

# The Eutrophication Casino

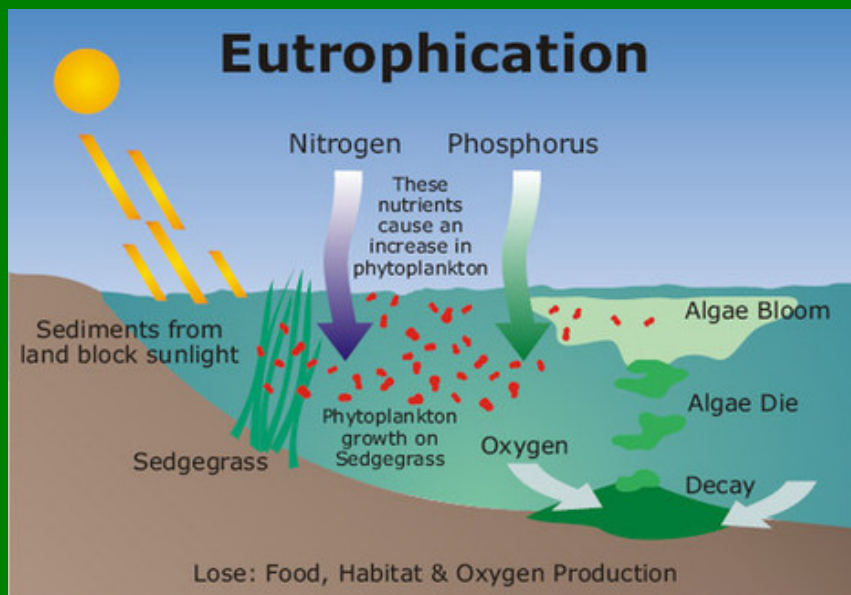


00	3	6	9	12	15	18	21	24	27	30	33	36	2:1
0	2	5	8	11	14	17	20	23	26	29	32	35	2:1
	1	4	7	10	13	16	19	22	25	28	31	34	2:1
1st 12				2nd 12				3rd 12					
1 to 18		Even		Odd		19 to 36							

Graeme Strathdee  
President  
Sylvan Lake Watershed Stewardship Society

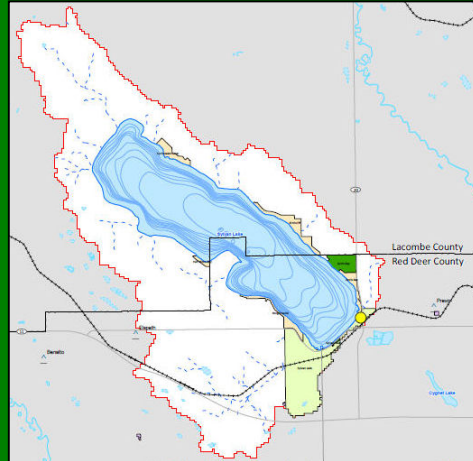


## Eutrophication



## The Sylvan Lake Watershed

Watershed Area, km <sup>2</sup>	106
Lake Area, km <sup>2</sup>	42
Lake Volume, Mm <sup>3</sup>	420
Agriculture, %	67
Total P Conc, µg/L	21
Total P in Lake, kg	8,800



