

# **EPA's Standards to Address Nutrient Pollution in Florida's Lakes and Flowing Waters**

## **Frequently Asked Questions**

### **1. What is “nutrient pollution”?**

Nutrient pollution is made up of phosphorus and nitrogen and causes harmful algae blooms -- the thick, green muck that fouls clear water and harms ecosystems across the state of Florida. Such algae blooms produce toxins harmful to both humans and animals, deplete oxygen needed for fish and shellfish survival, smother aquatic vegetation and discolor water. Approximately 375,000 acres of lakes, 1,900 miles of rivers and streams and 550 square miles of estuaries in Florida are hurt by nutrient pollution. Nutrient pollution comes from wastewater, urban stormwater, industry, and excess fertilizer and manure that flow off the land into waterways.

### **2. What is EPA's “numeric standards” rule?**

Today's rule sets specific numeric water quality targets for waters across most of Florida. The Florida Wildlife Federation filed a 2008 lawsuit against EPA under the Clean Water Act to require EPA to set numeric water quality standards for nutrient pollution. In the final days of the previous administration, EPA found that nutrient pollution standards are necessary in Florida after a careful review of existing data and water quality impacts across the State. The Agency settled a 2008 lawsuit on this issue in August 2009 by agreeing to adopt numeric nutrient pollution standards by November 2010. Today's rule complies with the terms of this settlement.

### **3. Why did Florida need new standards?**

Florida currently has narrative standards for water quality—a verbal description of clean water conditions. But these narrative standards are general and difficult to apply in practice. This new rule provides specific measurable guidelines to help restore Florida lakes, springs, rivers and streams to a healthy condition. Florida waters polluted by nitrogen and phosphorus will be cleaned up faster and high quality waters will be better protected from this pollution as a result of these new numeric standards.

### **4. What is the timeline for implementation of the standards?**

The rule will take effect 15 months after it is published in the Federal Register, except for the site-specific alternative criteria (SSAC) provision which is effective 60 days from publication. EPA is extending the effective date for the numeric standards by 15 months to allow time for the Agency to work with stakeholders and Florida Department of Environmental Protection (FDEP) to properly implement the rule and to help the public and all affected parties better understand the final standards and their basis.

### **5. How will Floridians benefit from this rule?**

Clean and safe waters are central to Florida's prosperity and economic growth. In 2007, over 4.3 million residents and over 5.8 million visitors participated in recreational activities in Florida that depend on clean water in streams and lakes. Over 2.7 million residents and approximately 1 million visitors used freshwater boat ramps, over 3 million residents and over 900,000 visitors participated in freshwater non-boat fishing, and over 2.6 million residents and almost 1 million visitors participated in canoeing and kayaking. Many people throughout Florida whose livelihood depends on these recreational water activities lose income from the impacts of this pollution.

Measurable or "numeric" water quality standards, rather than the narrative standards now in place, will better protect people's health and aquatic life. Clear, implementable numeric standards will help improve the quality of rivers, lakes and streams that supply our drinking water, promote better recreational activities like fishing, boating and swimming, and support businesses and local economies throughout the state.

## **6. Will compliance with this rule hurt Florida's economy?**

The tourism industry -- Florida's economic lifeblood -- depends on clean water and robust fish populations. In 2010, there were over 80.9 million visitors to the state of Florida, accounting for an estimated \$65 billion in tourism spending. In 2008, tourism spending resulted in approximately \$3.9 billion in State sales tax revenues and contributed to the employment of more than 1 million Florida residents. More than 880,000 anglers flocked to Florida in 2006, spending more than \$1 billion on fishing related products and services alone. Combined with residents, Florida's anglers spent more than any other state -- \$4 billion -- making Florida the fishing capital of the nation.

People living near impaired lakes and rivers can see their property values plummet. A 2005 algae outbreak on the St. Lucie River and estuary resulted in a half billion dollar loss in the county's waterfront property values. Conversely, clean water improves property values.

