



Numeric Nutrient Criteria Rules

Southeast Florida Utility Council

September 14, 2009

CELEBRATING 33 YEARS OF SERVICE,
COMMITMENT AND EXCELLENCE.

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Background

- EPA has determined that Florida's existing narrative nutrient water quality standard does not meet the requirements of the Clean Water Act.
- EPA has decided that numeric nutrient standards are required for Florida's lakes, streams, wetlands, estuaries and coastal waters.
- EPA has established firm deadlines for the establishment of numeric nutrient standards for lakes, reservoirs, streams, rivers, estuaries and coastal waters.
- EPA has committed to adopt its own numeric nutrient standards should DEP fail to adopt its own standards by the specified deadlines.
- All NPDES, ERP and similar permits will meet new standards upon renewal or modification through revised effluent limits.

EPA Fresh Water Ecoregions

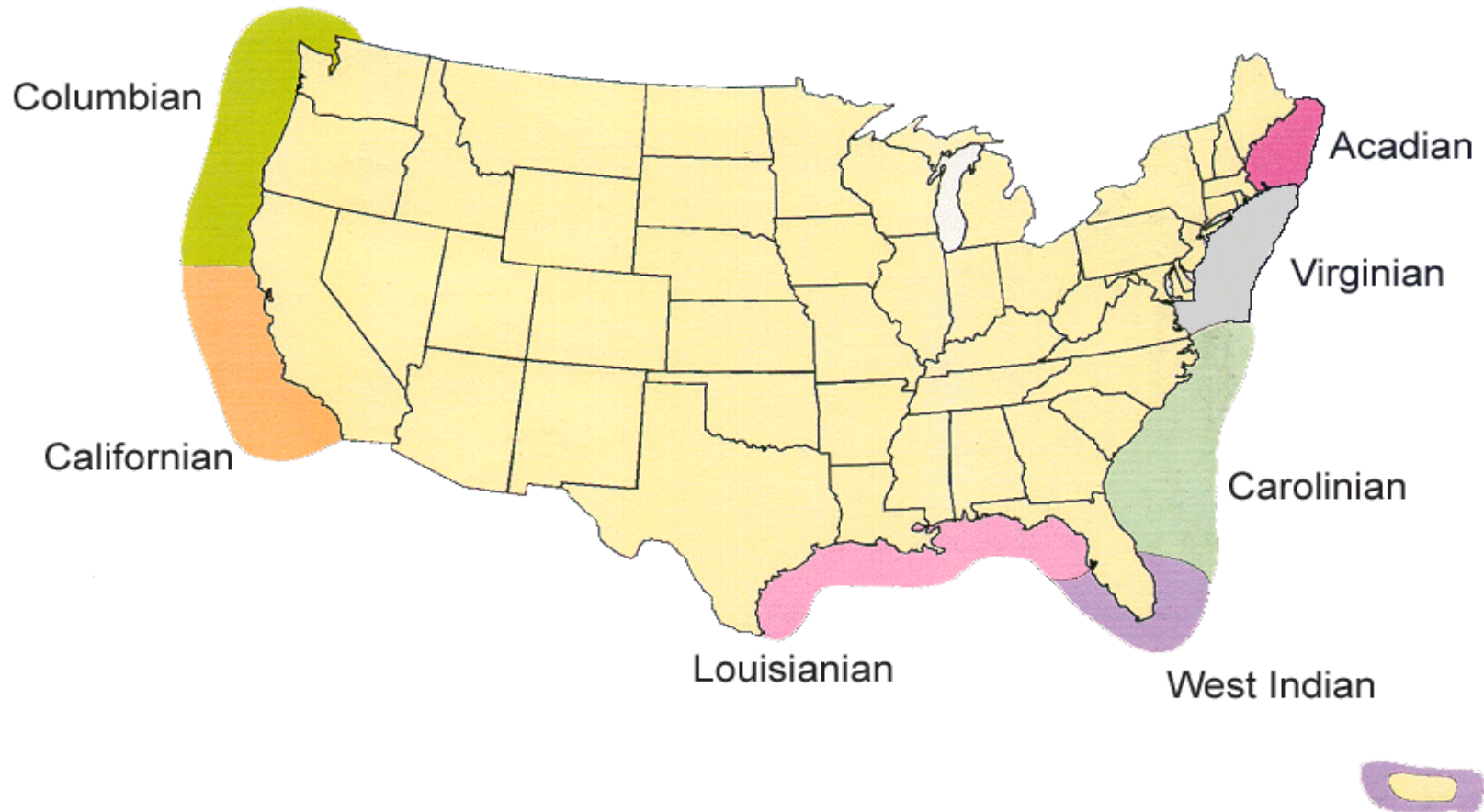
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*Draft Aggregations of Level III Ecoregions
for the National Nutrient Strategy*



