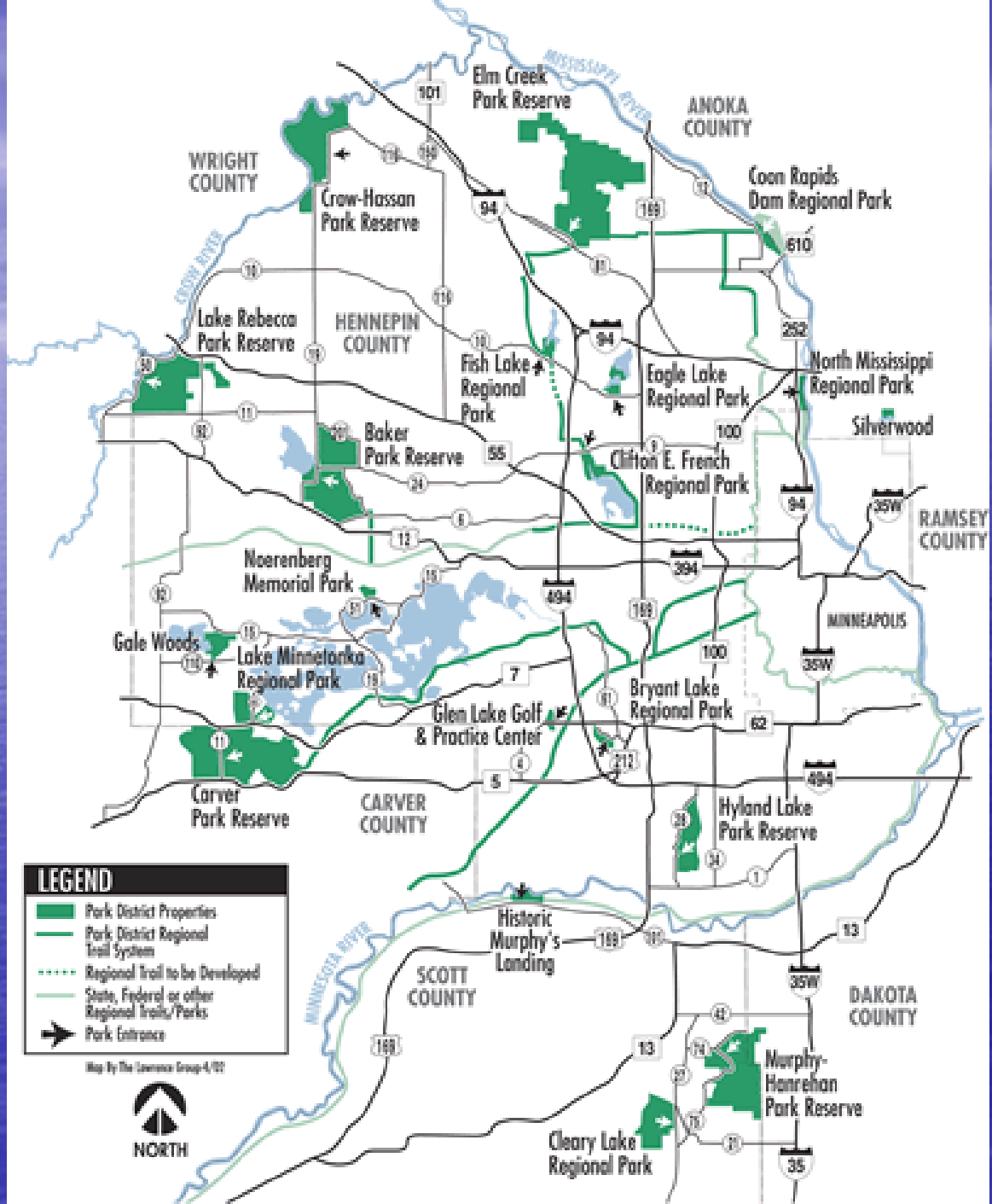


# A Tale of Many Cities

Working with City Councils to  
Protect and Improve Water  
Quality



**LEGEND**

- Park District Properties
- Park District Regional Trail System
- Regional trail to be Developed
- State, Federal or other Regional trails/Parks
- Park Entrance

Map By The Lawrence Group 4/07



# Three Rivers Park District

- Manage 27,000 Acres of Land
- 20 Lakes, 7 streams, Many wetlands
- Approximately 6 million visitors/year
- Co-manage with 35 municipalities, 10 watershed management organizations, 5 counties
- No regulatory authority

