NACWA
A Clear Commitment to America's Waters

August 13, 2014

Attn: Docket ID No. EPA-HQ-OW-2014-0135
U.S. Environmental Protection Agency, MC 28221T
1200 Pennsylvania Ave., NW.
Washington, DC 20460.
Via Electronic Mail: ow-docket@epa.gov

Re: Notice of Availability – Updated National Recommended Water Quality Criteria for the Protection of Human Health

The National Association of Clean Water Agencies (NACWA) appreciates the opportunity to provide comments on the U.S. Environmental Protection Agency's (EPA) *Notice of Availability – Updated National Recommended Water Quality Criteria for the Protection of Human Health* (79 *Fed. Reg.* 27303; May 13, 2014). While the update is intended only to ensure that the criteria "reflect the latest scientific information" and "follow the current EPA methodology for deriving human health criteria", the revisions to the criteria values are not insignificant. Some of the new criteria values are 5 to 50 times more stringent than the existing criteria. In a number of cases, the criteria values have changed so significantly, that pollutants which were previously not a concern for some clean water agencies, could overnight become potential compliance issues.

NACWA does not discount the importance of ensuring that the human health criteria reflect the latest scientific information, but there are also a number of policy considerations and decisions that make up these revisions that raise concerns for NACWA and its members. Given the potential impact to the clean water community, NACWA offers the following comments and recommendations for consideration by the Agency.

Policy Considerations in Establishing Fish Consumption Rates

NACWA understands that per capita consumption of fish across the United States has increased and that it is now well recognized that regular consumption of fish confers important health benefits to fish consumers. Accordingly, it is important to ensure that the Clean Water Act and related water quality programs have the necessary controls in place to help ensure that public health is protected. NACWA supports EPA's approach to look at the general population (the 90th percentile of the fish consuming population) for establishing the fish consumption rate instead

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of developing a national figure based on a particular subpopulation. The 26 percent increase in the fish consumption rate being proposed by EPA, from the current 17.5 g/day to 22 g/day, will contribute to making the criteria more stringent, but it is not a major driver given the other changes EPA is making.

Nevertheless, EPA's final report, *Estimated Fish Consumption Rates for the U.S. Population and Selected Subpopulations* (NHANES 2003-2010) (April 2014; EPA-820-R-14-002), deserves some careful review. EPA's data are based on 'short term' recall studies of food consumption, extrapolated to provide long-term estimates. The National Cancer Institute (NCI) has recognized that such extrapolations can overestimate consumption and has developed a statistical procedure to correct for it. EPA has developed its own methodology based on the NCI approach, citing a lack of time and resources to use the NCI method, but it is not clear from the material available in the docket how EPA's approach differs from the NCI approach. EPA needs to provide additional details for expert review to ensure consistency with the NCI methodology.

In its new fish consumption rate, EPA is including estuarine fish, a small fraction of anadromous salmon and, for the first time, the fraction of marine fish caught in near shore areas. It is unclear from the material in the docket how some of these decisions were made and NACWA requests that EPA provide more details on why and how these fish were included. Furthermore, the FCR Report notes that "[f]or the purposes of developing UFCR [usual fish consumption rate], we assumed that all estuarine, freshwater, and near coastal fish that were consumed were from U.S. waters. The reason for this is that standards need to be set to enable residents to safely consume from local waters the amount of fish they would normally consume from all fresh and estuarine (including near coastal) waters." In reality, however, a large portion of the fish people eat in the U.S. come from other countries or from marine waters, far away from the local waters that state standards are intended to cover.

