

Bull Shoals Lake - 2001 Data

Ozark Highlands Region

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).

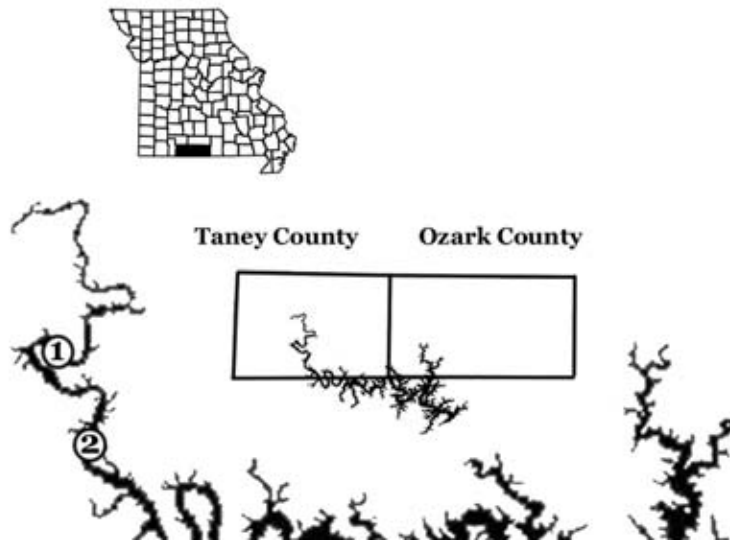


Figure 18. Location of sample sites on Bull Shoals Lake.

2001 Results

Figures 19 and 20 show how the parameters phosphorus, nitrogen, algal chlorophyll, and Secchi transparency varied in Bull Shoals Lake during the 2001 sampling season. The descriptive statistics appear in Tables 8 and 9. A brief description of these results:

- Eight samples were collected from April 15th to September 15th, at each of two sample sites.
- All values were quite consistent throughout the sampling season. Though the graphs imply variable values, the range of the values for nitrogen and phosphorus is small (120 and 13 $\mu\text{g/L}$, respectively).
- Nutrient and chlorophyll values are lower at Site 2 because of sedimentation and dilution. This also resulted in higher Secchi values for Site 2.
- Half of the Secchi values at Site 1 were below 75 inches, while none of the Secchi values at Site 2 were below 75 inches.
- Geometric mean nitrogen values for both sites were in the oligotrophic range.
- Geometric mean chlorophyll values were in the mesotrophic range. The geometric mean phosphorus value was mesotrophic at Site 1 and oligotrophic at Site 2.

Table 8. Descriptive statistics for Bull Shoals Lake, Site 1 – 2001.

Parameters	# of Geometric				
	Samples	Mean	Minimum	Maximum	Median
Secchi Transparency (inches)	8	86	63	142	76
Phosphorus ($\mu\text{g/L}$)	8	12	6	19	12
Nitrogen ($\mu\text{g/L}$)	8	238	170	290	245
Chlorophyll ($\mu\text{g/L}$)	7	6.6	3.6	10.4	7.8

