2021 Responses to Comments in Workshops - May 9 & 10, 2019

Responses to Comments in Workshop - May 9, 2019

Speakers

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Public Speakers

Ann McCarthy. Lido Peninsula and Lido Yacht Anchorage, marina owner and operator. p3
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Ann McCarthy. Lido Peninsula and Lido Yacht Anchorage. We are a marina owner and operator.
Comment 1 - Our biggest concern with the plan right now is the lack of a cohesive implementation plan. I do realize that the last couple pieces of information that came out stated that you expect the city and county to take the lead. But as everything is written prior to that, each individual discharger is required to submit a plan, is required to, you know, come up with this plan, do monitoring, do testing. And without a cohesive or coordinated way to do that, it seems like you'd have a lot of repetitive testing that's expensive and difficult for individual boat owners, hull cleaners, marina owners.

So our hope would be that, before these regulations came into place, that there would be a coordinated Implementation Plan and it would not be left to all dischargers separately.

Response 1 - The TMDLs themselves are not self-implementing. If and when the TMDLs are adopted and become effective, then the Santa Ana Water Board will take steps to implement them through the issuance of regulatory orders, such as Waste Discharge Requirements. We expect that the principal parties to receive those Waste Discharge Requirements would be the City of Newport Beach, the County of Orange and marina owners and operators. Santa Ana Water Board staff envision that the regulatory requirements to implement the TMDLs would be initially imposed on the City, the County and marina owners/operators. (Note that at the workshop, Board staff indicated that the Santa Ana Water Board's orders would likely be issued first to the City and County. Orders would likely also be issued to marina owners/operators.

We recommend that all parties who are responsible pursuant to the Cu TMDLs work collaboratively to identify and implement integrated solutions. The Santa Ana Water Board does not want wasted or redundant effort. It is in everyone's interest to optimize the use of resources to get the job done.

David Kennedy. Manager for Government Affairs for Boat U.S.
Boat U.S. is the national association. It's the Boat Owners Association of the United States. We have 620,000 members nationwide, 60,000 here in California. We're the voice of boaters in Washington and beyond. So, I appreciate the opportunity to come and speak with you all. Clearly this is something that is important to boat owners.

Comment 1 - And I think it's always important to highlight that boating is something that is a family activity. It's often the single biggest expenditure for families for their outdoor recreation. It's how they come together. Look around here. It's such a wonderful place. It's very important to many, many people.

Response 1 – Comments noted. Santa Ana Water Board staff agree that Newport Bay has a high recreational, economic and aesthetic value especially to the Newport Beach community and other communities in southern California. The Santa Ana Water Board's mission is to preserve, protect, enhance, and restore the waters within its jurisdiction, including Newport Bay, for all beneficial uses.

Comment 2 - Antifouling paints are a key part of how you keep your boat. It is part of the basic maintenance. It's about efficiency. They're also key to stopping invasive species. We see this problem across the county, that if we're not careful about how we manage these things, we do get spreads of invasives. And so effective antifouling paints are crucial to that effort.

Response 2 – Santa Ana Water Board staff agree that the introduction of invasive species should be controlled, and that Cu AFPs are the preferred antifouling paint of many boaters. Note, however, that with DPR's regulation for a maximum leach rate of 9.5 µg/cm^2/d for Cu AFPs for recreational boats[1] (effective July 1, 2018; compliance by June 30, 2020 for most paints), compliance is now expected. In addition, per DPR's analysis and determination, BMPs will need to be implemented together with the use of Cu AFPs with lower leach rates to achieve the dissolved Cu CTR chronic criterion in marina areas. (Note that some invasive species are becoming tolerant to Cu, and one possible option to reduce the potential threat of invasive species to Newport Bay is for boaters to clean their hulls at the last port of call before returning to the Bay.)

DPR's regulation for lower leach rate Cu AFPs is separate from the proposed Cu TMDLs, and the use of these lower leach rate paints may contribute to the decrease in Cu discharges from boats; however, the amount of reduction in Cu discharges with the use of reduced leach rate Cu AFPs in the Bay depends on the leach rates of the current Cu AFPs used in the Bay (i.e. if current Cu AFPs have leach rates lower than DPR's maximum leach rate of 9.5 µg/cm^2/d, then boaters will likely keep the paints that they are using and no reduction in Cu discharges will result.) In addition, conversions to non-biocide AFPs may be needed to achieve the CTR criterion of 3.1 µg/L in larger marinas, and the use of non-biocide paints is expected to contribute to decreased Cu loading to the Bay from Cu AFPs.

The proposed Cu TMDLs do not require conversions from Cu AFPS to alternative AFPs. Instead, the dischargers are required to consider strategies to reduce Cu discharges from Cu AFPs, which may include providing incentives for conversions to alternative AFPs. If this strategy is selected, the efficacy of the alternative AFPs should be considered.
See response to the City's comment 1 – City letter and Boat U.S.'s comment 2 (Response to Comments Document 2018).
See also responses to J. Marshall's comment 3 (2021 Responses to Comments at October 28, 2016 Santa Ana Water Board Meeting).

Comment 3 - I also think it's important to keep in mind that recreational boats have a wide variety of ways they are used. I wish I could use my boat every day but that's just not the reality of what we have. Some get up and run fast, others don't, so there's going to have to be a range of options for them, depending on how they operate. People will find a way but it's important to recognize that there's going to be different regimes that are going to work for each individual boat owner.

Response 3 – Comment noted. Santa Ana Water Board staff are aware that there are various boat types and uses.

Comment 4.1 - So I think we need to be careful about -- when we talk about alternatives, I think that there are some that work. But as -- and it was good that they highlighted the Washington State studies because I think that there's -- as they've gotten into it, they've really seen some questions come up about what are the unintended consequences of this? And so before we make a major push to get rid of -- you know, to move over, these things need to really be teased out.

Response 4.1 – First, the proposed Cu TMDLs do not require the conversion of boats from Cu AFPs to alternative paints. See response to comment 2, above.

[1] *Department of Pesticide Regulation's regulation in Chapter 3, Section 6190 of the California Code of Regulations*

Santa Ana Water Board staff agree that there are some issues with respect to the use and effectiveness of alternative paints. The Santa Ana Water Board cannot dictate the manner or means of compliance; therefore, the proposed Cu TMDLs identify a number of recommended strategies that must be considered by the dischargers in developing their own implementation plans to achieve the TMDLs. Recall that based on DPR's maximum leach rate regulation of 9.5 µg/cm^2/d for Cu AFPs for recreational boats (effective July 1, 2018; compliance by June 30, 2020 for most paints), boatyards and retailers with non-compliant paints in stock had two years to sell or use these paints by the appropriate deadline. Compliance is now expected. See response to comment 2, above.

Comment 4.2 - And, you know, I appreciate the comment that, you know, you won't regulate -- if it doesn't have a biocide, it's not regulated under your rules. But what are we trading off here? And so that needs to be considered.

Response 4.2 - The Santa Ana Water Board does not control the sale or use of biocide (or non-biocide) AFPs; the Board's authority is to regulate waste discharges, including those that are discharged from Cu AFPs. DPR regulates pesticides (which includes AFPs with biocides) they do not regulate non-biocide AFPs since they are not pesticides. See responses to comments 2 and 4, above.

Comment 5 - And I had a specific question for the attorney.

You identified the city, county, and the marinas as responsible dischargers, but we've also seen where individual boat owners were being held as dischargers. What's the authority there?

Response 5
An oral response was provided at the workshop. To supplement and clarify the oral response, under the Porter-Cologne Water Quality Control Act (California Water Code, § 13000 et seq.), the Santa Ana Water Board can regulate discharges of waste through the issuance of waste discharge requirements (WDRs), waivers of WDRs, or cleanup and abatement orders. As owners of the boats, the boat owners are responsible for the discharge of Cu from their boats. While legally possible to hold individual owners responsible for the discharge of Cu, it would not be practical to issue individual WDRs or other orders to each boat owner. See also Staff Report 2021, Section 5.6.1.3.

Comment 6 - I think that's an important question to answer, particularly for individuals, because that becomes a significant burden.

So -- and I'd say that Boat U.S. was a key part of the passage of the Clean Boating Act. And this is about bringing forward best management practices and about making sure that people understand. And we put an enormous effort into clean boating. We have our Foundation for Safe Boating and Clean Water, so this is something that's very important to our community.

So -- and I guess I'd just wrap up, really, with that. We're on the water, we're in the water, this is important, but we also need it to work and it needs to be effective, affordable, available, and that's really what I'd leave you all. And I appreciate you all's time.

Response 6 - Comments noted.

John Marshall. Past President of Recreational Boaters of California and Vice Commodore of Southern California Yachting Association.
So, we represent the boaters' interests here in Newport Harbor. This is the crown jewel, if you will, of Orange County. And we always believe ourselves to be the real stewards of the water here because we are on it a lot and we enjoy it.

Comment 1 - And I was just with the Mayor, Diane Dixon, and she indicated back in 2016, they did an impact -- an economic impact study and show that this body of water here is contributing about $900 million a year to the local economy here. So, anything that disrupts that or is antagonistic towards that is not appreciated, that's for sure.

Response 1 – Comment noted. The Santa Ana Water Board is not trying to disrupt the local economy. The Santa Ana Water Board is legally required to identify water bodies that exceed applicable standards for any pollutants and develop TMDLs for those impaired water bodies. Cu continues to exceed the dissolved Cu CTR chronic criterion in Newport Bay; therefore, Cu TMDLs are required. The CTR criteria[2] were established by USEPA to protect aquatic life in marine (and fresh) waters and are the applicable water quality objectives for dissolved Cu in Newport Bay.

Comment 2.1 – So, what we want to make sure that we understand is, for example, the 3.1 CTR, I'm wondering where that comes from? Because I just remember back in 9/11 when the USEPA said that air was okay to breathe, and I'm a layperson, I'm not a scientist, and I looked around at all this pulverized concrete and building materials and asbestos and PCs and copiers, just floating like clouds in Lower Manhattan, and then having USEPA say, no worries, it's okay to breathe that air. I'm thinking, no way.

Response 2.1 – USEPA established the California Toxics Rule (CTR) criteria in 2000, including the dissolved Cu saltwater CTR chronic criterion of 3.1 ug/L, which is the established, applicable criterion for dissolved Cu in marine waters. The chronic criterion for dissolved Cu (and other dissolved metals) was chosen by USEPA for the protection of aquatic organisms. See (CTR - USEPA 2000) for the derivation of these criteria (reference in footnote #2). See also response to the City's comment 6.4 – Attachment 6 (Response to Comments Document 2018).

Comment 2.2 - So -- because I see San Francisco. The CTR at 3.1, they're like three times that amount because they did the water effects study which proved that it was okay. So, the variance between the different bodies of water here in California really throw me for a loop as well.

Response 2.2 –Water bodies in California do differ in their chemistry, and the toxicity is related to the bioavailable fraction of a dissolved metal such as Cu.

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[2] *USEPA 2000. California Toxics Rule [CTR], Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Federal Register Rule—40CFR Part 131.38 U.S. Environmental Protection Agency, Washington, D.C.. F*ollow this link: Federal Register :: Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California or 00-11106.pdf (govinfo.gov)

For marine waters, the Cu bioavailability, and potential impacts on aquatic organisms, including toxicity, are directly related to the DOC concentration, which may vary seasonally within a water body and between water bodies.

This is demonstrated by the Cu Biotic Ligand Model (BLM) which determines a Cu BLM criterion based on station specific sampling data including the Cu concentration, DOC, pH and salinity. In marine waters, the Cu BLM criterion (calculated by the model) is highly dependent on the DOC since the pH and salinity are fairly constant.
(Note that the Cu BLM for marine waters was run for Newport Bay data, and when the DOC is below 1mg/L, the Cu BLM criterion is close to the dissolved Cu CTR criterion. (Note also that if this model is used to determine a Cu criterion, it is essential to model the DOC throughout the year so that sampling to determine a Cu BLM criterion can be conducted at appropriate times. To be protective, sampling should occur when DOC concentrations are the lowest.)

Recognizing that waterbody characteristics differ, the CTR allows for Water Effects Ratio investigations to modify the CTR criteria for dissolved Cu (and other pollutants) on a waterbody-specific basis. Stakeholders in Newport Bay can pursue such an investigation. If that investigation demonstrates that a revised dissolved Cu criterion is appropriate, and if that revised dissolved Cu criterion is approved by all involved agencies, then the need for and nature of the proposed Cu TMDLs would have to be revisited. See also responses 6.4(2) to the City's comment 6.4 – Attachment 6, and the County's comment S3.2 (Response to Comments Document 2018).

Comment 3 - But I guess the most important thing to, you know, pass along to everybody here is that a lot of what we're trying to do here is very impractical. I mean, boat owners go down to Ensenada to get their bottom painted down there. They go to other places. So, we're always like picking little bodies of water here and there and it's just, if it was more uniform and more consistent, it would be a lot easier to deal with. So, we're concerned about the economic impact.

Response 3 – Comment noted. The Substitute Environmental Document (SED) 2021 has been revised to include a more robust economic analysis.

Comment 4 - And I can just speak about this body of water here anecdotally. The eelgrass is flourishing here in the harbor which attracts the fish, which attracts the harbor seals, and that's another problem altogether because, you know, 900 pound marine mammals can really do a lot of damage to boats. And then we even have a pod of orcas that feed off the harbor seals. So, the circle of life, you can see it out there.

Response 4 – Comments regarding the improvement of Bay waters are noted.

Chris Miller. the City of Newport Beach.
We all care about the bay. And that was a statement that Linda made in her presentation.

Comment 1 - I'd like to start by saying that the city has provided comments, and we still stand by them, over the past couple years. I want to thank everybody for attending and thank the Water Board for their water quality efforts and the partnership that the city and the Water Board has had over the years. I look forward to making and continuing that and to continuing to grow.

Response 1 – The City's comments from October 2016 have been received and responded to (Response to Comments Document 2018), and are posted on our website. The City's comments from August 2018 have been received and responded to in the 2021 Responses to Comments from August 2018 Document, which was released for public review and is posted on the Santa Ana Water Board's FTP site[3]. The Santa Ana Water Board shares the interest in maintaining a productive partnership with the City.

Comment 2 - However, regarding this copper issue in Newport Harbor, we do not believe there is an issue. There might be a couple pockets of modestly increased hits within the harbor but the harbor is a big harbor and most of the harbor is below the standards. A lot of it has to do with flushing, tidal influence, and it depends on when you measure, and also where you're measuring, but a significant portion of the harbor is already at or below the standards.

Response 2 – The comments above reiterate the City's comments 5.6 – City letter (October 2016), and 6.35, 6.40 – Attachment 6 (October 2016). See responses to these comments (Response to Comments Document 2018). To the extent that there is already compliance with the dissolved Cu CTR criteria in areas of the Bay, then implementation efforts to achieve the TMDLs should focus on areas of non-compliance.

Comment 3 - We do see a nexus between DPR and between the Water Board. The Water Board regulates the discharge and DPR regulates the sale. I see a nexus between those.

In our opinion the issue should be handled at a statewide level. Why is Newport being the focus? Why is Marina del Rey the focus? Why is San Diego being the focus? If it's a problem statewide then it should -- our big point is that it should be handled on a statewide basis. DPR does a great job of regulating how much levels are allowed in their paints at 9.5; we support that. Let's see what the -- let's see what -- how that program is implemented and let's see the results of that. Let's see the benefits of the brake pad initiative that, although small, it will certainly contribute.

And if the paints need to be reevaluated in X amount of years, after they have gone through this process, that's okay, too, but regulated from the top level. We have sister agencies. DPR and Water Board should be working together as a team and coming up with a statewide standard.

Response 3 – The comments above reiterate the City's comments 1.2, 1.4 – City Letter,October 2016 (Response to Comments Document 2018), and the City's comment 3.4 – City Letter (2021 Responses to August 2018 Comments). See responses to these comments.

Comment 4 - I equate this to vehicle emissions. We don't -- we -- vehicle emissions is, of course, controlled through smog tests and issues such as that when you get your vehicle registered. Well, we don't control who drives on our streets. We allow anybody to drive on our streets. We allow any boater to boat in our harbor. So we don't control each individual boater and what they do because those boaters could go to Mexico, they could go to Dana Point, they could go to Huntington Harbor, they could go to Long Beach, L.A., anywhere in the Southern California region, or outside of the country, to paint their boats. We can't control that.

Response 4 – Comment noted. See response to G. Newmark's comment 2 (2021 Responses to August 2018 Comments). Also see response to D. Kennedy's comment 5, above.

[3] *Santa Ana Water Board FTP site is located at https://ftp.waterboards.ca.gov, The user name is rb8download, password is Region8_public.*

Comment 5 - Regarding the tour boats, in one of the slides I saw a bullet point that -- well, it was on the topic that most of the boats that are -- the boats that are being targeted are recreational vessels and that the tour boats don't spend a lot of time inside Newport Harbor. Well, that's quite the opposite of, actually, what does happen. A hundred percent of our tour boats are in the harbor, operating, I'll say, seven days a week in some capacity, and they're the largest boats in our harbor. On any given Sunday you'll have five, six, seven slow-moving vessels running for six, seven hours a day based on two or three different shifts of commercial boat tour, harbors.

Response 5 – Santa Ana Water Board staff have determined Cu allocations for all boats (recreational and commercial), rather than addressing only recreational boats as DPR did in their determination for a maximum leach rate for Cu AFPs. (The proposed Cu TMDLs had previously identified a single allocation for boats that applied to all recreational and commercial boats.) The proposed Cu TMDLs now have separate allocations for commercial boats greater than 79 ft., and 'other' boats, which include recreational boats and commercial boats under 79 ft. (The allocations are 134 and 7090 lbs/yr, respectively). The larger commercial boats were split out since they are currently covered under the Vessel General Permit (VGP) and will be subject to the regulations implementing the Vessel Incidental Discharge Act (VIDA) when those regulations are promulgated. DPR has authority over the sale and use of Cu AFPs; the Santa Ana Water Board has authority over the discharges of pollutants (including Cu) into state waters.

Comment 6.1 - It was stressed that copper paint conversion is not the solution. Well, then why are we here?

