



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF WATER

MEMORANDUM

SUBJECT: Response to September 29, 2021 Inspector General Final Report “EPA Needs an Agencywide Strategic Action Plan to Address Harmful Algal Blooms”

FROM: Radhika Fox
Assistant Administrator

For **BENITA
BEST-WONG**

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Date: 2021.11.24
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TO: Michael D. Davis
Office of Inspector General

Thank you for the opportunity to respond to the unresolved recommendations in the final Office of Inspector General Report: *EPA Needs an Agencywide Strategic Action Plan to Address Harmful Algal Blooms* (21-E-0264). The following is a summary of the U.S. Environmental Protection Agency’s position on the unresolved recommendation. We have provided an alternative high-level corrective action and estimated completion date.

The Clean Water Act (CWA) directs the U.S. Environmental Protection Agency (EPA) to develop, publish (and from time-to-time revise) water quality criteria to accurately reflect the latest scientific knowledge (CWA Section 304(a)). EPA published national ambient water quality criteria recommendations to address nutrient pollution (nitrogen and phosphorus) in rivers and streams for most ecoregions in the United States in 2000 and 2001 using a “reference condition” approach. Since then, these nutrient numeric criteria recommendations have been available to states, territories, and authorized tribes to use to adopt numeric criteria into their water quality standards to protect the designated uses of their rivers and streams from the adverse impacts of nutrient pollution.

To date, only one state (Hawaii) has adopted statewide numeric criteria for both nitrogen and phosphorus into their water quality standards to protect their rivers and streams. Three additional states (Minnesota, New Jersey, and Wisconsin) have adopted statewide numeric criteria for phosphorus only. Six states (Arizona, California, Florida, Montana, Nevada, and Utah) have adopted numeric criteria for both nitrogen and phosphorus for some of their rivers and streams, and three states (New Mexico, Oklahoma, and Vermont) have adopted numeric criteria for some of their rivers and streams for phosphorus only. The remaining 37 states have not opted to adopt numeric nitrogen or phosphorus criteria into their water quality standards to protect rivers and streams from the impacts of nutrient pollution. Instead, these states rely solely on interpreting their narrative criterion statements relative to nutrient pollution in their water quality standards to protect the designated uses of their rivers and streams in a site-specific manner. While this approach may not be the most efficient method to ensure protection of designated uses under the CWA, it is the state’s choice.

In addition to the existing numeric CWA Section 304(a) criteria recommendations for nutrients and the technical support materials to help states and authorized tribes adopt the CWA Section 304(a) nutrient criteria, EPA also administers a technical support program called the Nutrient Scientific Technical Exchange Partnership and Support (N-STEPS). Through N-STEPS, EPA provides direct technical support to states, territories, and authorized tribes to develop state-specific, or site-specific numeric nutrient criteria, upon their request. Since the program’s inception in 2005, EPA has provided direct technical support through this program to 48 states to assist them in their efforts toward developing numeric nutrient criteria for rivers and streams (Alaska has not made any requests for technical support, and Hawaii already has statewide numeric criteria to protect their rivers and streams). These projects have consisted of technical consultations, data analyses, and technical reviews to help the states develop numeric nutrient criteria for their rivers and streams.

EPA has not heard from states that they are delayed in their efforts to address harmful algal blooms due to the lack of availability of a singular new EPA national recommendation or due to the lack of availability of EPA-provided technical support. Our experience working with states for the past two decades suggests that the states prefer that we work with them individually to guide them on how to use their unique data sets in a manner that best addresses the effects of nutrient pollution in their rivers and streams. EPA believes that the National Nutrient Criteria Program’s efforts to provide technical assistance to states, territories, and authorized tribes is the most effective approach to help develop protective numeric criteria for those who are interested in adopting numeric nutrient criteria to protect the designated uses for all water body types: rivers and streams, lakes and reservoirs, and estuaries and coastal marine waters.

With that background in mind, EPA offers the following proposed corrective action to address recommendation #3 in the OIG September 29, 2021 report, “EPA Needs an Agencywide Strategic Action Plan to Address Harmful Algal Blooms” (see the updated table below).

**OIG Final Report: EPA Needs an Agencywide Strategic Action Plan to Address Harmful Algal Blooms
Proposed Revisions to OW Corrective Actions for OIG Recommendations (in red)**

No.	Recommendation	Initial Proposed Corrective Action	Proposed Alternate Corrective Action	Est. Completion Date
3	Mindful that the EPA has substantial work to complete before publishing final numeric water quality criteria recommendations for nitrogen and phosphorus under the Clean Water Act for rivers and streams, establish a plan, including milestones and identification of resource needs, for developing	<i>EPA is evaluating the relative priority of developing new water quality criteria recommendations for estuarine and coastal marine waters, and for rivers and streams. Once EPA has a better understanding of state/tribal water quality programs’ technical needs and the scientific strategic plan that can best meet those needs, EPA will be better positioned to act under its CWA Section 304(a) authorities for these waters. EPA</i>	EPA will develop a strategic plan, including milestones and identification of resource needs, to: <ul style="list-style-type: none"> • Gather nationally consistent data (e.g., NARS monitoring). • Evaluate the scientific information and conduct exploratory stressor-response analyses on the available data. • Determine if the science supports new or revised numeric nutrient criteria recommendations: <ul style="list-style-type: none"> ○ If the science does not support new recommendations, reevaluate when 	April, 2023

and publishing those criteria recommendations.	<i>will continue to work in partnership with states that are interested in developing and adopting numeric nutrient criteria for rivers/streams and estuarine/coastal marine waters.</i>	<p>more information and data become available.</p> <ul style="list-style-type: none"> ○ If the science does support new recommendations, develop and publish according to EPA procedures. 	
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EPA’s revised alternative corrective action takes into account that EPA cannot assume that sufficient new scientific information is available for EPA to revise the agency’s national ambient water quality criteria recommendations to address nutrient pollution, and specifically address harmful algal blooms, in rivers and streams. The proposed corrective action does commit EPA to take action to revise the nutrient criteria if the science supports an update. To revise these national numeric nutrient criteria recommendations using a stressor-response approach that addresses harmful algal blooms, EPA would need a nationally consistent data set with detections of a range of concentrations of either microcystin or cylindrospermopsin with corresponding concentrations of nitrogen and phosphorus for all types of rivers and streams. For context, the 2013-2014 National Rivers and Streams Assessment data detected microcystin at measurable amounts at 782 sites, with only one site exceeding EPA’s swimming advisory concentration. EPA is currently conducting exploratory analyses of these data to determine if the data are sufficient to support the development or publication of new revised criteria recommendations at this time.