Appendix A-1
Region 1

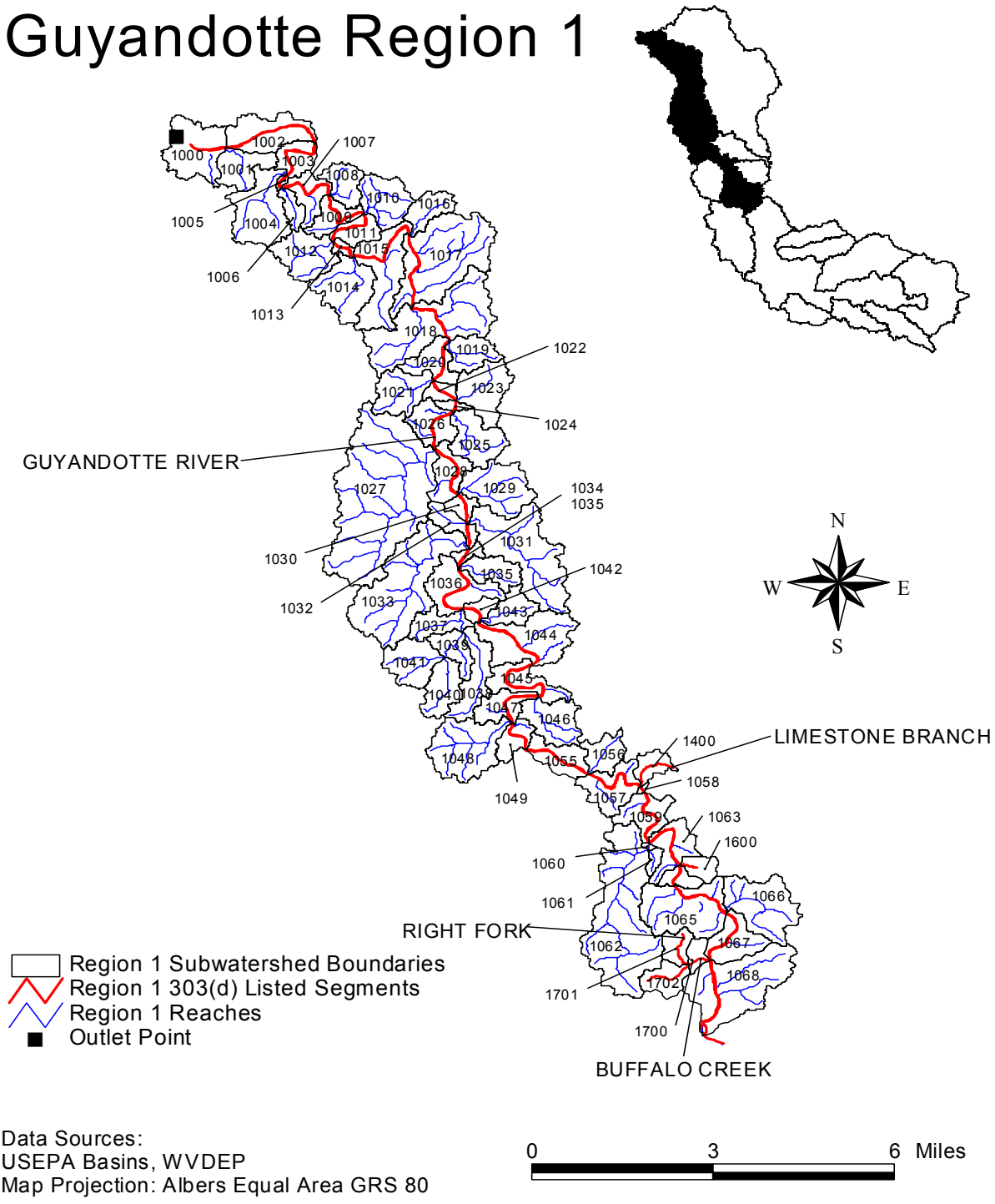


Figure 1. Region 1 - Guyandotte Watershed

Table 1. Impaired waterbodies in Region 1

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Affected Use
Buffalo Creek	OG-61	Metals, pH	1700, 1701, 1702		Aquatic Life, Human Health
Limestone Branch	OG-48	Metals, pH	1400		Aquatic Life, Human Health
Guyandotte River	OG-48	Al, Fecal Coliforms	All SWS in this region	1-14	Aquatic Life, Human Health
Right Fork of Buffalo Creek	OG-61-A	Metals, pH	1701		Aquatic Life, Human Health

T = Aquatic Life Trout Waters

W = Warm Water Fishery

Table 2. Locations of abandoned mines (seep, deep mine, and/or leachate)

SWS
1027
1028
1030
1041
1046
1055
1062
1063
1064
1066
1068
1701
1702

Table 3a. Water quality data for dissolved aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	1, WVO-4	16.90	15	27	10	09/04/03	10/21/03
1002	OG-000-002.8	48.33	36	69	3	08/02/00	08/08/02
1003	2, WVO-4	18.70	15	47	10	09/04/03	10/21/03
1018	OG-17m0.8	50.00	50	50	1	06/04/02	06/04/02
1029	OG-29m2.4	50.00	50	50	1	06/04/02	06/04/02
1033	OG-32-Em0.2	40.00	40	40	1	06/03/02	06/03/02
1033	OG-32-Fm	100.00	100	100	3	07/10/00	04/05/01
1033	OG-32-Fm0.2	50.00	50	50	1	05/30/02	05/30/02
1062	69	177.44	27	600	9	09/21/02	07/16/03
1065	OG-000-073.1	77.60	52	110	5	08/02/00	08/15/02
1066	3, WVOG-2	23.80	15	47	10	09/04/03	10/21/03

Table 3b. Water quality data for total aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	1, WVO-4	605.00	135	1700	10	09/04/03	10/21/03
1002	550639	2611.60	50	19000	65	01/10/90	06/06/95
1002	OG-000-002.8	1788.82	71	8900	11	11/29/99	08/08/02
1002	WA96-G01	827.50	50	2400	12	03/21/96	11/24/98
1003	2, WVO-4	353.60	81	1440	10	09/04/03	10/21/03
1008	OG-6m0.1	354.00	354	354	1	05/18/98	05/18/98
1012	OG-9-Am0.3	84.90	84.9	84.9	1	05/21/98	05/21/98
1017	OG-14-Dm0.4	237.00	237	237	1	05/12/98	05/12/98
1027	OG-27-Hm1.8	248.00	248	248	1	05/27/98	05/27/98
1029	OG-29m2.4	60.00	60	60	1	06/04/02	06/04/02
1032	OG-30m1.2	139.00	139	139	1	05/13/98	05/13/98
1033	OG-32-Em0.2	120.00	120	120	1	06/03/02	06/03/02
1033	OG-32-Fm	122.50	50	240	4	05/27/98	04/05/01
1033	OG-32-Fm0.2	70.00	70	70	1	05/30/02	05/30/02
1041	OG-34-E-1m0.8	116.00	116	116	1	05/11/98	05/11/98
1048	OG-42-Cm0.2	66.70	66.7	66.7	1	05/11/98	05/11/98
1062	69	489.00	30	2400	10	09/21/02	07/16/03
1062	OG-51-G.5m	440.00	440	440	1	05/13/98	05/13/98
1063	OG-51.5m	1560.00	1560	1560	1	05/13/98	05/13/98
1064	OG-000-070.0	239.00	239	239	1	05/20/98	05/20/98
1065	OG-000-073.1	534.80	46	2000	15	02/09/99	08/15/02
1065	WA96-G02	590.68	56.5	1570	11	05/31/96	11/24/98
1066	3, WVOG-2	1147.70	132	4480	10	09/04/03	10/21/03
1400	OG-48m	903.00	903	903	1	05/06/98	05/06/98
1600	OG-53m	4650.00	4650	4650	1	05/13/98	05/13/98
1700	OG-61m	821.00	821	821	1	05/13/98	05/13/98

Table 3c. Water quality data for dissolved iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	1, WVO-4	32.30	15	59	10	09/04/03	10/21/03
1000	OG-000.5-0002	28.00	28	28	1	03/22/00	03/22/00
1000	OG-000.5-0004	60.00	28	92	2	03/24/00	03/29/00
1000	OG-000.5-0005	20.00	20	20	1	03/29/00	03/29/00
1000	OG-000.5-0006	230.00	230	230	1	03/29/00	03/29/00
1002	OG-000-002.8	50.67	20	79	9	11/29/99	08/08/02
1003	2, WVO-4	27.80	15	86	10	09/04/03	10/21/03
1018	OG-17m0.8	120.00	120	120	1	06/04/02	06/04/02
1029	OG-29m2.4	20	20	20	1	04-Jun-02	04-Jun-02
1033	OG-32-Em0.2	40	40	40	1	03-Jun-02	03-Jun-02
1033	OG-32-Fm	20.33	20	21	3	10-Jul-00	05-Apr-01
1033	OG-32-Fm0.2	20	20	20	1	30-May-02	30-May-02
1062	69	370	60	1650	9	21-Sep-02	16-Jul-03
1065	OG-000-073.1	153.83	32	477	6	16-May-00	28-Nov-01
1066	3, WVOG-2	121.2	25	261	10	04-Sep-03	21-Oct-03

Table 3d. Water quality data for total iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	1, WVO-4	997.70	367	2760	10	09/04/03	10/21/03
1000	OG-000.5-0001	138.50	77	200	2	03/22/00	03/29/00
1000	OG-000.5-0002	570.00	570	570	1	03/22/00	03/22/00
1000	OG-000.5-0003	295.00	200	390	2	03/24/00	03/29/00
1000	OG-000.5-0004	1395.00	490	2300	2	03/24/00	03/29/00
1000	OG-000.5-0005	810.00	810	810	1	03/29/00	03/29/00
1000	OG-000.5-0006	3400.00	3400	3400	1	03/29/00	03/29/00
1000	OG-000.5-0007	1195.00	390	2000	2	03/24/00	03/29/00
1002	550639	2197.72	25	14000	65	01/10/90	06/06/95
1002	OG-000-002.8	2119.27	53	12000	15	02/09/99	08/08/02
1002	WA96-G01	1396.67	319	4000	12	03/21/96	11/24/98
1003	2, WVO-4	660.10	281	2320	10	09/04/03	10/21/03
1008	OG-6m0.1	1030.00	1030	1030	1	05/18/98	05/18/98
1012	OG-9-Am0.3	174.00	174	174	1	05/21/98	05/21/98
1017	OG-14-Dm0.4	527.00	527	527	1	05/12/98	05/12/98
1018	OG-17m0.8	1090.00	1090	1090	1	06/04/02	06/04/02
1027	OG-27-Hm1.8	540.00	540	540	1	05/27/98	05/27/98
1029	OG-29m2.4	110.00	110	110	1	06/04/02	06/04/02
1032	OG-30m1.2	260.00	260	260	1	05/13/98	05/13/98
1033	OG-32-Em0.2	170.00	170	170	1	06/03/02	06/03/02
1033	OG-32-Fm	81.25	20	140	4	05/27/98	04/05/01
1033	OG-32-Fm0.2	80.00	80	80	1	05/30/02	05/30/02
1041	OG-34-E-1m0.8	192.00	192	192	1	05/11/98	05/11/98
1048	OG-42-Cm0.2	252.00	252	252	1	05/11/98	05/11/98
1062	69	1271.00	260	5240	10	09/21/02	07/16/03
1062	OG-51-G.5m	957.00	957	957	1	05/13/98	05/13/98
1063	OG-51.5m	681.00	681	681	1	05/13/98	05/13/98
1064	OG-000-070.0	535.00	535	535	1	05/20/98	05/20/98
1065	OG-000-073.1	777.14	247	1960	14	02/09/99	08/15/02
1065	WA96-G02	923.00	250	3130	11	05/31/96	11/24/98
1066	3, WVOG-2	1806.50	804	3640	10	09/04/03	10/21/03
1400	OG-48m	920.00	920	920	1	05/06/98	05/06/98
1600	OG-53m	636.00	636	636	1	05/13/98	05/13/98
1700	OG-61m	1210.00	1210	1210	1	05/13/98	05/13/98

