Hazel Creek Lake, Site 1

Adair County

2006 DATA

Date	Secchi (inches)	TP (µg/L)	TN (µg/L)	CHL (µg/L)	ISS (mg/L)
4/26	44	20	530	11.8	3.4
5/19	31	20	610	7.2	6.3
6/16	51	16	400	6.9	2.4
7/3	60	20	570	5.8	2.4
7/28	71	15	470	11.3	2.2
Mean	**50**	**18**	**510**	**8.3**	**3.1**

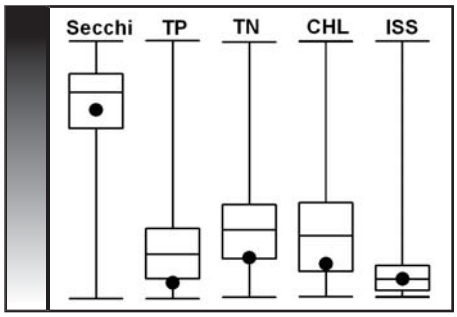
2006 SUMMARY

Hazel Creek Lake was sampled 5 times in 2006, with the last sample collected by the end of July.

Nutrients, chlorophyll, and suspended sediment concentrations were lower at the dam site than at the other two sites. This is common among reservoirs, as the particulate matter settles out as the water moves through the lake. Observed concentrations were highest at site 3.

The parameters measured in 2006 at the dam varied little throughout the season, with the highest clarity occurring on the July 28 sampling date.

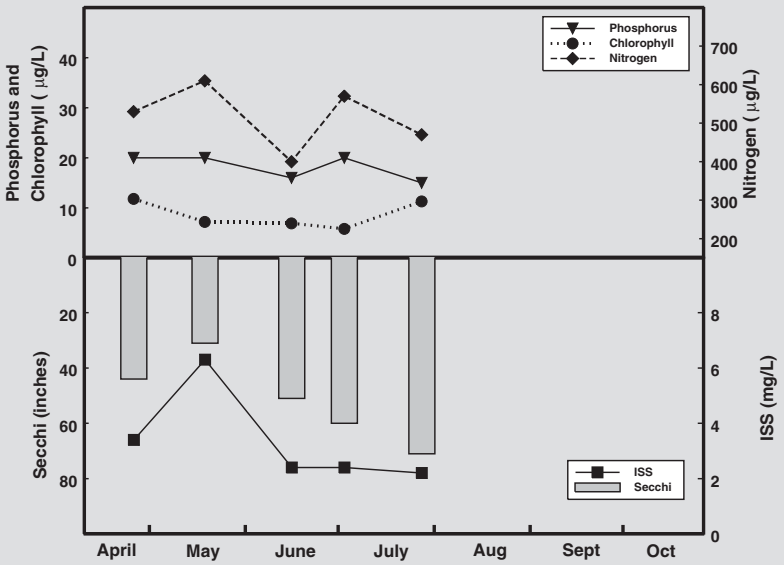
Mean concentrations of nutrients and chlorophyll were generally lower than observed in 75% of Missouri lakes. The mean concentration of suspended sediments was comparable to the median of all Missouri lakes. Secchi transparency



Relative Rank Graph
See page 11 for details

TRENDS

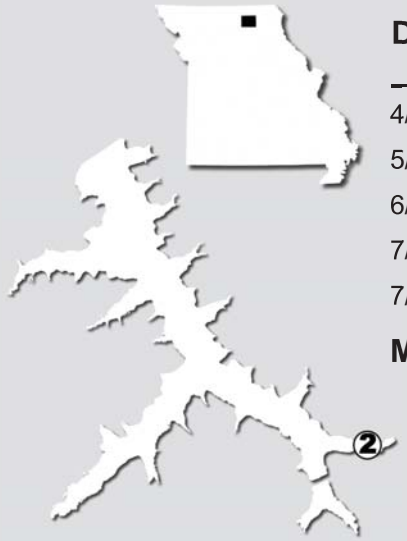
2006 was the second year that Hazel Creek Lake was sampled for the LMVP. Though parameters remained consistent throughout 2006, chlorophyll and suspended sediment concentrations were slightly higher than in 2005.



