

FINAL STATEMENT OF REASONS AND PUBLIC REPORT
DEPARTMENT OF PESTICIDE REGULATION

Title 3. California Code of Regulations
Adopt Section 6190
Pertaining to Copper-Based Antifouling Paint and Coating Products

UPDATE OF THE INITIAL STATEMENT OF REASONS

As authorized by Government Code section 11346.9(d), the Department of Pesticide Regulation (DPR) incorporates by reference the Initial Statement of Reasons prepared for this rulemaking. No changes were made to the proposed regulations nor are any changes necessary to the Initial Statement of Reasons following the 45-day public comment period.

The proposed regulatory action was noticed in the *California Regulatory Notice Register* on November 18, 2016. During the 45-day public comment period, DPR received comments on the proposed text. The comments are discussed under the heading “Summary and Response to Comments Received” of this Final Statement of Reasons.

DPR has adopted Title 3 California Code of Regulations (3 CCR) section 6190. The pesticide regulatory program activities that will be affected by this proposal are those pertaining to the registration of copper-based antifouling paint and coating (referred to as copper-based AFP) products. In summary, this action requires registrants of all new copper-based AFP products to submit estimated daily mean copper release rate (also referred to as leach rate) data as a requirement for registration. In addition, effective July 1, 2018, this action establishes a maximum allowable copper leach rate for copper-based AFP products registered in California for use on recreational vessels and states that currently registered products exceeding the leach rate will be subject to cancellation. This regulatory action also defines “recreational vessel” and “commercial vessel.”

In addition, the International Organization for Standardization (ISO) method 10890:2010, “Paints and varnishes – Modelling of biocide release rate from antifouling paints by mass-balance calculation,” was incorporated by reference since it would be impractical to publish this document in the CCR. ISO method 108090:2010 was available upon request from DPR throughout the course of the rulemaking period.

PUBLIC HEARING

No public hearing was scheduled or held.

SUMMARY AND RESPONSE TO COMMENTS RECEIVED DURING 45-DAY COMMENT PERIOD

- *Hasmukh Shah, American Chemistry Council*

Comment no. 1: Since copper-containing antifouling coatings have been found to be the most effective, most universally used coatings for reducing or preventing the introduction of invasive marine species, we are concerned that this regulation may adversely affect management of invasive species, with other down-stream consequences.

Response: Copper-based AFP products will still be allowed for use in California. However, products labeled for use (or not prohibiting use) on recreational vessels must meet the copper leach rate limit specified in the proposed regulations. For recreational vessels, there are currently registered and available copper-based AFP products that meet or are considerably lower than the proposed maximum allowable leach rate and have submitted or cited efficacy data to support claims for controlling labeled pests. Since the use of copper-based AFP products is only one of many ways to prevent or reduce the introduction of invasive species, DPR does not expect this regulation to adversely affect the management of invasive species.

Comment no. 2: Copper Task Force (CTF) urges DPR to ensure that AFPs continue to be used at effective levels and that the economic impact of not having effective AFPs be taken into account in any decisions.

Response: See response to comment no. 1.

Comment no. 3: Marine antifouling coatings are a necessity for vessels that remain in marine water for recreation or commercial activities. The efficacy of copper based antifouling coatings requires that leaching rate is appropriate to prevent biofouling, as EPA recognized in its Copper Antimicrobial Ecological Risk Assessment. CTF applauds the fact that DPR utilized the ISO method 10890-2010 with a correction factor in order to develop a leach rate for regulatory decision making. That method is considered to accurately represent actual leach rate of copper from these coatings.

Response: No response necessary.

Comment no. 4: CTF encourages CDPR to resist further decreases to the maximum leach rate so that it remains possible to: maintain effective recreational vessels coatings available to California recreational boaters; reduce invasive species transport, which has been identified as a significant concern in California surface and coastal waters; maintain recreational boating as an economically available activity to the California public; and allow best management practices (in-water hull cleaning, establishment of site-specific water quality standards and use of reduced rate coatings) to be fully implemented in order to establish the success that will be achieved by this regulation and other concurrent activities.

Response: No response necessary.

