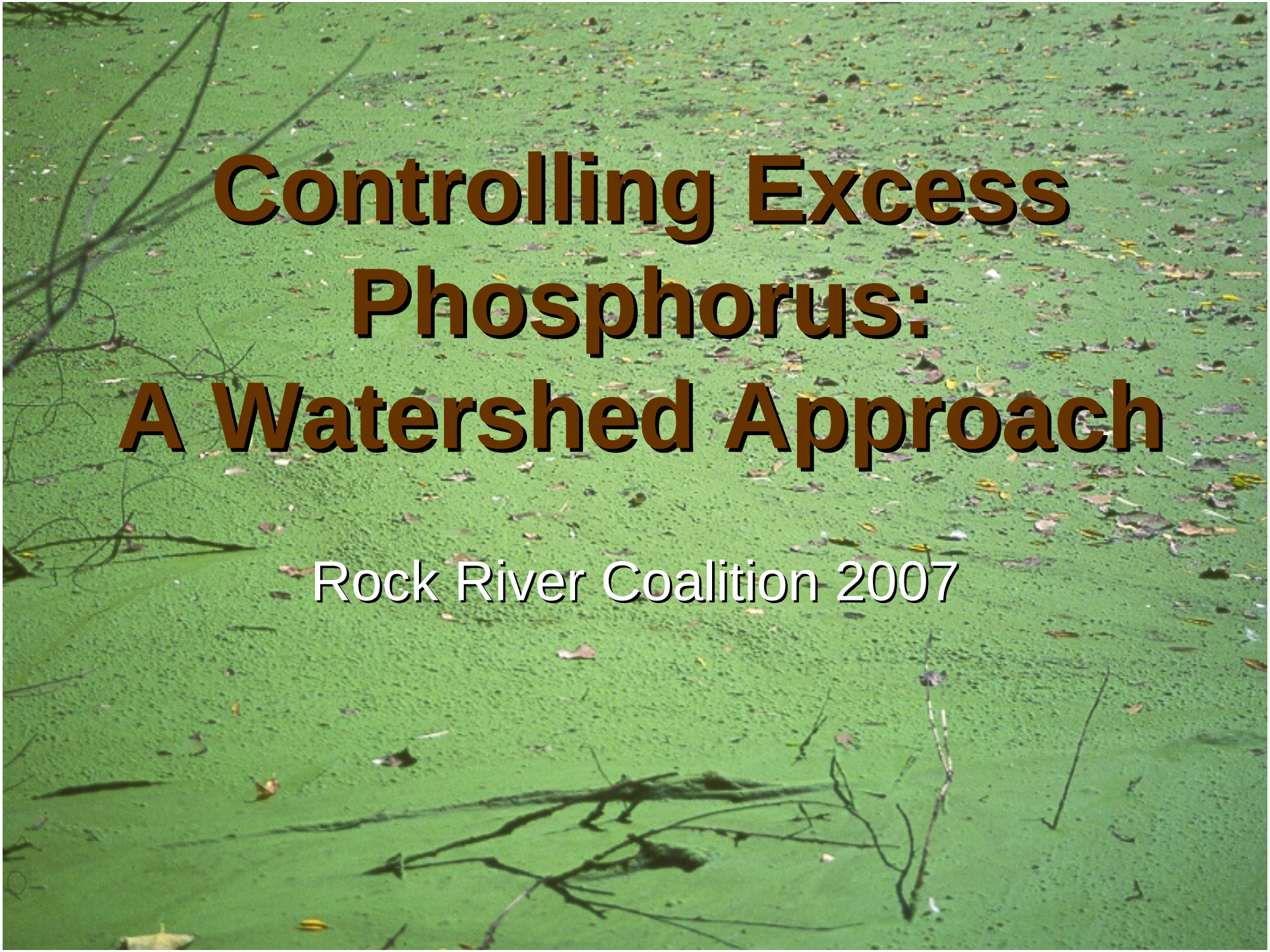
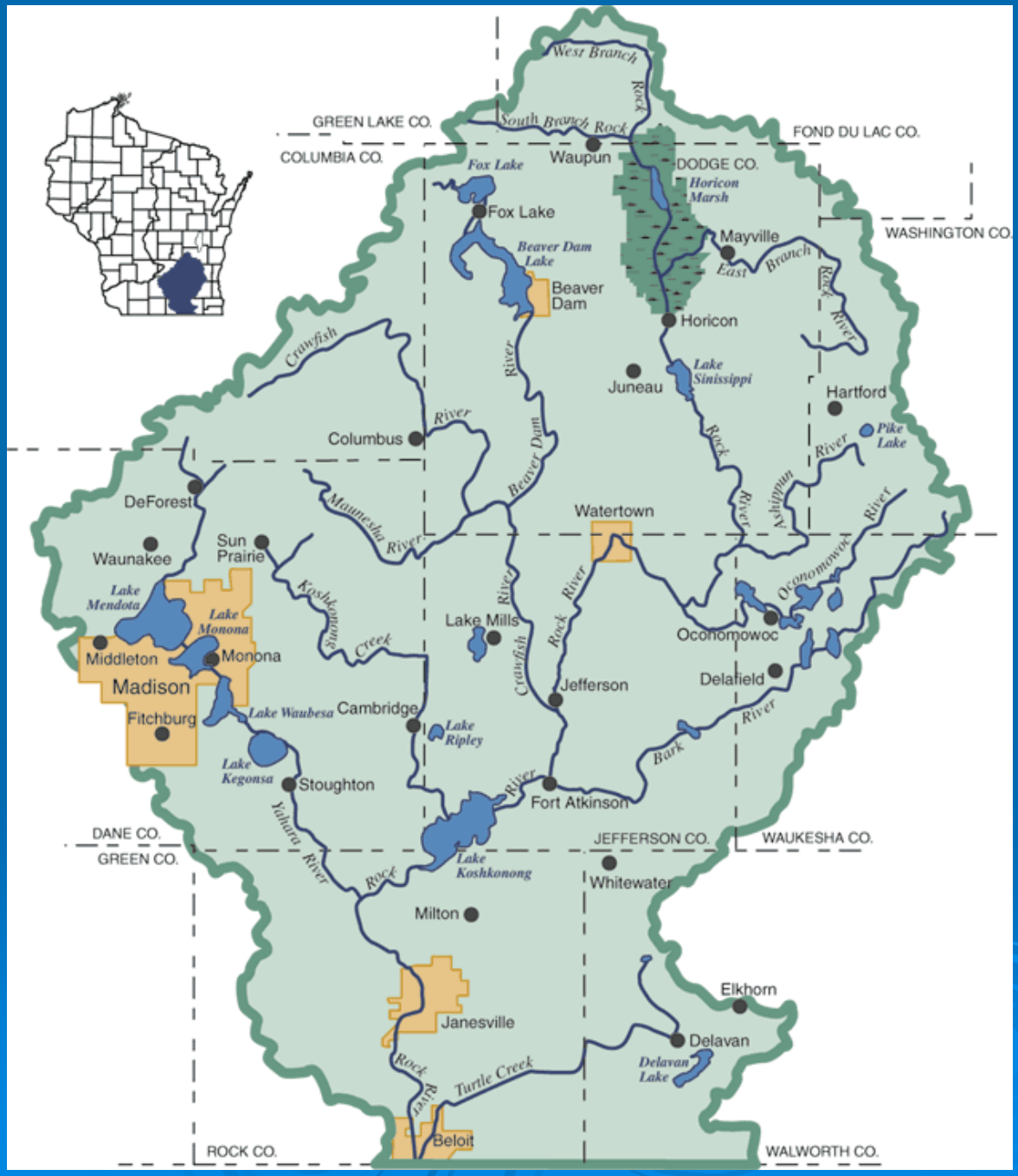


