is still impaired for Cu, and the status for Cu in the Bay is DO NOT DELIST. Additional data from Anchor QEA's study for the City (2015, 2016) show that over 30% of the samples exceeded the dissolved Cu CTR chronic criterion of 3.1 µg/L. Data from DPR's latest monitoring study (August 2019) also show impairment as dissolved Cu exceeded the CTR chronic criterion in 50% of the samples taken in Newport Bay.

See response to the City's comments 3.4.1, and S. Anghera's (City's consultant) comment 15.1 - Attachment 3 above. See also responses to the City's comment 3.1 – Attachment 1, and the Irvine Company's comment 1.1 (Response to Comments Document 2018).

Comment 3 p6 – Exponent comments, Oct 13, 2016
Management actions have resulted in marked improvement within the Bay, and conditions will continue to improve in the future; these activities must be considered when assessing impairment.

RB Response in Suppl. Staff Report or BPA 2018
The SSR discusses DPR's change in leach rates and DPR's general findings that BMPs will be necessary and that some conversion of boat paints will be needed for marinas with more than 1270 boats.
Addressed - No. The analysis in the SSR does not evaluate expected changes in copper concentrations in Newport Bay over time, is not quantitative, and relies on DPR's general statements about the use of BMPs and the need for boat paint conversions. The SSR does not consider flushing or other site-specific factors within Newport Bay. The SSR also does not address copper reductions that are expected to occur as a result of brake pad conversions, and does not address observed reductions in toxicity over time.

Response 3 – First, the SSR was not intended to address all comments from October 2016. See the Response to Comments Document 2018 for detailed responses to ALL comments from October 2016.

Santa Ana Water Board staff's Impairment Assessment confirms that Cu TMDLs continue to be necessary for Newport Bay. The latest State Water Board 303(d) assessment has determined that Upper and Lower Newport Bay are still impaired for Cu; therefore, Cu TMDLs are still required. In addition, newer data, including Anchor QEA's study (2015, 2016) and DPR monitoring show that the Bay is still impaired for Cu. Note that the proposed Cu TMDLs are expected to supersede the Cu TMDLs established by USEPA in 2002. See also response to Exponent's comment 2 above.

With respect to Cu reductions that may occur with the implementation of DPR's lower leach rate for Cu AFPs and/or brake pad conversions, see responses to the to the City's comments 3.4.1 and 3.4.2 – City letter above. The dischargers should consider other factors in the development and periodic review and update of their approved implementation strategies as part of an adaptive management process.

Comment 4a p8 – Exponent comments, Oct 13, 2016
A TMDL and implementation actions for biota are not needed. This comment agreed with Regional Board conclusions.

RB Response in Supplemental Staff Report or BPA 2018 - No response needed.
Addressed – Yes

Response 4a – No further response required.

Comment 4b p8 – Exponent comments, Oct 13, 2016
Sediment is not impaired by copper, and a TMDL for copper in sediments is not needed.

RB Response in Suppl. Staff Report or BPA 2018
The SSR concludes that sediments are not impaired, moves from ERLs/ERMs to SQOs for TMDL targets, and uses ERLs/ERMs for trend and antidegradation analysis.
Addressed - In part. The SSR agrees that sediments are not impaired but continues to develop TMDL targets for sediment (in the form of SQOs) and continues to use ERLs/ERMs for trend and antidegradation analyses.

Response 4b – See response to Exponent's comment 2 above.

Comment 4c p11 – Exponent comments, Oct 13, 2016
Copper concentrations in the water column do not appear to cause toxicity, and further study is warranted instead of a TMDL. Available data appear to indicate that toxicity is not present in water samples that exceed CTR criteria.

RB Response in Suppl. Staff Report or BPA 2018
The SSR and BPA do not discuss data indicating that the CTR criteria are over- protective. The BPA does allow for a water effects ratio (WER) study to be conducted in the future to evaluate the CTR criteria.
Addressed - No. Although the BPA allows a WER study to be conducted, it would be appropriate to determine impairment and whether CTR criteria are over- protective before adopting a TMDL for copper.

Response 4c –The CTR criteria are the applicable water quality objectives to assess dissolved metals, and impairment is determined by exceedances of the CTR criteria based on the State Listing Policy methodology. Exceedances of the CTR criteria do not need to be paired with a finding of toxicity for a finding of impairment. Based on Santa Ana Water Board staff's Impairment Assessment, and the State Water Board's assessment for the latest 303(d) list (2014-16) both Upper and Lower Newport Bay are still impaired for dissolved Cu, and thus the Cu TMDLs are warranted and required. Newer data from Anchor QEA's study for the City (2015, 2016) show that over 30% of the samples exceeded the dissolved Cu CTR chronic criterion of 3.1 µg/L. Data from DPR's latest monitoring study (August 2019) also show impairment as dissolved Cu exceeded the CTR chronic criterion in 50% of the samples taken in Newport Bay.
See response to the City's comment 3.4.1 and 3.8, and S. Anghera's (City's consultant) 15.1 –

Attachment 2 above. See also response to Exponent's comment 2, and General Comment 1 above. Note that the CTR provides for the option to conduct a WER investigation to establish a site-specific adjustment to the CTR criterion.

Comment 5 p13 – Exponent comments, Oct 13, 2016
The Regional Board's calculations of copper loading to the Bay due to leaching from boat paints need to be redone. Both the number of boats and the leach rates used in calculations are too high; average (not maximum) leach rates should be used.

RB Response in Suppl. Staff Report or BPA 2018
The SSR and BPA adjusted calculations by reducing the number of boats in the Bay. The copper leach rate was not adjusted.
Addressed - In part. Although the number of boats was adjusted, the leach rate used in the calculations was not adjusted.

Response 5 – For the number of boats, see responses to the City's comment 1.1- Attachment 1 (Response to Comments Document 2018).
For the leach rate – to be conservative, the leach rate used in the calculations was DPR's maximum allowable leach rate of 9.5 µg/cm^2/d. This leach rate may actually underestimate the Cu loading from boats if boats in the Bay are currently using Cu AFPs with leach rates higher than DPR's 9.5 µg/cm^2/d.

Comment 6 p14 – Exponent comments, Oct 13, 2016
The need for a TMDL has not been demonstrated, and the proposed implementation measures do not appear to be necessary.

RB Response in Suppl. Staff Report or BPA 2018
The SSR and BPA conclude that the Bay is impaired and a TMDL is required.
Addressed - See Exponent's 2018 comments.

Response 6 – See responses to Exponent's comments M4 and M6, and the City's comment 6.35 – Attachment 6 (Response to Comments Document 2018).

Comment 7 p15 – Exponent comments, Oct 13, 2016
Further actions are recommended instead of adoption of the proposed TMDL. Water column toxicity tests dissolved copper concentrations should be collected over 3-5 yrs to characterize current conditions and determine if a WER study is needed.

RB Response in Suppl. Staff Report or BPA 2018
The SSR and BPA conclude that the Bay is impaired and a TMDL is required.
Addressed - See Exponent's 2018 comments.

Response 7 – See responses to Exponent's comments M4.3 and M6, and the City's comments 6.35 and 6.40 (Response to Comments Document 2018).

Letter from S. Keith Garner and James F. Rusk to Dean S. Kirk, V.P. Environmental Affairs (Irvine Company) dated August 24, 2018 regarding Comments on Basin Plan Amendments for Copper TMDLs in Newport Bay, California.

Introduction
In summary, the TMDL suffers from the following legal defects:

- The available data do not demonstrate that Newport Bay is impaired for copper, and thus adopting a new TMDL is not appropriate. Before considering adoption of a new copper TMDL for Newport Bay, the Regional Board should conduct further study, in collaboration with stakeholders, to determine whether impairment exists.
- The TMDL does not include a peer review, as required by California law. If the Regional Board believes that a new TMDL is required, it should first direct staff to obtain a peer review of the proposed TMDL.
- Despite concluding that sediment is not impaired for copper, the TMDL inappropriately establishes numeric targets and implementation tasks for sediment. Those elements should be removed from the TMDL. If the Regional Board feels it necessary to address sediment in the proposed Basin Plan Amendment, it should do so through a non-TMDL action plan.

The TMDL unlawfully attempts to place responsibility for discharges from boats on non-dischargers, including marina owners and operators, the City of Newport Beach (City), and the County of Orange (County). The Regional Board should consider implementation strategies identified by staff that focus on the parties responsible for boat discharges.

Response to Introduction

See responses to comments 1 - 4 below.

Comment 1

A. Adoption of a new TMDL is not warranted at this time.

As explained in the technical comments submitted by Irvine Company and other stakeholders, the best available scientific information does not support a finding that water in Newport Bay is impaired for copper at this time.[2] Absent a scientific basis for an impairment finding, there is no legal basis to adopt a new TMDL. The Regional Board should, instead, direct staff to engage in further study and evaluation to determine whether any impairment exists and, if so, to evaluate the causes and appropriate numeric limits.

[2] *Only the status of water in Newport Bay is at issue, as the current proposed TMDL acknowledges that available data do not support a finding of impairment for sediment at this time. TMDL, at 2. See also Part II.C, infra.*

1. Available evidence does not support a finding of impairment.

The TMDL states that water in Upper and Lower Newport Bay is impaired for copper, and thus TMDLs for copper are required, based on exceedances of the dissolved copper saltwater criteria found in the California Toxics Rule (CTR).[3] However, the proposed TMDL continues to rely on a water column impairment assessment that uses data collected prior to 2014 and has not been updated to include newer data. More recent data, including information submitted by stakeholders in 2016 and information collected by the Regional Board in 2014, show that toxicity was not observed in Newport Bay even when CTR criteria were exceeded.[4] As Exponent has explained in technical comments submitted on behalf of Irvine Company, these data suggest that the CTR criteria used as TMDL targets in the existing copper TMDL for Newport Bay, which the U.S. Environmental Protection Agency (EPA) adopted in 2002, were overly protective, and that exceedances of the criteria do not necessarily indicate that water in Newport Bay should be considered impaired for copper.[5, 6]

[3] *TMDL, at 2.*

[4] *Metals Sediment Study in Lower Newport Bay [Post-dredging], Coastkeeper and Candelaria 2014, available at http://www.waterboards.ca.gov/santaana/water_issues/programs/tmdl/docs/sd_crk_nb_toxics_tmdl/14-03-31-LNB_Sediment_Final_Report.pdf.*

[5] *Paulsen, S., Technical comments on July 9, 2018 Supplemental Staff Report and Basin Plan Amendments for Copper TMDLs and Non-TMDL Metals Action Plans for Zinc, Mercury, Arsenic and Chromium in Newport Bay, California (August 24, 2018), at 3-4, 6. Exponent's technical comments are submitted with these legal comments and are incorporated herein by reference.*

[6] *Indeed, the CTR criteria explicitly recognize that they may be conservative, and that higher concentrations of dissolved copper in environmental samples may not result in toxicity. The CTR criteria provide for a study called a "water effect ratio" (WER) that can be conducted to adjust the CTR criteria to more appropriate levels (EPA 2000, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Rule [40 CFR Part 131]). WER studies have been conducted in other Southern California water bodies, and the default CTR criteria have been found to be unnecessarily low (LWA 2008, Final Report- Los Angeles River Copper Water-Effect Ratio Study, Prepared by Larry Walker Associates by the City of Los Angeles, June 3, 2008).*

The Supplemental Staff Report prepared for the revised TMDL states that the newer data "will be evaluated in future refinements to the proposed TMDLs, if adopted."[7] But this crucial evaluation should occur before a new TMDL is adopted, not after. Additional time and studies are needed to determine the concentrations of copper in the water column in Newport Bay and whether these concentrations lead to direct toxicity to aquatic organisms. Water samples should be analyzed for both dissolved copper concentrations and toxicity at randomly- selected sites throughout the Bay to determine if toxicity is present, and if so, the concentration of dissolved copper that results in measurable toxicity. Concentrations of copper over time should also be established in multiple waterbodies throughout the Bay in order to determine temporal trends and the impact of recent activities in the Bay (*e.g.*, sediment dredging) onthose concentrations. Due to a lack of sufficient and current data, it is premature to conclude that copper concentrations in the water column of the Bay cause toxicity or impair beneficial uses.

