The Rock River Coalition and its efforts to reduce Phosphorus Input to Lakes

Joe Dorava, President

Rock River Coalition

April 28, 2007

Rock River Coalition

Rock River Basin

Partnerships make things happen in the Rock River Basin

Rock River Coalition

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.

RRC Action Projects

- ● Shoreline restoration projects
- ▲ Rain garden installations
- ★ Citizen stream monitoring locations: 80 monitors in 2006 plus 30 wetland monitors

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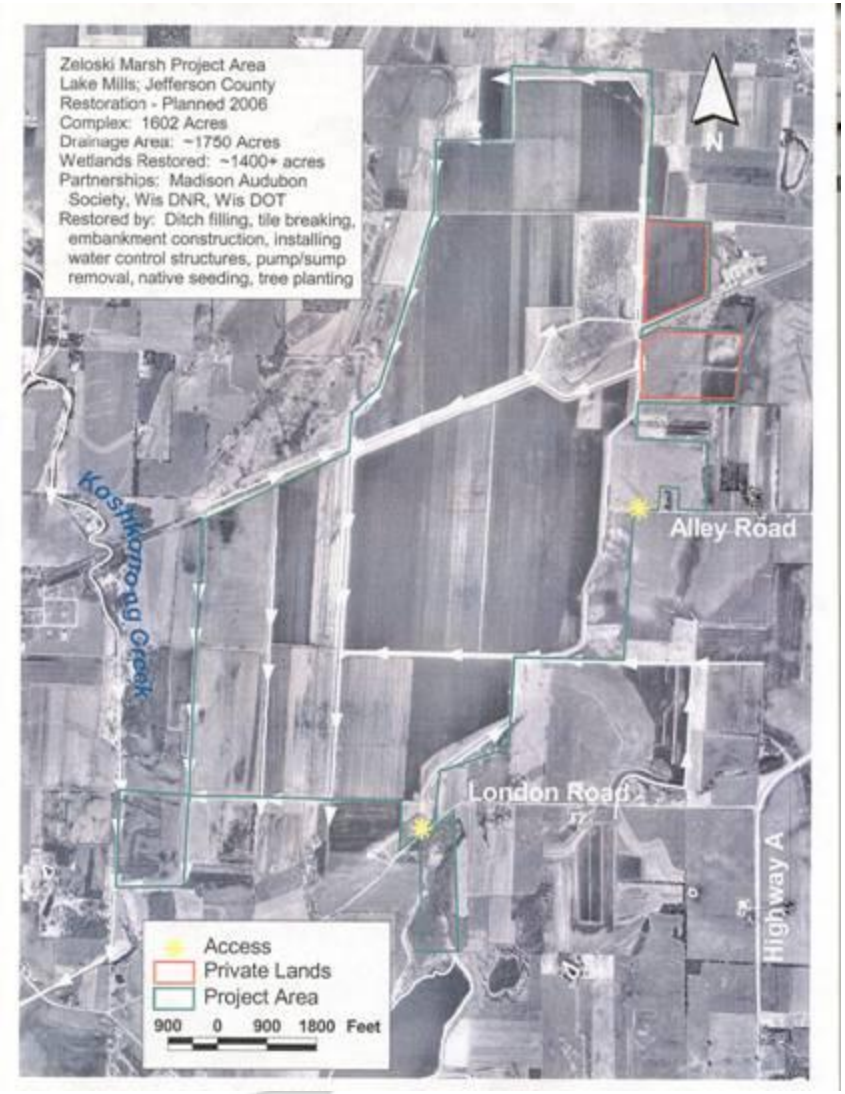
Citizen Wetland Monitoring



Plants, water quality, dragonflies & damselflies, butterflies, birds, toads and frogs, invasive species and more

Groundwater

- Award-winning Karst brochure
- Computer GFLOW Model
  - Counties: Green Lake, Dodge & Jefferson
  - Cities: Fitchburg, Whitewater, Janesville, Watertown, Lake Mills
  - Villages: Johnson Creek, Theresa,
  - Towns: Lake Mills, Shields, Summer, Aztalan, Clyman, Portland
  - Friends of Horicon Marsh
  - Lake Sinissippi Improvement District
    Lake Sinissippi Association
    Rock Lake Improvement Association
    Fox Lake Improvement and Rehabilitation District

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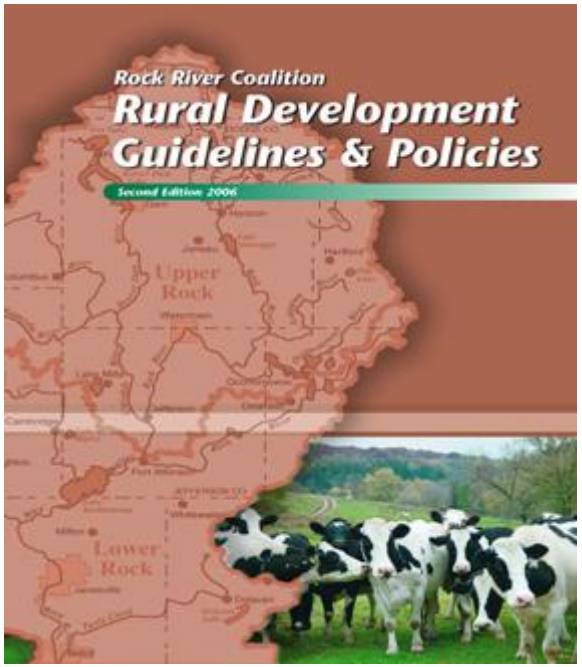
Shoreline Protection

12 projects done in partnership between the RRC and park & highway departments.