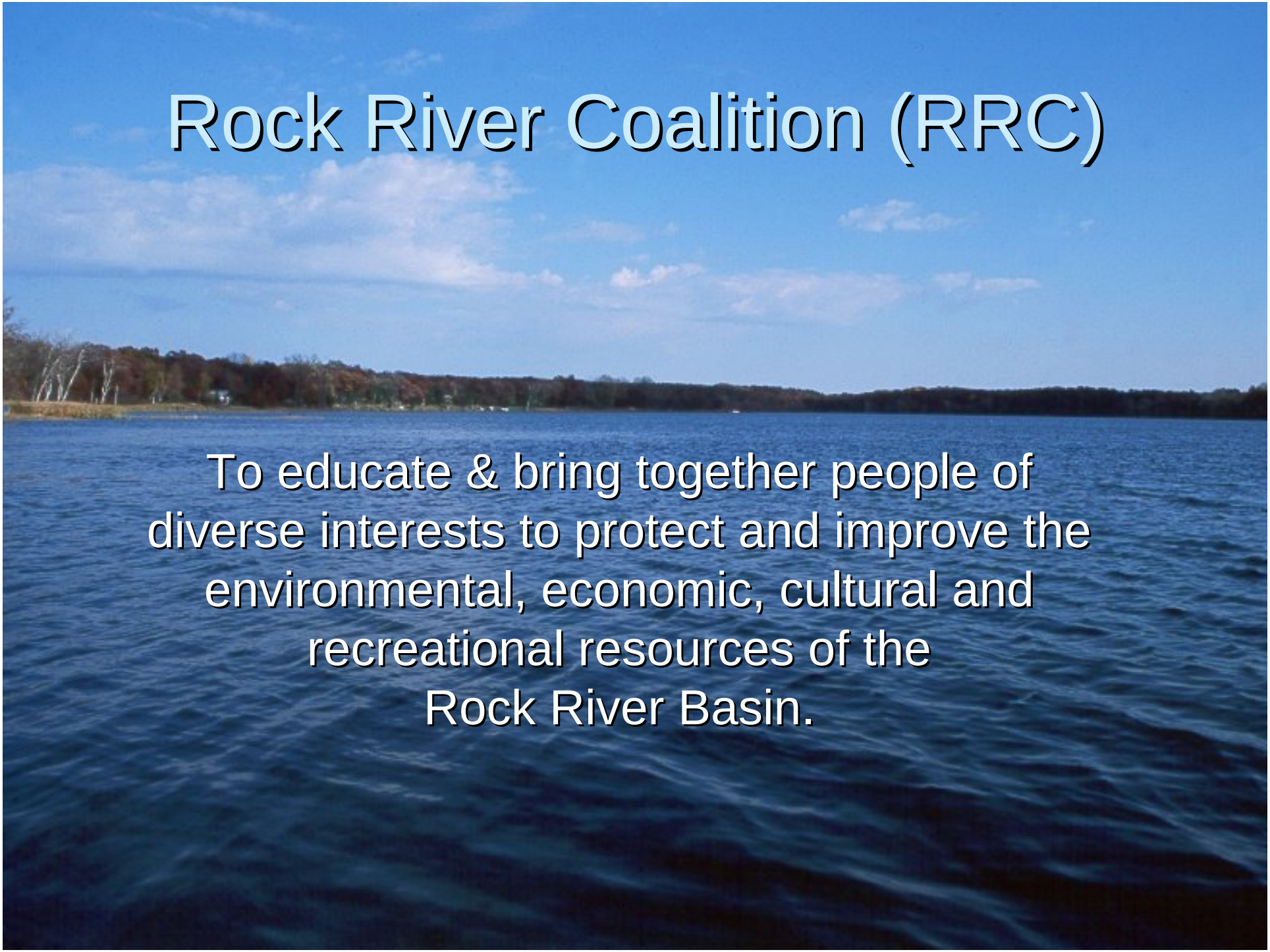
Controlling Excess Phosphorus: A Watershed Approach

Rock River Coalition 2007

Rock River Basin

Partnerships make things happen in the Rock River Basin





Rock River Coalition (RRC)

To educate & bring together people of diverse interests to protect and improve the environmental, economic, cultural and recreational resources of the Rock River Basin.