[7] *RWQCB 2018. Supplemental Staff Report – Basin Plan Amendments for Copper TMDLs and Non-TMDL*

Metals Action Plans for Zinc, Mercury, Arsenic and Chromium in Newport Bay, California, at 7 (Supplemental Staff Report).

Response 1.A.1 - As noted above, numerous stakeholders have submitted comments that reiterate the points made in this comment. These comments have been repeatedly addressed in this Response to Comments Document 2021, and the Response to Comments Document 2018.

See responses to Exponent's General comment 1, and comments A2 and A6 –Attachment A above. See also responses to the City's comments 3.1 and 3.4.1 – City letter, 3.1 – Attachment 3, and 6.35, 6.40 – Attachment 6; and response to Irvine Company's comment 1 (Response to Comments Document 2018). In addition, data from DPR's latest monitoring study (August 2019) also show impairment since dissolved Cu exceeded the CTR criterion in 50% of the samples taken in Newport Bay.

2. Adoption of a new TMDL is not legally justified.

The Regional Board adopts TMDLs under the authority of the federal Clean Water Act (CWA).[8] Under the CWA, states may adopt TMDLs only for water body segments listed as impaired, based on a finding that existing effluent limitations and pollution controls are not sufficient to achieve compliance with applicable water quality standards.[9] Because the available evidence does not adequately support the impairment finding in the proposed TMDL, the legal foundation to adopt a new TMDL is lacking. Instead of adopting a new TMDL at this time, the Regional Board should direct staff to consider additional studies to evaluate copper concentrations and the potential for toxicity in Newport Bay, as described above. In doing so, the Regional Board should fulfill the commitments made during its October 2016 meeting to conduct workshops, shareholder meetings, and other outreach and public engagement tasks before considering a TMDL for adoption.

[8] *33 U.S.C. § 1313(d)(1).*

[9] *Id.; 40 C.F.R. § 130.7(c)(1).*

Response 1.A.2 – The Cu TMDLs are required under the Clean Water Act because both Upper and Lower Newport Bay are 303(d) listed as impaired for Cu. In addition, the State Water Board's data latest assessment for the 303(d) list (2014-16) determined that Newport Bay is still impaired for Cu, and the status for Cu in the Bay is DO NOT DELIST. Newer data also show that the Bay is still impaired for Cu including data from Anchor QEA's study (2015, 2016) and DPR's monitoring (2019).
See response to comment 1.A.1 above and Exponent's comment 3 above. Based on findings of Cu impairment, the USEPA established Cu TMDLs for the Bay in 2002.

Comment 2.

B. California law requires the Regional Board to obtain a peer review of the proposed TMDL.

California law requires that, when a state or regional board adopts regulations that rely upon a scientific basis, such as a TMDL calculation, the scientific basis must be subjected to external peer review. Regional Board staff have not obtained a peer review of the basis for the proposed TMDL. If the Regional Board decides to consider adopting the TMDL, despite the recommendation for

further study provided above, the Board must first direct staff to subject the TMDL to peer review.

California Health and Safety Code Section 57004(b) prevents the California Environmental Protection Agency (CalEPA) or any department, board, or office within the CalEPA (which includes the State Board and Regional Boards), from taking any action to adopt the final version of a rule unless (i) the scientific portions of the proposed rule and its supporting data are submitted to an external peer review entity for its evaluation; (ii) the peer review entity prepares a written report that evaluates the scientific basis of the proposed rule; and (iii) the reviewer concludes that the scientific portion of the proposed rule is based upon "sound scientific knowledge, methods and practices," or, if the reviewer finds otherwise, the agency explains why it nonetheless has determined that the rule is based upon sound scientific knowledge, methods and practices.[10] For any rule proposed by a regional board, the board also must post a copy of the external scientific peer review report on the Board's website.[11]

[10] *Cal. Health & Safety Code § 57004(d).*

[11] *Id. at § 57004(g).*

Regional Board staff did not obtain a peer review of the proposed TMDL, and instead seek to rely on the peer review conducted for the Toxics TMDL that EPA adopted for Newport Bay in 2002.[12] The Supplemental Staff Report states in part, "Peer review is not required if a new application of an adequately peer-reviewed product does not depart significantly from its scientific approach. The recommended Cu TMDLs used the same scientific approach and peer- reviewed models used by USEPA in their Toxics TMDLs (2002), that include Cu and other Metals TMDLs. … Therefore, additional scientific peer review of the proposed Cu TMDLs is neither necessary nor required."[13]

[12] *Newport Bay and San Diego Creek TMDLs for Toxic Pollutants (EPA 2002).*

[13] *Supplemental Staff Report, at 11 (underlining in original). The 2016 Staff Report also states that certain unidentified sections of the report were "reviewed along the way by experts in various fields" (Staff Report, at 130), but such informal review clearly falls short of the process required under Health and Safety Code Section 57004.*

This is incorrect for two reasons. First, EPA did not conduct a peer review of its Toxics TMDL. In response to comment on the 2002 TMDL, EPA stated that "…these TMDLs have not been subjected to a formal peer review."[14] Second, even if EPA had conducted a peer review, it would be improper to rely on it. Such a peer review would not have included the data and information collected subsequent to 2002. The law is clear: before adopting the TMDL, the Regional Board must ensure that "the scientific portions of the proposed rule *and its supporting data*" undergo peer review.[15]

[14] *EPA, Responsive Summary – Newport Bay and San Diego Creek TMDLs for Toxic Pollutants (available at https://www3.epa.gov/region9/water/tmdl/nbay/tsdi0602.pdf), at 8 (Comment L.14).*

[15] *Cal. Health & Safety Code § 57004(d) (italics added).*

Response 2 – Pursuant to Health and Safety Code Section 57004 proposed rules that have a scientific basis or components generally must be submitted for external scientific peer review. However, per the Unified California Environmental Protection Agency Policy and Guiding Principles for External

Scientific Peer Review (March 13, 1998), this peer review is not required if a new application of an adequately peer-reviewed product does not depart significantly from its scientific approach.

The proposed Basin Plan amendments do not require further external scientific peer review since they use the same peer reviewed methodology that was used for the Shelter Island Yacht Basin Copper TMDL and do not depart significantly from that approach.
The discussion of peer review in the draft Staff Report has been revised. The draft SED 2021 and the revised Staff Report 2021 are being recirculated for public review and comment.
See also response to the City's comment 6.56 –Attachment 6 (Response to Comments Document 2018).

Comment 3

C. The Regional Board should remove numeric limits and implementation tasks for sediment from the TMDL.

Regional Board staff reconsidered its impairment analysis for sediment in Newport Bay in light of the information and comments provided by stakeholders in 2016, and determined in the current draft TMDL and Supplemental Staff Report that sediment in Newport Bay is not impaired for copper. However, the TMDL still contains numeric targets for copper in sediment and implementation tasks for sediment, including monitoring and evaluation. In light of the Regional Board's determination that sediment is not impaired for copper, numeric targets and implementation tasks for sediment are not appropriate and should be removed from the TMDL, in the event the Regional Board decides to consider adoption of the TMDL.

As stated in Part II.A. of these comments, the Regional Board adopts TMDLs for impaired water bodies under the authority of the CWA.[16] Under the CWA, TMDLs are required only when existing effluent limitations are not sufficient to achieve compliance with applicable water quality standards, resulting in impairment.[17] Because the Regional Board has concluded that sediment is not impaired for copper, there is no authority under the CWA to establish TMDLs for sediment.[18]

[16] *33 U.S.C. § 1313(d)(1).*
[17] *Id.*
[18] *See id.*

Moreover, including numeric limits and implementation tasks for sediment in the TMDL is unnecessary and serves no purpose. The numeric limits for sediment in the proposed TMDL are based on the sediment quality objectives (SQOs) that the State Board adopted in 2009 as part of the Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality (EBE Plan).[19] These objectives are already in effect, apply to Upper and Lower Newport Bay, and must be implemented through regulatory actions, when applicable.[20] But a TMDL is not an appropriate way to implement the SQOs when no impairment exists.

[19] *TMDL, at 3.*

[20] *EBE Plan, at 13-19.*

Likewise, the EBE Plan already provides for routine monitoring to evaluate compliance with the SQO assessment metrics. Where sediments fail to meet the SQOs, the EBE Plan calls for stressor identification to determine what pollutant(s) are responsible and to identify the source(s) of those pollutants.[21] Efforts to ensure compliance with SQOs in Newport Bay are already underway — for instance, the Regional Board has issued an investigative order requiring assessment of SQO compliance in the Bay. But, again, the TMDL is not an appropriate way to implement these tasks with respect to sediment where no impairment has been shown and the stressor, if any, is unknown.[22]

[21] *EBE Plan, at 17-19.*

[22] *See TMDL, Implementation Plan, § 2.*

The Regional Board's proposed numeric limits for copper in sediment, and the targeted monitoring for copper concentrations in sediments and sediment toxicity, should be removed from the TMDL. Monitoring should be conducted only in accordance with the SQO Policy and existing investigative orders. Alternatively, the Regional Board may consider implementing these measures through non-TMDL action plans, as it has proposed to do for other metals where impairment has not been shown.

Response 3 - Inclusion of sediment-related provisions in the proposed Cu TMDLs are needed to ensure that, if approved, the Cu TMDLs will supersede those established by USEPA. See also response to Exponent's comment 2 above.