Comment no. 5: In its documentation for the proposed regulation, DPR claimed that there was no economic impact associated with the regulation. The CTF respectfully disagrees. The introduction of nonindigenous and invasive species could have a significant impact on California and recommends that DPR give this due consideration as noted by the California State Lands Commission (CSLC) under its proposed revisions to Biofouling Management Regulations.

Response: See response to comment no. 1. DPR stated that the proposed regulatory action will not have a significant adverse economic impact because copper-based AFPs will still be allowed for use in California.

Comment no. 6: There is a significant threat to the environment from invasive species, and recreational marinas contain many man-made environmentally disturbed surfaces for invasive species to colonize. There is a clear need to ensure that the impact of failing to adequately control invasive species is taken into consideration when making regulatory decisions regarding biofouling management practices. Part of any decision needs to include ensuring that effective management tools such as AFP remain available.

Response: See response to comment no. 1. Also, since invasive species can be transported through ballast water and other means, effective control of invasive species requires employing preventative strategies and other management tools in addition to AFPs.

• *Allen Irish and Stephen Wieroniewy, American Coatings Association (ACA)*

Comment no. 7: Although ACA concurs with DPR's approach to use a recommended correction factor of 2.9 to calculate an adjusted daily mean copper leach rate, we note that the research underlying this calculation suggests that 2.9 is a very conservative, "worst-case" adjustment factor and in all likelihood, still overestimates actual releases.

Response: DPR's objective was to develop an environmentally protective copper leach rate that could be used for statewide regulation. At this time, the specified ISO mass-balance calculation method and 2.9 correction factor are well-validated, scientifically supported methodologies for estimating environmental releases in the absence of actual monitoring data. Absent actual data, conservative assumptions may be necessary to ensure that the aquatic environment is adequately protected. DPR submitted its methodology for establishing the maximum allowable leach rate, including a discussion of assumptions, for external peer review. The external peer review comments and responses are listed as documents relied upon and are available in the rulemaking file.

Comment no. 8: In practice, as ACA understands this proposal, as a result of the correction factor that DPR will apply, this regulation intends to ban coatings that exceed an ISO mass balance calculated release rate of 27.55 $\mu\text{g}/\text{cm}^2/\text{day}$. ACA believes that this is the best means of calculating the leach rate and concurs with DPR's approach.

Response: Yes, the 9.5 $\mu\text{g}/\text{cm}^2/\text{day}$ release rate is calculated by using the ISO mass-balance calculated release rate of 27.55 $\mu\text{g}/\text{cm}^2/\text{day}$ and dividing by the 2.9 correction factor. However, DPR is not banning AFPs that exceed this leach rate. The maximum allowable leach rate limit would only apply to products labeled to allow use on recreational vessels in California.

Comment no. 9: Regulation of antifoulants must balance environmental considerations against the need for the active ingredient in antifouling coatings to achieve their purpose of deterring fouling.

Response: The pesticide registration process accounts for both environmental considerations and efficacy. For every pesticide product, DPR is required to make a determination that the use of a product according to label directions adequately protects human health and the environment. Prior to registering a pesticide product or accepting an amended product label to add new pests, DPR evaluates submitted or cited efficacy data to ensure it supports claims for controlling pests on the label.

Comment no. 10: Effective antifouling coatings not only increase the fuel efficiency of marine vessels and protect the hull, but also protect the marine environment from the introduction and translocation of potential invasive species between areas along the U.S. coastline. The use of effective antifouling coatings helps make marine vessels more sustainable and lowers the carbon footprint of marine vessels, and copper biocides are widely considered the most effective antifoulants currently on the market. Since effective antifouling coatings are a necessity to achieve these important objectives for our recreational and commercial fleets, DPR must, in our view, explicitly balance the adverse environmental impact of lessening the efficacy of antifoulants against potentially competing environmental objectives, such as preventing invasive species and lessening the carbon footprint of the recreational boating fleet, in its present evaluation of the effects of the use of inorganic copper in biocides and balance these competing environmental objectives prior to making this regulation final.

Response: See response to comment no. 1.

