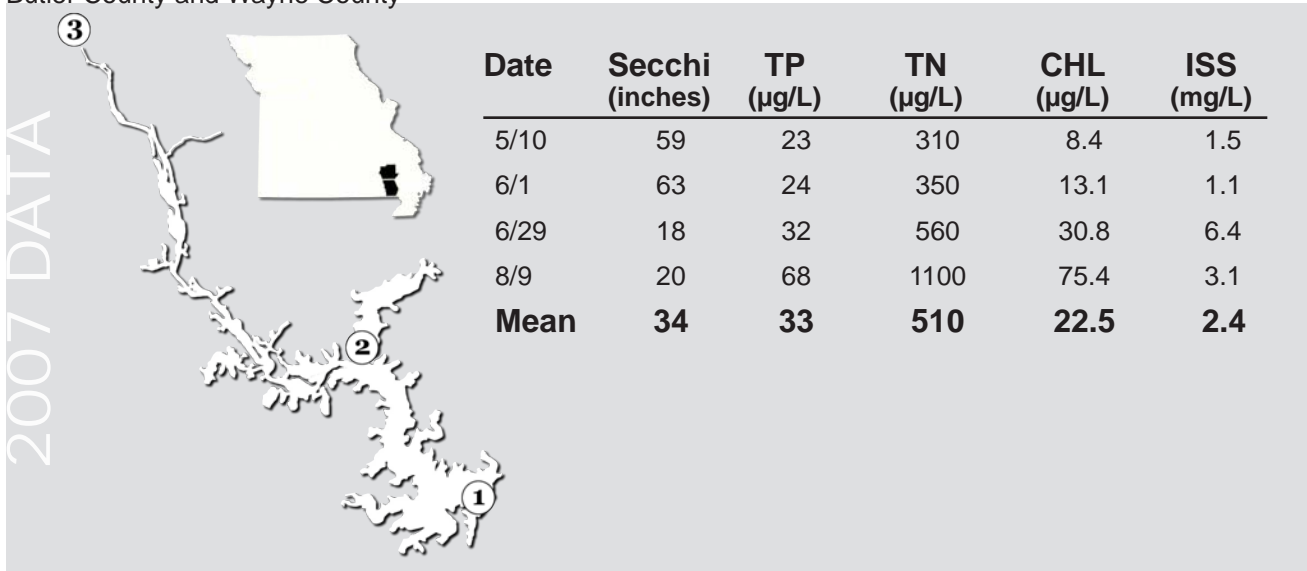


Lake Wappapello, Site 1

Butler County and Wayne County

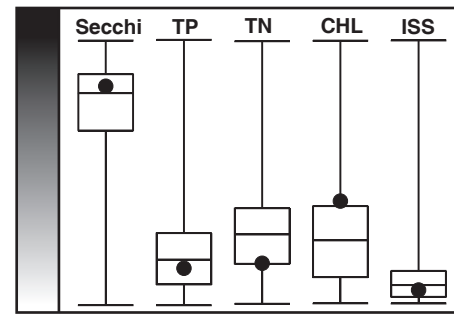


2007 SUMMARY

Four samples were collected at each of the three sites on Lake Wappapello.

At the dam (Site 1) suspended sediment concentrations were below the statewide median. While nitrogen and phosphorus concentrations were also below the median, chlorophyll concentrations were nonetheless higher than found in 75% of Missouri lakes. This implies a high algal biomass relative to nutrients, and is evident when comparing chlorophyll to phosphorus ratios. The ratios start at 0.37 (comparable to the regional mean) but steadily increase to 1.11.

The data suggest an algae bloom was occurring in late June and in early August, when chlorophyll to phosphorus ratios were near 1:1.