Santa Ana Water Board staff's Impairment Assessment resulted in an initial determination that the sediments were impaired for Cu based on exceedances of the sediment Cu ERM and the presence of toxicity in the same areas. More recently, the State Water Board's interpretation of the State Listing Policy (SLP) requires exceedances of the sediment Cu ERM with the presence of toxicity in paired samples to determine impairment. Since the sediment data evaluated did not have paired analyses, the Bay sediments are no longer considered to be impaired, although impairment was not ruled out, and sediments should be reevaluated by the newer methodology of the Sediment Quality Provisions.

A numeric target for sediment Cu was derived from the narrative SQOs, and is included in these Cu TMDLs. It is appropriate to include a numeric target for sediment Cu since earlier sediment samples exceeded the Cu ERM and toxicity was present in the same areas. Bay sediments should be further evaluated with the SQOs methodology (and SQOs-derived target).

The tasks related to sediments in the recommended Implementation Plan now require continued monitoring and evaluation of sediments in Lower Newport Bay and lower Upper Newport Bay (rather than remediation), based on the State Water Board's Sediment Quality Provisions. (See Staff Report 2021.)

With respect to the investigative order mentioned by the commentor – see response and footnote

to Exponent's comment 2, above.

Comment 4 -

D. The Regional Board cannot hold marina owners and operators liable for discharges of copper from boats.

The TMDL identifies copper-based antifouling paints (AFPs) used on boats as the largest source of copper to Newport Bay, and states that achieving compliance with the TMDL and numeric targets for copper will not be possible without reducing discharges from boats. The TMDL Implementation Plan requires a 20% reduction of copper discharges from AFPs within four years after USEPA approval of the TMDL, a 40% reduction within eight years, and a 60% reduction within 12 years. The TMDL further describes marina owners/operators as "dischargers" and "responsible parties" with respect to copper discharges from AFPs on boats. The TMDL Implementation Plan tasks marina owners and operators, the City and the County (in addition to boat owners, hull cleaners and boatyard owners/operators) with preparing and implementing an implementation plan and schedule to achieve the required load reductions from boats.[23]

[23] *TMDL, Implementation Plan §1.*

The Implementation Plan rests on an overbroad view of the Regional Board's legal authority, which is outlined in the Staff Report prepared in 2016 for the original draft TMDL.[24] Contrary to the assertions made in the Staff Report, the Regional Board lacks the authority to hold marina owners and operators responsible for discharges from boats or to require marinas to reduce such discharges. Any attempt by the Regional Board to make marina owners and operators liable for boat discharges, whether through the TMDL or any subsequent NPDES permit, waste discharge requirements (WDRs) or cleanup and abatement order (CAO), would be invalid and subject to legal challenge.

[24] *Staff Report – Basin Plan Amendments for Copper TMDLs and Non-TMDL Metals Action Plans for Zinc, Mercury, Arsenic and Chromium in Newport Bay, California, August 30, 2016 (Staff Report).*

Response 4 -
Marina owners and operators are dischargers and may be held responsible for discharges of Cu from Cu AFPs from boats in their marinas. See responses to specific comments below.

Comment 4.1

1. The Regional Board cannot regulate discharges from boats under the CWA.

As the Regional Board has acknowledged, discharges of copper from most boats in Newport Bay are not subject to regulation through the CWA's National Pollutant Discharge Elimination System (NPDES). The CWA prohibits the discharge of any pollutant, from a point source to a water of the United States, without a permit.[25] While the definition of a point source is broad, the CWA contains a provision added by the federal Clean Boating Act of 2008, which explicitly states that no CWA permit is required for any discharge incidental to the normal operation of a recreational vessel, including those from anti-fouling agents.[26] These discharges are regulated, instead, under

performance standards to be promulgated by the EPA.[27]

[25] 33 U.S.C. § 1311(a).

[26] 33 U.S.C. § 1342(r).

[27] See 33 U.S.C. §1322(o).

Commercial vessels that are not exempt from NPDES permitting are generally regulated under two general NPDES permits issued by EPA: the Vessel General Permit and the small Vessel General Permit. These permits address the use of copper-based and other AFPs. The Staff Report thus acknowledges that EPA and the U.S. Coast Guard (which has enforcement authority under the Clean Boating Act) are the agencies with authority to regulate copper discharges from boats under federal law.[28] The Staff Report also acknowledges that the EPA and the California Department of Pesticide Regulation (DPR) are the agencies with authority, under federal and state law, respectively, to regulate the sale and use of pesticides, including copper AFPs.[29]

[28] See Staff Report, at 75-76.

[29] Staff Report, at 71-72. DPR has recently finalized regulations that impose a maximum allowable copper leach rate of 9.5 µg/cm2/day on all copper-based AFP and coating product registrations. 3 CCR § 6190.

Because the CWA does not authorize the Regional Board to regulate discharges of copper from boats, the Staff Report appropriately concludes that the Regional Board's authority to regulate such discharges is found exclusively in the California Water Code.[30]

[30] See Staff Report, at 77. We note, however, that to the extent discharges from boats may be subject to NPDES permit requirements, the CWA and its implementing regulations unambiguously place sole responsibility for compliance on the "person who discharges or proposes to discharge pollutants" (40 C.F.R. 122.21(a)(1)) — in this case, the boat owners, operators, or (potentially) hull cleaners responsible for any discharge of copper from AFPs on boats.

Response 4.1
The Santa Ana Water Board's authority to regulate discharges from recreational boats is based in State law.

The Vessel Incidental Discharge Act (VIDA), enacted in 2018, added section 312(p) to the CWA and establishes a framework to regulate incidental discharges for normal operations of commercial vessels. It applies to commercial vessels greater than 79 ft., other non-recreational, non-Armed Forces vessels (such as research and emergency rescue vessels), and ballast water from small vessels (less than 79 feet) and fishing vessels of all sizes. VIDA repealed the Small Vessel General Permit and froze the existing Vessel General Permit in place until USEPA and the U.S. Coast Guard adopt regulations to implement VIDA. The Santa Ana Water Board has authority to regulate commercial vessels under State law, except to the extent preempted by VIDA.

Comment 4.2

2. California law does not authorize the Regional Board to hold marinas liable for discharges from boats.

The Staff Report states that residual copper discharged from boat AFPs is a waste subject to

regulation by the Regional Board under the California Water Code. The Staff Report identifies several regulatory options for the Regional Board to consider to address impairment caused by copper discharges from AFPs, including issuing individual or general WDRs, issuing a conditional waiver of WDRs, adopting a prohibition on discharge of residual copper from AFPs, and issuing CAOs to dischargers. The Staff Report further states that the Regional Board has the authority to issue WDRs or CAOs to marina owners and operators, among other parties, or to require them to enroll under conditional waivers of WDRs.[31]

[31] *Staff Report, at 78-80. The Staff Report recommends that the Regional Board issue a conditional waiver of WDRs for boat discharges.*

Stakeholders have questioned whether the Regional Board's authority to regulate discharges associated with copper-based AFPs is preempted or limited by federal and/or state law authorizing EPA and DPR to regulate the use of AFPs.[32] Those questions aside, we express no opinion on the most appropriate way for the Regional Board to exercise whatever authority it has under state law. We strongly disagree, however, with the claims in the Staff Report that the Regional Board may hold marina owners and operators liable for discharges from AFPs on boats and that it can require marinas to take action to reduce those discharges.

[32] *Letter from Dave Kiff, City Manager, City of Newport Beach, to Dr. Linda Candelaria, PhD, Re Regional board Meeting – October 28, 2016, Basin Plan Amendments to Incorporate Total Maximum Daily Loads ("TMDLs) for Copper and Non-TMDL Action Plans for other Metals in Newport Bay (October 14, 2016), Attachment 7, at 2-5.*

The Staff Report states that the Regional Board "has the discretion to hold Newport Bay marina owners/operators accountable for discharges of waste that occur or occurred within the marina leasehold … based on their status as owners or operators of the marina facility in which an activity occurs that results or resulted in a discharge of waste, and the marina owner/operators' ability to control the activity." According to the Staff Report, this makes marina owners and operators "responsible parties" for purposes of the TMDL.[33] The Staff Report makes a similar claim regarding the City and the County.[34] The Staff Report offers little explanation for this claim — particularly as to marina owners and operators — other than to cite to a series of State Board orders and a memorandum by the State Board's Office of Chief Counsel, purporting to establish "landowner liability" under WDRs and enforcement orders.[35] As explained below, staff's interpretation of the Regional Board's authority is incorrect, and the Regional Board does not have discretion to treat marina owners and operators as dischargers or dischargers for the purpose of WDRs, conditional waivers, enforcement orders or CAOs.

[33] *Staff Report, at 86.*

[34] *Staff Report, at 85-86.*

[35] *Staff Report, at 85 n.7.*

Response 4.2

Marina owners and operators are appropriately identified as dischargers based on three criteria (1) status as owner/operator of the facilities where the discharge of waste takes place; (2) knowledge of the activity causing the discharge, and (3) the ability to control the activity. (See e.g., State Water Board Order No. WQ 90-3, 86-15 (finding lessee was responsible for contamination based on his ability

to control the contamination). These three criteria are satisfied with respect to the discharge of Cu from Cu AFPs used on boat hulls. First, marina owners and operators own or operate marinas where boats are moored. By allowing boats to congregate in marinas, owners and operators cause and permit the discharge of Cu from boats moored in their marinas. Second, marina owners and operators have knowledge of Cu discharges from Cu AFPs—the Santa Ana Water Board has had many public meetings and workshops on the issue and Orange County Coastkeeper held public meetings on the issue and met with boaters regarding a boat paint conversion initiative funded under Section 319(h) of the Clean Water Act. In addition, the City of Newport Beach conducted public outreach and discussion resulting in the City Council adoption of resolution to encourage to use of non-Cu AFPs (Resolution No.2010-53). Third, marina owners and operators can control the discharge of Cu from Cu AFPs through their agreements with boat owners. Owners and operators can include conditions in their agreements to require BMPs for hull cleaning, control the number of boats that are moored in the marina, and limit the types of hull coatings used by boats in their marinas. Owners and operators can also provide incentives to use non-biocide paints through differential lease fees. (See also San Diego Regional Water Quality Control Board Technical Report for TMDL for Dissolved Copper in Shelter Island Yacht Basin, pp. 39–42, 44–47 (Feb. 9, 2005).)

a. The Water Code does not authorize regulation of marinas.

The California Water Code only authorizes the regulation of individual persons or entities that actually discharge, or plan to discharge, wastes into water bodies. Water Code Section 13260 requires "person[s] discharging waste, or proposing to discharge waste" to file a waste discharge report with a regional board.[36] Thereafter, if the regional board decides to issue WDRs, it must provide notice of the WDRs to "the person making or proposing the discharge."[37] This language is unambiguous: only the "person[s] discharging waste" are subject to the regional boards' authority. Nothing in the Water Code authorizes the regional boards to impose regulation or liability on non-dischargers.

