



EPA's Approval of Florida's Numeric Nutrient Criteria Rules

Summary

On June 13, 2012, the Florida Department of Environmental Protection submitted new and revised water quality standards for review by the U.S. Environmental Protection Agency pursuant to section 303(c) of the Clean Water Act. These new and revised water quality standards are set out primarily in Rule 62-302 of the Florida Administrative Code (F.A.C.) [Surface Water Quality Standards]. The Florida Department of Environmental Protection also submitted amendments to Rule 62-303, F.A.C. [Identification of Impaired Surface Waters], which sets out Florida's methodology for assessing whether waters are attaining State water quality standards. Both Rules 62-302 and 62-303 incorporate by reference supporting documentation which was submitted as part of the Rule package.

FDEP's new and revised water quality standards include, among other provisions, additions and revisions to the State's definitions and the addition of numeric criteria for springs, lakes, streams, and estuaries, as well as a procedure for developing alternative criteria. The changes made by FDEP reflect an overall effort to interpret the existing nutrient narrative criterion and reflect a hierarchy for criteria development by site-specific analysis, stressor-response relationships, or reference distribution.

FDEP's rules make significant advancements to the approach of reducing nutrient pollution in Florida waters. The overall method to deriving numeric criteria for lakes, springs, streams and estuaries makes for a well-balanced and technically sound approach that is more effective and efficient than FDEP's long standing approach of individual interpretations of the narrative for each and every water body in the state.

Algal blooms can discolor water, deplete the oxygen required for fish and shellfish survival, smother vegetation, and produce toxins harmful to humans, animals and ecosystems across the State of Florida. They occur when excess nitrogen and phosphorus, called "nutrient" pollution, flows into waterways via wastewater discharges, urban stormwater runoff and fertilizer runoff. Nutrients may also react with disinfection chemicals in drinking water to produce by-products, some of which have been linked with serious human illnesses.

The approval of Florida's rules will result in improved water quality and thereby protect public health, aquatic life and the recreational uses of Florida's waters, which are a critical part of the State's economy.

Background

Florida is known for its abundant and beautiful natural resources, particularly its aquatic resources, which are vital to Florida's economy. According to the Florida Fish and Wildlife Conservation Commission in 2011, the State's aquatic resources enabled an annual contribution of more than \$5 billion in revenue and more than 54,000 jobs in the saltwater sport fishing industry as well as more than \$1 billion in revenue and more than 24,000 jobs in the commercial saltwater fishing industry. However, nutrient pollution has contributed to severe degradation of aquatic resources in the State of Florida.

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. On January 14, 2009, the EPA made a determination that numeric nutrient WQS in the State of Florida were necessary to meet the requirements of the Clean Water Act. In August 2009, the 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 the EPA's January 14, 2009 determination). Consent Decree dates were subsequently amended. The Consent Decree provides that, if Florida submits and the EPA approves State numeric nutrient criteria for the relevant waters before any of the above dates, the EPA is no longer under obligation with respect to such criteria.

About this Action

In accordance with the requirements of the Clean Water Act, the U.S. Environmental Protection Agency has completed the review of the revised rules adopted by the State of Florida. The U.S. Environmental Protection Agency has concluded that those changes which were determined to be water quality standards are approved.

Criteria Derivation

Springs

For spring vents, FDEP adopted a nitrate-nitrite criterion. The spring vent nitrate-nitrite criterion is based on a stressor-response relationship between nitrate-nitrite and the presence of nuisance algal mats, with the criterion established at a concentration that would prevent nuisance mats from occurring.

Streams

For stream criteria, FDEP has developed reference-based nitrogen and phosphorus thresholds, in conjunction with biological components. This biological information augments the reference-based nutrient thresholds, and this integrated approach provides a strong package for protecting streams that is biologically responsive. The specific concentration values associated with the nitrogen and phosphorus thresholds vary depending upon which area of the state, out of a total of five areas that the waterbody is located within.

Lakes

FDEP has classified lakes into three categories: colored lakes, clear lakes with high alkalinity and clear lakes with low alkalinity. The lakes

criteria were based on a stressor-response relationship between total nitrogen and total phosphorus (TN and TP) and phytoplankton response (chlorophyll a).

Estuaries

Estuary-specific numeric interpretations of the narrative criteria were derived for estuaries along the South and Southwest Coast. These include Tampa Bay, Clearwater Harbor, Sarasota Bay, Charlotte Harbor, Clam Bay and South Florida marine waters from the Ten Thousand Islands around to Biscayne Bay including Florida Bay and the Florida Keys. FDEP adopted these criteria to protect recreation and a healthy, well-balanced population of fish and wildlife.

Downstream Protection

Protection of downstream waters is required in FDEP's nutrient Rule by the statement, "The loading of nutrients from a waterbody shall be limited as necessary to provide for the attainment and maintenance of water quality standards in downstream waters." FDEP will implement this narrative by using models to allocate to upstream watersheds when establishing the TMDL for the downstream waterbody; requiring dischargers, at the time of permit issuance, to provide reasonable assurance that their effluent does not cause or contribute to nutrient impairments in the receiving waterbody and downstream waterbodies; and identifying increasing trends in nutrient concentrations in all waters, including downstream waters, during the assessment cycle.

The FDEP Rule also includes an evaluation of trends to ensure that conditions are not increasing in a manner that could result in future impairment downstream.

FDEP's Rule provides processes that will serve to ensure the attainment and maintenance of downstream waters by requiring nutrient control measures not only in cases where nutrient impairment has already been documented, but also in cases where nutrient standards are currently met in downstream waters, but maintaining compliance with those nutrient standards is threatened as documented by water quality trends.

Site-Specific Alternative Criteria

FDEP's Rule also includes provisions outlining the process for the development of site-specific alternative criteria or SSAC for nutrients. This process provides a predictable approach to developing nutrient SSAC. The Rule language provides clear expectations on the water quality and biological data needed to characterize existing nutrient concentrations and aquatic health.

For More Information

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