Table 3e. Water quality data for dissolved manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	OG-000.5-0001	55.00	55	55.0	1	03/29/00	03/29/00
1000	OG-000.5-0002	130.00	130	130.0	1	03/22/00	03/22/00
1000	OG-000.5-0004	1720.00	240	3200.0	2	03/24/00	03/29/00
1000	OG-000.5-0005	22.00	22	22.0	1	03/29/00	03/29/00
1000	OG-000.5-0006	640.00	640	640.0	1	03/29/00	03/29/00
1000	OG-000.5-0007	1925.00	350	3500.0	2	03/24/00	03/29/00
1002	OG-000-002.8	28.00	28	28.0	1	11/29/99	11/29/99
1062	69	119.00	60	180.0	10	09/21/02	07/16/03

Table 3f. Water quality data for total manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	OG-000.5-0001	41.5	24.00	59.0	2.0	3/22/2000	3/29/2000
1000	OG-000.5-0002	150.0	150.00	150.0	1.0	3/22/2000	3/22/2000
1000	OG-000.5-0004	1775.0	250.00	3300.0	2.0	3/24/2000	3/29/2000
1000	OG-000.5-0005	51.0	51.00	51.0	1.0	3/29/2000	3/29/2000
1000	OG-000.5-0006	650.0	650.00	650.0	1.0	3/29/2000	3/29/2000
1000	OG-000.5-0007	1930.0	360.00	3500.0	2.0	3/24/2000	3/29/2000
1002	550639	117.0	5.00	750.0	65.0	1/10/1990	6/6/1995
1002	OG-000-002.8	815.8	45.00	10600.0	15.0	2/9/1999	8/8/2002
1002	WA96-G01	118.6	38.00	286.0	12.0	3/21/1996	11/24/1998
1008	OG-6m0.1	531.0	531.00	531.0	1.0	5/18/1998	5/18/1998
1012	OG-9-Am0.3	51.2	51.20	51.2	1.0	5/21/1998	5/21/1998
1017	OG-14-Dm0.4	191.0	191.00	191.0	1.0	5/12/1998	5/12/1998
1018	OG-17m0.8	330.0	330.00	330.0	1.0	6/4/2002	6/4/2002
1027	OG-27-Hm1.8	34.3	34.30	34.3	1.0	5/27/1998	5/27/1998
1029	OG-29m2.4	20.0	20.00	20.0	1.0	6/4/2002	6/4/2002
1032	OG-30m1.2	26.8	26.80	26.8	1.0	5/13/1998	5/13/1998
1033	OG-32-Em0.2	20.0	20.00	20.0	1.0	6/3/2002	6/3/2002
1033	OG-32-Fm	17.5	10.00	20.0	4.0	5/27/1998	4/5/2001
1033	OG-32-Fm0.2	20.0	20.00	20.0	1.0	5/30/2002	5/30/2002
1041	OG-34-E-1m0.8	10.0	10.00	10.0	1.0	5/11/1998	5/11/1998
1048	OG-42-Cm0.2	49.3	49.30	49.3	1.0	5/11/1998	5/11/1998
1062	69	194.0	80.00	440.0	10.0	9/21/2002	7/16/2003
1062	OG-51-G.5m	258.0	258.00	258.0	1.0	5/13/1998	5/13/1998
1063	OG-51.5m	611.0	611.00	611.0	1.0	5/13/1998	5/13/1998
1064	OG-000-070.0	79.2	79.20	79.2	1.0	5/20/1998	5/20/1998
1065	OG-000-073.1	979.6	39.00	11600.0	15.0	2/9/1999	8/15/2002
1065	WA96-G02	90.2	54.70	152.0	11.0	5/31/1996	11/24/1998
1400	OG-48m	174.0	174.00	174.0	1.0	5/6/1998	5/6/1998
1600	OG-53m	726.0	726.00	726.0	1.0	5/13/1998	5/13/1998
1700	OG-61m	375.0	375.00	375.0	1.0	5/13/1998	5/13/1998

Table 3g. Water quality data for total selenium

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	1, WVO-4	2.8	1.0	3.0	10.0	9/4/2003	10/21/2003
1003	2, WVO-4	2.8	1.0	3.0	10.0	9/4/2003	10/21/2003
1018	OG-17m0.8	5.0	5.0	5.0	1.0	6/4/2002	6/4/2002
1029	OG-29m2.4	5.0	5.0	5.0	1.0	6/4/2002	6/4/2002
1033	OG-32-Em0.2	5.0	5.0	5.0	1.0	6/3/2002	6/3/2002
1033	OG-32-Fm0.2	5.0	5.0	5.0	1.0	5/30/2002	5/30/2002
1066	3, WVOG-2	2.8	1.0	3.0	10.0	9/4/2003	10/21/2003

Table 3h. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	OG-000.5-0001	8.1	7.2	8.6	3.0	3/22/2000	5/24/2000
1000	OG-000.5-0002	8.2	8.2	8.2	1.0	3/22/2000	3/22/2000
1000	OG-000.5-0003	8.5	8.4	8.6	2.0	3/24/2000	3/29/2000
1000	OG-000.5-0004	8.0	8.0	8.0	2.0	3/24/2000	3/29/2000
1000	OG-000.5-0005	8.3	8.3	8.3	1.0	3/29/2000	3/29/2000
1000	OG-000.5-0006	7.7	7.7	7.7	1.0	3/29/2000	3/29/2000
1000	OG-000.5-0007	8.1	8.1	8.1	1.0	3/29/2000	3/29/2000
1002	550639	7.3	6.6	8.0	64.0	1/10/1990	6/6/1995
1002	OG-000-002.8	7.3	6.6	7.9	12.0	2/9/1999	8/8/2002
1002	WA96-G01	7.5	7.1	8.2	8.0	3/21/1996	11/24/1998
1004	OG-3-0.5Am	8.3	8.3	8.3	1.0	5/18/1998	5/18/1998
1004	OG-3m	8.3	8.3	8.3	1.0	5/18/1998	5/18/1998
1008	OG-6m0.1	7.8	7.8	7.8	1.0	5/18/1998	5/18/1998
1012	OG-9-Am0.3	7.8	7.8	7.8	1.0	5/21/1998	5/21/1998
1014	OG-10-Am	8.7	8.7	8.7	1.0	5/21/1998	5/21/1998
1014	OG-10m	8.7	8.7	8.7	1.0	5/21/1998	5/21/1998
1015	OG-11m	8.5	8.5	8.5	1.0	5/12/1998	5/12/1998
1017	OG-14-Dm0.4	8.5	8.5	8.5	1.0	5/12/1998	5/12/1998
1018	OG-17m0.8	4.6	4.6	4.6	1.0	6/4/2002	6/4/2002
1024	OG-23.5m	8.3	8.3	8.3	1.0	5/22/1998	5/22/1998
1027	OG-27-Am	8.3	8.3	8.3	1.0	5/22/1998	5/22/1998
1027	OG-27-Hm1.8	8.3	8.3	8.3	1.0	5/27/1998	5/27/1998
1027	OG-27m	8.3	8.3	8.3	1.0	5/22/1998	5/22/1998
1029	OG-29-Cm	8.3	8.3	8.3	1.0	5/13/1998	5/13/1998
1029	OG-29m2.4	4.0	4.0	4.0	1.0	6/4/2002	6/4/2002
1032	OG-30m1.2	8.2	8.2	8.2	1.0	5/13/1998	5/13/1998
1033	OG-32-Em0.2	3.7	3.7	3.7	1.0	6/3/2002	6/3/2002
1033	OG-32-Fm	6.0	5.0	8.2	4.0	5/27/1998	4/5/2001
1037	OG-34-Am	8.2	8.2	8.2	1.0	5/6/1998	5/6/1998
1037	OG-34m	8.2	8.2	8.2	1.0	5/6/1998	5/6/1998
1038	OG-34-Bm	8.2	8.2	8.2	1.0	5/6/1998	5/6/1998
1041	OG-34-E-1m	8.2	8.2	8.2	1.0	5/6/1998	5/6/1998
1041	OG-34-E-1m0.8	8.2	8.2	8.2	1.0	5/11/1998	5/11/1998
1043	WVOG-35	8.2	8.2	8.2	1.0	5/11/1998	5/11/1998
1044	OG-36m	8.1	8.0	8.2	2.0	5/4/1998	5/11/1998
1044	OG-37m	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1047	OG-40m	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1047	OG-41m	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1048	OG-42-Am	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1048	OG-42-Cm0.2	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1048	OG-42-Dm	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1048	OG-42-Em	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1059	OG-50m	7.8	7.8	7.8	1.0	5/6/1998	5/6/1998
1062	69	7.5	7.2	7.9	10.0	9/21/2002	7/16/2003
1062	OG-51-Bm	7.8	7.8	7.8	1.0	5/6/1998	5/6/1998
1062	OG-51-G.5m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998
1063	OG-51.5m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998
1064	OG-000-070.0	7.6	7.6	7.6	1.0	5/20/1998	5/20/1998
1065	OG-000-073.1	7.5	7.1	8.0	12.0	2/9/1999	8/15/2002
1065	WA96-G02	7.6	7.2	7.9	9.0	8/30/1996	11/24/1998
1066	OG-59m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998
1067	OG-60m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998
1400	OG-48m	8.0	8.0	8.0	1.0	5/6/1998	5/6/1998
1600	OG-53m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998
1700	OG-61m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998

