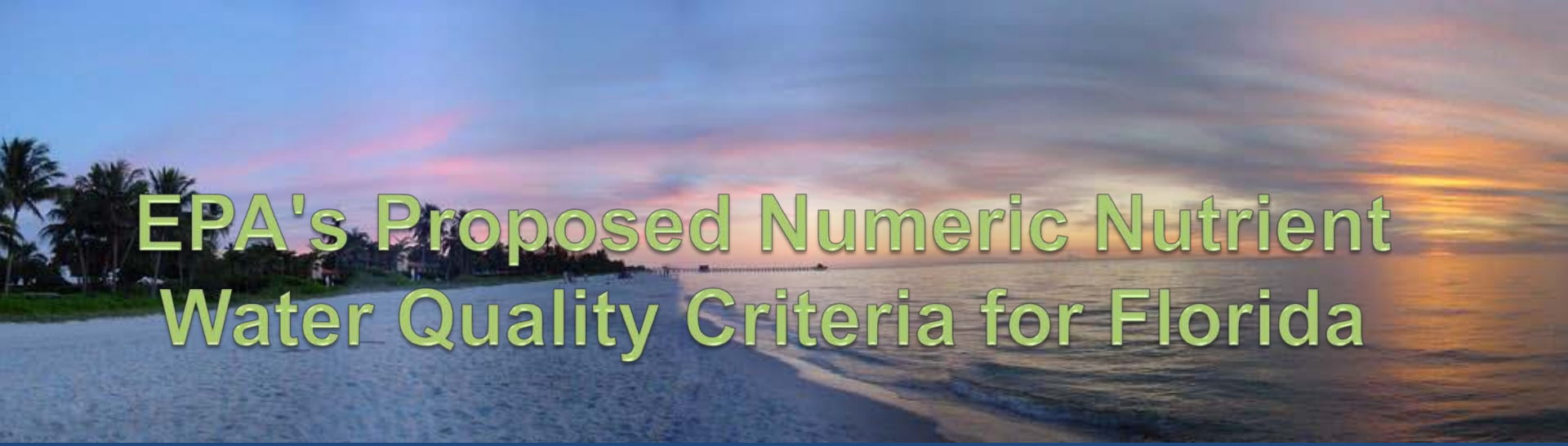

EPA's Proposed Numeric Nutrient Water Quality Criteria for Florida

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What Happened on January 14th, 2010?

EPA Administrator Lisa Jackson signed a proposed rule called "Water Quality Standards for the State of Florida's Lakes and Flowing Waters." This rule was published in the Federal Register on January 26th, 2010.

What is this Rule about?

EPA is proposing "numeric water quality criteria" **pertaining to nutrient concentrations to protect aquatic life in lakes and flowing waters, including canals, within the State of Florida**. In addition, EPA is proposing regulations **to help Florida develop "restoration standards" for impaired waters**.

"Impaired Water"

An impaired water body is one that is polluted to the point where it does not meet its designated use.

As a water body becomes impaired, the existing aquatic ecosystem changes for the worse, fish or wildlife habitat is degraded, and in extreme cases public health may be threatened.

Is Florida the only State where Numeric Water Quality Criteria have been Required?

EPA 2008 report:

19 States for some or all of their lakes and reservoirs

14 states for some or all of their rivers and streams.

How Many Impaired Water Bodies does the State of Florida Have?

According DEP 2008 Integrated Water Quality Assessment Report nitrogen and/or phosphorus:

1,000 miles of rivers and streams (Fourth major source)

350,000 acres of lakes (First major source)

900 square miles of estuaries (Second major source)

How do Nutrients Affect Florida's Water Bodies?

A short-term example is when excess nutrients trigger an algal bloom that looks and smells bad, and can result in poor-tasting drinking water.

A longer-term example is when sustained algal growth reduces water clarity, which in turn decreases the amount of light reaching a lake bottom. The result can be a decrease in growth of aquatic plants that provide critical fish habitat.

Hasn't DEP Already Established Water Quality Standards for Florida?

Yes, Florida has had nutrient water quality standards for many years, and DEP has been working to develop numeric nutrient criteria. However, standards previously established by DEP were "narrative" in nature and not "numeric."

So, What's the Difference Between "Narrative" and "Numeric" Standards?

Narrative standards use descriptive language to determine the point at which water quality is no longer supporting the designated use of a particular water body.

A numeric standard defines the maximum nitrogen and/or phosphorus concentration in a water body that will permit that water body to maintain its designated use.

What Happened Change the Way DEP was Addressing Florida's Water Quality Issues?