Land Use

- Award winning *Rock River Basin Rural Development Policies and Guidelines Manual*

- Workshops & Forums:
  - Cost of Community Services
  - Storm Water Techniques
  - Grow Smart – Grow Green



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Outreach Action Projects

Rain Garden In Every Community

Watertown Riverwalk

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Send Your Legislator Down The River

June 11, 2007: Dane County

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Get Involved

For more information about the RRC, monitoring or issue teams:

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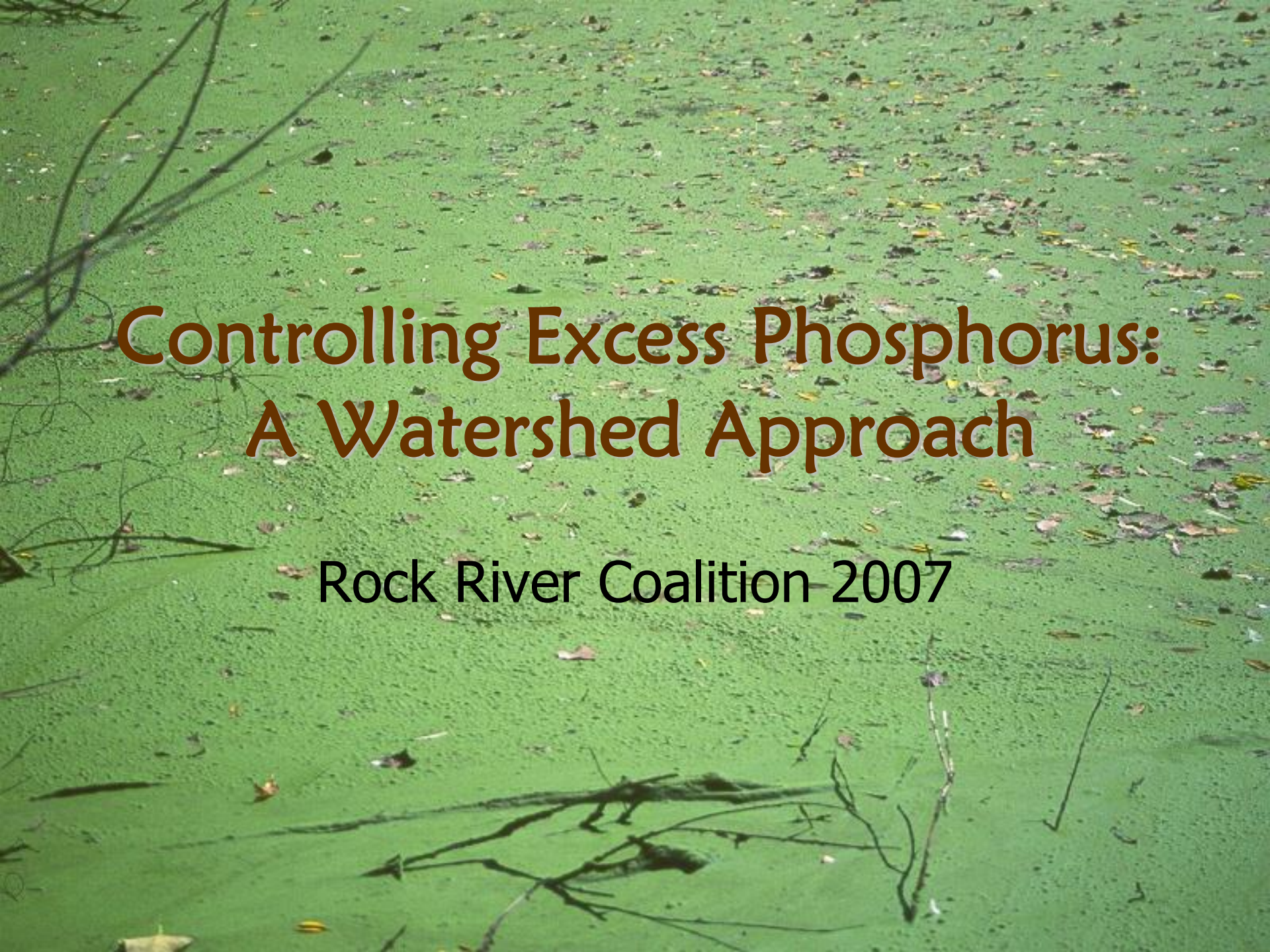

Controlling Excess Phosphorus: A Watershed Approach

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Wisconsinites Love Their Lakes

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Wisconsin Lakes

Wisconsin has the third highest concentration of lakes in the world

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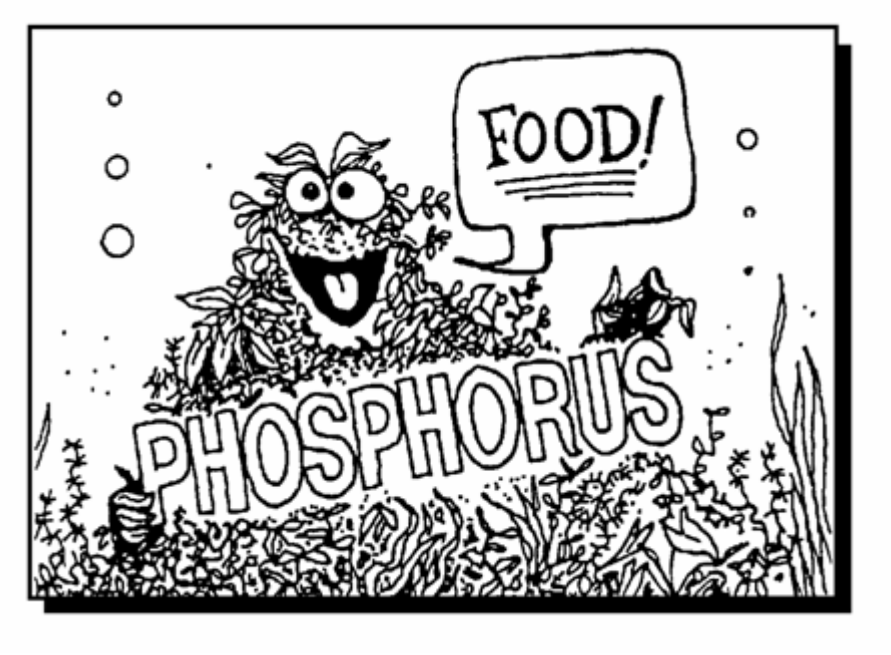
Excessive Plants and Algae

