

Numerical Nutrient Criteria for Streams in Other States

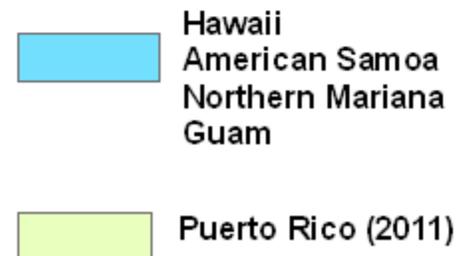
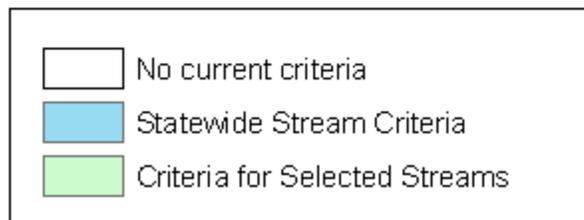
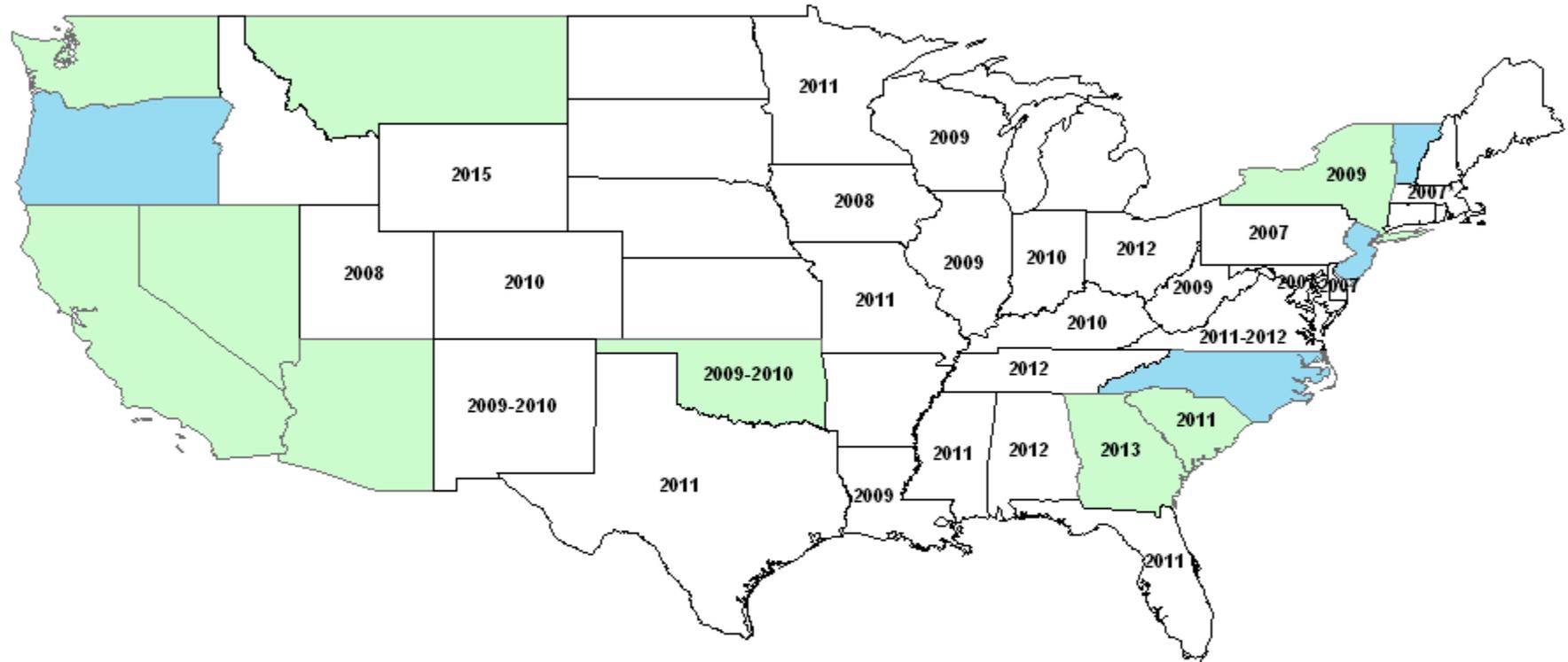
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Status of Nutrient Criteria Development for Streams



- “*” – Rule was in place in 1998, before EPA published nutrient criteria recommendations
- “**” – Rule was in place in 1998, but has been revised since then

American Samoa*

- All Surface Waters
 - Total Phosphorus: 150 $\mu\text{g/L}$
 - Total Nitrogen: 300 $\mu\text{g/L}$
 - Turbidity: 5 NTU
- Specific Criteria for Embayments, Pago Pago Harbor et al. + Ocean Water

Hawaii** – Wet Season (Nov – Apr)

| | Geometric Mean | 10 % | 2% |
|--|----------------|------|-----|
| TN ($\mu\text{g/L}$) | 250 | 520 | 800 |
| NO ₃ -N ($\mu\text{g/L}$) | 70 | 180 | 300 |
| TP ($\mu\text{g/L}$) | 50 | 100 | 150 |
| TSS (mg/L) | 20 | 50 | 80 |
| Turbidity (NTU) | 5 | 15 | 25 |