[36] *Cal. Water Code § 13260(a).*

[37] *Id. § 13263(a).*

Marina owners and operators do not discharge waste into Newport Bay by virtue of their ownership and operation of marina facilities, nor do they propose to discharge waste. Waste from AFPs is discharged, if at all, by boat owners and operators who make the decision to use copper-based AFPs or to have their boat hulls cleaned in a manner that releases copper. Marina owners and operators do not conduct, require or permit hull cleaning or the use of copper-based AFPs. Thus, it is inappropriate and unlawful to treat them as dischargers for purposes of WDRs, conditional waivers, CAOs or other regulatory actions.

Response 4.2a
Marina owners and operators are dischargers. See response to comment 4.2 above.

b. State Board WQ Orders do not provide authority.

The Staff Report cites to a series of State Board orders, including Order No. WQ 90-03, as

establishing "the issue of landowner liability under both [WDRs] and enforcement orders."[38] Staff's reliance on these orders is misplaced, because they provide no such authority and rest on an erroneous interpretation of the law. Even if these sources could be construed as establishing landowner liability, they would not authorize imposition of liability on marina owners and operators. As noted in the Staff Report, marinas are located on tidelands and/or submerged lands that are generally held and administered by the State of California for the benefit of the people of the State, and thus marina owners and operators are not landowners with full control over the use of such lands.[39]

[38] *Staff Report, at 85 n.7.*

[39] *Staff Report, at 85. We do not dispute that marina owners and operators may be responsible for discharges from marina facilities, but any such discharges are not at issue here.*

Water Quality Order 90-3, cited in the Staff Report, concerned a Regional Board's attempt to name the San Diego Unified Port District as a responsible party in six NPDES permits issued to boatyards and shipyards that were tenants of the Port. The Port appealed the Regional Board's action to the State Board, contending that the Port was a "non-operating" landowner and, therefore should not be subject to the NPDES order requirements. In upholding the Regional Board's action, the State Board concluded that both the CWA and the Water Code were silent as to which parties must be named in a NPDES permit, and on that basis, concluded that the Regional Board had the discretion to name a non-operating landowner in WDRs and NPDES permits.

Order No. 90-3 has not been subjected to judicial review and is based on questionable reasoning. As explained above, both the CWA and the Water Code unambiguously authorize regulation of only those individuals or entities that actually discharge, or plan to discharge, waste to jurisdictional waters. Moreover, the factual situation in Order No. 90-3 is not analogous, because in that case the Regional Board had issued several NPDES permits to the Port District's tenants, which it then amended to name the Port as a responsible party.[40] In the present case, however, the CWA explicitly provides that no NPDES permit is required or authorized for the vast majority of boats in Newport Bay, and the EPA — not the Regional Board — is responsible for issuing NPDES permits for the few vessels subject to CWA permit requirements. In addition, the State Board found in Order No. 90-3 that "the source of the discharge is the land owned by the Port District," and thus it was proper to hold the District liable as a landowner.[41] In this case, the source of the discharge is not land, but boats in Newport Bay, which marina owners and operators neither own nor control.

[40] *Order No. WQ 90-3, at 1.*

[41] *Order No. WQ 90-3, at 9.*

The other State Board Water Quality orders mentioned in the Staff Report also involve circumstances distinguishable from those that apply to the TMDL, or do not support the position taken in the Staff Report. Order No. WQ 87-5 affirmed the imposition of landowner liability on the U.S. Forest Service for a mining project on federal land for which the Forest Service issued a permit. The State Board found it appropriate to name the Forest Service as a discharger in WDRs issued to the mining company, because the Service conducted environmental review of the project, issued a permit for it, and was "in a good position to control how the mining operation was conducted."[42] The State Board summarized its prior

orders regarding landowner liability, including several of the orders cited in the Staff Report, as follows: "[T]he three elements at which we look to determine that a landowner can be held accountable are satisfied in this instance: ownership, knowledge of the activity, and ability to regulate it."[43] Even assuming this to be a correct interpretation of California law, it would not support the imposition of liability on marina owners and operators, who do not generally own the submerged lands on which boats are moored, do not regulate the use of AFPs on boats, and are not even in a position to know whether boats have been previously painted with copper-based AFPs.

[42] *Order No. WQ 87-5, at 3.*

[43] *Id. at 3-4.*

Order No. WQ 86-16 is not analogous because the entity named as a discharger was not merely a passive landowner, but a successor in interest to a prior landowner that the State Board found had been responsible for the actual discharges of pollutants from a chemical packaging facility that led to contamination of the site requiring cleanup.[44] Order No. WQ 84-6, likewise, involved landowners who the State Board found were directly involved in the actual discharges leading to contamination of their property.[45]

[44] *Order No. WQ 86-16, at 1, 5-10.*

[45] *Order No. WQ 84-6, at 2, 6-7.*

Three of the cited orders did not directly address the question of landowner liability. In Order No. WQ 87-6, the petitioner conceded that it was proper to name the landowner as a discharger in a CAO.[46] In Order No. 86-11, the petitioner likewise did not dispute the landowner's ultimate liability for waste discharged on its property, but only challenged the imposition of responsibility for day-to-day compliance with WDRs.[47] In order No. WQ 86-15, a *lessee* and gas station operator sought to avoid liability for discharges from underground tanks used by the gas station.[48] Thus, the issue of landowner liability was not properly before the State Board in any of these cases. Furthermore, the State Board agreed in order No. 87-6 that the landowner should bear only "secondary liability" for cleanup of the property because it did not "initiate or contribute to the actual discharge of waste."[49] Thus, the order does not support the Regional Board's current position.

[46] *Order No. WQ 87-6, at 3.*

[47] *Order No. WQ 86-11, at 2, 4.*

[48] *Order No. WQ 86-15, at 5-9.*

[49] *Order No. WQ 87-6, at 3.*

Other than citing to previous State Board orders, Order No. WQ 86-18 offered no authority or analysis for its conclusion that imposing landowner liability for groundwater contamination was proper.[50]

[50] *Order No. WQ 86-18, at 2.*

Contrary to the view espoused by the State Board in some of the cited Water Quality orders,

California law does not authorize the regional boards to hold landowners liable for the independent actions of third parties resulting in discharges of waste. Even if the regional boards could impose landowner liability in such a manner, it would not render marina owners and operators liable for discharges from boats using marina facilities. Thus, staff's reliance on the State Board Water Quality orders is misplaced.

Response 4.2b
See response to comment 4.2 above.

c. Case law concerning CAOs confirms that the Regional Board's interpretation of its authority is overbroad.

Not only does the Staff Report fail to identify any relevant authority for its claim that the Regional Board may hold marina owners and operators liable for boat discharges, but case law involving CAOs refutes staff's position and establishes that staff's interpretation of the Regional Board's authority is overbroad. A California Court of Appeal has held that the Porter-Cologne Act does not impose liability on entities whose involvement in a discharge is "remote and passive," like the alleged involvement of marinas in discharges from AFPs on boats.

Water Code section 13304 authorizes the water boards to issue CAOs requiring any "person who has discharged . . . or who has caused or permitted" waste to be discharged into waters of the state, in violation of any applicable WDRs or other order, to clean up or abate the waste.[51] On its face, this language unambiguously provides that marina owners or operators must have actively "discharged" waste, or "caused or permitted" a discharge of waste, in order to face liability under CAOs. Regional Board staff do not claim that marinas actually discharge waste from AFPs on boats, so any attempt to extend liability to marinas must rely on the "caused or permitted" language.[52] But, under applicable case law, marina owners and operators cannot be construed as having caused or permitted such discharges.

[51] *Cal. Water Code § 13304(a).*

[52] *See Staff Report, at 86.*

In *City of Modesto Redevelopment Agency v. Superior Court*, 119 Cal.App.4th 28 (2004), the Court of Appeal found that dry cleaning solvent manufacturers and distributors that took affirmative steps to facilitate the discharge of solvents by dry cleaning facility operators into a public sewer system (*e.g.*, instructing a dry cleaning facility to set up equipment to aid in the discharge) may face liability under a CAO issued by a regional board. But manufacturers and distributors that merely sold the solvents without warnings of dangers could not be held liable.[53] The court held that the phrase "cause or permit" in Water Code section 13304 does not allow the water boards to impose liability under CAOs on entities whose involvement in a discharge was merely "remote and passive." Rather, to be liable, an entity must have an "active involvement in activities leading to a discharge."[54]

[53] *119 Cal.App.4th at 43.*

[54] *Id. at 44.*

City of Modesto clearly precludes liability for marina owners and operators based on discharges from AFPs. Marina owners and operators do not have any active involvement in the activities responsible for discharges of copper from AFPs, including the boat owner/operators' application of copper-based AFPs, or the boat owner/operators' cleaning of boat hulls that exposes AFPs to increased leaching rates. Unlike the solvent distributors found liable in *City of Modesto*, marina operators do not instruct boat owners to use copper-based AFPs or facilitate such use. Any involvement of marinas in such discharges is, at most, "remote and passive," in that some portion of the discharges from boat AFPs occurs while the boats are moored at marina facilities.[55] Thus, the Regional Board clearly lacks authority to issue CAOs to marinas for boat discharges. More generally, the court's reasoning in *City of Modesto* — that the Legislature intended the Porter-Cologne Act to mirror the common law principles of nuisance, under which an entity may be held liable only for a nuisance that it played an active role in creating — also reinforces the conclusion that the Regional Board may not hold marinas liable for boat discharges under WDRs or conditional waivers.[56]

[55] *See id. at 43-44.*

[56] *See id. at 43. See also Order No. WQ 90-3, at 8 ("The same analysis applied to cleanup and abatement orders also applies to waste discharge requirements, even though the statutory language is different.").*

Because California law clearly does not allow the Regional Board to hold marina owners and operators liable for copper discharges from boat AFPs, the Regional Board should instruct staff to remove marina owners and operators from the list of "dischargers" and "responsible parties" tasked with carrying out the TMDL Implementation Plan for copper, including the reduction of discharges from AFPs and the evaluation of sediments that might be contaminated with copper discharged from boats in the past.[57]

[57] *TMDL Implementation Plan, §§ 1, 2.*

Response 4.2c
City of Modesto supports the naming of marina owners and operators as dischargers. Marina owners and operators are actively involved in the activities that lead to the discharge of Cu from Cu AFPs—they own and/or operate the marinas and enter into agreements with boat owners that allow boats to congregate in marinas where the discharge of Cu from the boats takes place. Marina owners and operators can control the discharge through conditions in their agreements with boat owners. Marina owners and operators' involvement with the discharge of Cu is neither remote nor passive. See also response to comment 4.2 above.

d. Action Plans and/or WDRs may not specify the manner of compliance with TMDLs.