EPA believes that businesses and public utilities can readily put in place many low cost protections needed to meet numeric nutrient pollution standards, and may even save money over time

## **7. How much will it cost to implement this rule?**

EPA estimates that the annual cost to address additional waters listed as impaired under this rule is between \$135 and \$206 million. This estimate assumes that waste water treatment plants discharging to impaired inland waters may need to install advanced treatment (but not reverse osmosis) and that agriculture operations will need to implement a range of State recommended BMPs to address impaired waters. EPA will continue to work with the State and stakeholders to determine the most affordable, common sense methods to plan for and achieve these numeric standards so that Florida's waters can be restored in the most cost-effective and flexible way possible.

EPA believes that other cost estimates developed by stakeholder groups that contribute to nitrogen and phosphorus pollution (e.g. municipal utilities, agricultural and industry groups) substantially overstate both the number of nitrogen and phosphorus pollution sources that may be affected by this rule, and the types of treatment that these sources may need to meet the rule.

For example, some stakeholders included in their estimates hundreds of wastewater treatment facilities not covered by this rule and assumed that all plants across the State would have to install very expensive additional treatment whether or not they discharge to impaired waters and regardless of any advanced treatment they may already have in place. Such estimates also assume that all dischargers will install highly expensive treatment that the State does not require today even for its most severely impaired waters. Agricultural estimates have assumed that all 13.6 million acres of agricultural activity in the State will require treatment even though State data suggests that the more likely amount is less than 10% of this figure. Where an activity is in an impaired watershed, EPA has considered only cost-effective BMPs similar to those identified and recommended by the state.

#### **8. Will compliance with this rule raise my taxes or utility bills?**

This rule will not take effect for another 15 months, and even then implementation will take place in gradual steps over time. EPA estimates that the annual costs of additional municipal waste water treatment and urban stormwater BMPs needed as a result of this rule to address nitrogen and phosphorus is only about a tenth of what some stakeholders have estimated and will be between \$40 to \$71 per household per year. This equals 11 to 20 cents per day per household for clean water.

#### **9. Is this rule based on sound science?**

Yes. EPA consulted with scientific experts in Florida and calculated the standards based on a review of over 13,000 water samples that the State collected from over 2,200 sites statewide. Consistent with standard EPA practice, the underlying data and methodology supporting the rule were independently peer reviewed. EPA also solicited extensive public feedback during the public comment periods following the proposed rule (January 2010) and the supplemental notice of data availability (August 2010). EPA carefully evaluated the public feedback and changed the rule to reflect the best available science, such as information on the relationship between nitrogen and phosphorus and biological responses in lakes and springs, and data on geological formations of phosphorus and least disturbed stream sites in Florida.

#### **10. Does this rule require Florida to clean up other states' discharges?**

No. In fact, upstream states will be required to ensure the attainment and maintenance of Florida's numeric nutrient criteria when developing designated uses and water quality criteria (see 40 CFR 131.10(b)). Numeric water quality standards will create the

structure and framework needed to inform neighboring states of their responsibility to comply with downstream standards in Florida.

### **11. How is EPA working with state officials?**

Florida has the primary responsibility for carrying out the requirements of the Clean Water Act with EPA support and review. Therefore, FDEP is responsible for implementing the federal numeric standards through their normal regulatory processes, as they would any other water quality standard. Florida's Department of Environmental Protection has a commitment to water quality, a high level of scientific expertise and one of the country's best data bases on the condition of its waters. This data base played a critical role in shaping the final standards.

EPA and the Florida Department of Environmental Protection share a commitment to clean water for Florida. EPA has worked closely with state officials to develop a sound scientific basis for numeric standards over the last 10 years by providing technical assistance and funding to support sampling and analysis of existing data.

With the promulgation of the numeric criteria in this final rule and the subsequent development of standards for the estuarine and coastal waters, and south Florida inland flowing waters (primarily canals) in 2012, we believe Florida will be well-positioned to carry out their implementation responsibilities. EPA will assist the State in any way needed to ensure the successful transition to implementation of these standards.

### **12. Is Florida the only state that EPA is working with to improve water quality standards?**

Nutrient problems exist in many parts of the United States. EPA has urged every state and many tribes to adopt specific or "numeric" nutrient pollution standards since 1998. EPA is targeting its limited resources to help address nutrient pollution where it poses the greatest threats, including working with states whose waters flow to the Chesapeake Bay, Long Island Sound, Lake Champlain, the Mississippi River and the Gulf of Mexico.

