Appendix D

Water Quality Data Analysis

Location: Guyandotte Main Stem @ Huntington WV (550639)
Pollutant: Total Fe (mg/L)
Data from: 1/10/1990 to 6/6/1995 (53 Observations)

Flow Range	# Obs	Flow (cfs)			Concentration (mg/L)		
Percentile	*Count*	*Mean*	*Min*	*Max*	*Mean*	*Min*	*Max*
0-10	6	243.294	162.750	345.239	0.80	0.13	1.80
10-20	5	381.994	361.059	428.809	0.45	0.09	0.92
20-30	5	525.341	458.949	584.989	0.28	0.18	0.49
30-40	5	763.637	686.369	804.189	0.68	0.46	1.00
40-50	6	1119.001	805.545	1411.090	0.32	0.05	1.20
50-60	5	1494.994	1452.190	1545.440	4.59	0.77	10.55
60-70	5	1837.092	1575.490	2311.320	2.58	0.07	7.60
70-80	5	3123.244	2776.320	3534.590	2.08	0.13	6.95
80-90	5	4998.432	4390.150	5795.090	4.33	0.55	14.00
90-100	6	11870.677	9081.180	21645.900	6.01	3.40	8.90

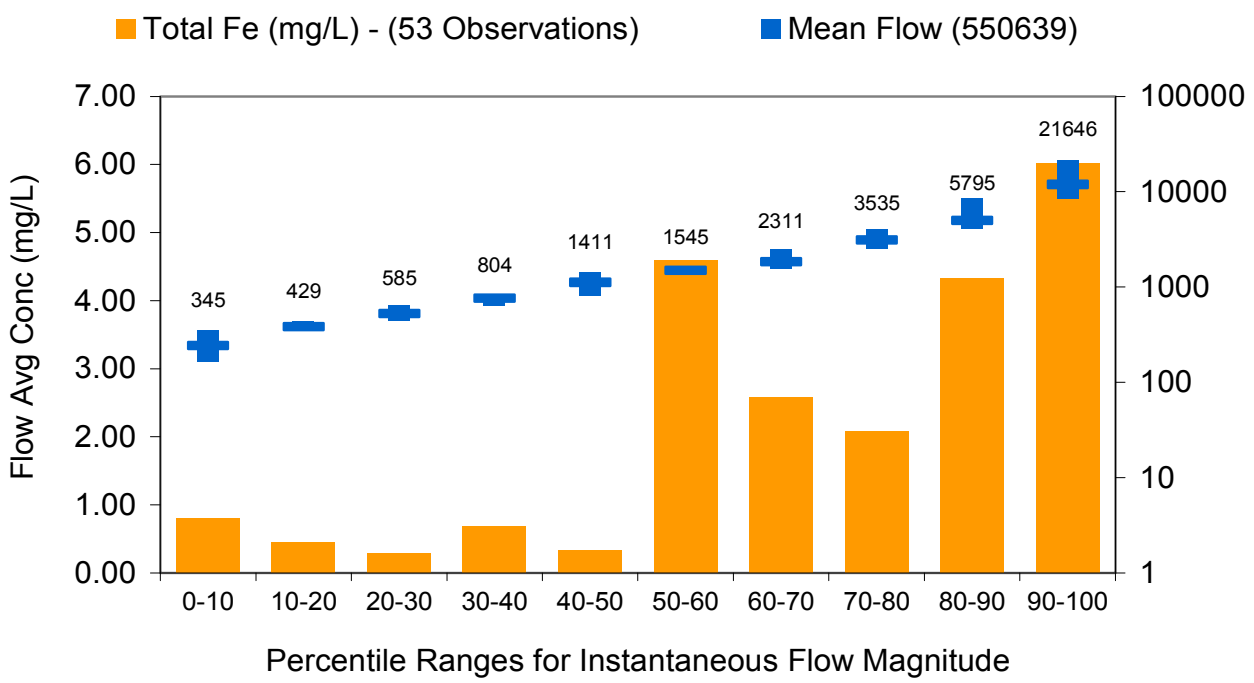

Figure 1 - Guyandotte River main stem at Huntington WV (550639) - Flow/Total Iron Relationship

Location: Guyandotte Main Stem @ Huntington WV (550639)
Pollutant: Total Al (mg/L)
Data from: 1/10/1990 to 6/6/1995 (53 Observations)

Flow Range	# Obs	Flow (cfs)			Concentration (mg/L)		
Percentile	*Count*	*Mean*	*Min*	*Max*	*Mean*	*Min*	*Max*
0-10	6	243.294	162.750	345.239	1.04	0.05	3.30
10-20	5	381.994	361.059	428.809	0.74	0.19	1.70
20-30	5	525.341	458.949	584.989	0.52	0.16	0.79
30-40	5	763.637	686.369	804.189	0.26	0.13	0.46
40-50	6	1119.001	805.545	1411.090	0.39	0.21	0.70
50-60	5	1494.994	1452.190	1545.440	4.46	0.28	9.50
60-70	5	1837.092	1575.490	2311.320	2.40	0.28	7.70
70-80	5	3123.244	2776.320	3534.590	1.98	0.61	4.60
80-90	5	4998.432	4390.150	5795.090	5.11	0.22	19.00
90-100	6	11870.677	9081.180	21645.900	7.50	3.60	15.00

