Nitrite (NO_2) is the form of nitrogen that sometimes serves as the transition point in the conversion of ammonia (NH_4) to nitrate. Unlike nitrate (NO_3), nitrites are short lived in aqueous systems, so they are often found at very low levels, if at all. However, prolonged exposure to high levels of nitrite can produce a serious condition called "brown blood disease" in fish as it blocks the blood's ability to carry oxygen, resulting in fish kills.

Levels of nitrite that are below laboratory detection are considered low. Normal levels of nitrite concentration range from 0.010 to 0.030 mg/L, while levels higher than 0.030 mg/L are fairly uncommon since this stage is the transition-step from ammonia to nitrate.

Nitrite concentrations in the 2003 monitoring data show little consistency except at Fleming Creek and Superior Drain No. 1 where the values were equal to or <0.010 mg/L for all five months. Allens, Millers, and Swift Run creeks all had very high measurements (>0.050 mg/L) in July, August and June, respectively. While both Allens and Millers creeks experienced their peak nitrate concentrations in the same month as peak nitrite concentrations, the pattern does not hold true for Swift Run.

Graph 8: Nitrite measurements obtained in 2003 monitoring

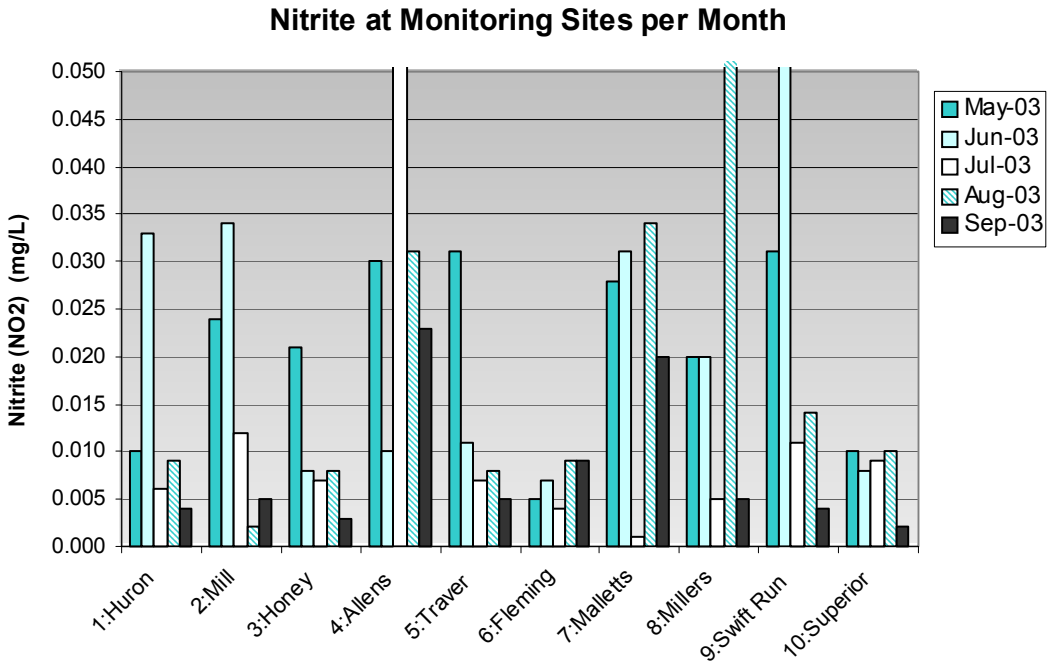

Table 8. Source data for graph 8

	1:Huron	2:Mill	3:Honey	4:Allens	5:Traver	6:Fleming	7:Malletts	8:Millers	9:Swift Run	10:Superior
May-03	*0.010*	*0.024*	*0.021*	*0.030*	*0.031*	*0.005*	*0.028*	*0.020*	*0.031*	*0.010*
Jun-03	*0.033*	*0.034*	*0.008*	*0.010*	*0.011*	*0.007*	*0.031*	*0.020*	*0.056*	*0.008*
Jul-03	*0.006*	*0.012*	*0.007*	*0.061*	*0.007*	*0.004*	*0.001*	*0.005*	*0.011*	*0.009*
Aug-03	*0.009*	*0.002*	*0.008*	*0.031*	*0.008*	*0.009*	*0.034*	*0.051*	*0.014*	*0.010*
Sep-03	*0.004*	*0.005*	*0.003*	*0.023*	*0.005*	*0.009*	*0.020*	*0.005*	*0.004*	*0.002*