Tied Together

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



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Explosive Algae Blooms

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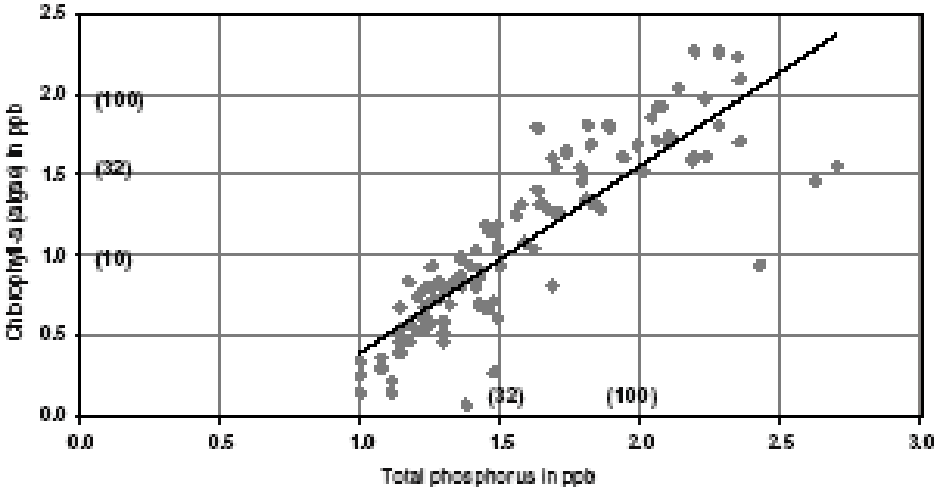
Sediment Encourages Rooted Plants


Low Oxygen → Fish Kills

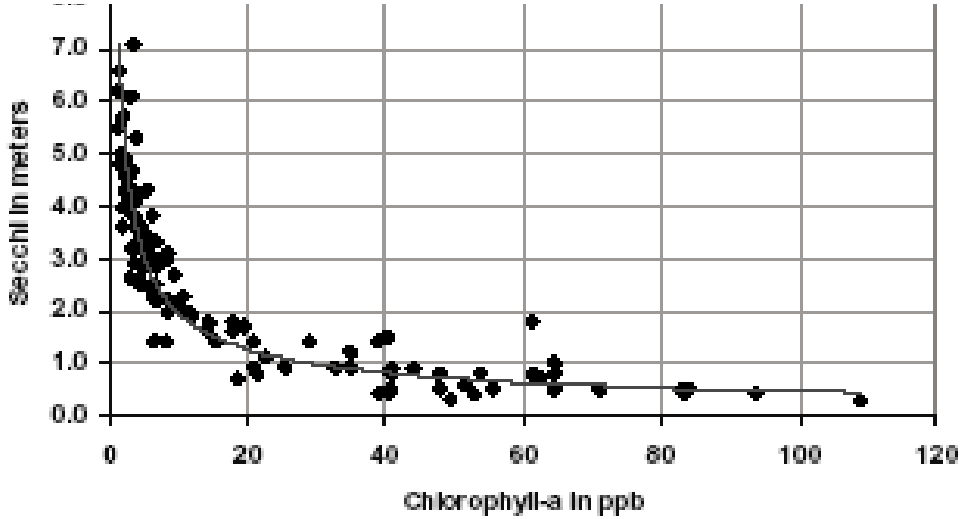

CAUTION
WATER QUALITY ADVISORY
This water may contain blue-green algae capable of producing toxins that can be dangerous to humans and pets.
FOR YOUR SAFETY
• If water is cloudy, looks like green paint or pea soup, or has a floating scum layer or floating clumps
-Do not swim or swallow water
-Do not 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

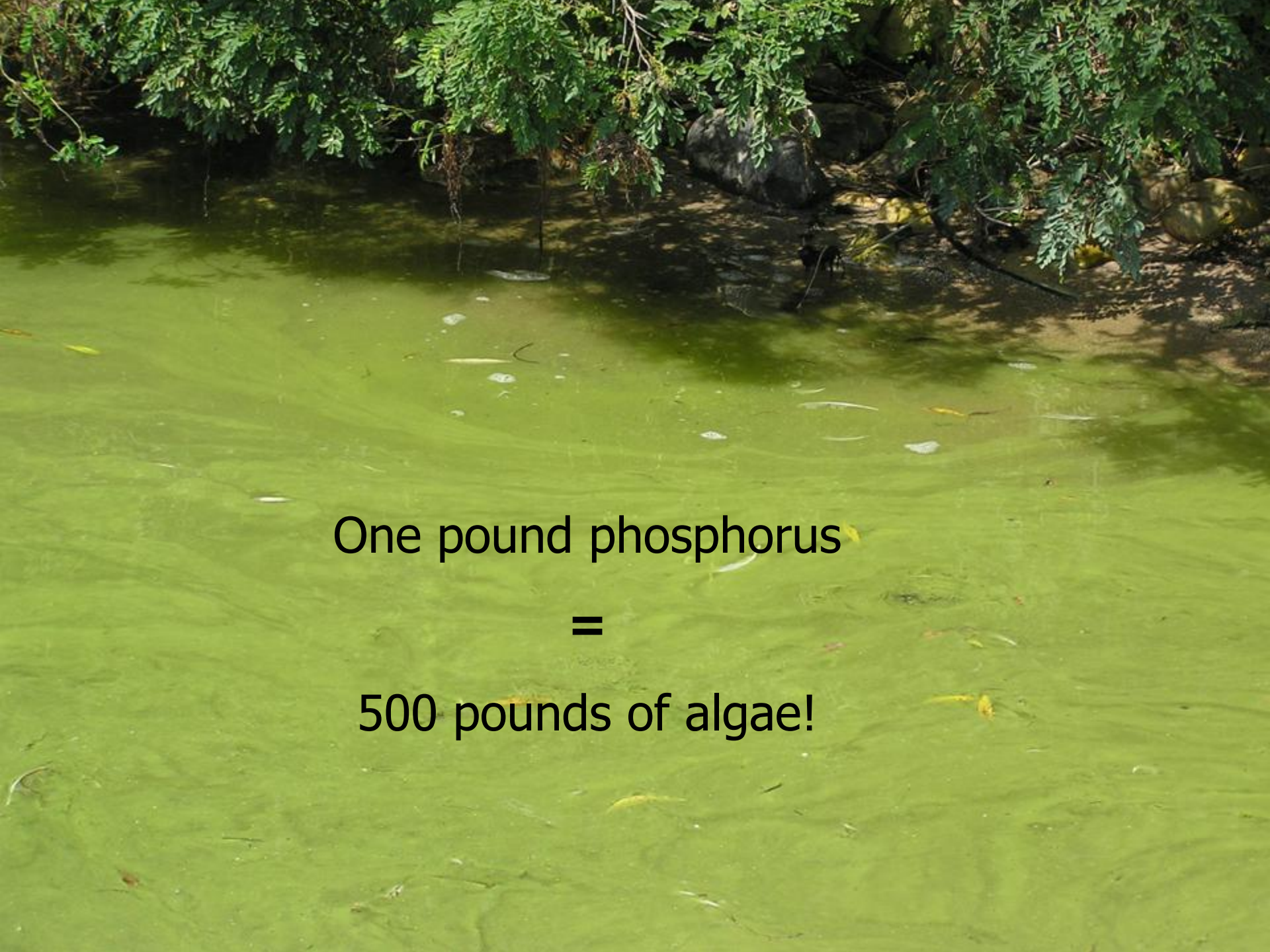
As the total amount of phosphorus in the water increases, the amount of algae in the water increases:

