

2011 Compliance Assistance Conference



Ohio's Water Quality Standards



Environmental
Protection Agency

Water Quality Standards (WQS)

- What they are
- What they do
- How they impact businesses and cities

Clean Water Act Requirements

- Program is in hands of the State
 - No national standards (only recommendations)
 - USEPA must review and approve State WQS
 - Flexibility is generally good
 - But there are downsides

What are WQS?

- How clean should surface water be
- Required Elements
 - Describe what the water is used for (beneficial use)
 - Write standards that protect those uses (criteria)
 - Adopt policies designed to keep clean water clean (antidegradation)

Beneficial Uses for Surface Water

- Water Supplies
- Recreation
- Fish and wildlife

Different Approaches

- One size fits all
 - All uses, all places, all times
- OR
- Tailor standards to fit specific situations
 - Categories of uses
 - Tiered aquatic life uses

Will we apply the same standards?



Coldwater Systems

Warmwater Lotic Systems

CWH

Primary HW Streams (<1 mi²)

Headwater Streams (1-20 mi²)

Wadeable Streams (20-300 mi²)

Large Rivers (>200-300 mi²)

Class 1

Class 2

Class 1,2 Modified

Class 3

EWH

W~~W~~H

M~~W~~H

2 Types :
-Channel mod.
--Non acidic MD

LR~~W~~

2 Types :
-Drainage maint.
-AMD

EWH

W~~W~~H

M~~W~~H

2 Types :
-Channel mod.
--Non acidic MD

LR~~W~~

2 Types :
-Drainage maint.
-AMD

EWH

W~~W~~H

M~~W~~H

3 Types :
-Impounded
-Channel mod.
--Non acidic MD

LR~~W~~

1 Type:
Other (case specific)

- Adopted in WQS
- Adopted in WQS
- Classification Tool

Water Quality Criteria

- Narrative
 - The “free froms”
 - Nutrients
- Chemical Specific
- Biological performance measures

