

304(a) Justifications for the 2022 Texas Surface Water Quality Standards Revision

Background:

The final federal Water Quality Standards Regulatory Revision, was published in the *Federal Register* on August 21, 2015, included a requirement for states and authorized tribes to provide a rationale for not adopting new or revised Clean Water Act 304(a) criteria recommendations when submitting the results of triennial reviews to the Regional Administrator. The intent of the new requirement is to increase transparency and communicate to the public how the state authorized tribe considered criteria recommendations and the latest science during its triennial review. The Environmental Protection Agency (EPA) has not provided explicit guidance for states to implement the new requirement. However, EPA strongly encourages states and authorized tribes to include the rationale on a publicly accessible web site or utilize other mechanisms to inform the public. The Texas Commission on Environmental Quality (TCEQ) has chosen to post the rationale on this website. Provided below are the justifications TCEQ provided to EPA when the 2022 revisions to the Texas Surface Water Quality Standards (TSWQS) were submitted for federal approval.

Aquatic Life Criteria (Table 1):

Aluminum Criteria:

TCEQ currently has a freshwater acute criterion of 991 µg/L in Table 1 of the TSWQS, but no adopted criteria for either freshwater chronic or saltwater (acute or chronic). The current acute freshwater criterion, which was adopted in 1991, is based on a recalculation of the national dataset in EPA's 1988 304(a) criteria document. EPA published revised 304(a) freshwater criteria for aluminum in 2018, which is based on a multiple linear regression model using local water chemistry parameters. However, EPA has yet to finalize the technical support document (TSD) regarding the implementation of these criteria. Once the TSD is finalized, the revised criteria and TSD can be discussed with stakeholders for possible future inclusion in the TSWQS.

Selenium Criterion:

TCEQ currently has acute and chronic criteria for both freshwater (20 µg/L acute; 5 µg/L chronic) and saltwater (564 µg/L acute; 136 µg/L chronic) in Table 1 of the TSWQS. The current freshwater and saltwater criteria, which were adopted in 1991, are based on EPA's 1987 304(a) criteria document. The freshwater criteria are identical to EPA's 1987 nationally recommended criteria, but the saltwater criteria are based on a recalculation of EPA's 1987 national dataset. EPA published a revised 304(a) freshwater chronic criterion for selenium in 2016 and released the draft TSDs for second round of public comments, which closed on January 3, 2022. However, EPA has yet to finalize the TSDs regarding the implementation of this criterion. Once the TSDs are finalized, the revised criterion and TSDs can be discussed with stakeholders for possible future inclusion in the TSWQS. TCEQ does consider the 2016 304(a) document in the development of site-specific criteria.

Nutrient Criteria:

The commission has considered federally-recommended approaches toward development of numeric nutrient criteria, and TCEQ has adopted alternative criteria to better address issues unique to the state. The commission, in coordination with stakeholders in the Nutrient Criteria Development Advisory Work Group, has adopted

site-specific numeric chlorophyll *a* criteria for 39 reservoirs and has established numeric translators of narrative nutrient criteria for assessment purposes in reservoirs. In addition to adopting and implementing numeric nutrient criteria, TCEQ regulates nutrients by applying narrative criteria to address permitted nutrient loadings at sites of concern, developing watershed rules which require nutrient reductions in wastewater discharges in or near specified water bodies, and employing the TCEQ's antidegradation policy to new and increased discharge loads of nutrients. TCEQ also considers monitoring data for phosphorus, nitrogen, and chlorophyll *a* to identify areas of concern in the Integrated Report.

TCEQ is currently contracting with universities to collect nutrient, habitat, and biological data in streams and rivers and to build models of nutrient relationships in bays and estuaries in support of future criteria development. TCEQ is committed to increasing the understanding of nutrient biological response relationships as part of criteria development and implementation and will continue this work to protect water quality in Texas.

Cyanotoxins:

EPA published recommended human health recreational ambient water quality criteria or swimming advisories for cylindrospermopsin and microcystins in 2019. These recommendations were considered by TCEQ and other state agencies when participating in the Toxic Substances Coordinating Committee Harmful Algal Workgroup (Workgroup). As part of the Workgroup, the commission and other state agencies (including the Texas Department of State Health Services) collaborated and contributed to the *Guide for Public Health Response to Cyanobacterial Harmful Algae in Recreational Freshwater in Texas* (Guide), which was released in March 2022. The Guide is publicly available for responding organizations, including local health departments, local governments, and water body managers.

The purpose of the Guide is to provide unified, statewide guidance when responding to harmful algal blooms (HABs) caused by cyanobacteria and to describe ways to protect humans and animals from cyanobacterial HABs. It provides recreational advisory threshold values for toxins and cyanobacterial cell density, a communication plan, public notification guidance, recommended advisory language, tools to track HABs in Texas, and other guidance. The Guide was developed based on information from other states, EPA's 2019 recommendations, and the World Health Organization. Specifically, EPA's recommendations for microcystin and cylindrospermopsin are Tier II Warning thresholds in the Guide.