United States Environmental Protection Agency
Office of Water 4305T
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Final Water Quality Standards for the State of Florida's Lakes and Flowing Waters

Summary

EPA has finalized strong standards to help reduce water pollution that causes harmful algae blooms -- the thick, green muck that fouls clear water -- which produce toxins harmful to humans, animals and ecosystems across the state of Florida. The blooms are caused by nitrogen and phosphorus, called “nutrients,” in wastewater, urban stormwater runoff and excess fertilizer which flow into waterways. The final standards set specific or "numeric" limits, called “criteria,” on the amount of nutrient pollution allowed in Florida’s lakes, rivers, streams and springs. This action seeks to improve water quality and protect public health, aquatic life and the long term recreational uses of Florida’s waters which are a critical part of the State’s economy. These standards will become effective 15 months from now, allowing cities, towns, businesses and other stakeholders as well as the State of Florida a full opportunity to review the standards and develop flexible strategies for implementation while Florida continues to recover from the recent economic crisis.

Background

Nitrogen and phosphorus pollution also known as "nutrient pollution" causes harmful algae blooms which produce toxins harmful to both humans and animals and deplete oxygen needed for fish and shellfish survival, smother vegetation and discolor water. It can also result in the formation of byproducts in drinking water from disinfection chemicals, some of which have been linked with serious human illnesses. Nutrient pollution originates from stormwater runoff, municipal wastewater treatment, fertilization of crops and livestock manure. Nitrogen also forms from the burning of fossil fuels, like gasoline.

The Florida Wildlife Federation filed a 2008 lawsuit against EPA, following which EPA in January 2009 made a determination under the Clean Water Act that numeric nutrient standards are needed in Florida. A consent decree settling the lawsuit, entered into in August 2009, requires EPA to adopt specific or “numeric” nutrient pollution standards by November 2010. On January 26, 2010, EPA published proposed “Water Quality Standards for the State of Florida’s Lakes and Flowing Waters” (75 FR 4173). In developing the proposed criteria for Florida’s lakes and flowing waters, EPA utilized extensive data provided by the Florida Department of Environmental Protection (FDEP) and utilized sound scientific approaches that were independently peer-reviewed. EPA conducted 13 well-attended public hearing sessions in six cities in Florida and held a 90-day public comment period inviting broad public participation. The Agency received over 22,000 public comments on the proposal.

On August 3, 2010, EPA published a notice supplementing the January 26, 2010 proposed rule, based upon comments received during the public comment period.

About this Regulation

In this rulemaking, EPA is promulgating final numeric nutrient water quality standards for lakes and springs throughout the State of Florida and flowing waters outside of the South Florida Region. The final standards set numeric limits on the amount of nutrient pollution allowed in Florida’s inland waters. These standards will become effective 15 months from now, allowing cities, towns, businesses and other stakeholders as well as the State of Florida a full opportunity to review the standards and develop strategies for implementation while Florida continues to recover from the current economic crisis.

Criteria for Florida Streams

EPA is establishing five different watershed-based regions within Florida with different total nitrogen and phosphorus (TN and TP) criteria for streams in each region. EPA evaluated extensive biological information and data on the levels of nutrients in relevant Florida streams and derived standards based on nutrient concentrations in least-disturbed streams that are unimpaired for nutrients. This approach is referred to as a reference approach.

Under the Clean Water Act, States designate and EPA approves uses for different water bodies (for example, contact recreation, or drinking water supply). Water Quality Standards (WQS) ensure that these uses are maintained. Sources that discharge into streams must not only ensure that WQS are maintained where they discharge, but also that their discharges do not cause pollution problems further downstream. This rule will protect both rivers and streams, and downstream lakes. In a later action, EPA will establish rules to protect estuaries, following a public peer review by EPA's Scientific Advisory Board (SAB). These standards for coastal waters must be promulgated by August 2012.

Criteria for Florida Lakes

EPA is classifying Florida's lakes into three groups (colored, clear & alkaline, clear & acidic) and assigning different values for total nitrogen (TN), total phosphorus (TP) and chlorophyll *a* to each lake group. The standards are based on the biological response (chlorophyll a production) to TN and TP levels in Florida's lakes. EPA proposed the use of chlorophyll *a* concentration as an indicator of a healthy biological condition, supportive of natural balanced populations of aquatic flora and fauna in each of the classes of Florida's lakes. Excess algal growth is associated with degradation in aquatic life, and chlorophyll *a* levels are a measure of algal growth.

Criteria for Florida Springs

Regarding numeric nutrient criteria for springs, EPA is establishing a nitrate-nitrite criterion based on experimental laboratory data and field evaluations that document the response of nuisance algae to nitrate-nitrite concentrations.

Additional Provisions

In addition to establishing final numeric nutrient water quality standards for Florida, EPA is also announcing a flexible approach for deriving federal site-specific alternative criteria (SSAC) based upon stakeholder submission of scientifically defensible recalculations of protective levels that meet the requirements of CWA section 303(c).

This allows for case-by-case adjustments depending on local environmental factors while protecting water quality. Governments or other stakeholders can seek site-specific consideration in cases where water bodies have been extensively assessed by the State and local communities and effective measures are in place to reduce nutrient pollution. Existing or new Total Maximum Daily Load (TMDL) targets that differ from EPA's final criteria can be submitted to EPA by Florida for consideration as new or revised WQS and will be reviewed under this SSAC process.

For More Information

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