Table 3i. Water quality data for fecal coliforms

SWS	WQ Station	Avg (#/100 mL)	Min (#/100 mL)	Max (#/100 mL)	Count	Start Date	End Date
1000	OG-000.5-0001	773.0	91.0	1455.0	2.0	3/22/2000	3/29/2000
1000	OG-000.5-0002	12000.0	12000.0	12000.0	1.0	3/22/2000	3/22/2000
1000	OG-000.5-0004	15.0	10.0	20.0	2.0	3/24/2000	3/29/2000
1000	OG-000.5-0005	91.0	91.0	91.0	1.0	3/29/2000	3/29/2000
1000	OG-000.5-0007	90.0	90.0	90.0	1.0	3/29/2000	3/29/2000
1002	OG-000-002.8	1125.6	6.0	2400.0	12.0	5/26/1999	8/8/2002
1065	OG-000-073.1	2553.8	4.0	22000.0	12.0	5/26/1999	8/15/2002
1004	OG-3-0.5Am	210.0	210.0	210.0	1.0	5/18/1998	5/18/1998
1004	OG-3m	330.0	330.0	330.0	1.0	5/18/1998	5/18/1998
1008	OG-6m0.1	1900.0	1900.0	1900.0	1.0	5/18/1998	5/18/1998
1012	OG-9-Am0.3	3300.0	3300.0	3300.0	1.0	5/21/1998	5/21/1998
1014	OG-10-Am	900.0	900.0	900.0	1.0	5/21/1998	5/21/1998
1014	OG-10m	3000.0	3000.0	3000.0	1.0	5/21/1998	5/21/1998
1015	OG-11m	2000.0	2000.0	2000.0	1.0	5/12/1998	5/12/1998
1017	OG-14-Dm0.4	6400.0	6400.0	6400.0	1.0	5/12/1998	5/12/1998
1018	OG-17m0.8	6.0	6.0	6.0	1.0	6/4/2002	6/4/2002
1024	OG-23.5m	5000.0	5000.0	5000.0	1.0	5/22/1998	5/22/1998
1027	OG-27-Am	740.0	740.0	740.0	1.0	5/22/1998	5/22/1998
1027	OG-27-Hm1.8	420.0	420.0	420.0	1.0	5/27/1998	5/27/1998
1027	OG-27m	70.0	70.0	70.0	1.0	5/22/1998	5/22/1998
1029	OG-29-Cm	30.0	30.0	30.0	1.0	5/13/1998	5/13/1998
1029	OG-29m2.4	2.0	2.0	2.0	1.0	6/4/2002	6/4/2002
1032	OG-30m1.2	3300.0	3300.0	3300.0	1.0	5/13/1998	5/13/1998
1033	OG-32-Em0.2	2.0	2.0	2.0	1.0	6/3/2002	6/3/2002
1033	OG-32-Fm	32.0	32.0	32.0	1.0	5/27/1998	5/27/1998
1033	OG-32-Fm0.2	2.0	2.0	2.0	1.0	5/30/2002	5/30/2002
1037	OG-34-Am	1300.0	1300.0	1300.0	1.0	5/6/1998	5/6/1998
1037	OG-34m	2000.0	2000.0	2000.0	1.0	5/6/1998	5/6/1998
1038	OG-34-Bm	2200.0	2200.0	2200.0	1.0	5/6/1998	5/6/1998
1041	OG-34-E-1m	6000.0	6000.0	6000.0	1.0	5/6/1998	5/6/1998
1041	OG-34-E-1m0.8	6.0	6.0	6.0	1.0	5/11/1998	5/11/1998
1043	WVOG-35	5600.0	5600.0	5600.0	1.0	5/11/1998	5/11/1998
1044	OG-36m	810.0	420.0	1200.0	2.0	5/4/1998	5/11/1998
1044	OG-37m	28.0	28.0	28.0	1.0	5/11/1998	5/11/1998
1047	OG-40m	380.0	380.0	380.0	1.0	5/11/1998	5/11/1998
1047	OG-41m	4200.0	4200.0	4200.0	1.0	5/11/1998	5/11/1998
1048	OG-42-Am	20000.0	20000.0	20000.0	1.0	5/11/1998	5/11/1998
1048	OG-42-Cm0.2	6400.0	6400.0	6400.0	1.0	5/11/1998	5/11/1998
1048	OG-42-Dm	3200.0	3200.0	3200.0	1.0	5/11/1998	5/11/1998
1048	OG-42-Em	230.0	230.0	230.0	1.0	5/11/1998	5/11/1998
1059	OG-50m	52.0	52.0	52.0	1.0	5/6/1998	5/6/1998
1062	OG-51-Bm	4200.0	4200.0	4200.0	1.0	5/6/1998	5/6/1998
1062	OG-51-G.5m	150.0	150.0	150.0	1.0	5/13/1998	5/13/1998
1063	OG-51.5m	2000.0	2000.0	2000.0	1.0	5/13/1998	5/13/1998
1066	OG-59m	3800.0	3800.0	3800.0	1.0	5/13/1998	5/13/1998
1067	OG-60m	240.0	240.0	240.0	1.0	5/13/1998	5/13/1998
1400	OG-48m	44.0	44.0	44.0	1.0	5/6/1998	5/6/1998
1600	OG-53m	20.0	20.0	20.0	1.0	5/13/1998	5/13/1998
1700	OG-61m	150.0	150.0	150.0	1.0	5/13/1998	5/13/1998
1002	550639	3110.7	20.0	25000.0	63.0	1/10/1990	6/6/1995
1002	WA96-G01	6054.5	320.0	22000.0	11.0	3/21/1996	11/24/1998
1065	WA96-G02	4055.6	12.0	16000.0	11.0	5/31/1996	11/24/1998

Table 4a. Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1057	WVG015022	97	97	3.20	0
1059	WV0095885	213	213	3.20	0
1059	WV1015796	597	597	3.20	0
1068	WV1005138	45	45	3.20	0
1020*	WVG640084	552	552	3.70	0
1063*	WVG640085	451	451	3.70	0
1067*	WVG640092	1127	1127	3.70	0

* Denotes actual Office of Water Resources Permit

Table 4b. Manganese baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1057	WVG015022	97	97	2.00	0
1059	WV0095885	213	213	2.00	0
1059	WV1015796	597	597	2.00	0
1068	WV1005138	45	45	2.00	0

Table 4c. Aluminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1057	WVG015022	98	98	3.27	0
1059	WV0095885	213	213	3.27	0
1059	WV1015796	597	597	3.27	0
1068	WV1005138	46	46	3.27	0

Table 5a. Iron baseline conditions and allocations (LAs) for nonpoint sources

* Othen Nonpoint Sources include: Forest, Wetland, Agriculture, Pasture, and Urban)

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1000	0	0	0	0	313	313	4	4	0	0	0	0	389	389	
1001	0	0	0	0	96	96	2	2	0	0	0	0	155	155	
1002	0	0	0	0	185	185	4	4	2	2	0	0	255	255	
1003	0	0	0	0	101	101	1	1	0	0	0	0	133	133	
1004	0	0	0	0	76	76	21	21	0	0	102	102	223	223	
1005	0	0	0	0	3	3	0	0	0	0	6	6	8	8	
1006	0	0	0	0	16	16	4	4	0	0	31	31	39	39	
1007	0	0	0	0	35	35	1	1	0	0	103	103	116	116	
1008	0	0	0	0	39	39	4	4	0	0	94	94	95	95	
1009	0	0	0	0	60	60	3	3	0	0	5	5	93	93	
1010	0	0	0	0	54	54	3	3	0	0	111	111	155	155	
1011	0	0	0	0	34	34	2	2	0	0	25	25	68	68	
1012	0	0	0	0	48	48	6	6	0	0	156	156	146	146	
1013	0	0	0	0	11	11	0	0	0	0	9	9	16	16	
1014	0	0	0	0	53	53	8	8	0	0	46	46	165	165	
1015	0	0	0	0	81	81	15	15	0	0	132	132	253	253	
1016	0	0	0	0	23	23	1	1	0	0	70	70	81	81	
1017	0	0	0	0	172	172	30	30	29	29	25	25	454	454	
1018	0	0	0	0	156	156	50	50	0	0	36	36	446	446	
1019	0	0	0	0	40	40	1	1	0	0	0	0	106	106	
1020	0	0	0	0	55	55	13	13	0	0	153	153	106	106	
1021	0	0	0	0	42	42	11	11	0	0	0	0	133	133	
1022	0	0	0	0	9	9	3	3	0	0	8	8	36	36	
1023	0	0	0	0	57	57	8	8	0	0	39	39	144	144	
1024	0	0	0	0	8	8	1	1	0	0	9	9	21	21	
1025	0	0	0	0	60	60	16	16	0	0	32	32	128	128	
1026	0	0	0	0	52	52	8	8	0	0	29	29	110	110	
1027	4,358	261	0	0	474	474	7	7	18	18	4	4	4,279	4,279	x
1028	3,654	3,654	0	0	152	152	1	1	0	0	0	0	481	481	
1029	0	0	0	0	81	81	21	21	14	14	7	7	161	161	
1030	204	204	0	0	33	33	0	0	0	0	10	10	183	183	
1031	0	0	0	0	146	105	54	38	185	148	5,093	3,565	269	269	x
1032	0	0	0	0	27	27	7	7	0	0	320	320	50	50	
1033	0	0	0	0	149	149	18	18	0	0	530	530	397	397	
1034	0	0	0	0	12	12	2	2	0	0	14	14	20	20	
1035	0	0	0	0	34	34	9	9	0	0	994	994	70	70	

Table 5a. (continued) Iron baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1036	0	0	0	0	69	69	18	18	0	0	0	0	136	136	
1037	0	0	0	0	32	32	11	11	0	0	72	72	73	73	
1038	0	0	0	0	41	41	9	9	10	10	417	417	112	112	
1039	0	0	0	0	13	13	9	9	0	0	4	4	66	66	
1040	0	0	0	0	24	24	10	10	0	0	14	14	97	97	
1041	474	47	0	0	95	95	1	1	0	0	43	43	681	681	x
1042	0	0	0	0	23	23	7	7	0	0	0	0	31	31	
1043	0	0	0	0	30	30	8	8	0	0	968	968	65	65	
1044	0	0	0	0	104	104	57	57	108	108	1,517	1,517	187	187	
1045	0	0	0	0	68	68	13	13	0	0	829	829	89	89	
1046	10	10	0	0	41	41	14	14	0	0	1,149	1,149	102	102	
1047	0	0	0	0	47	47	10	10	0	0	39	39	72	72	
1048	0	0	0	0	95	95	19	19	0	0	56	56	195	195	
1049	0	0	0	0	26	26	7	7	0	0	758	758	44	44	
1055	1,414	1,414	0	0	166	166	2	2	0	0	1	1	381	381	
1056	0	0	0	0	26	26	17	17	0	0	0	0	66	66	
1057	0	0	0	0	32	32	16	16	0	0	0	0	104	104	
1058	0	0	0	0	4	4	0	0	0	0	2	2	3	3	
1059	0	0	0	0	39	39	5	5	0	0	6	6	82	82	
1060	0	0	0	0	3	3	0	0	0	0	27	27	4	4	
1061	0	0	0	0	7	7	0	0	0	0	53	53	16	16	
1062	317	19	0	0	412	412	3	3	0	0	276	276	2,142	2,142	x
1063	629	629	0	0	292	292	0	0	4	4	20	20	515	515	
1064	1,013	1,013	0	0	91	91	0	0	0	0	4	4	173	173	
1065	0	0	0	0	148	148	13	13	0	0	854	854	202	202	
1066	29	29	0	0	81	81	2	2	0	0	93	93	180	180	
1067	0	0	0	0	62	62	5	5	0	0	24	24	100	100	
1068	7,905	7,905	1,787	1,787	341	341	1	1	0	0	10	10	1,410	1,410	
1400	37	11	0	0	33	33	1	1	0	0	0	0	223	223	x
1600	0	0	0	0	16	16	1	1	0	0	0	0	39	39	
1700	0	0	0	0	9	9	3	3	0	0	8	8	31	31	
1701	0	0	0	0	18	18	2	2	0	0	0	0	45	45	
1702	2,708	406	0	0	35	35	0	0	0	0	0	0	291	291	x

Table 5b. Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1000	0	0	0	0	92	92	1	1	0	0	0	0	414	414	
1001	0	0	0	0	28	28	1	1	0	0	0	0	258	258	
1002	0	0	0	0	54	54	1	1	2	2	0	0	365	365	
1003	0	0	0	0	30	30	0	0	0	0	0	0	157	157	
1004	0	0	0	0	22	22	7	7	0	0	32	32	518	518	
1005	0	0	0	0	1	1	0	0	0	0	2	2	13	13	
1006	0	0	0	0	5	5	1	1	0	0	10	10	106	106	
1007	0	0	0	0	10	10	0	0	0	0	32	32	187	187	
1008	0	0	0	0	12	12	1	1	0	0	29	29	207	207	
1009	0	0	0	0	18	18	1	1	0	0	1	1	172	172	
1010	0	0	0	0	18	18	1	1	0	0	39	39	403	403	
1011	0	0	0	0	10	10	1	1	0	0	8	8	155	155	
1012	0	0	0	0	14	14	2	2	0	0	49	49	370	370	
1013	0	0	0	0	3	3	0	0	0	0	3	3	37	37	
1014	0	0	0	0	15	15	3	3	0	0	14	14	431	431	
1015	0	0	0	0	26	26	5	5	0	0	46	46	655	655	
1016	0	0	0	0	8	8	0	0	0	0	24	24	238	238	
1017	0	0	0	0	57	57	11	11	25	25	9	9	1,169	1,169	
1018	0	0	0	0	52	52	18	18	0	0	12	12	1,183	1,183	
1019	0	0	0	0	13	13	0	0	0	0	0	0	276	276	
1020	0	0	0	0	18	18	5	5	0	0	54	54	262	262	
1021	0	0	0	0	14	14	4	4	0	0	0	0	391	391	
1022	0	0	0	0	3	3	1	1	0	0	3	3	96	96	
1023	0	0	0	0	19	19	3	3	0	0	14	14	454	454	
1024	0	0	0	0	3	3	0	0	0	0	3	3	50	50	
1025	0	0	0	0	20	20	5	5	0	0	11	11	412	412	
1026	0	0	0	0	17	17	3	3	0	0	10	10	293	293	
1027	5,613	5,613	0	0	108	108	17	17	35	35	11	11	2,434	2,434	
1028	6,261	6,261	0	0	21	21	3	3	0	0	0	0	244	244	
1029	0	0	0	0	28	28	7	7	12	12	2	2	535	535	
1030	314	314	0	0	1	1	1	1	0	0	27	27	99	99	
1031	0	0	0	0	50	50	19	19	164	164	1,784	1,784	884	884	
1032	0	0	0	0	9	9	2	2	0	0	112	112	167	167	
1033	0	0	0	0	50	50	6	6	0	0	186	186	1,295	1,295	
1034	0	0	0	0	4	4	1	1	0	0	5	5	66	66	
1035	0	0	0	0	11	11	3	3	0	0	348	348	237	237	
1036	0	0	0	0	23	23	6	6	0	0	0	0	451	451	
1037	0	0	0	0	11	11	4	4	0	0	25	25	239	239	

