

Lake Taneycomo

Ozark Highlands Region

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 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** of the water in the lake, which can be very short (Knowlton and Jones 1990).

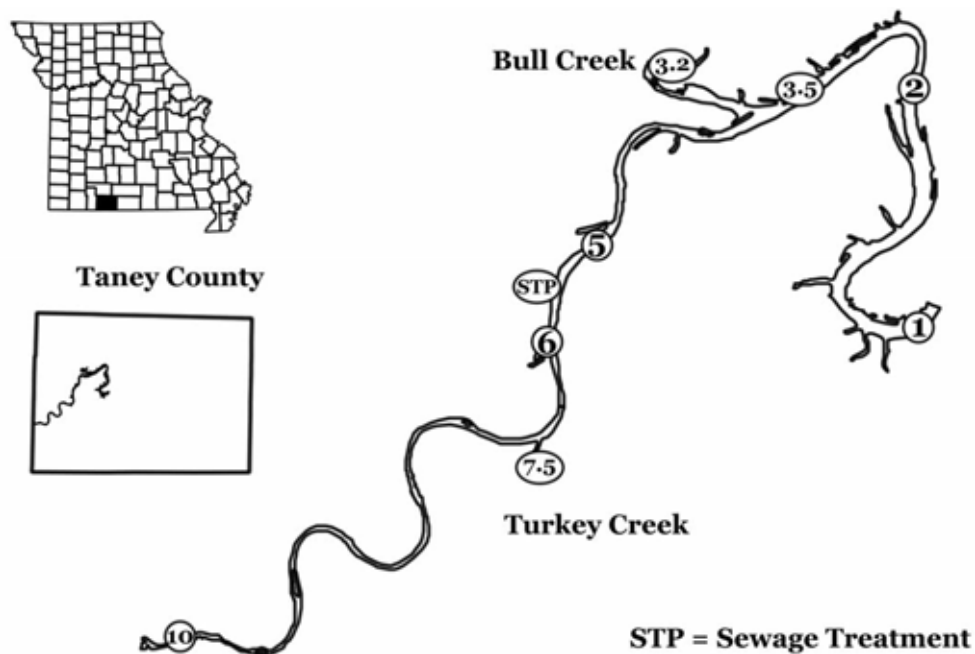


Figure 82. Location of Lake Taneycomo and sample sites.

- Nine sites were sampled in 2003. Six sites were in the main lake channel, one in Turkey Creek, one in Bull Creek, and one at the Branson sewage treatment plant outflow.
- See the *Trends* section (page 118) for long-term analyses of Lake Taneycomo data.

Table 39. Descriptive statistics for sample sites on Lake Taneycomo – 2003.

Parameters		Site 10	Site 6	Site 5	Site 3.5	Site 2	Site 1
Secchi Transparency (inches)	# samples	*	3	2	3	3	3
	median	*	187	190	76	124	70
	minimum	*	156	184	76	120	65
	maximum	*	227	196	81	180	97
	geomean	*	188	190	77	139	76
Phosphorus (µg/L)	# samples	7	5	5	3	3	3
	median	15	6	10	15	9	16
	minimum	13	6	8	12	7	10
	maximum	49	11	13	17	13	16
	geomean	18	7	10	15	9	14
Nitrogen (µg/L)	# samples	7	5	5	3	3	3
	median	820	660	860	570	600	610
	minimum	730	590	690	560	550	530
	maximum	1720	680	1360	690	650	670
	geomean	907	649	889	604	599	601
Chlorophyll (µg/L)	# samples	7	6	6	3	3	3
	median	1.8	1.0	0.9	2.3	2.1	4.8
	minimum	0.9	0.6	0.6	2.0	0.3	0.8
	maximum	3.6	1.3	2.4	6.9	2.2	10.3
	geomean	1.9	0.9	1.0	3.2	1.1	3.4

- Secchi disk rested on the bottom at sites 6, and 5 for some of the sample dates, thus summary statistics should be used with caution
- Secchi transparency values were greater at the up-lake sites, and generally decreased toward Powersite dam
- Secchi values were not recorded at site 10, as the disk always hit bottom
- Phosphorus and chlorophyll were higher at 3.5 relative to sites 5 and 2, suggesting that Bull Cheek was introducing nutrients
- Chlorophyll concentrations were low throughout the lake in 2003
- Sites 1, 2, and 3 were only sampled 3 times in 2003

Table 40. Descriptive statistics for Supplemental sample sites on Lake Taneycomo – 2003.