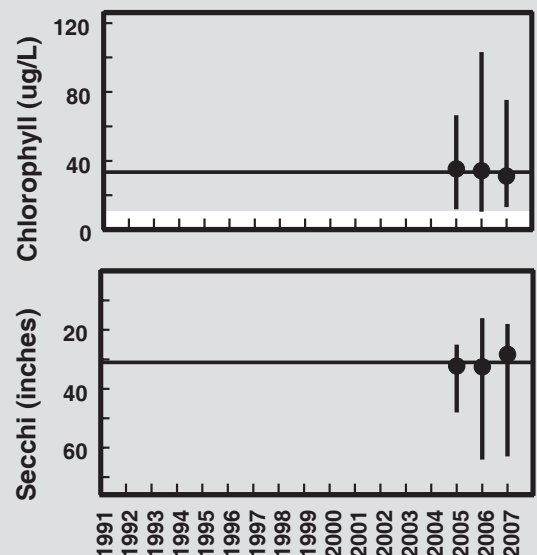
Relative Rank Graph
See page 11 for details

TRENDS

Nitrogen and phosphorus values are greater than the proposed nutrient criteria for Lake Wappapello.

Chlorophyll concentrations (as indicated by the 2007 data) are quite high in Lake Wappapello relative to the nutrient concentrations. That explains why the long-term chlorophyll value is more than double the proposed standard.

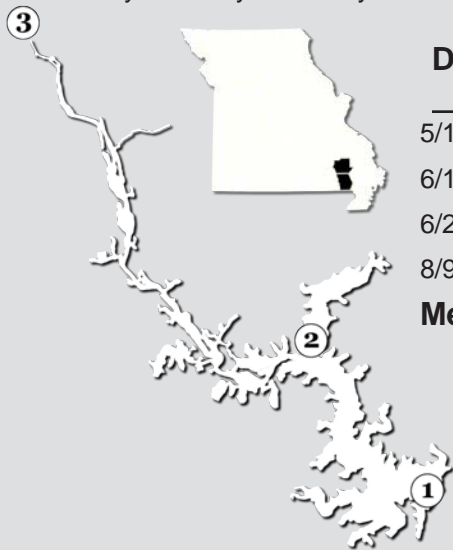
Within season variability is quite high at Wappapello Lake, with chlorophyll concentrations varying roughly 10-fold. However, seasonal mean values haven't varied much in the last three years.



Lake Wappapello, Site 2

Butler County and Wayne County

2007 DATA



Date	Secchi (inches)	TP (µg/L)	TN (µg/L)	CHL (µg/L)	ISS (mg/L)
5/10	59	40	500	18.2	6.4
6/1	62	27	400	12.7	2.4
6/29	17	53	800	54.4	10.3
8/9	25	97	1380	102.6	6.3
Mean	35	49	680	33.7	5.6

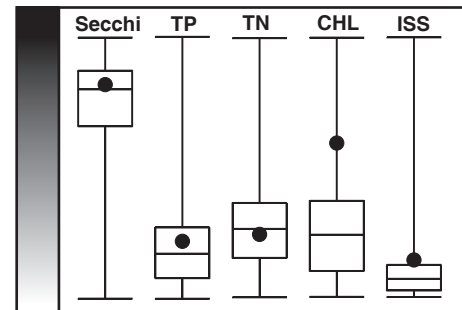
2007 SUMMARY

Four samples were collected at this site on Wappapello Lake.

This site has higher concentrations of nutrients, chlorophyll and sediments than the dam site (Site 1). Like the dam site, nutrient and chlorophyll concentrations started lowest early in the season, and increased by August.

Secchi transparency and nutrient values were comparable to the statewide median. Chlorophyll and sediment concentrations were greater than observed in 75% of Missouri lakes.

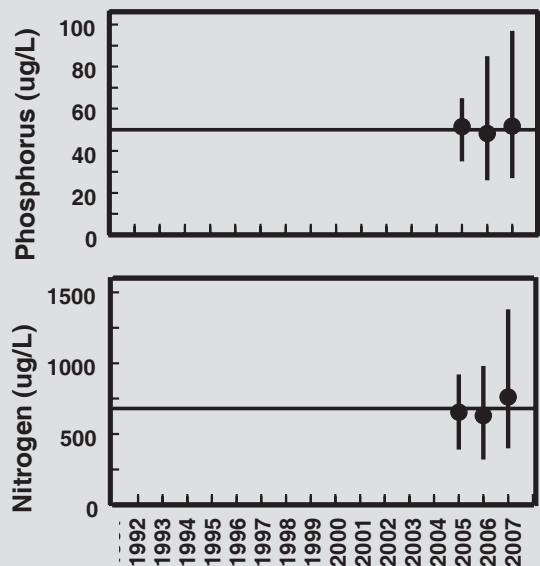
Sediment (ISS) concentrations at Site 2 were roughly double those found at the dam.