Response 6.1 – Santa Ana Water Board staff did not say that the conversion of boats from Cu AFPs to non-biocide AFPs was not the solution; we said that the conversion strategy is <u>not a requirement</u> of the proposed Cu TMDLs. The conversion to non-biocide paints <u>is</u> an option to be considered by the dischargers. The Santa Ana Water Board cannot dictate the means of compliance with orders issued by the Board to implement the TMDLs; therefore, the use of incentives to convert from Cu to non-biocide AFPs is a recommended, rather than required, strategy that the dischargers may choose to include as a strategy in their proposed implementation plan(s).
See response to the City's comment 1- City letter (Response to Comments Document 2018).
The proposed Cu TMDLs are necessary to achieve reductions in Cu discharges so that the applicable water quality standards are achieved throughout both Upper and Lower Newport Bay.

Comment 6.2 - The whole community is here to talk about copper paints and how effective they currently are and how effective they are not at lower copper paint -- at lower copper levels.

Is there a viable solution? We don't think so. The paints that are on the market now, the alternative paints, have not proven, from what we understand, to be effective. And there are several boat shipyards in the audience here who can attest to those different formulas and they simply haven't hit the sweet spot.

Response 6.2 –The City expressed the same concerns in their previous comments. As stated above, the proposed Cu TMDLs recommend but <u>do not require</u> the conversion from Cu AFPs to alternative AFPs. Recall, however, that based on DPR's maximum leach rate regulation of 9.5 µg/cm^2/d for Cu AFPs for recreational boats (effective July 1, 2018, compliance by June 30, 2020 or most paints), compliance is now expected. See response to comment 6.1 above. Note also, that DPR's lower leach rate regulation for Cu AFPs inherently includes the use of BMPs (best management practices) such as soft clothes during

hull cleaning and less frequent hull cleaning when feasible. Implementation of these and other BMPs , such as the use of a container/filter method during hull cleaning, the use of boat floats and/or dry docking of boats, and diver education and certification, mayresult in reductions in dissolved Cu concentrations in Newport Bay.
See also responses to the City's comments 5.2 – City Letter, and 7.4 - III and VIII - Attachment 7 (Response to Comments Document 2018).

Comment 7 - Let's let future dredging create more flushing in the harbor. Our community saw an increase in flushing in 2012 when our harbor was dredged. We dredged 600,000 cubic yards. Right now we're planning on dredging 1 million cubic yards or more in the next couple years. There wasn't a month that went by when boaters in our Harbor Commission were telling us that they've noticed an increase in water quality measured by increase of fish, eelgrass, dolphins, sea lions, and the like, even clarity.

Response 7 –The nature, timing and scope of future dredging, and the water quality effects of dredging are too speculative to provide reasonable assurance that water quality standards in the Bay will be achieved. While dredging does increase flushing, the Bay continues to be 303(d) listed for dissolved Cu[4] despite numerous dredging projects in the Bay; therefore, Cu TMDLs continue to be required. (See also revised draft SED 2021 , Section 5.3.b). The implementation of other, affirmative actions, such as the implementation of hull cleaning BMPs, is needed to provide that assurance.

Comment 8 - In good faith I think that we should let this next generation of paints and the rules that currently exist run their course. Let's see what happens over the next handful of years. Let's measure those results, let's do it together and take this one step at a time, instead of putting the burden on the individual boat owners at the lowest level, the marinas at the medium level, or the city and county at the highest level.

Response 8 – The recommended "no action/wait-and-see" approach does not provide reasonable assurance that water quality standards in the Bay will be achieved. The adoption of the proposed Cu TMDLs does not preclude the implementation of the City's proposed strategies above; these strategies can be incorporated into the City's proposed implementation plan(s) as first steps. In addition, the implementation of DPR's maximum leach rate for Cu AFPs inherently includes the use of BMPs for hull cleaning and reduced cleaning frequency; therefore, any strategy that relies on the use of Cu AFPs with leach rates at or below DPR's maximum leach rate must include the use of BMPs and reduced cleaning frequency to achieve the dissolved Cu CTR chronic criterion.
See response to the City's comment 4.2 – City letter 2016 (Response to Comments Document 2018).

Shelly Anghera. Moffat & Nichol. consultant for the City of Newport Beach.
lead scientist for the City on the copper issue and developing comments and the studies and the like.
The city asked me to just come up and summarize the current condition of the copper in the bay, the scientific information that we have available.

[4] *Final 2014/2016 California Integrated Report (Clean Water Act Section 303(d) List/305b Report*. (*A 2018 Integrated Report has also been ; it contains no updates for Newport Bay.)*

Comment 1 - The city has partaken in several studies to understand what the current copper concentrations are and the average concentration for the harbor is approximately 3.0, so it's just hanging right around the 3.1, so there are samples that are greater than the 3.1 but there's equally as many samples taken that are below 3.1.

Response 1 – First, impairment is not determined with an average concentration across a water body; impairment is determined by the number of exceedances compared to the number of samples pursuant to the methodology specified in the State Listing Policy (SLP 2004, amended 2015).
*If "*there are samples that are greater than the 3.1,*" they are exceedances of the criterion.*
It is erroneous to compare an average dissolved Cu concentration to the CTR chronic criterion to determine impairment (or non-impairment) of a water body.

Second, it is not clear what data the City used to determine an average dissolved Cu concentration of 3.0 ug/L. The State Water Board's data assessment for the 2014-16 303(d) list 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 also response to the City's comments in Attachments 4 & 5 (Response to Comments Document 2018).

Comment 2 - This is actually really important when we're looking at these new regulations that are expected. This shift, if we look at the data that's been done in San Diego, we're expecting a shift close to 30 percent reduction in copper concentrations, just from the DPR's actions. So, we'd really like -- the city would really like to see if these are going to be effective enough before requiring additional controls be put in an Implementation Plan.

Response 2 – First, it is not clear what San Diego data Ms. Anghera is referring to, or how the stated 30% reduction in Cu concentrations was calculated.
Second, the MAMPEC Model was used by DPR to determine a proposed maximum leach rate for Cu AFPs. This model used the dissolved Cu saltwater CTR chronic criterion (3.1 µg/L) as the target for marine waters to determine the leach rate that is needed to achieve this target. DPR states that most marinas in California (with < 1270 boats) should achieve the 3.1 µg/L CTR criterion by using lower leach rate Cu AFPs, but only if BMPs are also implemented with the use of lower leach rate paints.

In addition, the reduction in Cu loading to Newport Bay, which may result with the implementation of DPR's maximum leach rate, cannot be determined unless the leach rates of the Cu AFPs currently in use are known. Santa Ana Water Board staff have recommended that the City conduct a survey of the Cu AFPs currently in use in the Bay. With this leach rate information and the size of the boats using each Cu AFP, a projected reduction in Cu loading could be determined. See also response to the City's comment 3.4.1 – City Letter (2021 Responses to August 2018 Comments).

Comment 3 - In addition, part of the pattern of the copper concentrations that we see in the bay, it's directly related to the circulation of the bay and the amount of time, residence time, which is the amount of days it takes for water to circulate. So, the copper concentrations are the highest in the most restricted area, in the western area and near Rhine Channel. So, in those areas, we went out and we did some toxicity testing and in all of those cases, we were never able to find toxicity related to copper. So, we just wanted to provide that information here tonight.

Response 3 –Santa Ana Water Board staff agree that Cu concentrations in the Bay are related to the circulation in the Bay and the residence time, and the residence time in west Newport Bay is higher than other parts of the Bay; however, dissolved Cu exceeds the CTR chronic criterion in other parts of the Bay. With respect to toxicity, -per the State Listing Policy (SLP 2004, amended 2015), a determination of toxicity is not necessary to make a finding of impairment; the determination of impairment is based on the number of exceedances of the dissolved Cu CTR criterion compared to the total number of samples.

Daniel Hodge, resident of Newport Beach, lifelong boater. Vice President of RBOC Southern California.
We represent boaters' interests in Sacramento.

Comment 1 - My questions are related to how is that you guys are putting all these requirements on the boating community, cities, et al, and there seems to be confusion or conflicting information as to the type of toxicity or all the other chemicals you want to put in there? I'm not a biologist of[or] a chemist but I understand that copper is a regular element in saltwater unto itself. So how would you delineate copper from a boat versus what's already in the water?

Response 1 – First, Cu is an element in sea water. To determine the difference between background Cu and concentrations from boats, samples should be taken inside the marina and in the channel (outside the marina). In a Cu Marina Study in Lower Newport Bay (2007), a subset of marinas in the Bay were sampled.[5] Samples were taken within the marinas and in the channels outside the marinas to differentiate Cu concentrations in the marinas (areas of high boat concentrations) compared to more open areas. This study showed that Cu concentrations tend to be higher inside the marinas compared to the channels. (Note that west Newport Bay does not follow this trend as Cu concentrations were high in both marina areas and channels outside the marinas. This is because west Newport Bay is a more stagnant part of the Bay with limited flushing.) This sampling was similar to DPR's sampling study in marinas along the California coastline.[6] (See Dr. Burant's response below.)

With respect to the toxicity of other chemicals, if the commenter is referring to other types of paints, then the toxicity of biocide AFPs are known to DPR, but the toxicity of non-biocide AFPs have not been determined at this time. This is because DPR does not have authority over paints that do not contain biocides since they are not considered to be pesticides, even though non-biocide AFPs could be toxic to some aquatic organisms.

Oral response at the workshop

Dr. Burant (DPR) stated that : "DPR, in our first monitoring study, we did address this. We took samples at a site that was outside of the marina or as near the harbor, more in the open ocean or the open bay or -- and so on. We call these local reference sites. And so, we were able to determine there was a difference between the Cu concentration in a local reference site and a Cu concentration in the

[5] Orange County Coastkeeper and L.M. Candelaria. July 2007. Lower Newport Bay Copper-Metals Marina Study. Technical Report for the SARWQCB.
[6] Singhasemanon, N., E. Pyatt and J. Bacey. Monitoring for Indicators of Antifouling Paint Pollution in California Marinas. 2009. California Environmental Protection Agency. Environmental Monitoring Branch. California Department of Pesticide Regulation. Report No. EH08-05.

marina. And it was statistically significant that Cu concentrations in harbors and marinas were higher than in the local reference sites.
Of our 2019 Monitoring Study, we're going to be doing that same protocol, so we are going to work with different cities and municipalities and marinas to determine a local reference site to make sure that the Cu is accounted for in the natural waters."

Comment 2 - But I think, you know, to get the boating community's attention there has to be equitable resolutions for all parties. So, I would -- you know, it's on the street that you guys are looking at individuals and I know you addressed that somewhat. That unto itself is rather Draconian, to me, is that we own boats but we don't control any of this industry.
So, I would just ask that all parties involved take a hard look at being equitable.

Response 2 – Santa Ana Water Board staff agree that the Cu TMDLs should be equitable for all parties (recreational and commercial vessels). While individual boat owners are responsible for Cu discharges from their boats, it would be impractical to regulate individual owners. Rather, it is expected that Santa Ana Water Board orders implementing the Cu TMDLs, if approved, would be issued initially to the City, County, and marina owners and operators. (Note that at the May 9, 2019 workshop, Board staff indicated that the Santa Ana Water Board orders would likely be issued first to the City of Newport Beach and the County. Orders would likely also be issued also to marina owners/operators.)
See also response to D. Kennedy's comment 5, above.)

Bill Kenney. resident.
Comment 1 - Realistically, how is an individual boater going to prepare a proposed Implementation Plan?

Response 1 – It is our expectation that the City County, and marina operators/owners will take the lead for all dischargers and develop an implementation plan(s) for these Cu TMDLs. See response to D. Hodge's comment 2, above.

Comment 2 - Vessels with fouled hulls use considerably more fuel. And I'm wondering if the Board or the DPR have analyzed the negative environmental impacts, both water quality and air quality, that will be caused by the increased fuel consumption of fouled hulls?

Response 2 – Yes, Santa Ana Water Board staff are analyzing the environmental impacts for vessels with fouled hulls in the revised draft SED 2021 (to be distributed for review and comment upon completion). However, the comment appears to presume that conversion from Cu AFPs to alternative AFPs, which might be less effective in preventing fouling than Cu AFPs, are required by the proposed TMDLs. This is incorrect. See response to D. Kennedy's comment 2, above.

Comment 3 - Also, the charge of the California Coastal Commission is to provide access to the water for all Californians. One of the most economical ways to achieve that charge is through recreational boating. These proposed regulations are going to have a very significant impact on the charge of the California Coastal Commission.

Response 3 –The commenter did not specify how the proposed regulations will have a significant impact on the charge of the California Coastal Commission. The Santa Ana Water Board has the authority to regulate the discharge of waste in Newport Bay and is not aware of any impacts the proposed Cu TMDLs will have on the charge of the Coastal Commission. The Cu TMDLs do not include a requirement for

conversions to non-Cu AFPs; instead, responsible parties may consider providing incentives to convert some boats to non-biocide AFPs as part of their implementation strategy.

Comment 4 - And finally, many of the toxins that are in the bay are entering down San Diego Creek. And I'd like to know what the Board and the DPR are doing to try to minimize the toxins that are coming into our bay through San Diego Creek?

Response 4 – The Santa Ana Water Board regulates discharges of waste to San Diego Creek, and at this time, based on the State Water Board's 303(d) assessment for 2014-26, San Diego Creek is not impaired for Cu. Recall that the largest source of Cu to the Bay is Cu discharges from Cu AFPs. Cu loads in tributary runoff were determined for these proposed Cu TMDLs and no reduction of those loads is required at this time. Dissolved Cu exceeds the CTR criterion in Upper and Lower Newport Bay; no other dissolved metals exceed the applicable CTR criteria in San Diego Creek. (Note that TMDLs were adopted for selenium (Se)[7] for San Diego Creek by the Santa Ana Water Board in 2017 and approved by USEPA in 2019. These TMDLs are now being implemented.)implemented.)

Susan Paulsen. Exponent. consultant for The Irvine Company.

We've reviewed the fact sheet that was circulated in advance of this meeting and disagree with a few of the points in that fact sheet.

We appreciate the public workshops and appreciate the ability to work with the Regional Board and Regional Board Staff over time, so thank you, but we do continue to have concerns about the TMDLs.

Comment 1 - The first is concerning the management actions that have already been taken, I won't repeat all of that but DPR's new boat paint regulations, as well as the Brake Pad Partnership moves, are expected to reduce copper concentrations in the bay, and anything like dredging that reduces -- that increases circulation will also help as well.

Response 1 – Comment noted and have been previously addressed. See response to C. Miller's comment 7, above. See also response to the City's comment 3.4 - City letter (2021 Responses to August 2018 Comments).

Comment 2.1 - Second, we disagree with the Regional Board's Staff's assertion that the EPA TMDL will require a 92 percent reduction in discharges from the boats and that the -- they calculate a 92 percent reduction based on the EPA TMDL and a 60 percent reduction required based on the Regional Board TMDL. Those two differences are just from the calculation methods. Both of those regulations, the EPA TMDL and the Regional Board TMDL, use the same TMDL target. They're both aimed at achieving the CTR criteria in saltwater. If the CTR criteria are achieved then no further reductions will be required. And we believe that that's true under both the EPA TMDL and the Regional Board's TMDL.

Response 2.1 – USEPA's Cu TMDLs do require a 92% reduction in Cu discharges from boats. This 92% is the percent difference between the estimated Cu input from boats and USEPA's Cu allocation for boats, which is based on an estimate of 10,000 boats in Newport Bay. The difference is not from the calculation method, but from the revised number of boats and margin of safety. The required 60% reduction in Cu

[7] *Note that selenium (Se) is a metalloid, rather than a metal.*

discharges from boats in Board staff's proposed Cu TMDLs was calculated in the same manner. (The estimated number of boats in the Bay has been reduced to 5,000 for these proposed Cu TMDLs.) (The 60% reduction in Cu discharges from boats in Santa Ana Water Board staff's proposed Cu TMDLs includes both recreational and commercial boats; USEPA's Cu allocation for boats includes only recreational boats.)
In addition, Board staff's Cu TMDLs include a provision that states that if the CTR criterion is achieved (i.e. no impairment is demonstrated per the assessment methodology in the State Listing Policy[8] (SLP)), no further reduction in Cu discharges will be required, even if the Cu wasteload or load allocation for boats is not yet achieved.[9] USEPA's Cu TMDLs do not include such a provision.

Comment 2.2 - And, in fact, there's no way to measure discharges from boats directly. Our measure of whether we're achieving that regulation is whether we're meeting CTR criteria in the receiving water.

Response 2.2 – First, Cu discharges from boats <u>can</u> be measured directly by the Dome method, but the proposed Cu TMDLs do not require this. Cu discharges from boats can be (and have been) estimated using the equations shown in the Cu TMDLs and are based on DPR's maximum leach rate of 9.5 µg/cm^2/d. (See source estimate equations in Staff Report 2021[10].)
Second, – Santa Ana Water Board staff agree that the measure of whether the Cu TMDLs are being achieved <u>is</u> the achievement of the dissolved Cu CTR chronic criterion in the water; however, USEPA's TMDLs require a 92% reduction in Cu discharges from boats to meet the allocation for boats in addition to meeting the CTR criterion. See response to comment 2.1, above.

Comment 2.3 - For that reason, we think that instead of adopting a new TMDL, the Regional Board should consider adopting an Implementation Plan for EPA's Copper TMDLS.

Response 2.3 – USEPA's Cu TMDLs are based on older data, older sediment guidelines, an older number of boats estimate, and older load calculation equations; therefore, they would not be scientifically defensible at this time. While both Santa Ana Water Board staff's proposed Cu TMDLs and USEPA's Cu TMDLs require significant reductions of Cu discharges from Cu AFPs, the required reduction of Cu discharges from boats is much higher in USEPA's TMDLs compared to Board staff's Cu TMDLs (92 vs 60% reduction, respectively). In addition, Santa Ana Water Board staff's proposed Cu TMDLs include revisions and updates to USEPA's Cu TMDLs.
See response to Exponent's General Comment 4 (2021 Responses to August 2018 Comments). See also the Draft SED 2021, Section 5.2.)

Comment 3 - Third, and others have noted this, as well, many areas in the bay are already in compliance with CTR criteria, particularly those areas that receive significant flushing. And as others have noted, too, even in those areas where the CTR criteria are being exceeded, we don't have evidence of toxicity.