Table 5b. (Continued) Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1038	0	0	0	0	13	13	3	3	9	9	146	146	371	371	
1039	0	0	0	0	4	4	3	3	0	0	2	2	217	217	
1040	0	0	0	0	8	8	4	4	0	0	5	5	323	323	
1041	709	709	0	0	9	9	2	2	0	0	112	112	386	386	
1042	0	0	0	0	8	8	2	2	0	0	0	0	100	100	
1043	0	0	0	0	10	10	3	3	0	0	339	339	217	217	
1044	0	0	0	0	35	35	20	20	96	96	532	532	629	629	
1045	0	0	0	0	23	23	5	5	0	0	291	291	296	296	
1046	73	73	0	0	15	15	5	5	0	0	433	433	339	339	
1047	0	0	0	0	15	15	4	4	0	0	14	14	238	238	
1048	0	0	0	0	34	34	7	7	0	0	21	21	639	639	
1049	0	0	0	0	9	9	3	3	0	0	286	286	145	145	
1055	1,762	1,762	0	0	18	18	7	7	0	0	2	2	252	252	
1056	0	0	0	0	9	9	7	7	0	0	0	0	217	217	
1057	0	0	0	0	10	10	6	6	0	0	0	0	343	343	
1058	0	0	0	0	2	2	0	0	0	0	1	1	9	9	
1059	0	0	0	0	13	13	2	2	0	0	2	2	263	263	
1060	0	0	0	0	1	1	0	0	0	0	10	10	12	12	
1061	0	0	0	0	2	2	0	0	0	0	20	20	52	52	
1062	438	438	0	0	63	63	9	9	0	0	747	747	1,425	1,425	
1063	861	861	0	0	30	30	1	1	8	8	55	55	271	271	
1064	1,830	1,830	0	0	9	9	0	0	0	0	11	11	97	97	
1065	0	0	0	0	51	51	5	5	0	0	322	322	659	659	
1066	243	243	0	0	29	29	1	1	0	0	35	35	599	599	
1067	0	0	0	0	21	21	2	2	0	0	9	9	320	320	
1068	10,094	10,094	1,810	1,810	54	54	2	2	0	0	28	28	883	883	
1400	305	6	0	0	945	709	260	195	0	0	0	0	148	148	x
1600	0	0	0	0	1,055	792	65	49	0	0	0	0	128	128	x
1700	0	0	0	0	9	9	3	3	0	0	9	9	100	100	
1701	0	0	0	0	18	18	2	2	0	0	0	0	149	149	
1702	12,467	3,117	0	0	19	19	1	1	0	0	0	0	194	194	x

Table 5c. Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1000	0	0	0	0	201	201	3	3	0	0	0	0	326	326	
1001	0	0	0	0	62	62	1	1	0	0	0	0	159	159	
1002	0	0	0	0	118	118	3	3	1	1	0	0	244	244	
1003	0	0	0	0	65	65	1	1	0	0	0	0	117	117	
1004	0	0	0	0	48	48	15	15	0	0	70	70	269	269	
1005	0	0	0	0	2	2	0	0	0	0	4	4	9	9	
1006	0	0	0	0	10	10	3	3	0	0	21	21	54	54	
1007	0	0	0	0	23	23	1	1	0	0	70	70	118	118	
1008	0	0	0	0	26	26	3	3	0	0	64	64	114	114	
1009	0	0	0	0	39	39	2	2	0	0	3	3	105	105	
1010	0	0	0	0	35	35	2	2	0	0	76	76	203	203	
1011	0	0	0	0	22	22	1	1	0	0	17	17	86	86	
1012	0	0	0	0	30	30	4	4	0	0	106	106	189	189	
1013	0	0	0	0	7	7	0	0	0	0	6	6	20	20	
1014	0	0	0	0	34	34	6	6	0	0	31	31	216	216	
1015	0	0	0	0	52	52	10	10	0	0	90	90	339	339	
1016	0	0	0	0	15	15	1	1	0	0	48	48	115	115	
1017	0	0	0	0	112	112	21	21	20	20	17	17	596	596	
1018	0	0	0	0	101	101	34	34	0	0	24	24	600	600	
1019	0	0	0	0	25	25	1	1	0	0	0	0	139	139	
1020	0	0	0	0	35	35	9	9	0	0	104	104	137	137	
1021	0	0	0	0	28	28	8	8	0	0	0	0	188	188	
1022	0	0	0	0	6	6	2	2	0	0	5	5	50	50	
1023	0	0	0	0	38	38	5	5	0	0	26	26	205	205	
1024	0	0	0	0	5	5	1	1	0	0	6	6	26	26	
1025	0	0	0	0	39	39	11	11	0	0	22	22	184	184	
1026	0	0	0	0	33	33	5	5	0	0	20	20	146	146	
1027	21,843	21,843	0	0	481	481	8	8	20	20	5	5	4,701	4,701	
1028	24,861	24,861	0	0	153	153	1	1	0	0	0	0	525	525	
1029	0	0	0	0	54	54	15	15	10	10	5	5	231	231	
1030	433	433	0	0	34	34	0	0	0	0	12	12	200	200	
1031	0	0	0	0	97	97	37	37	132	132	3,478	3,478	386	386	
1032	0	0	0	0	17	17	5	5	0	0	218	218	72	72	
1033	0	0	0	0	98	98	12	12	0	0	362	362	570	570	
1034	0	0	0	0	8	8	2	2	0	0	9	9	29	29	
1035	0	0	0	0	22	22	6	6	0	0	679	679	101	101	
1036	0	0	0	0	45	45	12	12	0	0	0	0	195	195	
1037	0	0	0	0	21	21	8	8	0	0	49	49	105	105	

Table 5c. (Continued) Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1038	0	0	0	0	25	25	6	6	7	7	284	284	161	161	
1039	0	0	0	0	8	8	6	6	0	0	3	3	94	94	
1040	0	0	0	0	15	15	7	7	0	0	9	9	140	140	
1041	1,226	1,226	0	0	95	95	1	1	0	0	50	50	749	749	
1042	0	0	0	0	15	15	5	5	0	0	0	0	44	44	
1043	0	0	0	0	20	20	5	5	0	0	661	661	94	94	
1044	0	0	0	0	69	69	39	39	77	77	1,036	1,036	269	269	
1045	0	0	0	0	45	45	9	9	0	0	566	566	127	127	
1046	122	122	0	0	28	28	9	9	0	0	792	792	150	150	
1047	0	0	0	0	30	30	7	7	0	0	26	26	103	103	
1048	0	0	0	0	63	63	13	13	0	0	39	39	289	289	
1049	0	0	0	0	16	16	5	5	0	0	523	523	66	66	
1055	7,271	7,271	0	0	167	167	3	3	0	0	1	1	426	426	
1056	0	0	0	0	17	17	12	12	0	0	0	0	98	98	
1057	0	0	0	0	20	20	11	11	0	0	0	0	154	154	
1058	0	0	0	0	3	3	0	0	0	0	2	2	4	4	
1059	0	0	0	0	25	25	4	4	0	0	4	4	121	121	
1060	0	0	0	0	2	2	0	0	0	0	19	19	6	6	
1061	0	0	0	0	5	5	0	0	0	0	37	37	23	23	
1062	1,114	1,114	0	0	417	417	4	4	0	0	331	331	2,392	2,392	
1063	2,318	2,318	0	0	294	294	0	0	4	4	24	24	568	568	
1064	5,791	5,791	0	0	92	92	0	0	0	0	5	5	191	191	
1065	0	0	0	0	95	95	9	9	0	0	589	589	299	299	
1066	350	350	0	0	54	54	1	1	0	0	64	64	267	267	
1067	0	0	0	0	40	40	3	3	0	0	17	17	147	147	
1068	37,744	37,744	369	369	345	345	1	1	0	0	12	12	1,568	1,568	
1400	18	18	0	0	33	33	1	1	0	0	0	0	249	249	
1600	0	0	0	0	11	11	1	1	0	0	0	0	58	58	
1700	0	0	0	0	6	6	2	2	0	0	6	6	46	46	
1701	0	0	0	0	12	12	1	1	0	0	0	0	66	66	
1702	17,542	3,508	0	0	36	36	0	0	0	0	0	0	324	324	x

Table 6. Fecal Coliform baseline and allocations

SWS	Stream	Agriculture		Natural Sources		Failing Septics		Residential	
		Baseline Load (counts)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)
1000	*Guyandotte River*	*9.83E+14*	*4.59E+14*	*3.94E+14*	*3.94E+14*	*1.05E+16*	*0.00E+00*	*9.51E+14*	*4.53E+14*
1001	Russell Creek	4.38E+12	3.07E+12	2.84E+11	2.84E+11	1.98E+12	0.00E+00	2.25E+13	6.76E+12
1004	Davis Creek	9.37E+12	6.56E+12	8.11E+11	8.11E+11	6.74E+13	0.00E+00	1.23E+13	8.62E+12
1006	Booten Creek	3.46E+12	2.42E+12	1.53E+11	1.53E+11	1.52E+13	0.00E+00	6.68E+11	4.68E+11
1008	Mill Creek	7.13E+12	4.99E+12	2.57E+11	2.57E+11	2.70E+13	0.00E+00	4.51E+12	3.16E+12
1010	Lower Tom Creek	7.94E+12	5.56E+12	6.76E+11	6.76E+11	3.31E+13	0.00E+00	4.43E+12	3.10E+12
1012	Heath Creek	7.91E+12	5.54E+12	5.86E+11	5.86E+11	4.39E+13	0.00E+00	5.28E+12	3.69E+12
1014	Merritt Creek	7.86E+12	5.50E+12	7.17E+11	7.17E+11	3.82E+13	0.00E+00	6.06E+12	4.24E+12
1016	Cavill Creek	4.91E+12	3.44E+12	4.24E+11	4.24E+11	1.75E+13	0.00E+00	6.66E+11	4.66E+11
1019	Twomile Creek	3.97E+12	2.78E+12	4.79E+11	4.79E+11	8.61E+11	0.00E+00	6.30E+12	4.41E+12
1021	Falls Creek	7.86E+12	5.50E+12	7.03E+11	7.03E+11	1.83E+13	0.00E+00	9.33E+11	6.53E+11
1023	Onemile Creek	4.33E+12	3.03E+12	9.42E+11	9.42E+11	1.51E+13	0.00E+00	1.33E+12	9.28E+11
1025	Twomile Creek	3.00E+12	2.10E+12	8.79E+11	8.79E+11	1.03E+13	0.00E+00	1.11E+12	7.77E+11
1027	Fourmile Creek	2.18E+13	1.53E+13	5.22E+12	5.22E+12	1.18E+14	0.00E+00	2.17E+12	1.52E+12
1029	Sixmile Creek	1.42E+12	9.95E+11	1.24E+12	1.24E+12	1.30E+13	0.00E+00	1.47E+11	1.03E+11
1031	Ninemile Creek	4.03E+12	2.82E+12	2.37E+12	2.37E+12	2.56E+13	0.00E+00	0.00E+00	0.00E+00
1033	Tenmile Creek	7.67E+12	5.37E+12	2.88E+12	2.88E+12	6.22E+13	0.00E+00	5.78E+11	4.05E+11
1035	Furnett Creek	5.02E+10	3.52E+10	6.14E+11	6.14E+11	6.58E+12	0.00E+00	0.00E+00	0.00E+00
1037	Fourteenmile Creek	9.33E+12	6.53E+12	3.44E+12	3.44E+12	7.72E+13	0.00E+00	7.04E+11	4.93E+11
1043	Aarons Creek	6.38E+11	4.47E+11	5.51E+11	5.51E+11	5.96E+12	0.00E+00	0.00E+00	0.00E+00
1046	Sand Creek	3.60E+11	2.52E+11	7.61E+11	7.61E+11	2.16E+13	0.00E+00	0.00E+00	0.00E+00
1048	Little Harts Creek	2.20E+12	1.54E+12	1.26E+12	1.26E+12	3.69E+13	0.00E+00	2.42E+11	1.69E+11
1056	Green Shoals Branch	6.12E+11	4.29E+11	4.33E+11	4.33E+11	1.26E+13	0.00E+00	1.58E+11	1.11E+11
1060	Crawley Creek	3.36E+12	2.35E+12	3.05E+12	3.05E+12	1.12E+14	0.00E+00	6.50E+11	4.55E+11
1066	Mill Creek	4.47E+11	3.13E+11	1.23E+12	1.23E+12	4.07E+13	0.00E+00	6.08E+11	4.25E+11
1400	Limestone Branch	5.15E+11	3.61E+11	2.93E+11	2.93E+11	8.84E+12	0.00E+00	0.00E+00	0.00E+00
1600	Godby Branch	3.81E+11	2.67E+11	2.55E+11	2.55E+11	8.95E+12	0.00E+00	7.90E+10	5.53E+10
1700	Buffalo Creek	9.73E+10	6.81E+10	9.52E+11	9.52E+11	3.37E+13	0.00E+00	3.46E+11	2.42E+11

