

Numeric Nutrient Criteria

September 27, 2011

The
Next
BIG
Thing



Nutrient Criteria Objective

- To Develop Specific Numeric Criteria to be Proposed as Guidance Values to Aid in the Interpretation of the Narrative Nutrient Standard:
 - *“None in amounts that result in growths of algae, weeds and slimes that will impair the waters for their best usages.”*



Some History...

Phosphorus & Nitrogen, current focus on P
Driven by EPA, 10 year (plus) Effort
EPA Proposed National Criteria...

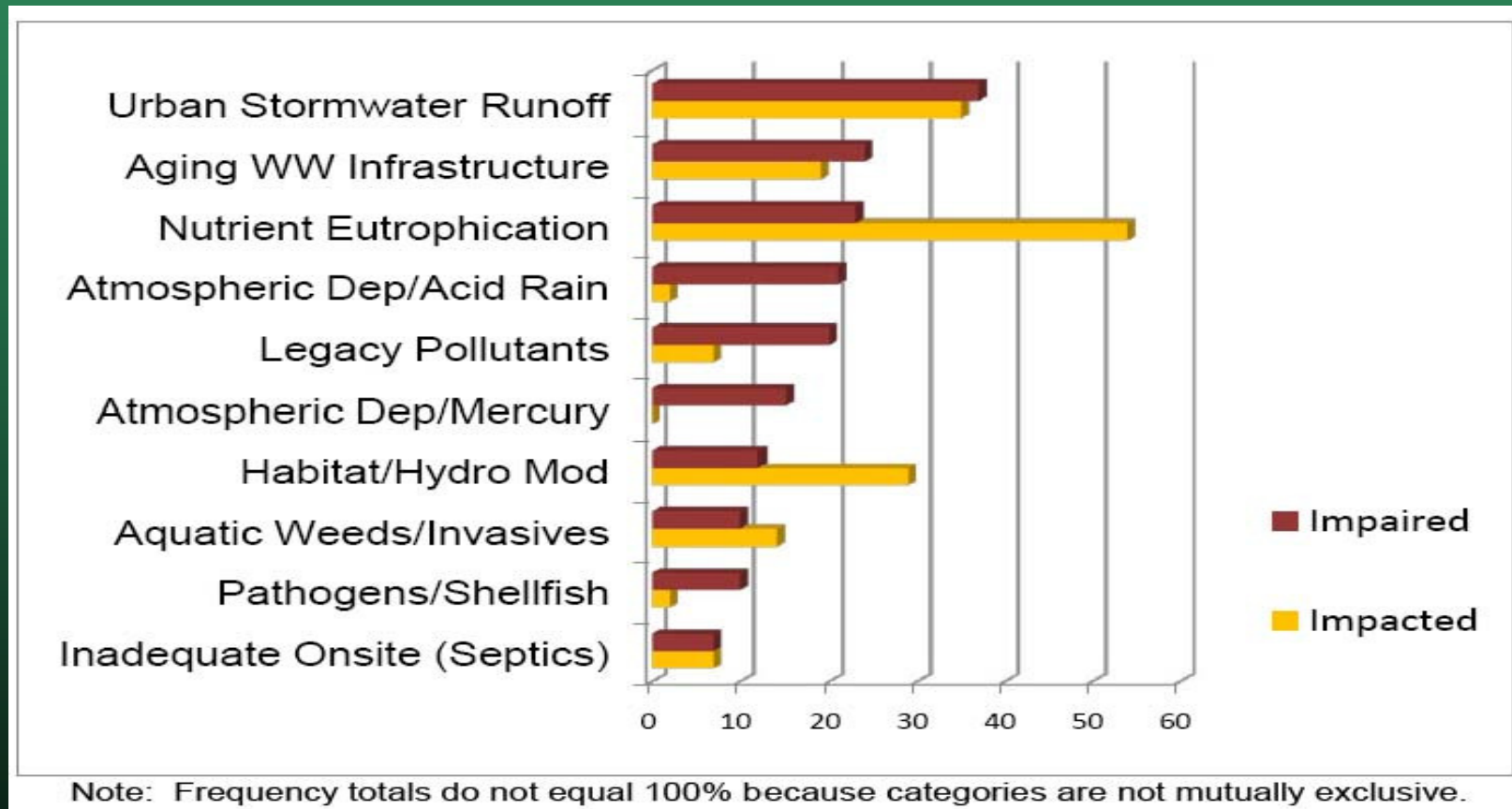
But States Can Develop Their Own
NYS Following a *Nutrient Standards Plan*
Need to Demonstrate Progress, but...