EPA Coastal Water Provinces

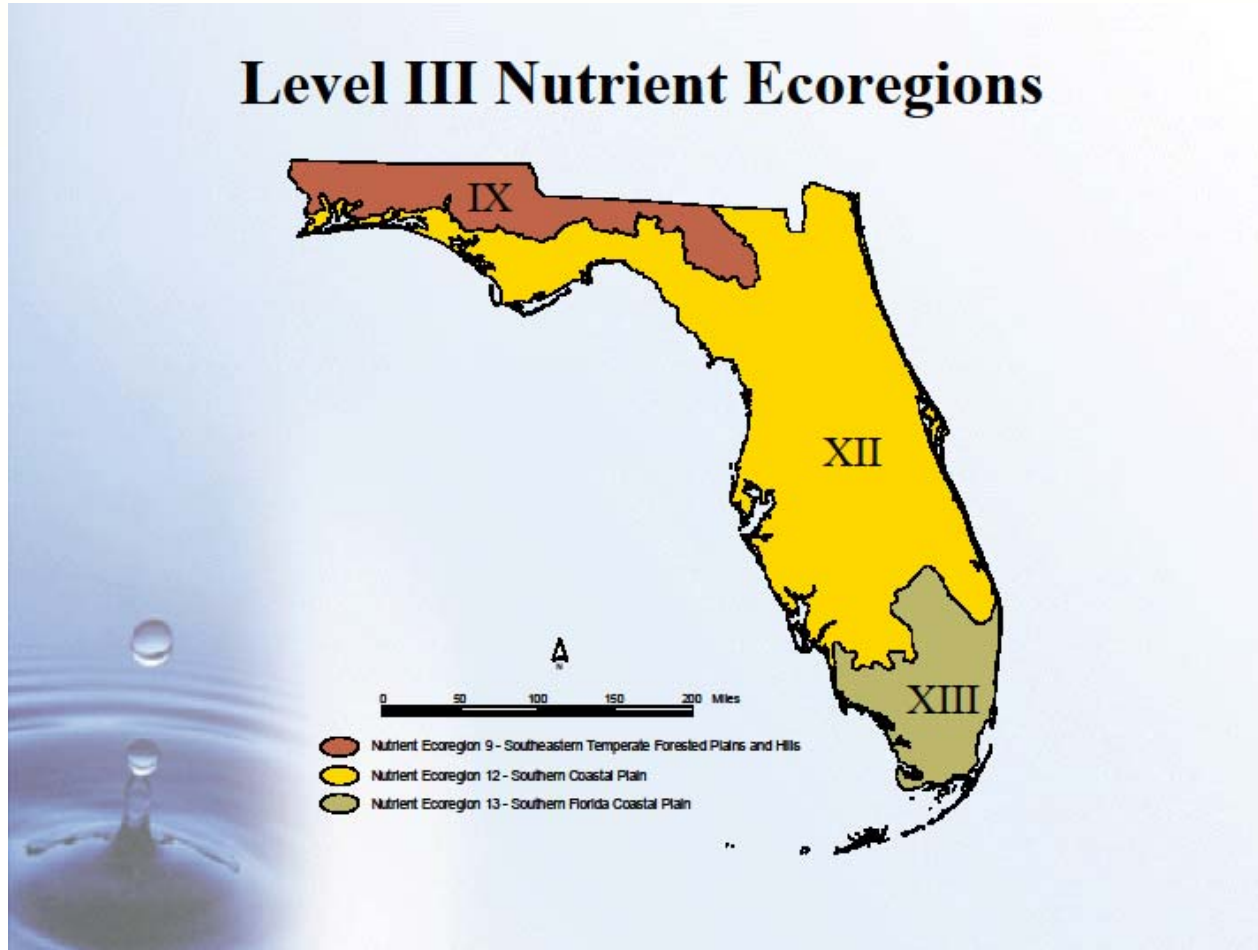
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Florida Ecoregions