Appendix A-2
Region 2

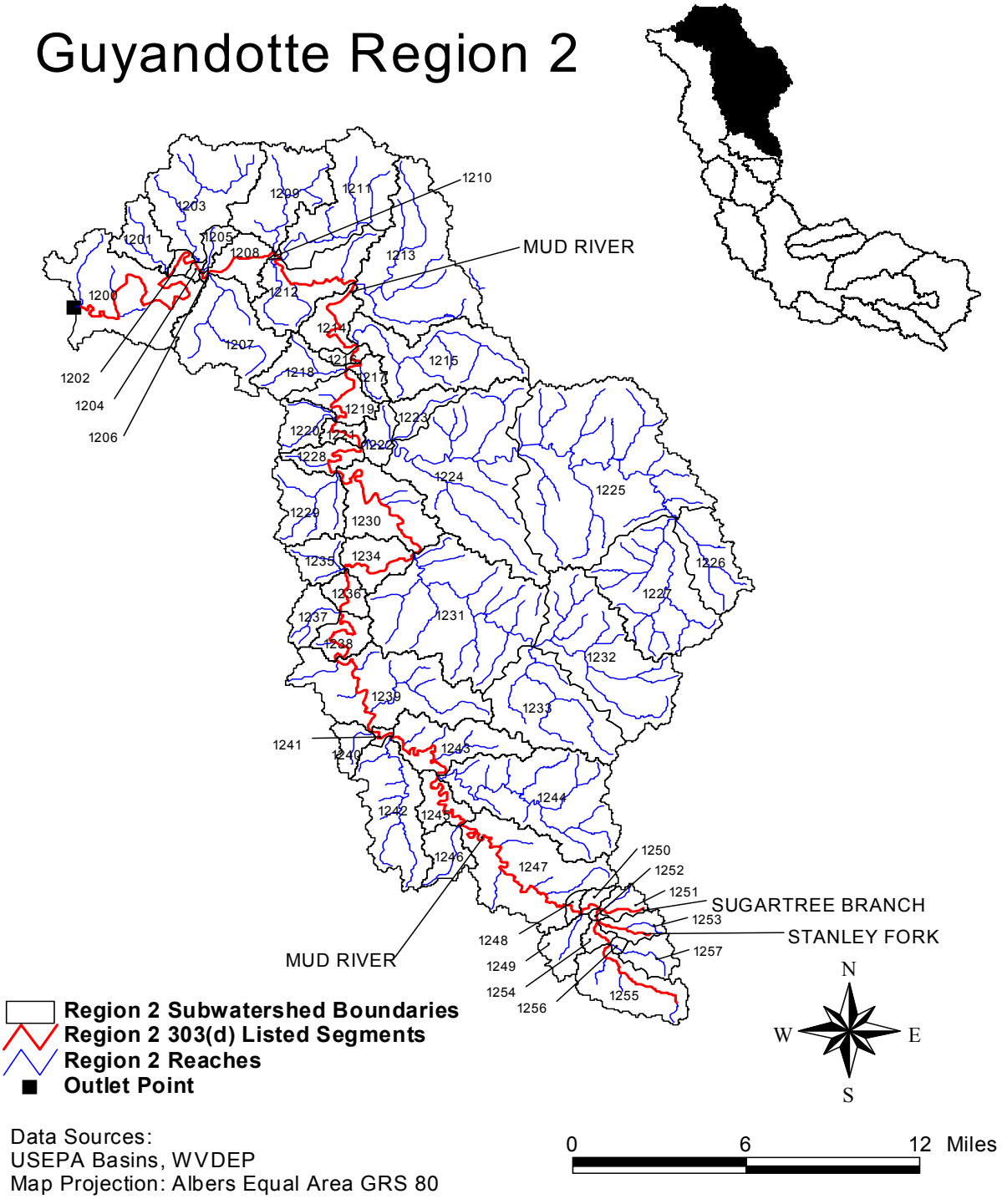


Figure 1. Region 2 - Guyandotte Watershed

Table 1. Impaired waterbodies in Region 2

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Affected Use
Mud River	OG-2	Selenium	All SWS in this Region		Aquatic Life, Human Health
Stanley Fork	OGM-48	Selenium	1253		Aquatic Life, Human Health
Sugartree Branch	OGM-47	Selenium	1251		Aquatic Life, Human Health

T = Aquatic Life Trout Waters

W = Warm Water Fishery

Table 2. Locations of abandoned mines (seep, deep mine, and/or leachate)

SWS
1232
1240
1243
1247

Table 3a. Water quality data for dissolved aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1200	4, WVOG-2	18.00	15	33	10	09/04/03	10/21/03
1209	OGM-7-Cm0.4	50.00	50	50	1	06/04/02	06/04/02
1212	5, WVOG-2	21.60	15	75	10	09/04/03	10/21/03
1221	6, WVOG-2	15.56	15	20	9	09/04/03	10/21/03
1239	7, WVOGM-47	22.78	15	83	9	09/03/03	10/20/03
1244	100	53.67	20	159	9	10/04/02	07/16/03
1245	97	44.89	24	89	9	10/04/02	07/16/03
1251	9, WVOG-2	15.56	15	20	9	09/03/03	10/20/03
1253	10, WVO-4	40.50	17	110	10	09/03/03	10/20/03
1254	8, WVOGM-48	15.56	15	20	9	09/03/03	10/20/03

Table 3b. Water quality data for total aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1200	4, WVOG-2	970.40	145	3690	10	09/04/03	10/21/03
1200	OG-2m3.6	355.00	355	355	1	05/29/98	05/29/98
1201	OGM-3m0.9	567.00	567	567	1	05/26/98	05/26/98
1203	OGM-4m0.2	237.00	237	237	1	05/29/98	05/29/98
1203	OGM-4m2	374.00	374	374	1	05/26/98	05/26/98
1209	OGM-7-Cm0.4	400.00	400	400	1	06/04/02	06/04/02
1209	OGM-7m0.4	302.00	302	302	1	05/26/98	05/26/98
1211	OGM-8-Bm	318.00	318	318	1	05/03/98	05/03/98
1212	5, WVOG-2	482.10	18	1540	10	09/04/03	10/21/03
1213	550747	1367.50	170	5000	12	10/09/91	09/09/92
1213	551029	1063.64	100	3100	11	11/05/91	09/09/92
1215	OGM-14m7.2	119.00	119	119	1	05/29/98	05/29/98
1221	6, WVOG-2	45.78	15	108	9	09/04/03	10/21/03
1224	OGM-20-Dm4.6	560.00	560	560	1	05/28/98	05/28/98
1224	OGM-20m6.4	86.40	86.4	86.4	1	06/09/98	06/09/98
1225	OGM-20-I-1m1.	760.00	760	760	1	05/28/98	05/28/98
1225	OGM-20-Km0.1	1000.00	1000	1000	1	05/04/98	05/04/98
1225	OGM-20-Mm1.8	740.00	740	740	1	05/27/98	05/27/98
1227	OGM-20m21.2	219.00	219	219	1	05/29/98	05/29/98
1227	OGM-20-Tm3.5	580.00	580	580	1	05/28/98	05/28/98
1229	OGM-22-Am0.7	1100.00	1100	1100	1	05/04/98	05/04/98
1231	OGM-25-Bm2.3	197.00	197	197	1	05/28/98	05/28/98
1233	OGM-25-Im3	147.00	147	147	1	05/26/98	05/26/98
1234	OG-2m47	275.00	275	275	1	05/28/98	05/28/98
1236	OG-2m48.7	210.00	210	210	1	05/28/98	05/28/98
1239	7, WVOGM-47	242.11	15	1260	9	09/03/03	10/20/03
1242	OGM-35m1.8	670.00	670	670	1	05/21/98	05/21/98
1242	OGM-35m4.1	50.00	50	50	1	05/19/98	05/19/98
1244	100	166.11	54	557	9	10/04/02	07/16/03
1244	OGM-39m10.2	112.00	112	112	1	05/27/98	05/27/98
1245	97	147.78	61	328	9	10/04/02	07/16/03
1246	OGM-40.3m2.2	89.90	89.9	89.9	1	05/19/98	05/19/98
1247	OGM-44m0.2	50.00	50	50	1	05/19/98	05/19/98
1248	OG-2m77.2	520.00	520	520	1	05/18/98	05/18/98
1251	9, WVOG-2	191.78	15	1040	9	09/03/03	10/20/03
1253	10, WVO-4	340.20	71	1310	10	09/03/03	10/20/03
1254	8, WVOGM-48	17.00	15	27	9	09/03/03	10/20/03
1255	OGM-50m	990.00	990	990	1	05/18/98	05/18/98

Table 3c. Water quality data for dissolved iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1200	4, WVOG-2	149.50	51	338	10	9/4/03	10/21/03
1209	OGM-7-Cm0.4	20.00	20	20	1	6/4/02	6/4/02
1212	5, WVOG-2	277.90	55	1630	10	9/4/03	10/21/03
1221	6, WVOG-2	41.11	15	102	9	9/4/03	10/21/03
1239	7, WVOGM-47	18.67	15	48	9	9/3/03	10/20/03
1244	100	180.00	80	490	10	10/4/02	7/16/03
1245	97	170.00	60	490	4	10/4/02	7/16/03
1251	9, WVOG-2	22.78	15	61	9	9/3/03	10/20/03
1253	10, WVO-4	30.30	15	118	10	9/3/03	10/20/03
1254	8, WVOGM-48	15.67	15	21	9	9/3/03	10/20/03

