

Bull Shoals Lake

Region - Ozark Highlands

Bull Shoals Lake is approximately 45,440 acres in size, the majority of which is located in Arkansas. It is the last of four reservoirs found in the White River System (it is preceded by Taneycomo, Table Rock and Beaver lakes).

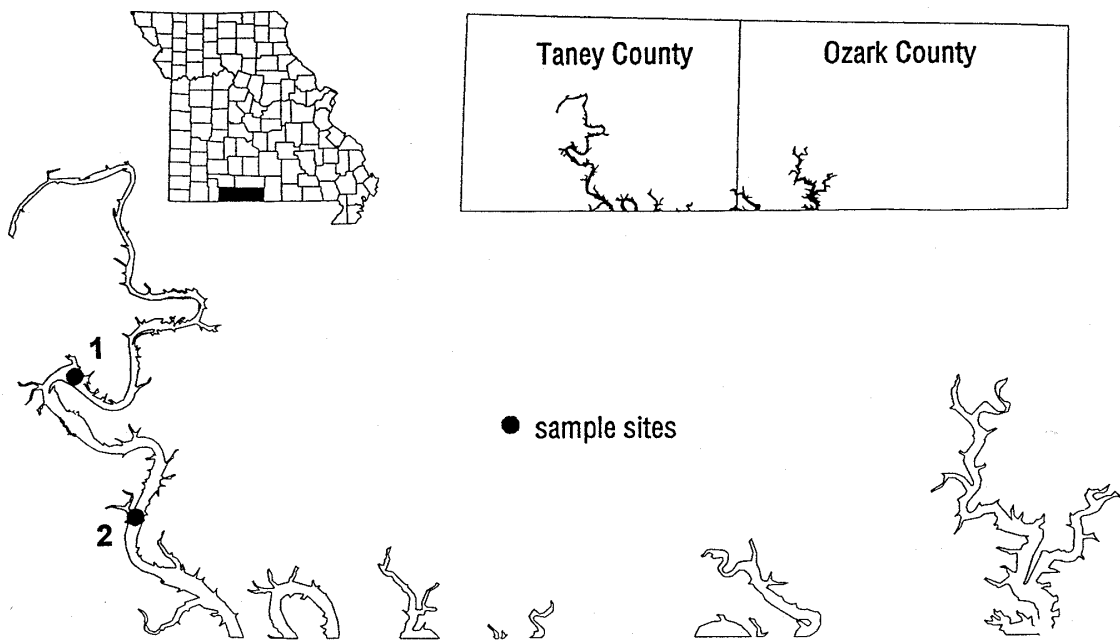


Figure 13. Location of sample sites on Bull Shoals Lake.

1999 Results

Figures 14 and 15 show how the parameters phosphorus, nitrogen, algal chlorophyll and Secchi transparency varied in Bull Shoals Lake during the 1999 sampling season. A brief description of these results are:

- ▶ Decreases in total nitrogen during sample season is a normal trend for the lake.
- ▶ The seasonal trend of algal chlorophyll shows a parallel to the nutrient concentrations.
- ▶ Nutrient and chlorophyll concentrations at Site 2 were lower than at Site 1, indicating a slight longitudinal gradient of increasing water quality as you move away from Lake Taneycomo's Powersite dam.
- ▶ Average phosphorus and chlorophyll values were in the mesotrophic range, while

nitrogen values were in the oligotrophic range for both sites.

Table 5. Descriptive statistics for Site 1 on Bull Shoals Lake - 1999.

Site 1	Average	Median	Minimum	Maximum
Chlorophyll ($\mu\text{g/L}$)	5.8	4.9	3.2	10.3
Nitrogen ($\mu\text{g/L}$)	228	180	140	410
Phosphorus ($\mu\text{g/L}$)	17	17	12	22
Secchi (inches)	71	74	39	96