Relative Rank Graph
See page 11 for details

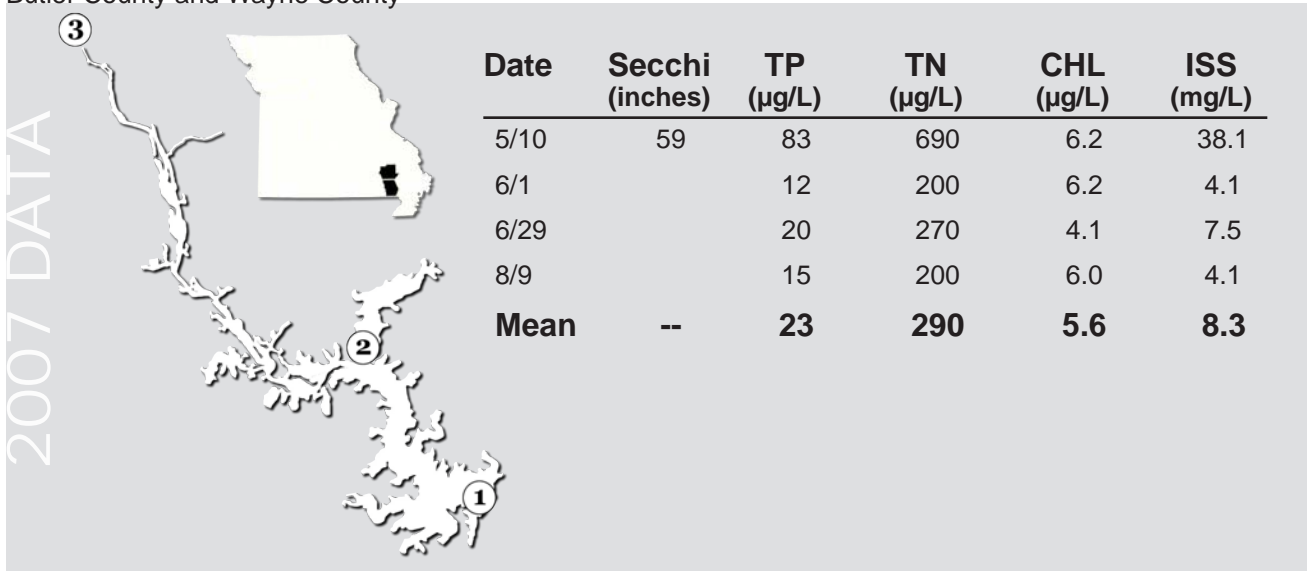
TRENDS

The two nutrients, phosphorus and nitrogen, were 48 and 33 percent higher at Site 2 than at Site 1. Like the dam site, however, mean values have been rather stable across the three years of monitoring.



Lake Wappapello, Site 3

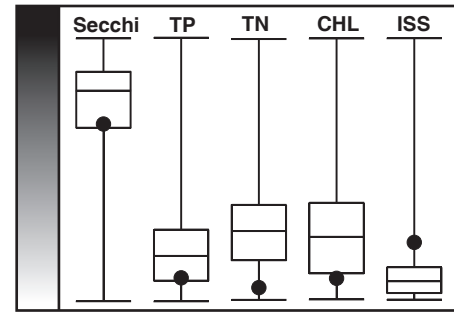
Butler County and Wayne County



2007 SUMMARY

Four sampling events occurred in 2007 at Lake Wappapello, Site 3. This site is located on the St. Francois River at the Highway 34 bridge. Water clarity is high enough at this site for the Secchi disk to reach the bottom. The absence of a Secchi value in the table above is an indicator of high clarity.

While the nutrient values seen at Site 3 are lower than those observed at the dam, this is a stream site and nutrients may pass by very quickly.



Relative Rank Graph
See page 11 for details

TRENDS

For the trend graphs to the right, only summer values (May 15-Sept. 15) were included.

Phosphorus concentrations at Site 3 were lower than at other Wappapello sites, with means around 15 ug/L.

While the mean chlorophyll concentrations have increased across the three years of sampling at Site 3, the difference between the 2005 and 2007 means is less than 2 ug/L.