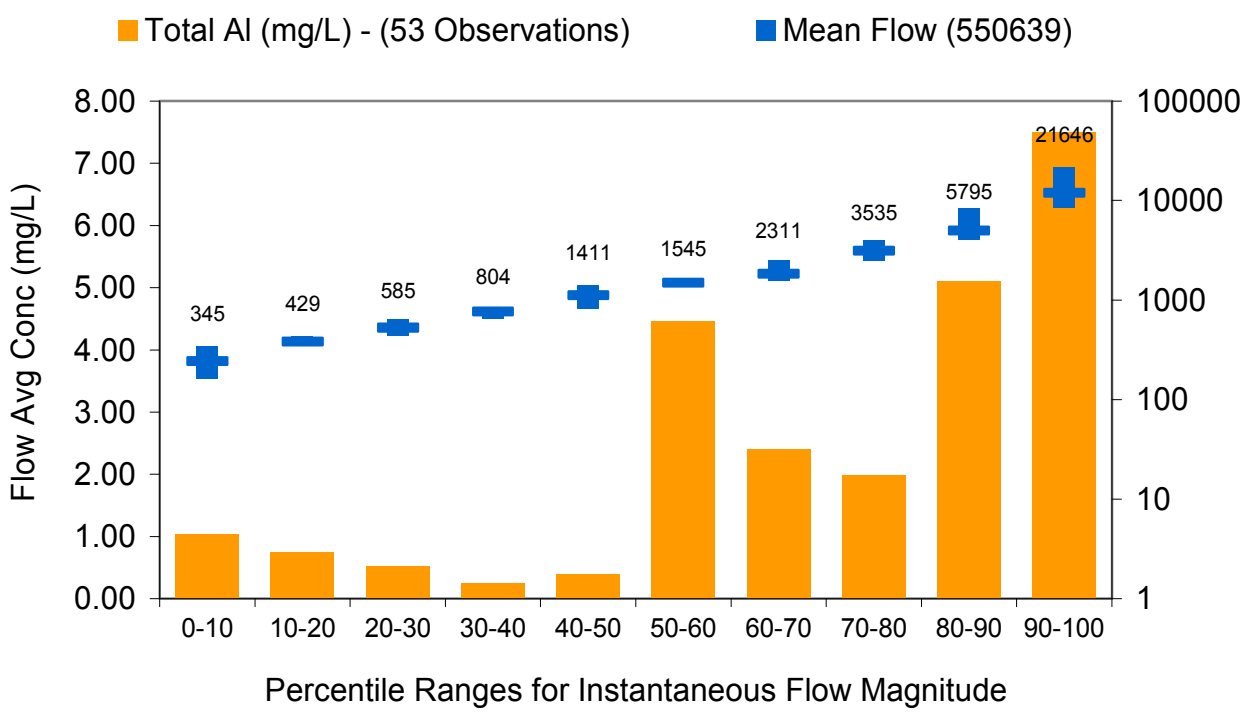

Figure 2 - Guyandotte River main stem at Huntington WV (550639) - Flow/Total Aluminum Relationship

Location: Guyandotte Main Stem @ Huntington WV (550639)
Pollutant: Total Mn (mg/L)
Data from: 1/10/1990 to 6/6/1995 (53 Observations)

Flow Range	# Obs	Flow (cfs)			Concentration (mg/L)		
Percentile	*Count*	*Mean*	*Min*	*Max*	*Mean*	*Min*	*Max*
0-10	6	243.294	162.750	345.239	0.09	0.02	0.18
10-20	5	381.994	361.059	428.809	0.06	0.02	0.12
20-30	5	525.341	458.949	584.989	0.06	0.02	0.11
30-40	5	763.637	686.369	804.189	0.07	0.05	0.08
40-50	6	1119.001	805.545	1411.090	0.03	0.01	0.10
50-60	5	1494.994	1452.190	1545.440	0.21	0.06	0.63
60-70	5	1837.092	1575.490	2311.320	0.11	0.01	0.25
70-80	5	3123.244	2776.320	3534.590	0.09	0.01	0.29
80-90	5	4998.432	4390.150	5795.090	0.22	0.05	0.75
90-100	6	11870.677	9081.180	21645.900	0.27	0.13	0.64

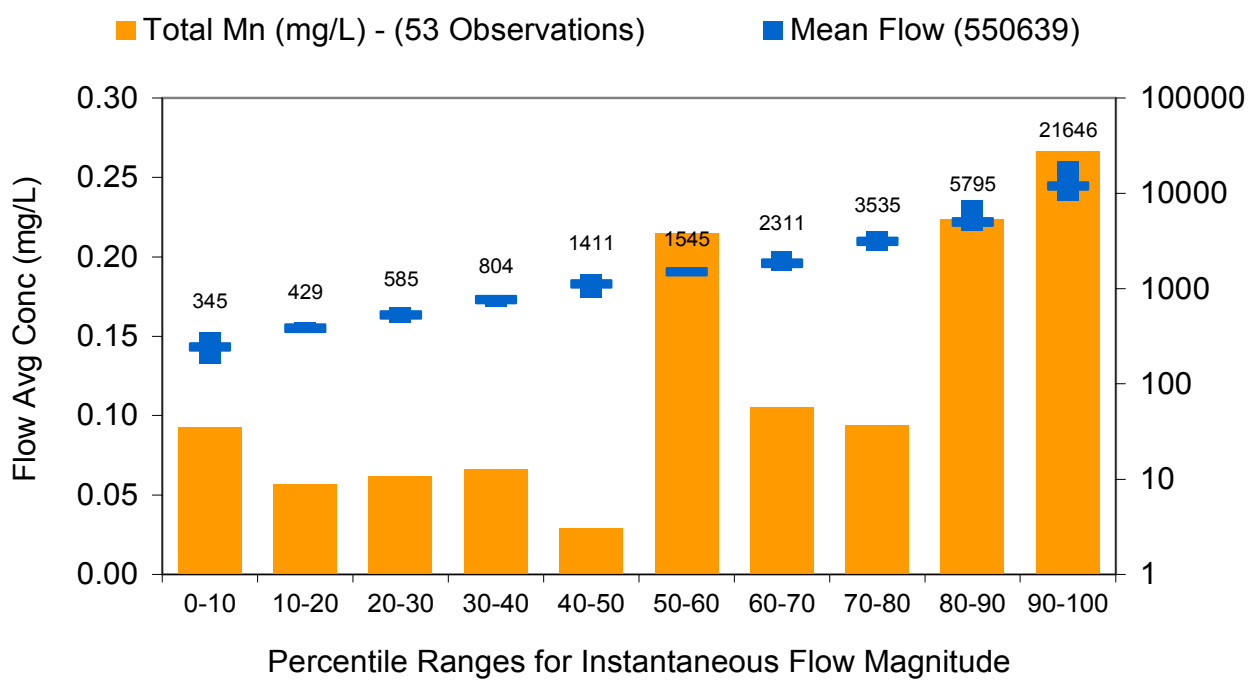

Figure 3 - Guyandotte River main stem at Huntington WV (550639) - Flow/Total Manganese Relationship