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Level III Nutrient Ecoregions



EPA Numeric Nutrient Standard Timeline

- **March 1998** – President’s Clean Water Action Plan requires EPA to develop recommended numerical nutrient criteria.
- **June 1998** – EPA National Strategy for Development of Regional Nutrient Criteria requires EPA to develop regional nutrient guidelines by 2000 and assist states and tribes in adopting numerical nutrient standards by 2003.
- **May 2000** – EPA adopts Numeric Nutrient Guidance Document for Lakes and Reservoirs.
- **July 2000** – EPA adopts Numeric Nutrient Guidance Document for Rivers and Streams.
- **Dec. 2000** – EPA adopts recommended numeric nutrient criteria for:
 - Rivers and Streams in Ecoregions II, III, VI, VII, XI, XI, XII, and XIV.
 - Lakes and Reservoirs in Ecoregions II, VI, VII, VIII, IX, XI, XII, and XIII.
 - Wetlands in Ecoregion XIII.
- **Jan. 2001**– EPA publishes notice of ecoregion criteria and encourages states to submit plan for developing and adopting state numeric nutrient water quality standards by 2004.
- **Oct. 2001** – EPA adopts Numeric Nutrient Technical Guidance Document for Estuarine and Coastal Waters.
- **Dec. 2001** – EPA adopts recommended numeric nutrient criteria for:
 - Rivers and Streams in Ecoregions I, IV, V, VIII, and X.
 - Lakes and Reservoirs in Ecoregions III, IV, V, and XIV.
- **Jan. 2003** – EPA finalizes nine water quality criteria documents for lakes and reservoirs, and rivers and streams.
- **June 2008** – EPA adopts Numeric Nutrient Technical Guidance Document for Wetlands.

DEP Numeric Nutrient Standard Timeline

- **Jan. 2001** – EPA encourages states to submit plan for developing and adopting numeric nutrient criteria.
- **Dec. 2001** – DEP Kickoff Meeting.
- **April 2002** – DEP adopts Numeric Nutrient Criteria Development Plan (“Plan”).
- **May 2002** – DEP submits Plan to EPA for approval.
- **June/July 2002** – DEP participates in National Nutrient Team and Stakeholder Meeting in Washington D.C.
- **July 2002** – DEP convenes first Technical Advisory Committee meeting.
- **July 2004** – DEP and EPA execute agreement to implement Plan.
- **Sept. 2007** – DEP submits revised Plan to EPA for approval.
- **Sept. 28, 2007** – DEP and EPA execute agreement to implement revised Plan.
- **July 1, 2008**– DEP releases first draft numeric nutrient rule.
- **July 23, 2008** – DEP conducts first workshop on draft numeric nutrient rule.
- **July 30, 2008** – DEP conducts second workshop on draft numeric nutrient rule.