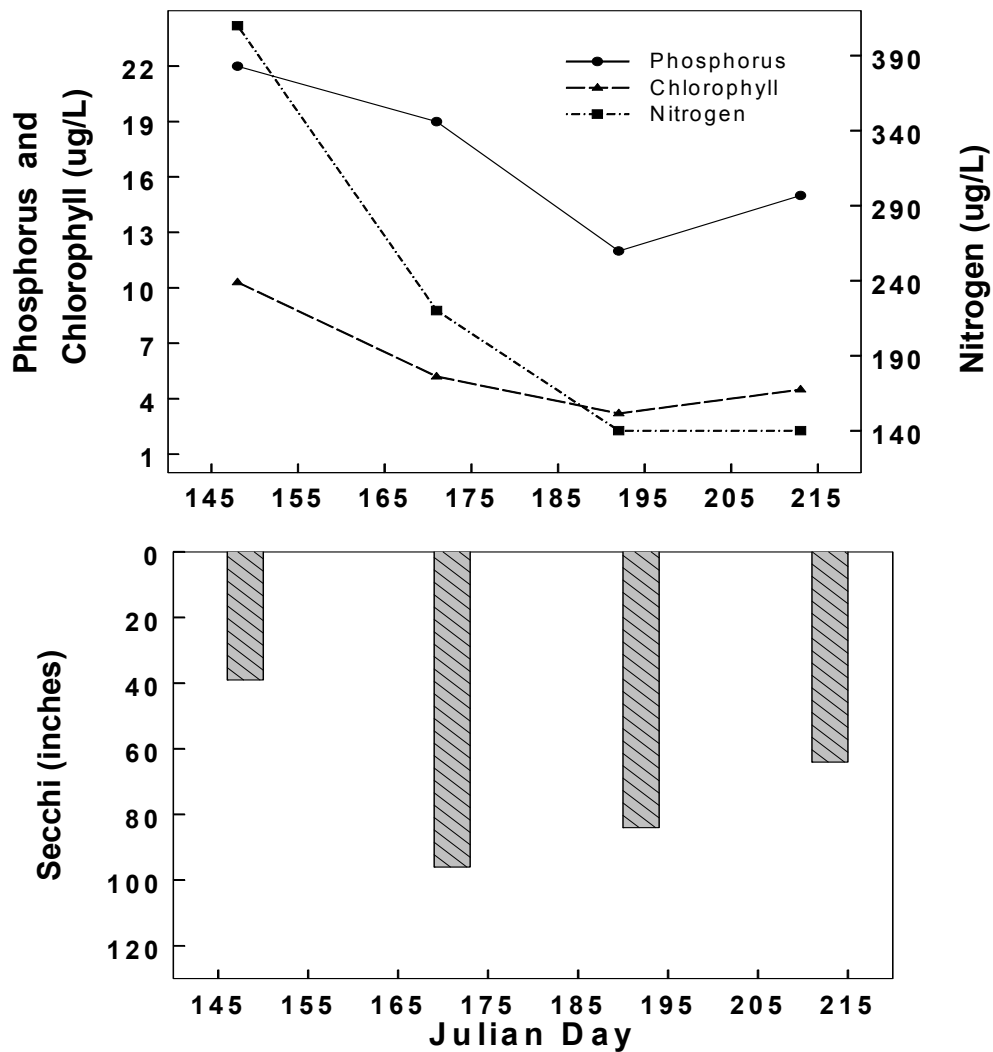


Figure 14. Seasonal fluctuations of the parameters at Site 1 on Bull Shoals Lake - 1999.

Table 6. Descriptive statistics for Site 2 on Bull Shoals Lake - 1999.

Site 2	Average	Median	Minimum	Maximum
Chlorophyll ($\mu\text{g/L}$)	5.3	5.1	2.6	8.6
Nitrogen ($\mu\text{g/L}$)	208	185	140	320
Phosphorus ($\mu\text{g/L}$)	11	10	10	12
Secchi (inches)	94	99	56	121

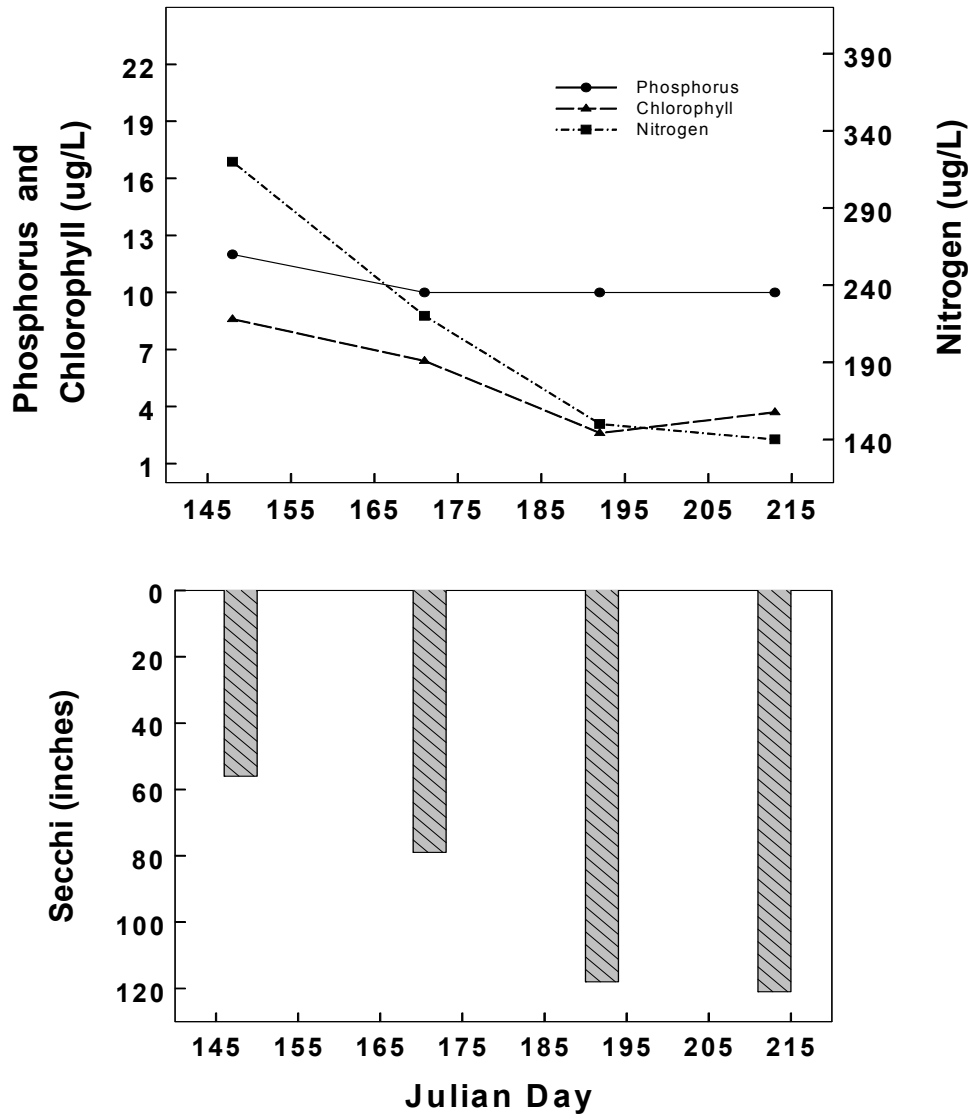


Figure 15. Seasonal fluctuations of the parameters at Site 2 on Bull Shoals Lake - 1999.