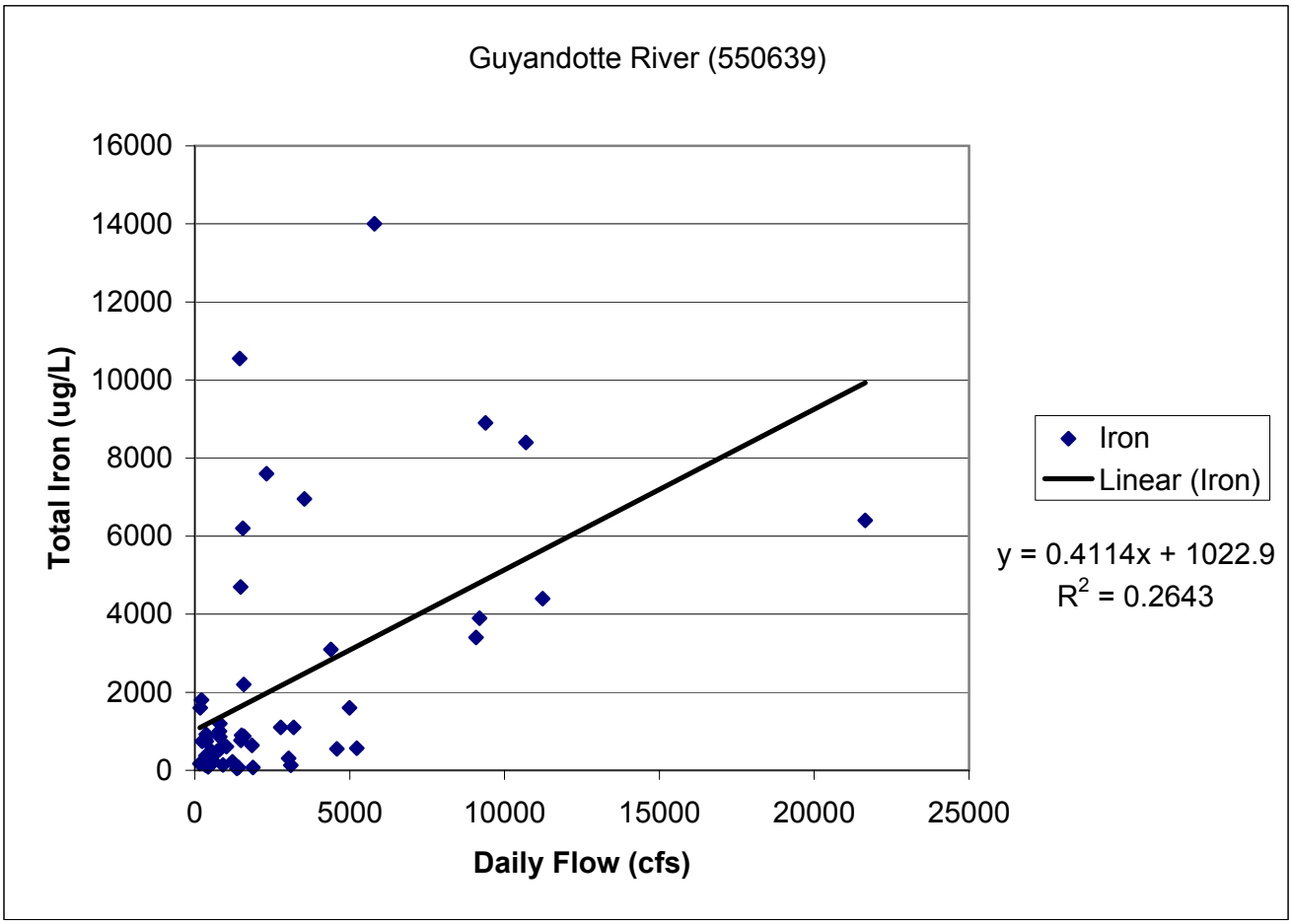

Figure 4 -Iron Correlation with Mean Daily Flow (Station 550639)

