Ben Branch - 2001 Data

Ozark Border Region

Ben Branch Lake is 44-acres in size and is located within the Ben Branch Lake Conservation Area, 10 miles north of Linn in Osage County. The watershed is approximately 625 acres, and is mostly forest and grassland. There is very little cropland within the watershed.

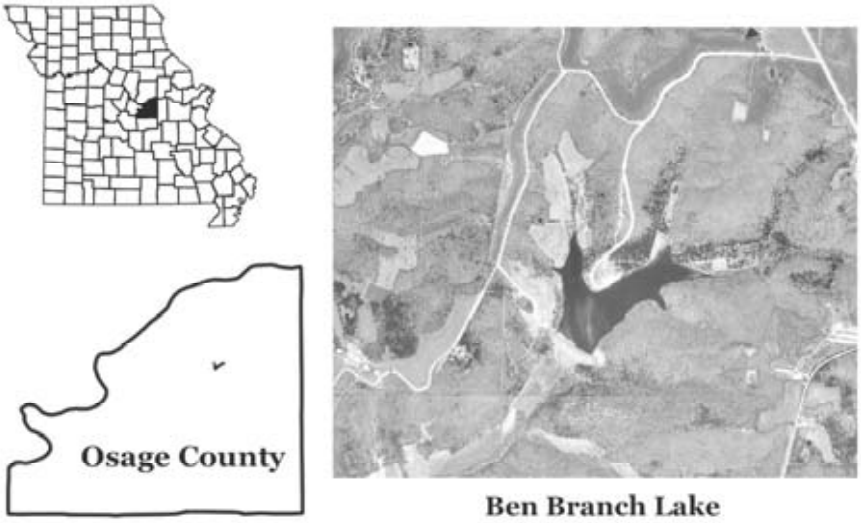

Figure 12. Location of Ben Branch Lake.

2001 Results

Figure 13 shows how the parameters nitrogen, phosphorus, algal chlorophyll, inorganic suspended solids and Secchi transparency varied in Ben Branch Lake during 2001. The descriptive statistics appear in Table 5. A brief description of the results:

- 8 samples were collected between April 30 and September 24.
- The Secchi value steadily increased throughout the sampling season (from 46" to 162"), explained by the general decrease in concentrations of both ISS and chlorophyll.
- Highest concentrations of nutrients, chlorophyll and ISS occurred early in the sampling season. There was a general trend of decreasing values as the season progressed, but it should be noted that in some situations the actual change in concentrations was quite small (e.g. ISS range = 2.1 mg/L).
- Ben Branch Lake was mesotrophic for phosphorus and chlorophyll, while nitrogen concentrations were in the eutrophic range, based on 2001geometric mean values.

Table 5. Descriptive Statistics for Ben Branch Lake – 2001.

Parameters	# of Samples	Geometric Mean	Minimum	Maximum	Median
Secchi Transparency (inches)	8	75	46	162	72
Phosphorus (μg/L)	8	16	10	28	14
Nitrogen (μg/L)	8	537	420	760	485
Chlorophyll (μg/L)	8	5.4	2.3	15.0	4.6
ISS (mg/L)	8	0.7	0.1	2.2	1.2

ISS=Inorganic Suspended Solids

Samples were collected between April 30 and September 24

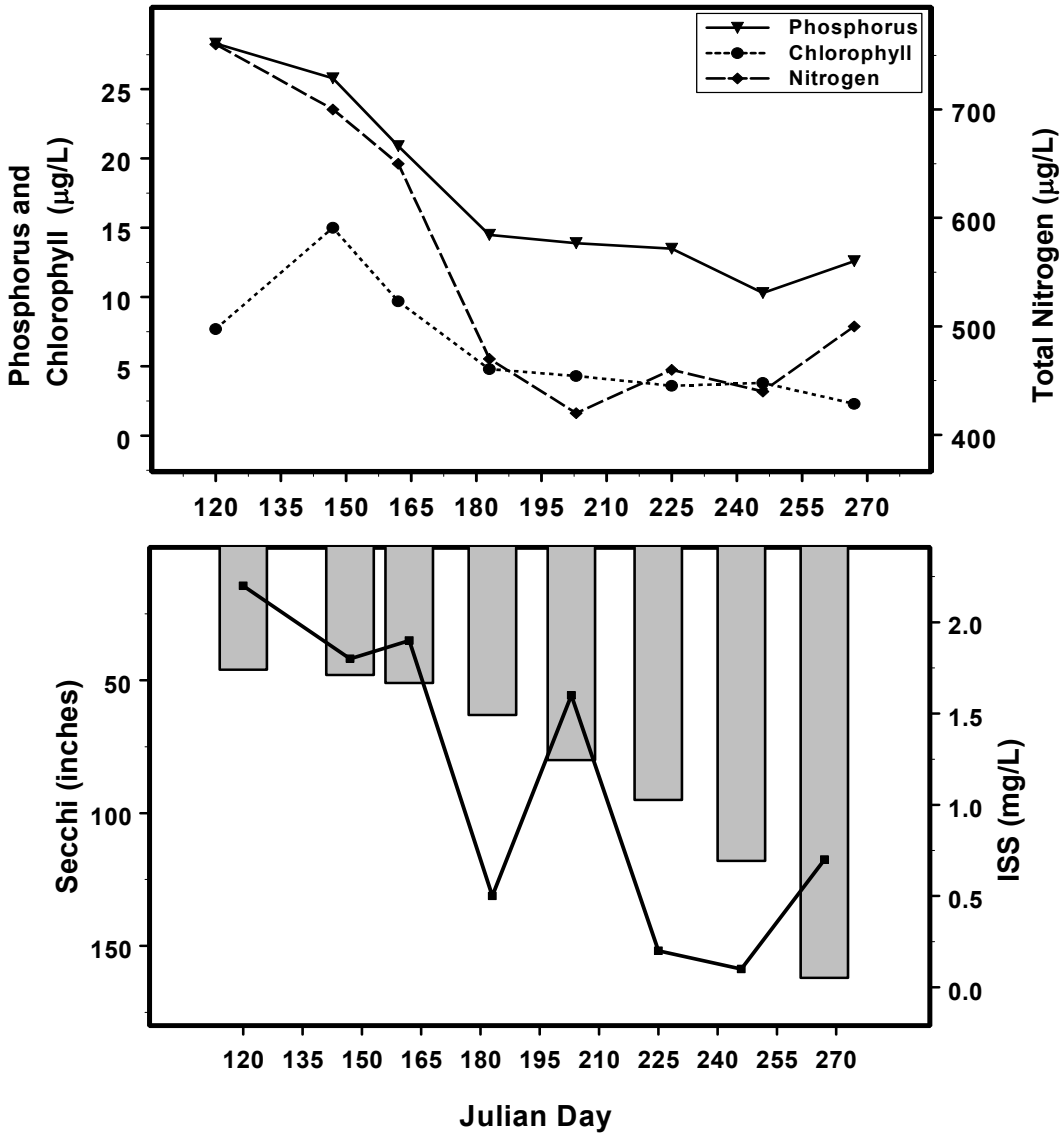

Figure 13. Seasonal fluctuations of parameters for Ben Branch Lake – 2001. Bars represent Secchi, line represents ISS.