Parameters		Site 3.2	Site 7.5	Site STP
Secchi Transparency (inches)	# samples	3	4	
	median	34	68	
	minimum	26	41	
	maximum	36	92	
	geomean	32	64	
Phosphorus (µg/L)	# samples	3	5	6
	median	18	22	33
	minimum	17	13	17
	maximum	21	32	135
	geomean	19	21	36
Nitrogen (µg/L)	# samples	3	5	6
	median	500	510	6085
	minimum	340	160	1130
	maximum	520	580	9140
	geomean	445	399	4923
ISS (mg/L)	# samples		3	
	median		3.9	
	minimum		2.3	
	maximum		4.5	
	geomean		3.4	

- Secchi values at site 7.5 (Turkey Creek) were comparable to values from main lake sites, while Secchi values from site 3.2 (Bull Creek) were notably lower.
- Only nitrogen and phosphorus concentrations were observed at the Sewage Treatment Plant effluent site (STP)
- Stream sites (Sites 3.5 and 7.5) had lower nitrogen concentrations than the main lake sites, but had higher phosphorus concentrations

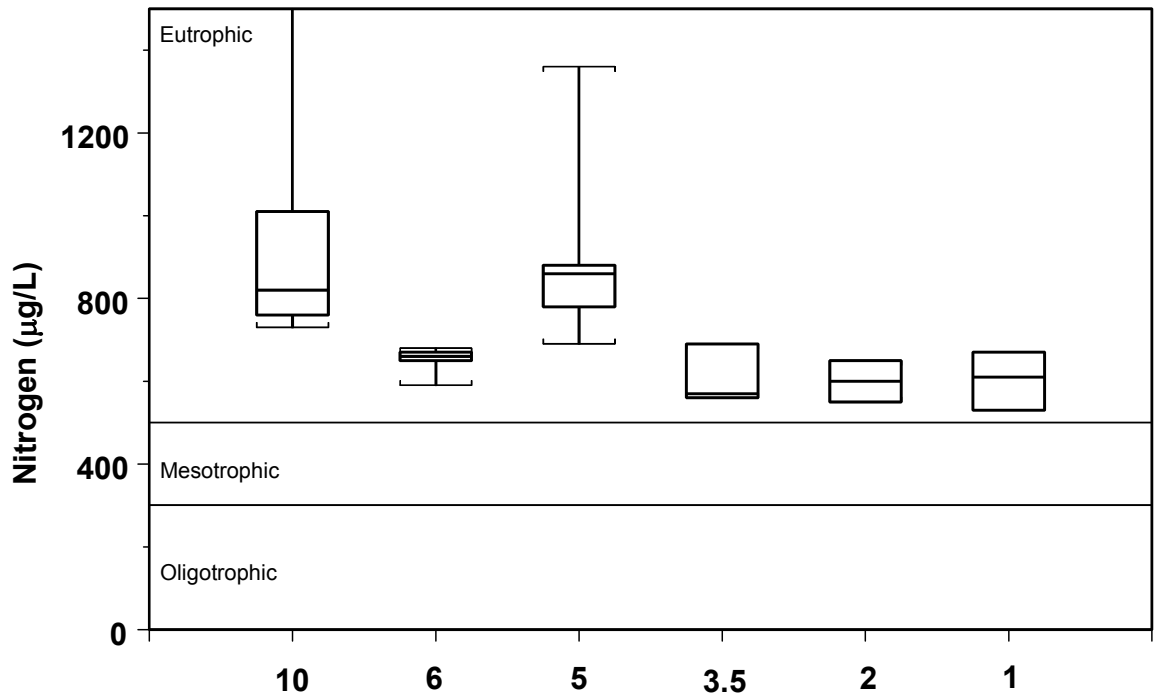


Figure 83. Nitrogen values for Lake Taneycomo – 2003.

