

# Forest Lake, Site 1

Adair County

2007 DATA

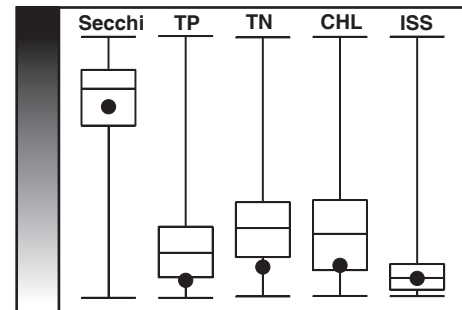


Date	Secchi (inches)	TP (µg/L)	TN (µg/L)	CHL (µg/L)	ISS (mg/L)
6/8	30	31	540	11.9	6.1
7/12	74	15	370	4.9	2.0
8/28	55	15	390	7.5	2.2
<b>Mean</b>	<b>50</b>	<b>19</b>	<b>430</b>	<b>7.6</b>	<b>3.0</b>

2007 SUMMARY

Two sites on Forest Lake were each sampled on three occasions in 2007. At Site 1, located near the dam, water quality varied among the three summer samples. The June sample contained twice the phosphorus and three times the inorganic suspended solids concentrations of the other two samples. Nitrogen and chlorophyll were also higher in June, though differences from the other sample dates were not as dramatic.

Comparison of 2007 mean values to statewide rankings shows that water quality in Forest Lake was better than average for all parameters except ISS, which was right at the statewide median value. Nutrients and chlorophyll ranked near the lower quartile, indicating values lower than 75% of Missouri reservoirs.

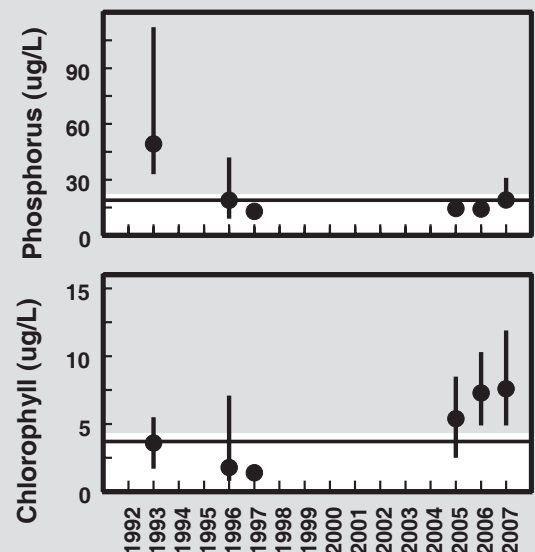


Relative Rank Graph  
See page 11 for details

TRENDS

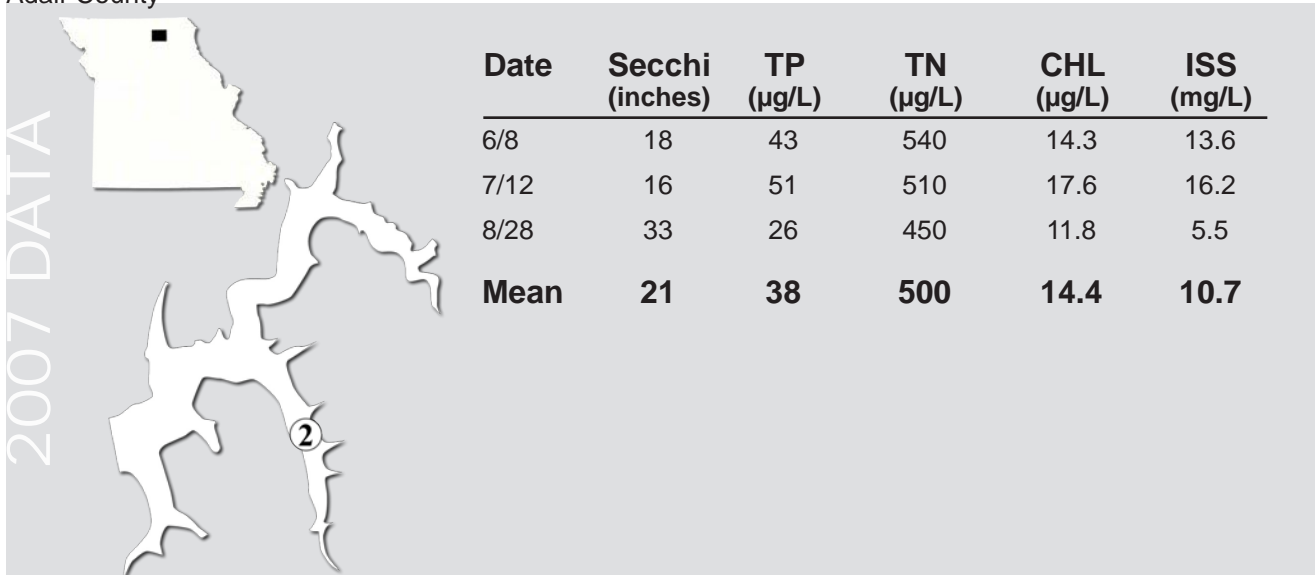
With the exception of 1993, phosphorus values have been comparable among the years that Forest Lake has been monitored. In contrast, chlorophyll values for 1996 and 1997 were low relative to values from the last three years. Lower levels of ISS may account for the increased chlorophyll relative to phosphorus. Lower ISS concentrations would allow more light to enter the lake and promote a higher level of photosynthesis (thus more chlorophyll).

Forest Lake is currently meeting proposed nutrient criteria (as indicated by the top of the white box)



# Forest Lake, Site 2

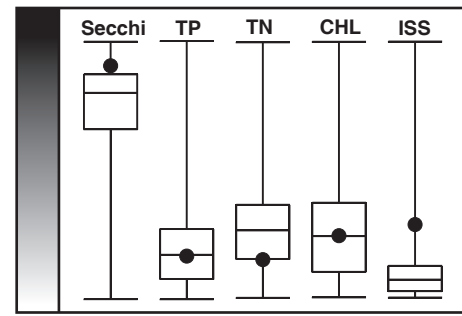
Adair County



2007 SUMMARY

Higher levels of phosphorus, nitrogen, chlorophyll and ISS were measured at Site 2 relative to Site 1, which is expected given the site is located in a tributary arm. High phosphorus and ISS values were measured longer into the summer at this site, with fairly dramatic decreases in August. Nitrogen and chlorophyll at Site 2 did not fluctuate much among the three samples.

Compared to statewide rankings, ISS concentrations at Site 2 were higher than 75% of Missouri lakes. This led to a mean Secchi transparency that was in the lowest quartile of statewide data. This is not surprising given this is a tributary site. Nutrients and chlorophyll were at or below the median statewide value.



Relative Rank Graph  
See page 11 for details

TRENDS

Phosphorus was a little higher in 2007 than in the previous two summers, though the difference is well within the normal year to year fluctuations seen in Missouri reservoirs. Chlorophyll has become less variable with each summer of data. This may be a function of the limited number of samples in 2007 as opposed to a trend in water quality.

Proposed criteria would only apply to the dam site, and are shown for reference only.