NACWA supports EPA's four preference hierarchy for fish intake amounts, with the use of local data on consumption patterns being the preferred approach. It is important, however, that EPA also provide states with sufficient flexibility to address the policy/risk management decisions related to the type of fish that count toward consumption levels. Idaho is currently developing revised human health criteria and the state Department of Environmental Quality has developed several discussion papers on this issue, including whether to include all fish consumed (including market fish) or just local fish, as well as the issue of anadromous fish. The location where fish are collected and where the most fish body weight accumulation takes place must be considered. This is particularly true of anadromous fish species that, in the case of Idaho, accumulate 90-95 percent of their bodyweight in waters (like Puget Sound or the Pacific Ocean) outside of the state's control. EPA needs to ensure that states have the flexibility to discuss these issues and select a path forward through an open dialogue with stakeholders that will allow for the evaluation of local data and discussion of how best to protect sensitive sub-populations.

While EPA's revision to the default fish consumption rate does not by itself have a major impact on the criteria values, EPA's overlapping layers of conservatism (including not considering bioavailability for reference doses, uncertainty factors for carcinogens, use of a 0.2 relative source contribution, assumed consumption levels over 70 years, risk level for carcinogens, etc.) on top of the new fish consumption value is troubling given the resulting criteria values, which are likely overly protective in many cases, and the potential cost that will be involved in trying to achieve limits based on the new criteria.

Use of 0.2 Relative Source Contribution (RSC) Value Inappropriate for Some Pollutants

EPA has decided to recommend a default 0.2 RSC for all of the human health criteria pollutants. This simplifying assumption treats all pollutants the same regardless of the level of exposure due to fish and water. While the 0.2 value was included in EPA guidance issued in 2000, the Agency has, since then, approved numerous state standards that use an RSC of 0.8 or 1.0, and in fact, some of EPA's own recommended standards have used a 0.8 or 1.0 RSC value, instead of the 0.2 value in the guidance. The roughly 35 human health water quality criteria that have an RSC other than 0.2 (in most cases, 1.0), will be 5 times more stringent under EPA's proposed revisions.

EPA has provided no rationale or scientific information that demonstrates that this radical change to require the broad use of the 0.2 RSC value is necessary, or that the existing standards using other values are flawed or inadequately protective. EPA must not make such a substantial change without a clear demonstration that it is needed to protect public health. At a minimum, the non-bioaccumulative compounds needs to be treated differently than those that bioaccumulate with respect to RSC assumptions. Applying a single value for all pollutants fails to account for the differences among them. Information is available to develop substance-specific RSCs and EPA needs to consider using this approach, rather than default to 0.2 for all pollutants, or better explain why the Agency believes that substance-specific RSCs are not appropriate.

Application of New Policies to Non-Bioaccumulatives

The combined effect of the changes EPA is proposing results in extremely stringent standards for a large number of pollutants. For pollutants like trihalomethanes (THMs), which have very little bioaccumulative potential, the criteria values will drop significantly resulting in more waters being declared as impaired as not meeting the fish consumption use, even though no pollutants are detected in the fish themselves. This illogical result underscores the need for EPA to reexamine the assumptions that it is using or requiring, since they are resulting in water quality standards that are overly protective of the designated uses of the waters.

EPA Must Understand and Help to Address Implementation Challenges

As noted above, the criteria values have changed so significantly, that pollutants which were previously not a concern for some clean water agencies, are now a potential compliance issue. This is particularly an issue in parts of the country where clean water agencies are allowed little or no dilution credit. Based on initial testing of several POTWs by one NACWA Member Agency, the proposed levels for PAHs and THMs in particular will present potential compliance challenges. For THMs, it should be noted that these POTWs do not use free chlorine only for disinfection, which tends to produce high levels of THM, but rather use a unique process designed to minimize formation of both THMs and nitrosamines while meeting stringent state requirements for viral and bacteria removals. This process uses a short free chlorine contact period, to destroy nitrosamine formation precursors, followed by a longer period of chloramination. The issue with THMs will likely require some assessment and possible changes to the disinfection methods at the impacted plants. Some of these plants already employ tertiary treatment and they may need to consider switching to UV disinfection to meet these new, more stringent levels. For POTWs discharging to effluent-dominated water bodies, the lower THM criteria would essentially rule out use of free chlorine as a disinfection method. There may also be some future issues with bis (2-ethylhexyl) phthalate where the new, lower criteria may bring up concerns about possible plastics contamination, potentially from sampling containers.