Even assuming, for the sake of argument, that the Regional Board could hold marina owners and operators responsible for discharges of copper from boats, the prescriptive nature of the regulatory

actions contemplated in the TMDL Implementation Plan and Staff Report would exceed the Regional Board's authority. The Staff Report states that the Regional Board could regulate marina owners and operators as dischargers under WDRs or conditional waivers, and suggests that marinas could be required to include provisions in leases or rental agreements that specify the types of AFPs to be used on boats allowed in the marina, limit the hull cleaning activities allowed in the marinas, and require use of best management practices by hull cleaners and boat owners, among other conditions.[58] Imposing such requirements on marina owners and operators through WDRs or conditional waivers would violate Water Code Section 13360, which states that "[n]o waste discharge requirement or other order of a Regional Board or the State Board or decree of a court issued under this division shall specify the design, location, type of construction, or particular manner in which compliance may be had with that requirement, order, or decree, and the person so ordered shall be permitted to comply with the order in any lawful manner."[59]

[58] *Staff Report, at 78-79, 86.*

[59] *Cal. Water Code § 13360(a).*

The Supplemental Staff Report states that the TMDL Implementation Plan does not dictate the method or manner of compliance, because it requires responsible parties to "develop their own proposed implementation plan with strategies to achieve these Cu TMDLs."[60] This claim elevates form over substance. The Implementation Plan includes specific "Recommended Implementation Tasks" to reduce copper discharges from copper-based AFPs, including: converting from copper AFPs to nontoxic AFPs or copper AFPs with lower leach rates (including by "restricting the use of Cu AFPs through marina leases, permits or other mechanisms"); requiring all underwater hull cleaners to use best management practices to reduce copper discharges; and continuing education programs for boaters, boatyards and marinas.[61] The Implementation Plan states that the implementation plan proposed by responsible parties "shall consider the recommended tasks listed below, and provide justification for tasks that are not included in their plans."[62] Both the 2016 Staff Report and the Supplemental Staff Report make clear that Regional Board staff believe the required reductions in discharges from boat AFPs cannot be achieved without implementing these "recommended" tasks.[63] Under the circumstances, it is clear that the Implementation Plan seeks to dictate precisely what methods will be used to reduce copper discharges from boats.

[60] *Supplemental Staff Report, at 6.*

[61] *TMDL Implementation Plan, at §§ 1.2.1 – 1.2.3.*

[62] *TMDL Implementation Plan, § 1.2.*

[63] *E.g., Supplemental Staff Report, at 7, 10 ("[I]mplementation actions must be taken to reduce Cu discharges from boats. These actions may include the use of BMPs by all divers … [and] the conversion of some boats using Cu AFPs to nontoxic and non-Cu paints."*

Response 4.2d

First, the Non-TMDL Action Plans (Action Plans) have been removed from the proposed Basin Plan amendments. The Cu TMDLs do not dictate the manner of compliance. The TMDLs are not self-implementing and are not orders. As the commenter notes, the TMDLs will need to be implemented through waste discharge requirements or other orders. The recommended tasks are strategies that

the dischargers must consider in developing their implementation plan(s); however, dischargers will be responsible for determining how they will comply with any orders that implement the TMDLs.

CONCLUSION

Comment 5
Regional Board staff have addressed some of the issues raised in prior comments on the proposed copper TMDL, including removing the finding of sediment impairment. The current proposed TMDL still requires revisions to address the implications of that change, including removing numeric targets and implementation tasks for sediment from the TMDL. The Regional Board also should consider further study and evaluation to determine whether water in Newport Bay is impaired for copper, before adopting a new TMDL, as the information supporting the proposed impairment finding for water is inconclusive and outdated.

*Response 5 - See responses to comment 3 above. See also responses to Exponent's comments 2 and 4, above. The statement that "*the information supporting the proposed impairment finding for water is inconclusive and outdated." *is not correct*.

The available data confirm that the Bay is still impaired for dissolved Cu. The State Water Board's data latest assessment for the 303(d) list (2014-16) determined that Newport Bay is still impaired for Cu, and the status for Cu in the Bay is DO NOT DELIST. Newer data also show that the Bay is still impaired for Cu. This includes data from Anchor QEA's study for the City (2015,2016) in which over 30% of the samples exceeded the dissolved Cu CTR chronic criterion, and data from DPR's latest monitoring study (August 2019)[21] that show impairment as dissolved Cu exceeded the CTR chronic criterion in 50% of the samples taken in Newport Bay. See responses to the City's comment 3.4.1 -City Letter, S. Anghera's (City's consultant) comment 15.1 – Attachment 3 above, and comment 1.A.1 above.
See also response to the City's comment 6.27 –Attachment 6 (Response to Comments Document 2018).

Comment 5.1 If the Regional Board intends to move forward with a new TMDL, it should direct staff to correct legal deficiencies in the current documents. First, staff must obtain an independent peer review of the scientific basis for the TMDL, as required by State law.

Response 5.1 See response to comment 2 above; S. Anghera's (City's consultant) comment 31 – Attachment 3 above, and the City's comment 6.56 –Attachment 6 (Response to Comments Document 2018).

Comment 5.2 Second, the TMDL must be revised to eliminate reference to marina owners and

[21] *DPR Copper Monitoring Data from 2019. A.Burant. Presentation to Marina InteragencyCoordinating Committee (MarinaIACC) Workgroup.*

operators as dischargers or responsible parties for purposes of boat AFP discharges and related sediment evaluation tasks.

Response 5.2. See response to comment 4.2 above.

US Environmental Protection Agency (USEPA)

Letter from the US Environmental Protection Agency dated August 22, 2018 regarding "Newport Bay Basin Plan Amendment".

We have reviewed the package and find the Copper TMDLs to be technically supported, and reasonable and appropriate, to address copper in Newport Bay. We support the Regional Water Board's adoption.

The positions described in this correspondence are preliminary in nature and do not constitute a determination by EPA under the Clean Water Act. EPA will make appropriate approval/disapproval decisions following adoption of the Basin Plan Amendment, and the State's submittal to the EPA.

We appreciate the significant work and stakeholder communication and coordination that has gone into the development of the Basin Plan Amendment, over a number of years. If you have any questions, please do not hesitate to contact me.

Response – Comments noted.

California Marine Affairs and Navigation Conference

Letter from the California Marine Affairs and Navigation Conference dated August 23, 2018 regarding "Basin Plan Amendment for Newport Bay".

Comment 1
My letter seeks to provide support for the inclusion of more science and consideration of all marine resources when considering the latest enforcement regulations for dissolved copper in the enclosed bays of Southern California.
The entire CMANC membership in Southern California will be straddled with additional costs and enforcement responsibilities in an environment that is already strapped for resources when copper limits are implemented. Our members have a limited ability to modify lease agreements, provide oversight, or police individual boaters with the use of legally available products used to protect their personal property. To further this point, the responsibility to govern legally available products should be done at the state level and focused on paint manufactures. Our membership has no authority to limit the use of legally available copper based paints. These municipalities are already burdened with limited budgets to provide public safety, social programs and developing resiliency tools. Any additional responsibilities need to be supported by the voters and congress, on a state-wide level, in order to provide the resources necessary to address this issue.

Response 1 - First, the proposed Cu TMDLs pertain to Newport Bay, not to all enclosed bays in southern California. In addition, Santa Ana Water Board staff have carefully reviewed the already

established Cu TMDLs in San Diego Bay (Shelter Island Yacht Basin) and Marina del Rey in Los Angeles County to inform the development of Board staff's proposed Cu TMDLs for Newport Bay. See response to the City's comment 3.5 - City letter above. See also responses 1.1 – 1.4 to the City's comments 1 and 5.2– City letter (Response to Comments Document 2018).

Second, USEPA has already established Cu TMDLs for Newport Bay in 2002. Santa Ana Water Board staff's proposed Cu TMDLs would revise and supersede USEPA's Cu TMDLs. Notably, the Cu TMDLs proposed by Board staff require less reduction of Cu discharges from boats than USEPA's TMDLs (60% vs 92%, respectively). In addition, the proposed Cu TMDLs, unlike those established by USEPA, include the provision that "Compliance with the Cu TMDLs will be considered to be achieved if the dissolved Cu CTR criterion of 3.1 µg/L is achieved, i.e. no impairment is demonstrated per the assessment methodology in the State Listing Policy (SLP)[22], and no further reduction in Cu discharges will be required even if the Cu wasteload or load allocation for boats is not yet achieved. If, however, the Cu wasteload or load allocation for boats is achieved, but the CTR criterion* is not achieved, these Cu TMDLs, including the allocations identified for boats and other sources, will be reviewed and revised as needed to ensure CTR compliance and further reduction in Cu discharges from Cu antifouling paints (AFPs) and/or other sources may be required.*
**(or a chronic CTR criterion adjusted by a Water Effects Ratio)*
The percent reductions and schedule for those reductions identified above shall become moot upon the demonstration that compliance has been achieved."

Absent the approval of Santa Ana Water Board staff's proposed Cu TMDLs, the Santa Ana Water Board is obligated to fully implement the USEPA TMDLs. See also response 1.4 to the City's comment 1 - City letter (Response to Comments Document 2018).

Third, it is critical to understand the nature of the Implementation Plan for the proposed Cu TMDLs. The proposed Implementation Plan requires dischargers, including the City of Newport Beach and the County of Orange (as dischargers with authority for the management of tidelands/submerged lands, and/or as owners/operators of marinas in Newport Bay) to develop proposed implementation strategies whereby the Cu TMDLs will be achieved. The Santa Ana Water Board encourages the City and County and marina owners/operators to take the lead responsibility for the development of these plan(s), which would be implemented by the dischargers upon approval by the Santa Ana Water Board. (Irvine Company, which is a marina owner/operator, has indicated its commitment to implement certain measures to reduce Cu in the Bay. See Irvine Company's/Exponent's comments above.)

The Cu TMDLs do not require the City of Newport Beach or the County of Orange to modify lease agreements or limit the use of legally available Cu AFPs. The proposed Implementation Plan identifies a number of recommended tasks that must be considered by the dischargers in

[22] *State Board's 303(d) Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (2004, amended 2015)*

developing their own implementation plans and strategies. These tasks include requirements for the use of BMPs during hull cleaning, a diver certification and education program, a boater education program, and the use of incentives for the conversion of boats from Cu to non-biocide AFPs lower leach rate Cu AFPs. (It must be emphasized that the proposed TMDLs do not require conversions from Cu to non-biocide AFPs but require consideration of this strategy.)

See response to the City's comment 3.4.1. – City letter above. See also response to the City's comment 1 - City letter (Response to Comments Document 2018).
See also relevant responses on legal issue of authority – response to G. Newmark's comment 2 - August 24, 2018 letter above; and responses to the City's comments 1, 2 – City letter, and 7.1 - 7.3 – Attachment 7 (Response to Comments Document 2018).