Comment no. 11: ACA concurs with the comments of the American Chemistry Council about the economic and environmental impact of less efficacious coatings and likewise urges DPR to consider the economic impact of not having effective AFP in establishing leach rate limits.

Response: See response to comment no. 1.

Comment no. 12: ACA suggests that DPR should also consider the objective established by an Executive Order (EO) requiring federal agencies “refrain from authorizing, funding, or implementing actions that are likely to cause or promote the introduction, establishment, or spread of invasive species in the United States unless, pursuant to guidelines that it has prescribed, the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions.” While the EO does not strictly apply to state entities like DPR, we nevertheless encourage DPR to likewise take into consideration these policy objectives and determine whether the benefits of this action clearly outweighs the potential harm it could cause, particularly given the lack of measured significant adverse toxic effect of the copper concentrations in the water bodies in question.

Response: See response to comment no. 1.

Comment no. 13: California law also views the prevention of invasive species to be an important goal and the California State Lands Commission, has, in furtherance of this goal, recently proposed regulations to establish new requirements for developing and maintaining a vessel-specific Biofouling Management Plan. These regulations clearly require biocidal antifoulants to be efficacious, requiring vessel owners to report whether the coating is within its recommended lifespan and also defining anti-fouling coatings, among other things, to “act as a deterrent to the settlement of living organisms.” Clearly, efficacy is an understood requirement for coatings to fulfill their purpose, including the important environmental objective of preventing the spread of invasive species.

Response: See responses to comment no. 1 and comment no. 9.

Comment no. 14: Some of the work done by DPR suggests that the assumptions incorporated in the proposed limits are too conservative and should be rethought.

Response: See response to comment no. 7.

Comment no. 15: ACA notes that the report indicates that while measured concentrations of dissolved copper in salt and brackish water marinas frequently exceeded California water quality standards (the benchmark was the California Toxics Rule, or CTR, standard), only 8 of 47 samples (17%) exhibited statistically significant toxicity. The report notes that “seven of the eight toxic samples came from Marina del Rey in Los Angeles. The remaining toxic sample originated from Marina Bay Yacht Harbor in Richmond.” The most appropriate conclusion that can be drawn from this key finding is that the water quality issues this regulation is seeking to address are almost wholly limited to one location (Marina del Rey), and that the proposed far-reaching change to the entire pesticide regulatory scheme, which effectively bans over half of all currently registered products is unneeded and overbroad. A targeted measure that addresses a single problematic location would be far more appropriate and far less disruptive.

Response: Although DPR’s sampling was only conducted on a subset of saltwater marinas, initial results from the draft saltwater Biotic Ligand Model (BLM) predict copper toxicity to occur in several other marinas and harbors besides Marina del Rey. In addition, Assembly Bill (AB) 425 (Chapter 587, Statutes of 2013) required DPR to determine a leach rate for copper-based AFP used on recreational vessels. Since recreational vessels are mobile, a statewide regulatory approach is the most effective way to mitigate environmental concerns regarding copper-based AFPs.

Comment no. 16: We also note that other work done by Mr. Singhasemanon also supports our view that scenarios and assumptions underlying the proposed limits are too conservative. Mr. Singhasemanon, in a presentation of sampling and monitoring work involving approximately 600 water samples, suggested that “Toxicity in a commonly-employed copper-sensitive test may not occur until [dissolved copper concentration] is well over CTR standards.” This important finding strongly argues for a less conservative modeling approach by DPR.

Response: See response to comment no. 7. In addition, the proposed maximum allowable copper leach rate limit was selected to bring statewide copper concentrations down to a level that is not expected to cause adverse effects to aquatic organisms; it was not selected to ensure that all copper dischargers comply with CTR standards.

Comment no. 17: DPR should also consider the impact of the bioavailability of copper. There has been considerable research that suggests that copper biocides are far less bioavailable than might be predicted due the presence of natural binding agents in basin water. Similarly, taking bioavailability into consideration has been shown to generally increase the water quality criteria by 2 to 5 times, as demonstrated in the Site-Specific Objective developed for San Francisco Bay.