Wisconsinites Love Their Lakes

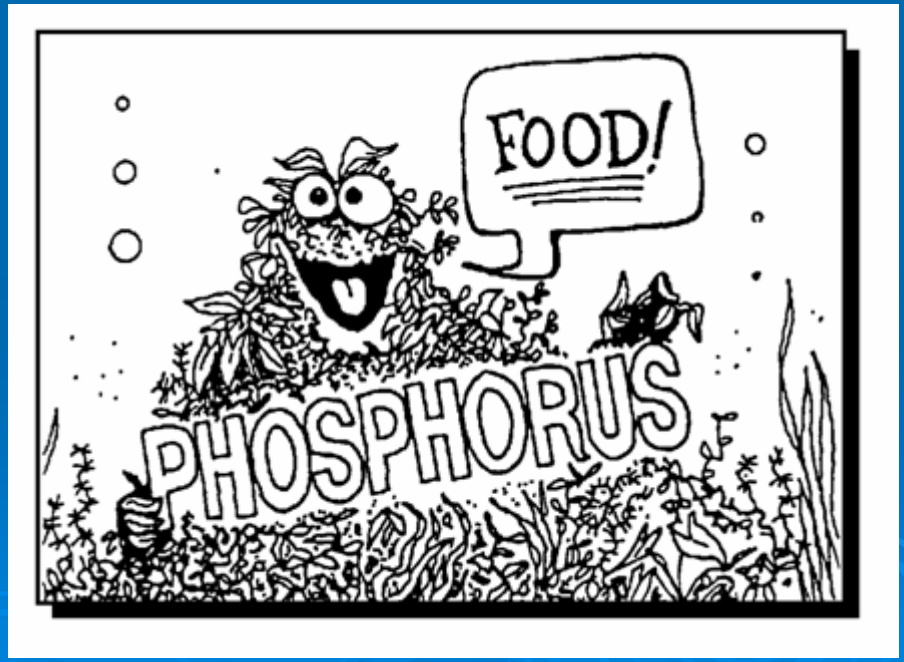
Wisconsin Lakes

Wisconsin has the third highest concentration of lakes in the world


Excessive Plants and Algae

Tied Together

- Our excess plant growth is tied together by two things:
  - Sediment
  - Phosphorus



Explosive Algae Blooms

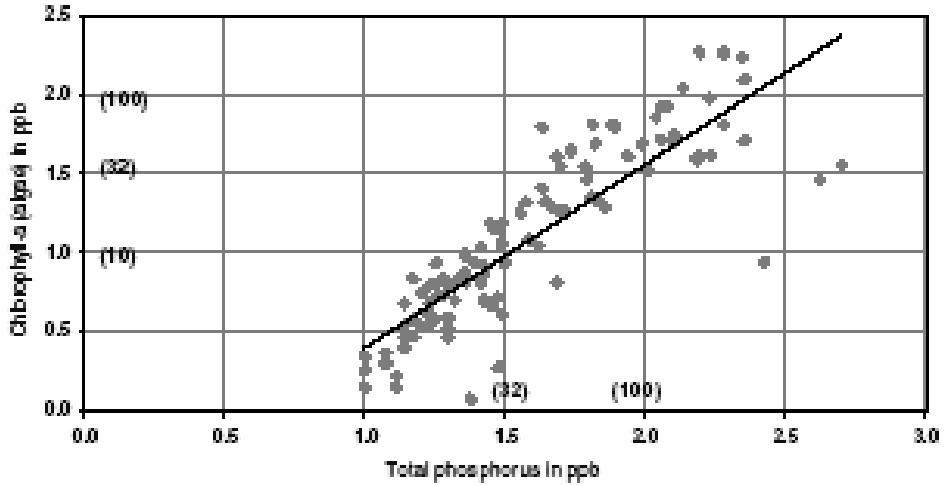
Sediment Encourages Rooted Plants


Low Oxygen → Fish Kills

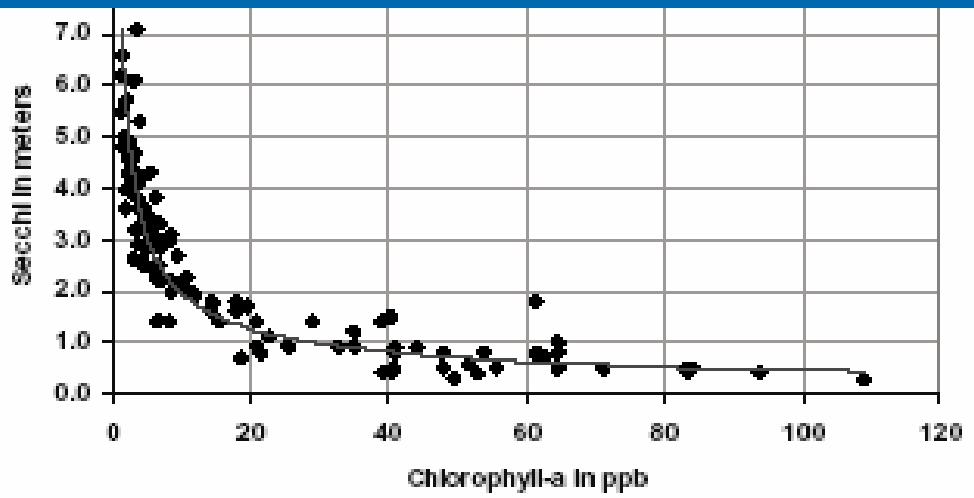

CAUTION
WATER QUALITY ADVISORY
This water may contain blue-green algae capable of producing toxins that can be dangerous to humans and pets.
FOR YOUR SAFETY
• If water is cloudy, looks like green paint or pea soup, or has a floating scum layer or floating clumps
-Do not swim or swallow water
-Do not allow pets to swim or drink
-Do not allow children to play in scum layer from shoreline
• Rinse off after swimming
For more information please contact the
Dane County Division of Public Health at (608) 242-6515

