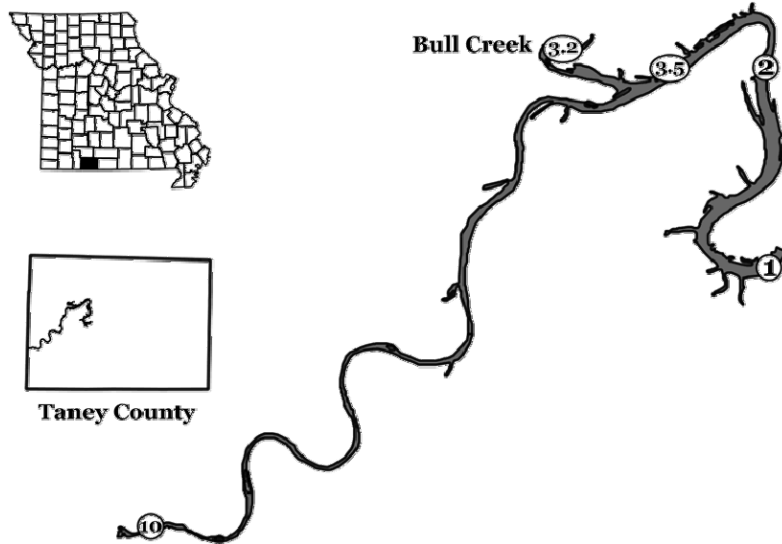


# Lake Taneycomo

Lake Taneycomo is a 22 mile long, 2080 acre lake in the White River Basin. It is located between Table Rock Lake and Bull Shoals Lake. While the majority of Lake Taneycomo's watershed is forested, the lake is influenced by the location of Branson and other nearby developed areas. The



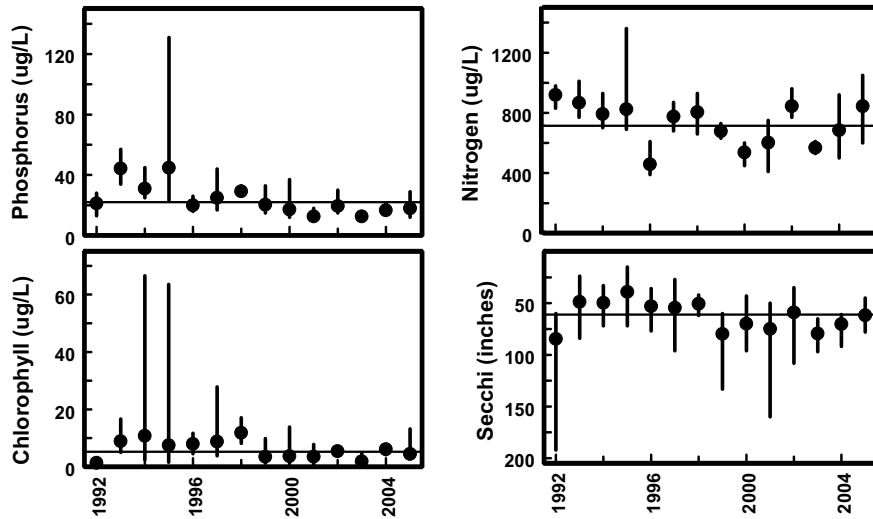
Location of Lake Taneycomo and its sample sites

The majority of water flowing through Lake Taneycomo originates from the deep waters of Table Rock Lake. This water source plays a large role in determining the overall water quality of Lake Taneycomo. Another major influence on water quality in Lake Taneycomo is the residence time (see page 6 for more information on residence time) of the water in the lake, which can be very short (Knowlton and Jones 1990).