Know the Two Laws of the Watershed

## Tributary Monitoring and Nutrient Loading in 2014

- Streams and Catchments

- Northwest Creek
    - 12.8 km<sup>2</sup>

- Golf Course Creek
    - 26.3 km<sup>2</sup>

- Nutrient Loading

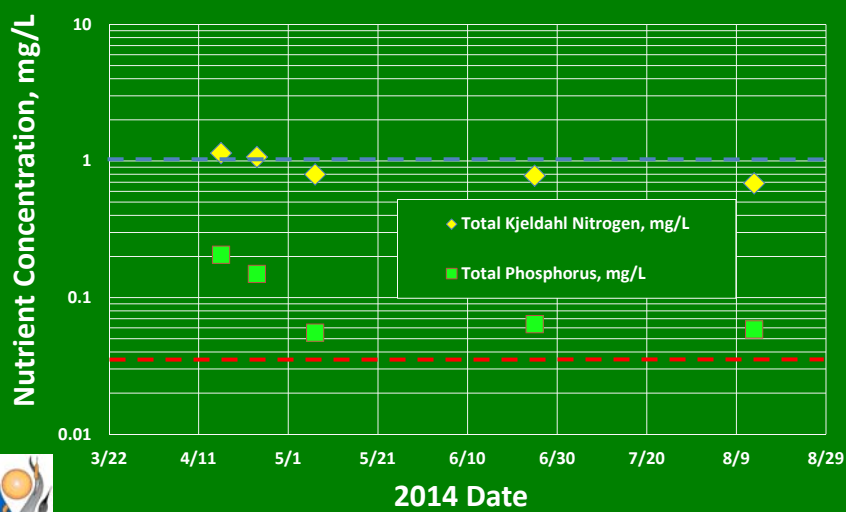
