

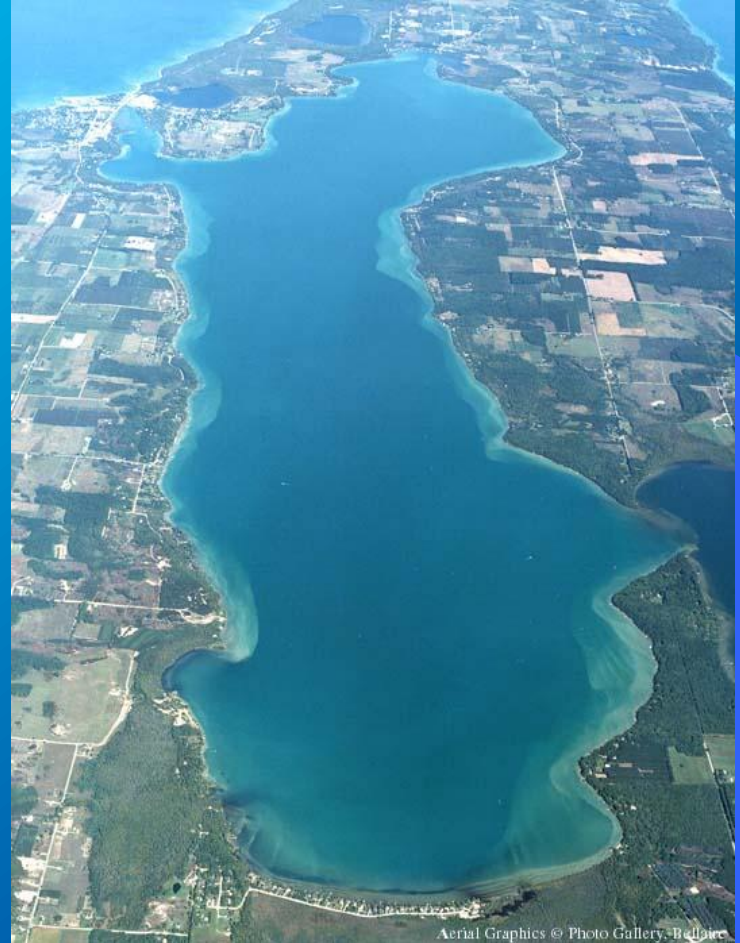
# Elk Skegemog Lakes Association

## Water Quality Monitoring

**2006 Interns:**  
**Erik Sundberg**  
**Kyle Clark**

# Parameters

- Dissolved Oxygen
- Clarity
- Temperature
- Phosphorous Levels



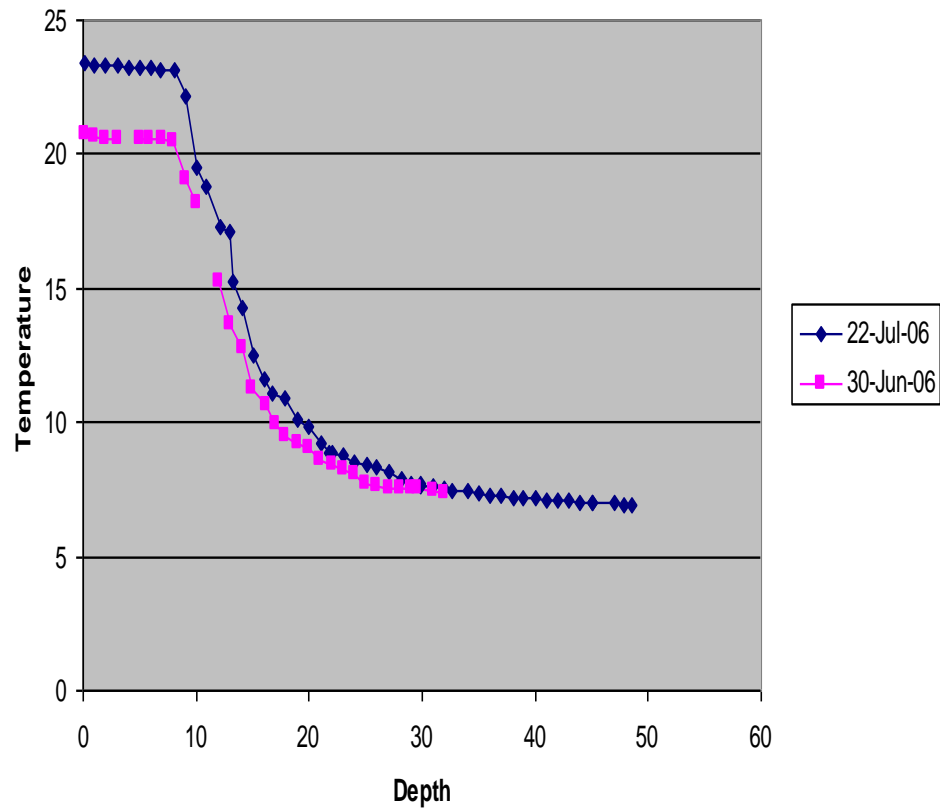
# Obtaining Temperature and Dissolved Oxygen Profiles