## Descriptive statistics for Lake Taneycomo – 2005

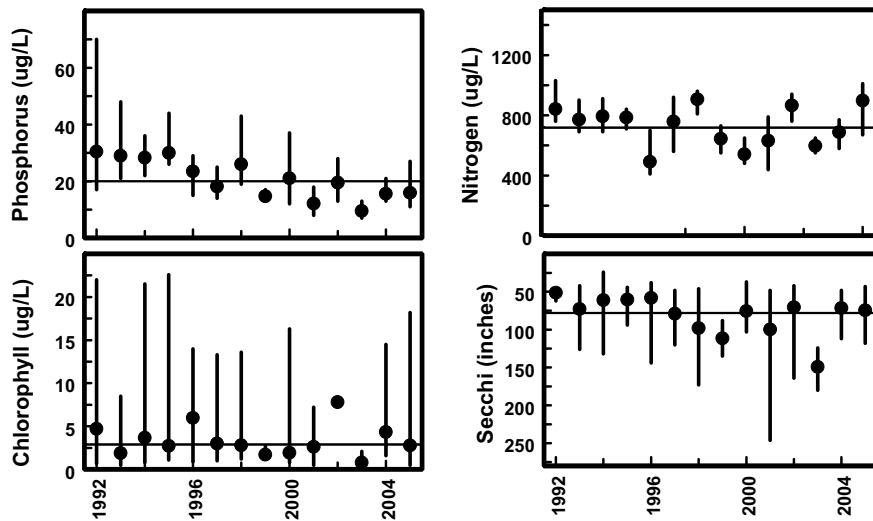
Parameters		1	2	3.5	10	3.2
<b>Secchi Transparency (inches)</b>	<b>Mean</b>	57	69	60		33
	<b>Minimum</b>	40	43	42		25
	<b>Maximum</b>	78	118	101		59
<b>Phosphorus (ug/L)</b>	<b>Mean</b>	18	17	18	20	31
	<b>Minimum</b>	12	11	9	12	16
	<b>Maximum</b>	29	27	32	26	50
<b>Nitrogen (ug/L)</b>	<b>Mean</b>	861	904	896	1069	556
	<b>Minimum</b>	600	670	520	990	200
	<b>Maximum</b>	1050	1010	1120	1170	860
<b>Chlorophyll (ug/L)</b>	<b>Mean</b>	4.9	3.6	3.8	1.7	
	<b>Minimum</b>	2.8	0.5	1.0	0.7	
	<b>Maximum</b>	13.2	18.2	15.2	3.2	
<b>ISS (mg/L)</b>	<b>Mean</b>					4.8
	<b>Minimum</b>					2.4
	<b>Maximum</b>					7.1

# Lake Taneycomo



## Multi year trends at Lake Taneycomo, Site 1

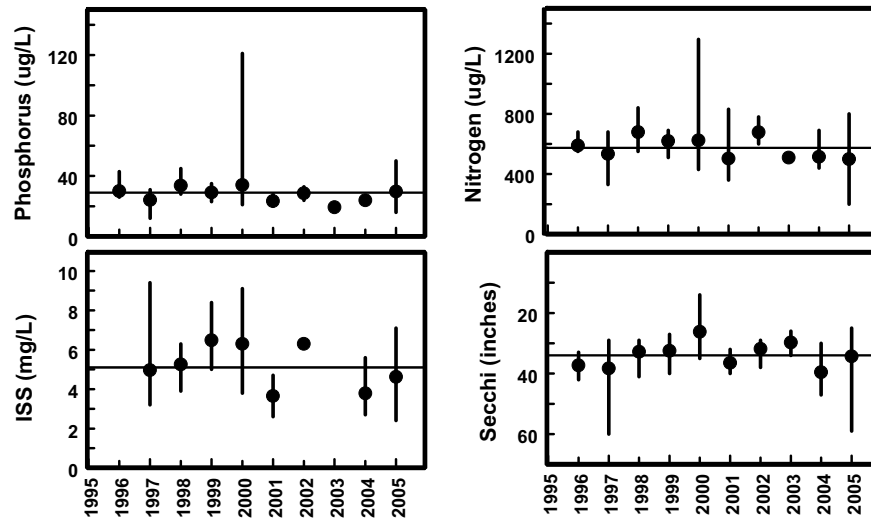
Mean phosphorus and chlorophyll concentrations at Site 1 (Powersite Dam) have been below the overall average since 1998. While nitrogen concentrations show high variability from year to year, there is no trend apparent. Water clarity has been higher since 1999 than in the years preceding. With less phosphorus in the system, algae was reduced which in turn increased water clarity.



## Multi year trends at Lake Taneycomo, Site 2

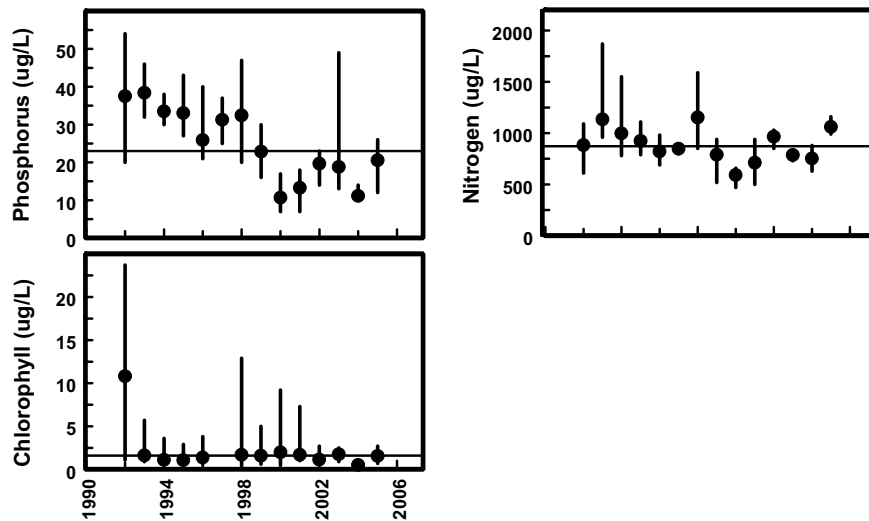
Phosphorus concentrations at Site 2 have declined in recent years, though the algae (as measured by chlorophyll concentration) has not responded yet. As a result, Secchi transparency hasn't changed either.