Chlorophyll-a is one measure of algae amounts



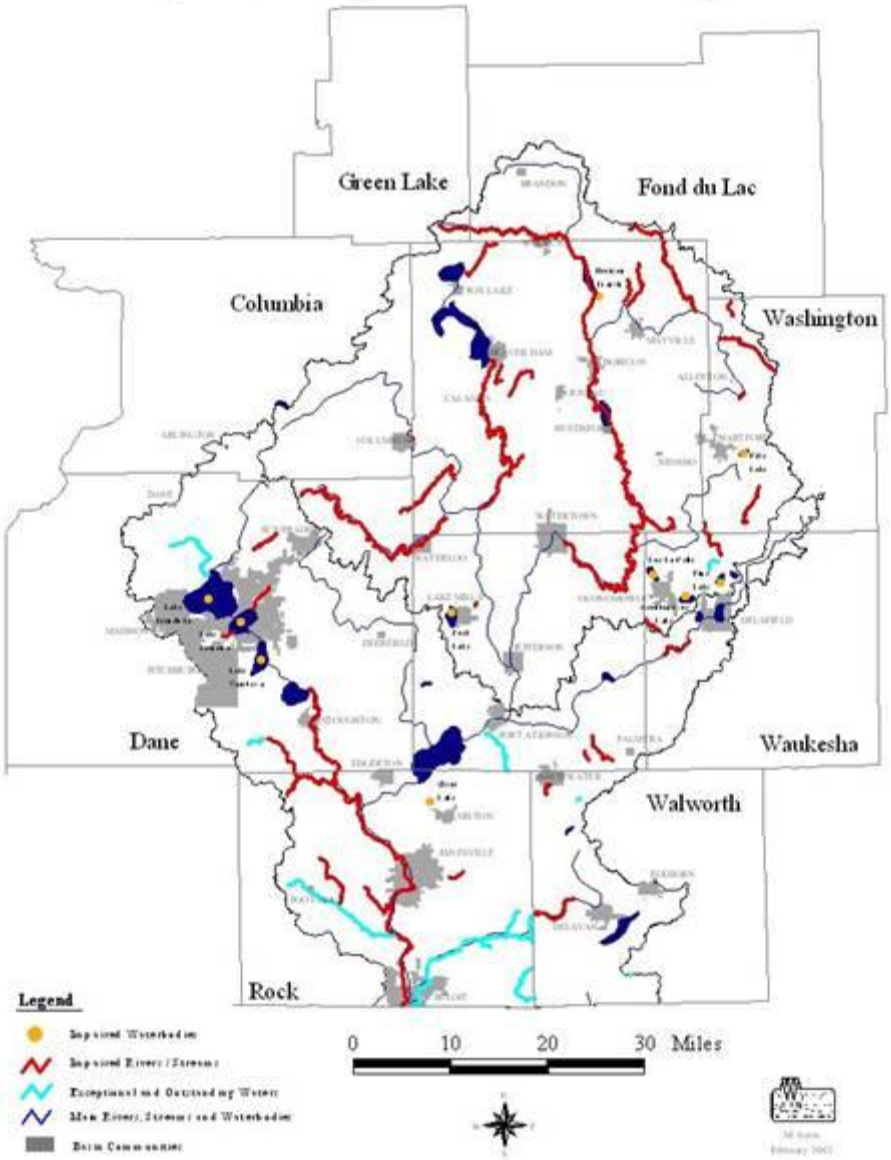
As the amount of algae in the water increased:
The clarity of the water decreases