### **13. Is the rulemaking process being rushed?**

No. As part of the consent decree with the Florida Wildlife Federation, EPA negotiated a longer timeline for the development of proposed and final specific or "numeric" nutrient pollution standards than is provided for under the Clean Water Act. EPA agreed to establish final numeric nutrient pollution standards for lakes and flowing waters by November 14, 2010, because EPA was confident it had sound data and scientific methods to establish appropriate standards in this timeframe.

EPA agreed to issue additional standards for Florida's estuaries and coastal waters by August 2012 and will shortly be submitting the underlying science for these standards to its independent Science Advisory Board for peer review.

**14. What is EPA doing to help communities understand and utilize the flexibilities in the rule?**

Over the next 15 months, EPA intends to host webinars and provide technical assistance and outreach to any community in Florida that wants to understand and utilize the flexibilities that are built into this rule. EPA will continue to partner with the FDEP, the scientific community and all stakeholders on the implementation of these new standards.

**15. Why did EPA decide to make the standards effective in 15 months?**

We opted for this approach to assure that all stakeholders and the state of Florida have a full opportunity to review the standards, understand their basis and application, and work through issues of implementation.

**16. How is EPA responding to the concern that not all water bodies are the same and case-by-case approaches are needed?**

The rule accounted for the differences in Florida rivers and streams by recognizing five different watershed-based regions for the development of nitrogen and phosphorus standards. In developing the nutrient criteria for lakes, EPA utilized three lake classifications based on clarity and alkalinity.

The rule also allows flexible implementation and alternative site-specific criteria where supported by sound science. These approaches include modifications of lake criteria and site-specific alternative criteria (SSAC) for both lakes and flowing waters. Site-specific alternative criteria represent alternative values to the criteria set forth in this final rule that would be applied on a watershed, area-wide, or waterbody-specific basis. Site-specific alternative criteria must protect the in-stream designated use, have a basis in sound science, and ensure the protection and maintenance of downstream water quality standards. Site-specific alternative criteria may be more or less stringent than the otherwise applicable federal numeric criteria.

Finally, the state may utilize any of the current mechanisms allowed under the Clean Water Act that provide flexibility in implementing water quality standards, such as variances and compliance schedules, if additional time is needed to meet the new criteria.

Section V of the preamble to the final rule provides more detail about the requirements for pursuing any of the options for modification, and describes when the utilization of a given approach would be most appropriate.

**17. How will the rule affect Total Maximum Daily Loads (TMDLs) on the books that were developed by the state of Florida and previously approved by EPA?**

No TMDL will be rescinded or invalidated as a result of this final rule nor does this final rule have the effect of withdrawing any prior EPA approval of a TMDL in Florida.

Nutrient TMDLs which were established prior to the effective date of the new criteria will stay in effect until updated and reviewed for consistency with applicable water quality criteria or changed waterbody conditions as part of the State's normal assessment, listing, and TMDL review process.

In certain situations affecting local governments or businesses where substantial investments in pollution control are predicated on water quality based effluent limits, and there is a need for long term planning certainty in making and maintaining these investments, this rule specifically establishes a federal SSAC process that allows the expeditious review of present TMDL targets and an evaluation of whether those targets represent appropriate site-specific alternative criteria in place of the numeric values in today's rule.

Florida or any other entity may initiate a SSAC process to review the water quality targets of existing TMDLs as site-specific alternative criteria. Site-specific alternative criteria represent alternative values to the new criteria that would be applied on a watershed, area-wide, or waterbody-specific basis. Regulations require that site-specific alternative criteria protect the in-stream designated use, have a basis in sound science, and ensure the protection and maintenance of downstream water quality standards. Site-specific alternative criteria may be more or less stringent than the otherwise applicable federal numeric criteria. By law, EPA must evaluate the technical basis and protectiveness of any proposed site-specific alternative criteria and will take action after appropriate public involvement.

#### **18. How will these new standards affect existing NPDES permits?**

NPDES permits are subject to five year cycles and in certain circumstances are administratively continued beyond five years. When a permit is renewed, it must comply both with applicable TMDL requirements and any new applicable criteria that may have been established since the TMDL was developed.

