

Lake Taneycomo

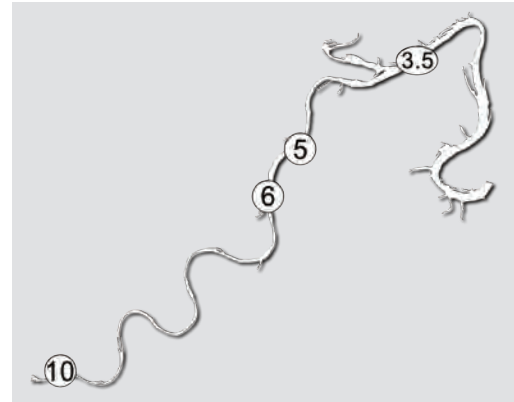
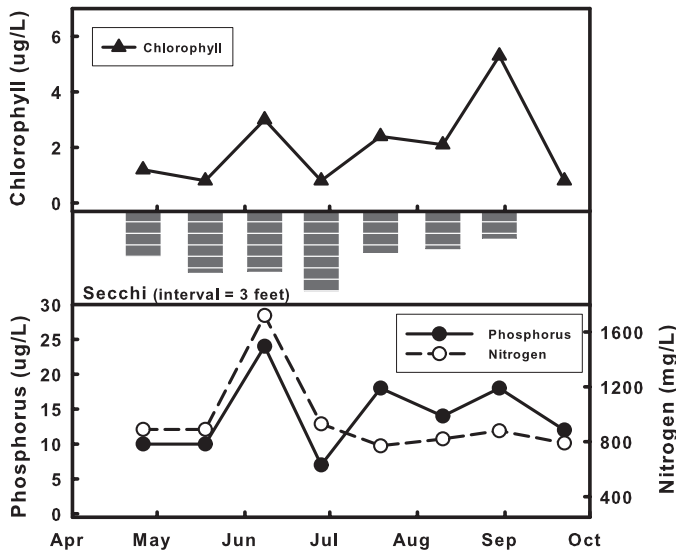


Site 3.5

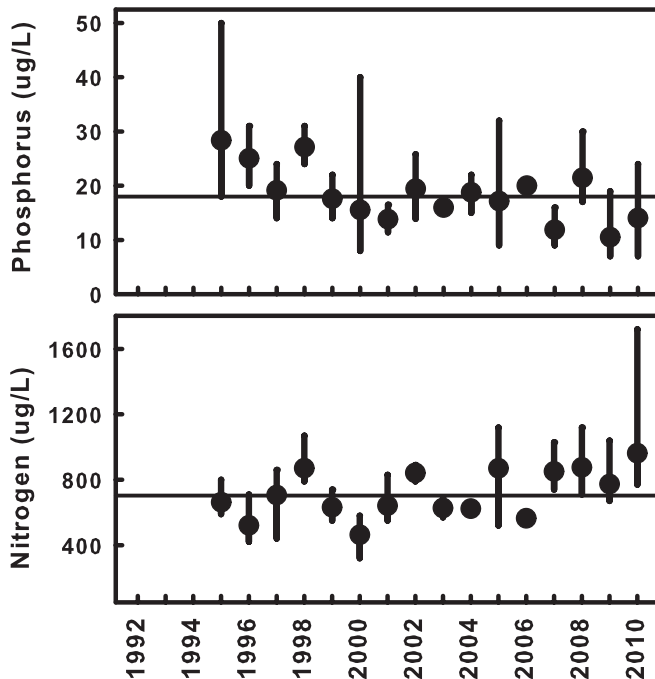
2010 DATA

Taney County
 Latitude: 36.6963 Longitude: -93.1583

Date	X	5/18	6/8	6/28	7/19	8/10	8/30	9/22	Mean
Secchi (inches)		194	191	252	132	120	87	.	152
TP (µg/L)		10	24	7	18	14	18	12	13
TN (µg/L)		890	1720	930	770	820	880	790	929
CHL (µg/L)		0.8	3.0	0.8	2.4	2.1	5.3	0.8	1.6



Phosphorus, nitrogen and algal chlorophyll all followed the same general pattern through the 2010 sample season, with minor peaks in early June and again in late September. Secchi transparency increased through the first half of the sample season, reaching a depth of 21 feet at the end of June, and then decreased as the summer progressed. The Secchi hit the bottom of the lake on 9/22, so no value is reported.



