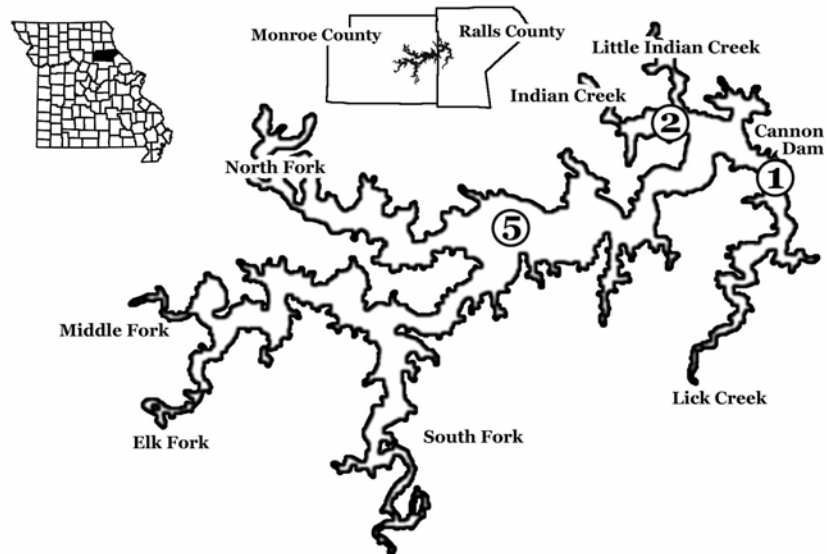


# Mark Twain Lake

Mark Twain Lake is a large reservoir (18,600 acres at normal pool) that lies in Monroe and Ralls counties. Construction of the Clarence Cannon Dam and power plant was completed in 1983. Row crops cover just over half of the land in Mark Twain Lake's watershed and grass/pasture land covers slightly more than a quarter. This reservoir provides drinking water, electricity and flood control in addition to the usual recreational amenities.

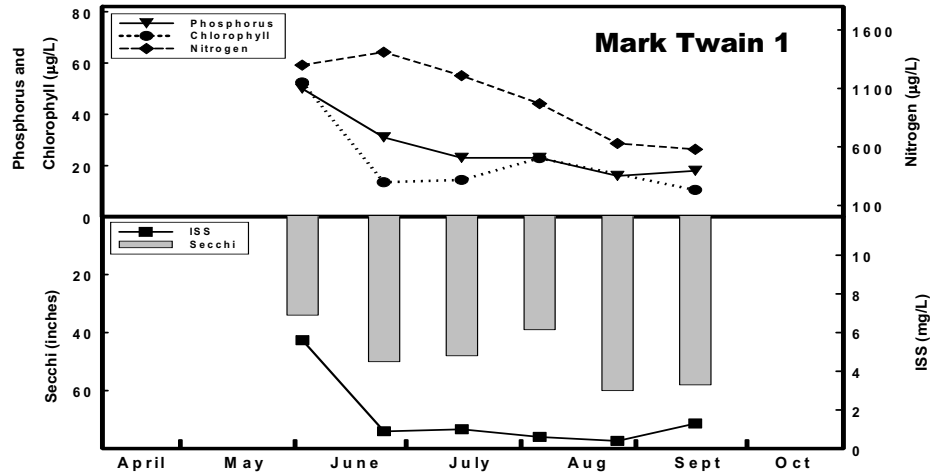


Location of Mark Twain Lake and its sample sites

- Water quality conditions at the three Mark Twain sites were quite comparable during the 2005 sample season.
- Relative to lakes statewide, Mark Twain tends to be in the middle 50% of the data – meaning it has water quality that is common for Missouri lakes.
- All three sites tended to have the highest nutrient, chlorophyll and ISS values at the beginning of the season, with decreased concentrations during the summer.
- The variations in the parameters during the sample season were normal for Missouri lakes.

