

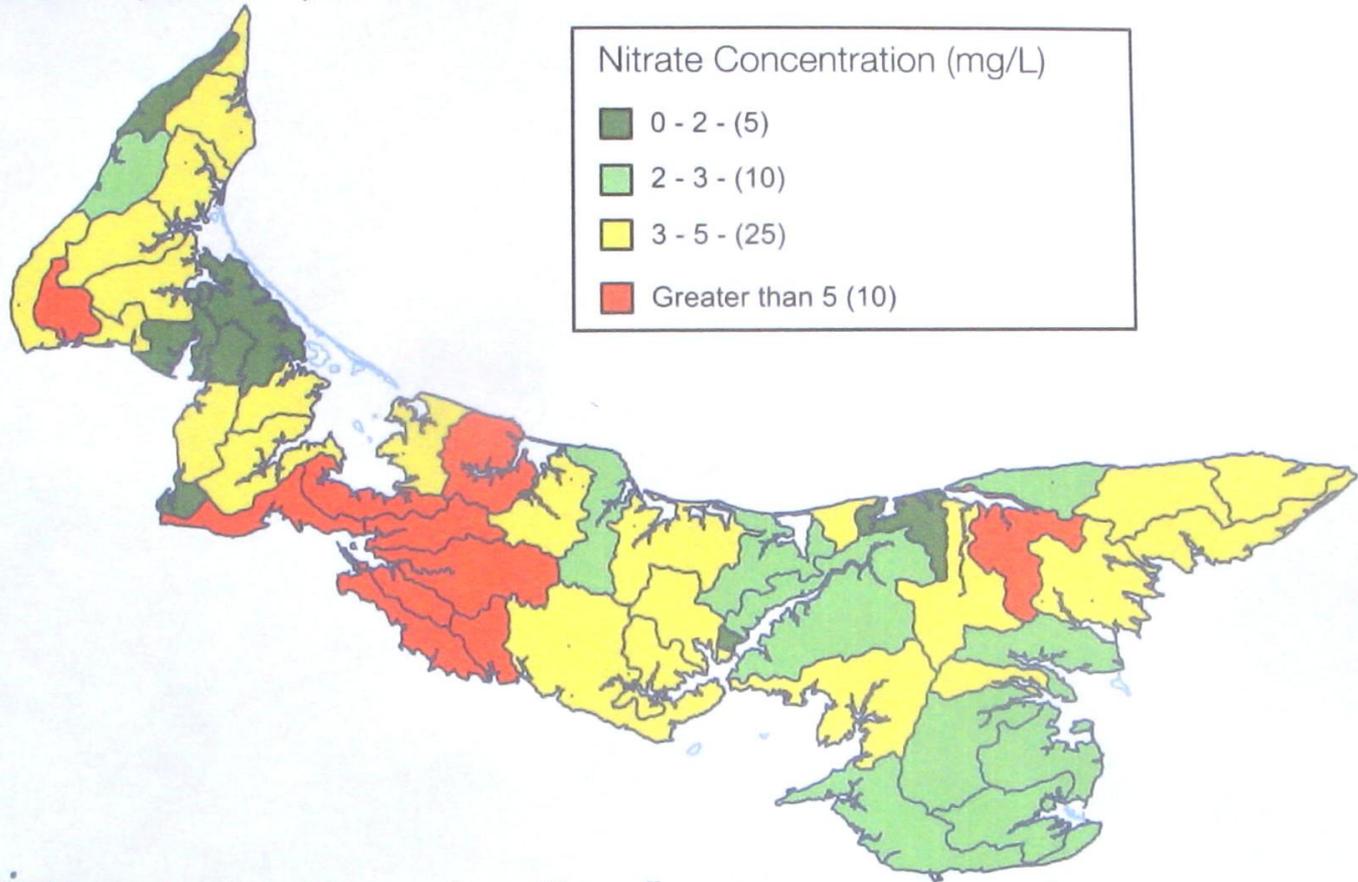
The Water Act Hearings

Presentation to the
Environmental Advisory Board
Southwest River
Nitrates Stakeholders Committee
Kensington North Watersheds Assoc.



