

WATER DATA SUMMARY

2003-2005 average for Tri-Lakes
unless otherwise indicated (through 7/31/05)

This information is preliminary only and represents samples taken in only one place on each of the four lakes, generally around the deepest spot on each lake. Thus, it does not necessarily reflect readings that may be found at other places on a lake, including a shoreline, where other factors may affect testing results.

Water Clarity (Secchi disk readings)		(averages) (8/29/05)	
Very poor	3'	Arrowhead	6' 4'
Poor	5'	Lower Camelot	6.2' 4.25'
Fair	7'	Upper Camelot	6.7' 6.5'
Good	10'	Sherwood	6.1' 3'
Very Good	20'		
Excellent	32'		

Total Phosphorus (ug/l): soluble phosphorus (readily dissolves in water) & the phosphorus in the plant & animal fragments in the water—does not include any phosphorus in sediments or inside plants themselves—to prevent nuisance algal blooms, TP should be:

For impoundments	below 30	Arrowhead	high 36 low <7
For natural lakes	below 20	Lower Camelot	high 25 low <7
		Upper Camelot	high 79 low <7
		Sherwood	high 54 low <7

Nitrates + Nitrites: inorganic nitrogen (mg/l)		Arrowhead high 3.15 low .59	
Acceptable levels	10 mg/l	Lower Camelot	high 2.42 low .72
Preferred levels	<2 mg/l	Upper Camelot	high 2.43 low .35
		Sherwood	high 3.6 low .74

Elevated nitrate concentrations can come from improperly functioning septic systems, use of nitrate fertilizer and/or the vulnerability of the aquifer to infiltration by surface drainage. Concentrations over 10 mg/l may cause “blue baby” syndrome and may also harm pregnant women.

Total Nitrogen: total nitrogen is nitrates + nitrites + total Kjeldahl (organic Nitrogen plus ammonia Nitrogen (Kjeldahl does not include nitrites or nitrates)—in mg/l

Results for April 2005	Arrowhead 2.87	Lower Camelot 3.59
	Upper Camelot 2.45	Sherwood 2.8

plants use nitrogen in nitrate, nitrite and ammonium form--a spring inorganic nitrogen over .3 mg/l may result in summer algal blooms—in mg/l

Results for April 2005 of nitrate, nitrite & ammonium	Arrowhead 1.82	Lower Camelot 2.68
(i.e., nitrogen for plant use)	Upper Camelot 1.79	Sherwood 1.98

Chloride: presence of chloride where it doesn't naturally occur indicates possible water pollution, which could come from road salts, septic tank effluent, animal waste and fertilizers—normal surface water range is 35 to 155 mg/l—chlorides may cause salty-tasting water—in the central Wisconsin area, natural chloride is 3 to 10 mg/l; higher readings, especially those over 10 mg/l, indicate human influence on water quality--in mg/l

Arrowhead	11.3	Lower Camelot	11
Upper Camelot	15.7	Sherwood	11.9

Sodium—high levels may cause water to taste salty--in mg/l

Health advisory	30 mg/l	Arrowhead	3.4
Desirable	<10 mg/l	Lower Camelot	2.0
		Upper Camelot	2.9
		Sherwood	3

Sulfate—high levels may cause water to taste bitter--in mg/l

Acceptable limit	250 mg/l	Arrowhead	30.2
		Lower Camelot	30.2
		Upper Camelot	39.7
		Sherwood	33.2

Magnesium—in mg /l

Good quality	100-1500 mg/l	Arrowhead	185
Satisfactory	1500-3000	Lower Camelot	183
Caution	3000-5000	Upper Camelot	168
		Sherwood	178

Calcium—in mg/l

Acceptable limit--under 150 mg/l		Arrowhead	41.7
		Lower Camelot	31.6
		Upper Camelot	39.9
		Sherwood	41.8

Hardness—in mg/l

Soft	0-60 mg/l	Arrowhead	187
Mod. hard	61-120 mg/l	Lower Camelot	187
Hard	121-180 mg/l	Upper Camelot	198
Very Hard	over 180 mg/l	Sherwood	176

Turbidity—the result of suspended solids in the water, which may include clay, silt, plankton, industrial wastes, sewage, sediments, etc.--in NTUs (nephelometric turbidity unit)

Acceptable limits	under 5 NTUs	Arrowhead	3.1
For drinking water	.5 to 1 NTU	Lower Camelot	2.1
		Upper Camelot	2.4
		Sherwood	2.3

Chlorophyll a

			(average)	(most recent)
Oligotrophic lake	2 to 5 ug/l	Arrowhead	4.9	12.68
Mesotrophic lake	6 to 10 ug/l	Lower Camelot	<1	9.55
Eutrophic lake	11+ ug/l	Upper Camelot	12.5	9.61
		Sherwood	8.45	15.26

Dissolved Oxygen

			(average)
Non-trout waters standard	5 mg/l	Arrowhead	low 4.3 high 11.7
(needed for fish survival)		Lower Camelot	low 5.7 high 11.95
		Upper Camelot	low .8 high 13.4
		Sherwood	low 4.95 high 12.9

Water Temperature (8/29/05)

Depth	Arrowhead	Lower Camelot	Upper Camelot	Sherwood
20'+	71.99F	72.57F	72.05F	70.71F
10'	72.66F	78.53F	73.02F	71.49F
top	73.51F	81.72F	73.92F	72.79F

(8/30/2005)