As the total amount of phosphorus in the water increases, the amount of algae in the water increases:

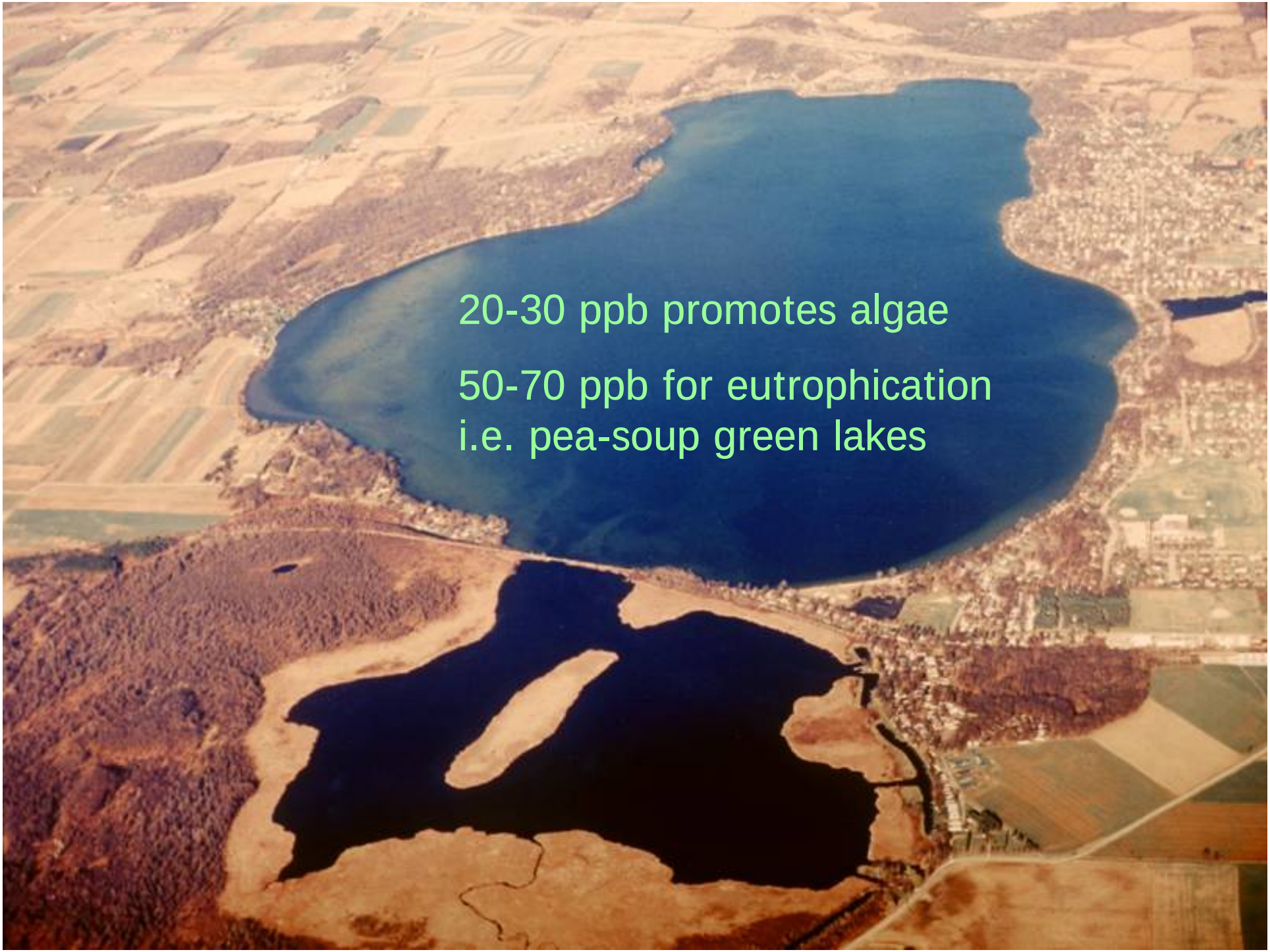
Chlorophyll-a is one measure of algae amounts