Table 3d. Water quality data for total iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1200	4, WVOG-2	1665.40	720	5918	10	09/04/03	10/21/03
1200	OG-2m3.6	1160.00	1160	1160	1	05/29/98	05/29/98
1201	OGM-3m0.9	681.00	681	681	1	05/26/98	05/26/98
1203	OGM-4m0.2	1130.00	1130	1130	1	05/29/98	05/29/98
1203	OGM-4m2	761.00	761	761	1	05/26/98	05/26/98
1209	OGM-7-Cm0.4	590.00	590	590	1	06/04/02	06/04/02
1209	OGM-7m0.4	661.00	661	661	1	05/26/98	05/26/98
1211	OGM-8-Bm	549.00	549	549	1	05/03/98	05/03/98
1212	5, WVOG-2	2463.60	155	16800	10	09/04/03	10/21/03
1213	550747	659.58	95	1800	12	10/09/91	09/09/92
1213	551029	426.82	45	1000	11	11/05/91	09/09/92
1215	OGM-14m7.2	308.00	308	308	1	05/29/98	05/29/98
1221	6, WVOG-2	301.56	223	374	9	09/04/03	10/21/03
1224	OGM-20-Dm4.6	310.00	310	310	1	05/28/98	05/28/98
1224	OGM-20m6.4	885.00	885	885	1	06/09/98	06/09/98
1225	OGM-20-I-1m1.	510.00	510	510	1	05/28/98	05/28/98
1225	OGM-20-Km0.1	290.00	290	290	1	05/04/98	05/04/98
1225	OGM-20-Mm1.8	460.00	460	460	1	05/27/98	05/27/98
1227	OGM-20m21.2	912.00	912	912	1	05/29/98	05/29/98
1227	OGM-20-Tm3.5	280.00	280	280	1	05/28/98	05/28/98
1229	OGM-22-Am0.7	720.00	720	720	1	05/04/98	05/04/98
1231	OGM-25-Bm2.3	250.00	250	250	1	05/28/98	05/28/98
1233	OGM-25-Im3	725.00	725	725	1	05/26/98	05/26/98
1234	OG-2m47	633.00	633	633	1	05/28/98	05/28/98
1236	OG-2m48.7	526.00	526	526	1	05/28/98	05/28/98
1239	7, WVOGM-47	394.00	74	1850	9	09/03/03	10/20/03
1242	OGM-35m1.8	340.00	340	340	1	05/21/98	05/21/98
1242	OGM-35m4.1	314.00	314	314	1	05/19/98	05/19/98
1244	100	468.00	210	950	10	10/04/02	07/16/03
1244	OGM-39m10.2	332.00	332	332	1	05/27/98	05/27/98
1245	97	213.33	90	300	9	10/04/02	07/16/03
1246	OGM-40.3m2.2	386.00	386	386	1	05/19/98	05/19/98
1247	OGM-44m0.2	233.00	233	233	1	05/19/98	05/19/98
1248	OG-2m77.2	170.00	170	170	1	05/18/98	05/18/98
1251	9, WVOG-2	586.67	301	1900	9	09/03/03	10/20/03
1253	10, WVO-4	583.40	222	1870	10	09/03/03	10/20/03
1254	8, WVOGM-48	117.78	93	192	9	09/03/03	10/20/03
1255	OGM-50m	280.00	280	280	1	05/18/98	05/18/98

Table 3e. Water quality data for dissolved manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1244	100	71.00	40	210.0	10	10/04/02	07/16/03
1245	97	69.00	30	110.0	10	10/04/02	07/16/03

Table 3f. Water quality data for total manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1200	OG-2m3.6	94.00	94	94	1	05/29/98	05/29/98
1201	OGM-3m0.9	34.50	35	35	1	05/26/98	05/26/98
1203	OGM-4m0.2	372.00	372	372	1	05/29/98	05/29/98
1203	OGM-4m2	113.00	113	113	1	05/26/98	05/26/98
1209	OGM-7-Cm0.4	140.00	140	140	1	06/04/02	06/04/02
1209	OGM-7m0.4	103.00	103	103	1	5/26/1998	5/26/1998
1211	OGM-8-Bm	45.10	45	45	1	5/3/1998	5/3/1998
1213	550747	504.58	30	2700	12	10/9/1991	9/9/1992
1213	551029	126.36	30	260	11	11/5/1991	9/9/1992
1215	OGM-14m7.2	75.30	75	75	1	5/29/1998	5/29/1998
1224	OGM-20-Dm4.6	20.00	20	20	1	5/28/1998	5/28/1998
1224	OGM-20m6.4	219.00	219	219	1	6/9/1998	6/9/1998
1225	OGM-20-I-1m1.	40.00	40	40	1	5/28/1998	5/28/1998
1225	OGM-20-Km0.1	26.00	26	26	1	5/4/1998	5/4/1998
1225	OGM-20-Mm1.8	28.00	28	28	1	5/27/1998	5/27/1998
1227	OGM-20m21.2	169.00	169	169	1	5/29/1998	5/29/1998
1227	OGM-20-Tm3.5	20.00	20	20	1	5/28/1998	5/28/1998
1229	OGM-22-Am0.7	35.00	35	35	1	5/4/1998	5/4/1998
1231	OGM-25-Bm2.3	10.00	10	10	1	5/28/1998	5/28/1998
1233	OGM-25-Im3	118.00	118	118	1	5/26/1998	5/26/1998
1234	OG-2m47	115.00	115	115	1	5/28/1998	5/28/1998
1236	OG-2m48.7	116.00	116	116	1	5/28/1998	5/28/1998
1242	OGM-35m4.1	32.30	32	32	1	5/19/1998	5/19/1998
1244	100	148.00	40	570	10	10/4/2002	7/16/2003
1244	OGM-39m10.2	34.60	35	35	1	5/27/1998	5/27/1998
1245	97	100.00	40	220	10	10/4/2002	7/16/2003
1246	OGM-40.3m2.2	66.00	66	66	1	5/19/1998	5/19/1998
1247	OGM-44m0.2	57.90	58	58	1	5/19/1998	5/19/1998
1248	OG-2m77.2	150.00	150	150	1	5/18/1998	5/18/1998
1255	OGM-50m	20.00	20	20	1	5/18/1998	5/18/1998

Table 3g. Water quality data for total selenium

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1200	4, WVOG-2	2.80	1	3	10	09/04/03	10/21/03
1209	OGM-7-Cm0.4	5.00	5	5	1	06/04/02	06/04/02
1212	5, WVOG-2	2.80	1	3	10	09/04/03	10/21/03
1213	550747	2.00	2	2	3	07/08/92	09/09/92
1213	551029	2.0	2.0	2.0	3	7/8/1992	9/9/1992
1221	6, WVOG-2	3.3	2.9	4.0	9	9/4/2003	10/21/2003
1239	7, WVOGM-47	16.1	10.3	19.6	9	9/3/2003	10/20/2003
1251	9, WVOG-2	4.8	2.9	9.4	9	9/3/2003	10/20/2003
1253	10, WVO-4	2.8	1.0	3.0	10	9/3/2003	10/20/2003
1254	8, WVOGM-48	6.7	5.4	8.0	9	9/3/2003	10/20/2003

Table 3h. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1200	OG-2m3.6	8.43	8.4	8.4	1	05/29/98	05/29/98
1200	OGM-1.5m	7.74	7.7	7.7	1	05/18/98	05/18/98
1201	OGM-3m0.9	7.60	7.6	7.6	1	05/26/98	05/26/98
1203	OGM-4m0.2	7.57	7.6	7.6	1	05/29/98	05/29/98
1203	OGM-4m2	7.56	7.6	7.6	1	05/26/98	05/26/98
1209	OGM-7-B-1m	7.52	7.5	7.5	1	05/03/98	05/03/98
1209	OGM-7-Cm0.4	2.93	2.9	2.9	1	06/04/02	06/04/02
1209	OGM-7m0.4	7.52	7.5	7.5	1	5/26/1998	5/26/1998
1211	OGM-8-Bm	7.52	7.5	7.5	1	5/3/1998	5/3/1998
1211	OGM-8-Cm	7.52	7.5	7.5	1	5/26/1998	5/26/1998
1211	OGM-8m4	7.52	7.5	7.5	1	5/3/1998	5/3/1998
1212	OG-2m18.8	8.47	8.5	8.5	1	5/14/1998	5/14/1998
1213	OGM-12m	7.71	7.7	7.7	1	5/15/1998	5/15/1998
1214	OGM-13m	7.71	7.7	7.7	1	5/15/1998	5/15/1998
1215	OGM-14m7.2	7.71	7.7	7.7	1	5/29/1998	5/29/1998
1216	OG-2m25.5	8.44	8.4	8.4	1	5/14/1998	5/14/1998
1218	OGM-16-Am	7.70	7.7	7.7	1	5/4/1998	5/4/1998
1220	OGM-19m	7.70	7.7	7.7	1	5/4/1998	5/4/1998
1223	OGM-20-Am	7.70	7.7	7.7	1	5/4/1998	5/4/1998
1224	OGM-20-Dm4.6	7.70	7.7	7.7	1	5/28/1998	5/28/1998
1224	OGM-20-Fm	7.70	7.7	7.7	1	6/9/1998	6/9/1998
1224	OGM-20m6.4	7.70	7.7	7.7	1	6/9/1998	6/9/1998
1225	OGM-20-Hm	7.70	7.7	7.7	1	5/27/1998	5/27/1998
1225	OGM-20-I-1m1.	7.70	7.7	7.7	1	5/28/1998	5/28/1998
1225	OGM-20-K-1m	7.67	7.7	7.7	1	5/7/1998	5/7/1998
1225	OGM-20-Km0.1	7.68	7.7	7.7	1	5/4/1998	5/4/1998
1225	OGM-20-Lm	7.68	7.7	7.7	1	5/6/1998	5/6/1998
1225	OGM-20-M-1m	7.65	7.7	7.7	1	5/6/1998	5/6/1998
1225	OGM-20-Mm1.8	7.67	7.7	7.7	1	5/27/1998	5/27/1998
1226	OGM-20-R-2m	7.65	7.7	7.7	1	5/27/1998	5/27/1998
1227	OGM-20m21.2	7.70	7.7	7.7	1	5/29/1998	5/29/1998
1227	OGM-20-Tm3.5	7.65	7.7	7.7	1	5/28/1998	5/28/1998
1227	OGM-20-Vm	7.65	7.7	7.7	1	5/7/1998	5/7/1998
1229	OGM-22-Am0.7	7.63	7.6	7.6	1	5/4/1998	5/4/1998
1231	OGM-25-Am	7.62	7.6	7.6	1	5/6/1998	5/6/1998
1231	OGM-25-B-1m	7.62	7.6	7.6	1	5/6/1998	5/6/1998
1231	OGM-25-Bm2.3	7.62	7.6	7.6	1	5/28/1998	5/28/1998
1232	OGM-25-H-1m	7.62	7.6	7.6	1	5/26/1998	5/26/1998
1233	OGM-25-I-4m	7.60	7.6	7.6	1	5/26/1998	5/26/1998
1233	OGM-25-Im	7.61	7.6	7.6	1	5/26/1998	5/26/1998
1233	OGM-25-Im3	7.60	7.6	7.6	1	5/26/1998	5/26/1998
1234	OG-2m47	8.38	8.4	8.4	1	5/28/1998	5/28/1998
1236	OG-2m48.7	8.36	8.4	8.4	1	5/28/1998	5/28/1998
1239	OGM-31m	7.60	7.6	7.6	1	5/21/1998	5/21/1998
1239	OGM-33-Bm	7.60	7.6	7.6	1	5/21/1998	5/21/1998
1239	OGM-33-Cm	7.60	7.6	7.6	1	5/28/1998	5/28/1998
1242	OGM-35-Em	7.60	7.6	7.6	1	5/28/1998	5/28/1998
1242	OGM-35m1.8	7.60	7.6	7.6	1	5/21/1998	5/21/1998
1242	OGM-35m4.1	7.60	7.6	7.6	1	5/19/1998	5/19/1998
1244	100	6.80	6.5	7.7	10	10/4/2002	7/16/2003
1244	OGM-39-Gm	7.57	7.6	7.6	1	5/27/1998	5/27/1998
1244	OGM-39m	7.60	7.6	7.6	1	5/27/1998	5/27/1998
1244	OGM-39m10.2	7.58	7.6	7.6	1	5/27/1998	5/27/1998
1245	97	7.93	7.2	8.5	10	10/4/2002	7/16/2003
1246	OGM-40.3m0	7.56	7.6	7.6	1	5/19/1998	5/19/1998
1246	OGM-40.3m2.2	7.55	7.6	7.6	1	5/19/1998	5/19/1998
1247	OGM-43m	7.54	7.5	7.5	1	5/18/1998	5/18/1998
1247	OGM-44m0.2	7.53	7.5	7.5	1	5/19/1998	5/19/1998
1248	OG-2m77.2	8.33	8.3	8.3	1	5/18/1998	5/18/1998
1255	OGM-50m	7.53	7.5	7.5	1	5/18/1998	5/18/1998