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



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Need to find all sources

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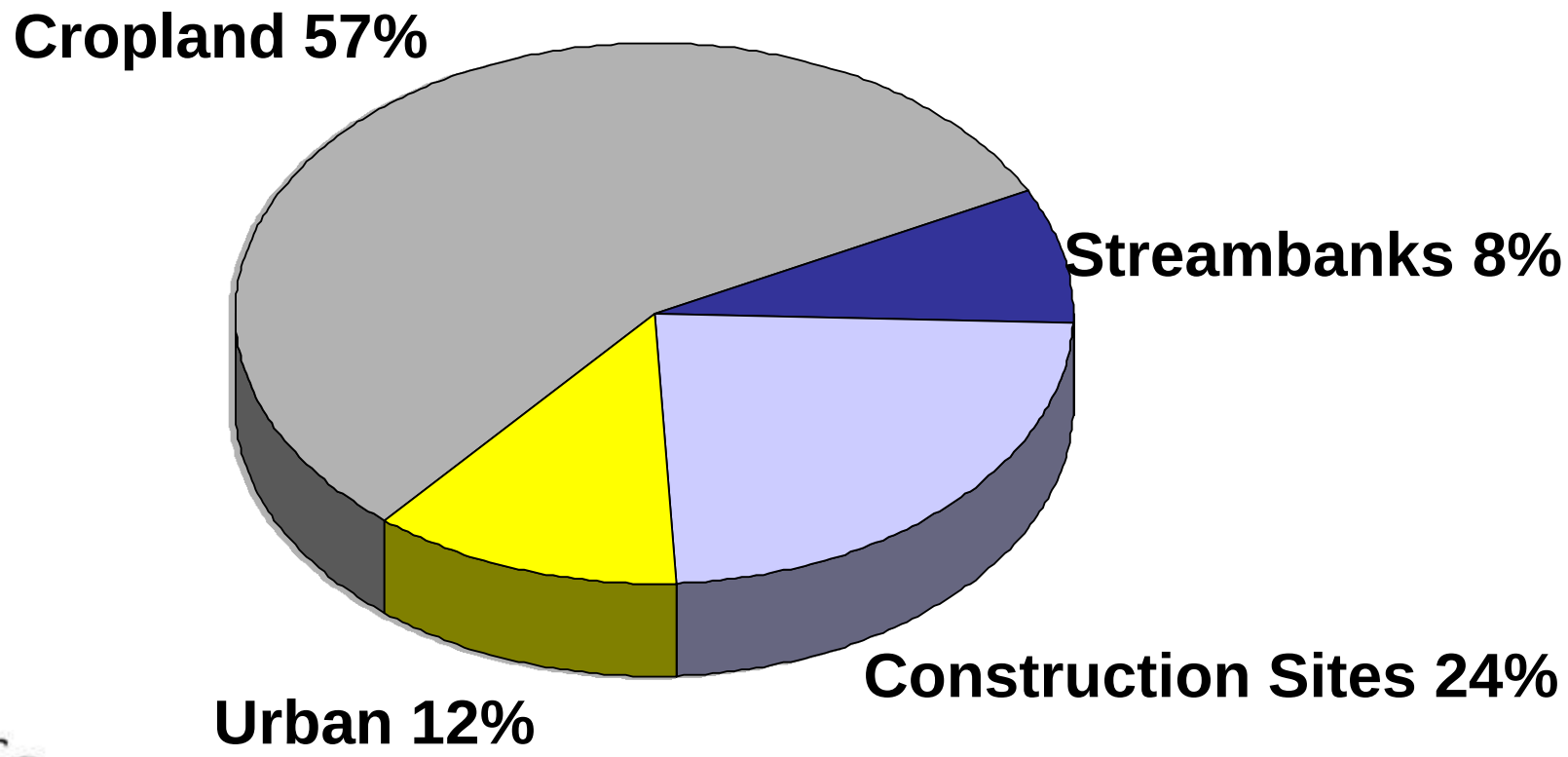
Sediment Sources

Lake Mendota Watershed - 1996



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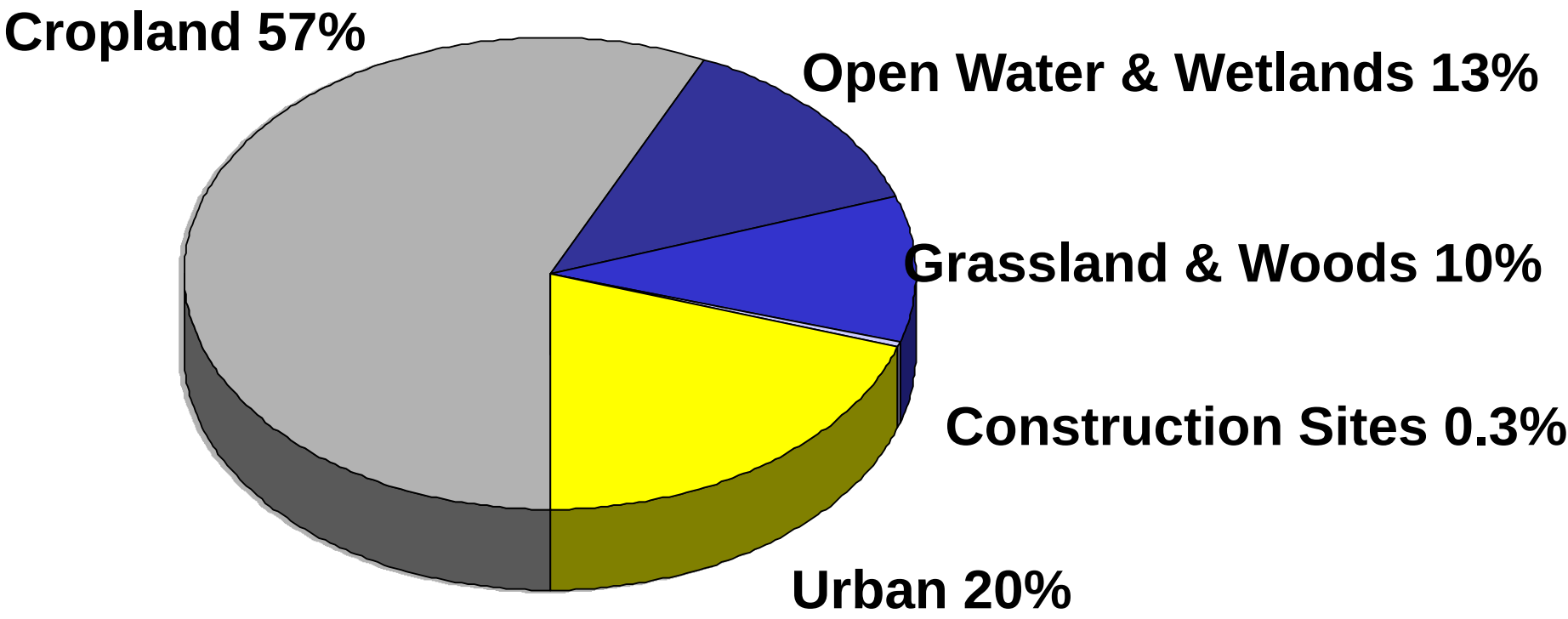
Land Uses

Lake Mendota Watershed - 1996



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Phosphorus entering streams in the Rock River Basin

Rural Stream 50 – 722 lbs/mi^2

Urban Stream 127 – 1150 lbs/mi^2

Voluntary agriculture performance standards require cost share to be enforced.