DEP Timeline Cont'd

- **Sept. 11, 2008** – DEP releases second draft numeric nutrient rule and conducts third workshop.
- **Nov. 18, 2008** – DEP conducts fourth workshop on numeric nutrient rule.
- **Dec. 9, 2008** – DEP conducts fifth workshop on numeric nutrient rule.
- **Jan. 7-8, 2009** – DEP conducts sixth workshop on numeric nutrient rule.
- **March 3, 2009** – DEP submits revised Plan to EPA for approval.
- **March 25, 2009** – DEP releases third draft numeric nutrient rule.
- **May 5, 2009** – DEP conducts seventh workshop on numeric nutrient rule.
- **June 3, 2009** – DEP conducts eighth workshop on numeric nutrient rule.
- **June 11, 2009** – DEP releases fourth draft numeric nutrient rule.
- **July 7, 2009** – DEP conducts ninth workshop on numeric nutrient rule.
- **July 17, 2009** – DEP releases fifth draft numeric nutrient rule.
- **July 22, 2009** – DEP conducts tenth workshop on numeric nutrient rule.
- **August 5, 2009** – DEP conducts tenth public workshop on numeric nutrient rule.

EPA Florida Lake and Reservoir Nutrient Criteria

Parameter	Aggregate Ecoregion IX	Aggregate Ecoregion XII	Aggregate Ecoregion XIII
TP mg/L	0.020	0.010	0.0175
TN mg/L	0.36	0.52	1.27
Chl <i>a</i> μ g/L	4.93	2.60	12.35T
Secchi (m)	1.53	2.10	0.79

Chl *a* – Chlorophyll *a* measured by Fluorometric method, unless specified. T is for Trichromatic method.

Current DEP Proposed Lake Nutrient Criteria

Annual Geometric Mean Concentrations

Long Term Average Lake Color and Alkalinity	Chlorophyll <i>a</i> ($\mu\text{g/L}$)	Total Phosphorus TP (mg/L)	Total Nitrogen TN (mg/L)
>40 Platinum Cobalt Units	20	0.05	1.23
\leq 40 Platinum Cobalt Units and > 50 mg CaCO ₃ /L	20	0.030	1.00
\leq 40 Platinum Cobalt Units and \leq 50 mg CaCO ₃ /L	9	0.015	0.85

- Color and alkalinity are based on 7 year rolling average
- If alkalinity data are unavailable, specific conductance data shall be used, with a value of 250 $\mu\text{mos/cm}$ used to estimate the 50 mg/L CaCO₃ alkalinity threshold until such time that alkalinity data are available.

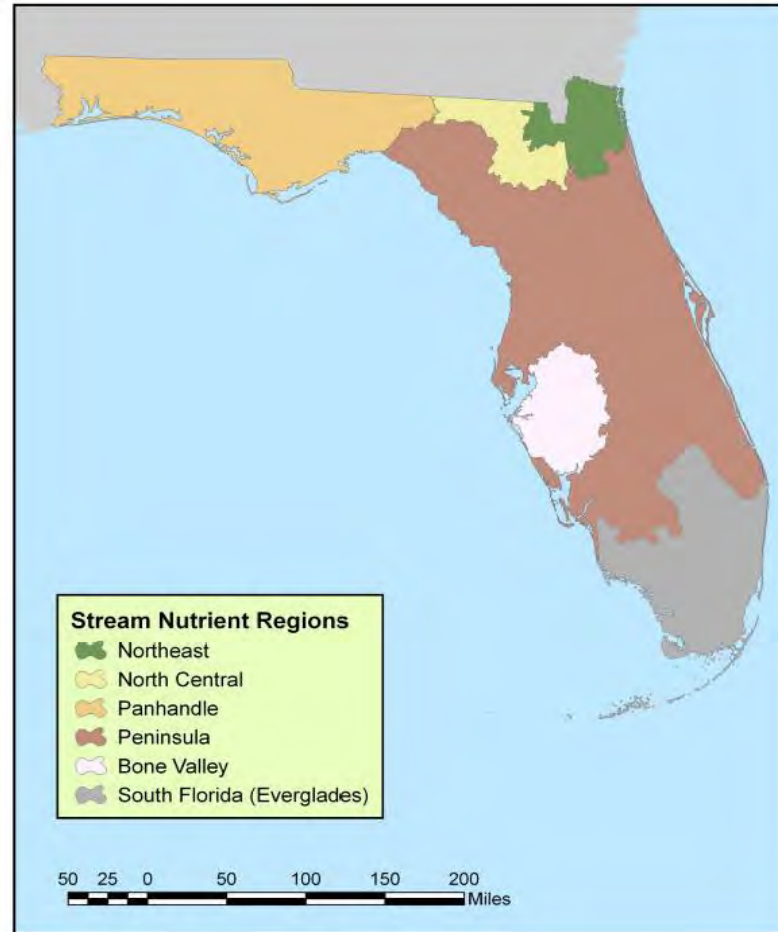
EPA Florida River and Stream Nutrient Criteria