#### **19. How will this new rule affect agricultural activities in the state of Florida?**

Most agricultural activities are not directly regulated under the Clean Water Act. For these activities, this new rule may affect them if they are located near waters that may be identified as impaired under this rule, i.e., waters that do not meet the new criteria. For agricultural operations in these areas, FDEP and the Florida Department of Agriculture and Consumer Services may require additional nonpoint source control procedures to limit runoff of fertilizers and animal wastes, i.e., best management practices (BMPs) in order to attain the numeric nutrient criteria that support state-designated uses.

However, Concentrated Animal Feeding Operations (CAFOs) are regulated under CWA Section 402 and as such may require NPDES (National Pollutant Discharge Elimination System) permits with water quality based effluent limits (WQBELs) for discharges. Since NPDES permits must be written to meet water quality standards, these permits may need to be revised based on the new numeric nutrient criteria. EPA is not aware of any

other agricultural activities regulated under CWA Section 402 that will be impacted by the final rule.

**20. How do the final standards compare with the draft standards previously developed by the State of Florida?**

Today's final criteria are very similar to the draft standards previously developed by the State of Florida and reflect the same body of science, data, and methodologies that Florida considered.

**21. How has EPA responded to criticism that its Downstream Protection Values (DPVs) are overly conservative and very burdensome on upstream dischargers?**

EPA has carefully considered many comments on this issue. In response to our request for comment on the most appropriate model to use for calculating DPVs, the rule has been significantly revised to utilize a different primary model and allow the use of other scientifically comparable modeling approaches. The final rule also allows several alternative approaches to developing a DPV and determining the most appropriate point of compliance

The DPVs for estuaries and coastal waters will be finalized in August 2012. These values will apply after the effective date of the 2012 rule and as permits come up for renewal.

**22. In what specific ways has EPA modified the final standards to take into account scientific concerns raised by the state of Florida and others?**

Throughout the rule-making process, stakeholders and FDEP raised a number of concerns about the science and ability to flexibly implement certain provisions in the rule.

EPA listened carefully and was responsive to these concerns by:

- 1) Delaying finalization of downstream protection values (DPVs) for estuaries and criteria for South Florida canals to allow for additional review by EPA's Science Advisory Board
- 2) Finalizing criteria for Florida's streams that account for geological differences across the State
- 3) Acting upon and adopting significant elements of FDEP's least-disturbed stream site Benchmark approach
- 4) Finalizing adjustable criteria for Florida's lakes that account for site-specific data
- 5) Finalizing a criterion for Florida's springs that matches the criterion FDEP proposed as appropriate
- 6) Establishing a procedure for deriving federal SSACs where site-specific technical and science data support the need for refinements to the federal criteria

- 7) Providing substantially more flexibility in the development and implementation of lake down stream protection values
- 8) Adding a 15 month effective date

**23. What will the immediate impact of the standards be when they take effect after 15 months?**

Once the new standards become effective, implementation will be phased in as water quality assessments are completed and impaired waters are identified; total maximum daily loads are calculated and implemented; and NPDES permits are renewed. In each of these processes there are opportunities for public participation and further scientific and technical analysis. As a delegated State, the Florida Department of Environmental Protection has the primary responsibility of setting priorities and carrying out these actions with oversight and assistance from EPA. Where streams, lakes, or springs do not achieve the numeric standards, point source dischargers of nitrogen or phosphorous will need new or revised NPDES permit conditions. Other sources such as agriculture and/or septic systems will have to apply nitrogen and phosphorus pollution Best Management Practices as developed through TMDLs, Basin Management Action Plans and related State requirements.

**24. What role will the state of Florida play in implementation?**

Florida has the primary responsibility of carrying out the requirements of the Clean Water Act and will be responsible for implementing the numeric standards through their normal water quality program and associated regulatory processes, as with any other water quality standard.

**25. How does EPA plan to address nutrient pollution of estuarine and coastal areas?**

EPA plans to propose numeric nutrient criteria for Florida's estuarine, coastal waters and Southern Florida inland flowing waters by November 14, 2011 and will sign the final rule by August 15, 2012. EPA will shortly be submitting the underlying science for these standards to its independent Science Advisory Board for peer review.

**26. What role will the state of Florida play in developing standards for estuaries and coastal areas?**

EPA has been working with FDEP scientists and technical staff on this effort since February 2009, and we will continue to work closely on development of the estuary and coastal numeric nutrient criteria.