Response: DPR considered the BLM during the model selection process because it utilizes data on site-specific water constituents to predict the bioavailability of copper in natural waters and its toxicity to aquatic organisms; however, U.S. EPA is still evaluating the use of this model in saltwater environments. Therefore, DPR decided the Marine Antifoulant Model to Predict Environmental Concentrations (MAM-PEC) was more appropriate to use for predicting concentrations of dissolved copper in coastal marinas. DPR is legally obligated to develop a leach rate for statewide regulation, not develop site-specific water quality criteria. This mitigation approach is more appropriate because recreational vessels are mobile and DPR's regulatory authority is limited to the sale and use of pesticides. Site-specific objectives are included in DPR's mitigation recommendations as a way for copper dischargers to consider site-specific conditions, and therefore, bioavailability to meet the Total Maximum Daily Loads (TMDLs) developed by the Regional Water Quality Control Boards.

Comment no. 18: We also encourage DPR to consider the bioavailability of copper as it models the predicted environmental concentration of copper ions in the environment as a way of determining the risk quotient, as interactions with the dissolved organic carbon in the water will reduce the amount of leached out copper ions that are actually available to the aquatic organisms.

Response: See response to comment no. 17.

Comment no. 19: Although ACA urges DPR to reconsider its underlying assumptions, should DPR choose to implement the limits as proposed, we urge DPR to extend the deadline for compliance. Over half of current products would be out of compliance and could be subject to cancellation and/or require reformulation in a relatively short period of time (prior to July 1, 2018.) Reformulation of existing products and preparation of submissions is a large task, particularly for small and medium sized manufacturers. At a minimum, manufacturers will need to re-label, and/or put in place sales restrictions, on a large variety of products to comply with the requirements of Sec. 6190(c). ACA believes that the time being provided to do this is inadequate and requests that the effective date be postponed until at least 2019.

Response: If a product is currently labeled for use on recreational vessels and is not in compliance with the leach rate limit specified in the regulation, the registrant also has the option of revising the product label to avoid cancellation or reformulation. Registrants may submit a notification to the U.S. Environmental Protection Agency (U.S. EPA) and label amendment to DPR prohibiting the use of the product on recreational vessels in California, or limiting the use of the product only on commercial vessels in California. Based on the availability of this option and prior outreach efforts (including those to copper-based AFP manufacturers and formulators) regarding the requirement for DPR to establish a leach rate for copper-based AFP used on recreational vessels by February 1, 2014, DPR believes the July 1, 2018, effective date is reasonable.

- *M. Benjamin Eichenberg, San Francisco Baykeeper; Matt O'Malley, San Diego Coastkeeper; and Arthur Pugsley, Los Angeles Waterkeeper*

Comment no. 20: It is unclear whether this proposed leaching standard would effectively reduce copper contamination of surface waters consistent with California Toxics Rule (CTR) standards.

Response: DPR does not have the legal authority to regulate all copper dischargers subject to the CTR and is not legally mandated to regulate to a level significantly below effects levels. DPR has a legal mandate to regulate the sale and use of copper-based AFP so that its use will not result in adverse effects to human health and the environment, and does so using a risk-based approach (accounting for toxicity and exposure). Although DPR used the 3.1 ppb CTR standard to develop its leach rate matrix (since this protective threshold is used by the State Water Board), DPR selected a proposed maximum allowable copper leach rate limit that would bring statewide copper concentrations down to a level that would protect aquatic organisms, which is a different standard than the CTR standard. Copper concentrations that exceed CTR standards do not necessarily demonstrate toxicity in mussel developmental toxicity tests. However, DPR believes the proposed maximum leach rate paired with mitigation recommendations will reduce copper loading from copper-based AFPs and should help nearly all of California's saltwater marinas come into compliance with the CTR's protective chronic copper saltwater standard.

Comment no. 21: Waterkeepers urge DPR to provide supporting evidence that the proposed action will in fact reduce toxicity in copper-impaired marinas and other surface waters, consistent with legal requirements.

Response: See response to comment no. 20.

