Hazel Creek Lake, Site 1

Adair County

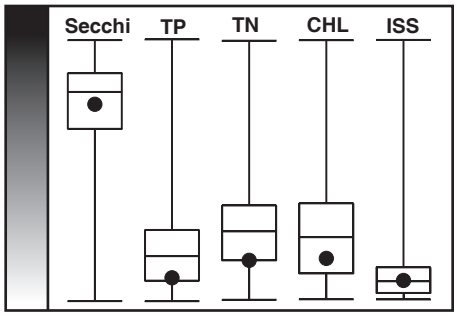
2007 DATA

Date	Secchi (inches)	TP (µg/L)	TN (µg/L)	CHL (µg/L)	ISS (mg/L)
6/8	29	34	590	12.4	6.7
7/12	55	21	530	8.4	1.9
8/28	61	18	410	9.0	2.5
Mean	**46**	**23**	**500**	**9.8**	**3.2**

2007 SUMMARY

Nitrogen and chlorophyll did not vary considerably among the three samples collected at Site 1 on Hazel Creek Lake in 2007. Phosphorus and inorganic suspended solids concentrations were highest in June and decreased in the July sample. As ISS decreased, Secchi transparency increased.

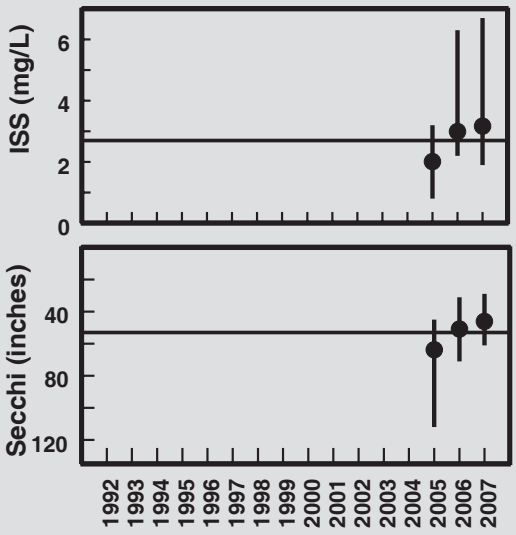
2007 mean values for all parameters were between the 25th percentile and the median value in the statewide rankings. This means that 50% to 75% of Missouri lakes had more nutrients, algae or sediments than Hazel Creek Lake (and thus less clarity).



Relative Rank Graph
See page 11 for details

TRENDS

While the average values have not been very different among years, higher individual values of inorganic suspended solids have been measured during 2006 and 2007. The increases in suspended sediment have led to lower Secchi clarity readings during these two years. Long-term mean nutrient and chlorophyll values (not shown) in Hazel Creek Lake are well below proposed criteria.



Hazel Creek Lake, Site 2

Adair County

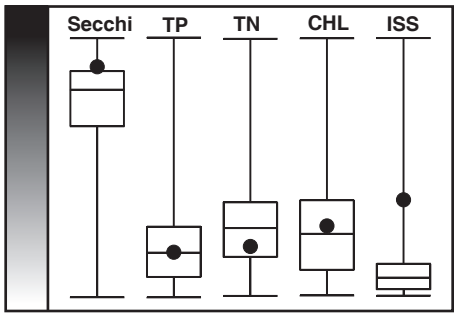
2007 DATA

Date	Secchi (inches)	TP (µg/L)	TN (µg/L)	CHL (µg/L)	ISS (mg/L)
6/8	--	58	780	19.8	25.5
7/12	22	40	570	13.7	12.7
8/28	26	27	450	15.0	8.3
Mean	**24**	**40**	**580**	**16.0**	**13.7**

2007 SUMMARY

June phosphorus and inorganic suspended solids values were higher than in July and August at Site 2, much like the pattern displayed at Site 1. One difference was that nitrogen at Site 2 was also elevated in June relative to the other two samples. Even though the nutrients and inorganic suspended solids concentrations varied among the three samples, chlorophyll values remained quite stable.

Nutrients and chlorophyll hover around the statewide median values, while inorganic suspended solids were in the upper quartile and Secchi transparency was shallower than 75% of Missouri reservoirs. The location of Site 2 should be taken into consideration when reviewing these findings, as it is common for up-lake sites to have more nutrients, suspended sediment and lower Secchi than dam sites.

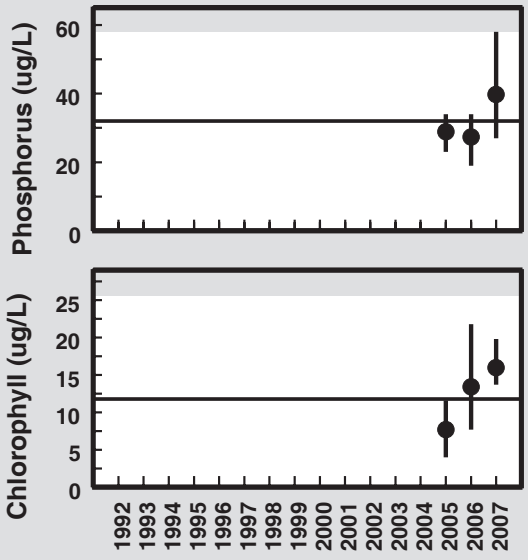


Relative Rank Graph
See page 11 for details

TRENDS

While phosphorus levels were higher at Site 2 in 2007 compared to the previous two years, the difference is well within the normal year-to-year range observed in Missouri reservoirs. The increase in chlorophyll over the last three years may be a result of differences in the concentratsions of both nutrients and inorganic suspended solids among years. Continued monitoring will help determine if trends in water quality are occurring.

Nutrient criteria would not apply to this up-lake site The criteria are shown on the trend graph as reference.



Hazel Creek Lake, Site 3

Adair County

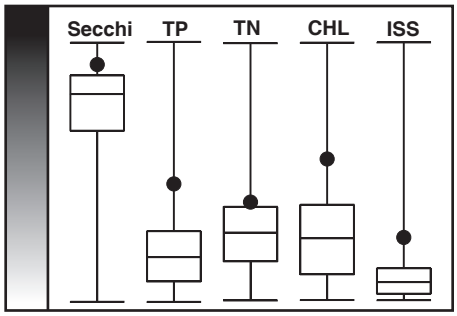
2007 DATA

Date	Secchi (inches)	TP (µg/L)	TN (µg/L)	CHL (µg/L)	ISS (mg/L)
6/8	12	170	1280	27.6	21.3
7/12	23	87	1000	33.7	6.5
8/28	28	56	700	32.7	5.6
Mean	**20**	**94**	**960**	**31.2**	**9.2**

2007 SUMMARY

Site 3 was by far the most variable site on Hazel Creek in terms of nutrients, chlorophyll and inorganic suspended solids values during 2007. Conditions at this site are characteristic of riverine locations. Even though it was more variable, the same general temporal patterns were observed – higher concentrations of nutrients and inorganic suspended solids in June accompanied by a lower Secchi reading.

All 2007 values were in the upper quartile of the statewide rankings. This is expected given this site is located in what amounts to a small catch basin on the upper end of the reservoir.



Relative Rank Graph
See page 11 for details

TRENDS

Phosphorus and inorganic suspended solids concentrations have generally followed the same pattern over the three years this site has been monitored. This is normal as suspended soil material (which make up the ISS) entering the lake often have phosphorus attached to it.