Samples were collected between April 15 and September 15

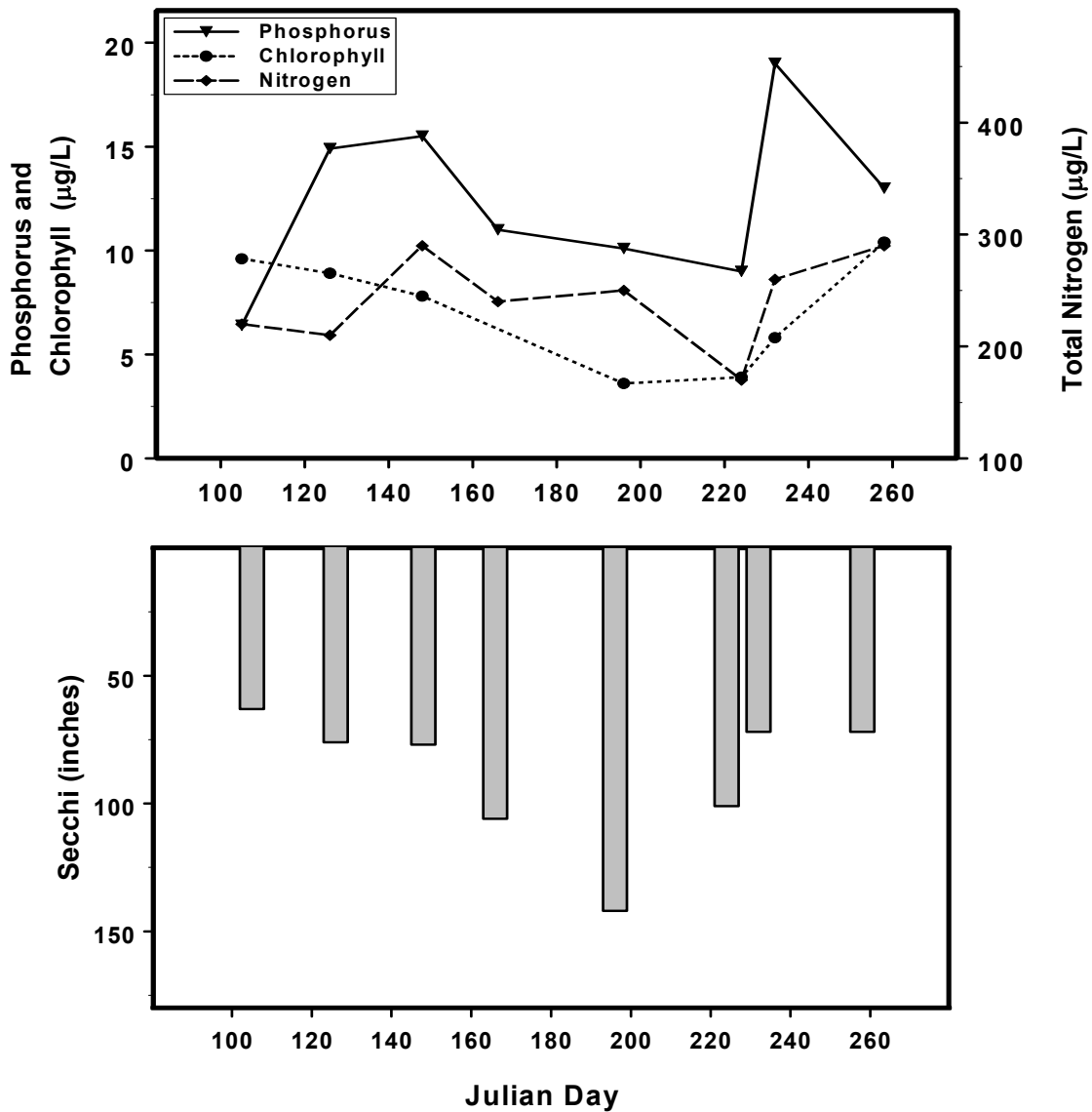


Figure 19. Seasonal fluctuations of the parameters at Site 1 on Bull Shoals Lake – 2001. Bars represent Secchi, line represents ISS.

Table 9. Descriptive statistics for Site 2 on Bull Shoals Lake – 2001.

Parameters	# of Geometric			Maximum	Median
	Samples	Mean	Minimum		
Secchi Transparency (inches)	8	110	80	149	108
Phosphorus ($\mu\text{g/L}$)	8	8	6	11	7
Nitrogen ($\mu\text{g/L}$)	8	218	100	350	235
Chlorophyll ($\mu\text{g/L}$)	8	5.1	3.7	9.0	4.8