Average Groundwater Nitrate Concentration

Based on 14,555 samples from 2000 to 2005



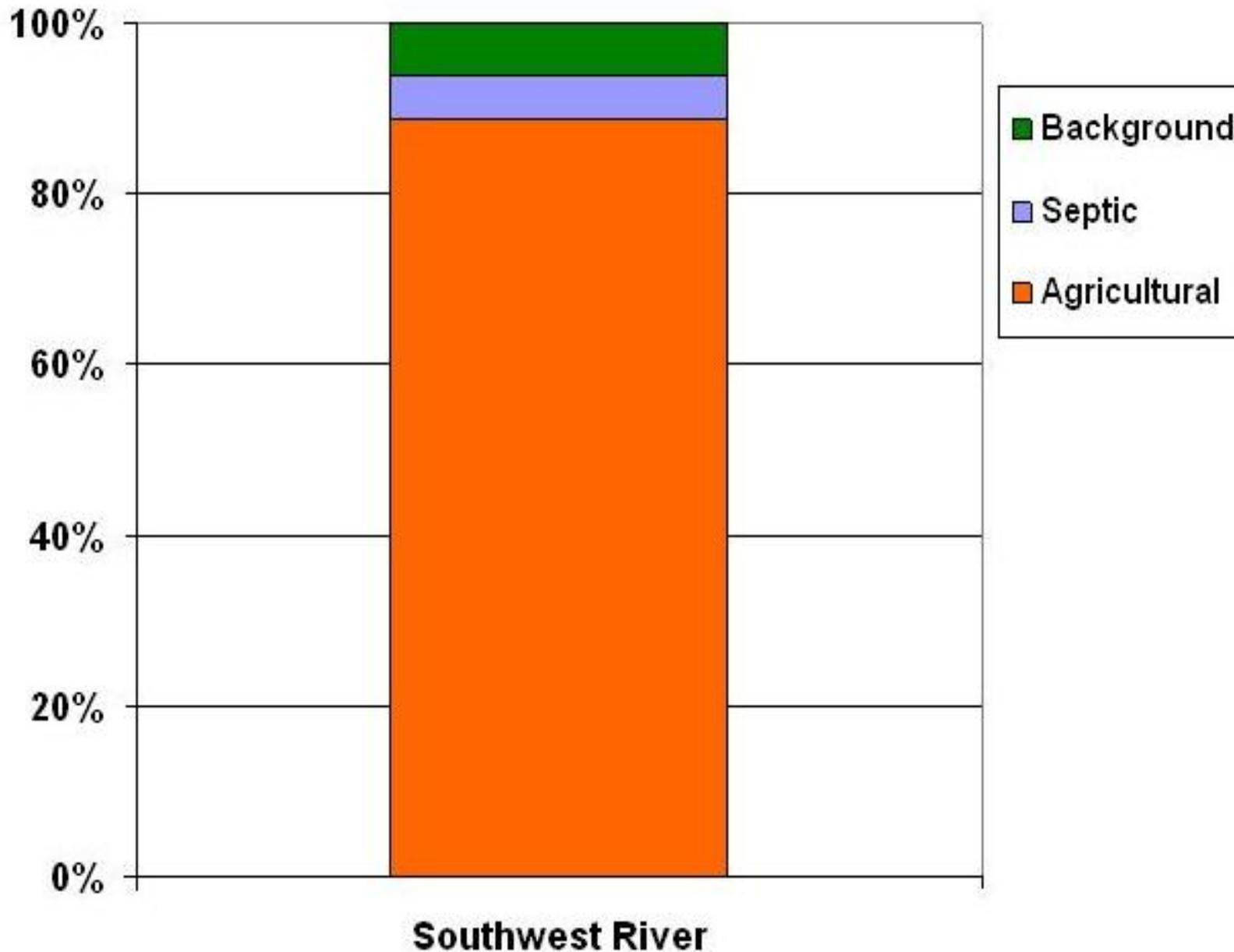
Environment,
Energy and Forestry

0 12.5 25
kilometres

April 2008

Figure 1.

Average groundwater nitrate concentration based on samples taken over the period 2000-2005 in each watershed grouping.