# Characteristics of Success

- Good Data
- Organize constituent base
- Educate, Educate, Educate
- Identify Key players
- Cultivate personal relationships
- Develop personal credibility
- Show examples of benefit
- Be positive
- Be persistent

# Good Data

- Most critical component of relationship
- Identify the “real” problem
- Have rigorous QA/QC program
- Must be able to withstand attacks
- Need to be statistically valid – even citizen monitoring programs

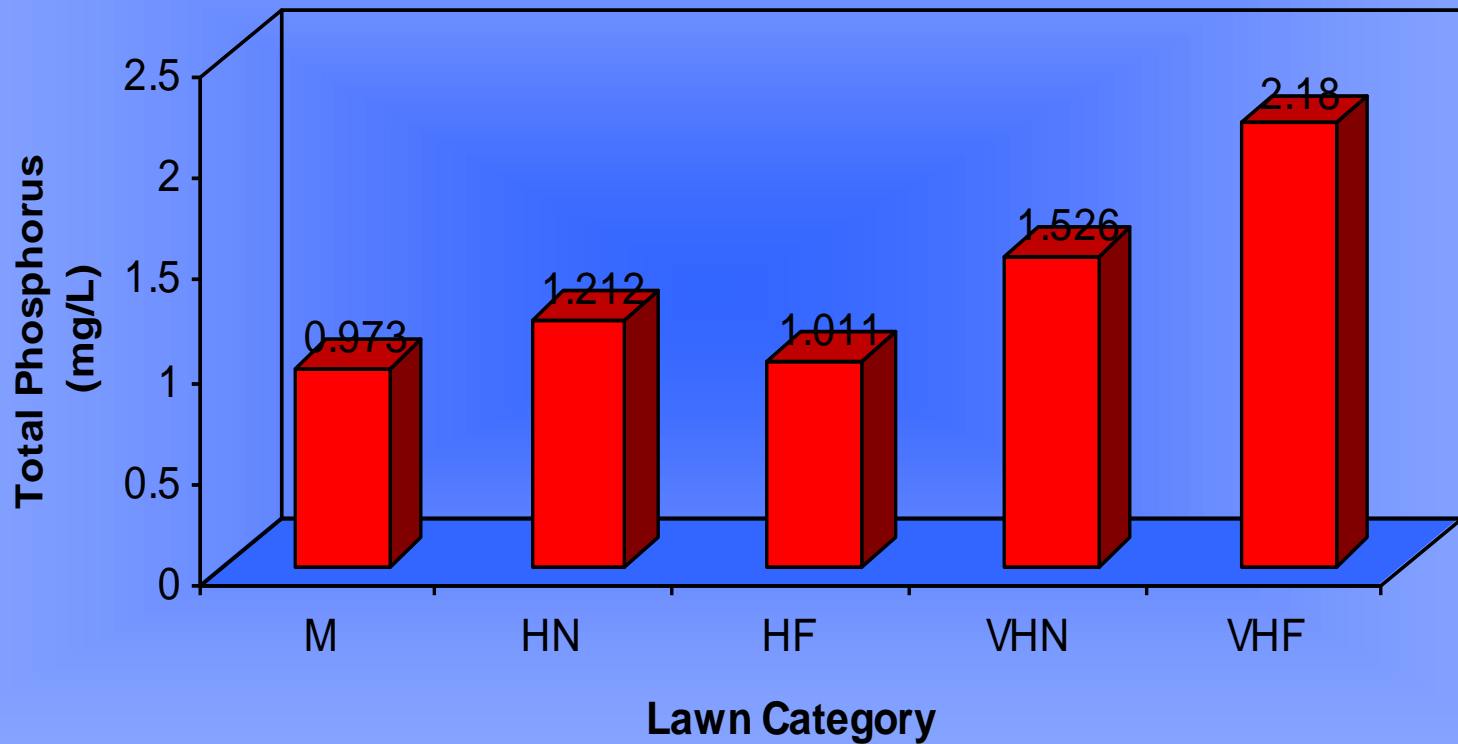
# Submergent Plants



# Good Data

- Most critical component of relationship
- Identify the “real” problem
- Have rigorous QA/QC program
- Must be able to withstand attacks
- Need to be statistically valid – even citizen monitoring programs