Comment no. 22: DPR should revise the proposed regulations to do the following: (1) ensure that the leach rate standard is calculated appropriately to reduce levels of copper in impaired waters; (2) expand the application of mean copper release rate limits to AFP products labelled for commercial vessels; (3) consider reasonable alternatives that are more protective of California's waters; and (4) require application of appropriate and effective best management practices to further reduce impacts from copper-based AFP products.

Response: The proposed maximum allowable leach rate was based on model predictions and will reduce loading of copper to impaired water bodies (1). DPR's rulemaking proposal is based on the findings from the 2009 report, "Monitoring for Indicators of Antifouling Paint Pollution in California Marinas." In the report, DPR concluded that copper-based AFP products applied to recreational vessels are likely the major source of dissolved copper concentrations in the studied marinas. Therefore, DPR's rulemaking proposal focuses on recreational vessels. However, DPR is requiring leach rate data for all copper-based AFP products, including those on commercial vessels, in the event that DPR later determines that additional mitigation measures are necessary to address water quality concerns (2). DPR explored a number of potential mitigation measures and best management practices over the years. However, DPR only has the authority to regulate pesticide sales and use, and does not have the authority to regulate or license in-water hull cleaners, in-water hull cleaning practices, or boat owners. DPR will continue to work with California State and Regional Water Boards to evaluate the effectiveness of the regulation. DPR

will continue to actively communicate with U.S. EPA about potential label language to consider during U.S. EPA's copper registration review process, and work with DPR's partners, including boating stakeholders, to promote and implement voluntary mitigation measures (3) and (4).

Comment no. 23: Waterkeepers acknowledge the need for AFPs to increase vessel efficiency and reduce harmful pollutants associated with vessel fuel usage and engine maintenance. However, AFP usage must be balanced against its toxicity to marine aquatic life.

Response: The purpose of this rulemaking is to protect marine aquatic life by modifying the use of copper-based AFPs to address the scenarios of concern.

Comment no. 24: Several legal authorities require DPR to regulate pesticides to prevent harm to the environment, harm which includes the exceedances of water quality standards caused by copper-based AFPs. DPR is required to "protect aquatic environments from the effects of exposure to" copper-based AFPs. As a result of this imperative, DPR must recommend conservative measures that do not rely on guesswork or rough modeling estimates to ensure such protection.

Response: See responses to comment no. 7 and comment no. 20.

Comment no. 25: Waterkeepers request that DPR consider stronger measures in pursuit of the legislature's instruction that it "protect aquatic environments" or risk further violations of Title 40, Code of Federal Regulations Part 131, or the CTR chronic water quality standard for copper. Less stringent regulations, such as those currently recommended by DPR, risk missing copper Total Maximum Daily Load compliance dates issued by regional water quality control boards.

Response: See responses to comment no. 20 and comment no. 22.

Comment no. 26: DPR's proposed leach rate of $9.5 \mu\text{g}/\text{cm}^2/\text{day}$ is not sufficiently stringent to ensure that water quality standards will be met. DPR assumes that the $9.5 \mu\text{g}/\text{cm}^2/\text{day}$ leach rate standard is sufficiently protective only if specific practices are followed in conjunction with the use of paint that meets this standard. Specifically, DPR assumes that "in-water hull cleaners follow the California Professional Divers Association's best management practices method with soft-pile carpet and limit in-water hull cleaning to no more frequently than once per month." Yet the proposed regulations do not require these practices or implement any measures that would encourage adherence to California Professional Divers Association's best management practices ("BMPs"). In fact, DPR states in its analysis of the regulation that it "does not have jurisdiction over the activities of in-water hull cleaners." Thus, there is no assurance that the proposed leach standard is sufficient to meet water quality standards. DPR must either require these practices be implemented or reevaluate the standard to determine what leach rate is protective if these specific practices are not followed.

Response: See responses to comment no. 7, comment no. 17, and comment no. 22.