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

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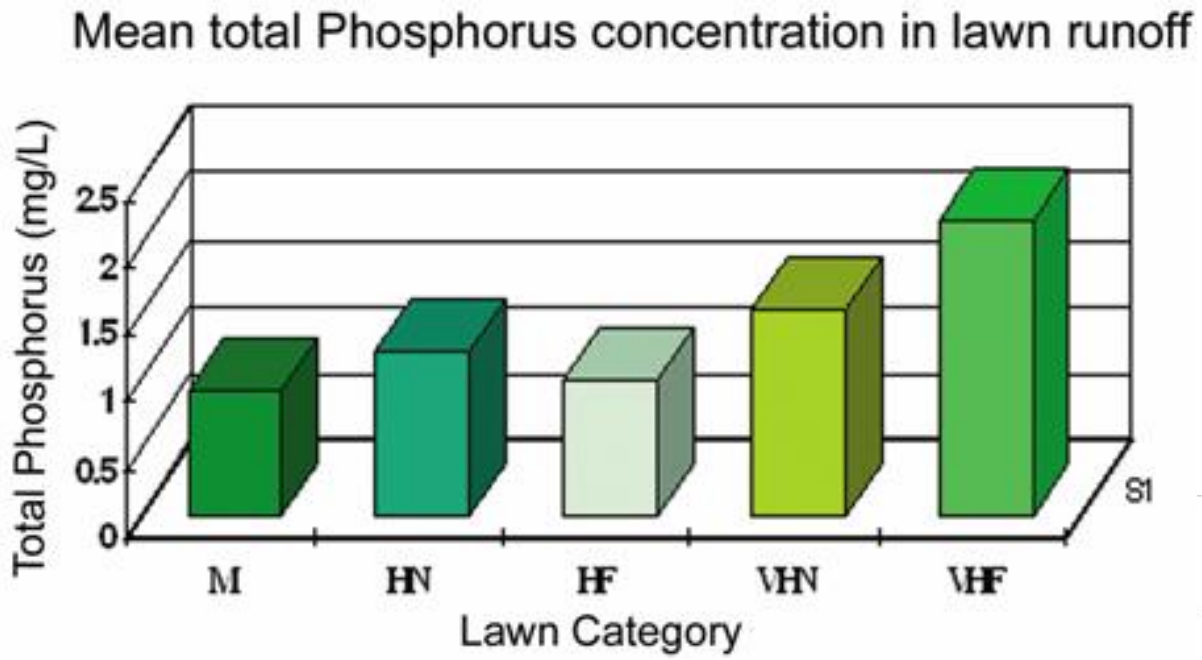
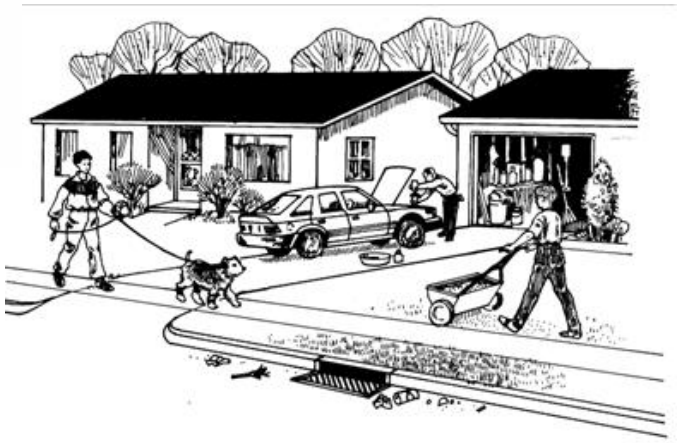
Urban Lawns





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Phosphorus is Essential for Plant Growth