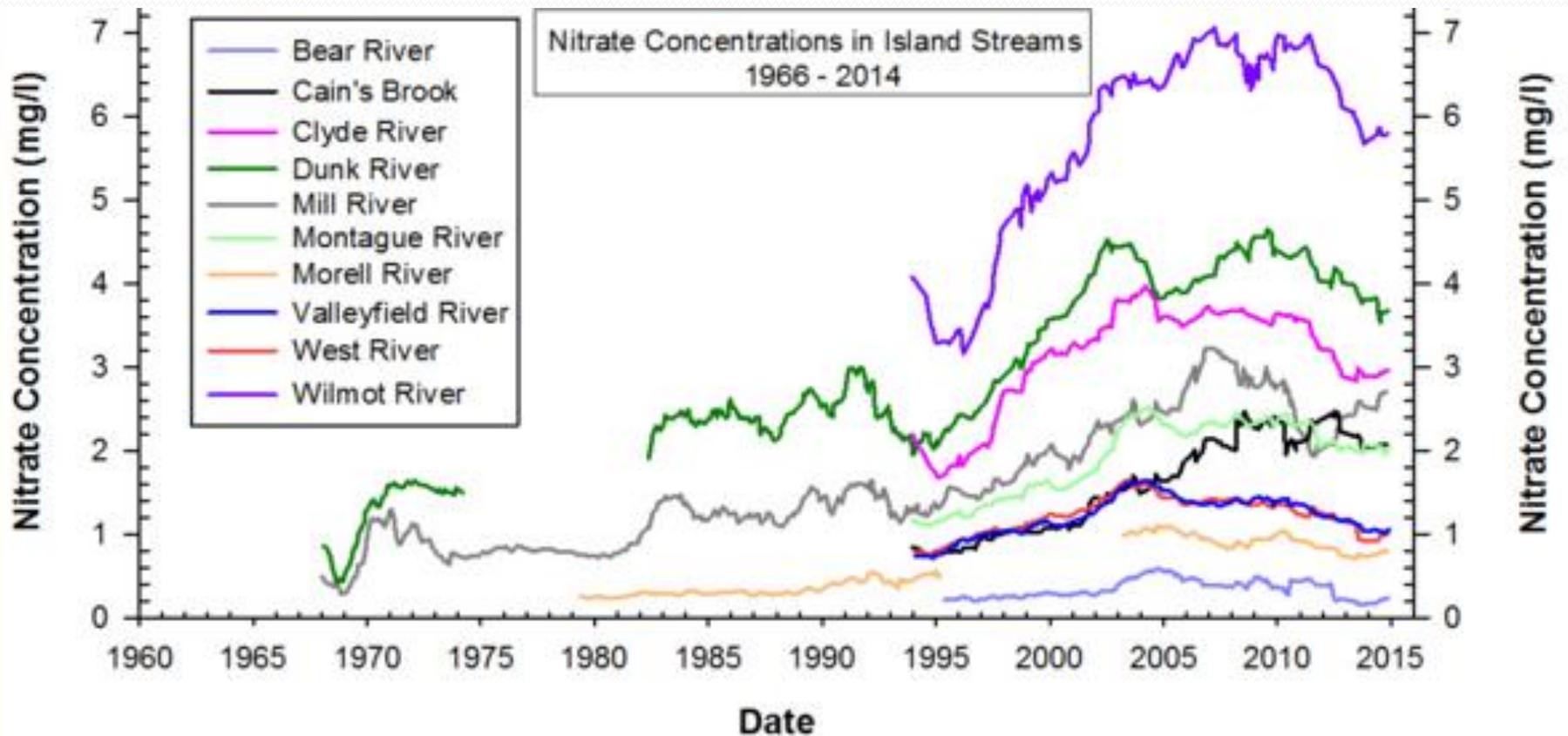
Topics Examined

- Land Use
- Potato Varieties
- Septic Systems and Minimum Lot Size
- Sea Lettuce Removal
- Education and Awareness of Nitrate Issues
- Additional Research

Soil Conservation, Potato Acreage



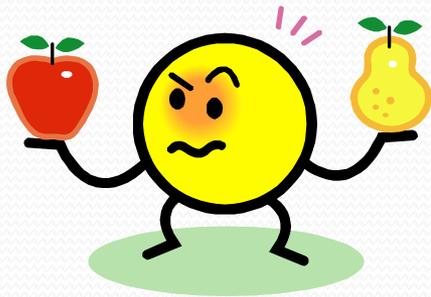
Nitrate Trends in PEI Surface Water



Comparison of Fertility Approaches

Fertility Planning

- Looks at nutrient requirements of the crop



Nutrient Management

- Field maps
- Soil reports
- Field history (previous inputs, crops, yield, etc)
- Organic inputs (manure, previous crop plow down)
- Inorganic inputs (synthetic fertilizer)
- Timing of field operations, nutrient applications
- Yield Potential
- Crop removal rates