Comment no. 27: External peer reviewer Dr. Gretchen K. Bielmyer-Fraser suggested that DPR use the model-derived leach rates without the adjustments for BMP practices and less frequent (monthly) hull cleaning as a more conservative and thus more protective measure for aquatic life. DPR responded that other conservative assumptions made these suggested changes redundant,

but did not adequately explain why the assumptions that “all dissolved copper is bioavailable” and “all ships are at berth” are equivalent to BMP practices and hull cleaning frequency. In fact, there is no rational quantitative connection provided. DPR must provide a quantitative evaluation in order to support a rational conclusion that the conservative, protective measurements recommended by Dr. Bielmyer-Fraser are, indeed, redundant.

Response: DPR’s modeling approach involves a matrix of different input parameters. DPR applies methodologies that are scientifically sound using quantitative assessment when data are available. When information for some of the input parameters are lacking, DPR makes conservative assumptions to ensure the aquatic environment is adequately protected.

Compared to the model-derived rates, the maximum allowable leach rates were adjusted lower with consideration of cleaning effects (a more conservative approach). We chose the scenario of BMP cleaning at the monthly frequency, which is a more conservative approach than simply using model-derived leach rates, to reflect the mitigation schemes DPR proposed in its response to AB 425.

The assumption that all dissolved copper is bioavailable is a very conservative assumption. DPR concluded that in saltwater, about 89–99 percent of the dissolved copper is bound to organic ligands and considered to be non-bioavailable.

The assumptions that all ships in a marina are painted with copper paints and that all ships are present in the marina at berth are also conservative approaches. The application factor and ships at berth are important input parameters for the MAM-PEC model and are linearly correlated with the model predicted concentration of dissolved copper. For instance, if we reduce the application to suggest that only half of the boats within a marina were painted with copper, the resulting copper concentration would be reduced by half. The same results would occur if we reduced the number of ships at berth by half.

Comment no. 28: It is not clear whether the Marine Antifoulant Model to Predict Environmental Concentrations (MAM-PEC), used by DPR to establish copper leach rates as a basis for its regulation, considers instances where copper impairment is already occurring or if the model assumes unimpaired conditions. As previously mentioned, a significant proportion of marinas in California are copper-impaired. Supporting documentation does not indicate a sample baseline for the leach rate of currently available bottom coat paints and whether the proposed value will improve water and sediment quality. Additional information should be provided regarding model assumptions and whether the proposed action will reduce, impair, or maintain the status quo regarding copper concentrations and toxicity in copper-impaired marinas and surface waters.

Response: DPR’s January 2014 report, “Modeling to determine the maximum allowable leach rate for copper-based antifouling paint products in California marinas” (available at <http://www.cdpr.ca.gov/docs/emon/surfwttr/caps/2480_appendix_1_modling.pdf>), a document relied upon, provides information and details regarding modeling inputs, including background dissolved copper concentrations used for each scenario. DPR’s modeling procedure considers existing impairments and is reflected by the “background concentration” input to the MAM-PEC model. The values of the background concentration for the five marina scenarios are presented in Table 2 on page 4 of our modeling report.

DPR's report also shows the distribution of leach rates for copper-based AFPs (i.e., a sample baseline of leach rates) that were registered as of January 2014. See Table 7 and Figure 2 of the report. DPR determined that more than half (i.e., 58 percent) of copper-based AFP products exceeded the 9.5 µg/cm²/day leach rate.

The focus of DPR's rulemaking is to address elevated concentrations of dissolved copper in the water column of marinas. However, the reduction of passive leaching into the water column is expected to also reduce loading to the sediment as dissolved copper can transform to more insoluble copper complexes. Reduction of loading to the sediment is also expected from the recommended BMP for in-water hull cleaning, which generates particulate copper that settles to the marina sediment.

Comment no. 29: DPR's regulations, as proposed, do not apply to copper-based AFPs labeled for commercial vessel use only. However, paint or coating products labeled only for use on commercial vessels should not be exempt from regulation. Copper-based AFPs are a pesticide whether labelled for or used on a commercial or recreational vessel. A pesticide for commercial use is still harmful to the environment as defined by FAC section 12824. While AB 425 only addresses recreational vessels, DPR is obligated to ensure that all uses of that pesticide are protective of the environment. FAC section 12824. Thus, the regulation should be expanded to include all copper-based AFPs.