Concentration x Flow Volume



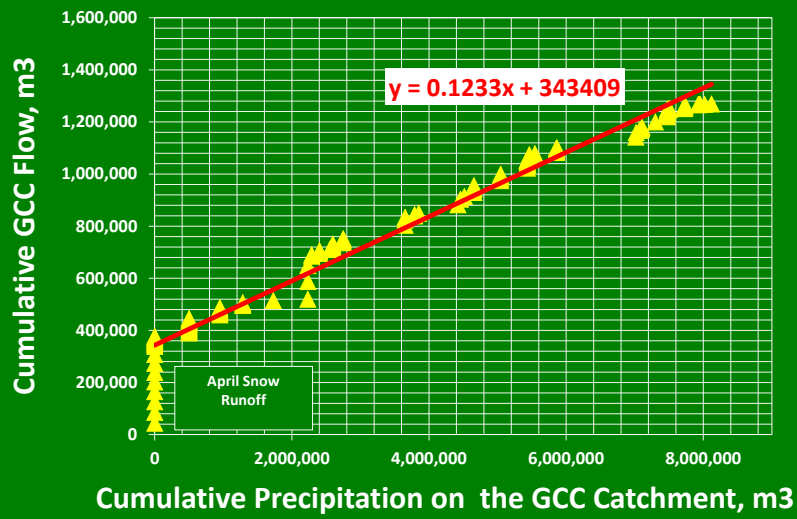
## Sampling Golf Course Creek



## Nutrient Concentrations Golf Course Creek 2014

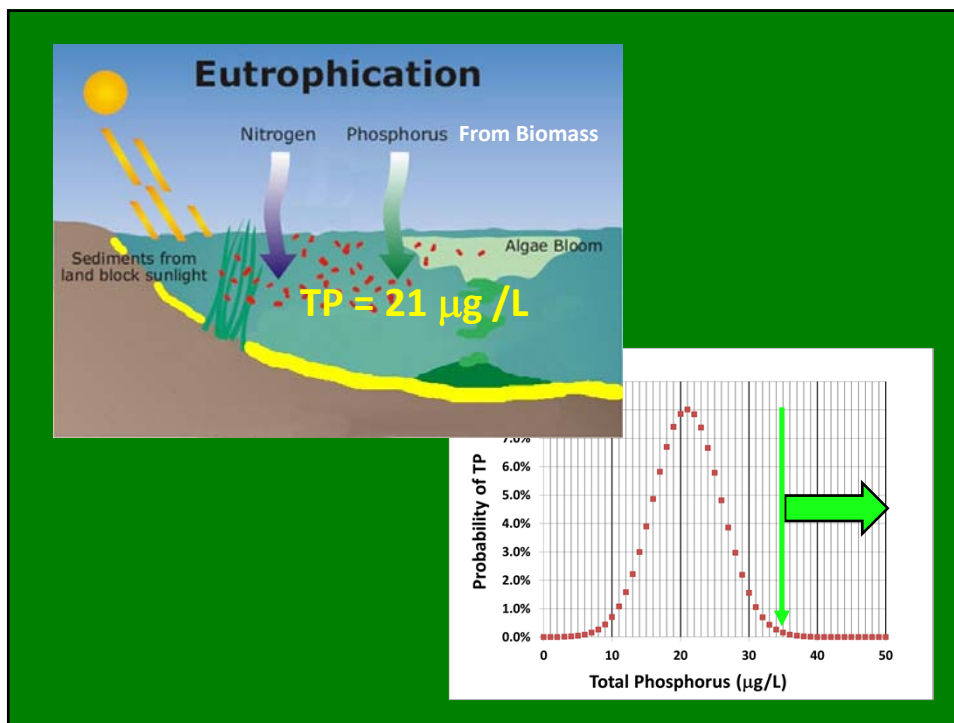
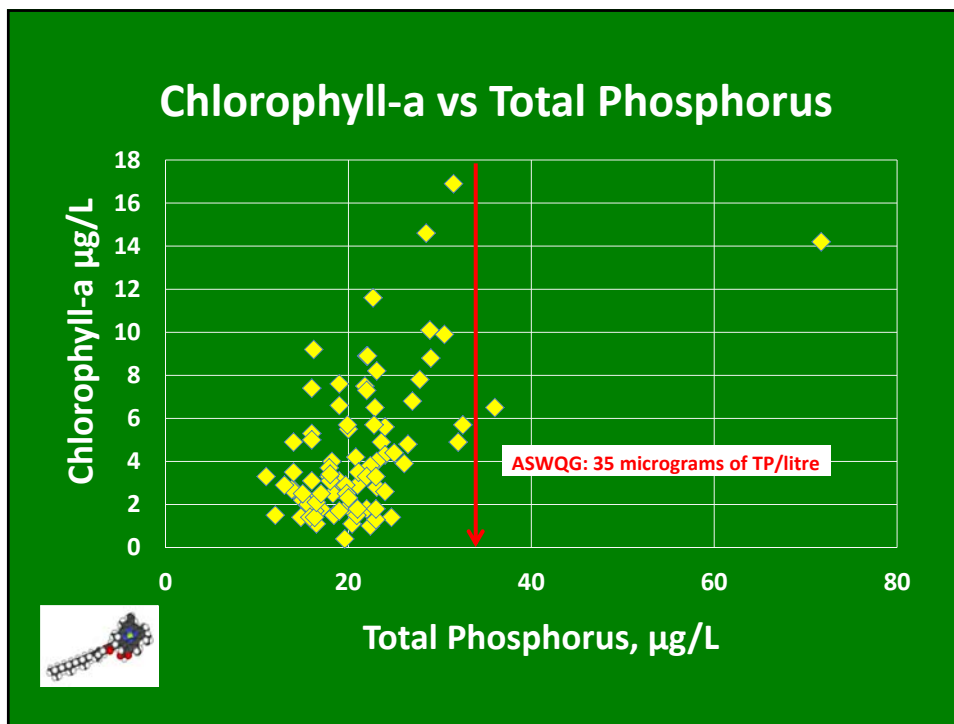