Samples were collected between April 15 and September 15

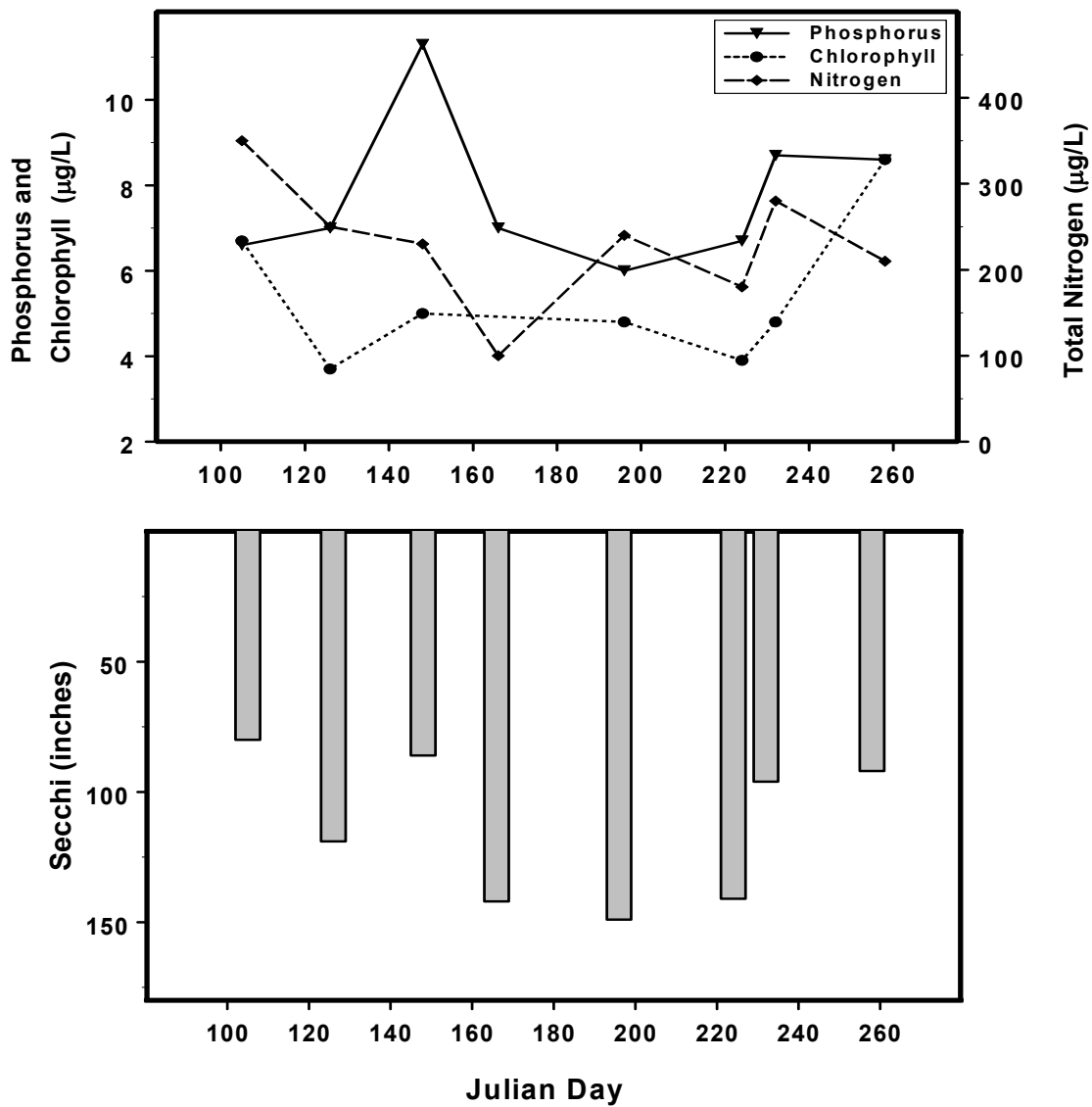


Figure 20. Seasonal fluctuations of the parameters at Site 2 on Bull Shoals Lake – 2001. Bars represent Secchi, line represents ISS.