## Average Phosphorus Levels in Lawn Runoff





# P-Free Fertilizer Reduction Potential

	<b>TP</b>		<b>SRP</b>	
	<u><b>0-2cm</b></u>	<u><b>&gt;2cm</b></u>	<u><b>0-2cm</b></u>	<u><b>&gt;2cm</b></u>
<b>Mean Event Export (P-used)</b> (g/ha/cm)	<b>33.2 ± 15.9</b>	<b>23.1 ± 3.2</b>	<b>11.3 ± 7.4</b>	<b>15.2 ± 2.8</b>
<b>Mean Event Export (P-free)</b> (g/ha/cm)	<b>35.9 ± 7.9</b>	<b>18.7 ± 2.3</b>	<b>12.5 ± 3.8</b>	<b>7.9 ± 1.9</b>
<b>Mean Event Difference</b>	<b>0</b>	<b>5.2 ± 3.8</b>	<b>0</b>	<b>8.1 ± 3.5</b>

**% Annual Reduction**

**12 -16 %**

**24 – 34 %**

# Good Data

- Science
- Not Values
- Global climate change – opposition to data was and is value driven

# Nutrient Production by Livestock in the Lake Independence Watershed

<b>Manure (wet)</b>	<b>19.2 Million Lbs</b>
<b>Phosphorus</b>	<b>16,746 Lbs</b>
<b>Nitrogen</b>	<b>85,186 lbs</b>



# TMDL Decision Process

- Science
  - TMDL Number = 1091
  - Sources of TP loading
  - Monitoring and modeling data
  - BMP effectiveness