Making standards more stringent using multiple layers of conservative input factors will lead to NPDES-based permit limits that are substantially more stringent than necessary, either directly through water quality-based permit effluent limits or indirectly through impairment listing and TMDL-based limits. The limits will often be below the levels that can accurately be quantified, will require costly treatment for compliance, and in some cases will not prove attainable even with feasible treatment systems. Dischargers that cannot meet these limits will need to obtain variances from state permitting agencies or face the risk of enforcement for noncompliance. Where the standards are simply not attainable – resulting in permit limits that cannot be met – there will be a need to conduct use attainability analyses (UAAs), in order to develop standards that are attainable. The UAA process can be difficult and costly, and can take years to complete. These are all issues EPA needs to consider as it moves forward with these revisions.

Oregon recently embarked on an effort to revise its human health criteria, changing the state-wide fish consumption rate to 175 g/day. Dischargers in Oregon were left with what some consider a very cumbersome permit-by-permit process for addressing implementation issues. Idaho, by contrast, is considering the need for implementation tools as it works to revise the state's criteria. Site-specific or permit-specific approaches will be burdensome for dischargers and state agencies. Instead, watershed level or state-wide approaches are needed, which include variances, compliance schedules and similar implementation tools. Regardless of any changes EPA may make as a result of the comment period, many of the criteria will continue to be extremely low and the Agency must ensure the states are adequately prepared to deal with the implementation challenges. EPA must also realize that the realities in some parts of the country result in these tools – site-specific criteria, variances, etc. – being highly controversial and likely not viable options given third-party stakeholder concerns.

Recommendations for EPA's Next Steps

EPA has not considered the use of Probabilistic Risk Assessment (PRA) for criteria derivation to address concerns over compounded conservatism resulting from the use of conservative, upper-bound estimates for the variables in the risk calculation. In addition to the conservatism embodied in the selection of individual components of the risk calculation, the underlying assumption that the most sensitive subpopulations will be exposed to maximum allowable concentrations over a full lifetime is a highly unlikely scenario. PRA is a technically-sound approach that represents the best science available for assessing risk. It provides greater certainty concerning actual level of risk for a wide range of the population, including subpopulations with higher risk factors, than current deterministic approaches. It also allows for a more informed and transparent risk management decision, meaning that all interested parties will be better able to provide effective input into the process. PRA methods represent a significant technical advance that EPA and the states should consider, but even using PRA the criteria for some pollutants will still be very low and possibly unattainable, underscoring the critical need for rational implementation policies and tools. If EPA does not consider PRA methods appropriate for national criteria, the Agency needs to explain its rationale and ensure that states have the flexibility to use PRA if they desire.

EPA needs to also consider the development of a fish tissue backstop for certain pollutants. This approach would allow actual fish tissue concentrations to be used in determining whether designated uses are met and avoid inaccurate conclusions regarding support of uses based on water concentrations.

EPA needs to provide additional information on its decision to use a bioaccumulation factor model instead of using biological concentration factors. NACWA understands that other commenters, including at least one

state regulatory agency, have expressed concerns with EPA's decision to use a BAF approach and with the model that has been selected.

Compliance with these criteria is becoming increasingly problematic and expensive with all these layers of conservatism and EPA needs to proceed cautiously. Though cost is not a factor when developing its national recommended criteria, the Agency must recognize that its decisions can and will have major cost implications. This will be particularly true if and when EPA decides to apply these proposed changes to the more problematic pollutants like mercury and PCBs.

NACWA appreciates the opportunity to comments on the Agency's proposed revisions to its human health criteria. Please contact me should you have any questions about our comments.

Sincerely,

Chris Hornback
Senior Director, Regulatory Affairs