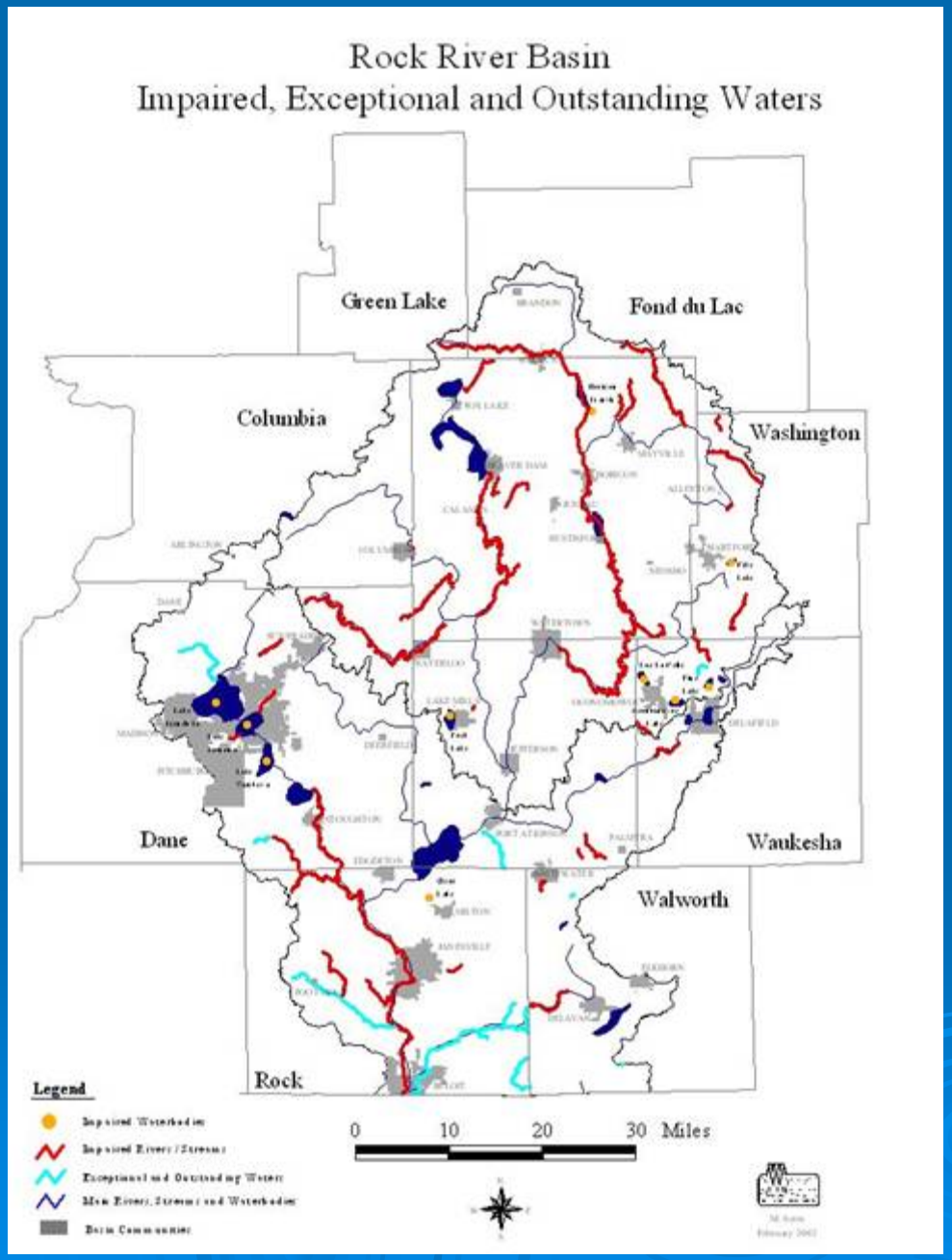


As the amount of algae in the water increased:
The clarity of the water decreases




One pound phosphorus
=
500 pounds of algae!