Lawsuits Could Force Changes



Nutrients are a W.Q. Problem

Top Ten Causes/Sources of Impaired/Impacted Waters

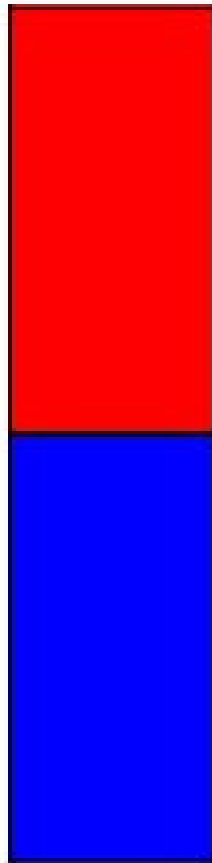


Should be Easy, Except...

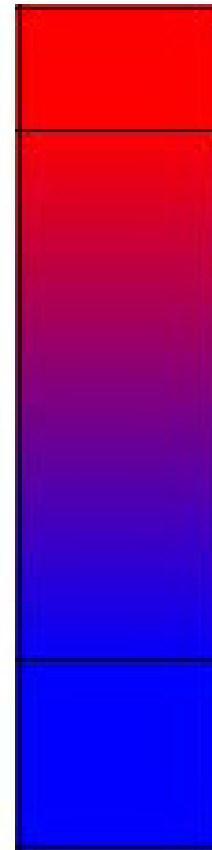
- Naturally Occurring and Ubiquitous,
- Acceptable Levels Vary Water to Water,
- Nutrients are *Indicator* of Impairment, but..
- Unlike Other Standards, Not Toxic,
- Significant Component of Wastewater, so..
- Will affect everyone, everywhere.
- And, Oh Yeah...No Money



W.Q. Criteria: Drawing the Line



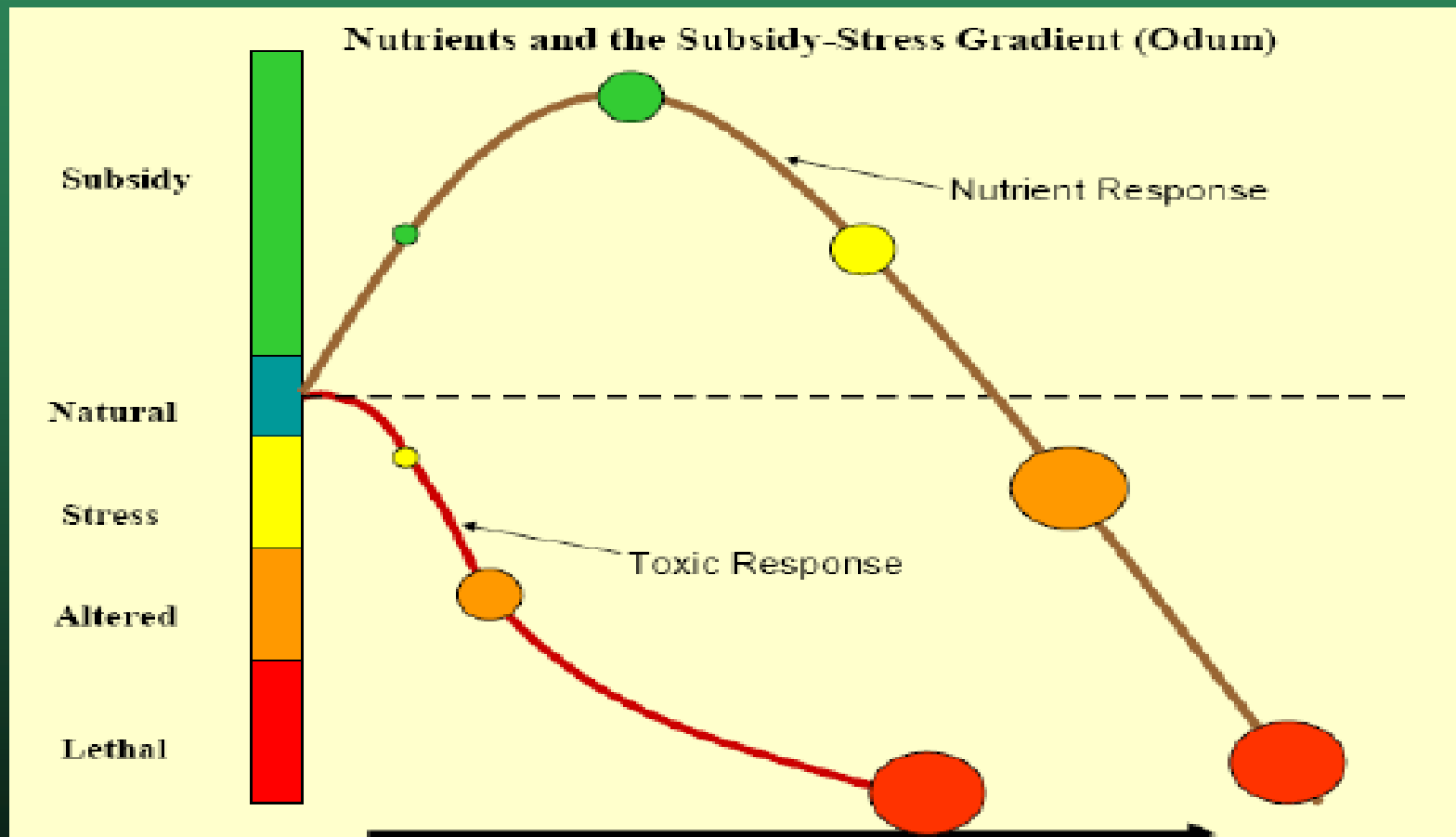
Water Quality standards development suggests that there is a distinct value above which a waterbody exhibits impairment where uses are not supported and below which the waterbody exhibits "full support" of designated uses.