Recommendation #1

- **We recommend that incentives be created to facilitate the introduction of nutrient management on farms. The incentives could be in the form of increased rebates for the creation of nutrient management plans, or subsidizing the cost of a qualified agronomist.**

Potato Varieties



Soil Nitrate Monitoring

Rye Grass and Spring

Plow

KNWSA



**nutrient
stewardship**

Potato Plant Breeding



Recommendation #2

- **We recommend that the Government of Prince Edward Island join, and perhaps lead, a coalition of groups that will promote potato varieties that will reduce the impact of nitrates and other environmental indicators, while supplying the industry with high quality product and good economic return.**

Additional Research



River Monitors, part of the solution

Mo. Yr.		Location										Volunteer																			
Day of	Day of	Time	Weather	Tide	Appearance of Water (check all that apply)							Sea Lettuce Amount and Appearance (check all that apply)							Odor (H2S only, Check all that apply)												
	e.g. July 14, 2014 = 14	e.g. 11:30 am	General condition in last 24 hours e.g. cloudy, raining, clear. Water Temperature.	L (Low), M (Mid), H (High)	Clear	Slightly Cloudy	Very Cloudy	Red (Like Silt)	Lime Green	Olive Green	Grass Green	White (Milky)	Grey	Other	None	< 25% Coverage	25% - 75% Coverage	75% - 100% Coverage	On bottom	Floating	Both Floating and on Bottom	On the Shoreline	Healthy	Some die off	Equal Amt. Healthy & Dead	Mostly dead	No odor	Mild or Faint odor	Medium Odour	Strong odor	
Sun.																															
Mon.																															
Tue.																															
Wed.																															
Thur.																															
Fri.																															
Sat.																															
Sun.																															
Mon.																															
Tue.																															
Wed.																															
Thur.																															
Fri.																															
Sat.																															
Notes (include any unusual conditions observed including weather and the extent and duration of anoxic events. Please call 368-5044 or email cscrane@gov.pe.ca to report anoxic events)																															

Recommendation #3

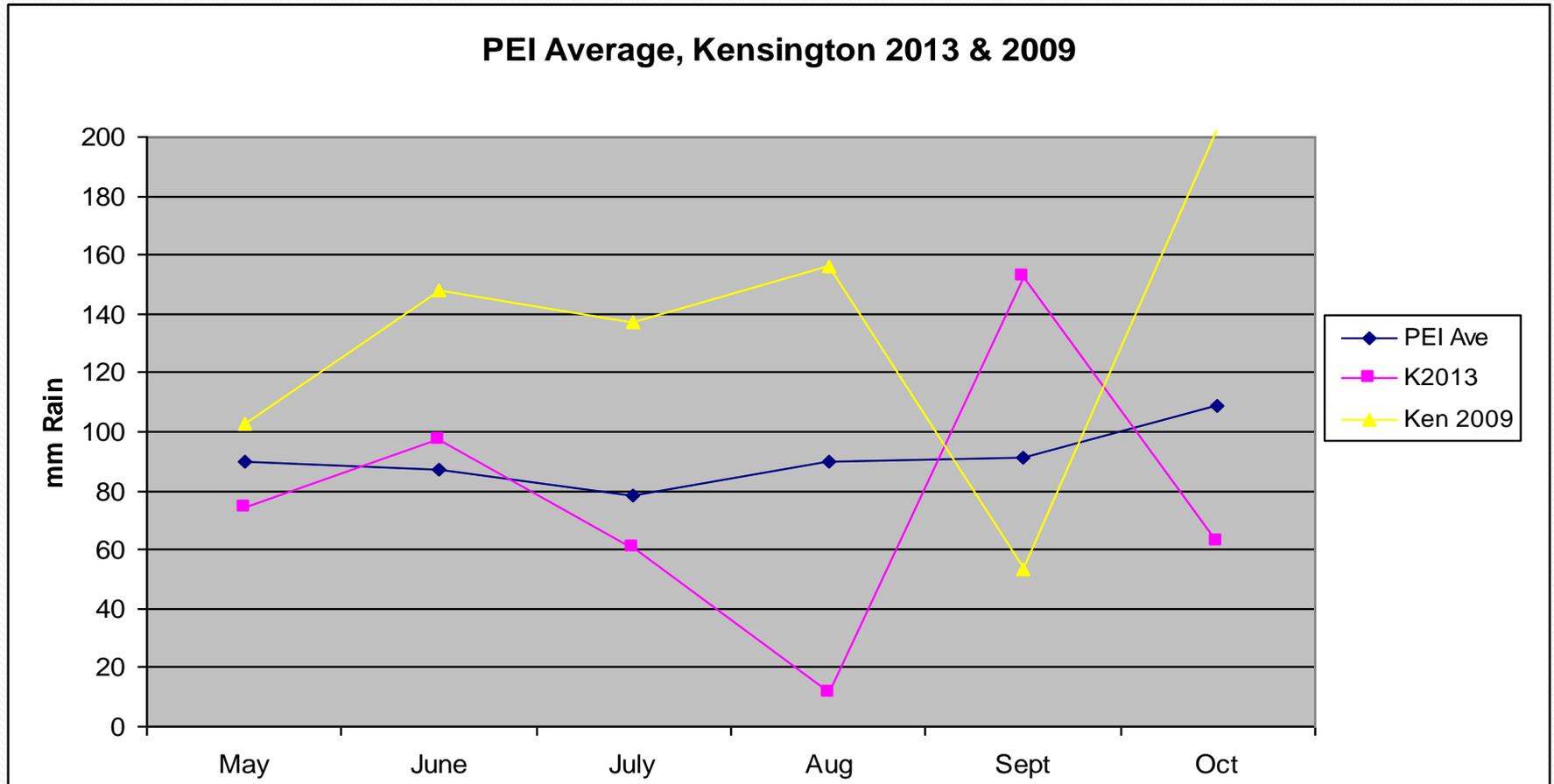
- **We recommend that a group be formed to bring together the various research being done on nitrates in groundwater and surface water on Prince Edward Island, so that the lessons being learned can be implemented in our watersheds in a timely and effective fashion.**