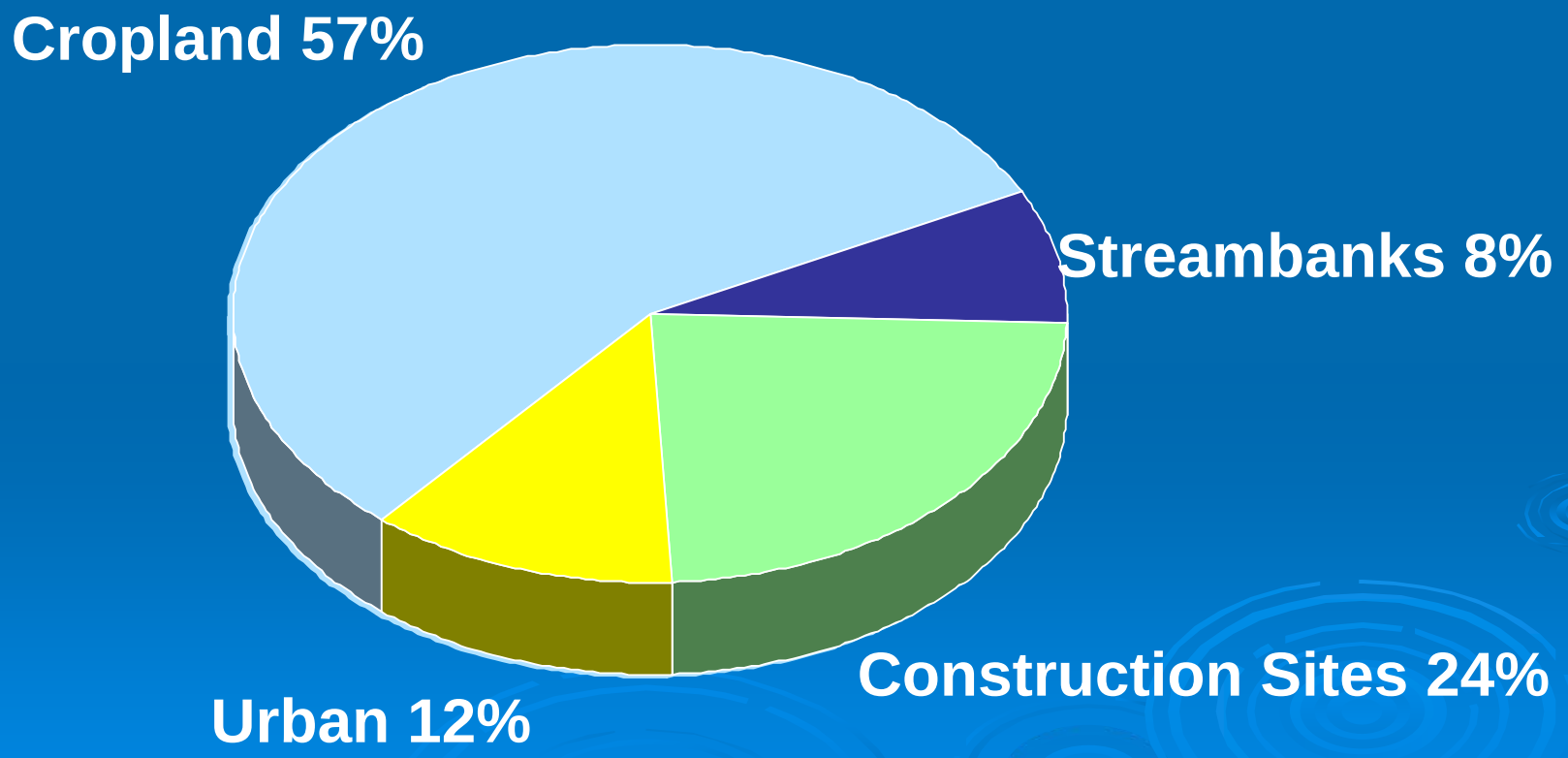

20-30 ppb promotes algae
50-70 ppb for eutrophication
i.e. pea-soup green lakes


Rock River Basin
Impaired, Exceptional and Outstanding Waters
Green Lake
Fond du Lac
Columbia
Washington
Dane
Waukesha
Walworth
Rock
Legend
0
10
20
30 Miles


Need to find all sources

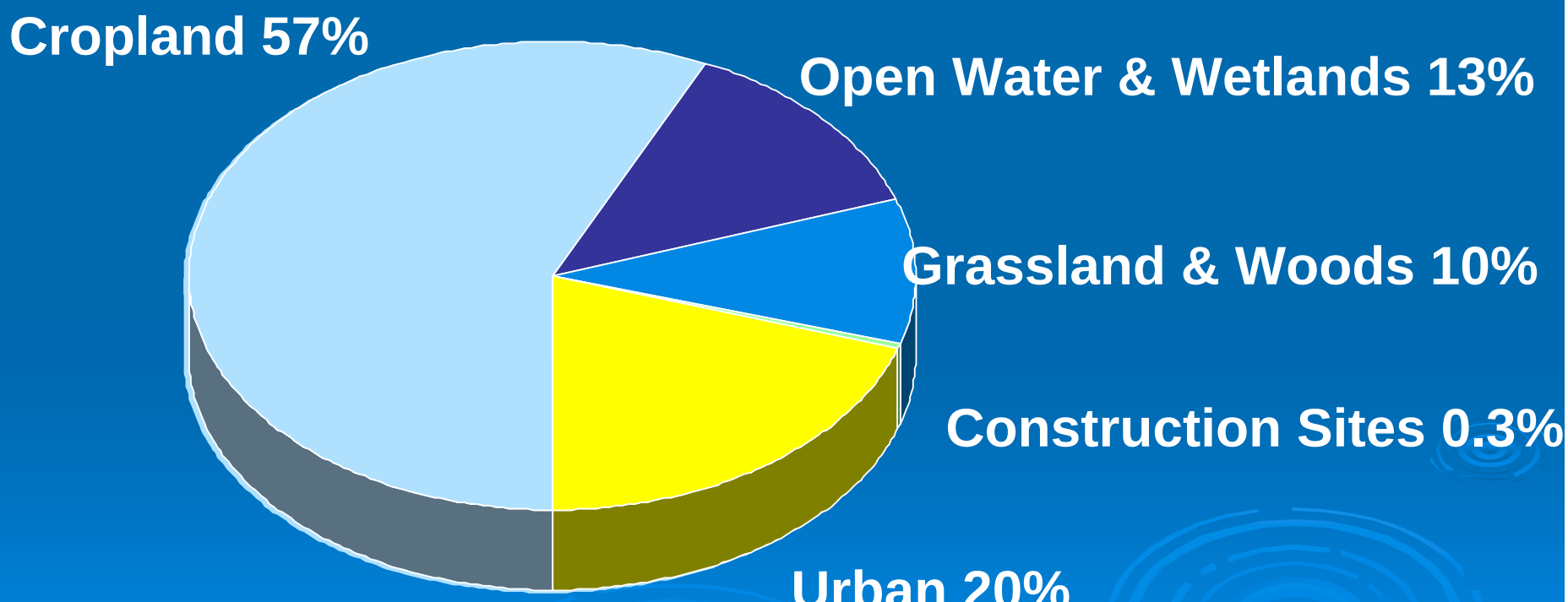
Sediment Sources

Lake Mendota Watershed - 1996



Land Uses

Lake Mendota Watershed - 1996




Phosphorus entering streams
in the Rock River Basin
Rural Stream 50 – 722 lbs/mi²
Urban Stream 127 – 1150 lbs/mi²

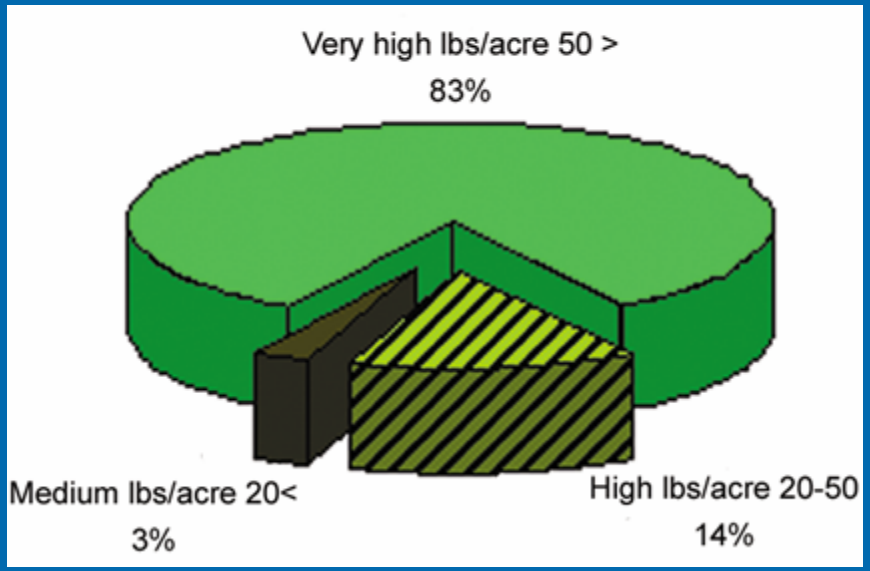
Some Agriculture Performance Standards require cost share.