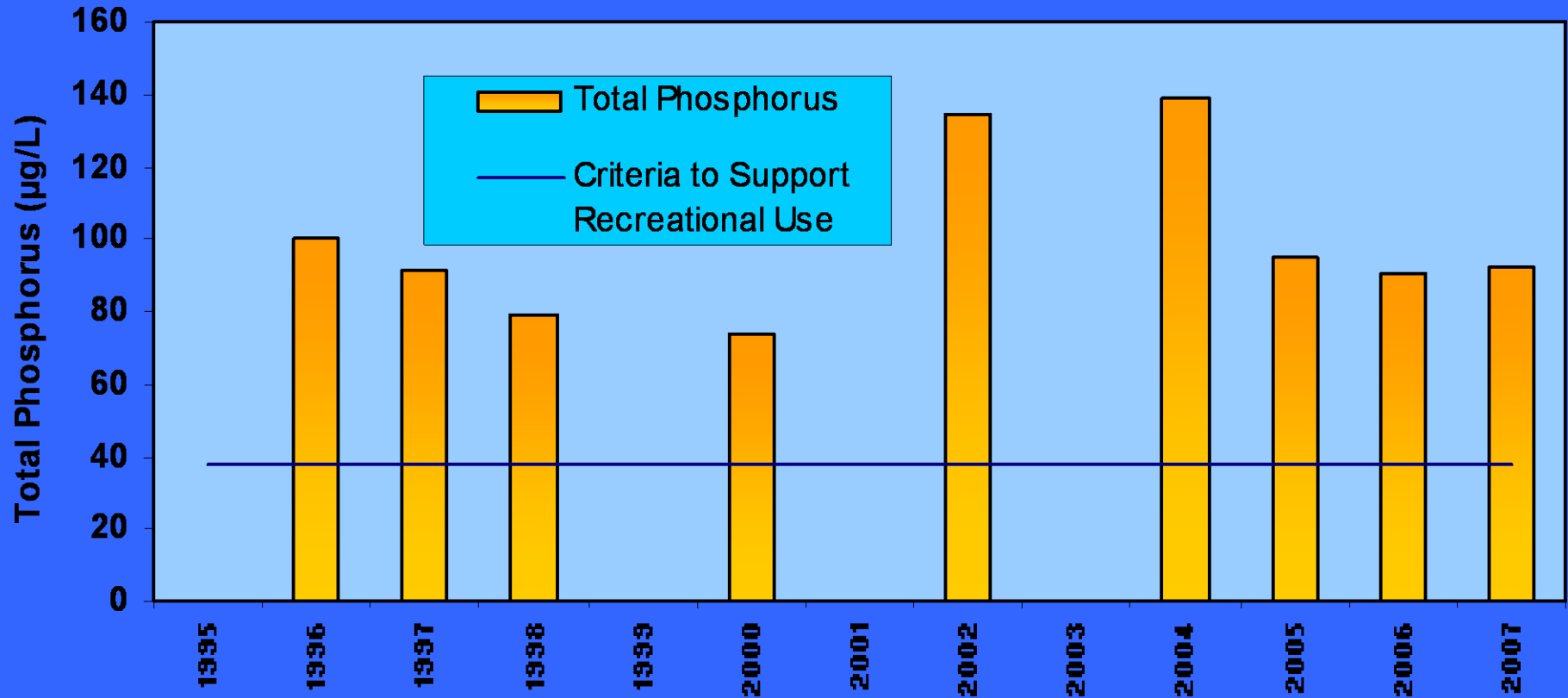
# TMDL Decision Process

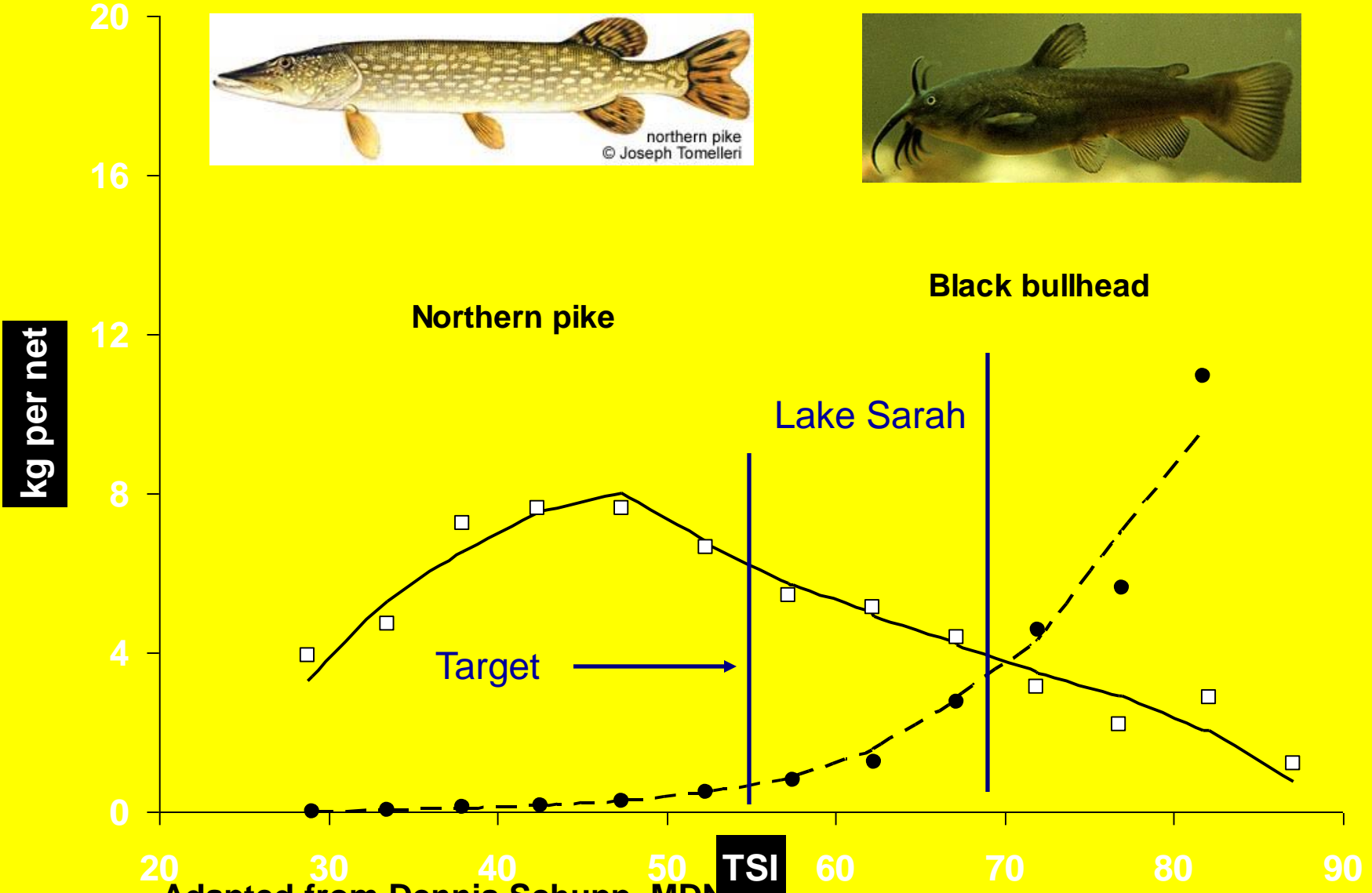
- Values
  - How much TP reduction from each city
  - BMP selection
  - Source reduction or stormwater treatment
  - Regulation or voluntary cooperation
  - Cost based or social acceptability