Cropping Systems

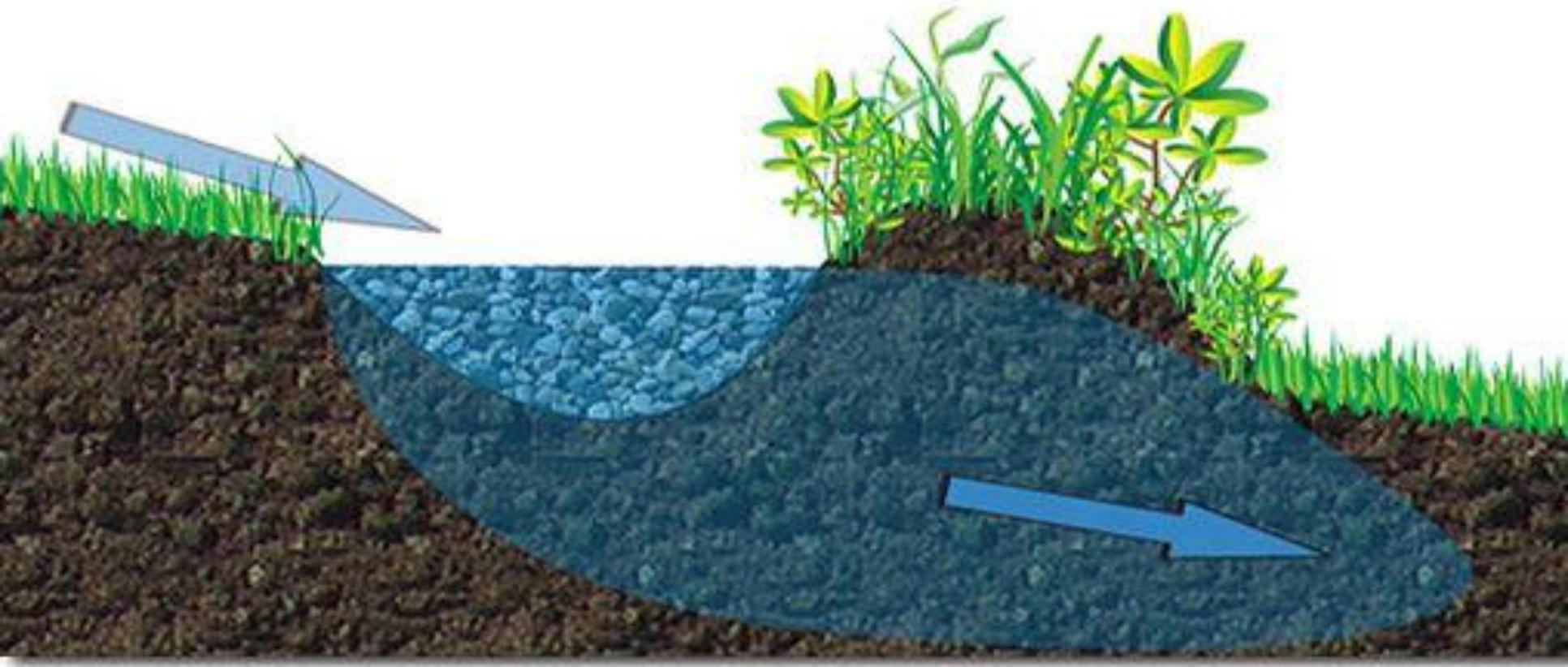
Monitoring Soil Nitrate Movement



Rainfall Variations, Kensington



Harvesting Surface Water



Experimenting with Soil Management



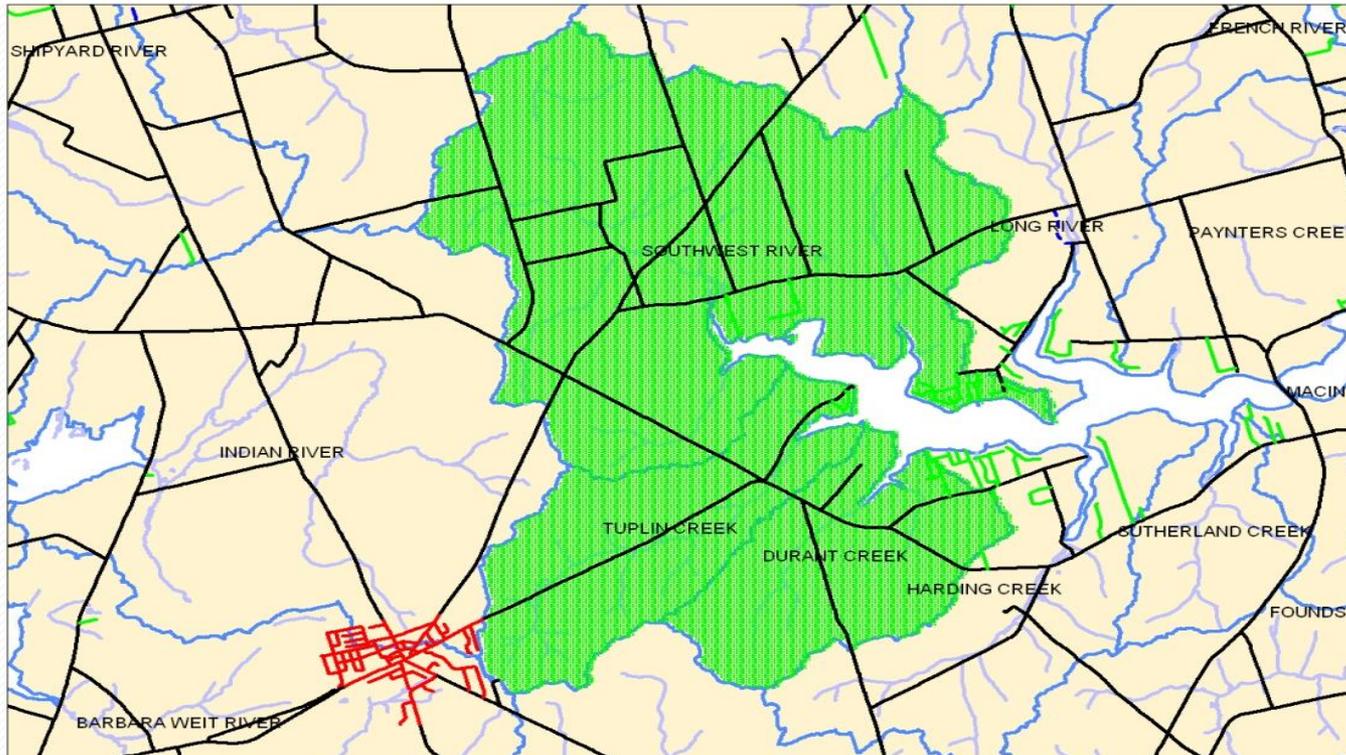
Creating Modern Cropping Systems



Recommendation #4

- **We recommend that research be examined and conducted on cropping as a whole, involving crop rotations, tillage techniques, nutrient management and water management, to maximize the productivity and sustainability of our soils, our ability to profitably grow safe food, and to manage our water resource.**

Thank You



Southwest River Nitrate Stakeholders