A statewide approach to Cu regulation is not within the authority of the Santa Ana Water Board. DPR has the authority to regulate Cu AFPs statewide and has issued a regulation to lower the maximum allowable leach rate for Cu AFPs to 9.5 µg/cm^2/day. However, this allowable leach rate requires the implementation of certain hull cleaning BMPs (specifically, the use of soft cloths and a maximum cleaning frequency of once per month) to achieve the CTR criterion of 3.1 µg/L. Further, DPR has stated that the lower leach rate for Cu AFPs alone will not result in compliance with the CTR chronic criterion in larger marinas (>1240 boats), and that conversions from Cu AFPs to non-Cu AFPs will likely be necessary.

Comment 2
Besides the financial burden, our biggest concern stems from the application of overly protective measures when the impacts of copper have not been demonstrated to show an impairment. The CMANC members would like to support each other through advocating the following:

Let science define the real impact of dissolved copper in marine systems. The use of science will allow for the demonstration and prioritization of resources to address the priority issues for each public- or private-sector party. The use of overly conservative water quality criteria is a luxury that our cities, counties, and public agencies cannot afford. These harbors, marinas, and bays are being burdened with new regulations when the actual impairment has not been demonstrated. The exceedance of an ultra-low regulatory value does not necessarily mean that a water quality problem exists, only the potential that an impact could occur under specific circumstances. A clear and definitive demonstration of appropriate numeric standards needs to be demonstrated to the stakeholders. The CMANC membership advocates the use of strong science to demonstrate the linkage between copper-based antifouling boat paint and marine quality impairments. The affected parties will require it to support or negate the benefits of the proposed implementation actions.

Response 2
First, the available data confirm that the Bay is still impaired for dissolved Cu. The State Water Board's data latest assessment for the 303(d) list (2014-16) determined that Newport Bay is still impaired for Cu, and the status for Cu in the Bay is DO NOT DELIST. Additional data also show that the Bay is still impaired for Cu. This includes data from Anchor QEA's study for the City (2015,2016) in which over 30% of the samples exceeded the dissolved Cu CTR chronic criterion of 3.1 µg/L, and data

from DPR's latest monitoring study (August 2019)[23] that show impairment as dissolved Cu exceeded the CTR chronic criterion in 50% of the samples taken in Newport Bay. See responses to the City's comment 3.4.1 -City Letter, S. Anghera's (City's consultant) comment 15.1 – Attachment 3 above, and comment 1.A.1 above.

The CTR criteria, established by the USEPA in 2000, are the applicable water quality objectives and have not been demonstrated to be overprotective for Newport Bay. (Newport Bay data were also run in the marine Biotic Ligand Model (BLM), and when the DOC concentrations were below 1 mg/L, the Cu BLM criterion was close to the CTR criterion (3.1 µg/L). See response to Exponent's General Comment 1 above.) The dischargers could elect to conduct the science needed to make adjustments to these criteria (WER investigation) as part of their proposed implementation plan(s) to implement the TMDLs.

See responses to S. Anghera's (City's consultant) comments 1 – Attachment 2, and 15.1 –Attachment 3; Irvine Company's comment 4; and Garner and Rusk's comment 1.A.1 above.
See also responses to the City's comments 6.27 –Attachment 6, 3.1 – City letter, and 3.1 – Attachment 3 (Response to Comments Document 2018).

Comment 3
Examine all the responsibilities of our public agencies and ensure that resources are available to address human health, social and safety issues as well as measures to protect marine life.

Response 3 -Santa Ana Water Board staff are well aware of the practical implications of the proposed Cu TMDLs.
See response to the City's comment 1.3 - City letter (Response to Comments Document 2018).
Once again, in the absence of the adoption of the proposed Cu TMDLs, the Santa Ana Water Board is obligated to fully implement the established USEPA TMDLs, which require a greater reduction in Cu discharges from boats, as well as Cu in tributary runoff, than the proposed Cu TMDLs. See response to CMANC's comment 1 above. See also response to the City's comment 1.4 - City letter (Response to Comments Document 2018).

Comment 4
At this time there are no reliable alternatives to copper-based anti-fouling paints. State Board and Regional Boards should ensure affordable and effective alternatives are available before forcing a change. Most of the commercial industry will not be affected, but the recreational boating community could be severely impacted. It is critical that recreational vessels have anti-fouling surfaces on their hulls for effective operation and prevention of invasive species. Without it, the recreational boating community will be forced out of the water. The social and financial impacts

[23] *DPR Copper Monitoring Data from 2019. A.Burant. Presentation to Marina InteragencyCoordinating Committee (MarinaIACC) Workgroup.*

cannot be calculated at this time, but a great California tradition will be altered forever.

Response 4 - See responses to the City's comments 5.2- City letter, and 7.4 –Attachment 7 (Response to Comments Document 2018).

Comment 5
At this time we do not believe it is appropriate for the Regional Board to adopt the Amendments that have been proposed until additional outreach to the boating community has been completed as discussed during the October 2016 workshop and the comments received at that time are thoroughly addressed.

Response 5 - Meetings/conference calls were held with the City, the County and Irvine Company after the revised BPA documents were posted on September 27, 2018 (including January 17, 2019 (Irvine Company); January 22, 2019 (City, County); and February 28, 2019 (City, County, Irvine Company). Santa Ana Water Board staff also held two public workshops in the City of Newport Beach on May 9 and 10, 2019.

See the response to S. Anghera's (City's consultant) comment 32 –Attachment 3, and Exponent's comment 3 above. See also responses to the City's comments 4.1 –City letter, and 6.52 -Attachment 6 (Response to Comments Document 2018).

Recreational Boaters of California

Letter from the Recreational Boaters of California dated August 23, 2018 regarding "Regional Board Meeting on October 19, 2018 to adopt the Basin Plan Amendments to Incorporate Total Maximum Daily Loads for Copper and Non-TMDL Action Plans for other Metals in Newport Bay".

Comment 1 - RBOC reiterates the comments we submitted in 2016 and also endorses the August 22 comments that have been submitted by the City of Newport Beach, the points raised in those comments, and the City's request. These include:

1.1 It has been 21 months since the October 28, 2016 workshop and there have been no workshops, no outreach to the boating community, no inclusion of named dischargers in the development of the latest draft TMDL. *City comment 1 – City letter.*
1.2 To date, we do not believe that our concerns about the practical impacts of the proposed implementation plan to our community and Newport Bay have been acknowledged or appreciated. Our original comments and concerns still stand. *City comment 1 – City letter.*
1.3 The copper TMDL unlawfully attempts to force local agencies to solve a conflict caused by the Regional Board's failure to convince the Legislature or its sister state agencies to ban copper anti-fouling paint [AFP]. *City comment 3.1 – City letter.*
1.4 The copper TMDL is unlawful because alternatives to copper AFP are not effective or available and may have significant adverse environmental impacts. *City comment 3.2 – City letter.*
1.5 The phased implementation schedule is unreasonable and unsupported, and would force substantial early investments that may be unnecessary. *City comment 3.3 – City*

letter.

Response 1 – These comments are the same as the City's comments 1 and 3.1-3.3 – City letter (Response to Comments Document 2018); see responses to those comments.

In addition, two public workshops concerning the proposed Cu TMDLs (and Non-TMDL Action Plans for Zn, Hg, As and Cr) were held in Newport Beach, CA on May 9 and 10, 2019. Responses to the comments provided at those workshops will be made available prior to Santa Ana Water Board consideration of the proposed TMDLs.
Note that the Action Plans for Zn, Hg, As and Cr have been removed from the Basin Plan Amendment.

Comment 2 - In addition, RBOC is significantly concerned that:
2.1 The revised amendments place an unfair and unreasonable responsibility on boats to continue to be responsible for lowering the levels of copper even after boat copper loads have been reduced to recommended levels, if the water column then shows that copper levels exceed 3.1 CTR.

Response 2.1 - It is neither unfair nor unreasonable to require further reduction in Cu discharges from boats if such further reduction is needed to achieve the dissolved Cu CTR chronic criterion of 3.1 ug/L. Cu AFPs on boat hulls are the predominant source of Cu discharges to the Bay; sufficient reduction from that source is needed to achieve the Cu TMDLs. If such additional reduction is demonstrated to be necessary, then the TMDLs would need to revisited and revised accordingly. See also response to CMANC's comment 1, above.

2.2 The information included in the attachments establishes that there may in fact not be a copper impairment [either in the water or sediment], and that no implementation plan is necessary at this time.

Response 2.2 - The available data confirm that the Bay is still impaired for dissolved Cu. The State Water Board's data latest assessment for the 303(d) list (2014-16) determined that Newport Bay is still impaired for Cu, and the status for Cu in the Bay is DO NOT DELIST. Additional data also show that the Bay is still impaired for Cu. This includes data from Anchor QEA's study for the City (2015,2016) in which over 30% of the samples exceeded the dissolved Cu CTR chronic criterion, and data from DPR's latest monitoring study (August 2019)[24] that show impairment since dissolved Cu exceeded the CTR chronic criterion in 50% of the samples taken in Newport Bay. See responses to the City's comment 3.4.1 -City Letter, S. Anghera's (City's consultant) comment 15.1 – Attachment

[24] *DPR Copper Monitoring Data from 2019. A.Burant. Presentation to Marina InteragencyCoordinating Committee (MarinaIACC) Workgroup.*

3 above, and comment 1.A.1 above.

USEPA established Cu TMDLs in 2002. In the absence of the adoption of Santa Ana Water Board staff's proposed Cu TMDLs, the Santa Ana Water Board must fully implement USEPA's TMDLs, which require a greater reduction of Cu discharges from boats (92% reduction vs 60% reduction for Board staff's proposed Cu TMDLs). See response to S. Anghera's (City's consultant) comment 1 - Attachment 2 above. See also response to the City's comments 6.27 –Attachment 6, 3.1 – City letter, and 3.1 – Attachment 3 (Response to Comments Document 2018).

With respect to sediments, see responses to Exponent's comments 1 and 2 above. See also responses to the City's comments 6.17, 6.29, 6.32, 6.34 and 6.39 – Attachment 6, and 3.1 -Attachment 3; and Irvine Company's comment 2 (Response to Comments Document 2018).

2.3 The board has not acknowledged and learned from the challenges ongoing at Marina del Rey Harbor and Shelter Island.

Response 2.3 - See response to the City's comment 3.5 – City letter above.

2.4 The revised amendments do not reflect the fact that alternatives to copper-based AFP may cause greater environmental harm and may increase the entrance and spread of invasive species.

Response 2.4. – Revisions to the draft SED have been made to analyze the potential environmental impacts of alternative paints. The revised draft SED 2021 is being recirculated for public review and comment. See responses to the City's comments 3.7 - City letter above; and the City's comments 5.7 – City Letter and 7.9.1 – 7.9.6 – Attachment 7 (Response to Comments Document 2018).