Response: DPR's rulemaking proposal is based on the findings of the 2009 report, "Monitoring for Indicators of Antifouling Paint Pollution in California Marinas." Based on DPR's study of California marinas, DPR concluded that copper-based AFP products applied to recreational vessels are likely the major source of dissolved copper concentrations in the studied marinas. The marinas with the higher risks to aquatic organisms are all those heavily dominated by recreational vessels. Since smaller commercial vessels spend more time outside the marina environment than recreational vessels and larger vessels are too large to enter and moor in shallow recreational vessel-based marinas, DPR's rulemaking proposal focuses on recreational vessels. However, DPR is requiring leach rate data for all copper-based AFP products, including those on commercial vessels, in the event that DPR later determines that additional mitigation measures are necessary to address water quality concerns.

Comment no. 30: Some proportion of products labeled for commercial use will be utilized on recreational vessels through mistaken application or willful misuse of an inappropriate AFP product.

Response: Based on the proposal, any product not in compliance with the leach rate limit and labeled to allow use on recreational vessels is subject to cancellation. Alternatively, registrants may amend the label to include a statement that the product is not allowed for use on recreational vessels in California or that the product is only allowed for use on commercial vessels (different from "commercial use" which is an unenforceable term intended to limit the user of the product). After this regulation goes into effect, it will be illegal for entities to use products labeled to prohibit use on recreational vessels on recreational vessels.

Comment no. 31: Such misuse may increase dramatically if DPR's copper-based AFP regulations are instituted and the only copper-based AFPs available are labeled for commercial use only.

Response: There are currently registered and available copper-based AFP products that are in compliance with the proposed leach rate and labeled to allow use on recreational vessels. As stated in response to comment no. 30, “commercial use only” is different from “commercial vessel use only.”

Comment no. 32: DPR’s regulation ignores all commercial sources, though such sources arguably fall under the legislature’s instruction in AB 425 as paint that is used on recreational vessels whether or not that is the paint’s intended use. Compliance with AB 425 requires that DPR consider and plan for AFP products intended for commercial use that may be used on recreational vessels. DPR must also comply with FAC section 11501(e) by ensuring that AFP is properly labeled, appropriate for the use it is actually put to, and used in a manner consistent with the use for which it was labeled.

Response: See responses to comment no. 20 and comment no. 30. AB 425 requires DPR to determine a leach rate for copper-based AFP used on recreational vessels. The proposed regulation creates distinct requirements for copper-based AFP products labeled to allow use on recreational vessels.

Comment no. 33: DPR based its regulations solely on dissolved copper concentrations in saltwater and brackish water marinas that exceeded CTR copper water quality standards. DPR should have evaluated reasonable alternatives that were more stringent than the CTR copper water quality standard of 3.1 µg/L. A lower standard may well result in environmental benefits without significant added cost. For instance, Washington State has initiated an alternatives assessment project which identified alternatives that include biocidal antifouling and foul release paints, as well as new non-paint non-biocide technologies. Studies such as the Washington State assessment project must be taken into account as part of DPR’s basis for regulation and determination of the efficacy of mitigation measures.

Response: See response to comment no. 20. DPR has been involved in Washington State’s assessment project in an advisory role. Note that Washington State has geographically different fouling pest issues and water quality concerns from California. For example, Washington State pursued legislative actions on copper-based AFPs based on concerns with runoff containing copper being discharged from boatyards engaging in the stripping and painting of boat hulls. DPR understands that setting a maximum copper leach rate for AFP products is not the sole mitigation measure and continues to seek opportunities to collaborate with its partners on additional copper mitigation. In fact, DPR is working closely with the Port of San Diego and other boating stakeholder groups to encourage the development and use of more effective alternatives, including those considered to be biocide-free.

Comment no. 34: DPR has not established that it has considered all reasonable alternatives that would be more effective in addressing copper pollution in California marinas and harbors, and thus its alternatives analysis is inadequate.

Response: See response to comment no. 22. DPR was legally obligated to develop a leach rate for paints used on recreation vessels. Since DPR’s regulatory authority is limited to the sale and use of pesticides, DPR determined that the proposed regulations were the most effective way to regulate paint used on recreational vessels on a statewide level.