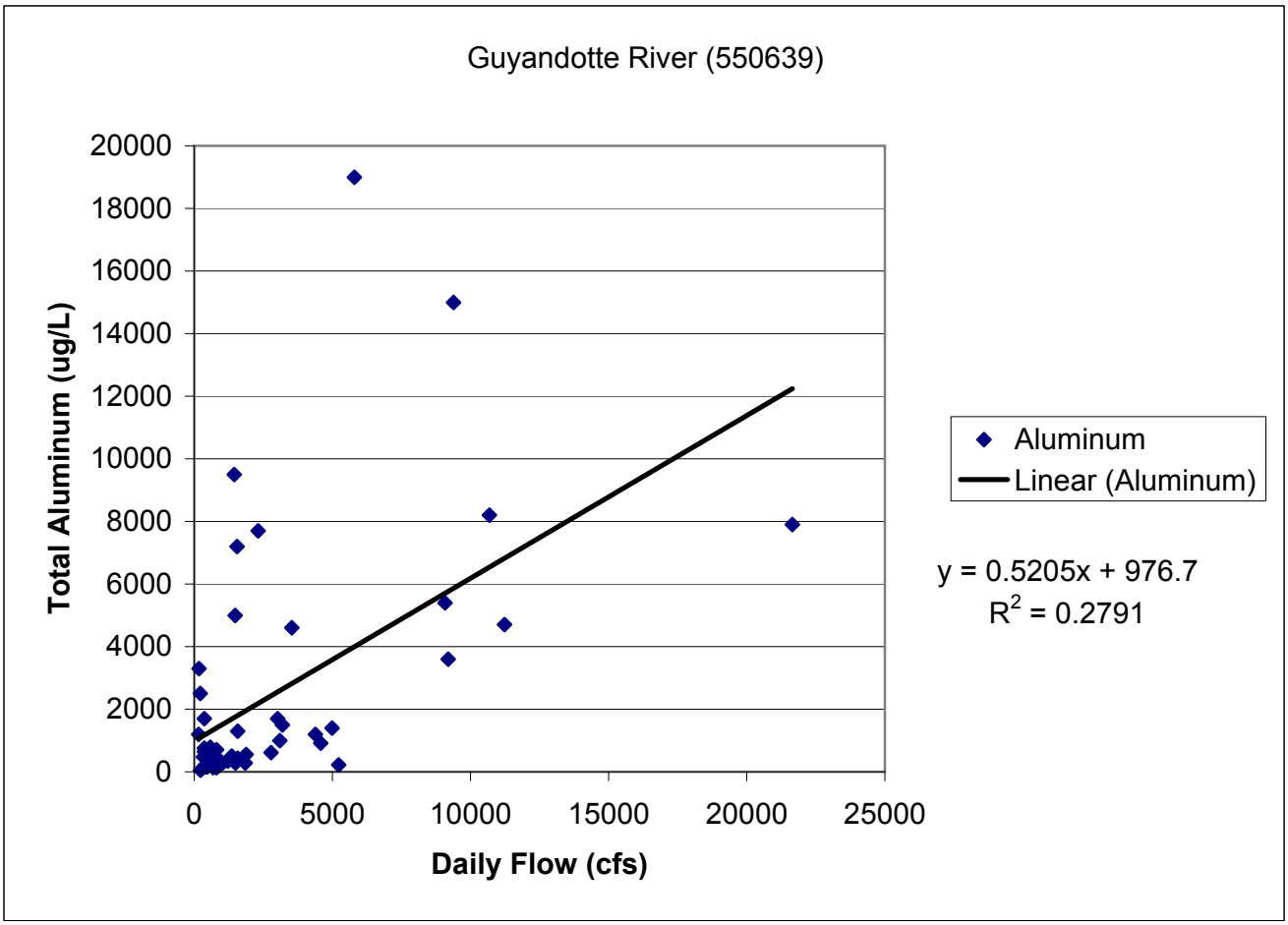

Figure 5 - Total Aluminum Correlation with Mean Daily Flow (Station 550639)

