

# Strategic Research Initiative Water Quality

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Nutrient Standards Forum

October 23, 2007



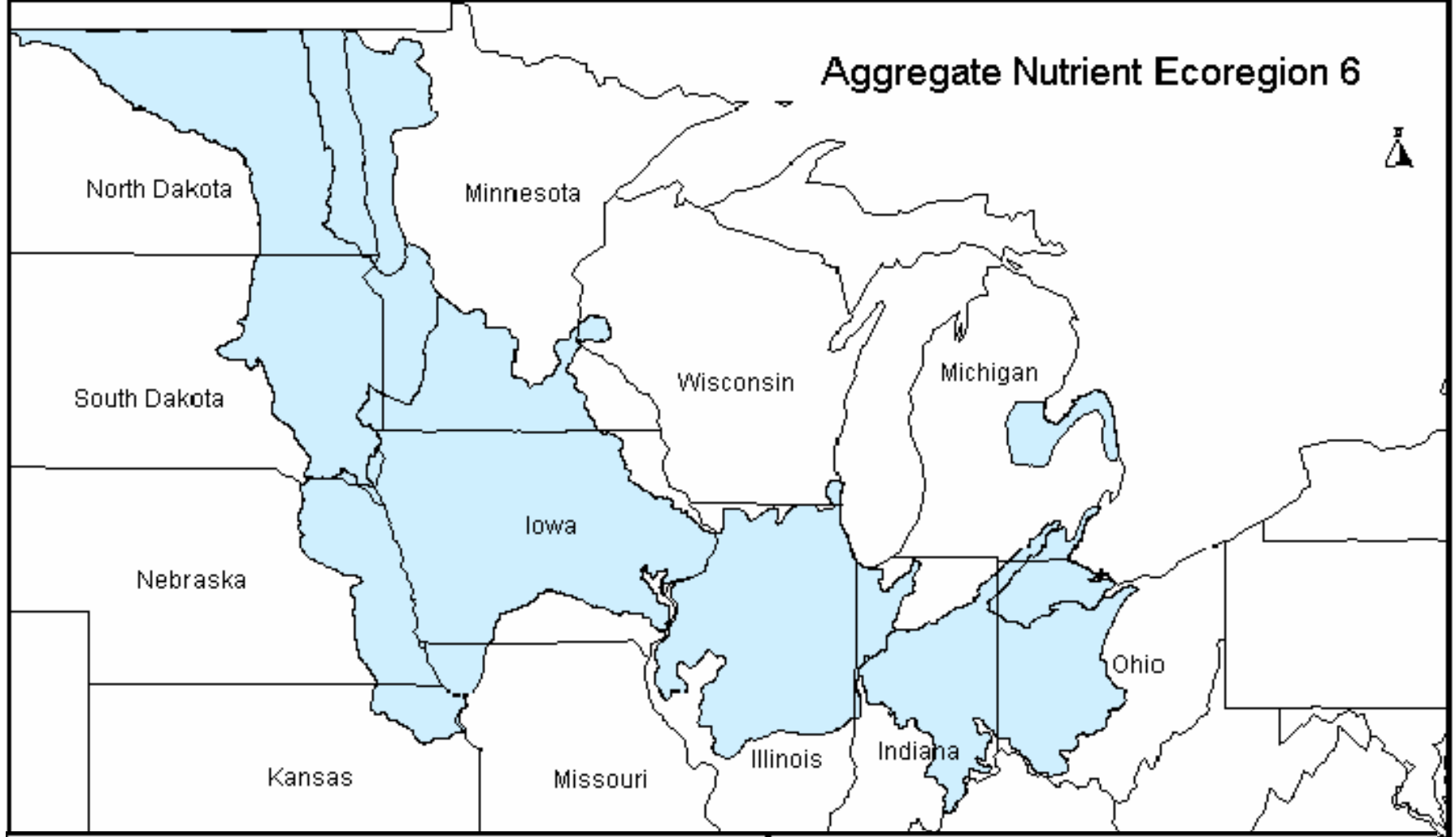
# Ambient Water Quality Criteria Recommendations