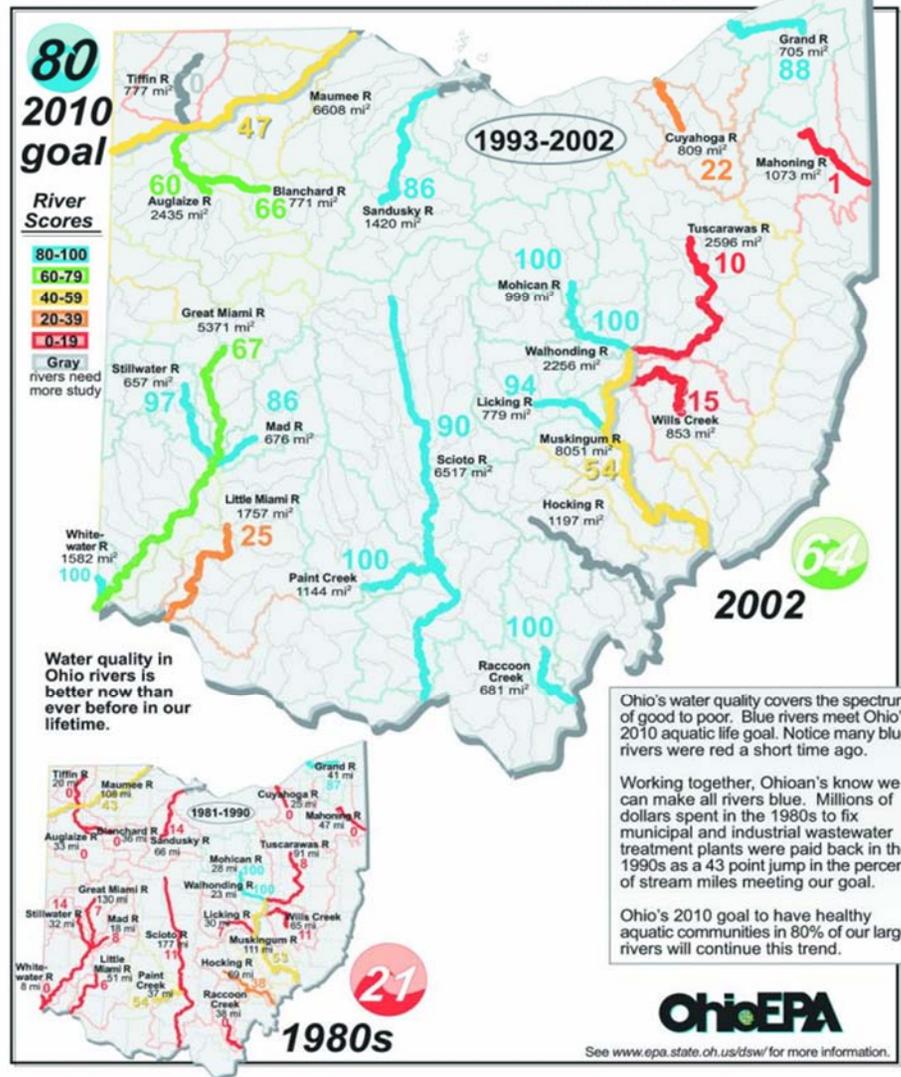


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Impact of Chemical Criteria - Ammonia Case Example

- Past action - Case by case requirements for advance wastewater treatment
- Results –
 - More waste treatment
 - Lower ammonia concentrations, less toxicity
 - Also less O² demand
 - Improved dissolved oxygen in river
 - Dramatic improvements

Big Rivers: Ohio's big water quality success



OhioEPA

Next Impact of Ammonia Criteria ?

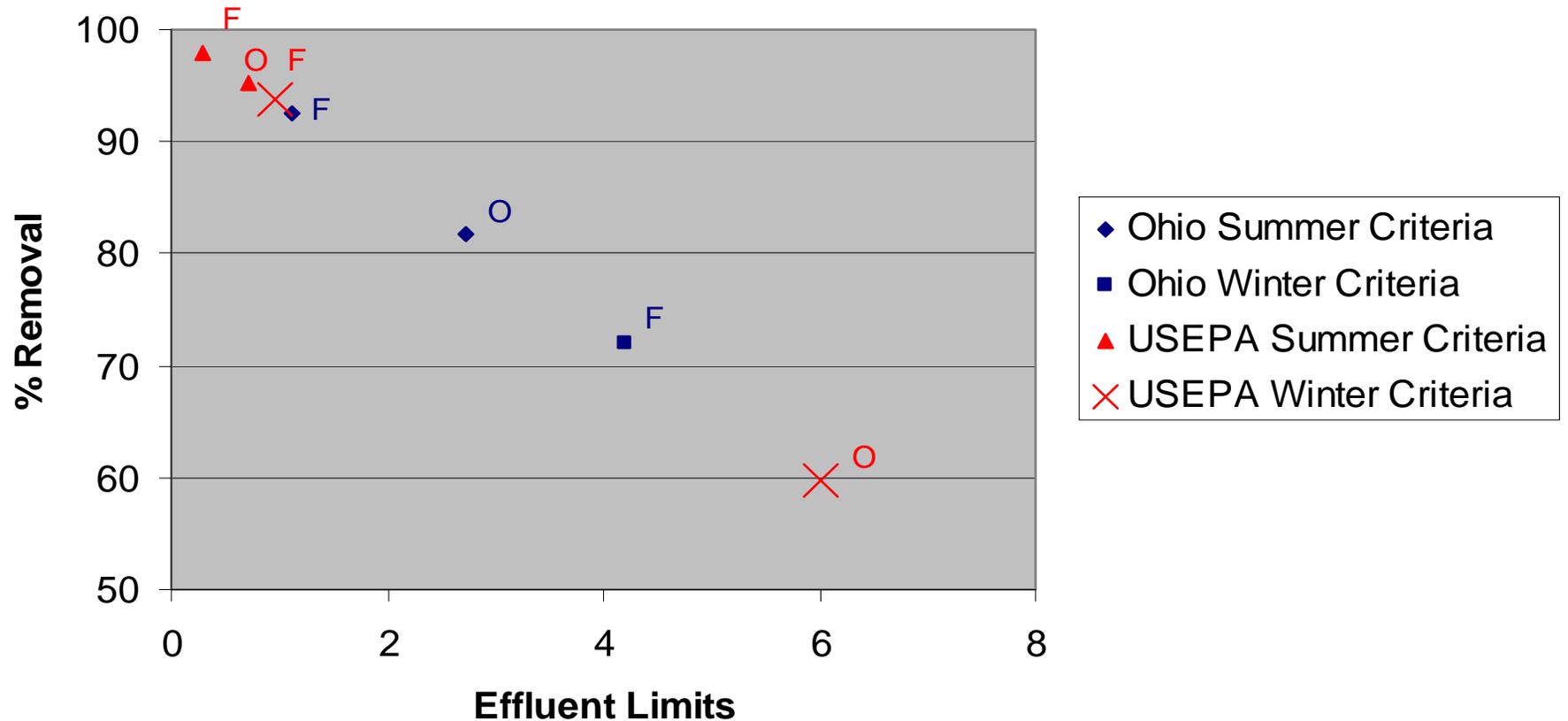
- New data (ammonia's toxicity to freshwater mussels)
- Pending updated of national criteria recommendation
- Implementation at State level
 - Draft rule
 - Proposed rule
 - Adopt final rule
 - Apply criteria in NPDES discharge permits