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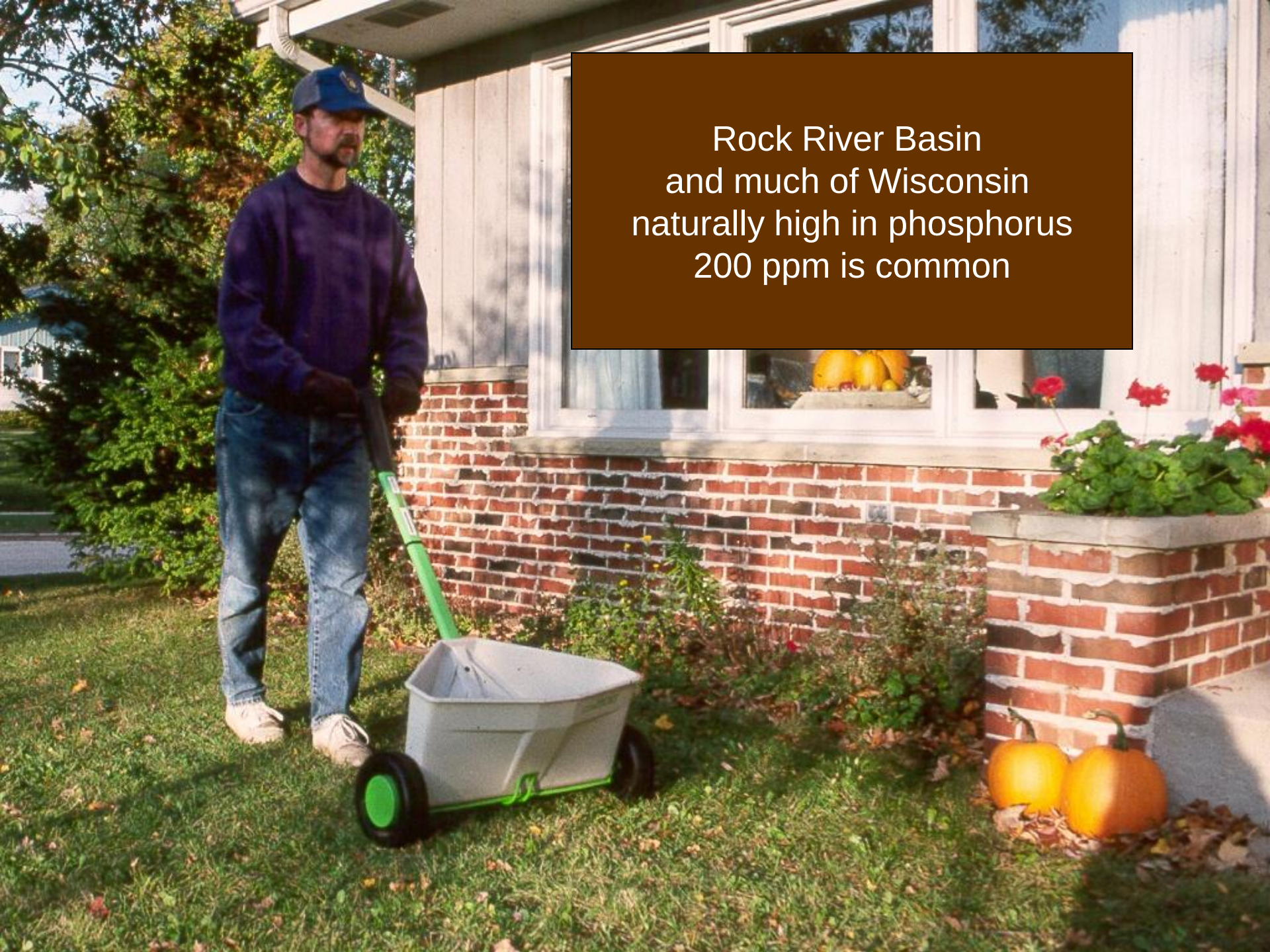
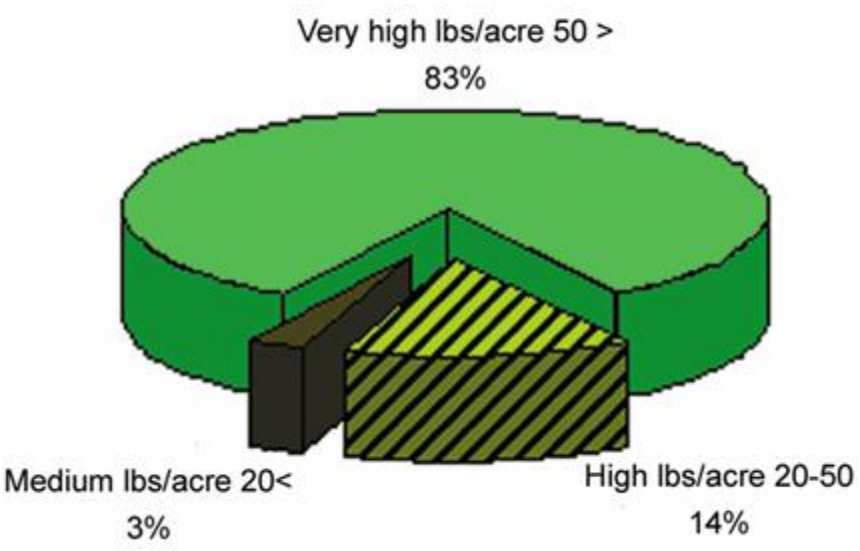
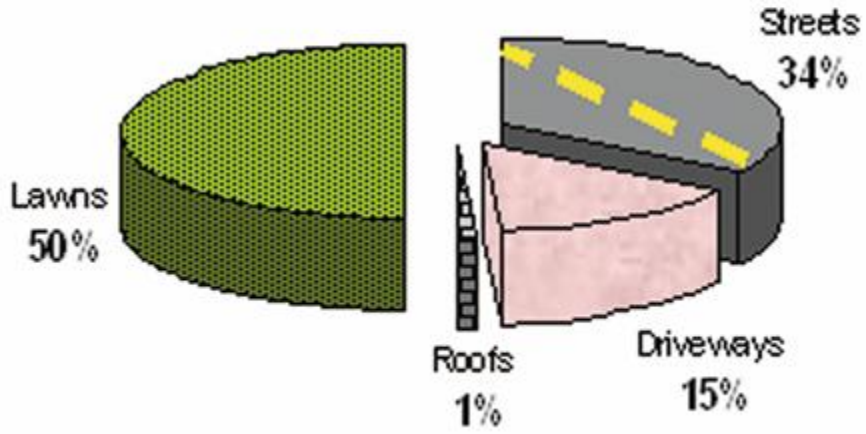

Rock River Basin
and much of Wisconsin
naturally high in phosphorus
200 ppm is common