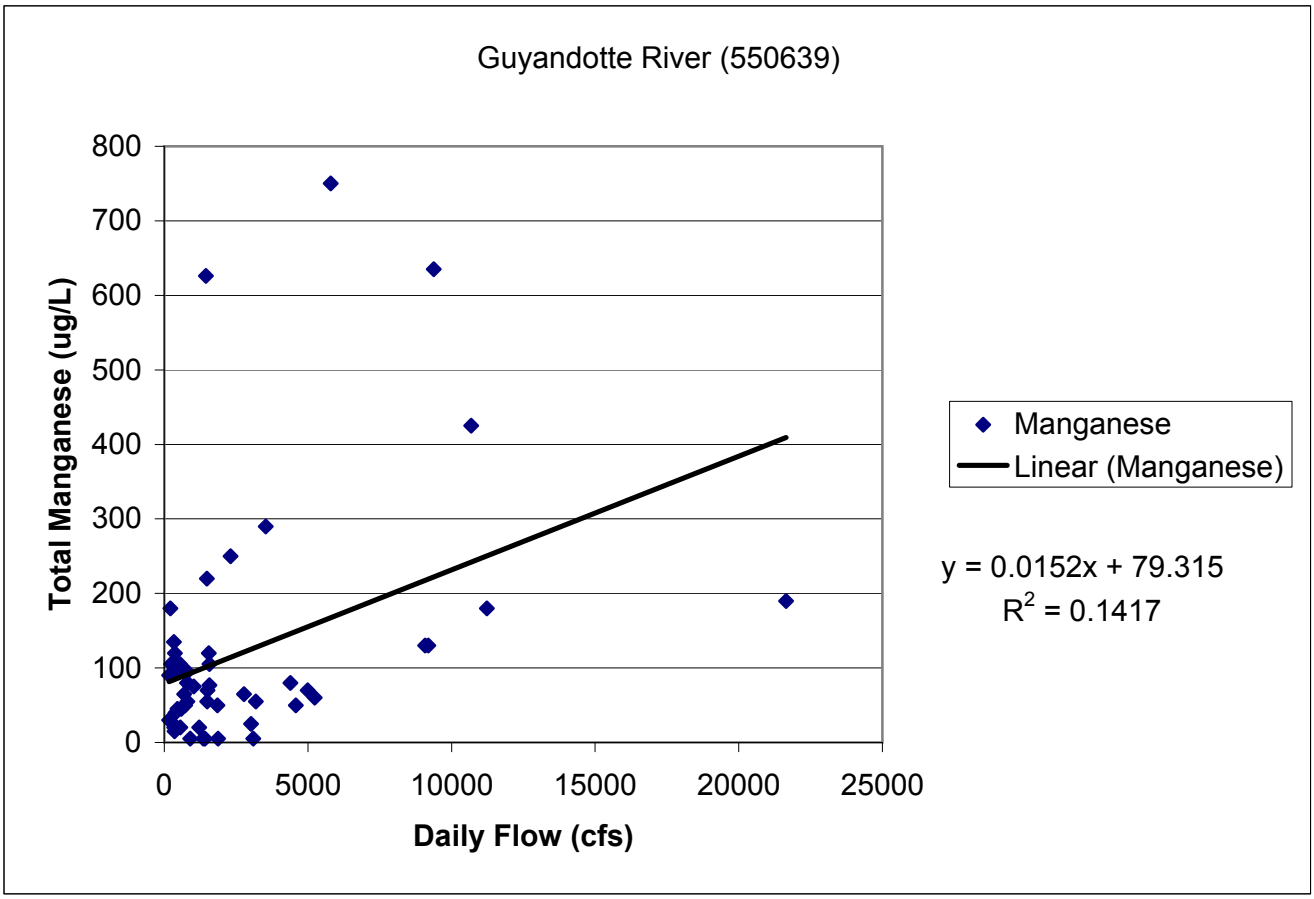

Figure 6 - Manganese Correlation with Mean Daily Flow (Station 550639)