Much money and effort has been spent to keep pollution out of the lakes and streams.

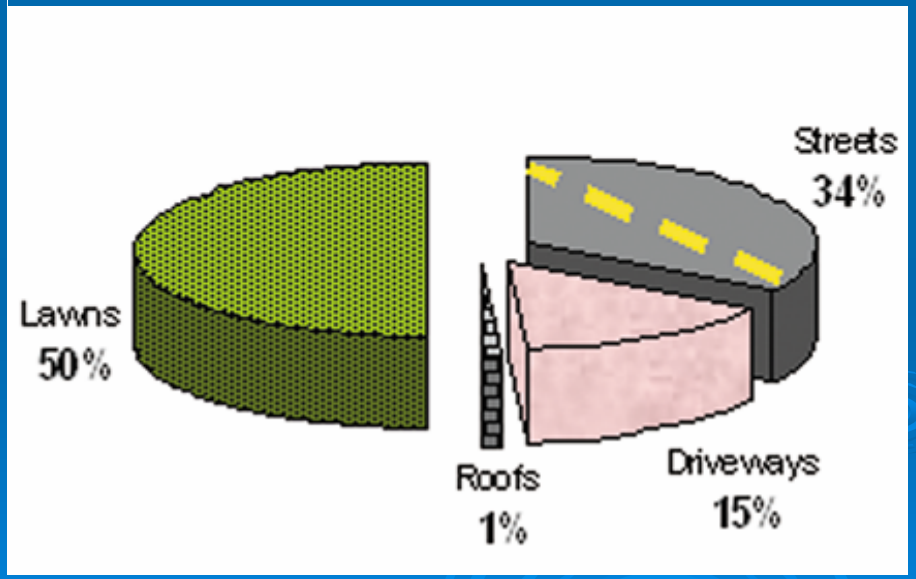
Phosphorus is Essential for Plant Growth

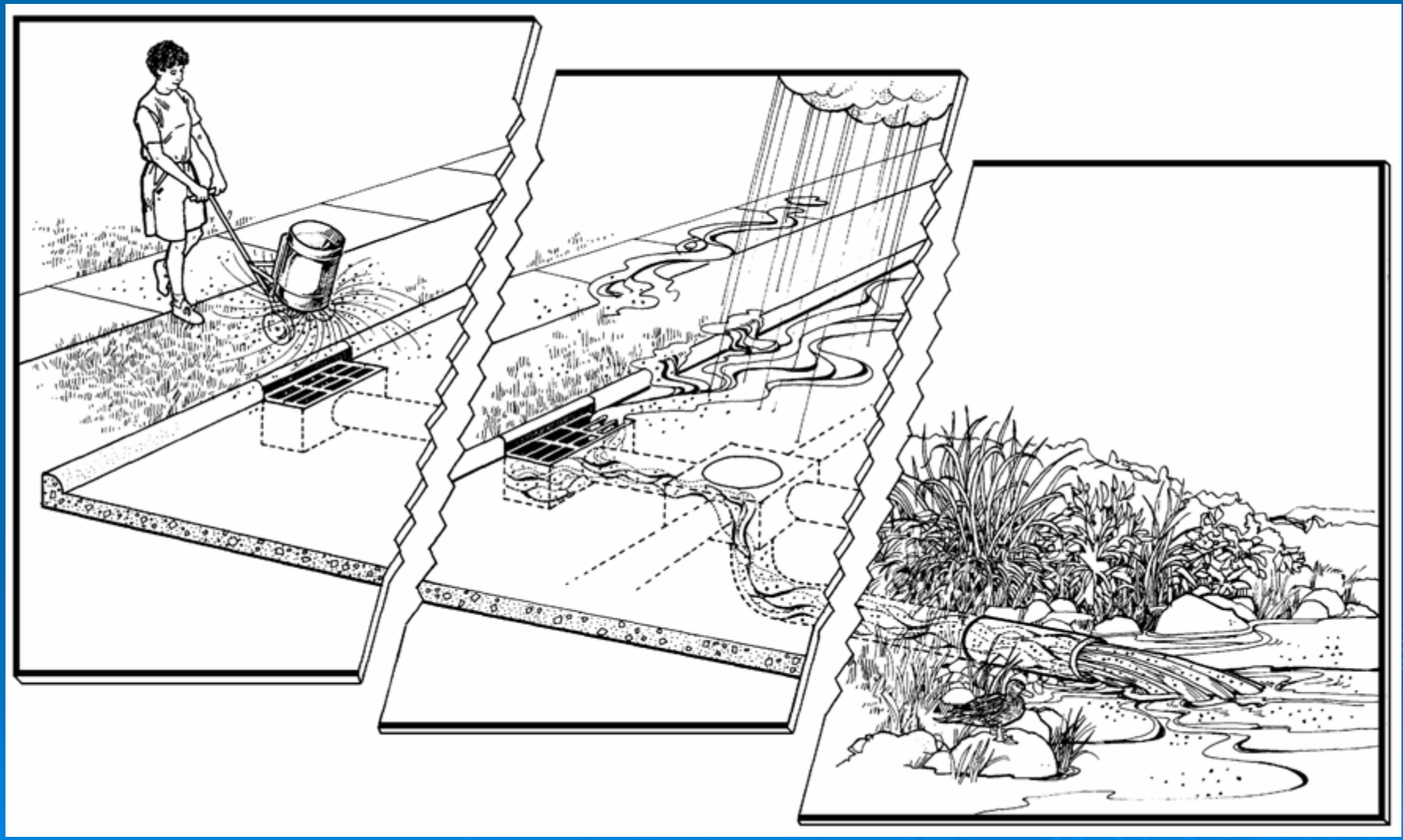

Rock River Basin
and much of Wisconsin soils are
naturally high in phosphorus
200 ppm is common