Soil Phosphorus Fertility Rating
Summary of 181 Study Lawns



Urban Residential Runoff
Total Phosphorus Sources



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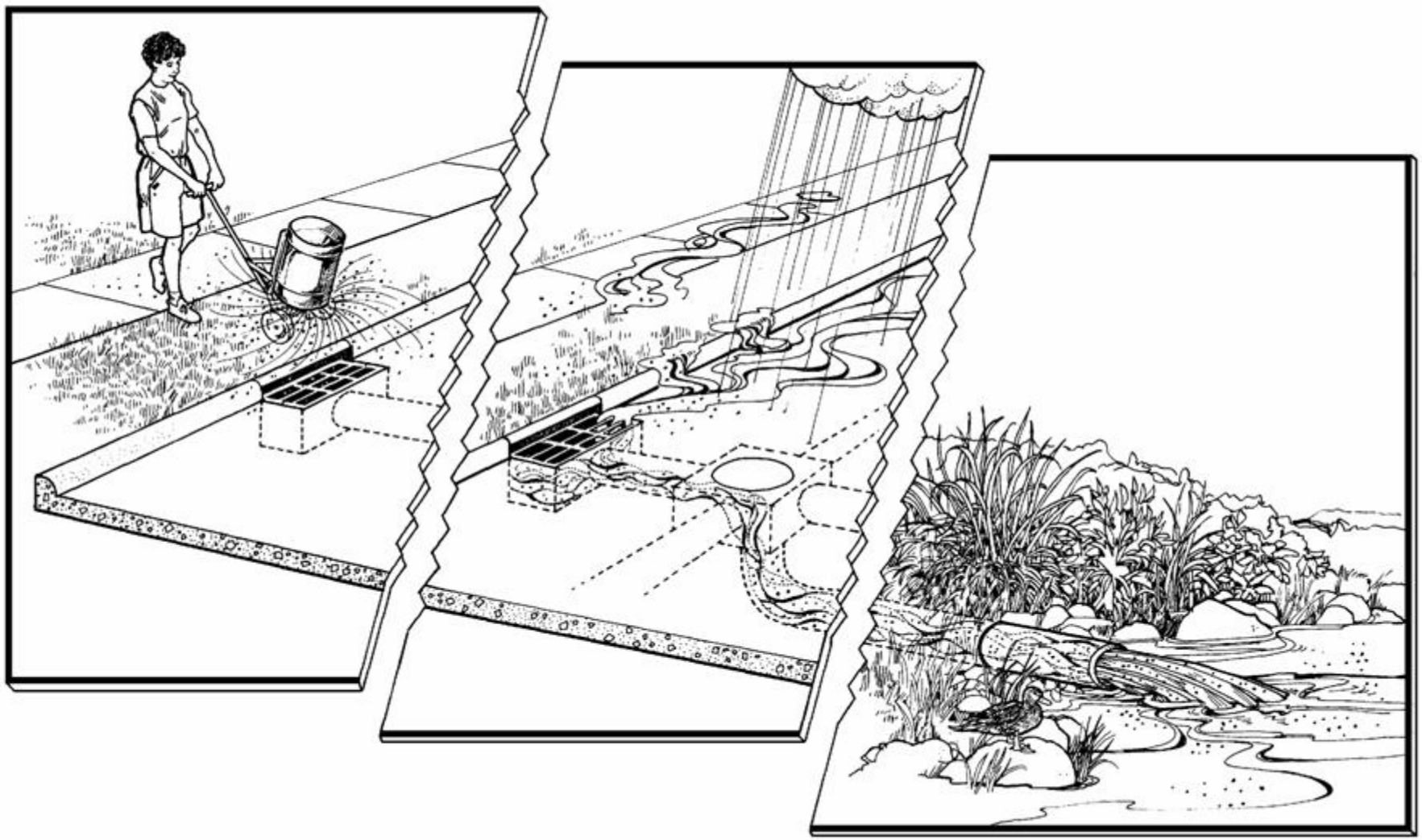

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Soil P Changes Over Time

Example: Current – Soil P 60

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

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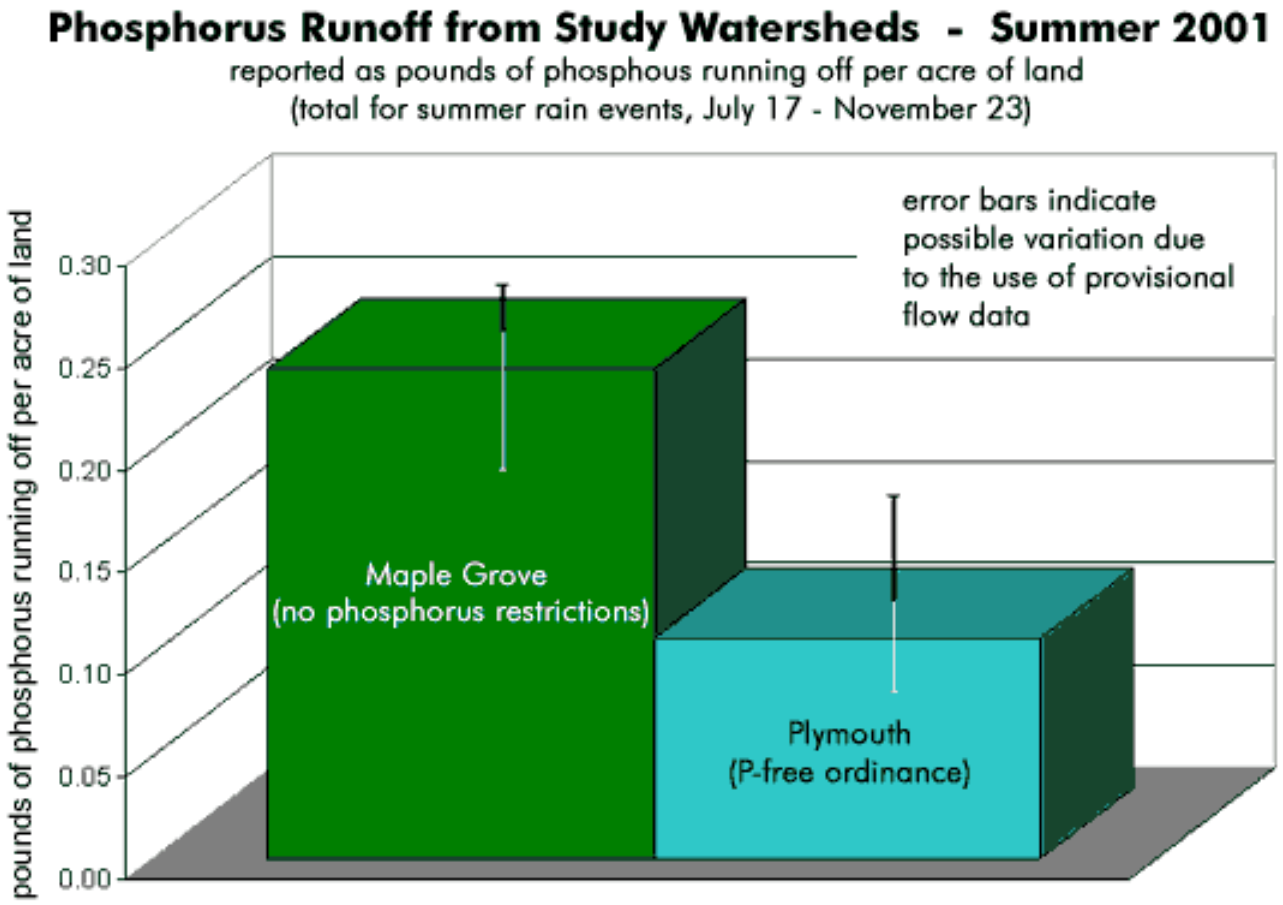

Community with phosphorus ban had half the run off!

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

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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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