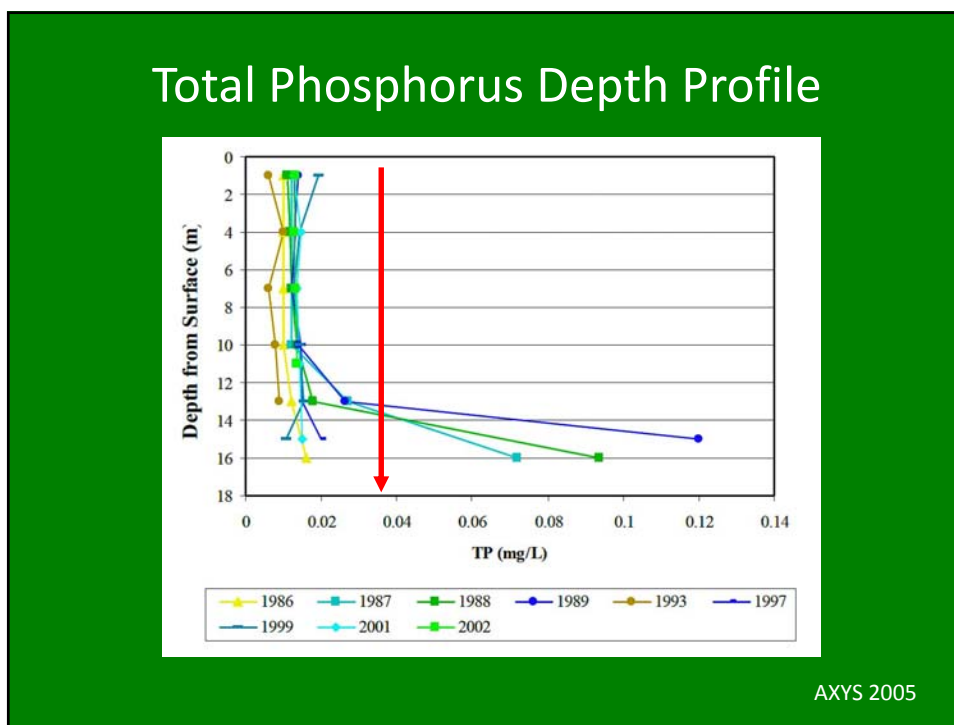
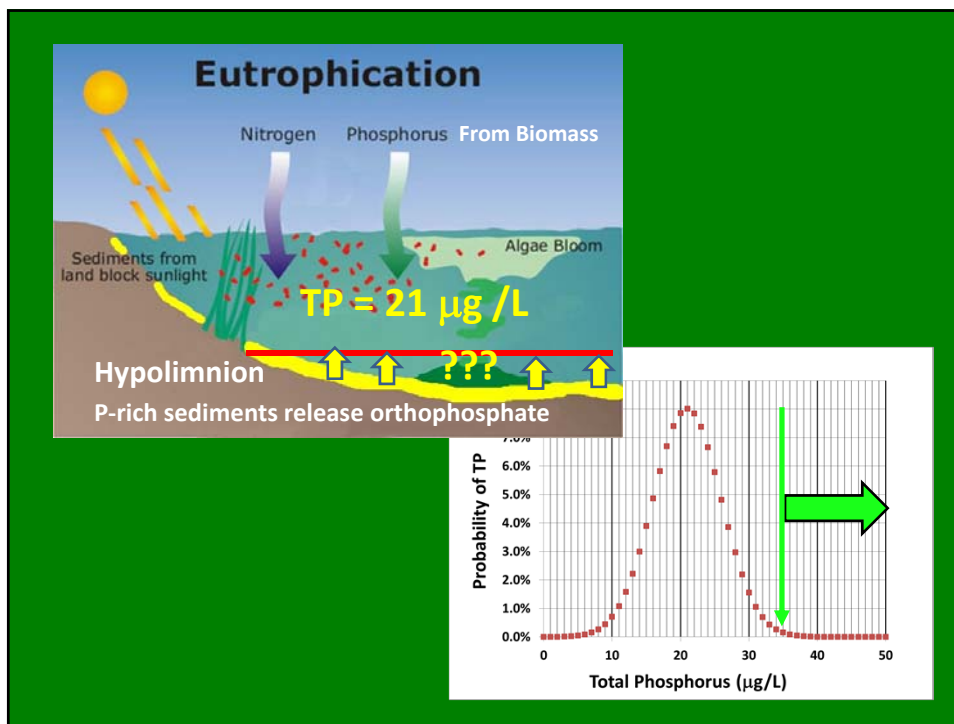
### Effect of Precipitation on Flow in Golf Course Creek