In July 2008, an organization called Earthjustice (Florida Wildlife Federation, the Conservancy of Southwest Florida, the Environmental Confederation of Southwest Florida, St. John's Riverkeeper, and the Sierra Club filed a lawsuit against EPA. The suit: 1) claimed that there was an unacceptable delay by the federal government in setting limits for nutrient pollution; 2) claimed that EPA had previously determined that numeric nutrient criteria are necessary as described in the Federal Clean Water Act; and 3) further argued that EPA was obligated to promptly propose these criteria for Florida.

So, What Happened as a Result of the Lawsuit?

- January 14, 2009, EPA determined that numeric standards were, in fact, needed to meet the requirements of the Clean Water Act. EPA also declared that Florida's existing narrative criteria were insufficient to protect water quality.

-In August 2009, EPA entered into a Consent Decree with the environmental groups to settle the 2008 litigation. (A Consent Decree is a voluntary agreement between the parties in a lawsuit.)

-EPA committed 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.

-EPA agreed to establish final standards by October 2010 for lakes and flowing waters and by October 2011 for estuarine and coastal waters.

What Does EPA's Proposed Rule Say?

The proposed rule is long and detailed. The document (obtainable from EPA's web site at http://www.epa.gov/waterscience/standards/rules/florida/) is 196 pages.

Who will be affected by this rule?

- **Industries discharging pollutants to lakes and flowing waters.**
- **Publicly owned water treatment facilities.**
- **Entities responsible for managing storm water runoff.**
- **Non-point source contributors to nutrient pollution. (Examples of these are agricultural production, managed landscapes, and urban areas. In short, everyone and everything in Florida.)**

What Do the Proposed Numeric Nutrient Criteria Look Like?

Map of watershed regions applicable to rivers and streams numeric water quality criteria.