# Lake Taneycomo



## Multi year trends at Lake Taneycomo, Site 3.2

There are no apparent trends at this site in Bull Creek. All parameters showed higher variability in 2005 than observed since the 2000 sampling season.



## Multi year trends at Lake Taneycomo, Site 10

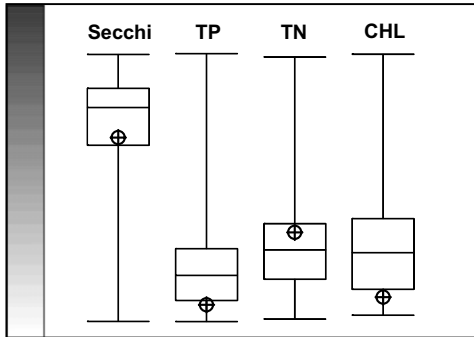
Site 10 is the first Taneycomo site below Table Rock Dam and water conditions here reflect sub-surface conditions within Table Rock Lake.

Phosphorus concentrations have decreased at Site 10 since 1998, while nitrogen concentrations show no such trend. Chlorophyll concentrations, like nitrogen, show no decreasing trend, though values are generally low, due to the water source (sub-surface Table Rock).

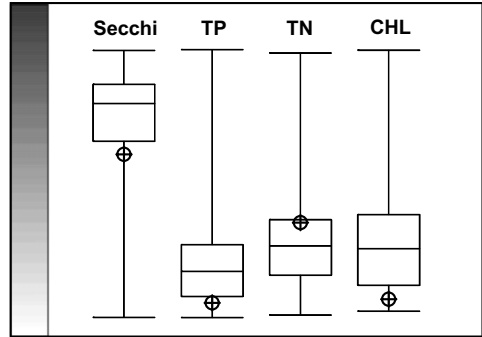
# Lake Taneycomo—Relative Rank Graphs

## Main Lake

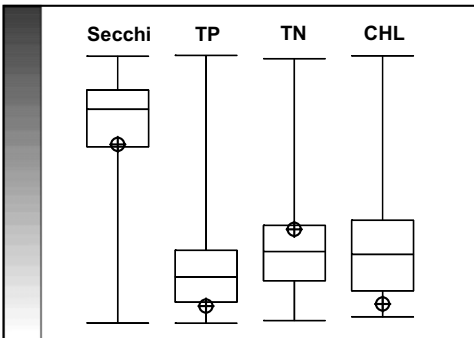
Lake Taneycomo, Site 1



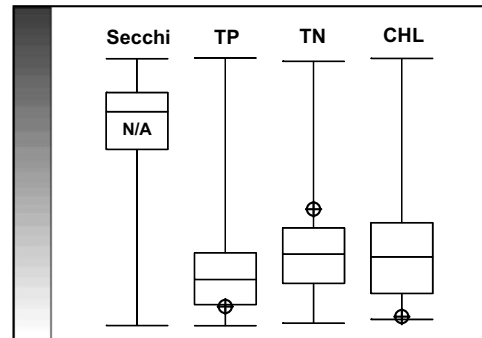
Lake Taneycomo, Site 2



Lake Taneycomo, Site 3.5

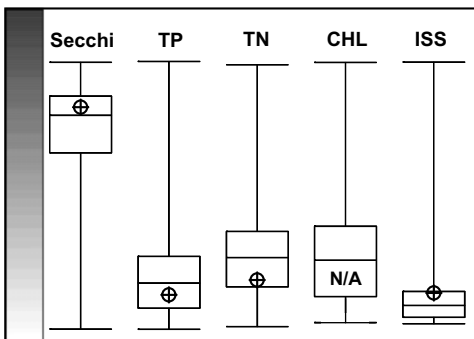


Lake Taneycomo, Site 10



## Bull Creek

Lake Taneycomo, Site 3.2



During 2005, the main lake sites consistently had nitrogen concentrations above the statewide median. Phosphorus and chlorophyll concentrations averaged among the state's clearest lakes. Phosphorus reduction efforts in the White River basin have apparently been effective at keeping algae in check. While there have been no similar efforts to reduce nitrogen concentrations, algae in Missouri's lakes are almost always limited by the amount of phosphorus. This means that reducing nitrogen concentrations in our lakes would have little or no effect on the amount of algae.