Response 3 – See response to Exponent's General Comment 1 – (Response to Comments Document 2019 (August 2018 Comments)). Per the State Listing Policy, water column impairment due to dissolved Cu is

[8] *State Water Board's 303(d) Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (SLP 2004, amended 2015)*
[9] *Amendments to the Water Quality Control Plan to incorporate Newport Bay Copper TMDLs. 2021*
[10] *Staff Report 2021 is Appendix A of the draft Substitute Environmental Document (SED) 2021.*

determined by the number of exceedances of the CTR criteria compared to the total number of samples evaluated for a water body. As such, impairment be established even if some parts of a water body (in this case, the Bay) are in compliance with the CTR criterion. Implementation of the Cu TMDLs should focus on areas of non-compliance. Note also that the presence of toxicity is not required in addition to exceedances of the CTR criterion to demonstrate impairment. See response to the City's comment 5.6 – City letter (Response to Comments Document 2018).

Comment 4 - Fourth, Irvine Company is concerned that the copper discharges originate from the boats, not the marinas, and it's already been dealt with so I won't hammer on it, but the concern about the authority to implement a regulation in the way that this one is proposed.

Response 4 – Marina owner and operators are properly identified as dischargers. See response to Garner and Rusk's comment 4.2 (2021 Responses to Comments from August 2018).

Comment 5 - And finally, the TMDL fact sheet say that the proposed TMDLs recommend but do not require conversion to non-copper paints. In fact, we believe that the conversion to non-copper paints will actually be made quite difficult by the TMDLs because the TMDLs state that non-copper AFPs, other biocides, may be considered only if the Regional Board is satisfied that there will be no significant adverse environmental impacts associated with their use. The Regional Board has not indicated, and we don't understand, how a boat owner would make that demonstration.

Response 5 – The TMDLs fact sheet from the Workshops states that the proposed Cu TMDLs recommend, but do not require, conversion to non-Cu paints. This is correct – the strategies for reducing Cu discharges from Cu AFPs are recommended strategies as the Santa Ana Water Board cannot dictate the manner or method of compliance. We agree that the conversion from Cu to non-Cu AFPs and/or lower leach rate Cu AFPs will help to reduce Cu discharges from Cu AFPs.

The original language in the proposed TMDLs stating that "non-copper AFPs, other biocides, may be considered only if no significant adverse environmental impacts associated with their use is demonstrated" referred only to non-Cu biocide AFPs; this language has been revised to state that "The conversion of Cu AFPs to other biocide AFPs is not recommended." Non-Cu biocide AFPs are not recommended since they contain other biocides, including Zn and organics, that are known to be toxic to aquatic organisms. Non-biocide AFPs are an option to non-Cu biocide AFPs. Again, the dischargers may prioritize the types of AFPs and/or conversions that they plan to use in their implementation plan(s) required by the Cu TMDLs. The expectation is that <u>any</u> strategy proposed by the dischargers to achieve the requisite Cu reductions, including the use of non-Cu AFPs, would be accompanied by consideration of the potential environmental effects and appropriate mitigation measures. For conversions from Cu AFPs to non-Cu AFPs, 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 or the container/filter method for hull cleaning, reduced frequency of cleaning, and or spatial or temporal distribution of conversions) to minimize environmental effects.

Hein Austin. boater.

Comment 1 - 1.1 - Point five percent; most copper paints have between 20 and 70 percent copper in them. But as of January 2020, Washington State will allow only 0.5 percent copper in the paint. They have completely vilified copper and are trying to eradicate it on bogus research.

1.2 For the past 6,000 years, we have been intricately combined with copper. We've had copper in our food chain, we've used copper in our weapons, we've used -- we have been part of the copper -- copper has been part of our existence. And for the last 200 years, we've been using copper as an antifouling agent on boats.

Response 1.1 –The state of Washington is in the process of changing their regulations with respect to Cu AFPs.
Response 1.2 - Comment noted. Note that USEPA's CTR criteria for dissolved Cu (and other dissolved metals) were established in 2000, based on toxicity studies by USEPA. The Santa Ana Water Board is legally required to implement these criteria.

Comment 2 - Recently, we started using tributyltin and that was a catastrophe. Now that triggered a movement, a radical movement against copper, because when tributyltin was put on the chopping block, it was for a good reason. Look at copper. Type in copper on the internet and you will see, copper is a -- I'm going to read this -- "is a useful material but it also is valuable, a valuable mineral found in food. Copper is an essential nutrient of the body. Together with iron, it enables the body to form red blood cells, it helps maintain healthy bones, blood vessels, nerves, and immune function, and it contributes to iron absorption." And these organisms in the water also needs an immune system, so copper is very important, even for water organisms. None of this can be said of tin, tin-based tributyltin based. Tin based, that's already a given establishment that it's toxic.

Response 2 – Cu is a micronutrient – it is beneficial at low doses, but toxic at higher concentrations; the difference between concentrations that are beneficial vs toxic can be very small.
(See R. Eisler 1998[11].)

Comment 3 - Now to vilify copper to the extent of like Washington State does, and this state is fast on its way there, there are -- the person who leads this thing out of San Diego, her name is Karen Holman, 20-year veteran environmentalist, who is drawing up a long list of impaired waterbodies based on studies that are, you know, blacklisting places like harbor, Newport Harbor.

Response 3 – The role attributed to Ms. Holman is incorrect. Impaired waterbody listings for California are the responsibility of the Regional Water Boards, the State Water Board and USEPA. Ms. Holman works for the Port of San Diego and has been responsible for implementing the Shelter Island Cu TMDL for many years.

Comment 4 - And based on all these studies, if there was a list of impaired minds, these people would be at the top of the list because the way that copper is being viewed is completely erroneous. It's based on flawed research.
Comment 4.1 - First of all, the research is way outdated.

Response 4.1 – This comment has been expressed multiple times by multiple commenters and responded to by Santa Ana Water Board staff.

[11] *Eisler. 1998. (p3) Copper Hazards to Fish, Wildlife and Invertebrates: A Synoptic Review. Contaminant Hazards Reviews, Report No. 33. U.S. Geological Survey, Laurel, Maryland. 120pp.*

See responses to the City's comments 3.1 – City Letter and 3.1 - Attachment 3, and Irvine Co. comments 1.1 and 4.1. (Response to Comments Document 2018).

Comment 4.2 - Secondly, the research doesn't keep into account that, today, we have approximately 2.8 million cars on our roads with brake pads, just in Orange County, versus 10,000 or so boats in Orange County, and all that runoff that comes through our harbors, okay?

Response 4.2 – The research for the proposed Cu TMDLs does take into account the brake pad issue, and the urban runoff that drains into the Bay via the major tributaries (San Diego Creek, Santa Ana - Delhi Channel); however, Cu discharges from boats are estimated to be 6 times higher than those from the major tributaries in a wet year. (In a dry year, Cu discharges from boats may be over 30 times higher than those from the major tributaries (or storm drains).) See responses to the City's comment 6.41, paragraph 4, Irvine Co.'s comment 1.3, and the County's comments 3.3, 8 and S27 (Response to Comments Document 2018).

Comment 4.3 - These studies do not account for evolution. Many of us are quick to say, yeah, we believe in evolution, except when it comes to organisms that evolve in the water. In fact, I believe these organisms are so tough and so robust that they evolve, they become more -- go to any pharmaceutical company that does research, they have a hard time keeping up with all the evolution that goes on in the organisms and they become more resistant against whatever we throw at them in terms of, you know, treatment and all. And I believe that we need to keep into account that these organisms become more robust against the copper paint. We should make copper paint stronger, not weaker; right?

Response 4.3 – It is true that some fouling organisms are becoming tolerant to Cu; therefore, it makes sense to convert at least some Cu AFPs to non-biocide AFPs. Also note that based on DPR's maximum leach rate regulation of 9.5 µg/cm^2/d for Cu AFPs for recreational boats (effective July 1, 2018, compliance by June 30, 2020 for most paints), compliance is now expected. DPR has the authority to regulate Cu AFPs (which are a type of pesticide), and on water bodies that are impaired due to dissolved Cu, they reevaluated the registration for Cu AFPs and issued this regulation for reduced leach rates for Cu AFPs. To "make copper paint stronger", i.e., with a higher Cu leach rate, would be contrary to the purpose of the Cu TMDLs, which is to correct impairment due to Cu in the Bay.

Comment 4.4 - Another flaw in the study is that -- in these studies is that we believe that all shoes -- it's a one-fit-all, you know, shoe situation; everybody should be treated the same. Because the way we -- the way things went in Washington, that we had to -- we are now at the point where 0.5 percent is allowed, if this happens in California, all it takes is just one organization, like that of this lady, Carl -- what's her name? -- Karen Holman to blacklist all our harbors here and all our marinas.

And therefore, I would like to say tonight that copper is not nearly as negative a component in our food chain as what people are making it out to be.

Response 4.4 – Comments noted. See response to comment 3 above.

Comment 5 - There's a lot more that I can say about copper in the water and the way it improves our lives and our marine quality, as well, but I do understand, there are some problems with leaching. And leaching is only a problem is people don't know how to clean their boats.

For example, when I painted my boat, it was -- it had a brand new coat of copper paint on it. I didn't go in with a big scrubby and wash off all the paint on my boat and see powder. I want to see no

powder when I clean my boat. So what I did was, for the first two years, I grew a marine layer on my boat.

For example, if you catch a fish, the fish has a slimy layer that makes it slip out of your hands. That, I don't know what they call that, but when you catch a fish and it slips out of your hand, it is covered with a protective coat that helps protect it against bacteria and all kinds of other things, I grew that on my boat. And how did I do that? I just, instead removing all that expensive paint from my boat, I used this mitten and I just mopped my boat for two years. Once a month, I mop the boat. I see no paint coming off at all.

So, an individual like me, who protects my boat, also protects the environment. Therefore, I can have tributyltin paint, almost, in there. I can have strong stuff in there. But as long as I grow that marine layer, that marine layer is between my mitten and my paint, and there's very little leaching coming off of my boat because of that marine layer. I can feel it, it's slimy, it's slippery. And as long as I do that, I'm fine.

Now I wait for a month or two and I -- now, after two years, after having grown that, I put -- I take the roughest scrubby I can find and I start just wiping off the muck on top of that marine slipper layer. So, I believe it's in cleaning your boat properly, regularly, where the solution will lie.

Response 5 – Santa Ana Water Board staff agree that more boats should be cleaned using BMPs (e.g. soft cloths). In fact, based on DPR's determination of a maximum leach rate, the use of BMPs is required with the use of Cu AFPs with lower leach rates in order to achieve the dissolved Cu CTR criterion.

Comment 6 - And I would propose us exploring the option of putting dies [dyes] in paints. When I bring my boat to the marina to check for if my boat is leaking, my head is leaking, you know, if my holding tank is leaking, what they do is the authorities step on my boat, they put a big tablet in my holding tank, and they make me run the head. And that will show if there's a leak into the water. It will light up the water, bright neon, like this mitten. If we can have something to that effect in paints, we can tell which diver goes out there and is busy stripping a boat; right? Because if we -- if the water lights up and the harbor master comes by and they see this long slick of bright yellow water, they're going to want to know what's going on underneath the water. But they won't see that it's my boat because I will just be lightly mopping my boat.

So perhaps that is something we can consider before outrightly keeping -- you know, before keeping copper at the top of the list of villains in water, in good global water quality management.

Oral response provided at workshop

DR. CANDELARIA: We agree with you on the use of BMPs. If you recall from the presentation, the first thing that we're saying is use BMPs, use soft cloths. If more boaters used BMPs then that would help to reduce the Cu in the Bay and so we agree on that.

DR. BURANT: I also wanted to talk about the Cu antifouling paint leach rate cap for both California and for Washington State.

So for California, before this regulation went into effect there were about 200 paints that were registered; 50 percent of them, or a little, actually, under 50 percent of them, 45 percent of them had leach rates above that cap, so those paints are now off the market and they're being reformulated. And that is why -- and the other 110 that are on the market right now, they're still available for boaters to use.

And that is why I like to actually have that DPR mission statement at the beginning of the presentation, to have that dual purpose of, you know, fostering reduced risk pest management, making sure invasive species are not coming into Newport, but also protecting the environment.

And, Nan, correct me if I'm wrong on this, but I think Washington State is rethinking their Cu bans [ban on Cu AFPs].

MR. SINGHASEMANON: Yes, very much so.

DR. BURANT: Yeah, so that, I think they've realized that there are no viable alternatives and they are still in the process of coming up with their own leach rate cap.

Brian Ouzounian.

Comment 1 - This is not my first encounter. This is my second encounter with the Board. The first one was having the arduous journey of procuring a dock permit and I had to sink a pile. And your Board shown as the most difficult permit to acquire, 82 pages for one pile. I think what I'm trying to illustrate is your [you're] overboard. You're way out of balance. In fact, this Board's out of balance. It's gender imbalanced. I don't know if you've noticed but I wonder how many of you have cleaned the hull of a boat or maintained a boat or had experience around a boat or been in a boatyard, been a deckhand. It just comes to mind. But I see an imbalance here and I see a strong-arm power. It's what I see.

Response 1 – Comments noted. As stated above, the Santa Ana Water Board is legally required to implement the water quality standards established in USEPA's CTR (California Toxics Rule) in 2000.

Comment 2 - It's scary to me to have this second encounter. I didn't want to come here to begin with but I can't afford not to come here and speak my mind.
I saw nothing of historical data. I'm a forensic consultant by my trade. I see nothing here that substantiates your case. I see this and I hope that the U.S. Boat will consider a lawsuit if you follow through with this. I see a wide-open gap for a problem. I do not see consistency here.

Response 2 – No historical data were presented at the Workshops since the goal of the Workshops was to present only the requirements of the proposed Cu TMDLs so that the stakeholders would have plenty of time to express comments/concerns. The historical data and Board staff's Impairment Assessment can be found in the Staff Report 2021 at the Santa Ana Water Board's FTP site[12].

Comment 3 - This harbor is getting cleaner year by year. Forty-five years, I've lived on it. Boats have come and gone. I'm 75 feet out in the water with a dock. Every day I see it. We have dolphins now proliferating the harbor, pods of dolphins. We never -- I mean, in the last two to three years, we've seen dolphins. One day, we may see a whale come through here. Actually, they're getting in closer at the jetty. I can't believe the water is becoming more toxic or is as bad as you have depicted it to be.

Response 3 – While improvements to the Bay are noted, the Bay still exceeds the CTR chronic criterion for dissolved Cu; therefore, Cu TMDLs are still required. The strategies to reduce Cu discharges from Cu AFPs should be included in the proposed implementation plan(s) of the dischargers (including the City of Newport Beach, County of Orange and marina owners/operators). The Cu TMDLs require the dischargers to develop their own proposed implementation plan(s).

Comment 4 - But I'll tell you what is increasing, hypodermic needles. We have a street end next to us. And I police the beach because I want to. But on big rains when the back bay flushes down, and all the

[12] *Santa Ana Water Board FTP site is located at https://ftp.waterboards.ca.gov, The user name is rb8download, password is Region8_public.*

tributaries to the harbor, up on the beaches, and the city comes very nicely and cleans up the beach. And for the last two years, as I speak to them, hypodermic needles go in a special biohazard container and it's prolific. And with children playing on the public beaches, with God only knows what's in the hypodermic needles or what's the residue, that has become an increase. Dolphins are on the increase but hypodermic needles are also. Something -- I can tell you, that is a public hazard right off.

Response 4 – On April 7, 2015, the State Water Board adopted an Amendment to the Water Quality Control Plan for Ocean Waters of California (Ocean Plan) to Control Trash and Part 1 Trash Provision of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries (ISWEBE Plan). (Trash Amendments). The project objective for the Trash Amendments is to provide statewide consistency for the Water Boards' regulatory approach to protect aquatic life and public health beneficial uses, and reduce environmental issues associated with trash in state waters, while focusing limited resources on high trash generating areas. The Trash Amendments apply to all permittees under the NPDES municipal separate storm sewer systems (MS4) permits. Implementation of the Trash Provisions through the MS4 permits and other permits are expected to result in significant reductions in trash including hypodermic needles from inland and bayside sources.

Comment 5 - So as I listen to you, I'm wondering, what is the threat to my wee little boat? Are you going to consider a fine if I don't comply with whatever regulation you come up with? Are you going to confiscate my boat if I don't pay the fine?

Response 5 – Santa Ana Water Board staff have always made an effort to work with the dischargers to develop reasonable, effective strategies to implement TMDLs. These efforts have been the same with the proposed Cu TMDLs. The Santa Ana Water Board has neither the intention of nor the authority to confiscate anyone's boat.

Comment 6 - I've watched how California, in my 69 years, has developed. We've gone way out of balance, way out of balance. And the assumption of power that this Board takes, both in my experience for the one pile or whatever tonight, just scares me. It's just -- this is not right. This is not right somehow. Something's not adding up as far as Newport Harbor is concerned. I can't speak for the other harbors. But when we do studies about what's fair in California, it's what's fair up and down the coast.

Response 6 – Pursuant to the California Water Code, the Santa Ana Water Board has the authority to regulate discharges of waste to protect water quality and beneficial uses. The CTR chronic criterion for dissolved Cu is the same statewide unless a site-specific adjustment has been made based on a Water Effects Ratio study for a specific water body.

Comment 7 - Recently, a lot of controversy on moorings, what's the right mooring rate? And I have another story about that but I won't tell it. But I can tell you, the duty of the State Lands Commission is to create fairness, so when a boater leaves Northern California and comes down to Newport Beach or San Diego, there's fairness in pricing. I don't think that can be inconsistent with the Water Board's attention to the subject. It has to be fair up and down the state. You can't come to Newport Beach and say, well, look at all these rich people, let's just put the arm on them. And I hope that's not being done here. But from the evidence that I saw as far as your sampling, I see nothing scientific that could convince me otherwise. Maybe you have it in the background but I don't see it and it frightens me. It frightens me in that government is taking over and going into our one joy in Newport Harbor, boating.

Response 7 – Comments noted. See responses to comments 2 and 6, above.

Comment 8 - I concur with Chris Miller on the cruises but I think it's -- he was a little light on that. I watch the cruise ships right from my home. Every weekend, they will be out, and during the week, six, seven, eight of them, every night, and everyone's having a good time and that's what we're here for; residents have to take the posture of being good hosts and I hope I'm one of them. But those boats are very attractive to a lot of people but I also know they take a lot to maintain.