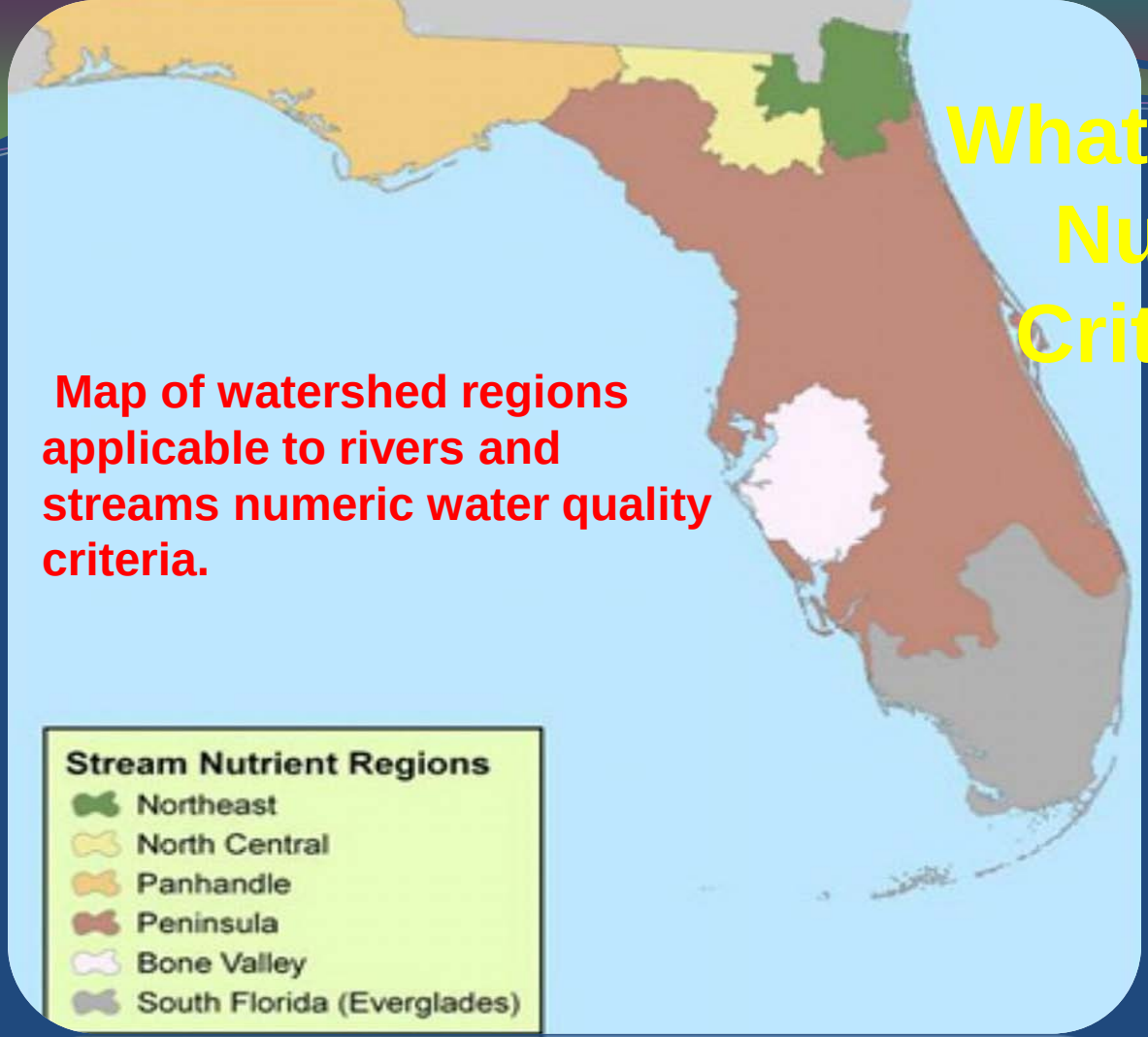

Table 2. *Numeric criteria proposed for rivers and streams, defined as free-flowing surface waters in defined channels, including rivers, creeks, branches, canals (outside south Florida), and freshwater sloughs.*

Watershed region*	In-stream protection value criteria	
	Total N (mg/L)	Total P (mg/L)
Panhandle	0.824	0.043
Bone Valley	1.798	0.739
Peninsula	1.205	0.107
North Central	1.479	0.359

*See Further Information section for a map of these regions.

Table 1. *Numeric criteria proposed for lakes. A lake is a freshwater body that is not a stream or other water course, with some open water free from vegetation above the water surface.*

A	B	C	D	E	F
		Baseline criteria		Modified criteria[a]	
	Chlorophyll *a* (µg/L)[b]	Total N (mg/L)	Total P (mg/L)	Total N (mg/L)	Total P (mg/L)
Colored lakes[c]	20	1.23	0.050	1.23 – 2.25	0.050 – 0.157
Clear lakes, alkaline[d]	20	1.00	0.030	1.00 – 1.81	0.030 – 0.087
Clear lakes, acidic	6	0.500	0.010	0.500 – 0.900	0.010 – 0.030

Table 3. *Numeric criteria proposed for springs (the point where underground water emerges onto the land surface, including the spring run) and clear streams (free-flowing clear water other than a spring run:*

Nitrate (NO_3^--N) + nitrite (NO_2^--N) shall not surpass a concentration of 0.35 mg/L as an annual geometric mean more than once in a 3-year period, nor surpass as a long-term average of annual geometric mean values. Total N and total P criteria for streams on a watershed basis are also applicable to clear streams.

Table 4. *Numeric criteria proposed for south Florida canals. A canal is a trench, the bottom of which is normally covered by water with the upper edges of its two sides normally above water. (Note: All secondary and tertiary canals wholly within Florida's agricultural areas are Class IV waters and thus are not subject to this proposed rule.)*

	Chlorophyll *a* (µg/L)	Total N (mg/L)	Total P (mg/L)
Canals	4.0	1.60	0.042
Applies to all canals within DEP's south Florida bioregion, with the exception of canals within the Everglades Protection Area (EvPA) where the TP criterion of 0.010 mg/L currently applies.			

If I Want to Comment on the Rule, What Should I Do?

-There is a 60-day public comment period within which you can submit written comments to EPA on the proposed rule. Comments must arrive at EPA's offices by March 29, 2010.

There are also several public meetings where you can provide oral comments.

Public comment period and the location of meetings can be found at http://www.epa.gov/waterscience/standards/rules/florida/

If I Want to Comment on the Rule, What Should I Do?

- Be ready to explain why you agree or disagree with the proposed rule.
- Suggest alternatives and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for the estimate to be reproduced.
- Provide specific examples to illustrate your concerns, and suggest alternatives.

How Sensitive are Florida's Water Bodies to Nutrients?

One way we can answer this question is by comparing the proposed numeric nutrient standards to drinking water standards.

For example, the drinking water standard for nitrate-nitrogen is 10 ppm, while the highest total N concentration found in the proposed rule is about 1.8 ppm. This illustrates that some of Florida's aquatic ecosystems are sensitive to nutrients at concentrations much lower than those directly affecting humans.

Specifically, What does the Proposed Rule Mean to Agriculture?

Short term, numeric standards are not likely to have a great effect on agriculture. The Florida Watershed Restoration Act, Total Maximum Daily Load (TMDL) and Best Management Practice (BMP) by DACS is the method agriculture will use to meet water quality standards.

Agricultural operations filing a notice of intent to implement BMPs will receive a presumption of compliance with water quality standards even after acceptance of numeric criteria by DEP.

Long term, the requirements of the BMP program will likely change as a result of numeric nutrient criteria. With numeric standards, the success of the existing BMP program will be much easier to assess. It is likely that more aggressive and expensive practices will be required. It will be important to document the success of existing BMPs to ensure credit is established for on-going commitments.

Questions?

http://www.imok.ufl.edu/bmp/vegetable/