In reality there is a graduated spectrum of effects, rather than a single distinct tipping point. And the nature of the spectrum can vary considerably from one stream to the next.



Further Complications



Nutrient Criteria “Modules”

- W.Q. Criteria Development – DEC staff
- Assessment and Listing – w/ USEPA
- Regulatory Implementation
- Stakeholder Communication

All Modules are Related, but...

Pursuing (somewhat) Separately



W.Q. Criteria Development

- To Protect Recreation in Lakes
- To Protect Aquatic Life in Rivers
- To Protect Water Supplies in Lakes/Res

Will also look at:

- Protection of Recreation in Rivers
- Protection of Aquatic Life in Lakes
- Protection of Water Supplies in Rivers



Water Quality Criteria Development

Uses	Rivers/Streams	Lakes/Reservoirs
Water Supply	Phase Two	Phase One
Recreation	Phase Two	Phase One
Aquatic Life Support	Phase One	Phase Two



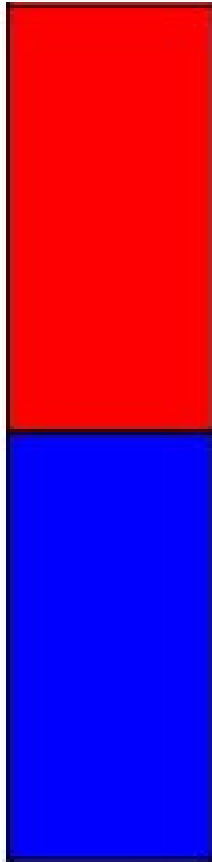
W.Q. Criteria Development

Three of the Issues

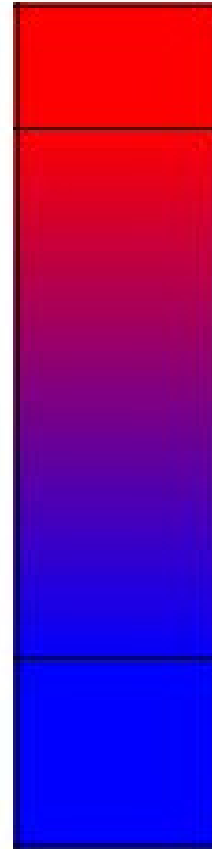
- Causal Variables (Phosphorus)
vs Response (Chl, Clarity, Biology)
- EPA's Independent Applicability
- Impairment: Where to Draw the Line



Again, Where to Draw the Line?



Water Quality standards development suggests that there is a distinct value above which a waterbody exhibits impairment where uses are not supported and below which the waterbody exhibits "full support" of designated uses.



In reality there is a graduated spectrum of effects, rather than a single distinct tipping point. And the nature of the spectrum can vary considerably from one stream to the next.



Assessment and Listing

- Using the Criteria to Determine Section 303(d) List Decisions
- Distinctions Btw Impaired (restoration) and Stressed/Impacted (protection)
- Set Stringent Criteria and “Walk Back”
- Same Issues with Other Standards



Regulatory Implementation

- Challenge: Reasonable Phasing In of Very Stringent Criteria
- Options: Variances, Loading Caps, NonPoint Source Reduction/Offsets, Adaptive Management, Other
- Nutrient Implementation Workgroup



Communication

- National Issue in the News
- Enviro, Regulated Community Aware
- NYSDEC Presentations to Date:
 - Business Council (April)
 - Water Mgmt Advisor Comm (June)
 - NY Water Environ Assoc (July)
 - NYS Ag & Mkts (Sept)
 - SRBC (Sept)



Possible Schedule Forward

June	Revise Nutrient Standards Plan
(July)	Develop Asmt/Listing Methodology
(Aug)	Finalize Fact Sheets
Dec 31	Identify SPDES Impact (Qualitative)
2012	Implementation Strategy/Framework
2012 ?	Release Draft Criteria
2013 ?	Propose Final Criteria



Before Proposing Criteria

- Need to Complete ALL Modules
 - Evaluate Impacts to All Uses
 - Understand 303d Listing Implications
 - Estimate Impact on Dischargers
 - Develop Implementation Strategy
 - Conduct Appropriate Outreach

But, What are Implications for Current Permit/TMDL Actions?