There's probably -- the area on -- most of those boats, let's say the average boat, is maybe 50 times that of my boat, and I know to haul those boats out and redo the bottom is quite expensive, but they're huge. The Flyer, I'm told, when it goes up to Seattle to get overhauled is quarter million dollars in fuel just to take it up to have it hauled out and serviced. And I've only heard of that happening twice in 15, 20 years, but there's a lot of paint on that boat compared to everybody else's boat. So, I think that's a subjective analysis on how you would write a rule.

But anyway, I just think there's a lot more to be done. And I would encourage U.S. Boat to keep an eye on what happens here and encourage them to stop it with a lawsuit if it's unfair or bless it with condoning if it is, and that's your charge to do that or not, but I do need to see some balance here. And it would, I think, be welcomed.

Response 8 – Comments noted. The proposed Cu TMDLs include Cu allocations for all boats (recreational and commercial), rather than addressing only recreational boats as USEPA did in their Cu TMDLs. See also response to C. Miller's comment 5 above.

Ray Hiemstra. Associate Director at Orange County Coastkeeper.

We've been working on this for a long time. I've personally been working on the copper issue for about 13 years. So, we think it's long past time until this TMDL gets implemented.

Comment 1 - So it's been 17 years since 2002 when the EPA did their initial studies and identified the problems. There's been additional studies in 2006 after that. The city's done additional studies on their own after that. Every single study has shown that there is copper exceedances in the bay, so there's no question about that. Looked carefully at what the standard is, the 3.1, looked it through implementing the biologic ligand model, and what we're looking at is about the same, so the standard that we have that we need to me is the appropriate one.

We're here for clean water. Realize that some of this may be -- change is different, change is sometimes hard, but change is inevitable and that's what we need to do here.

Response 1 – Comments noted.

Comment 2 - So one of the things we're looking at, our comments, and we've submitted several comment letters, the Board is very familiar with those, so we think the timeline is too long.

So, first of all, we should have a maximum of ten-year timeline. And we specifically think that for the Upper Bay, there should be a six-year timeline. And our justification for that is we have here from the October 16th, 2002 Supplemental Environmental Document for the State Board Resolution 2012-56, and that's related to marine protected areas. And what that says is that marine water quality is going to play a big role in the success of marine protected areas. In section 7.5.2, it specifically states, "If these marine protection areas require additional protection from potential impacts associated with degraded water quality, the State and Regional 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 protection area designations were created due to the critical ecological functions of Upper Bay and its significance to the state and local community. This marine protected area needs to be protected, so we want to see that shorter timeline, and even shorter one for the marine protected area.

Response 2 – The recommended compliance schedule is "as soon as possible but no later than 12 years". The Santa Ana Water Board will consider the proposed implementation plans and schedules to be submitted by the dischargers to affirm that the plans/schedules meet this requirement. This determination would be subject to public review and comment. Santa Ana Water Board staff are not persuaded that it is necessary to specify a shorter time schedule for the Upper Bay: as a practical matter, the actions taken by the dischargers to implement the Cu TMDLs (e.g., requirements for the use of BMPs, diver certification, boater education) can and should be implemented bay-wide. Implementation of these actions throughout the Bay is likely to be necessary to achieve the dissolved Cu CTR criterion (3.1 µg/L) since most boats are moored in the Lower Bay, and daily tidal flows from the Lower Bay to the Upper Bay (and the reverse) affect water quality in the Upper Bay. Again, the expectation of the "as soon as possible" proposed schedule is that these and other actions, as identified in the dischargers' approved implementation plans/schedules, will be taken promptly and efficiently.

Comment 3 - We also want to see the requirements go into effect right away. This waiting for Office of Administrative Law, that's not a requirement, that's just something that started happening maybe, you know, five, seven years ago. TMDLs should have a date. And if there's going to be an adoption hearing on April 2nd [sic] and, boy, that will be a fun day, then it needs to go into effect on April 2nd. There's no need to wait another -- because then that turns 10 years into 12 years if we wait another two years. And by the time you start it at 2002 and get to that final period in 2033, you're talking 31 years. That's plenty of time to make this change.

Response 3 - Approval of the regulatory provisions of the proposed Cu TMDLs by the Office of Admininstrative Law (OAL) is required by law as part of the approval process so that the Basin Plan amendments are effective for regulatory purposes. Santa Ana Water Board staff will seek to facilitate the review and approval process by soliciting concurrent reviews of the Basin Plan amendments among the other approving agencies (State Water Board, USEPA) to the extent feasible. Final approval of the Basin Plan amendments by USEPA is required for the Basin Plan amendments to become effective and thereby form a legal basis for orders by the Santa Ana Water Board to require TMDL implementation.

Comment 4 - So the other thing we asked for is there should be additional monitoring for potential other biocides, maybe Irgarol or whatever things go to.

Response 4 – The BPAs for the proposed Cu TMDLs include monitoring and evaluation of Cu; other metals data can be analyzed as part of these analyses. The monitoring for other biocides that may be used is not part of the recommended strategies for these Cu TMDLs; however, monitoring of these biocides could be added to this monitoring as part of the dischargers' proposed implementation plans. This comment will be considered in the process of approving the proposed monitoring programs to be submitted by the dischargers pursuant to the requirements of the proposed Cu TMDLs.

With respect to Irgarol, it is our understanding that USEPA is proposing a ban on Irgarol antifouling products. USEPA's proposed ban is in accordance with the International Maritime Organization's ban[13] proposing that by October 2025 no new application of Irgarol can occur.

Comment 5 - And then lastly, let's remember that there's -- this is not something new for Newport Bay. This is not the first time. So, in San Diego and Marina del Rey, there's TMDLs, they're in compliance with their TMDLs. San Diego's been -- had a TMDL for a long time, so if they can do it, Newport Beach can do it too.

So, we're just urging the adoption of this TMDL and to bring water quality into compliance. That doesn't mean that every boat has to eliminate copper. There's some boats, you know, that are going out of the harbor and moving around that need copper on them. As was mentioned, we're actually pretty close to the goal, so it's not going to take a miracle to make this happen but we've got to get started and the TMDLs is obviously required.

Response 5 – Comments noted.

Kevin Ketchum, past President of Marine Recreation Association, and Principal and General Manager of California Yacht Marinas with over 2,000 slips in Southern California and L.A. County and San Diego County.

Comment 1- First of all, I want to thank you for taking your time this evening. It made it possible for a lot of us to be able to participate, having this evening thing. And then doing it again tomorrow during the mid-day, I think, gives a lot of us a chance to respond. I want to thank you.

And the guys who came from Sacramento, thanks. That's appreciated.

I know we've communicated in the past, and I've been here in the '16 and the '18, and now the '19. And I have a question, and then maybe just a summary comment.

On your slide 13, you talk about proposed TMDL Implementation Plan recommends but does not require, okay, and you make a big point of that. But to be honest, it sounds disingenuous because we can't lift all the boats out of the water, we're not going to remove all of the boats out of the water, so it's a statement but it's meaningless because what you're doing, and I think this is maybe an overview, you've said that there's a 92 percent problem from the vessels creating the problem, that was the feds. You guys have a 60 percent reduction. So, if we don't reduce the copper hull paint leaching, right, there is no alternative, there are hopeful alternatives, but there really is no practical. And that's why Washington's backed off; right? They're trying to solve that problem.

And I understand, your job is not to worry about the economics.

Response 1- First, the proposed TMDLs do not require that boats be lifted out of the water; nor do they require conversions of boats from Cu AFPs to alternative AFPs. The Implementation Plan for the proposed Cu TMDLs identifies a number of strategies for dischargers to consider whereby compliance with the TMDLs might be achieved, including the use of BMPs during hull cleaning (such as soft cloths), diver certification, boater education, and the use of incentives to boat owners for conversions from Cu AFPs. Dischargers are required to consider these strategies in developing their own proposed implementation plans.

[13] https://www.epa.gov/newsreleases/epa-administrator-wheeler-announces-proposed-action-cancel-irgarol-uses

See responses to the City's comments 1 and 3 - City letter (Response to Comments Document 2018); see also response to the City's comment 3.4.1 - City letter (2021 Responses to August 2018 Comments).

*Second, the comment states that "*you've said that there's a 92 percent problem from the vessels creating the problem, that was the feds. You guys have a 60 percent reduction*". It is unclear what the commenter means by a 92 percent problem - USEPA's Cu TMDLs require a 92% reduction in Cu discharges from boats; Santa Ana Water Board staff's Cu TMDLs call for a 60% reduction in Cu discharges from boats.*

Third, Economics are one of the factors to be considered by the Santa Ana Water Board. Economic considerations are addressed in the SED 2021, which has beeng revised and distributed for further review and comment. (See Draft SED 2021, Section 6.)

Comment 2 - The problem is, and it looks to me, the difference of what you did this time is in '16, you kind of helped with an Implementation Plan suggestions. This time, I think what I'm reading is here's the targets, right, hopefully the city, hopefully the county will respond and they'll come up with a plan to hit those targets. And you don't have to eliminate copper hull paint, if you can figure out another way of getting there; the problem is you're not. And then that's the problem because you have to have an antifouling paint to have a feasible recreational boating community. There's no alternative.

Response 2 – The Implementation Plan for the proposed Cu TMDLs shown in the Staff Report 2021 (and delineated in the revised draft Basin Plan Amendments 2021) requires that the dischargers, including the City and the County, submit their own proposed implementation plan(s) and schedule(s) to achieve the TMDLs. The Implementation Plan identifies a number of recommended strategies that are to be considered by the dischargers in developing their plans. These recommended strategies include the use of BMPs for hull cleaning (which is required with the use of DPR's lower leach rate Cu AFPs to achieve the dissolved Cu CTR criterion of 3.1 µg/L), the conversion of Cu AFPs to lower leach rate Cu AFPs, and the use of incentives for the conversion of Cu AFPs to non-biocide AFPs.
See also response to comment 1, above.

Comment 3 - So I think if we could take time, okay, because what you're going to do is I understand your intent and your obligation to a degree, but on the flipside, you're going to stick a problem on the county, the city, everybody who is in this room, okay, without a good alternative. And that, I think, is the real core problem here is let's give DPR their regulations to get a chance to see if we get there, okay? But the implementation, short of removing boats, okay, lift them out of the water but the vessels here are too big. On a can -- a vessel on a can, you can't lift out, okay? The smaller boats, you can lift out, and Marina del Rey's got their program. My boat's on a lift because it's only 26 feet. But the cost of that lift is more than the average cost of your 25-foot boat in this marina on a can or in a slip. You know, that's a $10,000 expense…. And if we can give DPR's a chance to see what happens, okay, see if that gets us there.

Response 3 –The Department of Pesticide Regulation (DPR) anticipates that implementation of their maximum leach rate for Cu AFPs, will achieve the dissolved Cu CTR criterion of 3.1 µg/L in most marinas in the state if hull cleaning BMPs and reduced cleaning frequencies are implemented with the use of lower leach rate Cu AFPs. DPR determined that in larger marinas (over 1270 boats), conversions from Cu AFPs to non-Cu AFPs will likely be necessary (in addition to BMPs) to achieve the dissolved Cu CTR criterion. Waiting to measure the effects of the implementation of DPR's maximum leach rate for Cu AFPs before requiring additional control actions is insufficient to ensure that the CTR criterion for

dissolved Cu will be achieved, especially since the use of BMPs is built into DPR's determination of the lower rate for Cu AFPs. See draft SED 2021, Section 5.3a.) The dischargers could consider a strategy in their implementation plan(s) to provide time for the implementation of DPR's maximum leach rate for Cu AFPs, but only if hull cleaning BMPs are implemented concurrently, consistent with DPR's recommendations provided with the leach rate determination for Cu AFPs. The dischargers would have to demonstrate that their proposed implementation plan(s) will lead to compliance with the CTR chronic criterion by the deadline in the proposed Cu TMDLs.

The City maintains that, in fact, the Bay is close to meeting the dissolved Cu CTR chronic criterion. Santa Ana Water Board (and State Water Board) staff's review of the data show that there continues to be Cu impairment in the Bay and that Cu TMDLs are still necessary. This includes data from Anchor QEA's study (2015, 2016) for the City in which over 30% of the samples exceeded the dissolved Cu CTR criterion. Further, the State 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. 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 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). However, to the extent that the Bay is close to meeting the Cu CTR chronic criterion, then the TMDL implementation strategies/schedule(s) can be tailored accordingly, for example, to address areas where compliance is most problematic.

The Cu TMDLs, including the proposed Implementation Plans, are subject to change over time.

Comment 4 - The BMPs, and just a question and I'll leave it at this, I guess I realize why those industries that are cleaning hulls aren't listed as dischargers or responsible parties but, clearly, their activities contribute greatly. But if we can understand that there is not an alternative, and the fact that Washington, who was the champion of this, who was gung-ho 100 percent by that boating community, had to back off, I think really speaks wonders of the problem, the difficulties if you go down this road.

Response 4 – Underwater hull cleaners and boatyard owners/operators <u>are</u> identified as dischargers in the proposed Cu TMDLs Basin Plan Amendments.
See responses to legal issues pertaining to the determination of dischargers responsible for Cu discharges in the response to G. Newmark's comment 2 (2021 Responses to August 2018 Comments), and responses to the City's comments 7.1-7.3 – Attachment 7 (Response to Comments Document 2018).

Oral response at the workshop
DR. CANDELARIA: I'd like to address your concern about saying that we're being disingenuous in saying that you're not required to convert boats, that's correct. What we're saying is the TMDLs require the dischargers to come together and make an implementation plan. Tell us what you can do.

And with respect, I made a big point out of not converting [to non-biocide paints]-- not being required to convert boats because that was a comment we heard over and over again about ~~where~~ we're [boaters] worried that all boaters are going to have to convert to non-copper and we [boaters] don't feel like there's a good alternative.

Comment 5 - MR. KETCHUM:

I noticed that in the 2016 TMDL that you worked on, it had that number of 10,000 boats. Okay, we had that issue and that's been corrected and thank you for making that adjustment. But what changed, and, Linda, you made a big point that, hey, if you hit that CTR before 60 percent, you're done.

But what I noticed I think, maybe I misread it, but isn't the opposite also true, that if you hit the 60 percent reduction at the boat, recreational boat level, but yet the CTR for some reason is something greater, then they have to keep reducing?

Response 5 – Pursuant to the language proposed in the Cu TMDLs, It is correct thatif 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)), then no further reduction in Cu discharges is 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 chronic criterion (or a chronic CTR criterion adjusted by a Water Effects Ratio) 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.*
The percent reductions and schedule for those reductions identified above shall become moot upon the demonstration that compliance has been achieved.

Karen Prioleau. individual boat owner, as well as a professor at Orange Coast College.
And I run the Professional Mariners Program, and I have cleaned many a boat bottom, and I am a licensed master.

Comment 1 - So I just would like a clarification because it appears that the burden of this is going to go on the individual boat owners, so I would just like a clarification on the following.
It's my understanding that the charter boats, the dinner cruises and so forth, will be exempt.

Response 1 –The statement that commercial vessels, including the charter boats, dinner cruise boats, etc. are exempt is incorrect. Santa Ana Water Board staff have determined Cu allocations for both recreational and commercial boats, rather than addressing only recreational boats (DPR's regulation for a maximum leach rate for Cu AFPs applies to recreational boats only). The proposed Cu TMDLs now have separate allocations for commercial boats greater than 79 ft. and other boats (134 and 7090 lbs/yr, respectively). The other boats category includes recreational boats and commercial boats under 79 feet. The larger commercial boats were split out since they are currently covered under the Vessel General Permit (VGP) and will be subject to the regulations promulgated to implement the Vessel Incidental Discharge Act (VIDA).

Comment 2 - So, in summary, that means that literally every boat in Newport Harbor would have to comply with this; is that correct?

Response 2 - The proposed Cu TMDLs require reductions in Cu discharges from boats such that the dissolved Cu CTR criterion is achieved. Some recreational boaters will likely continue to use Cu AFPs but those Cu AFPs will have to comply with DPR's maximum leach rate regulation of 9.5 µg/cm^2/d for Cu AFPs for recreational boats (effective July 1, 2018, compliance by June 30, 2020 for most paints). Boatyards and retailers with non-compliant paints in stock had two years to sell or use these paints by the appropriate deadline. Compliance is now expected. Large commercial vessels covered under the Vessel General Permit are required to comply with requirements to implement applicable wasteload allocations established or approved by U.S. EPA when notified by U.S. EPA or a state agency that such a wasteload allocation exists.

Comment 3 - And the mooring buoys and the bottom of the mooring buoys?

Response 3- The proposed Cu TMDLs do not directly address mooring buoys. However, if there are Cu discharges from these buoys, then the dischargers' plans to achieve the Cu TMDLs might want to address them specifically.

Dave New. President of Basin Marine Shipyard.
We've been painting boat bottoms here in the harbor since 1939. And I would like to ask a couple questions.
Comment 1 - I'd like to know how you got the results as far as the copper being construed in the harbor from the boats. There's about 4,500 boats in Newport Harbor and there's probably 450,000 acres of freeway that drain into Newport Harbor that everybody has copper in their brake shoes. So I don't know if it's a different copper. I'd like to know that.

Response 1 – Santa Ana Water Board staff's Impairment Assessment and Source Analysis are included in the Staff Report 2021[14] that is posted on our FTP site[15].

Oral comments at workshop.

DPR (DR. BURANT): Very quick comment about road runoff and how much Cu is contributed via road runoff.

So a lot of the studies that DPR did were all conducted during the summer when it's not raining, so that's how we know that it's mostly from the boats. And we're designing this study coming up this summer to follow that same protocol.
[Santa Ana Water Board staff comment --In addition, the Santa Ana Water Board and USEPA staff have calculated the Cu loads from boats and compared them to Cu loads from tributary and storm drain runoff, and boats are the largest source of Cu to the Bay.]

Comment 2 - Number two, your test results, Linda, was that from the study that was done in the Balboa Yacht Basin? I expressed my concern at that time that the people conducting the study were using the wrong cleaning media, which would affect the results. I would like to see the results, when available.