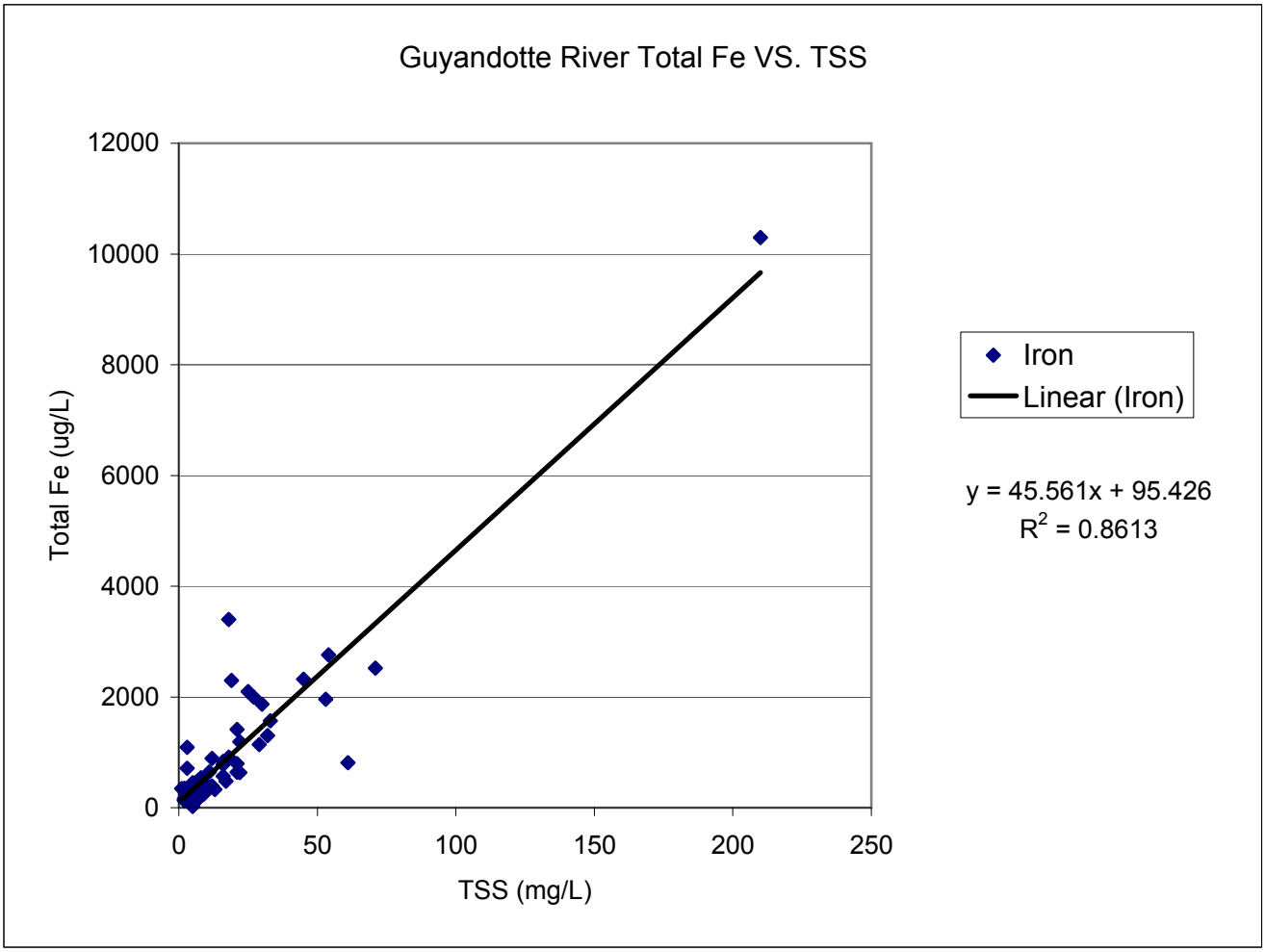

Figure 7 - Combined Guyandotte River Stations Total Iron/TSS Correlation

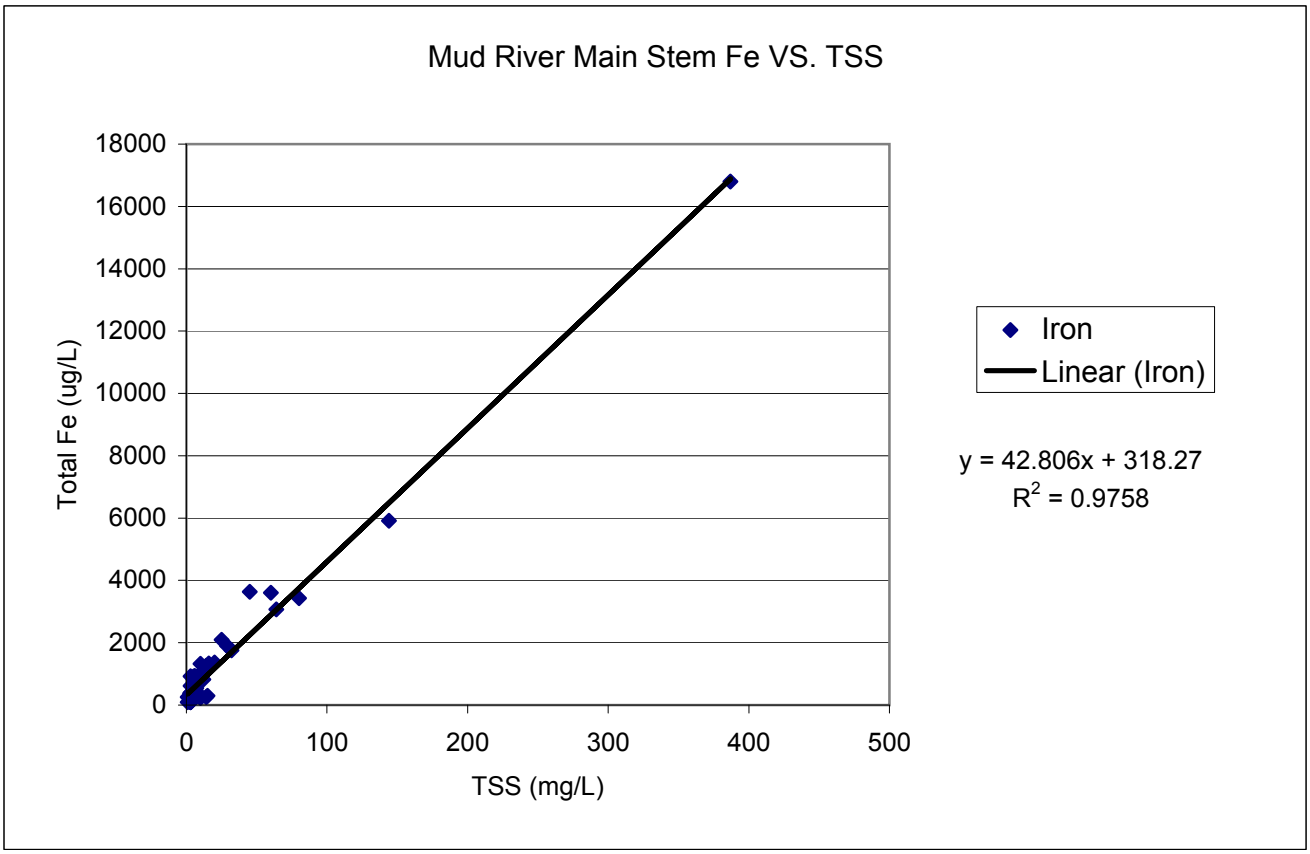

Figure 8 - Mud River Stations Total Iron/TSS Correlation