Table 3i. Water quality data for fecal coliforms

SWS	WQ Station	Avg (#/100 mL)	Min (#/100 mL)	Max (#/100 mL)	Count	Start Date	End Date
1200	OG-2m3.6	610.0	610.0	610.0	1	5/29/1998	5/29/1998
1200	OGM-1.5m	12000.0	12000.0	12000.0	1	5/18/1998	5/18/1998
1201	OGM-3m0.9	1000.0	1000.0	1000.0	1	5/26/1998	5/26/1998
1203	OGM-4m0.2	1000.0	1000.0	1000.0	1	5/29/1998	5/29/1998
1203	OGM-4m2	610.0	610.0	610.0	1	5/26/1998	5/26/1998
1209	OGM-7-B-1m	460.0	460.0	460.0	1	5/3/1998	5/3/1998
1209	OGM-7-Cm0.4	2.0	2.0	2.0	1	6/4/2002	6/4/2002
1209	OGM-7m0.4	540.0	540.0	540.0	1	5/26/1998	5/26/1998
1211	OGM-8-Bm	84.0	84.0	84.0	1	5/3/1998	5/3/1998
1211	OGM-8-Cm	2800.0	2800.0	2800.0	1	5/26/1998	5/26/1998
1211	OGM-8m4	520.0	520.0	520.0	1	5/3/1998	5/3/1998
1212	OG-2m18.8	150.0	150.0	150.0	1	5/14/1998	5/14/1998
1213	OGM-12m	150.0	150.0	150.0	1	5/15/1998	5/15/1998
1214	OGM-13m	1400.0	1400.0	1400.0	1	5/15/1998	5/15/1998
1215	OGM-14m7.2	880.0	880.0	880.0	1	5/29/1998	5/29/1998
1216	OG-2m25.5	200.0	200.0	200.0	1	5/14/1998	5/14/1998
1218	OGM-16-Am	140.0	140.0	140.0	1	5/4/1998	5/4/1998
1220	OGM-19m	130.0	130.0	130.0	1	5/4/1998	5/4/1998
1223	OGM-20-Am	220.0	220.0	220.0	1	5/4/1998	5/4/1998
1224	OGM-20-Dm4.6	2240.0	380.0	4100.0	2	5/21/1998	5/28/1998
1224	OGM-20-Fm	940.0	940.0	940.0	1	6/9/1998	6/9/1998
1224	OGM-20m6.4	160.0	160.0	160.0	1	6/9/1998	6/9/1998
1225	OGM-20-Hm	909.0	909.0	909.0	1	5/27/1998	5/27/1998
1225	OGM-20-I-1m1.	1100.0	1100.0	1100.0	1	5/28/1998	5/28/1998
1225	OGM-20-K-1m	1200.0	1200.0	1200.0	1	5/7/1998	5/7/1998
1225	OGM-20-Km0.1	340.0	340.0	340.0	1	5/4/1998	5/4/1998
1225	OGM-20-Lm	360.0	360.0	360.0	1	5/6/1998	5/6/1998
1225	OGM-20-M-1m	300.0	300.0	300.0	1	5/6/1998	5/6/1998
1225	OGM-20-Mm1.8	550.0	550.0	550.0	1	5/27/1998	5/27/1998
1226	OGM-20-R-2m	171.0	171.0	171.0	1	5/27/1998	5/27/1998
1227	OGM-20m21.2	1100.0	1100.0	1100.0	1	5/29/1998	5/29/1998
1227	OGM-20-Tm3.5	6300.0	6300.0	6300.0	1	5/28/1998	5/28/1998
1227	OGM-20-Vm	220.0	220.0	220.0	1	5/7/1998	5/7/1998
1229	OGM-22-Am0.7	350.0	350.0	350.0	1	5/4/1998	5/4/1998
1231	OGM-25-Am	520.0	520.0	520.0	1	5/6/1998	5/6/1998
1231	OGM-25-B-1m	160.0	160.0	160.0	1	5/6/1998	5/6/1998
1231	OGM-25-Bm2.3	3800.0	3800.0	3800.0	1	5/28/1998	5/28/1998
1232	OGM-25-H-1m	8000.0	8000.0	8000.0	1	5/26/1998	5/26/1998
1233	OGM-25-I-4m	3500.0	3500.0	3500.0	1	5/26/1998	5/26/1998
1233	OGM-25-Im	3200.0	3200.0	3200.0	1	5/26/1998	5/26/1998
1233	OGM-25-Im3	550.0	550.0	550.0	1	5/26/1998	5/26/1998
1234	OG-2m47	10000.0	10000.0	10000.0	1	5/28/1998	5/28/1998
1236	OG-2m48.7	600.0	600.0	600.0	1	5/28/1998	5/28/1998
1239	OGM-31m	1500.0	1500.0	1500.0	1	5/21/1998	5/21/1998
1239	OGM-33-Bm	610.0	610.0	610.0	1	5/21/1998	5/21/1998
1239	OGM-33-Cm	400.0	400.0	400.0	1	5/28/1998	5/28/1998
1242	OGM-35-Em	3800.0	3800.0	3800.0	1	5/28/1998	5/28/1998
1242	OGM-35m4.1	66.0	66.0	66.0	1	5/19/1998	5/19/1998
1244	OGM-39-Gm	5000.0	5000.0	5000.0	1	5/27/1998	5/27/1998
1244	OGM-39m	5200.0	5200.0	5200.0	1	5/27/1998	5/27/1998
1244	OGM-39m10.2	2900.0	2900.0	2900.0	1	5/27/1998	5/27/1998
1246	OGM-40.3m0	930.0	930.0	930.0	1	5/19/1998	5/19/1998
1246	OGM-40.3m2.2	430.00	430	430	1	05/19/98	05/19/98
1247	OGM-43m	1200.00	1200	1200	1	05/18/98	05/18/98
1247	OGM-44m0.2	55.00	55	55	1	05/19/98	05/19/98
1248	OG-2m77.2	50.00	50	50	1	05/18/98	05/18/98
1255	OGM-50m	72.00	72	72	1	05/18/98	05/18/98

Table 4a. Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1247	WV1016776	0	0	3.20	0
1247	WV1017225	100	100	3.20	0
1250	WV0099392	1,294	621	1.54	52
1250	WV1017225	161	77	1.54	52
1251	WV0099392	4,073	1,955	1.54	52
1251	WV1016695	709	340	1.54	52
1252	WV0099392	1,355	650	1.54	52
1252	WV1016776	7,629	3,662	1.54	52
1253	WV0099392	2,710	2,710	3.20	0
1254	WV0099392	5,419	2,601	1.54	52
1254	WV1016776	15,259	7,324	1.54	52
1255	WV0099392	8,129	3,902	1.54	52
1255	WV1016776	30,518	14,649	1.54	52
1212*	WVG640009	98.05	98.05	3.70	0

* Denotes actual Office of Water Resources Permit

Table 4b. Manganese baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1247	WV1016776	0	0	2.00	0
1247	WV1017225	60	60	2.00	0
1250	WV0099392	480	480	2.00	0
1250	WV1017225	60	60	2.00	0
1251	WV0099392	1,440	1,440	2.00	0
1251	WV1016695	251	251	2.00	0
1252	WV0099392	480	480	2.00	0
1252	WV1016776	2,703	2,703	2.00	0
1253	WV0099392	960	960	2.00	0
1254	WV0099392	1,920	1,920	2.00	0
1254	WV1016776	5,405	5,405	2.00	0
1255	WV0099392	2,880	2,880	2.00	0
1255	WV1016776	10,811	10,811	2.00	0

Table 4c. Aluminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1247	WV1016776	0	0	3.27	0
1247	WV1017225	102	102	3.27	0
1250	WV0099392	1,261	1,261	3.27	0
1250	WV1017225	156	156	3.27	0
1251	WV0099392	3,951	3,951	3.27	0
1251	WV1016695	688	688	3.27	0
1252	WV0099392	1,315	1,315	3.27	0
1252	WV1016776	7,407	7,407	3.27	0
1253	WV0099392	2,631	2,631	3.27	0
1254	WV0099392	5,261	5,261	3.27	0
1254	WV1016776	14,815	14,815	3.27	0
1255	WV0099392	7,892	7,892	3.27	0
1255	WV1016776	29,629	29,629	3.27	0

Table 5a. Iron baseline conditions and allocations (LAs) for nonpoint sources * Othen Nonpoint Sources include: Forest, Wetland, Agriculture, Pasture, and Urban)

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1200	0	0	0	0	331	331	3	3	0	0	78	78	644	644	
1201	0	0	0	0	48	48	0	0	0	0	0	0	105	105	
1202	0	0	0	0	15	15	0	0	0	0	6	6	18	18	
1203	0	0	0	0	140	140	0	0	0	0	90	90	349	349	
1204	0	0	0	0	10	10	0	0	0	0	29	29	16	16	
1205	0	0	0	0	16	16	0	0	0	0	5	5	40	40	
1206	0	0	0	0	0	0	0	0	0	0	6	6	5	5	
1207	0	0	0	0	162	162	15	15	21	21	165	165	412	412	
1208	0	0	0	0	88	88	0	0	0	0	7	7	152	152	
1209	0	0	0	0	96	96	0	0	0	0	22	22	303	303	
1210	0	0	0	0	1	1	0	0	0	0	0	0	3	3	
1211	0	0	0	0	99	99	0	0	88	88	2	2	388	388	
1212	0	0	0	0	212	212	6	6	0	0	74	74	407	407	
1213	0	0	0	0	328	328	45	45	86	86	14	14	805	805	
1214	0	0	0	0	71	71	11	11	0	0	0	0	148	148	
1215	0	0	0	0	164	164	39	39	0	0	262	262	429	429	
1216	0	0	0	0	18	18	3	3	0	0	64	64	33	33	
1217	0	0	0	0	15	15	3	3	0	0	15	15	51	51	
1218	0	0	0	0	31	31	15	15	0	0	56	56	127	127	
1219	0	0	0	0	29	29	4	4	0	0	18	18	117	117	
1220	0	0	0	0	30	30	12	12	57	57	79	79	87	87	
1221	0	0	0	0	19	19	1	1	0	0	71	71	45	45	
1222	0	0	0	0	13	13	1	1	0	0	1	1	71	71	
1223	0	0	0	0	34	34	6	6	0	0	22	22	83	83	
1224	0	0	0	0	226	226	46	46	36	36	47	47	795	795	
1225	0	0	0	0	389	389	141	141	0	0	1,682	1,682	1,170	1,170	
1226	0	0	0	0	134	134	128	128	0	0	83	83	221	221	
1227	0	0	0	0	209	209	163	163	0	0	28	28	498	498	
1228	0	0	0	0	28	28	4	4	0	0	939	939	75	75	
1229	0	0	0	0	72	72	16	16	0	0	215	215	206	206	
1230	0	0	0	0	92	92	15	15	26	26	1,343	1,343	271	271	
1231	0	0	0	0	246	246	22	22	57	57	0	0	848	848	
1232	527	53	0	0	518	518	2	2	0	0	16	16	3,878	3,878	x
1233	0	0	0	0	174	174	21	21	27	27	42	42	410	410	
1234	0	0	0	0	115	115	0	0	0	0	110	110	177	177	
1235	0	0	0	0	28	28	1	1	0	0	76	76	93	93	