Response 2 – The data were from a hull cleaning study in the Balboa Yacht Basin to look at the amount of Cu that is coming off the boats during hull cleaning. The data is currently in multiple files and will be made available when it can be presented in an organized format.

Oral response in workshop – Michael Zlotkin
Michael Zlotkin, who conducted [hull] cleaning for a hull cleaning study in Newport Bay (Balboa Yacht Basin), responded at the workshop to Dave New's concern about the cleaning media employed. He stated that "most boats are painted 99 percent with hull paint. There are propellers and different metal parts of the boat that are not. And if they are [painted], because of the way that electrolysis works, the Cu gets burnt up when it's over a metal or non-bonded surface in the boat. So we are able to clean all of the hull paint with a sponge, unless it is a hard paint and very old. Most of the paints in Balboa Yacht

[14] *Staff Report 2021 is Appendix A of the draft Substitute Environmental Document (SED) 2021.*
[15] *Santa Ana Water Board FTP site is located at https://ftp.waterboards.ca.gov, The user name is rb8download, password is Region8_public.*

Basin are a hybrid of ablative paints. You actually can clean them with a sponge, though it does make quite a bit of paint come off because they are ablative. However, we did find most boats in Balboa Yacht Basin to have really rough growth on their shafts and propellers and poor management of their anodes. And so we had to really rehab all the boats that we found by putting in a lot of effort scrubbing the shafts and the propellers.

We were absolutely tremendously careful of hull paint, and I have documentation from every boat I cleaned, photos before and after. And it is necessary to use a Scotch-Brite Pad, a heavy scraper, if you're going to clean a propeller to where it's actually going to function when it's covered in barnacles."

Comment 3 - Well, all my fellow boatyard operators here in Newport Beach, we all -- you know, we clean and prep and sand the boat bottom and we all encapsulate all the runoff and it goes into clarifiers, and we all reuse our water. So, the boatyards, I think are already ahead of the curve, at least the ones here in Newport Beach. I can't speak for the other ones in other areas, so thank you. --

Response 3 – Comments noted.

Dave Webb, City of Newport Beach.

Comment 1 - I just want to make a couple of brief comments. Thanks again, DPR, for coming down today. Appreciate all that work. I did note that you regulate the sale and use of paints. The state is a discharger, there's no way around that, and you're going to have to work with that. And you, by the way, are the State of California, all of us here. We have to work through that because it's your paints that are causing the exceedances. And even the BMPs, maybe the training of the divers is a state function, all right? It's just like you train teachers, certificates, laborers, various other folks that work in the state under these type of things are state certified, state trained. That's something we might want to look at. And I think maybe DPR has a hand in that. If you're certifying this paint, if used this way, it's safe, then you've got to make sure the people using it are trained appropriately and keep training them.

I heard that the Water Board and DPR are not in conflict but I still disagree with that. Your discharge is violating your regulation. There is a conflict. It's a state-on-state regulation problem. We have to work through that. There's a concern there.

Response 1 – These comments reiterate points made by the City/Mr. Webb in prior discussions and correspondence (e.g., October 14, 2016 and August 22, 2018 City letters). Responses to these comments are provided in the responses to City comments 1, 2 , 5.1, and 7.1-7.3 – Attachment 7 (Response to Comments Document 2018), and response to G. Newmark's comment 2 (2021 Responses to August 2018 Comments).

Comment 2 - Observations. I heard some things, like the County and City, we hope, will do the Implementation Plan or required to do it, I'm not sure which it is. I don't know where my electeds are going to go and where the City is going to go, but if we choose not to do an Implementation Plan, we only have four boats in the harbor. We have three lifeguard boats and one ~~bus and~~ Boston whaler. I don't have a lot of footprint on here, so I guess I'd be regulated as a boat owner, just like all these folks, and I'm not sure how we'd regulate that if we didn't do the Implementation Plan. But just a thought that came to mind.

Response 2 – The Santa Ana Water Board encourages the City and the County to take lead roles in the preparation of implementation plan(s) to achieve the Cu TMDLs. The City is a discharger and thus responsible for implementation plan development and implementation.

See response to comment 1, above.

Comment 3 - I'm still confused that if you're not requiring removal of copper paints, how we're going to get to the level that you're requiring if no one chooses to remove copper paints. Somewhere along the line, I think that's a false statement, truthfully, because you're going to have to have people remove copper paints unless it's, again, the DPR paint swap is going to take care of, which I'm also hearing in conflict because I think the state says if we do this, along with some BMPs, we're good, so there should be no conflict with you. You guys should say, okay, if we do it, the state says, over here the harbor should be fine, we don't have a conflict, but it sounds like we still have one there. So that's a little concern I have.

Response 3 - The proposed Cu TMDLs recommend, but do not require, conversions from Cu AFPs to alternative AFPs. Providing incentives for such conversions may be one strategy the City chooses to employ in their proposed implementation plans to achieve the TMDLs. See response to comment 1, City letter (Response to Comments Document 2018). Cu AFPs applied to recreational boats must comply with DPR's regulation for a maximum leach rate of 9.5 µg/cm^2/d for Cu AFPs for recreational boats; when coupled with hull cleaning BMPs, this could potentially achieve the Cu CTR criterion of 3.1 µg/L. In addition, based on DPR's maximum leach rate regulation of 9.5 µg/cm^2/d for Cu AFPs (effective July 1, 2018, compliance by June 30, 2020 for most paints), boatyards and retailers with non-compliant paints in stock had two years to sell or use these paints by the appropriate deadline.. Compliance is now expected and only Cu AFPs that meet DPR's lower leach rate may be sold and used in California. With respect to DPR's leach rate regulation and the use of BMPs with lower leach rate Cu AFPs, see response to K. Ketchum's comment 3, above.

Comment 4 - I think the underlying voice and what the city has kind of asked about is there's a lot of moving parts on this, as you know. There's a lot of data that's changed, even when we talk about the 2002 EPA regulations that got this whole thing started, the testing, the loads back then and the calculations, so much of that's changed.

Chris [Miller] alluded to us doing a dredging project. As we've told you, we're going to do about a million dollars' worth of removal of material out here. That's going to change the circulation patterns.

I'm not sure how to address commercial boats. I know they're such a small item, we're not worried about it, but my head goes to right over there, there's a lot of big commercial boats right next to each other and that's where one of the exceedance problems are but they get a different level of paint. They get a much higher level of copper paint and they're not required to use a lower level. I don't know how we resolve that because I can't tell those folks -- I don't have the authority to say take your boat out of the harbor.

Response 4 – The comments regarding changing conditions and data reiterate prior comments made by the City (October 2016 and August 2018 letters). See responses to the City's comment 3- City letter, comment 3.1 – Attachment 3, comment 6.17- Attachment 6 (Response to Comments Document 2018), and the City's comment 1 - City letter (2021 Responses to August 2018 Comments).
Regarding dredging, see response to C. Miller's comment 7, above.

Based on further consideration of the proper regulatory approach for commercial vessels, the proposed Cu TMDLs have been modified to separate the total boat allocation into a separate wasteload allocation for commercial boats over 79 ft. (134 lbs/yr), and a load allocation for all recreational boats and commercial boats less than 79 ft. (7090 lbs/yr). The total Cu allocation for recreational and commercial

vessels remains the same (7224 lbs/yr). See Table 5-5 which shows the mass-based allocations for Newport Bay (Staff Report 2021[16]). See also response to K. Prioleau's comment 2 above.

Comment 5 - That brings back another thing. And I think the precedence is already set and I think the Regional Board really needs to think about this because you're used to a lot of different regulations in how you've worked over the years, but when it comes to this, these movable boats, Chris' analogy of the highways and the cars, that waterway out there is something the city oversees. We have sheriffs and operations and various things. We maintain the depth of the harbor through the federal government. We don't regulate the vehicles on top.

Just like the cars, we don't regulate the vehicles that run on our roads. The state and the feds control the formulation of the gas, the control of the emissions, the output of the tailpipes and how that works. I don't have an Implementation Plan, and nor am I required, and I think the precedence is set, when L.A. has too many cars in it and the NOx and the CO2 exceed the air quality rules, the City of L.A. is not required to take some cars out of the city or tell the cars to stop, turn your motor off. That -- and that essence is what you're saying the city and the county will need to do here.

There's too many boats or too much copper, so you need to remove some of those, or tell those guys to turn their engine off or take that copper off. We don't have that authority. We have been telling you that and you can really think about that. And that precedence is set, not just with the Air Quality Boards, all the other regulations in the state where you guys hold the cards and control the formulation of something and you want us to come in now and enforce it. I think you're into a big legal problem there. Our attorneys have looked at it. Other folks are looking at it. I just want to point that out, that you need to look at it that way.

Response 5 - The City is properly identified as a discharger in the proposed Cu TMDLs and has the authority to take steps to control Cu discharges from AFPs. See response to G. Newmark's comment 2 (2021 Responses to August 2018 Comments).

Comment 6 - We're here to do clean water. We like that. We're here to help. The costs I'm hearing in here, I even heard things about the city might want to do incentive programs, what the cost of the last incentive program that I think Coastkeeper helped to change paints out? I heard something from my staff, like $600,000. I don't know what that was but I'd be curious, how many of those boats have flipped back to copper paints? What happened to that money? Do we have to do continual incentives every year?

Response 6 – The project that Mr. Webb is referring to is the Newport Bay Copper Reduction Project (O.C. Coastkeeper, 2013[17]), which was funded at $260,400 (319(h) grant) with a match of $86,800 from Coastkeeper. The portion of the grant allotted for incentives was $80,000. Again though, as stated before, the conversion of boats from Cu to non-biocide AFPs and the use of an incentive program is a recommended, but not required, strategy in these Cu TMDLs.

[16] *Staff Report 2021 is Appendix A of the draft SED 2021.*

[17] *Orange County Coastkeeper. March 2013. Newport Bay Copper Reduction Study. Technical Report for Santa Ana Regional Water Board.*

Comment 7 - And again, this goes into that, how much is the City going to expect to pay in this? Do I have copper boat paint police that go around and swab people and say your copper is not legal? I don't even know who left to Mexico today and is going to come back next week with a different paint job.

So there are some logistical problems. We are here to work with you but please recognize that, what you're doing. And it is the point. I know we have real concerns there and we just don't want to end up getting into a ruffle over this.

Response 7 – The Implementation Plan for the proposed Cu TMDLs requires that the City and other dischargers develop their own proposed implementation plan(s) and schedule(s) whereby the requisite Cu reductions from boats are expected to be achieved. Upon approval by the Santa Ana Water Board, those plans/schedules are to be implemented by the City and other dischargers. This approach enables the City to identify strategies that are feasible to implement, taking into account the logistical challenges identified.

Alondra Heredia. student at UCI.

I care about the health of our waters.

I think what you guys are doing is great. Obviously, copper is a problem here in Newport Bay because there's ample research that indicates this. The EPA passed stricter Copper TMDLs in 2002. And if they did so it's because plenty of research suggests that in high concentrations, it can actually have very detrimental effects on the quality of our water, marine life, and potentially on the health of humans.

Comment 1 - So I don't understand why it's taking so long for us to do something about it here when there's also research that shows that the copper concentrations here in Newport Bay are exceeding legal standards and it's going to continue being that way if we don't do something about it soon. Why are we waiting to like react? What's going to be our cue to action for us to realize that we have to do something about it now?

Response 1 – Comments noted. Santa Ana Water Board staff are proceeding as expeditiously as possible to move the proposed Cu TMDLs forward for adoption, and are committed to expeditious implementation, if and when the TMDLs are approved. It should be pointed out that the Santa Ana Water Board is already regulating Cu inputs to the Bay from urban stormwater runoff.

Comment 2 - And there's other options to copper-based paints. I know San Diego is currently doing research on alternatives and the research already suggests that some of those paints are actually like as good as some copper-based paints. And while research is still ongoing, they do show a lot of potential to be an alternative to copper-based paints. We could do more research on these paints to see how well they do in protecting boats. It's just an issue that needs to be addressed now because 12 years, it's ample of time for boat owners and operators to get adjusted to the changes, to offer new solutions, and just get adapted.

Response 1 – Comments noted.

Frank Szafranski with International Paint.
I want to thank you for having this forum here this evening. I've heard a lot of great input here tonight on antifouling paints and the benefits. And I have to say that there's been a lot of good testimony here this evening.

Comment 1 - Antifouling paints are an important part of boating. You can't have boats without them. There have been a lot of alternatives that have been checked out and looked at over the years. Some have had some success. Some have had, you know, very little success. Some of the studies I found, particularly IRTA, was very flawed in its methodology for, you know, espousing alternative to copper-based antifouling paints. I think that there's a way to approach this issue without implementing a TMDL.

Response 1– Newport Bay is still impaired for dissolved Cu; therefore, Cu TMDLs are still required for Newport Bay. Cu TMDLs are required to ensure that the CTR chronic criterion for Cu , which is the legally applicable criterion is being met in the Bay in accordance with the State Listing Policy (SLP) requirements. In addition, sampling and analyses continue to show that Cu AFPs are the largest source of Cu to the Bay. Cu TMDLs have already been established for Newport Bay by USEPA and are being implemented, in part, in the Orange County MS4 permit.

Comment 2 - When I was first involved in some of these issues, I worked with Nan Singhasemanon {DPR] and the American Coatings Association in developing an underwater hull cleaning study, that was, we were tasked with doing that. And, Linda, you may be familiar with that. As we did that in San Diego, we found that up to 50 percent of the copper that was in the water column at any given time was a result of the amount of -- was a result of underwater hull cleaning. Once an antifouling paint reaches a steady state it stays that way until it's interrupted by a hull cleaning event. And every time that happens a bunch of copper goes into the water. And then, of course, as a result of that the toxicity levels get exceeded.

Response 2 – Comments noted.

Comment 3 - And I've heard a lot of discussion tonight about the use of BMPs and I think that you're heading in the right direction with that. If the amount of cleaning -- we found in San Diego during the study that we did that there were probably 15, 16 cleanings per year that took place on the average boat. We put a lot of copper into these paints to do a job. They're not designed to be cleaned. Unlike what some people have thought they were, they're not designed to be cleaned. People, you know, see a little bit of slime on the bottom and they want to wipe it off but they get very aggressive and that's when all the copper comes out.

If we could cut hull cleanings in half, I think that you could meet your, you know, you could meet your requirements without having to implement a TMDL. And that could be done through educational programs and so forth.

Response 3 – Santa Ana Water Board staff agree that the use of BMPs is a necessary strategy to implement the proposed Cu TMDLs. In addition, the use of lower leach rate Cu AFPs, required by DPR's maximum leach rate regulation, also requires the use of BMPs to achieve the CTR chronic criterion. BMPs identified by DPR include the use of soft cloths for hull cleaning and less frequent hull cleaning.

Comment 4 - And so I think I probably am, you know, in agreement with some of the other testimony here tonight, that it's just a matter of BMPs, it's just a matter of educating the boat owner, you don't

have to clean every month, you don't have to clean 15, 16 times a year, but if you can cut that cleaning in half you can cut the amount of copper load, in my opinion.

Response 4 – Boater education and diver certification/education are recommended strategies in the proposed Cu TMDLs Implementation Plan; however, the dischargers must develop their own implementation plan(s) and include strategies to achieve these Cu TMDLs.

Clay McDermett. Hornblower Yachts representative.
And just want to let you guys know that we intend to be a leader in clean water here for boaters. Hornblower is going to do the best we can. We do have the biggest boats in the harbor and we've got a lot of boats, so we'll do the best we can.

Comment 1 - I haven't heard a whole lot of solutions. We will -- the only things I'm going to bring back to my bosses are using soft scrub, making sure that our hull cleaners are using soft scrubs, making sure that we're maybe cleaning a little less, apparently, but I haven't heard any good solutions on paint. Like I don't know if we're using the right paint. I don't know if less copper is better. I don't -- you guys haven't really clarified that at all for me.

Response 1 – The recommended strategies to achieve the requisite Cu reduction from boats include compliance with DPR's maximum leach rate regulation of 9.5 µg/cm^2/d for Cu AFPs, coupled with the use of BMPs during hull cleaning and reduced cleaning frequency. Though DPR's maximum leach rate regulation does not address commercial boats, allocations for commercial boats are included in these Cu TMDLs. Commercial boat owners could investigate whether lower leach rate Cu AFPs would serve as well for their operations. Other strategies include a diver certification program(s) for underwater hull cleaners (including the use of soft cloths), a boater education program(s) and the use of incentives for boaters to convert boats from Cu to non-biocide AFPs. The dischargers may identify other strategies in their proposed implementation plan(s). See also response to K. Prioleau's comment 2 above.

Hein Austin.
Comment 1 - For all the diving communities here, when I started with my boat and I started using this [showing soft cloth mitt] in the beginning, I used it once a month for two years. Now I clean my boat five times a year. During the winter the water is cold, the stuff grows slower, so I wait for -- I don't clean from Thanksgiving until March. And after that, I clean every second month, five times. You do not need to clean your boat more than five times a year, in my experience, and I don't want any paint to come off of my boat.

Response 1 – The Implementation Plan for the proposed Cu TMDLs includes the use of BMPs, such as soft cleaning cloths, and reduced cleaning frequency as possible strategies to reduce Cu discharges from Cu AFPs.

Comment 2 - Number two, I have two questions, I have yet to find a smoking gun proving that copper is collapsing our ecosystems or destroying organisms or under-developing larvae or whatever. I'd like to hear about a study that has a smoking gun because up to now it's all about what could be, what should be, what might be, it's all vague.

Response 2 – Santa Ana Water Board staff do not make the claim that Cu is "collapsing our ecosytems or destroying organisms or under-developing larvae…". Dissolved Cu exceeds the CTR chronic criterion in Newport Bay, and based on State Listing Policy (SLP) methodology (2004, amended 2015) the Bay was shown to be an impaired waterbody; therefore, Cu TMDLs are required. Cu AFPs on boats are the largest source of Cu to the Bay; therefore, Cu discharges from Cu AFPs must be reduced to meet the TMDLs. USEPA established Cu TMDLs for Newport Bay in 2002; those Cu TMDLs also found that Cu discharges from Cu AFPs are the largest source of Cu to the Bay.