Hawaii** – Dry Season (May – Oct)

| | Geometric Mean | 10 % | 2% |
|--|----------------|------|-----|
| TN ($\mu\text{g/L}$) | 180 | 380 | 600 |
| NO ₃ -N ($\mu\text{g/L}$) | 30 | 90 | 170 |
| TP ($\mu\text{g/L}$) | 30 | 60 | 80 |
| TSS (mg/L) | 10 | 30 | 55 |
| Turbidity (NTU) | 2 | 5.5 | 10 |

New Jersey*

- Classification: FW1, FW2, PL, SE1, SE2, SE3, SC
 - FW = Fresh Waters
 - PL = Pineland Waters
 - All others are coastal
- FW1: Maintain Natural State
- FW2 streams: TP – 100 $\mu\text{g}/\text{L}$
- PL: $\text{NO}_3\text{-N}$ – 2000 $\mu\text{g}/\text{L}$
- To be amended in 2010

Vermont*

■ Classification

- A: All waters that drain to drinking water supply and all waters above 2,500 ft altitude
- B: All other waters

■ Criteria

- TP: 10 $\mu\text{g}/\text{L}$ at low median monthly flow in all streams above 2,500 ft altitude
- $\text{NO}_3\text{-N}$ (flows $>$ low median monthly)
 - “A” $>$ 2,500 ft – 200 $\mu\text{g}/\text{L}$
 - “A” $<$ 2,500 ft – 2000 $\mu\text{g}/\text{L}$
 - “B” – 5000 $\mu\text{g}/\text{L}$

■ Draft of revised criteria have been submitted to EPA

Oregon

- Chlorophyll: average of 15 $\mu\text{g}/\text{L}$, based on 3 samples in 3 consecutive months
- Turbidity: maximum of 10 percent greater than natural level
- TP
 - Site specific to Yamhill River Basin (TMDL)
 - 70 $\mu\text{g}/\text{L}$ during low flow period (May – Oct)

North Carolina* - Classification

- B: Primary contact recreation, aquatic life protection
- C: Secondary contact recreation, aquatic life protection
– benchmark minimum criteria
- WS-1 thru WS-V: tiered drinking water protection
- WL: Wetlands
- SC: Salt Water C Classification
- SB, SA: Other Tidal and Coastal Waters
- SWL: Coastal Wetlands

North Carolina* - Criteria

| | Chl-a ($\mu\text{g/L}$) | Turbidity (NTU) |
|-----------------------|---------------------------|-----------------|
| C (Trout habitat) | 15 | 10 |
| C (Non-trout habitat) | 40 | 50 |
| SC | 40 | 25 |

Oklahoma

- TP: 30 day geometric mean of 37 $\mu\text{g}/\text{L}$ in waters designated as Scenic Rivers
- Turbidity
 - Cool water fisheries: 10 NTU
 - Other waters designated for fish and wildlife propagation: 50 NTU

Montana

- Site Specific – 2 reaches of Clark Fork River
- TP: 20 $\mu\text{g}/\text{L}$ in upper reach, 39 $\mu\text{g}/\text{L}$ in lower
- TN: 300 $\mu\text{g}/\text{L}$
- Benthic Chl-a (June 21 – Sept 21)
 - Summer mean: 100 mg/m^2
 - Maximum: 150 mg/m^2

Puerto Rico*

■ Classification

- Coastal Waters: SA, SB, SC
- Surface Waters: SD – which is everything except for SE (Laguna Tortuguero, Laguna Cartegena, et al – exceptional ecological value)

■ Criteria

- Turbidity: SB and SC – 10 NTU, SD – 50 NTU
- TP: SD – 1 mg/L in waters upstream from reservoirs and drinking water supplies

Florida - Classification

- Class I: Potable Water Supply
- Class II: Shellfish Propagation and Harvesting
- Class III: Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife (includes marine and freshwater components)
- Class IV: Agricultural Water Supplies
- Class V: Navigation, Utility, and Industrial Use

Florida – Criteria

- Elemental Phosphorus: Classes II & III (marine) – 0.1 $\mu\text{g}/\text{L}$
- Everglades Protection Area (Class III)
 - Long-term geometric mean of 10 $\mu\text{g}/\text{L}$
 - Rule developed following Settlement Agreement with US-EPA in 2001
 - Determination of Achievement
 - Geomean of $\leq 10 \mu\text{g}/\text{L}$ averaged across all stations in 3 out of 5 yrs
 - Geomean of $\leq 11 \mu\text{g}/\text{L}$ averaged across all stations in any one year
 - Geomean at all individual stations $\leq 15 \mu\text{g}/\text{L}$

Florida – The Memo

- January, 2009: From US-EPA to Florida DEP
- Recognizes the State's efforts to address nutrient issues including:
 - \$20 million in collection and analysis of data
 - Nutrient-specific narrative criteria
 - Basin Management Action Plans (BMAP)
 - Grizzle-Figg Act of 1990
 - Applies to Tampa Bay Area
 - Limits of 5/5/3/1 for BOD₅/SS/TN/TP for all WWTP
 - 1999 – Same limits for Florida Keys

However

- Reliance on Narrative Criteria is “resource intensive, time consuming, and less than effective”
- Numeric criteria are needed to identify impaired waters and calculate TMDLs.

Therefore

- “Section 303(c)(4) of the CWA requires that the Administrator promptly prepare and publish proposed regulations...when the Administrator makes a determination.”
- EPA plans to propose numeric criteria
 - Lakes and flowing waters – within 12 months
 - Estuaries and coastal waters – within 24 months

More Information

- State Adoption of Numeric Nutrient Standards
(1998-2008) EPA-821-F-08-007