Parameter	Aggregate Ecoregion IX	Aggregate Ecoregion XII	Aggregate Ecoregion XIII
TP mg/L	0.0366	0.040	0.015
TN mg/L	0.69	0.90	1.14
Chl <i>a</i> µg/L	0.93S	0.40S	---
Turb FTU/NTU	5.70	1.90	1.50

Chl *a* – Chlorophyll *a* measured by Fluorometric method, unless specified. S is for Spectrophotometric method.

DEP Stream Nutrient Regions

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Current DEP Proposed Stream and River Criteria

	TP mg/L	TN mg/L**
Panhandle	0.069	0.82
Northeast	0.101	1.73
North Central	0.322	1.73
Peninsula	0.116	1.73
Bone Valley	0.415	1.73
South Florida*	--	--

*DEP has not developed criteria for South Florida streams.

** In months when the median color is less than 40 platinum cobalt units, the monthly median nitrite-nitrate concentration for Class I and III streams shall not exceed 0.35 mg/L more than 10 percent of the time, unless a site specific alternative criterion is adopted.

EPA/DEP Lake Comparison

	TP mg/L	TN mg/L	Chl α μ g/L	Secchi (m)
Aggregate Ecoregion IX	0.02	0.36	49.3	1.53
Aggregate Ecoregion XII	0.01	0.52	26.00	2.10
Aggregate Ecoregion XIII	0.0175	1.27	12.35	0.79
>40 Platinum Cobalt Units	0.05	1.23	20	n/a
\leq 40 Platinum Cobalt Units and > 50 mg CaCO $_3$ /L	0.030	1.00	20	n/a
\leq 40 Platinum Cobalt Units and \leq 50 mg CaCO $_3$ /L	0.015	0.85	9	n/a

EPA  DEP 

EPA/DEP Stream Comparison

	TP mg/L	TN mg/L	Chl <i>a</i> mg/L	Turb FTU/NTU
Aggregate Ecoregion IX	0.0366	0.69	0.00093	5.70
Panhandle	0.069	0.82	n/a	n/a
North Central	0.322	1.73	n/a	n/a
Aggregate Ecoregion XII	0.04	0.90	0.0004	1.90
Northeast	0.101	1.73	n/a	n/a
Peninsula	0.116	1.73	n/a	n/a
Bone Valley	0.491	1.31	n/a	n/a
Aggregate Ecoregion XIII	0.015	1.14	---	1.50
South Florida	---	---	---	---

EPA  DEP 

For comparison purposes, EPA Aggregate Ecoregion IX includes DEP Panhandle and North Central Regions, EPA Aggregate Region XII includes DEP Northeast, Peninsula, and Bone Valley Regions, and EPA Aggregate Ecoregion XIII includes DEP South Florida Region.