Comment 3 - And number two is if we do bring it down to the right levels will we relieve -- will we give relief to the paint makers? Will we stop the pressure on the copper to go down and let it go back to normal levels and allow us to use 70 percent if we can bring it down with other methods? No smoking gun and I'd like to know if there's a reverse in mind if we do meet these targets?

Response 3 – The reduction of Cu discharges from boats to the Bay is necessary to meet the Cu TMDLs. To aid in that reduction, DPR issued a regulation for a maximum leach rate of 9.5 µg/cm^2/d for Cu AFPs for recreational boats (effective July 1, 2018, compliance by June 30, 2020 for most paints), whereby boatyards and retailers with non-compliant paints in stock had two years to sell or use these paints by the appropriate deadline. Compliance is now expected. According to DPR, the implementation of this regulation should achieve the dissolved Cu CTR chronic concentration in the Bay in marinas with < 1270 boats, but only if hull cleaning BMPs are also implemented with the use of lower leach rate Cu paints. For larger marinas, other measures, such as conversions to non-biocide paints, may be necessary to achieve the CTR criterion. See response to H. Austin's comment 4.3.

Jessie Salem. owner, Newport Harbor Shipyard.

Comment 1 -Just to clarify, you all identify boatyards as dischargers but under the existing General Permit, we have been forbidden to discharge industrial wastewater for over 15 years, and that permit does allow us to discharge stormwater runoff. And we're an extremely regulated industry.

My question for you all is how are you going to enforce? If you search public records over the last several years, of the permit holders at least, you see that you've issued several, what you call, enforcement actions but they're just letters. There's no punitive damage behind them. You point to divers in the bay that are not regulated at all but certainly everybody agrees that those divers are contributors to the problem, so they're mostly guys working at small boats, most of them, probably, don't even have business licenses, let alone any training.

So once again, my question is it's great that you're going to propose these TMDLs but history dictates that you don't enforce and you don't have any punitive repercussions for violators. I don't know if that's a statement and a question.

If you're going to enact these laws, these regulations, these TMDLs, history dictates that your, the Board's, idea of enforcement is writing a nasty letter but there's no punitive damage, so there's really no motivation for violators to abide by these new regulations. And the violators are the people that, in my opinion, are creating most of the problem. That man over there has invested hundreds of thousands of dollars. My business has invested several hundreds of thousands of dollars in water quality while we stand by and watch unregulated businesses in the bay contribute to this problem.

The point is, is not to say anything, but we all think these TMDLs are important. We all want to contribute to cleaner water. But you as a group and as an organization have to give us the tools to do so

and your tools are to enforce the rules and regulations which you create before you enact new rules and regulations.

Response- Staff provided an oral response at the workshop: "The State Water Board has an enforcement policy that the Regional Water Boards are required to implement. And it relies on progressive enforcement. So, the first level is to issue a notice of violation to a discharger who has violated a permit or violated or a prohibition or done some type of action that's not permitted. And depending on his action, the discharger action, if he complies at that point, then it's done. If he does not comply then we do have the ability to levy fines against a violator. And we have done that in the past." *Santa Ana Water Board staff agree that enforcement is an important tool to implement regulations properly and fairly. Santa Ana Water Board resources are utilized for enforcement as necessary and feasible. Any perceived lack of enforcement by the Board does not obviate the need to enact new rules and regulations,*

Responses to Comments in Workshops - May 10, 2019 - Santa Ana Water Board Staff

Speakers
Santa Ana Water Board Staff
Hope Smythe, Executive Officer

Jayne Joy, Assistant Executive Officer
Linda Candelaria, Environmental Scientist, Lead on Cu TMDLs
Joanne Schneider, Environmental Program Manager
Terri Reeder, Supervisor, Coastal Waters Planning and CEQA Sections

State Water Board Staff
Gita Kapahi, Workshop Facilitator
Teresita Sablan, Santa Ana Water Board Counsel
Department of Pesticide Regulation Staff
Aniela Burant, PhD
Nan Singhasemanon

Public Speakers
Jerry Desmond, Recreational Boaters of California pp38, 50
David Kennedy, Boat Owners Association of the United States p40
Richard Dinon, Southern California Yachting Association p40
Jim Haussener, California Marine Affairs and Navigation Conference p42
Firoozeh Peiman, Coastkeeper p45
Jess Dearman, Coastkeeper p45
David Booker, boat owner p46
Shelly Anghera, Consultant, City of Newport Beach p47
Chris Miller, City of Newport Beach p48
Matt Lentz, GSI Environmental p40

Jerry Desmond. California Advocate for Recreational Boaters of California (RBOC).
Comment 1 - RBOC has been a participant in the efforts and the initiative to address copper-based antifouling paints for quite some time.

We support the idea to protect the environment. Boaters want to have a safe and clean waterway into which to operate.

At the same time we recognize the importance of copper-based antifouling paints--not just for ease of being in the water on a boat, but also to protect from invasive species. If you're transporting and you have a dirty hull, you're bringing invasive species into different parts of the state.

We have as an overall policy on copper paint that if there's any ban or prohibition against the use of copper-based antifouling paints, that any such ban be accompanied by findings that alternatives are available, effective, and affordable.
If Cu paints are banned, there must be alternative paints that are available, effective, and affordable.

Response 1 – First, the proposed Cu TMDLs do not include any plan to ban Cu antifouling paints (AFPs), and the use of alternative paints is a recommended strategy rather than a requirement.
(See recommended Implementation Task 1.2.3 in the Implementation Plan for the proposed Cu TMDLs.)
Second, Santa Ana Water Board staff agree that in order to convert from Cu AFPs, there must be alternative paints that are available, effective and affordable. See responses to the City's comments 3.4.1 and 6.1-6.2 (2021 Responses to August 2018 Comments), and comments 1 and 5.2 – City Letter (Response to Comments Document 2018).
Based on an alternative paint study by the Port of San Diego, there are some alternative paints that are available, effective and affordable. (Note that there are likely no non-biocide paints that are as effective as Cu to prevent fouling; therefore, boats painted with non-biocide paints must be cleaned more frequently than Cu AFPs.)

Comment 2 - If low leach rate copper paints are available and effective and can be used, boaters will transition to it. We have boaters in Shelter Island, Marina del Rey who have been participating on alternative copper paints to see if they work. I don't think we can say today that we have that knowledge and confidence.

We are encouraged that the state is taking action to actually identify and regulate and permit the sale of low leach copper paint and, hopefully, we'll be participating in that process. And we'll also be participating as the state identifies different bodies of water in which to look at the effectiveness of the paint and develop a baseline.

And perhaps that's the opening of our statement in terms of this, those new developments at the state level to identify low leach rate paint, what would be available, that's a plan -- the baseline is going to be developed over the next year or so -- that's a plan that could work and it could have buy-in by the boating community. And is it, therefore, a Basin Plan amendment that can await that outcome and see what those results are?

Response 2 – The Department of Pesticide Regulation (DPR) issued a regulation for a maximum leach rate of 9.5 µg/cm^2/d for Cu AFPs for recreational boats. Compliance with that requirement is now expected. Based on DPR's determination of the lower leach rate, the use of compliant AFPs must be accompanied by the use of BMPs to achieve the dissolved Cu CTR chronic criterion of 3.1 µg/L[18]. (See also response to comment 1 above regarding the use of alternative paints.)

[18] *Department of Pesticide Regulation's regulation in Chapter 3, Section 6190 of the California Code of Regulations*

Delaying consideration of the proposed Cu TMDLs to wait and determine the effects of the implementation of lower leach rate Cu AFPs required by DPR,would not provide reasonable assurance that water quality standards in the Bay will be achieved. See response to the City's comment 3.4.1 (2021 Responses to August 2018 Comments) and J. Haussener's (CMANC) comment 11 below.

Comment 3 - So our first request would be to coordinate with the state to look at the results of this marina, of the paint that's out there. It's just being available July 2018. It will be two years, a couple years. Let's get the paint out and see if it works. Does this Basin Plan amendment need to be on the books before that or can it wait for the results of that study?

Response 3 - Regarding "paint…[that's] available July 2018", if the commenter is referring to Cu AFPs with leach rates at or below DPR's maximum leach rate of 9.5 µg/cm^2/d, at least some of these paints have always been available to boaters. Regarding the comment about waiting on the Basin Plan Amendment, see response to comment 2, above. In addition, USEPA has already established Cu TMDLs for Newport Bay, and steps must be taken to achieve those TMDLs if the proposed Cu TMDLs are not adopted.
Note also that based on DPR's leach rate regulation, BMPs must be used with lower leach rate Cu AFPs to achieve the dissolved Cu CTR chronic criterion. Whether or not the proposed TMDLs are adopted, BMPs will need to be implemented to reduce Cu AFP discharges.

Comment 4 - Individual boaters always worry that we're being identified as the discharger and we have responsibility. I don't know if we get comfort from the PowerPoint presentation that says that there will be other responsible parties that develop the Implementation Plan but the boaters are always put out there as the boater. You know, I think it's the same in San Diego, Marina del Rey, and other bodies of water.

And while we are supposed to have the comfort that there will be plans developed through these other entities, there's never a removal of the boater as being a discharger who's going to be responsible for their own plan and possible penalties.

Response 4 – Boaters are properly named as dischargers, along with the City of Newport Beach, the County of Orange, marina owner/operators, boatyard owner/operators, and hull cleaners. The expectation is that the City, County and marina owners/operators, rather than individual boat owners, will take the lead in developing and implementing strategies to meet the Cu TMDLs.
See responses to the Marine Recreation Association's (MRA) comment 3.1 and G. Newmark's comment 2 ((2021 Responses to August 2018 Comments), and responses to the City's comments 7.1-7.3 – Attachment 7 (Response to Comments Document 2018).

Comment 5 - In terms of the best management practices for diving companies and hull cleaners we've had an open mind to development and upgraded -- I think the divers have, as well, education of boaters and the hull cleaners, best management practices for them. I think we've encouraged that at the state level and local communities as well. And that can be an effective, a very effective approach.

Response 5 – Comment noted. The Cu TMDLs include recommendations to implement diver certification and education, and boater/boatyard education to ensure that hull cleaning BMPs recommended by DPR for concurrent use with the lower leach rate Cu AFPs are implemented. These BMPs are necessary to achieve the CTR chronic criterion.

Comment 6 - And then finally, -- a point of fairness, and that is the same thing about, potentially the boaters being identified as a boater, it's just the recreational boaters. It's not commercial ships in San Diego. It's not the Navy. Why are we continuing to be identified, and we don't really care for this focus on us, and not all the other responsible parties. We think it ought to be a comprehensive approach that looks at commercial, if we look at the list of the commercial boats that are exempt, there are a lot. In San Diego, we've got the Navy exempt. The other contributors of copper to the problem all ought to be at the table.

Response 6 – Santa Ana Water Board staff have determined Cu allocations for both recreational and commercial boats.
See responses to C. Miller's comment 5 and K. Prioleau's comment 2 from the May 9, 2019 workshop above. Cu discharges from Cu AFPs on boats will need to be reduced to meet the TMDLs.

Comment 7 - I saw some statistics that talk about over 90 percent, I guess, are from antifouling paints, but there are brake pads, there's Navy, there's all kinds. It continues to look like in these different forums that the boaters are being singled out again. And so we ask for just basic fairness in terms of all contributors.

Response 7 –Cu discharges from boats continue to be the largest source of Cu to the Bay, compared to other sources. The proposed TMDLs include allocations for these other sources in addition to allocations for both recreational and commercial boats.
See also responses to comments 4 and 6, above.

David Kennedy. Manager for Government Affairs for Boat U.S.
Boat U.S. is the Boat Owners Association of the United States. We're a national organization. We have over 620,000 members nationwide, 60,000 members here in California. This is, obviously, an important enough issue that I've come here from Washington so that we understand and we make sure that the voice of boaters are heard.

I did provide comments last night. I'm not going to particularly repeat those. I'll note that we work very closely with RBOC. They are our state partner here, a very important part of trying to come up with solutions that are going to work for boaters on the water.

Comment 1 The thing I want to reiterate and continue to emphasize is that we need to come up with solutions that work practically and that maintain the accessibility of boating for as many people as possible. The boater needs to be a part of this conversation. The boating dollar is my most discretionary dollar; it's the first one I don't spend. And when you look out at Newport Harbor and how important and how integral it is to this community, this needs to work and it needs to work for as many people as possible. So that's the one thing that I would add to our comments from last night.

Response 1 –Comments noted. Santa Ana Water Board staff will continue to work with the stakeholders during this TMDL process.

Rich Dinon. Commodore of the Southern California Yachting Association
The Association represents in excess of 90 yacht clubs, not just in Southern California but also Northern Mexico and Arizona, Nevada, and Utah. We are not an advocacy organization.

Comment 1 - The word trust is a really important component of what we're talking about. We trust that you recognize, in this process, the needs of individual boaters.

I would estimate that for the average boater to repaint their hull with the majority of those non-copper-based paints today that are incompatible, that the boat has to get pulled up, it has to get stripped, it has to get a couple layers of barrier before they get the epoxy put on it, and then a couple coats of paint.

Given that our boatyards in Southern California are limited in number and are highly regulated, that's a very expensive proposition. Off the top of my head, I'd say a tenth to a third of the total value of the boat would be the investment. So, it's a material commitment on the part of that boat owner.

We will see the rates of salvage pick up a lot on the type of boats that the beginner boater is getting into, lesser expensive, the smaller boats, simply, that salvage or junking cycle is going to be accelerated.

Response 1 - Conversions to alternative AFPs are recommended, but not required, in the proposed Cu TMDLs. Rather, the proposed Cu TMDLs require that the dischargers propose their own implementation plan(s) whereby the TMDLs can be achieved. The strategies identified in the dischargers' implementation plan(s) may include conversions to alternative AFPs. (Note that compliance with DPR's maximum leach rate regulation of 9.5 µg/cm^2/d for Cu AFPs for recreational boats is now required, irrespective of TMDL requirements. Boatyards and retailers with non-compliant paints in stock had two years to sell or use these paints by the appropriate deadline.)
Santa Ana Water Board staff agree that converting from Cu to non-biocide AFPs would be an extra cost, should such conversions be selected by the responsible parties as a TMDL compliance strategy, and that non-biocide AFPs are usually more expensive to apply. However, some non-biocide AFPs have been shown to last 5-7 years compared to Cu AFPs which last approximately 2-3 years. In addition, grants may be available to assist boaters in the conversion costs to non-biocide paints. (One such 319(h) grant was awarded to Orange County Coastkeeper to convert boats from Cu to non-biocide AFPs in Balboa Yacht Basin, Newport Bay[19].)

Comment 2 - Further, with respect to hull cleanliness, if you will, a critical component of that is fuel consumption. And so there needs to be a consideration in this process of maintaining a clean hull over an extended period of time or we'll be trading, quite frankly, trading one issue for another. So, the maintenance is very, very important.

Response 2 – Santa Ana Water Board staff agree that maintenance is very important. Boats with non-biocide AFPs will likely need to be cleaned more frequently than boats with Cu AFPs.
See also responses to comment 1, above, regarding the proposed Implementation Plan for the TMDLs.

Comment 3 - Finally, I have to say that it strikes me as a pretty aggressive schedule for reduction of copper. And the reason I'm saying that is because we already have an inventory, as you just heard, that still has to be used up. Additional, I think the average boater probably hauls out between three and five years. That's what we're currently getting in terms of life expectancy for today's bottom paints with divers. And so couple that cycle with the availability of the lower discharge rate paint, it seems to me to be a disconnect. So that would be something I'd suggest you'd look into.

[19] *Orange County Coastkeeper. 2013. Newport Bay Copper Reduction Study. Technical Report for Santa Ana Regional Water Board.*

Response 3 - See response to comment 1 above, regarding the proposed Implementation Plan for the Cu TMDLs. The proposed TMDLs recommend, but do not require, the conversion of boats from Cu to non-Cu AFPs; such conversions may be a part of compliance strategies included in the implementation plan(s) proposed by the dischargers.
The proposed TMDLs compliance schedule (as soon as possible but no later than 12 years) is reasonable and is based on a typical repainting schedule of 2-3 years for Cu AFPs. (Note that the Marina del Rey Toxics TMDLs has a 10-year compliance schedule.[20])
With respect to the inventory, higher leach rate Cu AFPs cannot be sold or used after June 30, 2020, for most paints used on recreational boats. Therefore, compliance with the lower leach rate Cu AFPs is now expected.

Comment 4 - We very much appreciate what you're doing and what your role is. It's an important role. We understand exactly why we're doing it. And believe me, as a boater, I'm not in love with copper. I would instantly embrace something that wasn't, if it worked, if it worked and if it could be converted, and if it could be rolled over and substituted properly and expeditiously. So, I want to thank you for your work and thank you for your comments.

Response 4 – *Comments noted.*

Jim Haussener. California Marine Affairs and Navigation Conference.
Comment 1 - We sent a letter back in August of 2015. So, I want to thank you very much for holding the workshops. One of the comments we made at that time was that you had not held the workshops you indicated in 2016. So, we certainly appreciate getting the entire executive office staff here, as well as the TMDL folks, counsel, and somebody out of Sacramento to be here for us.

Response 1 – Comments noted.

Comment 2 - More questions about the slides, if I can. Slide six, you posted the EPA TMDL and supporting documents and mentioned that. There's a linkage into your 2016 document, except the link is broken. Would you mind posting that on your website or coming up with a new link and email it around to us? It's one of those things that keeps getting referred to.

Response 2 –Documents pertaining to the proposed Cu TMDLs and can be found at the Santa Ana Water Board's FTP site[21]

Comment 3 - You referenced new data in slide number eight. What is that new data? What is the date of this data? And when will you post the data? One of the things that Dr. Candelaria made, the comment, was some data and analyzing it. Perhaps you [could] post as much raw data out there so folks can take a look at it, and then give yourselves time to analyze it and the rest of us a little bit of time?