- Hydrolab Quanta Sensor
- Measures temperature, dissolved oxygen, specific conductivity, and PH

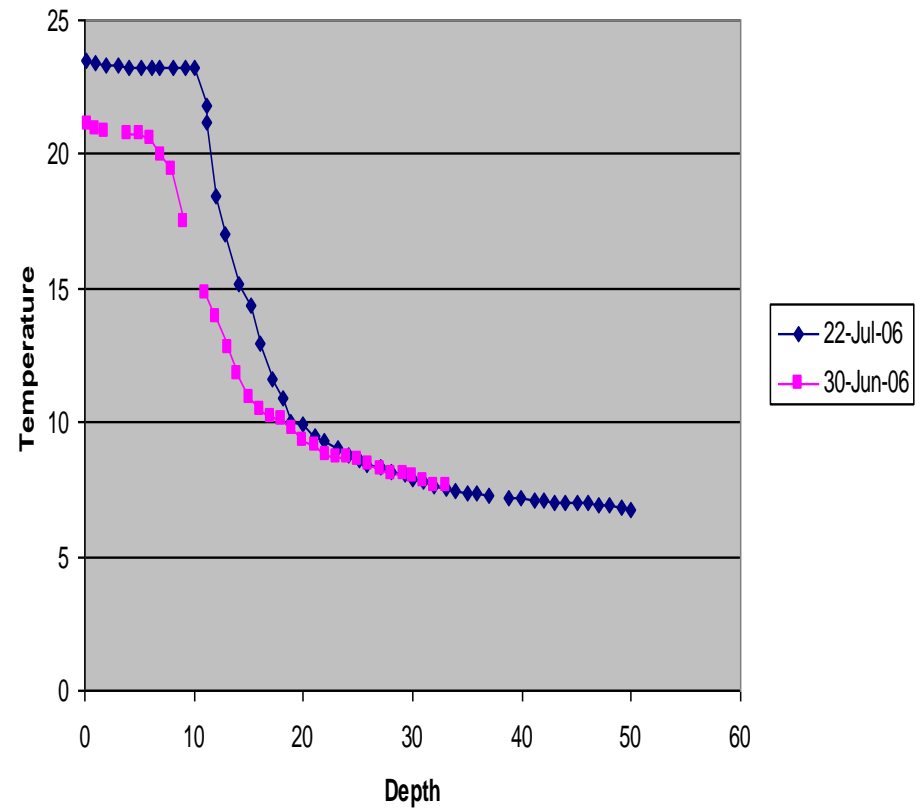


# Elk Lake Temperature Profiles

Temperature Over Depth In North Elk

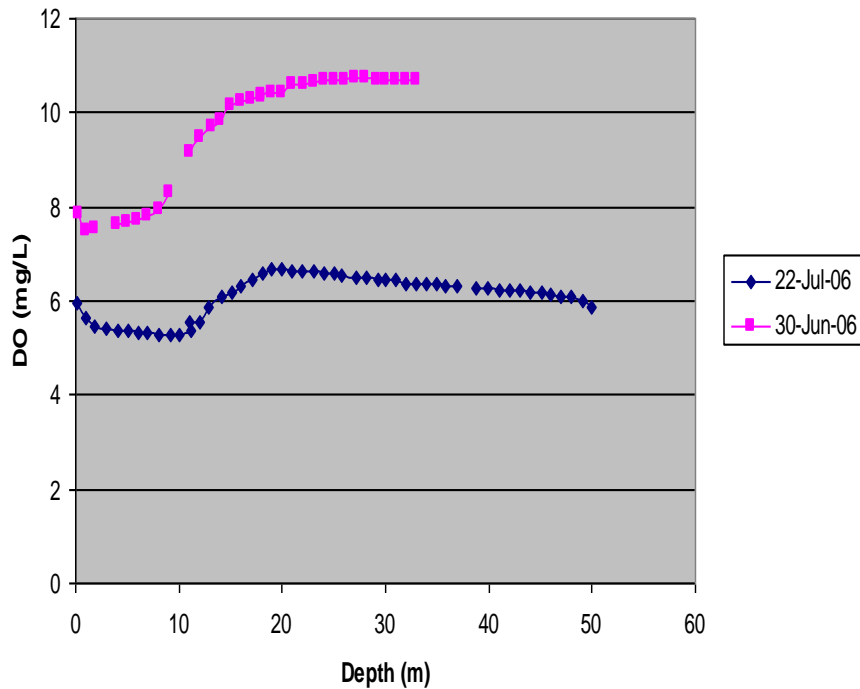


Temperature Over Depth on South Elk

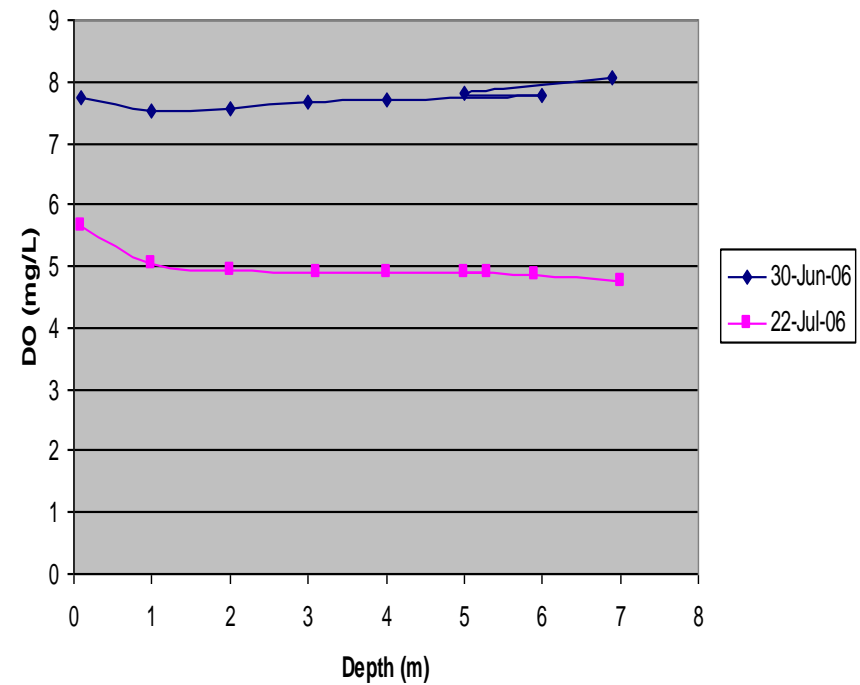


# Elk and Skegemog Lake Dissolved Oxygen Profiles

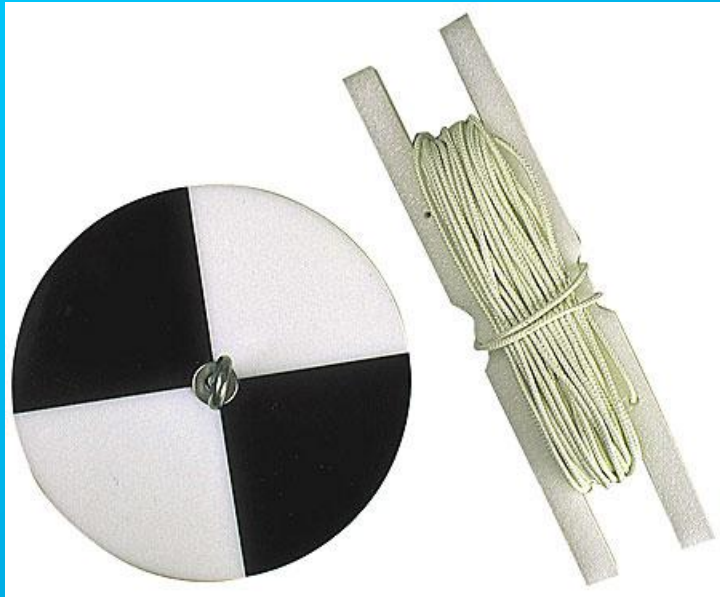
## DO Versus Depth in South Elk



## DO Versus Depth IN Skegemog



# Water Clarity



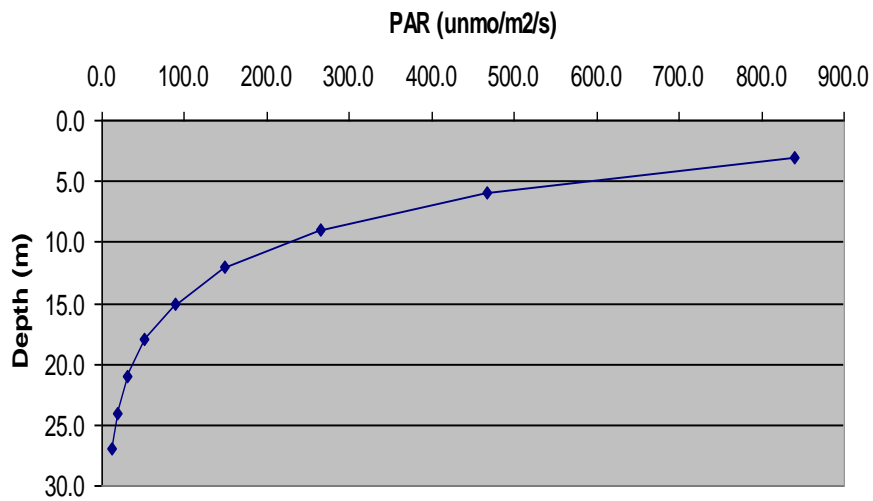
- Secchi Disk



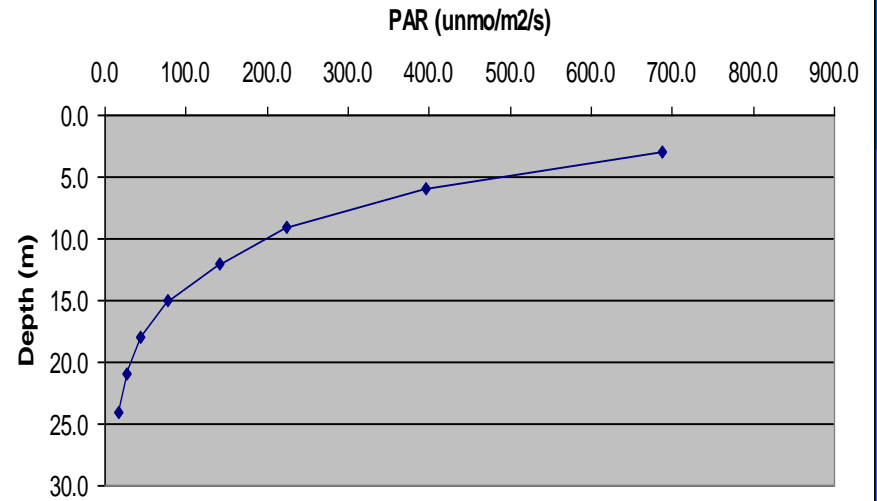
- Li-Cor Quantum Sensor

# Li-Cor Profiles

Elk Lake South Basin 6/30/06