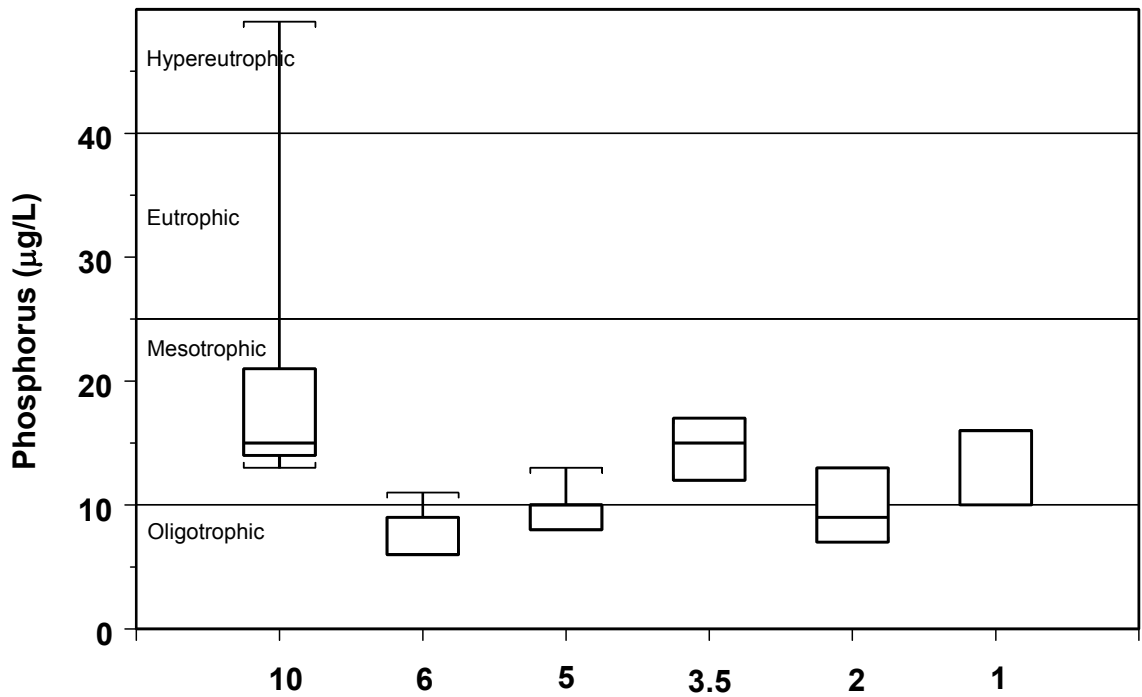


Figure 84. Phosphorus values for Lake Taneycomo – 2003.