2.5 The copper TMDL imposes unfunded state mandates.
Response 2.5 - See responses to the City's comment 3.6 – City letter above; and the City's comments 5.5 - City Letter, and 7.7 - Attachment 7 (Response to Comments Document 2018).

2.6 The substitute environmental document fails to comply with the California Environmental Quality Act and CEQA 's implementing guidelines.

Response 2.6 - The commenter does not specify how the draft SED fails to comply with CEQA or its implementing guidelines. The draft SED has been revised to address specific comments raised by other commenters. The revised draft SED 2021 is being recirculated for public review and comment. See response to the City's comment 3.7 – City letter above.

2.7 The revised amendments seem flawed, preempted, give substandard

consideration to current conditionsand technical analyses, and do not comply with CEQA.

Response 2.7. The commenter does not specify how the amendments are flawed or preempted, or how the amendments do not comply with CEQA. See response to the City's comment 3.8 – City letter above; and the City's comment 3 - City letter (Response to Comments Document 2018).

Comment 3 - RBOC joins in the request of the City of Newport Beach that the board:

3.1 Not adopt the amendments at this time.

3.2 Select an additional review period a meaningful discussion about additional testing and monitoring, education, best management practices, the implementation timeline for DPR's updated AFP regulations, and more, with the goal of coming back to the Regional Board with more robust data and implementation ideas.

3.3 Commit to participating thoroughly and in good faith in that discussion provided all of the parties do so collaboratively, as has been the collective spirit in the past.

Response 3 – Comments 3.1 – 3.3 reiterate the City's comment 2 – City letter above; and comment 4 –City letter (Response to Comments Document 2018). See responses to these comments.

For these and other reasons RBOC respectfully requests that the Regional Board not adopt the amendments on October 19, 2018, and provide additional time for all stakeholders to further discuss the stated concerns.

Marine Recreation Association - August 24, 2018

Letter from the Marine Recreation Association dated August 23, 2018 regarding "Attachment A to Resolution No. R8-2018-0071".

We appreciate the Regional Board's recognition of our requested changes in October of 2016. However, we respectfully ask **the Regional Board to not adopt the proposed amendments** until we have economically affordable and safe alternative AFPs, that have been studied and proven to be less harmful than Cu AFPs. Additionally, there are three primary concerns MRA has with the proposed adoption of resolution No. R8-2018-0071 that we believe can have devastating unintended consequences if they are not addressed.

Comment 1 - Alternative AFP's need additional time for studying both human health factors and environmental impacts.

1.1 The memorandum submitted by Dr. Anghera of Latitude Environmental raises serious concerns regarding human health impacts of the current AFP alternatives. Dr. Anghera, stated

from an Ecology 2014 Study that, "All three paints identified as *preferred* contain hazardous chemicals that pose human health and/or environmental risks and are categorized to be avoided… These chemicals that have a combination of either high persistence in environment, high bioaccumulation potential, and high human toxicity or ecotoxicity and are recommended to be avoided." This report is very disconcerting to MRA and we would implore the Regional Board to investigate these concerns prior to adopting the proposed amendments.

1.2 In the recent publication of Marina Dock Age in the May/June 2018 issue, the article titled *Washington State Halts Its Ban on Antifouling Copper Paints* states that Washington State's governor signed a bill on March 15th that delayed all phases of the ban on Copper AFP's until January 1, 2021. This is due primarily to the initial research conducted by Washington State's Department of Ecology Hazardous Waste and Toxic Reduction Program, which states "Our preliminary research indicated that some of the alternative biocidal paints might be more harmful to the environment than copper." Clearly, we need to ensure that the proposed amendments will have clear guidance on the environmental impacts of alternative AFP's and ensure that alternatives are safe for human interaction.

Response 1 – Comments 1.1 – 1.2 reiterate the City's comment 6 -Attachment 2 above. See responses to these comments.

Comment 2 - The economic costs of available alternatives are cost prohibitive for middle class boaters.

2.1 The summary provided by Dr. Anghera states,

"… **there are only three** non-biocide paints tested in these studies that are still available (Table 5) and were recommended in one or more studies. **All three paints are designed for commercial vessels**. **All three paints must be applied by professionals**. Even though the paints are recommended alternatives to copper, Ecology (2014 and 2017) maintains concerns over hazardous chemicals within the paint that could pose a risk to humans and the marine environment. Many of the paints evaluated do not have full disclosure of ingredients because of the proprietary rights and many of the compounds being used have not been tested."

We are sure it's not the intention of the Regional Board to drive middle class boaters out of enjoying Newport Bay. However, the proposed amendments will essentially require all boaters to have their hulls repainted with alternative AFP's by professionals, which will force certain owners and families out of their boating experience.

Response 2 – See response to S. Anghera's (City's consultant) comment 6 - Attachment 2 above. In addition, note that the conversion from Cu to non-biocide AFPs is a <u>recommended</u> task in the proposed Implementation Plan, but conversions are <u>not required</u>.

Comment 3 - The Implementation Plan and Schedule for Cu TMDLs places undue future burdens

and liability on individual boat owners and marina owners/operators.

3.1 Section 1.1.1 states, "The dischargers shall submit their own proposed implementation plan(s) and schedule(s) to achieve reductions of Cu discharges from Cu AFPs in accordance with the requirements identified in Task 1 above." The Dischargers/Responsible Parties are as listed: City of Newport Beach (City), County of Orange (County), Marina owners/operators, Individual boat owners, Underwater hull cleaners, and Boatyard owners/operators. This will create thousands of duplicative implementation plans and schedules, which will likely not be reviewed. We believe all of the implementation plans and schedules should be required only by the City of Newport Beach and the County of Orange, which have the necessary resources to accomplish the required tasks.

Response 3.1 - The Cu TMDLs are not self-implementing. If adopted, the Santa Ana Water Board must implement the Cu TMDLs through the issuance of orders (e.g., waste discharger requirements or investigative orders). While the named dischargers in the Cu TMDLs are the "City of Newport Beach (City), County of Orange (County), Marina owners/operators, Individual boat owners, Underwater hull cleaners, and Boatyard owners/operators," *it is not practical for the Santa Ana Water Board to issue orders to individual boat owners. Santa Ana Water Board staff expect that the City and the County, and marina owners/operators, will take the lead role in developing an implementation plan(s)/schedule(s) to implement these TMDLs on behalf of and in coordination with other dischargers. Implementation plans developed by the City and County, marina owners/operators (and any other parties that elect or are determined to do so as implementation of the TMDLs proceeds) can and should be integrated to avoid duplication and to optimize the use of resources.*

3.2 Individual boaters and marina owners/operators cannot control Cu inflows into the bay from tributaries' and storm drains. Thus, Cu must be monitored and tested from the storm drains and tributaries prior to entering the bay to ensure that they are below Cu TMDLs that are being proposed. We believe that the current proposed amendments will leave individual boaters and marina owners and operators responsible for Cu TMDL's when the sources of Cu could be stemming from upstream.

*Response 3.2 – Santa Ana Water Board staff agree that "*Individual boaters and marina owners/operators cannot control Cu inflows into the bay from tributaries' and storm drains." *The proposed TMDLs do not require boaters and marina owners/operators to do so. In fact, the proposed allocation for tributary runoff requires NO reduction in Cu discharges. By far, the most significant source of Cu discharges to the Bay is Cu AFPs on boat hulls. Note that Cu discharges from boats are six times higher than Cu discharges in tributary runoff in a wet year (and over 30 times higher than Cu in tributary runoff in a dry year).*

Comment 4
MRA respectfully requests that the Regional Board decline the adoption of Resolution No. R8-2018-0071, given the issues we have stated above. MRA will continue to work with the Regional Board to find an equitable and justified solution to improve the water quality of Newport Bay.

Response 4 - Comment noted. See also responses to Marine Recreation Association comments in the Response to Comments Document 2018.

BoatU.S.

Letter from *BoatU.S.* dated August 24, 2018 regarding "2018 Basin Plan Amendments to Incorporate Total Maximum Daily Loads for Copper and Non-TMDL Action Plans for other Metals in Newport Bay".

BoatU.S. is the largest organization of recreational boat owners in the United States, with more than 600,000 members nationwide and over 59,000 members in California. On behalf of our members, we would like to register our significant concern with the updated proposed amendments to incorporate a Total Maximum Daily Load (TMDL) for copper in Newport Harbor. As drafted, these amendments could impose a significant burden on boat owners in order to meet the TMDL. In addition, BoatU.S works closely with our California state partner the Recreational Boaters of California (RBOC) and we firmly endorse the comments they have provided on this subject.

For a number of years we have been closely following the development of the Newport Bay Basin Plan amendments as they related to setting a TMDL for copper and the potential impacts on recreational boats. We commented in 2016 when the previous version of the plan was considered (copy attached) expressing significant concerns with the plan that was presented at the time. In reviewing the 2018 updates we see little that would mitigate the objections we raised in our original comments.

We have also reviewed and support the comments submitted by the City of Newport Beach. We are particularly troubled by the lack of engagement by the Board and its staff with the effected stakeholders, something that was promised in 2016. As a group that will bear a significant burden for any mitigation measures required should the TMDL be adopted, it is vital the recreational boating community be involved with the development of the plan.
BoatU.S. remains committed to engaging with the Board on addressing the issues surrounding anti-fouling coatings. We plan on attending the October 19th meeting and look forward to a constructive discussion to develop reasonable policy options that work for recreational boat owners.

Response - See responses to comments from RBOC and the City of Newport Beach above, and responses in the Response to Comments Document 2018. See also response to Exponent's comment 3 above.

Lido Peninsula Company, LLC

Letter from Lido Peninsula Company, LLC dated August 24, 2018 regarding "Basin Plan Amendments to Incorporate Total Maximum Daily Loads for Copper and Non-TMDL Action Plans for other Metals in Newport Bay".

We previously provided written comments on October 17, 2016. We are still very concerned about the proposal to require marina owners to restrict or ban the use of legally-available copper-based antifouling paints through a new TMDL. We are concerned that the implementation plan will be both unenforceable and that the practical impacts of the proposed implementation plan to the harbor and individual stake holders is unknown. We believe this

plan could have significant detrimental economic impacts to the harbor and its stakeholders.

We are asking that the Water Board not adopt the amendments on October 19, 2018 and allow more time to look into this matter and work with stakeholders to develop a long term, cooperative and viable solution.

Response - As stated in prior responses, the proposed Cu TMDLs do not require marina owners to restrict or ban the use of Cu AFPs. Rather, the Implementation Plan for the proposed Cu TMDLs requires that dischargers, ideally led by the City of Newport Beach and the County of Orange, develop their own proposed implementation plan(s) whereby the Cu TMDLs will be achieved. Certain recommended compliance methods must be considered in the development of these implementation plan(s), but are not required. These strategies include providing incentives for the conversion from Cu AFPs to alternative AFPs. See response to the CMANC's comment 1 above.