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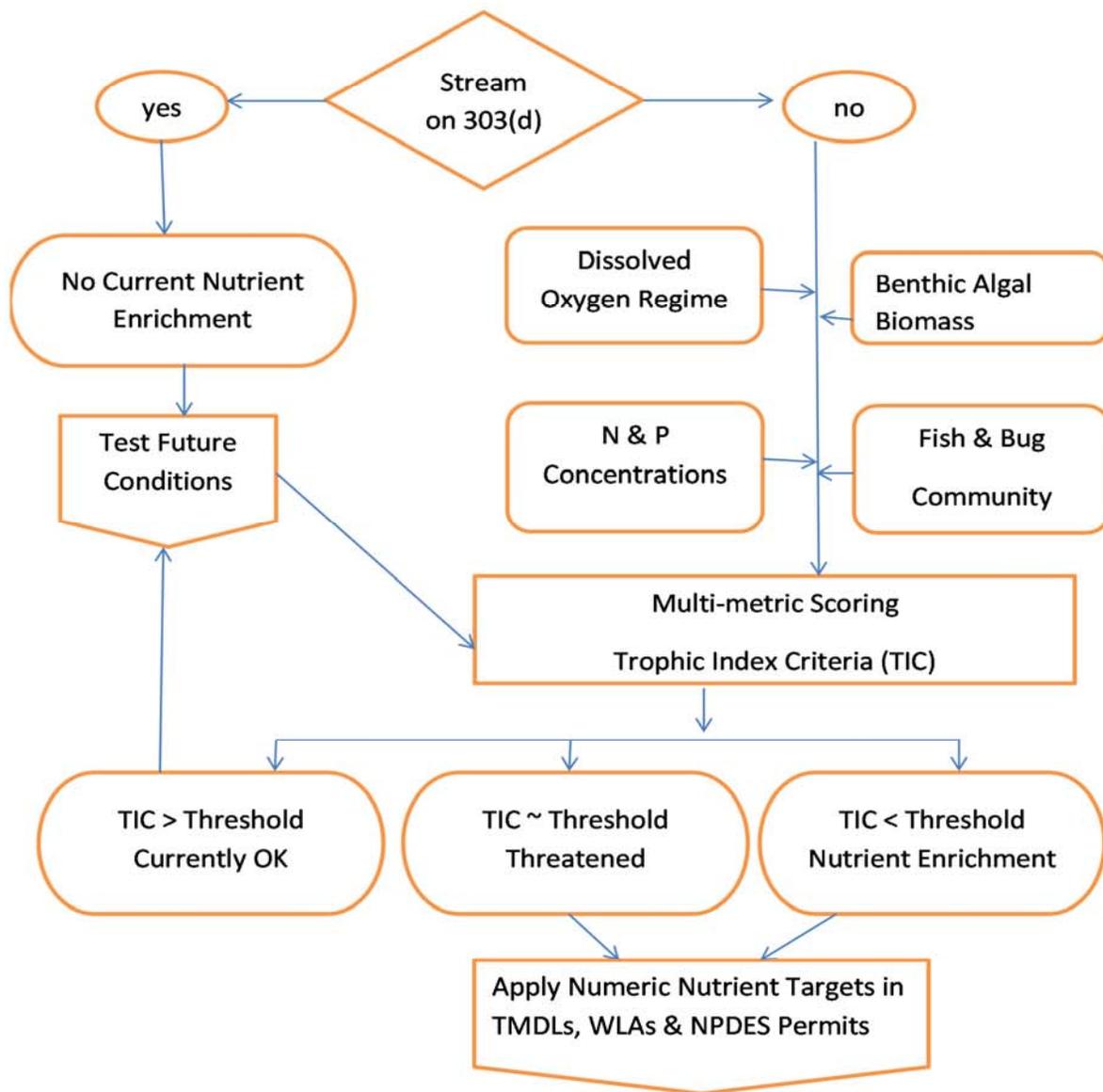
Permit results IF we applied the draft federal criteria –
What will be the results in the RIVER?