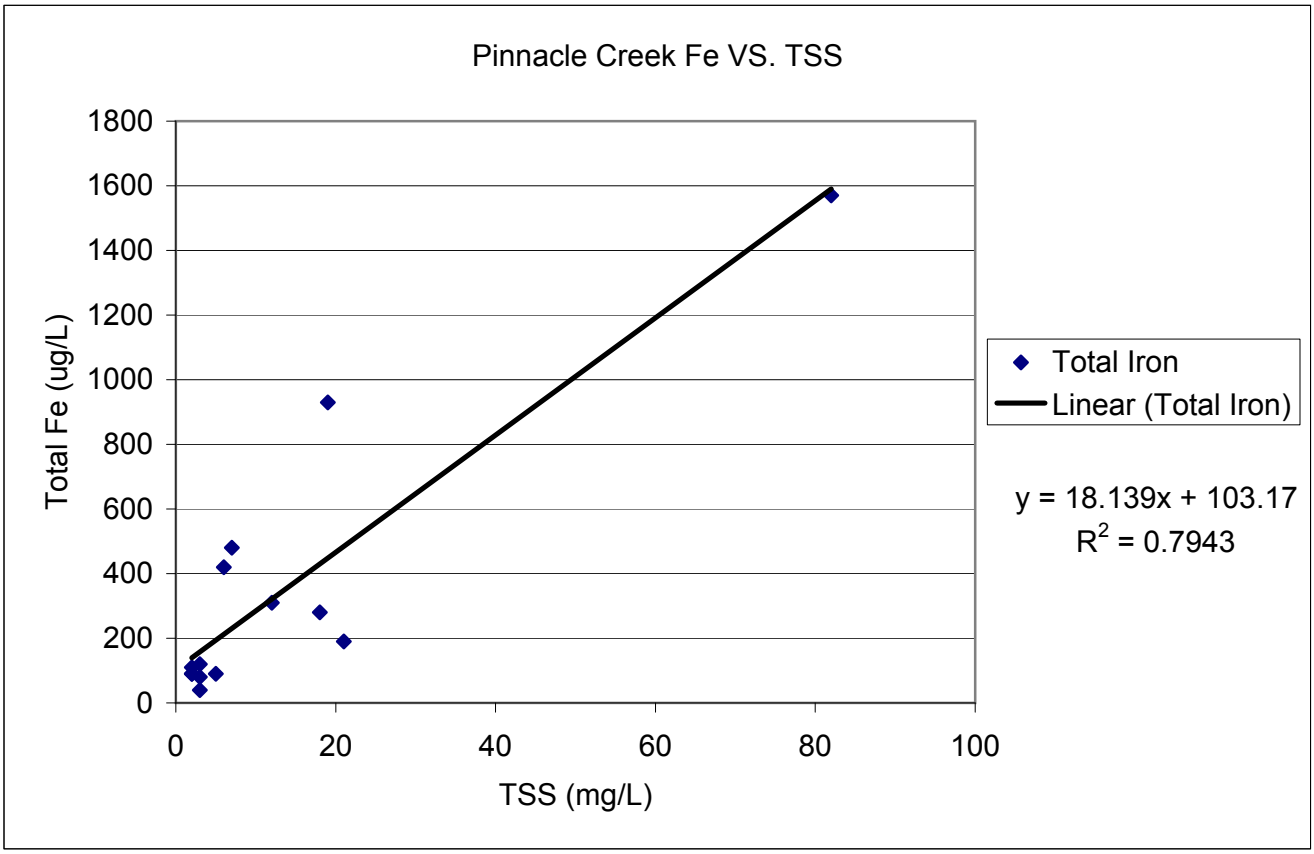

Figure 9 - Pinnacle Creek Stations Total Iron/TSS Correlation

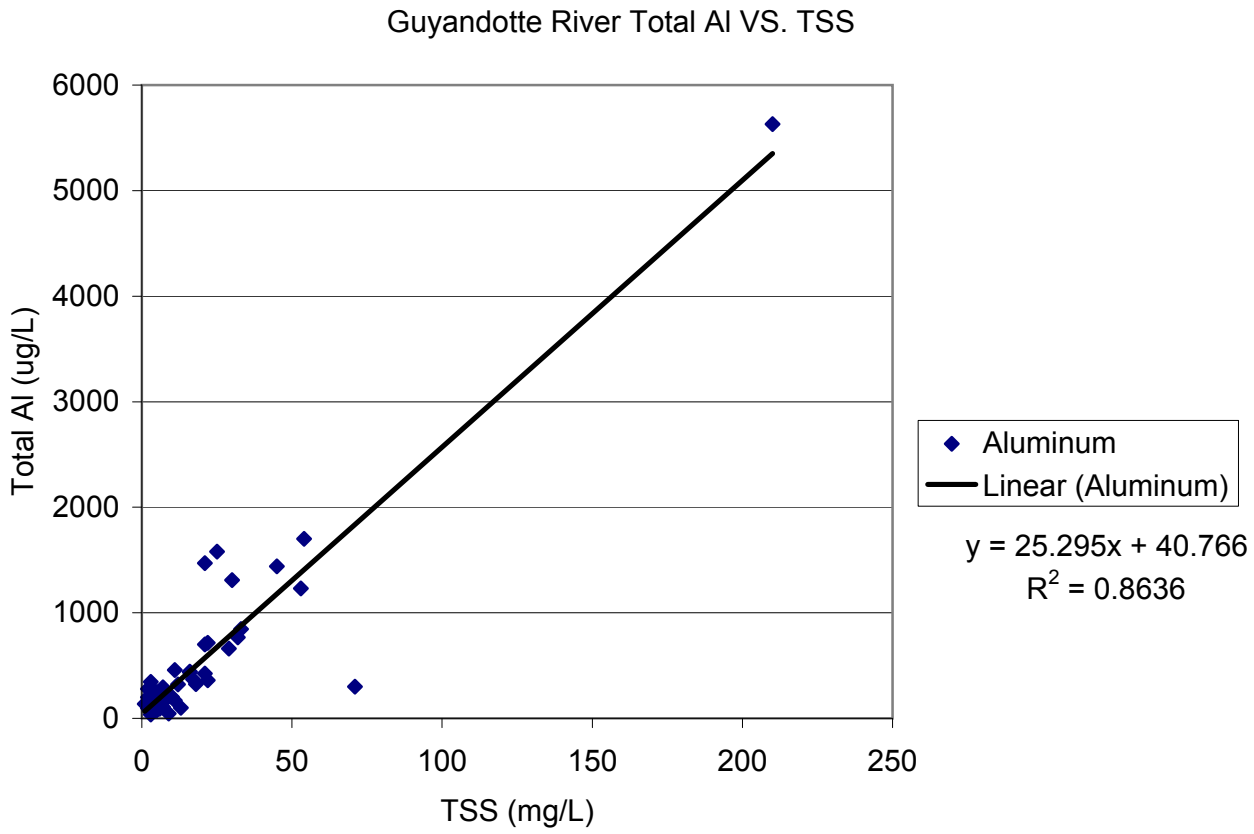

Figure 10 - Guyandotte River Stations Total Aluminum/TSS Correlation