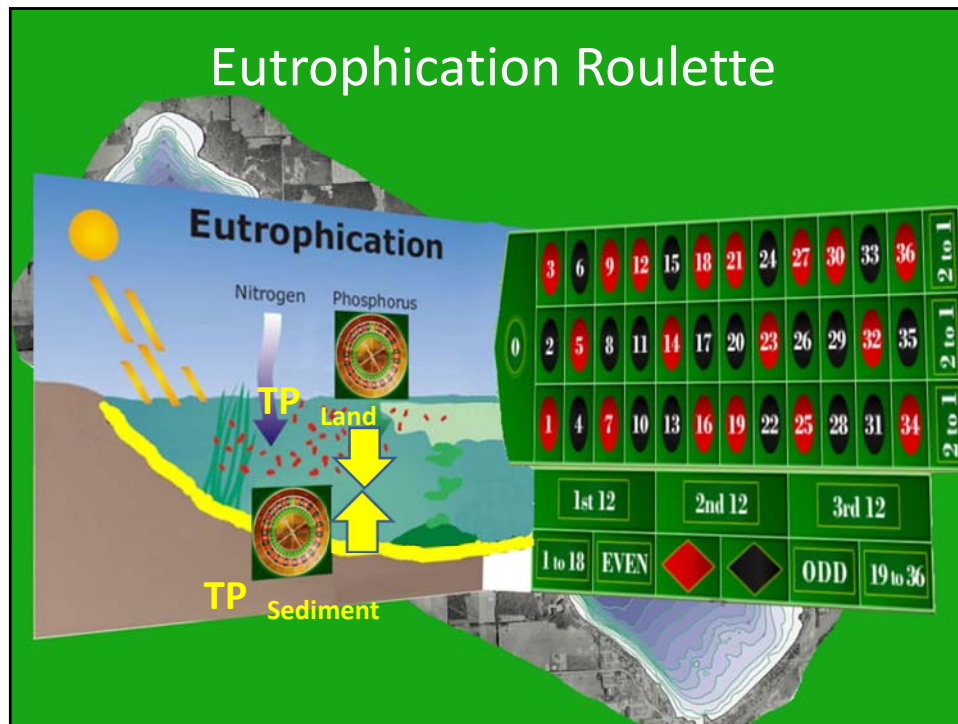


### Water Quality Sampling Campaign 2014



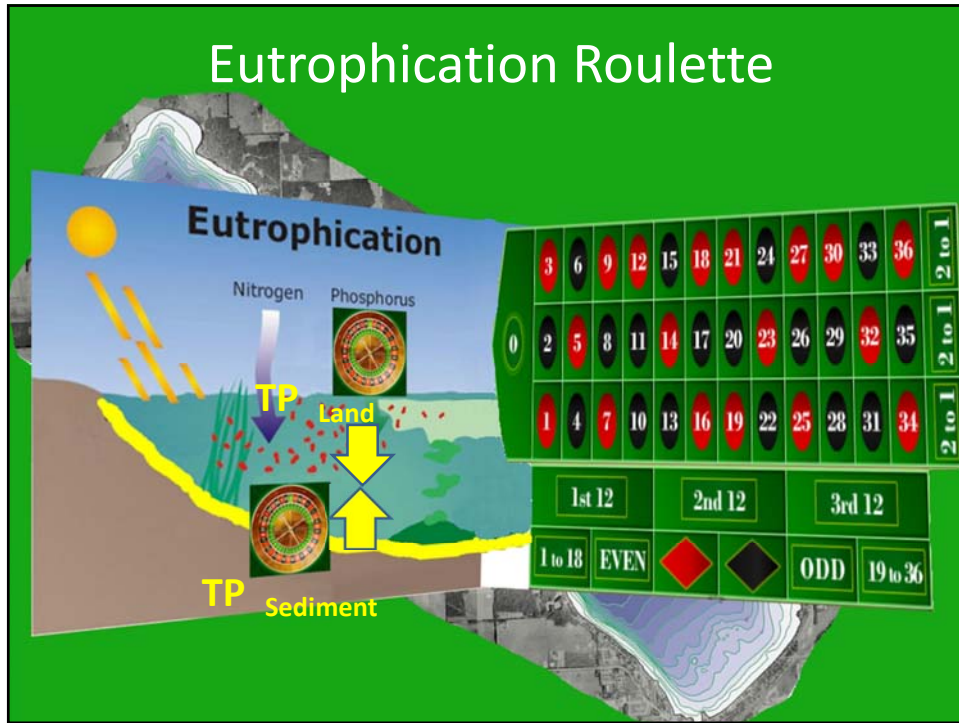






## The Casino Rules for the Game

1. Players deposit 10% of their watershed assets with the casino cashier.
2. Game scores are the sum:
 
$$P_{\text{Land}} + P_{\text{Sediment}}$$
  1. Players may bet on any number between 1 and 36.
  2. If game scores consistently exceed 36, and the lake becomes eutrophic, players will lose their deposits.





*Yes?*

*No?*

*Fin*