Soil Phosphorus Fertility Rating
Summary of 181 Study Lawns



Urban Residential Runoff
Total Phosphorus Sources



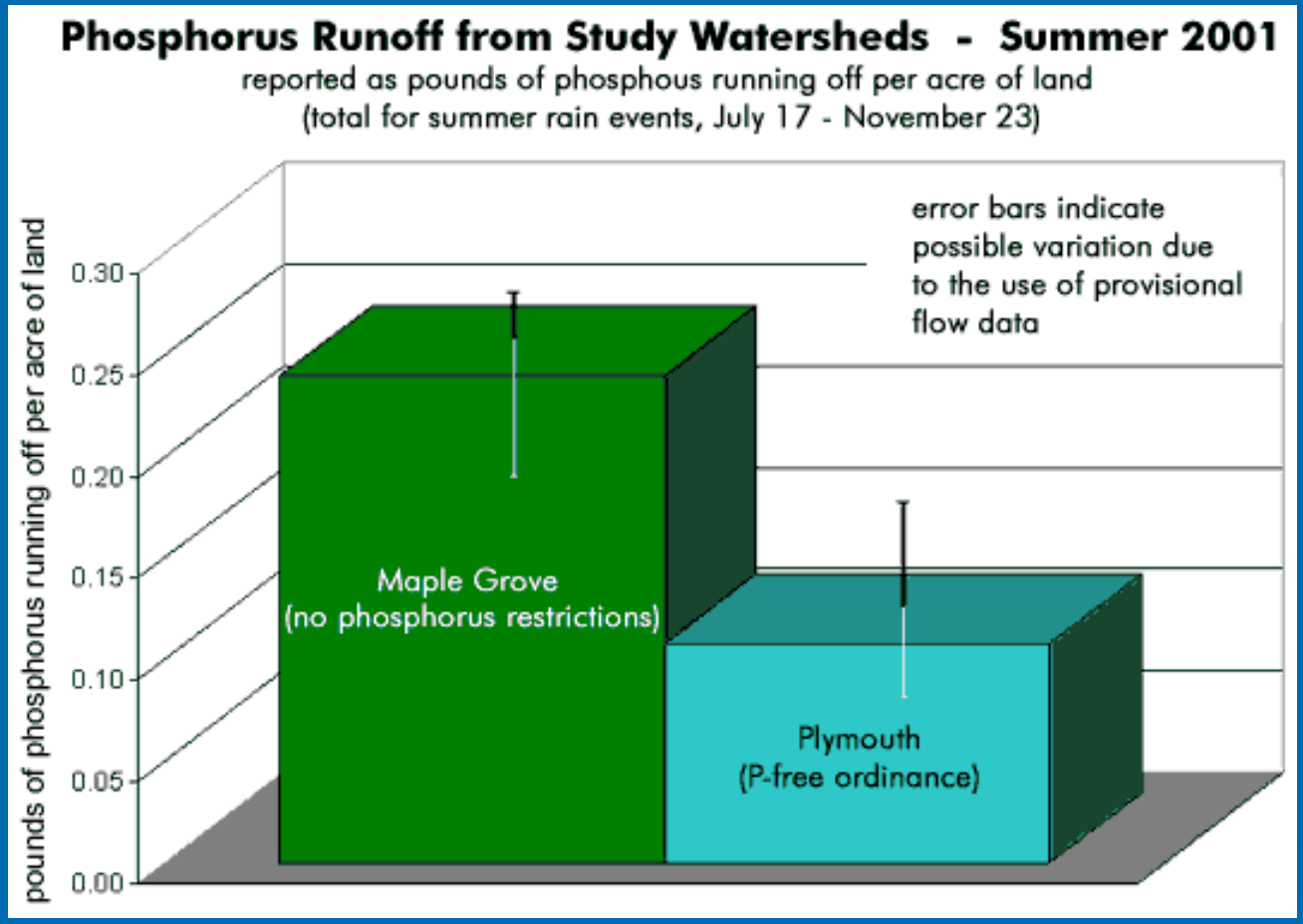


Soil P Changes Over Time

Example: Soil with P 60lbs/acre

Clippings removed
- 4.5lbs/acre/year used
- 8 years without adding P

Leave clippings
- 1.8 lbs/acre/year used
- 22 years without adding P



Community with phosphorus ban had half the run off!

20,000 square foot lawn
not using excess phosphorus means
1,000 pounds less algae!

Let's all work together for healthy rivers and lakes!

RRC Recommendation:
restrict phosphorus application in residential areas to only new lawns, lawns where a soil test shows a need, and of course allow application to fruits, flowers, trees, shrubs and vegetables.

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UW–Extension
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Photos and graphics by:
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For more information

Joe Dorava, RRC President
jdor@vierbicher.com

Suzanne Wade: UWEX
Rock River Basin Educator
920-674-8972
suzanne.wade@ces.uwex.edu

Ed Grunden, RRC
Monitoring Director
920-674-7443
ed@rockrivercoalition.org