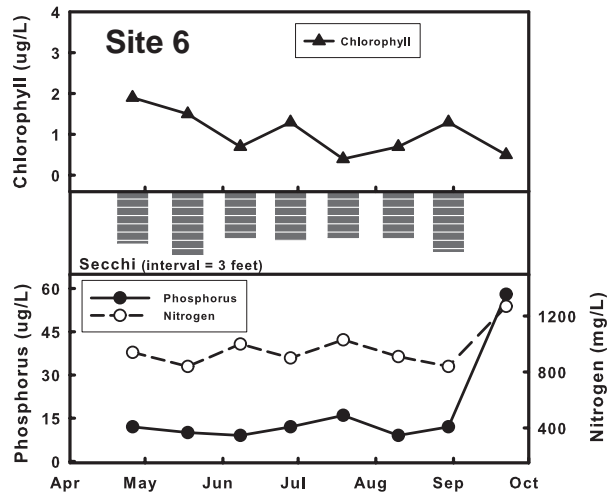
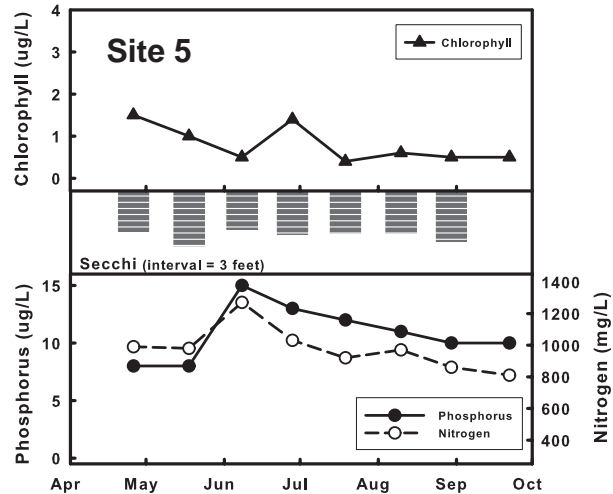
Long-term trends at Site 3.5 in Lake Taneycomo are for lower phosphorus concentrations relating to reduced inputs. In contrast, summertime nitrogen levels have been above the long-term average during the last four summers.

Lake Taneycomo Site 5

Taney County
 Latitude: 36.6722 Longitude: -93.1986

Date	4/26	5/18	6/8	6/28	7/19	8/10	8/30	9/22	Mean
Secchi (inches)	242	326	229	259	252	252	300	.	264
TP (µg/L)	8	8	15	13	12	11	10	10	11
TN (µg/L)	990	980	1270	1030	920	970	860	810	728
CHL (µg/L)	1.5	1.0	0.5	1.4	0.4	0.6	0.5	0.5	0.7

In general, water quality in the mid-lake section of Lake Taneycomo was fairly stable across the 2010 sample season. Site 5 saw only minor fluctuations in the parameters, while Site 6 was stable except for the last sample date on September 22. On this day concentrations of both nutrients showed a sharp increase over the previous sample date. As we have seen in the past, short-term nutrient increases in Lake Taneycomo do not always translate to higher levels of algal chlorophyll. At both sites the Secchi transparency was deeper than normal during the season, with clarity exceeding lake depth on the last sample date.



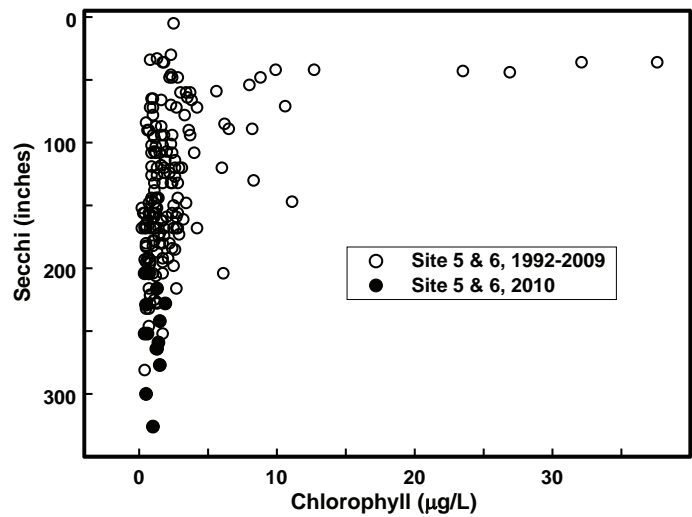
Lake Taneycomo Site 6

Taney County
 Latitude: 36.6519 Longitude: -93.2133

Date	4/26	5/18	6/8	6/28	7/19	8/10	8/30	9/22	Mean
Secchi (inches)	228	277	204	216	204	204	264	.	226
TP (µg/L)	12	10	9	12	16	9	12	58	14
TN (µg/L)	940	840	1000	900	1030	910	840	1270	958
CHL (µg/L)	1.9	1.5	0.7	1.3	0.4	0.7	1.3	0.5	0.9

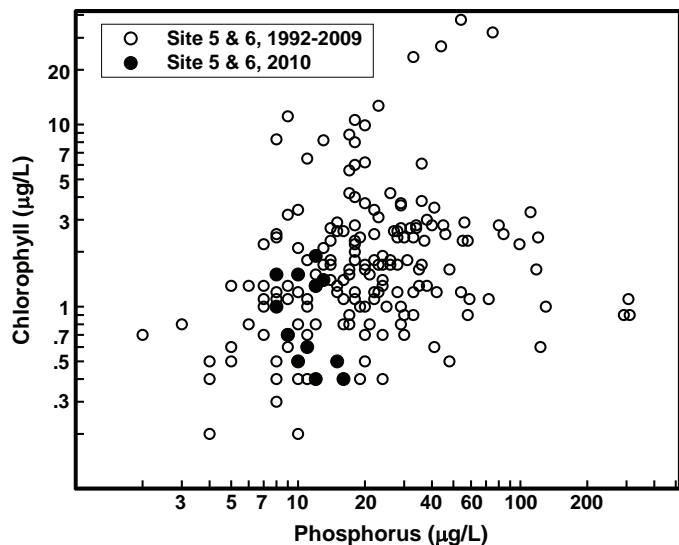
Lake Taneycomo (continued)