Percent ammonia reductions required at Findlay (F) and Ottawa (O) under different WQS criteria



How are Biological Criteria Used?

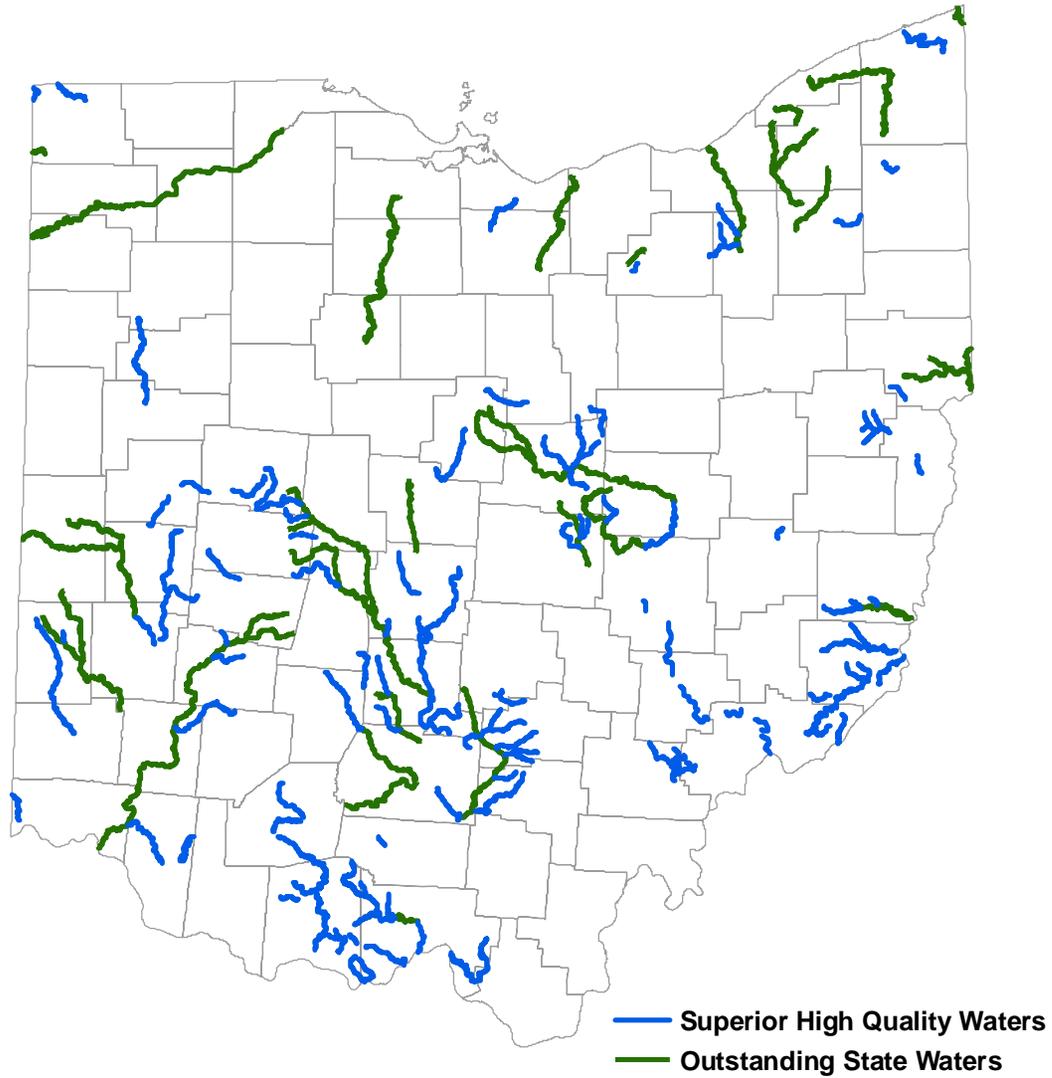
- 303(d) listing
- Development of Nutrient Criteria
 - Designed to link criteria and nutrient reductions with in-river results
- Trophic Index Criterion



Antidegradation

- How we keep clean water clean --
- 1 – No loss of “use”
- 2 – Review decisions that increase pollution loads
- 3 – Identify best of the best
 - Reserve a fraction of the pollution assimilation capacity
 - These waters kept cleaner for future generations

Ohio's Cleanest Streams



Questions?



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