# Mark Twain Lake, Site 1

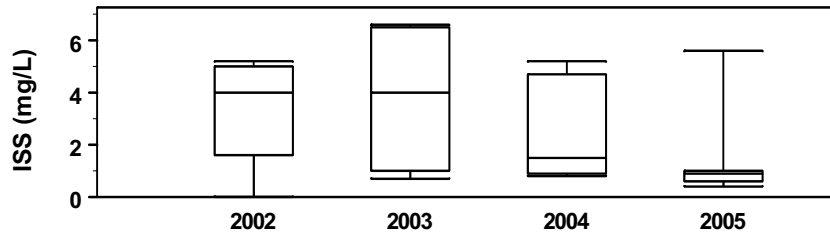
## Seasonal fluctuations of parameters for Mark Twain Lake, Site 1 – 2005



## Descriptive statistics for Mark Twain Lake, Site 1 – 2005

	Secchi (inches)	TP (ug/L)	TN (ug/L)	CHL (ug/L)	ISS (mg/L)
<b>Geometric Mean</b>	47	25	961	19.0	1.1
<b>Minimum</b>	34	16	580	10.5	0.4
<b>Maximum</b>	60	50	1410	52.4	5.6
<b>Number of Samples</b>	6	6	6	5	6

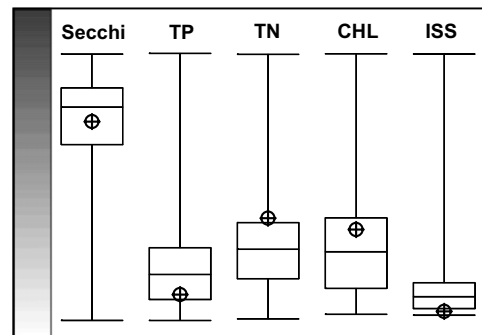
## ISS trends at Mark Twain Lake, Site 1



While median ISS concentrations at Mark Twain Lake, Site 1 were lower in 2005 than previously observed, the range of values observed each year is similar.

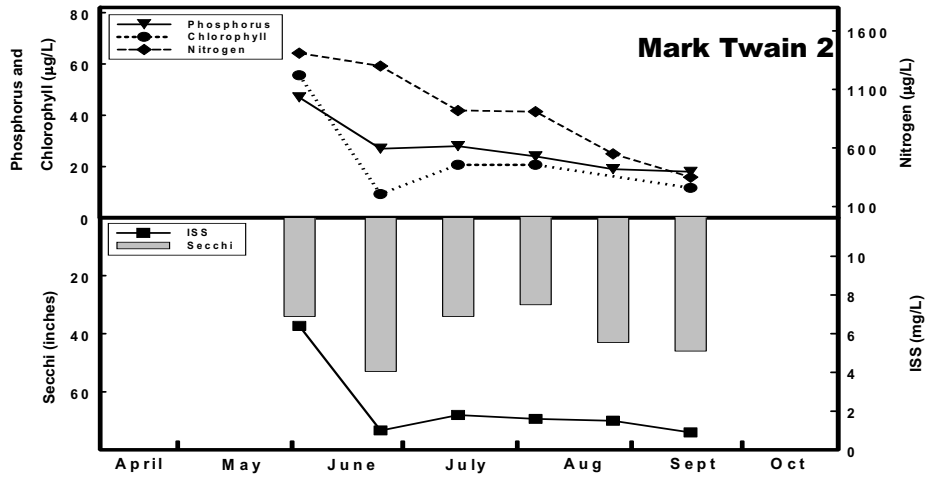
2005 Nitrogen concentrations at Mark Twain Lake, Site 1 were higher than was observed in 75% of Missouri reservoirs.

## Relative Rank for Mark Twain Lake, Site 1



# Mark Twain Lake, Site 2

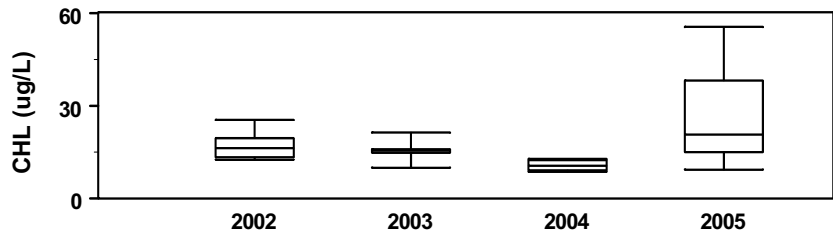
Seasonal fluctuations of parameters for Mark Twain Lake, Site 2 – 2005