Secchi measurements at sites 5 and 6 were quite clear during the 2010 sample season. Readings taken in late September hit bottom at both sites and are not represented in the accompanying graph. Looking back at old field sheets, Secchi readings bottomed out at these sites only one other time, June 2002. Review of the graph shows that while chlorophyll levels in 2010 were low, they were not lower than previously measured values.



The cause of the improved clarity at these mid-lake sites during the 2010 season is not obvious. There may have been decreased levels of inorganic suspended sediment in the lake, which would improve clarity.

When we plot 2010 chlorophyll concentrations against phosphorus for sites 5 and 6 we find that the two parameters related to each other in a fashion similar to previous years. While chlorophyll levels were on the low end of the range (note both phosphorus and chlorophyll are log-scaled, which spreads values out at low end and compresses values on the high end), they were comparable to past values. Phosphorus concentrations are also on the low end of what has historically been measured at these sites, but not as low as some past values.



Lake Taneycomo



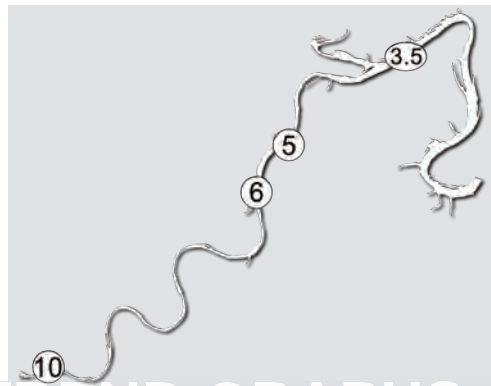
Site 10

2010 DATA

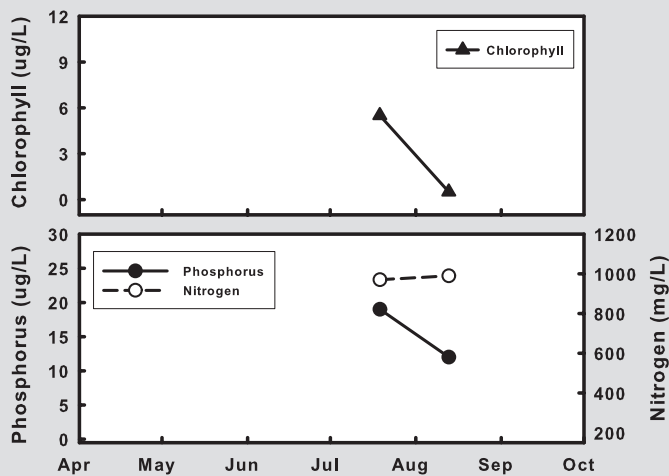
Taney County
 Latitude: 36.5967 Longitude: -93.2950

Date	X	X	X	X	7/19	8/14	X	X	Mean
Secchi (inches)					Secchi on bottom				
TP (µg/L)					19	12			15
TN (µg/L)					970	990			980
CHL (µg/L)					5.5	0.5			1.7

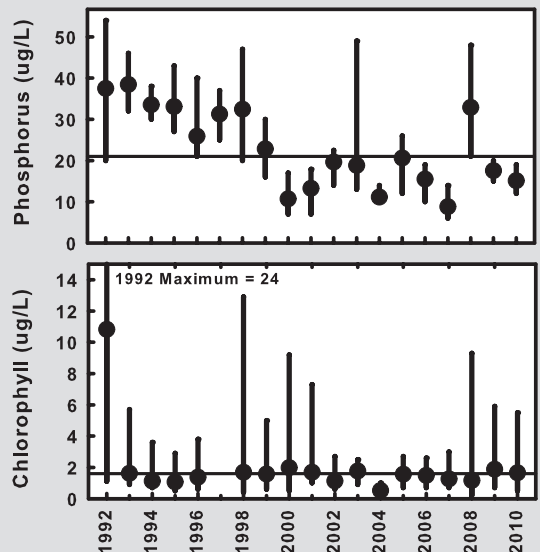
Not much can be said about the water quality at Site 10 in 2010 due to limited sampling. Long-term data show the decline of phosphorus at this site, relating to reduced inputs in the Table Rock Lake watershed. Chlorophyll levels are generally low (<3µg/L) with concentrations that occasionally peak above 5 µg/L.



2010 GRAPHS



TREND GRAPHS



See pages 10-11 for help interpreting graphs