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[20] *Los Angeles Regional Water Quality Control Board. 2015. Reconsideration of the Total Maximum Daily Load for Toxic Pollutants in Marina del Rey Harbor. Technical Report. LARWQCB, Los Angeles, CA.*
[21] *Santa Ana Water Board FTP site is located at https://ftp.waterboards.ca.gov, The user name is rb8download, password is Region8_public.*

Response 3 – Slide 8 (Santa Ana Water Board staff Workshop presentation) relates to Board staff's proposed Cu TMDLs (compared to Slide 7 that presents USEPA's Cu TMDLs). The newer data referred to in Slide 8 are the data used for the Impairment Assessment – Santa Ana Water Board staff used data after 2002 (which are newer than the data used by USEPA for their Metals TMDLs established in 2002). Analyses of these data are presented in the revised Staff Report 2021[22] . Posting all of the raw data that has been evaluated is not practical at this time but can be made available in the future when the administrative record for the Cu TMDLs has been completed and submitted to the State Water Board.

In addition, newer data show 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 - If the CTR is achieved, you do not need to go to a 60 percent reduction. Does this definitely apply to the EPA TMDL? In other words, if it's achieved, you may not need to get to a 92 percent reduction based on the EPA TMDL or not?

Response 4 – The Santa Ana Water Board's proposed Cu TMDLs specifically state that if the dissolved Cu CTR chronic criterion is achieved before the 60% reduction in Cu discharges from boats (recreational and commercial) is achieved, no further reduction is required. USEPA's Cu TMDLs do not include such a provision. Legally, the allocations specified in USEPA's TMDLs must be achieved in addition to meeting the CTR chronic criterion for Cu.

Comment 5 - Slide 22, you're hoping to post stuff by the end of May and you're looking at taking this to the Board on August 2nd. Can we get a commitment from the Executive Officer that at least everything that Staff has reviewed, there's at least a 60-day period between when it's all posted on your website and when you bring it before the Board?

Response 5 – The legally required comment period is 45 days. Santa Ana Water Board staff have endeavored to make documents available to accommodate a longer review/comment period. (All pertinent documents, including the revised draft BPA, draft SED 2021 and Staff Report 2021 were made available for public review on June 29, 2021 and posted on the Board's FTP site[23]. The Response to Comments from August 2018 Document was made available on July 12, 2021, and is also posted on the FTP site. (See footnote #16.)

Comment 6 - I asked the question yesterday about the transcripts being available, and I understand you are going to post them on your website so thank you very much. There were certainly some comments and back-and-forth dialogue yesterday that I would like to see more of.

Response 6 – All documents relevant to the consideration of adoption of the proposed Cu TMDLs are posted to the , Santa Ana Water Board's FTP site (See footnote #22)The transcripts will also be posted.

[22] *Staff Report 2021 is Appendix A of the draft Substitute Environmental Document (SED) 2021.*
[23] ???

Comment 7- Again, the data comments, the City of Newport Beach has provided data, you've got data, Coastkeeper ha.s provided data. It would be nice if there could be one repository for all that data at one spot. And whether you're available to do it, or Coastkeeper or City of Newport Beach, don't really care, it's just it would be nice to have everything in one spot. And primarily to make sure everything that the Board staff has looked at is included.

Response 7 – Comment noted. The studies evaluated in Board staff's Impairment Assessment will be made available on the Board's FTP site. Reports for these studies do not always include the raw data. In addition, data are made available to the public through the Water Boards California Environmental Data Exchange Network (CEDEN). Posting all of the raw data that has been evaluated is not practical at this time but can be made available in the future when the administrative record for the Cu TMDLs has been completed and submitted to the State Water Board.

Comment 8 - we need to go back and review to make sure citations are accurate.

Response 8 – Santa Ana Water Board staff agree and have thoroughly check all references.

Comment 9 - The TMDL was called a revision yesterday. I know in your 2016 Staff Report you indicated that EPA would allow that to happen, in other words, you coming in and directly revising. Are they willing to eliminate that written correspondence from them? In other words, if you adopt a TMDL, will they eliminate their TMDL? I assume that's a rulemaking process and federal agencies don't really like to go through a rulemaking process if they can avoid it. So, I'd like to know because you did make a comment in your 2016 as -- and you did comment yesterday, this is now a revision, how you anticipate going about that.

Response 9 – Santa Ana Water Board staff's proposed Cu TMDLs were modeled after USEPA's Cu TMDLs for Newport Bay (and the Shelter Island Yacht Basin Cu TMDL, San Diego, CA[24]). USEPA recognizes that approved Santa Ana Water Board Cu TMDLs will supersede USEPA's TMDLs. Once USEPA reviews and approves the Cu TMDLs, they will confirm in their approval letter that the Santa Ana Water Board's Cu TMDLs supersede their Cu TMDLs for Newport Bay, and the Board's Cu TMDLs will then be implemented through appropriate orders.

Comment 10 - There are alternatives. One of the things, because I work for all the ports in California, and so as a result I deal with a lot of different Water Boards, there are some that seem to rush the TMDLs and they just need the priorities of the basis. But in looking and listening last night in terms of best management practices and those sorts of things, it looks to me like do we need to do a TMDL or can we do a Category 4(b) (phonetic) process here.

Response 10 – USEPA already established Cu TMDLs for Newport Bay in 2002. Board staff's proposed Cu TMDLs update and revise USEPA's Cu TMDLs, specify an Implementation Plan and compliance schedule, and will supersede USEPA's Cu TMDLs upon approval. Since Cu TMDLs in Newport Bay have already been established by USEPA, a Category 4(b) approach is not an option.

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[24] San Diego Regional Water Quality Control Board. 2005. Total Maximum Daily Load for Dissolved Copper in Shelter Island Yacht Basin, San Diego Bay. Technical Report. SDRWQCB, San Diego, CA.

Comment 11 - If we're going to go to BMPs and things of that sort, can we work with everybody who's been talking about how they appreciate a clean bay and a goal of what they want to do, some of those sorts of things? And so it seems like this might be a time to break the paradigm. And if we go through Clean Water and extra TMDLs and we're not even sure at the state or federal level as to whether TMDLs are achieving their purpose overall because there are so many of them and nobody is, quote, "tracking them" according to the EPA. Could we be a leader in this process and maybe achieve the goals of a cleaner bay by doing something other than going directly to a TMDL?

Response 11 – USEPA already established Cu TMDLs for Newport Bay in 2002. Dissolved Cu continues to exceed the CTR chronic criterion in Newport Bay; therefore, Cu TMDLs continue to be necessary and an alternative approach is not an option.

Comment 12 - There were some comments yesterday about a staff report. And I certainly want to make sure that the staff report that was commented about, that we're looking at the 2016 and the 2018, our, quote, "the staff report," and there is not another staff report coming down the pike that we have to be aware of. So when the staff report was being referenced yesterday, it was specifically targeting those two documents?

Response 12 –The original staff report is the Staff Report 2016; there is also a Supplemental Staff Report 2018. Santa Ana Water Board staff have prepared a revised Staff Report 2021[25], which incorporates and updates information in the Staff Report 2016 and Supplemental Staff Report 2018. Board staff have also revised the proposed Basin Plan Amendments and draft SED 2021. The Staff Report 2021 and draft SED 2021 have been made available for public review and comment, and can be found on the Santa Ana Water Board's FTP site[26].

Firoozeh Peiman. from Huntington Beach.
Comment 1 - I'm here to support the immediate adoption of the Copper TMDL. And Newport belongs to everybody, not just the boaters. And I'm afraid the city and the county have been doing nothing to work on this problem. So, we need a clean bay for people.

Response 1 – Comments noted.

Jesse Dearman. from Irvine.
Comment 1 - I am also in support of the Copper TMDL. I think it's important for all of us as a population to really take responsibility for the pollution that's happening. However, I do think that the time period should be cut down from 12 years to 10 years. Los Angeles and San Diego both have ten-year plans and I think it's a likely possibility for us.

Response 1 – The compliance schedule proposed for the Newport Bay Cu TMDLs is reasonable. It provides adequate time to develop and implement various strategies to address Cu discharges from Cu AFPs (and other sources). These strategies should include the use of BMPs, and may include the conversion of some boats from Cu to non-biocide AFPs and/or lower leach rate Cu AFPs during the regular repainting schedule.

[25] *Staff Report 2021 is Appendix A of the draft Substitute Environmental Document (SED) 2021.*
[26] *Santa Ana Water Board FTP site is located at https://ftp.waterboards.ca.gov, The user name is rb8download, password is Region8_public.*

Dave Booker. Boat owner.
Comment 1 - I'm a boat owner, so I'm one of those that feels picked on every time you talk about bottom paint.
But I will also share that I don't really need copper in my bottom paint, I just need something to help keep the growth off of it.

Response 1 – Comments noted. The Santa Ana Water Board is not trying to "picki on boaters." The data show that Cu AFPs are the largest source of Cu to the Bay, resulting in exceedances of the dissolved Cu CTR chronic criterion.

Comment 2 - I also, by the way, clean my boat twice a month. I'm an avid racer and I just won't race with slime on the bottom. And slime occurs now in about ten days. So, you have to understand, that's the reality of what we've got.

Response 2 – Santa Ana Water Board staff understand that boaters with racing boats usually clean their hulls more frequently than other boats; this may be a boat type that could potentially convert to non-biocide AFPs, which do not contain Cu and require more frequent cleaning, in any case, to prevent fouling.

Comment 3 - I want to thank you for having these meetings. And I want to point out that we really want a clean bay. We've got to start talking about how to get a clean bay and the cause and effect relationship between what these numbers are and what we're going to get back in a clean bay.

Response 3 – The proposed Cu TMDLs will help improve the water quality of Newport Bay. Dissolved Cu continues to exceed the CTR criterion in the Bay; therefore, Cu TMDLs are still required.

Comment 4 - So I haven't seen in any of these meetings anything but a number that somebody in Washington decided they want, 3.0 micrograms -- did I say that right? -- per liter on copper. And so what the heck does that really mean? If we're currently at nine, what are we going to get across the different levels of ecosystems in the back bay and in our bay? So, what is the promise that we're going to get if we implement this up and as we go forward?

Response 4 – The saltwater CTR chronic criterion for dissolved Cu is 3.1 µg/L (USEPA 2000[27]). This criterion was established by USEPA based on toxicity studies. USEPA established the CTR criteria to protect human health and aquatic life beneficial uses.
See also responses to the City's comment 6.4 –Attachment 6 (Response to Comments Document 2018).

Comment 5 - So we've got to examine some ecology metrics, not just the Copper TMDL metric, so that we know what the hell the payback is going to be as far as our vitality of our local water ways. And I think that's something for the local folks to do, not the state folks.

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[27] USEPA 2000 California Toxics Rule [CTR], Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California; Federal Register Rule—40CFR Part 131.38. U.S.Environmental Protection Agency, Washington, D.C. [28] Department of Pesticide Regulation. 2018. Final Decision Concerning Reevaluation of Copper Based Antifouling Paint Pesticides. CA Notice 2018-03.

So, I'd like to turn this into -- I'd like to measure the bay health and make a projection of how healthy it's going to get as we move forward.

Response 5 – Again, Cu TMDLs are necessary for the Bay since dissolved Cu continues to exceed the CTR chronic criterion. See response to S. Anghera's comment 1 (Workshop comments of May 9, 2019, above), and comment 4 above.

Shelly Anghera. consultant for the City of Newport Beach.

Comment 1 - I provided some testimony last night about the general condition of copper in the bay and the city asked me to just reiterate those today. I'm the scientist that's helped collect the information. The general concentration, the average concentration of copper in Newport Bay, is three. The criteria is 3.1 and it's based on the number of times in exceedances samples are greater than that 3.1. So, it just -- that is part of the reason that we're here today.

Response 1 – This comment reiterates S. Anghera's comment 1 in the Workshop comments of May 9, 2019. See responses to comment 1 (Responses to Workshop Comments -May 9, 2019).

Comment 2 - One of the important things to note is the pattern of copper and how it happens in the bay. It changes at every location. Every time the tide changes it's higher in concentrations in areas where the water has a very low turnover rate, so in more restricted areas of the harbor. But the mouth and the main channel is always below the 3.1 criteria.

Response 2 – This comment reiterates S. Anghera's comment 3 in Workshop comments, May 9, 2019, but the claim of Cu concentrations changing with the tides has not been substantiated with data. See response to comment 3 (Response to Comments in Workshops - May 9 & 10 2019).

Comment 3 - It also should be noted that copper is elevated in the Upper Newport Bay where there are no boats participating in that, which gives you an idea that there is still copper coming down from the watershed.

Response 3 – Santa Ana Water Board staff agree that there is some Cu input from the main tributaries (San Diego Creek and Santa Ana-Delhi Channel); however, the largest input of Cu to the Bay is from Cu AFPs on boats. In addition, Cu moves from the Lower to Upper Bay during daily incoming tides. The proposed Cu TMDLs specify allocations for tributary inputs; however, <u>no reduction</u> is required from the tributaries The Cu TMDLs (and the dissolved Cu CTR chronic criterion) cannot be achieved in the Bay unless and until there are reductions in Cu discharges from Cu AFPs.

Comment 4 - There's two major state initiatives that have occurred that are being enacted right now.

You heard from Department of Pesticide Regulations on the reductions of the boat paint. We have estimated, the science community has estimated that that's probably going to be about a 30 percent shift of a decline in copper coming off of boats.

And also, with the Brake Pad Initiative, some of the work that's been done in L.A. County and Orange County is estimating the impacts of copper reductions coming into the receiving waters being close to 50 percent reduction based on those brake pad initiatives.

All of those things should be in full effect by 2025. So, we look at that. When we are in a situation where most of the harbor is near a 3.0 concentration, with these major initiatives happening

by the state, there's a strong likelihood that we are going to have a greater portion of the harbor well below that 3.1 criteria.

Response 4 – Santa Ana Water Board staff are aware of both regulations – DPR's regulation for a maximum leach rate for Cu AFPs, and the Brake Pad Initiative. Cu discharges from boats are still the largest source of Cu to the Bay and the proposed Cu TMDLs cannot be achieved without reductions from Cu AFPs.
See response to comment 3 above. See also responses to the City's comment 3.4.1 and 3.4.2 - City Letter (2021 Responses to August 2018 Comments).

Chris Miller. City of Newport Beach.
Comment 1 - I'm not going to repeat everything that I said last night because I trust that everything will be transcribed and available in a minute form.
My first comment would be that it's anticipated that a proposed date for this being adopted would be August 2nd. I think that's unrealistically soon, respectfully.

So, I respectfully request that perhaps a longer-term date might be considered rather than proposing, right now, an August 2nd date.

Response 1 – At the time of the workshops, Santa Ana Water Board staff expected to present the proposed Cu TMDLs for the Board's consideration at the August 2, 2019 board meeting. The timing of the Santa Ana Water Board's consideration of the proposed Cu TMDLs has been delayed, in part to allow staff time to further revise the proposed Cu TMDLs and the supporting BPA documents. A public hearing for the Santa Ana Water Board to consider adoption of the Cu TMDLs BPA is currently scheduled for September 17, 2021.

Comment 2 - The City and myself do see a direct nexus between DPR's 9.5 leach rate point in conjunction with the Water Boards 3.1 criteria.

We have an example of two sister agencies that are both state agencies, both under CalEPA, that should be working together to create a solution for this problem that is perceived down here in Newport Harbor and statewide. If DPR is regulating the paints that are being sold in California, then they should work with the Water Board to figure out the right level that the paint should have of copper and then live with it. And then that would then trickle down to all the harbors within California, not just Newport Harbor, not just Marina del Rey, and not just San Diego.

Response 2 – There is a direct correlation between DPR's 9.5 µg/cm^2/d leach rate and the dissolved Cu CTR chronic criterion of 3.1 µg/L since DPR used this 3.1 µg/L (chronic criterion) as one input to the MAMPAC model to back-calculate a maximum leach rate for Cu AFPs. (Leach rates were calculated for various-sized marinas, and ultimately the leach rate of 9.5 µg/cm^2/d was selected as the maximum allowable leach rate for Cu AFPs for DPR's regulation. (This leach rate represents a marina size of 1270 boats).

The Santa Ana Water Boards and State Water Board are (and have been) working with DPR on Cu AFP issues for many years. Prior to determining a lower leach rate for Cu AFPs, DPR and several coastal Water Boards in southern California conducted studies to help DPR determine whether the registration of Cu AFPs should be reevaluated. Based on data from these studies and evaluation using the MAMPAC

model, DPR reevaluated these Cu AFPs and determined a maximum leach rate that is applicable state-wide[28]. DPR and the Water Boards have separate legal authorities and responsibilities with respect to AFPs: DPR's legal authority is to regulate the sale and use of AFPs; tWater Boards' legal authority is to regulate discharges of Cu (and other biocides) from biocide-based AFPs (in this case, through the adoption of the proposed Cu TMDLs and Orders to implement the TMDLs). See response to G. Newmark's comment 7 -Attachment 7 (Response to Comments Document 2018). Note that Cu exceedances are more of a problem in southern California marinas compared to northern California.

Comment 3 - If the goal, ultimately, is to take care of all the harbors within California, we're on a 40-year plan, so -- or, I mean, some long-term decade-old plan like that. Things will take a long time if they're taking -- if right now we're on our tenth or twelfth or some-odd year working on this.

Response 3 – Comment is unclear. The proposed Cu TMDLs are intended to address Cu discharges to Newport Bay (in particular Cu discharges from boats) to achieve the dissolved Cu CTR chronic criterion and protect beneficial uses. The Implementation Schedule in the proposed Cu TMDLs provides a period of up to 12 years to achieve the Cu TMDLs and the dissolved Cu CTR chronic criterion.

Comment 4 - So that would summarize my comments. And I would respectfully request that there's a lot of moving parts going on right now. There's a lot of studies. Let's let the paint vet at the newly reformulated 9.5. Let's let that play into effect for a few years, monitor it, study it, and let's see how that plays out before we rush to judgment and enact something sooner than later.

Response 4 –These strategies that the City is proposing can also be accomplished within the framework of adopted Cu TMDLs and the dischargers' own implementation plan(s). Delaying consideration of the proposed Cu TMDLs to wait to determine the effects of the implementation of lower leach rate Cu AFPs that meet DPR's leach rate of 9.5 µg/cm^2/d would not provide reasonable assurance that water quality standards in the Bay will be achieved. Further, the success of DPR's leach rate for Cu AFPs in achieving the CTR chronic criterion is contingent on the implementation of BMPs, such as soft cloths and reduced hull cleaning frequency, with the use of lower leach rate Cu AFPs, and also depends on the leach rates of the current Cu AFPs in use. (If the leach rates of these paints are already below DPR's maximum leach rate for Cu AFPs, then the use of lower leach rate Cu AFPs would not result in a decrease in Cu discharges from boats). It would not suffice to await the implementation of the DPR's leach rate for Cu AFPs alone; BMPs must also be implemented with lower leach rate Cu AFPs as recommended in DPR's Cu leach rate determination letter.