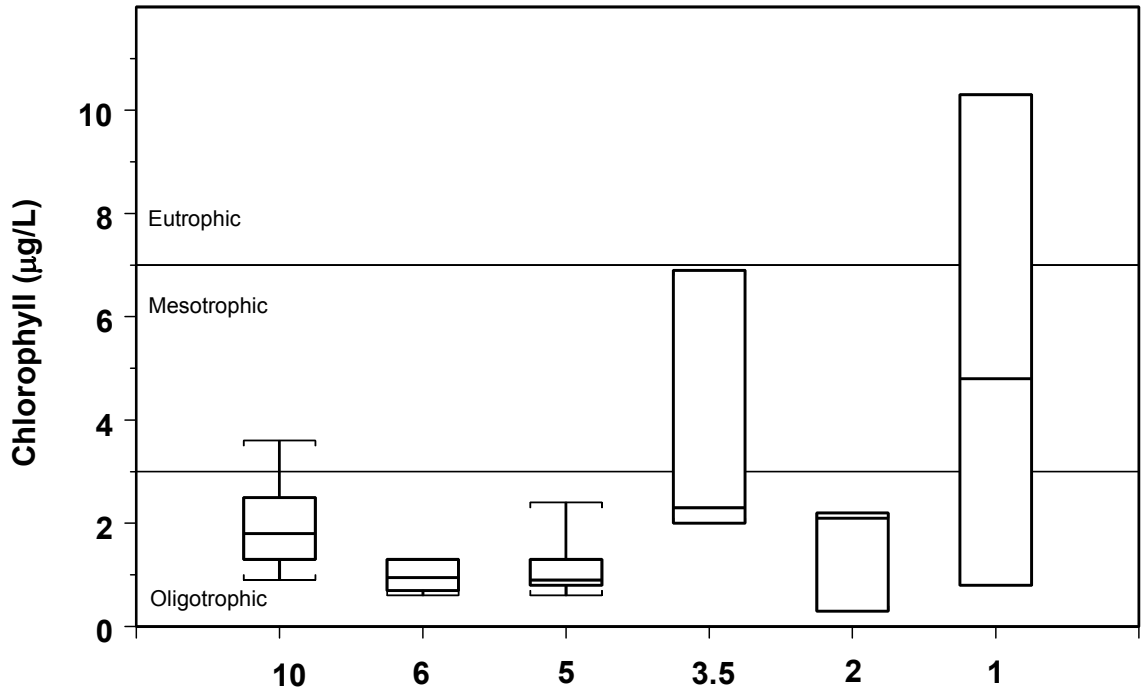


Figure 85. Chlorophyll values for Lake Taneycomo – 2003.
 (3 chlorophyll samples were processed from sites 1, 2 and 3.5, all from spring and early summer)

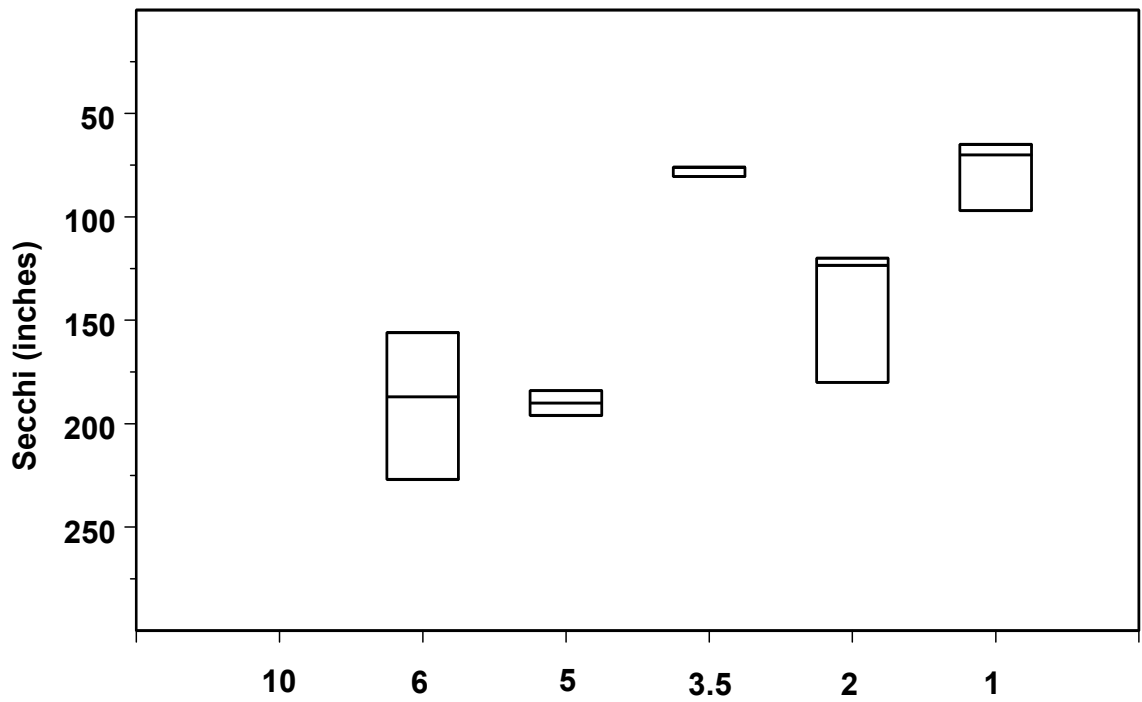


Figure 86. Secchi values for Lake Taneycomo – 2003