# Educate, Educate, Educate

- Knowledgeable Council more likely to take action
- Difficult because of turnover – Repeat constantly
- Must understand problems and possible solutions
- Must get councils to distinguish between data and values
- Must present data in understandable format

## Year Averages Total Phosphorus





Adapted from Dennis Schupp, MDNR



# Planktonic Algae



# Organize Constituent Base

- Property owners, homeowners, business community, fishing community, recreational users
- Voters count
- Need them to attend meetings, lots of meetings
- Articulate spokesperson – person needs to be rational

# Identify Key Players

- Council member preferred
- Municipal staff
- Consultant
- Need to be advocate for water quality
- Need to be or become knowledgeable
- Need to have credibility with council

# Cultivate Personal Relationships

- Be professional
- Provide Key Players with the tools to help your cause
- Take some of the heat (Be the bad guy)
- Do not need to socialize, but need to respect each other
- Provide them with assistance in other areas

# Develop Credibility

- Be professional
- Be honest
- Don't promise what you cannot deliver
- Enlist outside help when appropriate – An expert is some who lives more than 40 miles away
- HAVE GOOD DATA
- Be Prepared!!!!!!



Soil Test Results

Sample Designation	Soil Texture	Soil pH	Buffer Index	Organic Matter	P Phosphorus (ppm)	K Potassium (ppm)	Soluble Salts (mmhos)
PL 32	MEDIUM	7.6		MEDIUM	(OLSEN) 46 PPM X 2 = LB/ACRE	74	

INTERPRETATION OF SOIL TESTS



RECOMMENDATIONS FOR HOME LAWN

LIME RECOMMENDATION: 0 LBS/1,000 SQ.FT. GRASS NOT WATERED CLIPPINGS M  
 TOTAL AMOUNT OF EACH NUTRIENT TO APPLY PER YEAR:  
 NITROGEN 1 LB/1000 SQ.FT. PHOSPHATE 0 LB/1000 SQ.FT. POTASH 1 LB/1000

THE APPROXIMATE RATIO OF PROPORTION OF THESE NUTRIENTS IS: 5-0-5 OR 10-0-10  
 USE A FERTILIZER WITH THE PERCENTAGE OF NUTRIENTS CLOSEST TO THE ABOVE RATIO.  
 APPLY ACCORDING TO THE INSTRUCTIONS ON THE FERTILIZER BAG OR CONTAINER, OR DETERMINE THE  
 REQUIRED FROM THE INSTRUCTIONS GIVEN ON THE BACK SIDE OF THIS REPORT. SINCE MEETING THE  
 AMOUNT REQUIRED FOR EACH NUTRIENT WILL NOT BE POSSIBLE IN MOST CASES, IT'S MORE IMPORTANT  
 THE AMOUNT OF NITROGEN REQUIRED AND COMPROMISE SOME FOR PHOSPHATE AND POTASH.  
 APPLY TOTAL AMOUNT AT ONE TIME IN SEPTEMBER.

\* CAUTION DO NOT APPLY MORE THAN 1 LB NITROGEN PER 1000 SQ.FT. IN ONE APPLICATION TO  
 BURNING THE GRASS UNLESS A SLOW RELEASE FORM OR ORGANIC FERTILIZER IS USED. IT IS RECOMM  
 UP TO 50 PERCENT OF THE NITROGEN OF THE SLOW RELEASE FORM

# Show Examples of Benefits

- Reduced algae blooms
- Better fishing
- Tie to cost of inaction
- Tie to cost of alternatives



**STOP  
CLOSED**



*Based on recent monitoring for E. coli bacteria  
Serious risk of illness may be present*

**THIS AREA IS CLOSED  
TO SWIMMING**

FOR MORE INFORMATION:

1-800-441-4636 ext. 1460

[www.wibeaches.us](http://www.wibeaches.us)

# Planktonic Algae



# Be Positive

- Need to sell water quality management programs
- Difference between scientific uncertainty and management uncertainty – BMP implementation will improve conditions
- If you always do what you have always done, you will always get what you have always got

# Be Persistent

- Impacts occur over decades, improvements will need just as long
- If is the right thing, keep asking
- Generate more data if necessary
- Enlist more support - voters