Hazel Creek Lake, Site 2

Adair County

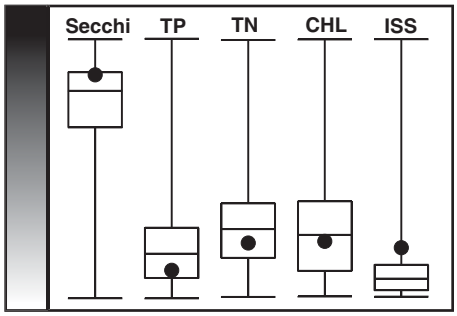
2006 DATA



Date	Secchi (inches)	TP (µg/L)	TN (µg/L)	CHL (µg/L)	ISS (mg/L)
4/26	26	26	610	11.0	7.4
5/19	23	34	670	15.8	11.2
6/16	45	19	580	7.7	2.7
7/3	28	32	620	12.2	9.4
7/28	24	27	620	21.8	10.1
Mean	**28**	**27**	**619**	**12.9**	**7.3**

2006 SUMMARY

This up-lake site has higher concentrations of nutrients, chlorophyll and sediments than the dam site, and lower Secchi transparency. Up-lake sites typically differ from dam sites in this way, as the depth is usually much shallower and the sources of inflow are much closer. Nutrient, chlorophyll and sediment concentrations tend to exhibit higher variability at up-lake sites than at dam sites, however all parameters were quite stable at site 2 in 2006. This site had nutrient and chlorophyll concentrations near the median of Missouri lakes.

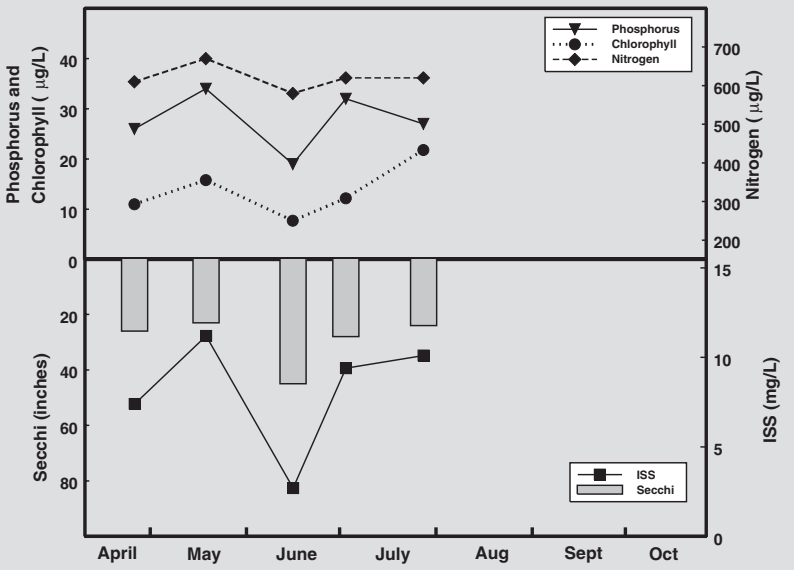


Relative Rank Graph
See page 11 for details

TRENDS

The Secchi depth increased dramatically for the June sampling date. The minimum chlorophyll and suspended sediment concentrations for 2006 coincided with the higher clarity found in June.

Water quality in 2006 was similar to that of 2005.



Hazel Creek Lake, Site 3

Adair County

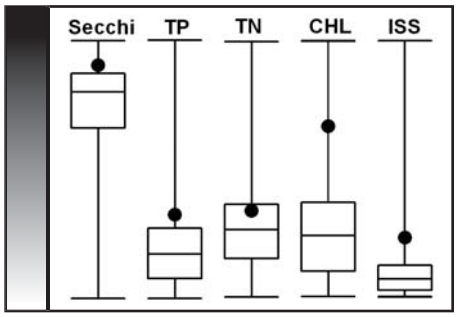
2006 DATA

Date	Secchi (inches)	TP (µg/L)	TN (µg/L)	CHL (µg/L)	ISS (mg/L)
4/26	16	92	910	48.7	15.2
5/19	19	70	860	27.0	10.8
6/16	26	62	940	34.0	6.0
7/3	24	67	890	43.0	8.5
7/28	24	58	790	39.5	6.2
Mean	**22**	**69**	**876**	**37.7**	**8.8**

2006 SUMMARY

Site 3 at Hazel Creek Lake is separated from the main lake by a road, with culvert pipes carrying the water underneath. This renders site 3 more like a small catch basin and less like the up-lake site that the map suggests it is.

Chlorophyll concentrations are higher than seen in more than 75% of Missouri lakes, as are concentrations of phosphorus and suspended sediments. Nitrogen concentrations are among the middle 50% of Missouri lakes and the Secchi transparency is among the shallowest 25% in Missouri.



Relative Rank Graph
See page 11 for details

TRENDS

Variability at this site was still low, despite the high concentrations of nutrients and algae observed. The dry conditions of 2006 meant less runoff from the watershed, and thus fewer nutrient inputs and less variability.

Suspended sediment concentrations were somewhat lower in 2006 than in 2005. Chlorophyll concentrations increased, despite lower concentrations of phosphorus, as more sunlight was available to the algae.