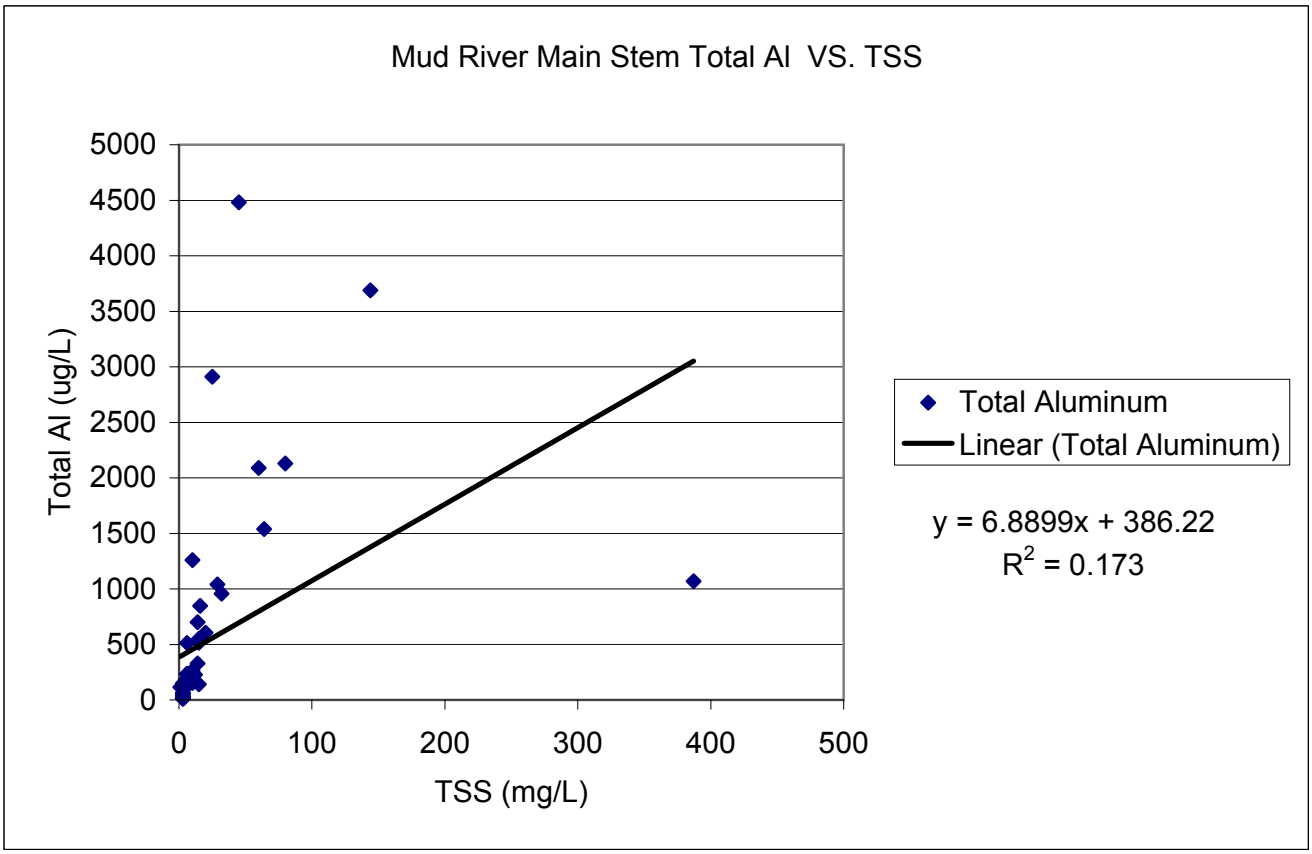

Figure 11 -Mud River Stations Total Aluminum/TSS Correlation

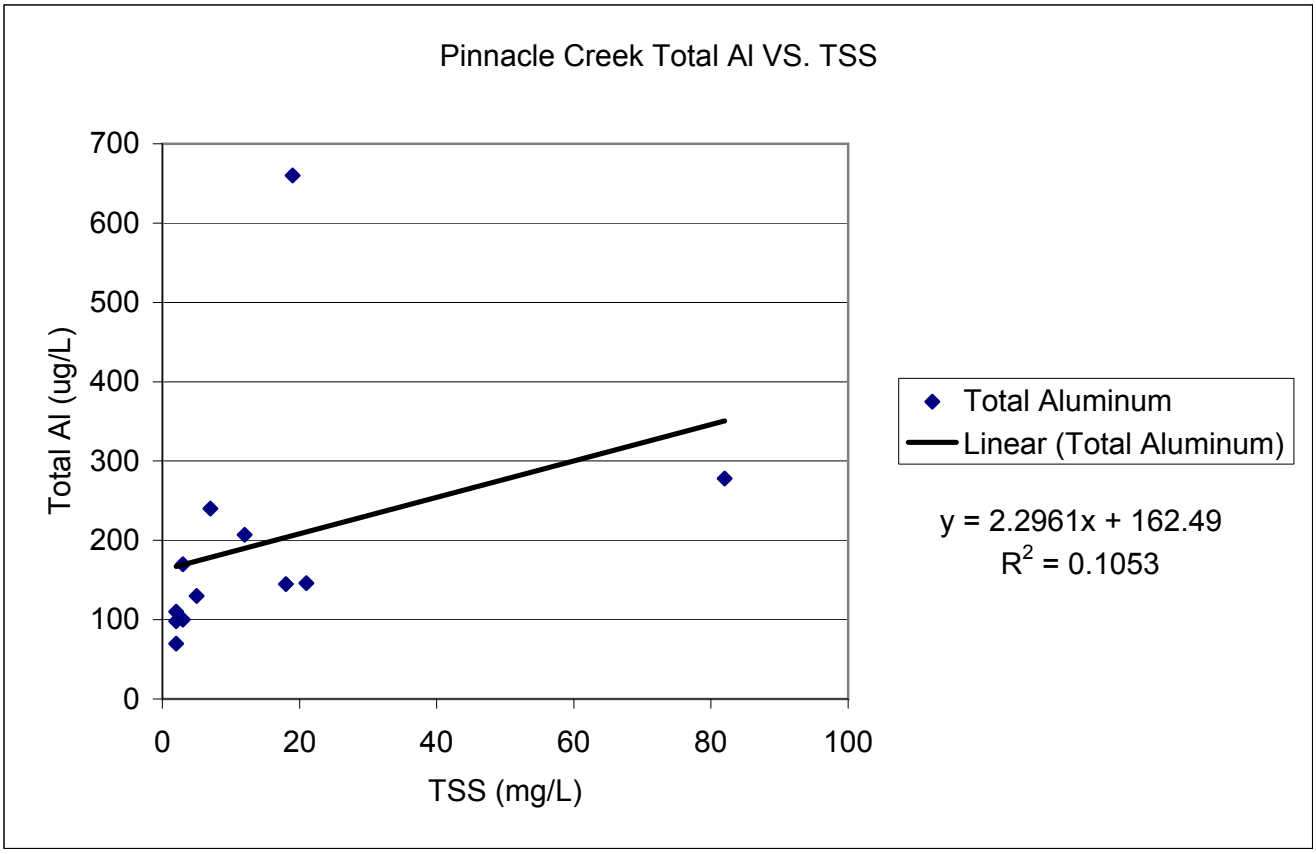

Figure 12-Mud River Stations Total Aluminum/TSS Correlation