Information Supporting the Development  
of State and Tribal Nutrient Criteria

## Individual States:

1. Adopt Recommendations
2. Develop their own Standards

## Aggregate Nutrient Ecoregion 6



### Nutrient Parameters

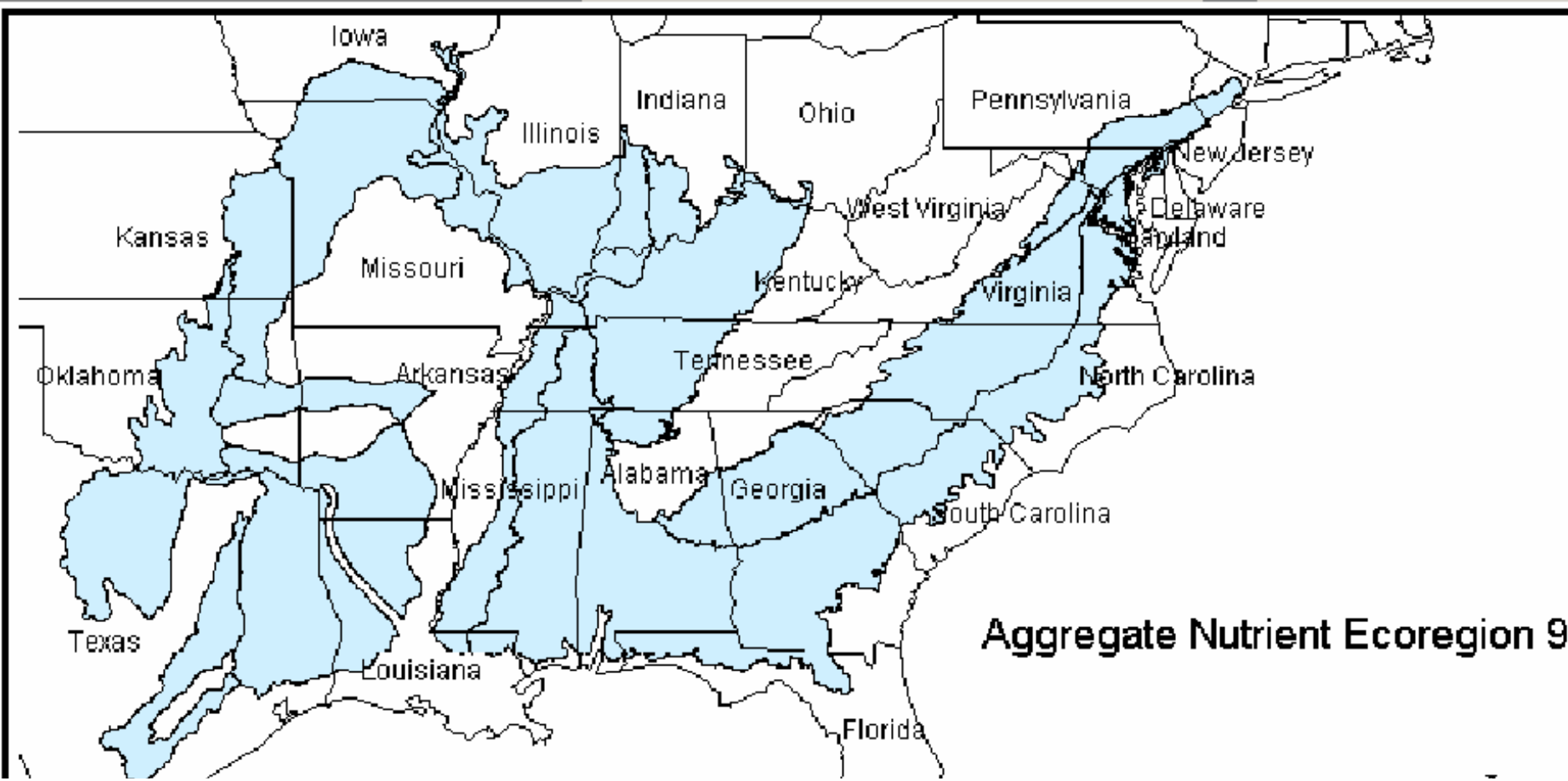
### Aggregate Nutrient Ecoregion VI Reference Conditions

Total phosphorus ( $\mu\text{g/L}$ )

76.25

Total nitrogen ( $\text{mg/L}$ )

2.18



**Aggregate Nutrient Ecoregion 9**

Nutrient Parameters	Aggregate Nutrient Ecoregion IX Reference Conditions
Total phosphorus ( $\mu\text{g/L}$ )	36.56
Total nitrogen (mg/L)	0.69

How to develop nutrient standards that are protective of water quality, but are also realistic and achievable?

Focus on phosphorus



What's New

Organization

Calendar

News

Research

Links

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Topics

Overview

External Competitive Grants Program

Strategic Research Initiatives (SRIs)

Research Calendar

Research Focus Areas

Research Portfolios

Research Reports

Research Partners

### Strategic Research Initiative (SRI) Program

In 1998, C-FAR established the Strategic Research Initiative (SRI) Program to implement a targeted, multidisciplinary, and multi-institutional team approach to addressing major concerns and opportunities for Illinois' food, agricultural, and related industries and consumers. This unique approach encourages collaboration among the state universities and other research entities throughout Illinois and brings together the state's top scientists to work together for a common cause.

The following SRIs were selected for funding beginning in FY04. Total funding amounts are provided below.