Further, USEPA has already established Cu TMDLs for Newport Bay as part of the 2002 Toxics TMDLs. Santa Ana Water Board staff's proposed Cu TMDLs would supersede USEPA's Cu TMDLs. Notably, the TMDLs proposed by Board staff require less reduction of Cu discharges from boats than USEPA's TMDLs (60% vs 92%). In addition, the proposed Cu TMDLs, unlike those established by USEPA, include the provision that there need not be strict numeric compliance with the Cu allocation assigned to boats, provided that it is demonstrated that there is compliance with the CTR Cu criterion of 3.1 µg/L (per State Listing Policy methodology). Absent the approval of Board staff's TMDLs, the Santa Ana Water Board is obligated to fully implement USEPA's TMDLs.

John Fradkin

Email from *John Fradkin* dated August 23, 2018 regarding "Copper based boat paints in Newport Harbor".

I have read and support the City of Newport Beach's current position with regards to copper based boat paints.

I have been playing on the water in Newport Harbor for over 50 years and can honestly say that in my opinion the water in Newport Harbor has never been cleaner than it is today.
The City of Newport Beach has done a great job with regards to dredging and general trash cleanup and the harbor waters are both clear and thriving with marine life.
I have a mooring in the harbor and at low tide if the sun is overhead I can sometimes see the bottom. This is unprecedented in the 22 years that I've had that mooring and has only happened over the past couple of years.
I have also noticed rock scallops on almost every seawall and piling. Juvenile fish school under my boat regularly and I have seen lobsters in some unusual places in and around the Balboa Yacht Club marina which I don't recall ever seeing before.

In summary I think that the water of Newport Harbor is cleaner than I've ever experienced over the past 50 years and is currently thriving with marine life.

I don't think we need to make any rash changes because the current system is working and the harbor

waters are healthy.

Response - Comments noted. See responses to the City's comments, Lido Peninsula Company LLC's comments, and CMANC's comment 1 above. See also responses to the City's comments (Response to Comments Document 2018).

Paul Blank

Email from *Paul Blank* dated August 23, 2018 regarding "Support for the City of Newport Beach position on TMDLs for Copper in Newport Harbor ".

I am a resident of the City of Newport Beach and I own a boat moored in Newport Harbor.

I am also a member of the Newport Beach Harbor Commission although I am not writing on behalf of that Commission.

The City of Newport Beach has prepared a well-crafted and comprehensive letter in response to the proposed Basin Plan Amendments to Incorporate TMDLs for Copper and Non-TMDL Action Plans for other Metals in Newport Harbor. I fully support the City's arguments against the proposed amendments at this time.

I attended and spoke at the October 28, 2016 workshop on this matter.
I was, at the time, on a mailing/distribution list of parties interested in this matter.
I believed at the time, based on comments from the Board and its Executive Officer that the matter would receive further attention, including but not limited to public workshops where constituent's concerns would be heard.
To date, I have received no notification of any such public workshops or any substantive change in the evidence supporting the proposed Amendments.

As the City as done, I also respectfully request that you and your Regional Board staff colleagues and the Regional Board not adopt the Amendments at the October 19, 2018 meeting.

Response - Comments noted. Since the October 19, 2018 meeting, Santa Ana Water Board staff have engaged with dischargers in multiple meetings/conference calls, and two public workshops were held in May 2019.
With respect to meetings with dischargers -see responses to S. Anghera's (City's consultant) comments 32 –Attachment 3 above; and comment 6.52 - Attachment 6 (Response to Comments Document 2018).
With respect to the comment asking the Regional Board to not adopt the Amendments – see responses to the City's comment 2 above.

Dennis Durgan

Email from *Dennis Durgan* dated August 23, 2018 regarding "Action Plans for other Metals In Newport Bay ".

I have just been made aware of two dates in which to comment on pending action with regard to TMDLs for Copper in Newport Bay. I have been an active boater in Newport Harbor for about 57 years and currently have a couple of boats in a marina in the harbor. I am in support of the City of Newport Beach position on TMDLs for Copper in Newport Bay. I would like to request that you and your colleagues not adopt the Amendments @ the October 19, 2018 meeting. I make this representation as an independent citizen of the City. Thank you for your time and consideration. I look forward to staying abreast of this situation.

Full disclosure; I am the current City Harbormaster for Newport Beach but am not writing on behalf of the City.

Response - Comments noted. See the responses to the City's comments above. See also responses to the City's comments (Response to Comments Document 2018).

Brian Ouzounian

Email from *Brian Ouzounian* dated August 24, 2018 – no subject.

I am in support of the City of Newport Beach and their position on the current Copper issue in Newport Bay.

Response - See the responses to the City's comments above. See also responses to the City's comments (Response to Comments Document 2018).

Nina Manning

Letter from *Nina Manning* dated August 24, 2018 regarding "Copper Bottom Paint proposed amendments".

As a boatowner, with a boat docked in Newport Harbor, I support the City of Newport Beach's view that adoption of the proposed Amendments to the Water Quality Control Plan for the Santa Ana Region be delayed giving all concerned parties opportunities for continued discussion of those concerns and presentation of going forward ideas.

Response - See the responses to the City's comments above. See also responses to the City's comments (Response to Comments Document (2018).

Brian Ouzounian

Second email from *Brian Ouzounian* dated September 5, 2018 regarding "Comment Plans for Newport Bay Metals".

Recently I commented as to your plans for copper levels in Newport Harbor but it seems you did not receive my comments due to an incorrect link provided by the City of Newport Beach. So, I submit the following:

I support both the City of Newport Beach position and comments (August 22, 2018) and the BOATUS

(I have been a long standing member) position and comments (August 24, 2018) related to Newport Bay. I have been an active boater in Newport Harbor for over 60 years, own boats docked and moored in the harbor, own a mooring in the harbor, and own our full time harbor-front residence (43years). Be it so known that I am against your adoption of the Amendments @ the October 19, 2018 meeting. My disdain for the board's over reach in regulations is quite strong. It would be wise to "back off the pedal."

Please add me as a person of interest to your notices on this subject.

Response - Mr. Ouzounian's October 17, 2016 comments were received and responses are included in the Response to Comments Document 2018. Mr. Ouzounian has been added to the Cu TMDLs email list for this matter. See responses to the City's comments above. See also responses to the City's comments (Response to Comments Document 2018.

Southern California Yachting Association

Letter from *Southern California Yachting Association* dated September 17, 2018 regarding "Regional Board Meeting on October 19, 2018 to adopt the Basin Plan Amendments to Incorporate Total Maximum Daily Loads for Copper and Non-TMDL Action Plans for other Metals in Newport Bay".

Comment 1 - Boaters in the Santa Ana watershed and throughout the region have a keen interest in the issues being addressed by the regional board. Our organization is greatly concerned about the ramifications of this issue as it pertains to all recreational boating.

1.1 The copper TMDL impermissibly attempts to force local agencies to solve a conflict caused by the Regional Board's failure to convince the Legislature or its sister state agencies to ban copper anti-fouling paint (AFP). *(same as the City's comments 1 and 3.1 -City letter)*

1.2 The copper TMDL is unwarranted because alternatives to copper AFP are not effective or readily available and may have significant adverse environmental impacts. *(same as the City's comment 3.2 -City letter)*

1.3 The phased implementation schedule is unreasonable and unsupported, and would force substantial early investments that may be completely unnecessary. *(same as the City's comment 3.3 -City letter)*

Response 1 – Comments 1.1 – 1.3 reiterate the City's comments 1 and 3.1, 3.2, 3.3, respectively – City letter above. See responses to these comments.

In addition, SCYA is significantly concerned that:

Comment 2 - The revised amendments place an unfair and unreasonable responsibility on boats to continue to be responsible for lowering the levels of copper even after boat copper loads have been reduced to recommended levels, if the water column then shows that copper levels exceed 3.1 CTR.

Response 2 – This comment reiterates RBOC's comment 2.1 above. See response to this comment.

Comment 3 - The information included in the attachments establishes that there may in fact not be

a copper impairment (either in the water or sediment), and that no implementation plan is necessary at this time.

Response 3 - This comment reiterates the** City's comment 3.8 -City letter above. **See response to this comment.

Comment 4 - The board has not acknowledged and learned from the ongoing challenges at Marina del Rey Harbor and Shelter Island in San Diego.

Response 4 - This comment reiterates the** City's comment 3.5 -City letter above. **See response to this comment.

Comment 5 - The revised amendments do not reflect the fact that alternatives to copper-based AFP may cause greater environmental harm and may *increase the entrance and spread of invasive species and pathogens that are fatal to humans.*

***Response 5 - This comment largely reiterates the** City's comment 3.2 -City letter above. **See response to this comment.** The commenter has not specified how AFP alternatives will lead to the spread of harmful pathogens, and Board staff is unaware of any such effect.*

Comment 6-The copper TMDL imposes unfunded state mandates.

Response 6 - This comment reiterates the** City's comment 3.6 -City letter above. **See response to this comment.

Comment 7- The substitute environmental Document fails to comply with the California Environmental Quality Act and CEQA's implementing guidelines.

Response 7 - This comment reiterates the** City's comment 3.7 -City letter above. **See response to this comment.

Comment 8-The revised amendments seem flawed, preemptive, fails to adequately consider current conditions and technical analyses, and do not comply with CEQA.

Response 8 - This comment reiterates the** City's comment 3.8 -City letter above. **See response to this comment.

Comment 9 - SCYA joins in the request of the City of Newport Beach and Recreational Boaters of California that the board:

9.1 Not adopt the amendments at this time.

9.2 Select an additional review period for a meaningful discussion about additional testing and monitoring, education, best management practices, the implementation timeline for DPR's updated AFP regulations, and more, with the goal of coming back to the Regional Board with more robust data and implementation ideas.

9.3 Commit to participating thoroughly and in good faith in that discussion provided all of the parties do so collaboratively, as has been the collective spirit in the past.

Response 9 – Comments 9.1 – 9.3 reiterate the City's comments 2.1 – 2.3, respectively – City letter above. See responses to these comments.

Comment 10 - For these and other reasons, SCYA respectfully requests that the Regional Board not adopt the amendments on October 19, 2018, and provide additional time for all stakeholders to further discuss the stated concerns.
SCYA appreciates the Regional Board's objective to protect the water and the recreational boating community remains willing and ready to discuss the development of amendments that incorporate a justified, reasonable, fact and science-based implementation plan to address actual water quality concerns in the Newport Bay.

Response 10 - Comments noted. See also Response to comment 2, City of Newport Beach letter, August 2018, above.