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Water Quality Standards

Water Quality Standards for the State of Florida's Lakes and Flowing Waters

Fact sheet; January 2010

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Summary

EPA has proposed water quality standards in the State of Florida that would set a series of numeric limits on the amount of phosphorus and nitrogen pollution, also known as "nutrient" that would be allowed in Florida's lakes, rivers, streams, springs and canals. This proposed action seeks to improve water quality, 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. The proposed standards comply with the terms of a January 2009 EPA determination under the Clean Water Act that numeric nutrient standards are needed in Florida and an August 2009 consent decree between EPA and the Florida Wildlife Federation.

Background

The Florida Wildlife Federation (FWF) filed a lawsuit in 2008 seeking to require EPA to promulgate numeric nutrient water quality standards (WQS) for Florida waters. After EPA analyses of the facts in Florida and discussions with the Florida Department of Environmental Protection (FDEP), on January 14, 2009, EPA made a determination that numeric nutrient WQS in the State of Florida were necessary to meet the requirements of the Clean Water Act. EPA determined that Florida's existing narrative criteria on nutrients in water was insufficient to ensure protection of the State's water bodies. The determination recognized that, despite Florida's intensive efforts to diagnose and control nutrient pollution, substantial water quality degradation from nutrient over-enrichment remains a significant challenge in the State and is likely to worsen with continued population growth and land-use changes. The January 14, 2009 determination stated EPA's intent to propose numeric nutrient standards for lakes and flowing waters in Florida within twelve months of the determination, and for estuaries and coastal waters, within 24 months of the determination.

In August 2009, EPA entered into a Consent Decree with FWF to settle the 2008 litigation, committing to propose numeric nutrient standards for lakes and flowing waters in Florida by January 2010, and for Florida's estuarine and coastal waters by January 2011 (consistent with the dates outlined in EPA's January 14, 2009 determination). EPA agreed to establish final standards by October 2010 for lakes and flowing waters and by October 2011 for

estuarine and coastal waters.

To date, Florida has invested significant resources in its statewide nutrient control efforts, and has coordinated closely with EPA on a technical and scientific level on EPA's proposed criteria. EPA used a data set of over 800,000 nutrient-related measurements collected by Florida and worked extensively with the State on data interpretation and technical analyses for developing EPA's proposed numeric nutrient criteria for Florida's WQS.

Nutrient pollution can damage drinking water sources; increase exposure to harmful algal blooms which are made of toxic microbes that can cause damage to the nervous system or even death; and form byproducts in drinking water from disinfection chemicals, some of which have been linked with serious human illnesses like bladder cancer. Phosphorus and nitrogen pollution come from stormwater runoff, municipal wastewater treatment, fertilization of crops and livestock manure. Nitrogen also forms from the burning of fossil fuels, like gasoline.

Nutrient problems can happen locally or much further downstream, leading to degraded lakes, reservoirs, and estuaries, and to hypoxic "dead" zones where aquatic life can no longer survive. High amounts of nitrogen and phosphorus in surface water result in harmful algal blooms, dead fish, reduced mating grounds and nursery habitats for fish.

Summary of Proposed Rule

In this rulemaking, EPA is proposing numeric nutrient criteria for the following four water body types in Florida: lakes, streams, springs and clear streams, and canals.

EPA is proposing to classify Florida's lakes into three groups (colored, clear & alkaline, clear & acidic) and to assign total nitrogen (TN), total phosphorus (TP) and chlorophyll a criteria to each lake group. The criteria are based on the biological response (chlorophyll a production) to TN and TP levels in Florida's lakes. The Agency is also proposing an accompanying approach that Florida can use to adjust TN and TP criteria for a particular lake within a certain range where sufficient data on TN and TP levels are available to demonstrate that the chlorophyll a criteria for a specific lake will still be met.

EPA is proposing four different watershed-based regions within Florida of streams with different TN and TP criteria for each region. EPA evaluated a combination of biological information and data on the distribution of nutrients in a substantial number of healthy streams measured by Florida's stream condition index. In developing these proposed numeric nutrient criteria for rivers and streams, EPA also evaluated their effectiveness for assuring the protection of downstream lake and estuary designated uses pursuant to the provisions of 40 CFR § 130.10(b), which requires that WQS must provide for the attainment and maintenance of the WQS of downstream waters. EPA used best available science and data related to downstream waters and found that the instream nutrient criteria EPA is proposing may not be stringent enough to ensure protection of aquatic life in certain downstream lakes and estuaries. Accordingly, EPA is also proposing an equation that would be used to adjust instream TP criteria to protect downstream lakes and a different methodology to adjust TN criteria for streams to ensure protection of downstream estuaries.

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

For canals in south Florida, EPA is proposing chlorophyll a, TN and TP criteria. To best protect these highly managed water bodies, EPA based these criteria on canals that are meeting their designated uses with respect to nutrients.

In addition to proposing numeric nutrient criteria, EPA is also proposing a new WQS regulatory tool for Florida, referred to as "restoration standards." This will enable Florida to set enforceable incremental water quality targets (designated uses and criteria) for nutrients, while at the same time retaining protective criteria for all other parameters, to meet the full aquatic life use.

Finally, EPA is also proposing an approach for deriving federal site-specific alternative criteria (SSAC) based upon State submissions of scientifically defensible recalculations that meet the requirements of CWA section 303(c). Total Maximum Daily Load (TMDL) targets submitted to EPA by Florida for consideration as new or revised WQS could be reviewed under this SSAC process.

To get more information

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