#### Projects Funded through the FY05 Strategic Research Initiative Program

<http://www.ilcfar.org>

# Water Quality SRI Advisory Group

## Illinois Environmental Protection Agency

Gregg Good

Roy Smogor

Bob Mosher

Bruce Yurdin

Matt Short

Paul Terrio

## Illinois Department of Agriculture

Dennis McKenna

# Water Quality SRI

1. Identify critical research needs
2. Develop request for proposals
3. Evaluate and select projects
4. Regular meetings and updates

# Water Quality SRI Collaborators

- Metropolitan Water Reclamation District of Greater Chicago (MWRDGC)
- Bloomington-Normal Water Reclamation District
- Oak Ridge National Laboratory
- The Nature Conservancy
  
- Additional funding provided by the Illinois Illinois Environmental Protection Agency through Section 319 of the Clean Water Act.

# Strategic Research Initiative Water Quality



Nutrient Concentration



Increased Algal Growth



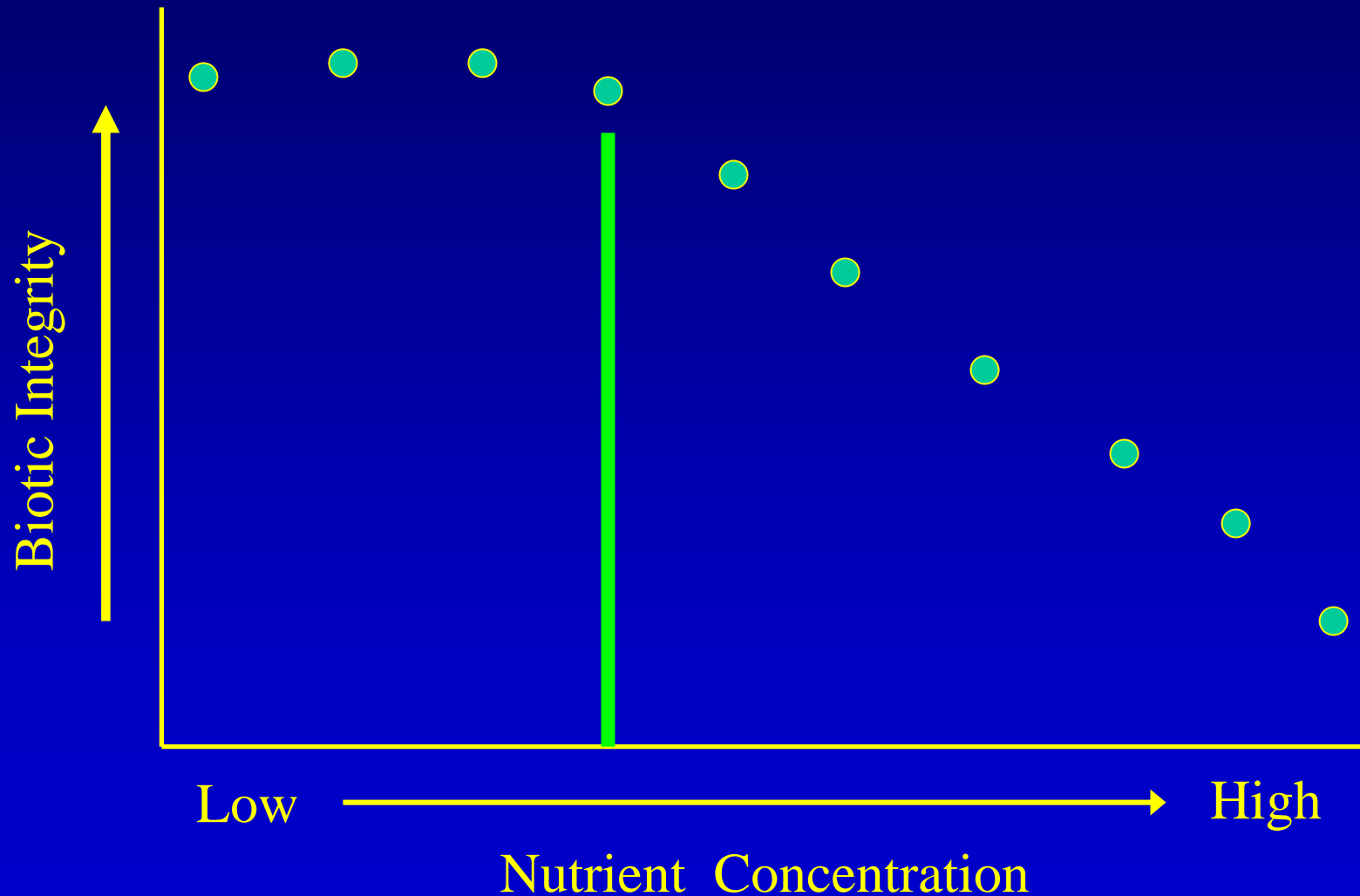
Low Dissolved Oxygen



Biotic Impairment

# Nutrients and Biotic Integrity

Is there a simple and direct relationship?



# Water Quality SRI Teams

- Mark David  
University of Illinois
- Walter Hill  
Illinois Natural History Survey
- Bill Perry  
Illinois State University
- Mike Machesky  
Illinois State Water Survey



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