Sierra Club Lawsuit

- **July 17, 2008** – FWF, Sierra Club, et al file complaint against EPA for failing to comply with CWA Section 303(c)(4)(B) duty to set numeric nutrient criteria for Florida.
- **January 14, 2009** – Letter from B. Grumbles to M. Sole where EPA formally determines numeric nutrient should be developed on an expedited basis in Florida.
- **April 9, 2009** – FWF, Sierra Club, et al amend complaint to address EPA's Jan. 2009 determination.
- **August 19, 2009** – Consent Decree signed by Plaintiffs and EPA
 - **January 14, 2010** – Deadline for EPA to publish in Fed. Register notice of proposed rulemaking for numeric water quality criteria for lakes and flowing waters
 - **October 14, 2010** - Deadline for EPA to publish in Fed. Register notice of final rulemaking for numeric water quality criteria for lakes and flowing waters
 - **January 14, 2011** - Deadline for EPA to publish in Fed. Register notice of proposed rulemaking for numeric water quality criteria for coastal and estuarine waters
 - **October 14, 2011** -Deadline for EPA to publish in Fed. Register notice of final rulemaking for numeric water quality criteria for coastal and estuarine waters
- **Nov. 16, 2009** – Hearing on Motion to approve Consent Decree

EPA Numeric Nutrient Criteria - General Effect

- Will significantly impact wastewater treatment plants, reuse systems and certain potable water treatment plants by requiring nutrient effluent standards beyond the ability of current conventional treatment technology.
- Will require expensive best management practices to control non-point sources.
- Could impede natural system restoration or mitigation.
- Could adversely affect consumptive use of surface and ground water sources.
- Could result result in an as much as 75% of Florida's streams, lakes and coastal waters being declared impaired or in noncompliance.
- Could prevent growth.

EPA Numeric Nutrient Criteria - So Fla Effect

- Will establish numeric nutrient standards for canals, streams and wetlands, which would have been omitted under latest DEP rule because of lack of data.
- Will make it difficult, if not impossible, for South Florida utilities to terminate ocean discharges by specified statutory deadline.
- Will impede operation of Central and Southern Florida Flood Control System and related water control and drainage works.
- Will interfere with timely and cost-effective implementation of Everglades Restoration.
- Could limit water users' ability to withdraw surface water or groundwater from Biscayne aquifer, if withdrawal has effect of concentrating nutrients by reducing water volume in canals.
- Could create compliance issues because EPA rule would not apply to canals, streams, lakes and wetlands on tribal lands.

Legal Options

- Intervene in FWF, Sierra Club, et al lawsuit.
- Initiate legal action against EPA because of improper determination under Clean Water Act that numerical nutrient standards are required.
- Participate in EPA Rulemaking Process.

EPA Rulemaking Process

- Notice of proposed rule published by EPA on or before January 14, 2010 and 2011 deadlines in Consent Decree.
- EPA shall provide interested persons opportunity to submit written comments, data, views or arguments concerning proposed rules.
- EPA will develop administrative record reflecting all information considered or relied upon in support of proposed rules.
- Notice of final rule published by EPA on or before October 14, 2010 and 2011 deadlines in Consent Decree.
- EPA final rule may be challenged by filing suit in federal district court:
 - Rule is judged based on rulemaking record and evidentiary hearings are not normally permitted.
 - Rule will be invalidated if found to be arbitrary or capricious or contrary to the Federal Administrative Code or the Clean Water Act.
 - Approximately 70% of similar challenges found in EPA's favor.

SEFLUC Member Options

- Participate Individually in EPA Rulemaking
 - **Pro:** - Represent individual utility's interests and possibly reach separate settlement with EPA
 - **Con:** - Individual utility will bear entire expense of participation
- Participate in EPA Rulemaking as Part of Statewide Organization or Group
 - **Pro:** - Spread expense of participation among largest possible group and gain credibility by speaking with one voice on subject.
 - **Con:** - Lose ability to present unique South Florida perspective or possibly reach separate settlement with EPA
- Participate in EPA Rulemaking as Part of South Florida Organization or Group
 - **Pro:** - Spread expense of participation among relatively large group, gain ability to present unique South Florida perspective and possibly reach separate settlement with EPA
 - **Con:** - Individual utility expenses greater than statewide option

QUESTIONS?

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