Comment no. 35: DPR acknowledges that BMPs can reduce water quality impacts from copper-based AFPs, yet DPR has not made any such BMPs mandatory.

Response: See response to comment no. 22.

Comment no. 36: Additional potential mitigation measures could include labeling requirements or informational brochures on painted-hull maintenance and hull cleaning to be included with the purchase of AFPs, programs to increase boater awareness of alternatives to copper-based AFPs, and incentive programs to encourage vessel owners to use those alternatives. DPR could also require special licensure and training that includes its suggested mitigation measures as a precondition to purchase of copper-based AFPs.

Response: See response to comment no. 22 regarding labeling requirements. As for suggestions on point-of-purchase brochures, programs to increase boater awareness, and incentive programs to encourage vessel owners to use alternatives, these are all specifically mentioned in the January 2014 document, “DPR Copper Antifouling Paint (AFP) Mitigation Recommendations” available at <http://www.cdpr.ca.gov/docs/emon/surfwttr/caps/2480_appendix_2_recs.pdf>. DPR will work with the relevant responsible parties to follow through on these particular recommendations.

Comment no. 37: Waterkeepers have observed that voluntary measures such as those proposed by DPR are often ineffective, especially when they involve steps that oppose the financial interests of the regulated industry, such as programs to encourage vessel owners to use different products. As a result, Waterkeepers recommend that DPR make some or all of the voluntary mitigation measures DPR has recommended mandatory.

Response: See response to comment no. 22.

Comment no. 38: The voluntary mitigation measures suggested by DPR in the Initial Statement of Reasons should be included in the proposed regulations either through licensure requirements, labeling, or some other means.

Response: See response to comment no. 22.

Comment no. 39: The adoption of less abrasive cleaning techniques, especially through training and licensure for bottom cleaners, would yield immediate results, but has not been considered by DPR as a mandatory mitigation measure.

Response: See response to comment no. 22.

Comment no. 40: DPR’s leach rate calculations are based on BMPs that are not contained in the regulation currently under consideration.

Response: See responses to comment no. 7, comment no. 20, and comment no. 22.

Comment no. 41: DPR admits that dissolved coppers concentrations in marinas may still at times exceed the CTR criterion, yet DPR declines to propose regulations that will bring all marinas into compliance. Waterkeepers urge DPR to aim for measures that will meet with certainty the Legislature’s instructions, that it “protect aquatic environments.”

Response: See responses to comment no. 20 and comment no. 22.

Comment no. 42: DPR’s regulatory recommendations risk further violations of the California Toxics Rule and missing copper Total Maximum Daily Load compliance dates.

Response: See response to comment no. 20.

MANDATE ON LOCAL AGENCIES OR SCHOOL DISTRICTS

DPR has determined that the proposed regulatory action does not impose a mandate on local agencies or school districts requiring reimbursement by the State pursuant to Part 7 (commencing with section 17500) of Division 4 of the Government Code because the regulatory action does not constitute a “new program or higher level of service of an existing program” within the meaning of section 6 of Article XIII B of the California Constitution. DPR has also determined that no nondiscretionary costs or savings to local agencies or school districts will result from this regulatory action.

ALTERNATIVES DETERMINATION

The Director has determined that no alternative considered by DPR would be more effective in carrying out the purpose for which this regulation is proposed, or would be as effective and less burdensome to affected private persons or businesses than the adopted regulations, or would be more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of the law. These amendments are designed to protect the environment by reducing the potential for adverse impacts to aquatic organisms in California marinas.

POSTING REQUIREMENT

3 CCR section 6110, states in part that, “The public report shall be posted on the official bulletin boards of the Department, and of each commissioner's office, and in each District office of the DPR [Division of Pest Management, Environmental Protection and Worker Safety] for 45 days.” DPR has posted its Initial Statement of Reasons and Public Report on its official bulletin board, which consists of the Department's Internet Home Page <<http://www.cdpr.ca.gov>>. In addition, copies were provided to the offices listed above for posting.