Matt Lentz. GSI Environmental.

Comment 1 - I guess I'm kind of representing a different segment of upstream dischargers, especially those that are covered under the Industrial General Permit, a State Water Board-issued General Permit. And what we see going on is kind of an interesting regulatory dilemma.

The State Water Board recently adopted some amendments to the Industrial General Permit whereas they brought in the 2002 version of the TMDL issued for Newport Bay and have created a translation, basically, and implementation requirements based on that 2002 TMDL that have created numeric effluent limits that are going to be effective to certain industrial dischargers upstream in the

[28] *Department of Pesticide Regulation. 2018. Final Decision Concerning Reevaluation of Copper Based Antifouling Paint Pesticides. CA Notice 2018-03.*

tributary areas we're talking about here for copper, for zinc, and for lead at extremely low numbers. And again, this is based on the 2002 EPA TMDL.

So, there's a number of dischargers. The amendment was adopted in 2018 and is set to become effective on July 1st, 2020. So literally, there are numeric effluent limits that could be affected on numerous, dozens of dischargers, if not more, in the Newport Bay in the upstream tributary areas.

Response 1- The IGP effluent limits for some of the metals are based on the 2002 USEPA TMDLs and that's why they were included in that IGP permit revision. If the proposed Cu TMDLs are approved, the IGP requirements for Cu based on the 2002 USEPA TMDLs would remain in effect until the permit is amended to implement the approved Cu TMDLs.

Comment 2 - I've talked to the State Water Board and they don't have any immediate plans to reopen or renew that permit, certainly not before July 1, 2020. Does the Board have any thoughts on how there could be language or something implemented in the revision of this TMDL that could help the State Water Board.

Response 2 - Santa Ana Water Board staff has and will continue to consult with the State Water Board about this complex issue and how the Cu TMDLs waste load allocations would be incorporated into the IGP.

Comment 3 - Is there still an opportunity to provide comments on some of the attainment language or Implementation Plan language that would kind of make it as clear as possible for the industrial discharger community, and make it easier for the State Water Board if they have to look at the TMDL and understand what the implementation expectations are for those upstream dischargers?

Response 3 - Once the revised BPA documents are posted, another public review and comment period will be initiated, which would provide the desired opportunity for additional input.

Jerry Desmond. Recreational Boaters of California.

Comment 1 - I just have one other issue I thought I'd mention, and it was brought up by some of the other speakers, as well, and that is the issue of site-specific studies. And we recognize that the number 3.1 is sort of a fallback number if site-specific studies do not take place.

It was mentioned on a slide about Marina del Rey and some funding for site-specific studies there. And our organization on a statewide basis as RBOC would look forward to a dialogue and a conversation about how to come up with funding for site-specific studies here, Shelter Island, Marina del Rey, and some of the other water bodies that are on the table.

We have boaters pay a tremendous amount of money statewide in gas tax dollars, as well as registration fees, and the paying back of loans. We have a Division of Boating and Waterways with different statutory authorized programs and services that benefit the boaters. Our organization has adopted a policy statement to look for ways to open up the monies that boaters pay. We're not talking about General Fund monies.

But out of the monies we pay as boaters, we would look forward to a dialogue of how we could authorize those funds to be available for the right science to be conducted to have site-specific studies, look at more accurate data about the water body, to drive the decisions that are the 3.1 fallback number. We recognize it's a lot of dollars. I looked at Marina del Rey, $400,000, $500,000. We've heard numbers like millions. And we've also heard about the collaborative process that needs to be

undertaken there, where it's with the Regional Board, with the scientists that would be paid the money, we would look forward to that to really drive a science-driven answer to the water bodies. And if it takes the dedication of statewide boater gas tax dollars, registration fees for that kind of effort, we would support it.

So I'd like to say publicly, so it's on the record, that if there is that opportunity for that kind of dialogue with other stakeholders and with government entities and Regional Boards and state entities as part of the overall dialogue that's being talked about, we would participate and encourage it and advocate for that.

Response 1 –Santa Ana Water Board staff have worked with, and will continue to work with, stakeholders to move forward with scientifically defensible studies in Newport Bay. In addition, the Implementation Plan and compliance schedule for the proposed Cu TMDLs provide the opportunity to conduct site-specific studies, if desired. If such studies are conducted and ultimately result in the approval of an alternative Cu criterion, then the ongoing need for and nature of Cu TMDLs would need to be revisited.

Oral Response at the workshop

DR. CANDELARIA - We [Board staff] and Coastkeeper already conducted a Copper Marina Study (Coastkeeper and Candelaria 2007[29]). And here's a little chemistry. The toxicity of Cu is determined by the chemical form of Cu. When there's more dissolved organic carbon in the system, the Cu is tied up. When there's a low amount of dissolved organic carbon, or DOC, more free Cu is available and so the toxicity to organisms tends to be higher.

In the Cu Marina Study, we looked at the dissolved organic carbon. At certain times of the year it's higher but certain times of the year it's very low, below one [mg/L]. The Biotic Ligand Model that EPA put out is a model to determine, alternative Cu criteria. We ran Newport Bay data with the Biotic Ligand Model, and when the DOC is below one, the results are essentially back at the CTR criterion. This is site-specific data, so conducting a site-specific study is not a guarantee that the Cu criterion will increase.

In Newport [Bay], the DOC varies a lot: it's higher in the winter and very low in the summer. We [Board staff] collected samples in December, May and August, and in August the [DOC] numbers were very low (one or below). It's really important to characterize the DOC throughout the year.

I'd just like to add, that if you run a site-specific objective study, that's not a guarantee that the criteria will be higher.

Orange County also ran some of their data, (Jian Peng), and they came up with the same result, when the DOC is low, you're back at the CTR criterion.

Nan Singhasemanon. Department of Pesticide Regulation.

I've worked a long time on this topic. And I think, you know, I've heard a few things in here, and in particular the comment about the state agencies working together.

I've been working, DPR has been working with the State Board and the Regional Board for more than 17, 18 years on this topic, so it's not like we haven't been talking. Now we understand the need for using antifouling paints as a pest management tool. FIFRA, the pesticide law, basically, if it simply were just about protecting environment, then we would just say let's just cancel all the paints. We won't use

[29] Orange County Coastkeeper and L.M.Candelaria. July 2007. Lower Newport Bay Copper-Metals Marina Study. Technical Report for Santa Ana Regional Water Board.

copper anymore and that will be it. But we have to take into consideration the pest management needs of boaters and to protect again, just normal aquatic species from aquatic invasive species.

DPR is also aware that there are some non-copper alternatives out there. Typically, they're biocides that we're familiar with, like zinc, Irgarol, Sea-nine, and a few other biocides. However, we also know that copper is very, very effective. That's the reason it's been around for a long time, to replace tributyltin.

We know that good alternatives aren't necessarily out there yet, particularly biocide-free ones. We've been participating in trying to identify these biocides for a while. The solution at the time was to help more of the industry to develop lower leaching paints, or not really develop them but to really narrow down what's available to folks. That seems to be the approach that we've been taking. And we understand that it maintains copper in the toolbox.

This is something that's evolved over a long period of time. We know that you can't just take the material out because there's still a need to use to copper to help maintain the pest control.

I just wanted to clarify that point. Linda and I have been working together for a long time. This is not a simple issue. It's very complicated. The EPA is considering adopting the same leach rate path as California. It's a bigger issue here. California has larger marinas. Other states, not. They don't have such a big copper problem. Their marinas aren't as big. They're not as dense. But even at the federal level, they're already considering the same leach rate cap approach that we're using.

UNIDENTIFIED FEMALE: (Off mike.) You think they'd get the Navy to sign up for that?

MR. SINGHASEMANON: The Navy operates on their own standards. It's called Uniform Discharge Units.

MR. SINGHASEMANON: Yeah. Well, the TMDLs are associated mainly with recreational boat marinas. The Clean Water Act actually exempts the military, I think, sites or the operations from that Act, so that's why we don't address that.

I have worked with the Navy in the past, especially in San Diego, and they're very conscientious about the materials that they're using. They're experimenting with new materials all the time. I know that and I think that there's been other studies, that show that some of the naval bases have relatively high concentrations of copper in the past, and that's to be expected.

But again, their focus is mainly on the Clean Water Act and the Porter-Cologne which is addressing non-military-type sites, so that's what the Water Boards are charged with.

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Oral response in workshop

DR. CANDELARIA:-*I have a couple comments.*

We initially established an allocation for all boats in the Bay - recreational and commercial boats. However, since the May 2019 meetings, Board staff have separated the boat allocation into a waste load allocation for commercial boats over 79 ft, and a load allocation for recreational boats and commercial boats under 79 ft. Discharges from commercial boats over 79 ft. are considered to be WLAs and are regulated under the VGP (Vessel General Permit), and will soon be regulated under the Vessel Incidental Discharge Act (VIDA).

A lot of the data that we looked at is summarized in the 2016 Staff Report.

And I also wanted to mention that we keep hearing that the average copper concentration in the bay is 3.0. In one recent study [by Anchor QEA for the City], 33 percent, a third of the samples, exceeded the chronic criterion of 3.1, and approximately 16 percent of the samples were above 4.8 which is the acute criterion. So, there's a little bit of a disconnect there. And we intend to have discussions regarding the studies that have been discussed here.

MS. SCHNEIDER: Just wanted to make an additional comment. We're about to engage in the third public comment period for these TMDLS, so we've had a number of these comments made before

and we have prepared some responses and are in the process of doing so again now. And we will be doing so based on the comments that we received today which we greatly appreciate.

One of the repeated comments is let's wait for the DPR leach rate of 9.5 to kick in, wait and see, and do some monitoring in the future to determine whether implementation of the 9.5 leach rate will suffice to get us where we all want to go or at least where the CTR criteria tell us we need to go.

The thing that everybody needs to understand again, and as Aniela has talked about and as Linda has pointed out, the success of the 9.5 leach rate in achieving the CTR criterion is contingent on the implementation of BMPs, things like the use of soft cloths, reduced hull cleaning frequency. So, it simply will not suffice to await the implementation of this 9.5 number unless there are direct actions taken to implement the BMPs that, for example, DPR anticipates. So, I just wanted to make that point clear.

And again, all of the comment letters, transcripts, responses to comments, along with other Basin Plan amendment, the Cu TMDLs, Action Plans and related documentation is now or will be posted on the Regional Board's website. And, again, Linda provided a link to that specific page on the website and I encourage you all to visit.

[Note: the above information previously found on the Santa Ana Water Board's website is now available on the Water Board's FTP site:

https://ftp.waterboards.ca.gov/WebInterface/login.html
user name is rb8download
password is Region8_public
Choose Copper TMDLs folder, then 2021 BPA Documents -Copper TMDLs

Responses to Other Comments - April & May 2019 Santa Ana Water Board Staff

Ken Pedersen, Clipper Yacht Harbor. Letter dated April 19, 2019. p54
KC Pedersen, Clipper Yacht Harbor. Letter dated April 19, 2019.
Eva Kanemot, Clipper Yacht Harbor. Letter dated April 19, 2019.
Neal Blossom, American Chemet Corporation. Email dated May 13, 2019. p55

Letters dated April 19, 2019 from Ken Pedersen, KC Pedersen and Eva Kanemoto are identical and comments are addressed below.
Ken Pedersen - President, Clipper Yacht Harbor, member Marine Recreation Association.
KC Pedersen - VicePresident, Clipper Yacht Harbor, and
Eva Kanemoto - Harbor master, Clipper Yacht Harbor.

General Comment. The Marine Recreation Association and its members are against [the] regulations that the [Santa Ana Water] Board is considering.
Comment 1.

a. Alternative AFPs need additional time for studying both human health factors and environmental impacts. *A* memorandum submitted by Dr. Anghera of Latitude Environmental to the Water Board raises serious concerns, regarding human health impacts of the current AFP alternatives. Dr. Anghera stating from 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 concerning to us and we would implore the Water Board to investigate these concerns prior to adopting the proposed amendments.

b. In the publication of Marina Dock Age in the May/June 2018 issue. *Washington State Halts Its Ban on Antifouling Copper Paints,* the article states, Washington State's governor signed a bill on March 15, 2018 that delayed all phases of the ban on Cu AFP's until January 1, 2021. Primarily due to the initial research conducted by Washington State's Department of Ecology Hazardous Waste and Toxic Reduction Program, **"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 1a. First, the Cu TMDLs <u>do not require</u> the conversion of Cu AFPs to non-biocide AFPs – other tasks to reduce Cu inputs to the Bay are recommended for consideration first, including the use of BMPs during hull cleaning, the use of slip liners and the conversion of Cu AFPs with higher leach rates to Cu AFPs with leach rates less than 9.5 µg/cm^2/d (DPR's leach rate regulation[30]).

[30] *Department of Pesticide Regulation's regulation in Chapter 3, Section 6190 of the California Code of Regulations*

If the dischargers choose to use conversions to non-biocide AFPS as a strategy to reduce Cu discharges from boats, Santa Ana Water Board staff agree that caution must be taken in the choice of the non-biocide AFPs. Note that the County of Los Angeles already conducted a review of available non-biocide AFPs and chose a few paints to use in their conversions.[31]

Response 1b. See response to 1a above.

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

The summary provided by Dr. Anghera states,

> "... **there are only three** non-biocide paints tested in these studies that are still available... 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 usedhave not been tested."

We are sure it is not the intention of the Water 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.

I am requesting that you reject these regulations at this time and allow for more study of the issue and alternatives which are environmentally and economically sound.

*Response 2. The Santa Ana Water Board is tasked with the implementation of the water quality criteria. Since Cu exceeds these CTR criteria, and Cu AFPs on boats are the largest source of Cu to the Bay, Cu discharges from boats must be reduced to meet the TMDLs. This being said, Santa Ana Water Board staff definitely do not want to "*drive middle class boaters out of enjoying Newport Bay". *As stated in 1a above, boaters are not required to convert from Cu to non-biocide AFPs. There are various strategies to decrease Cu discharges from boats, including the use of BMPs during hull cleaning, the use of other BMPs such as slip liners, and the conversion of current Cu AFPs to lower leach rate Cu AFPs.*

Neal Blossom. Director of Quality Assurance and Global Regulatory Affairs, American Chemet Corporation. Email dated May 13, 2019.

Comments to the Proposed Basin Plan Amendment to Incorporate the Copper TMDLs in Newport Bay.

1) Given that the state has just recently enacted (July 2018) the leach rate limit for recreational vessel coatings, and
2) that copper from urban runoff is projected to continue to decline over the next five years due to the brake pad initiative and the passing of SB346 in 2010, and
3) that copper concentrations in the bay are very near the copper threshold for the TMDL regulation of 3.1 micrograms per liter (µg/L) dissolved copper, and

[31] *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

4) that no toxicity has ever been found to be associated with copper in the last 8 years in Lower Newport Bay, and
5) the US EPA is implementing a nationwide recreational vessel coating leach rate limit matching that of California as stated in the Interim Registration Review Decision, August 2018 (attached), and
6) the state of Washington delayed a ban on copper in recreational vessel coatings. The Washington Dept of Ecology submitted a report to the legislature requesting a delay of the ban until further research was collected (attached)…*Excerpt from Washington Study…*

the implementation of these changes to the Basin Plan is a premature, expensive and ultimately an environmentally risky endeavor that will have no measured benefit.

The resources of the RWQCB, the City of Newport Beach and the boat owners would be much better spent on more productive issues at this time such as a focus on aquatic invasive species which are often introduced and spread due to poor hull fouling control.

Response.
First, USEPA already established Cu TMDLs for Newport Bay in 2002 on the basis of their data analysis findings that dissolved Cu exceeded applicable water quality objectives. In the absence of approved Santa Ana Water Board Cu TMDLs that supersede those of USEPA, the Board is obligated to implement USEPA's TMDLs, which are based on older data and require more stringent reductions in Cu from boats than the Cu TMDLs proposed by Santa Ana Water Board staff (96% vs 60% reduction in Cu discharges from boats, respectively). See response to comment 1 by the City of Newport Beach, October 14, 2016 letter (Response to Comments document 2018).

While Cu in urban runoff is expected to decline over time due to regulatory initiatives, as noted by the commenter, that does not obviate the need to address Cu discharges from boats, which are the largest source of Cu input to the Bay. Compliance with the applicable water quality objective for Cu cannot be achieved if these discharges from boats are not reduced. (See also responses to: S.Anghera's comment 4, J. Desmond's comment 3, and C. Miller's comment 4 (Responses to Comments in Workshop - May 10, 2019).

The objective of the proposed Cu TMDLs is to achieve compliance with applicable water quality standards (which includes water quality objectives and beneficial uses). If dissolved Cu concentrations in the Bay are "very close" to the Cu water quality objective (CTR chronic criterion), then actions to reduce Cu discharges from boats may also be modified. The data indicate that the dissolved Cu CTR criterion of 3.1 µg/L continues to be exceeded in the Bay and that Cu TMDLs and implementation actions by dischargers are necessary to achieve the Cu TMDLs. (See also responses to S. Anghera's comment 1; C. Miller's comment 2; K. Ketchum's, comment 3; S. Paulsen'sn, comment 3 (Responses to Comments in Workshop - May 9, 2019). See also response to the City's comment 6.4- Attachment 6 (Response to Comments document 2018.)

Findings of impairment, which dictate the development and implementation of TMDLs, do not rely on findings of toxicity. See response to S. Anghera's comment 3, (Responses to Comments in Workshop - May 9, 2019), , and response to the City's comment 6.4 – Attachment 6 (Response to Comments Document 2018).

Santa Ana Water Board staff are aware of the state of Washington's efforts related to Cu antifouling paints. As noted in prior responses, the Santa Ana Water Board's proposed Cu TMDLs do not require conversions from Cu to other AFPs. (See response to C. Miller's comment 6.2, (Responses to Comments in Workshop - May 9, 2019). However, such conversions may be part of the dischargers' proposed strategies to achieve the needed reduction in Cu discharges from boats.