Elk Lake North Basin 6/30/06



# Secchi Disk Profiles

Lake	Date	Secchi Depth
Elk Lake North Basin	6/30/06	6.3 m
Elk Lake South Basin	6/30/06	5.3 m

Lake Skegemog	6/22/06	4.6 m
Lake Skegemog	6/30/06	5.9 m

# Obtaining Phosphorous Profiles

- The Van Dorn Bottle is used to acquire water samples from desired depths. This allows ESLA to establish depth profiles of several different parameters, including phosphorous levels.



Van Dorn Bottle

# Phosphorous Levels of Local Tributaries

<b>Tributary</b>	<b>Phosphorous Level in ppb</b>
Vargason Creek	7.2
Desmond Creek	3.8
Rapid River	4.0
Barker Creek	5.3
Copeland Creek	4.3
Battle Creek	5.5
Williamsburg Creek	5.2

# Phosphorous Levels of Elk and Skegemog Lake

Lake Location	Phosphorous level in ppb
North Elk Lake Surface	1.4
North Elk Lake Middle	2.7
North Elk Lake Deep	3.0
South Elk Lake Surface	2.7
South Elk Lake Middle	1.4
South Elk Lake Deep	2.9
Lake Skegemog Composite	4.4

# Phosphorous Level of Elk River

<b>Elk River</b>	<b>Phosphorous Level in ppb</b>
Outflow	3.3

# Summary

- Phosphorous seems to be constantly filtered out of the environment by the local lakes and tributaries, especially Elk Lake.
- Much more information should be gathered about the Elk-Skegemog watershed. Phosphorous loads from each of the tributaries, precipitation, and groundwater must be measured.