Descriptive statistics for Mark Twain Lake, Site 2 – 2005

	Secchi (inches)	TP (ug/L)	TN (ug/L)	CHL (ug/L)	ISS (mg/L)
<b>Geometric Mean</b>	39	26	816	19.2	1.7
<b>Minimum</b>	30	18	350	9.3	0.9
<b>Maximum</b>	53	47	1410	55.6	6.4
<b>Number of Samples</b>	6	6	6	5	6

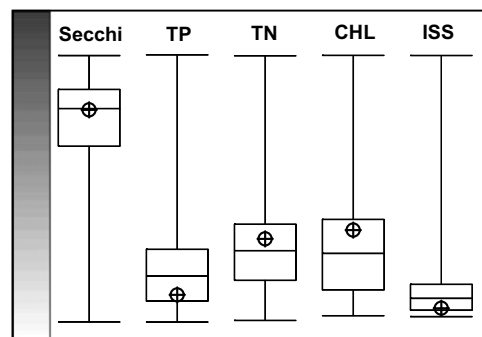
Chlorophyll trends at Mark Twain Lake, Site 2



2005 chlorophyll concentrations at Mark Twain Lake, Site 2 were higher than previously observed. This is likely the result of reduced shading, thanks to the low ISS concentrations observed at this site.

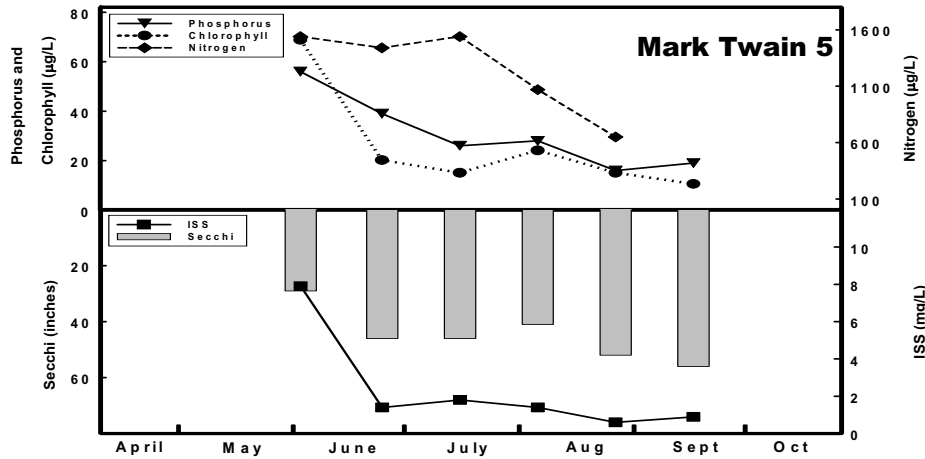
Nitrogen concentrations were slightly lower at Site 2 than at Site 1 in 2005.

Relative Rank for Mark Twain Lake, Site 2



# Mark Twain Lake, Site 5

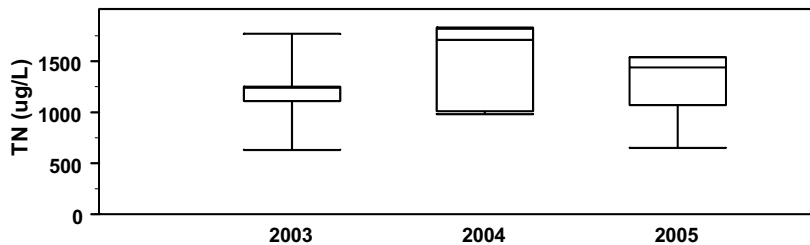
## Seasonal fluctuations of parameters for Mark Twain Lake, Site 5 – 2005



## Descriptive statistics for Mark Twain Lake, Site 5 – 2005

	Secchi (inches)	TP (ug/L)	TN (ug/L)	CHL (ug/L)	ISS (mg/L)
<b>Geometric Mean</b>	44	28	1189	20.8	1.6
<b>Minimum</b>	29	16	650	10.6	0.6
<b>Maximum</b>	56	56	1540	68.8	7.9
<b>Number of Samples</b>	6	6	5	6	6

## Nitrogen trends at Mark Twain Lake, Site 5



Though nitrogen concentrations have not changed at Site 5 in its three years of monitoring, the concentrations are higher than observed in over 75% of Missouri lakes.

### Relative Rank for Mark Twain Lake, Site 5