Table 5a. (Continued) Iron baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1236	0	0	0	0	39	39	0	0	63	63	7	7	62	62	
1237	0	0	0	0	30	30	0	0	47	47	0	0	84	84	
1238	0	0	0	0	39	39	6	6	140	140	0	0	78	78	
1239	0	0	0	0	284	284	34	34	11	11	113	113	469	469	
1240	97	10	0	0	25	25	0	0	50	50	0	0	274	274	x
1241	0	0	0	0	21	21	1	1	0	0	0	0	12	12	
1242	0	0	0	0	164	141	31	27	150	135	3,720	3,162	259	259	x
1243	2,393	2,393	0	0	158	158	4	4	36	36	1	1	1,135	1,135	
1244	0	0	0	0	238	238	112	112	0	0	28	28	522	522	
1245	0	0	0	0	35	35	16	16	38	38	104	104	77	77	
1246	0	0	0	0	51	51	16	16	33	33	7	7	84	84	
1247	4	0	0	0	210	210	98	98	67	67	428	428	395	395	x
1248	0	0	0	0	6	6	1	1	0	0	17	17	16	16	
1249	0	0	0	0	24	24	6	6	0	0	0	0	61	61	
1250	0	0	0	0	6	6	3	3	0	0	0	0	17	17	
1251	0	0	0	0	21	21	7	7	0	0	0	0	33	33	
1252	0	0	0	0	3	3	2	2	0	0	0	0	0	0	
1253	0	0	0	0	25	25	0	0	0	0	3,662	3,662	51	51	
1254	0	0	0	0	13	13	2	2	0	0	0	0	7	7	
1255	0	0	0	0	54	24	33	13	0	0	5,267	2,107	37	37	x
1256	0	0	0	0	6	6	2	2	0	0	215	215	10	10	
1257	0	0	0	0	27	27	9	9	0	0	1,665	1,665	68	68	

Table 5b. Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1200	0	0	0	0	97	97	1	1	0	0	24	24	1,124	1,124	
1201	0	0	0	0	14	14	0	0	0	0	0	0	312	312	
1202	0	0	0	0	4	4	0	0	0	0	2	2	51	51	
1203	0	0	0	0	42	42	0	0	0	0	28	28	1,034	1,034	
1204	0	0	0	0	3	3	0	0	0	0	9	9	25	25	
1205	0	0	0	0	5	5	0	0	0	0	2	2	119	119	
1206	0	0	0	0	0	0	0	0	0	0	2	2	9	9	
1207	0	0	0	0	53	53	5	5	19	19	58	58	1,035	1,035	
1208	0	0	0	0	29	29	0	0	0	0	2	2	324	324	
1209	0	0	0	0	32	32	0	0	0	0	8	8	906	906	
1210	0	0	0	0	0	0	0	0	0	0	0	0	8	8	
1211	0	0	0	0	32	32	0	0	77	77	1	1	1,156	1,156	
1212	0	0	0	0	68	68	2	2	0	0	26	26	830	830	
1213	0	0	0	0	107	107	16	16	77	77	5	5	1,764	1,764	
1214	0	0	0	0	24	24	4	4	0	0	0	0	341	341	
1215	0	0	0	0	55	55	14	14	0	0	92	92	1,247	1,247	
1216	0	0	0	0	6	6	1	1	0	0	23	23	85	85	
1217	0	0	0	0	5	5	1	1	0	0	5	5	156	156	
1218	0	0	0	0	10	10	5	5	0	0	20	20	393	393	
1219	0	0	0	0	10	10	2	2	0	0	6	6	337	337	
1220	0	0	0	0	10	10	4	4	51	51	28	28	265	265	
1221	0	0	0	0	6	6	0	0	0	0	25	25	115	115	
1222	0	0	0	0	4	4	0	0	0	0	0	0	218	218	
1223	0	0	0	0	11	11	2	2	0	0	8	8	266	266	
1224	0	0	0	0	74	74	16	16	32	32	16	16	2,387	2,387	
1225	0	0	0	0	129	129	49	49	0	0	589	589	3,501	3,501	
1226	0	0	0	0	45	45	45	45	0	0	29	29	623	623	
1227	0	0	0	0	70	70	57	57	0	0	10	10	1,505	1,505	
1228	0	0	0	0	9	9	2	2	0	0	329	329	216	216	
1229	0	0	0	0	24	24	5	5	0	0	75	75	637	637	
1230	0	0	0	0	31	31	5	5	23	23	471	471	754	754	
1231	0	0	0	0	81	81	8	8	51	51	0	0	2,428	2,428	
1232	712	712	0	0	68	68	5	5	0	0	40	40	1,735	1,735	

Table 5b. (Continued) Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1233	0	0	0	0	59	59	7	7	24	24	15	15	1,260	1,260	
1234	0	0	0	0	38	38	0	0	0	0	38	38	360	360	
1235	0	0	0	0	9	9	0	0	0	0	27	27	273	273	
1236	0	0	0	0	13	13	0	0	56	56	2	2	170	170	
1237	0	0	0	0	10	10	0	0	41	41	0	0	260	260	
1238	0	0	0	0	13	13	2	2	124	124	0	0	220	220	
1239	0	0	0	0	96	96	12	12	10	10	40	40	1,481	1,481	
1240	163	163	0	0	10	10	1	1	100	100	0	0	157	157	
1241	0	0	0	0	7	7	0	0	0	0	0	0	36	36	
1242	0	0	0	0	56	56	11	11	133	133	1,303	1,303	856	856	
1243	3,086	3,086	0	0	41	41	9	9	72	72	2	2	644	644	
1244	0	0	0	0	80	80	39	39	0	0	10	10	1,707	1,707	
1245	0	0	0	0	12	12	5	5	34	34	37	37	249	249	
1246	0	0	0	0	17	17	5	5	29	29	2	2	281	281	
1247	51	51	0	0	71	71	34	34	59	59	150	150	1,310	1,310	
1248	0	0	0	0	2	2	0	0	0	0	6	6	53	53	
1249	0	0	0	0	8	8	2	2	0	0	0	0	204	204	
1250	0	0	0	0	2	2	1	1	0	0	0	0	57	57	
1251	0	0	0	0	7	7	2	2	0	0	0	0	109	109	
1252	0	0	0	0	1	1	1	1	0	0	0	0	0	0	
1253	0	0	0	0	9	9	0	0	0	0	1,283	1,283	82	82	
1254	0	0	0	0	4	4	1	1	0	0	0	0	15	15	
1255	0	0	0	0	18	18	11	11	0	0	1,845	1,845	125	125	
1256	0	0	0	0	2	2	1	1	0	0	75	75	25	25	
1257	0	0	0	0	9	9	3	3	0	0	583	583	197	197	

Table 5c. Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1200	0	0	0	0	211	211	2	2	0	0	53	53	673	673	
1201	0	0	0	0	31	31	0	0	0	0	0	0	148	148	
1202	0	0	0	0	10	10	0	0	0	0	4	4	26	26	
1203	0	0	0	0	91	91	0	0	0	0	61	61	493	493	
1204	0	0	0	0	6	6	0	0	0	0	19	19	17	17	
1205	0	0	0	0	10	10	0	0	0	0	3	3	56	56	
1206	0	0	0	0	0	0	0	0	0	0	4	4	5	5	
1207	0	0	0	0	104	104	10	10	15	15	113	113	528	528	
1208	0	0	0	0	57	57	0	0	0	0	5	5	192	192	
1209	0	0	0	0	63	63	0	0	0	0	15	15	433	433	
1210	0	0	0	0	1	1	0	0	0	0	0	0	5	5	
1211	0	0	0	0	64	64	0	0	62	62	1	1	554	554	
1212	0	0	0	0	135	135	4	4	0	0	51	51	476	476	
1213	0	0	0	0	210	210	31	31	61	61	9	9	951	951	
1214	0	0	0	0	47	47	8	8	0	0	0	0	180	180	
1215	0	0	0	0	107	107	27	27	0	0	179	179	588	588	
1216	0	0	0	0	12	12	2	2	0	0	44	44	42	42	
1217	0	0	0	0	9	9	2	2	0	0	10	10	71	71	
1218	0	0	0	0	21	21	10	10	0	0	38	38	179	179	
1219	0	0	0	0	19	19	3	3	0	0	12	12	160	160	
1220	0	0	0	0	20	20	8	8	41	41	54	54	124	124	
1221	0	0	0	0	13	13	1	1	0	0	49	49	58	58	
1222	0	0	0	0	8	8	1	1	0	0	1	1	99	99	
1223	0	0	0	0	22	22	4	4	0	0	15	15	119	119	
1224	0	0	0	0	146	146	31	31	25	25	32	32	1,115	1,115	
1225	0	0	0	0	254	254	96	96	0	0	1,148	1,148	1,651	1,651	
1226	0	0	0	0	89	89	87	87	0	0	57	57	300	300	
1227	0	0	0	0	137	137	111	111	0	0	19	19	697	697	
1228	0	0	0	0	19	19	3	3	0	0	641	641	103	103	
1229	0	0	0	0	47	47	11	11	0	0	147	147	295	295	
1230	0	0	0	0	60	60	10	10	18	18	917	917	363	363	
1231	0	0	0	0	158	158	15	15	41	41	0	0	1,157	1,157	
1232	2,246	2,246	0	0	523	523	2	2	0	0	18	18	4,189	4,189	
1233	0	0	0	0	116	116	15	15	19	19	28	28	579	579	

Table 5c. (Continued) Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1234	0	0	0	0	74	74	0	0	0	0	75	75	202	202	
1235	0	0	0	0	18	18	1	1	0	0	52	52	129	129	
1236	0	0	0	0	25	25	0	0	45	45	5	5	81	81	
1237	0	0	0	0	20	20	0	0	33	33	0	0	119	119	
1238	0	0	0	0	26	26	4	4	100	100	0	0	106	106	
1239	0	0	0	0	189	189	23	23	8	8	77	77	671	671	
1240	48	48	0	0	25	25	1	1	55	55	0	0	301	301	
1241	0	0	0	0	14	14	1	1	0	0	0	0	17	17	
1242	0	0	0	0	109	109	21	21	107	107	2,540	2,540	371	371	
1243	11,950	11,950	0	0	161	161	4	4	39	39	1	1	1,247	1,247	
1244	0	0	0	0	157	157	77	77	0	0	19	19	749	749	
1245	0	0	0	0	23	23	11	11	27	27	71	71	111	111	
1246	0	0	0	0	34	34	11	11	23	23	5	5	121	121	
1247	27	27	0	0	140	140	67	67	47	47	292	292	566	566	
1248	0	0	0	0	4	4	1	1	0	0	12	12	23	23	
1249	0	0	0	0	16	16	4	4	0	0	0	0	87	87	
1250	0	0	0	0	4	4	2	2	0	0	0	0	24	24	
1251	0	0	0	0	14	14	5	5	0	0	0	0	47	47	
1252	0	0	0	0	2	2	2	2	0	0	0	0	0	0	
1253	0	0	0	0	17	17	0	0	0	0	2,501	2,501	53	53	
1254	0	0	0	0	9	9	2	2	0	0	0	0	10	10	
1255	0	0	0	0	35	35	22	22	0	0	3,597	3,597	53	53	
1256	0	0	0	0	4	4	2	2	0	0	147	147	13	13	
1257	0	0	0	0	18	18	6	6	0	0	1,137	1,137	94	94	

Table 6. Fecal Coliform baseline and allocations

SWS	Stream	Agriculture		Natural Sources		Failing Septics		Residential	
		Baseline Load (counts)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)
1200	Mud River	5.11E+14	1.28E+14	7.09E+13	7.09E+13	1.74E+15	0.00E+00	3.18E+14	7.95E+13

Appendix A-3
Region 3

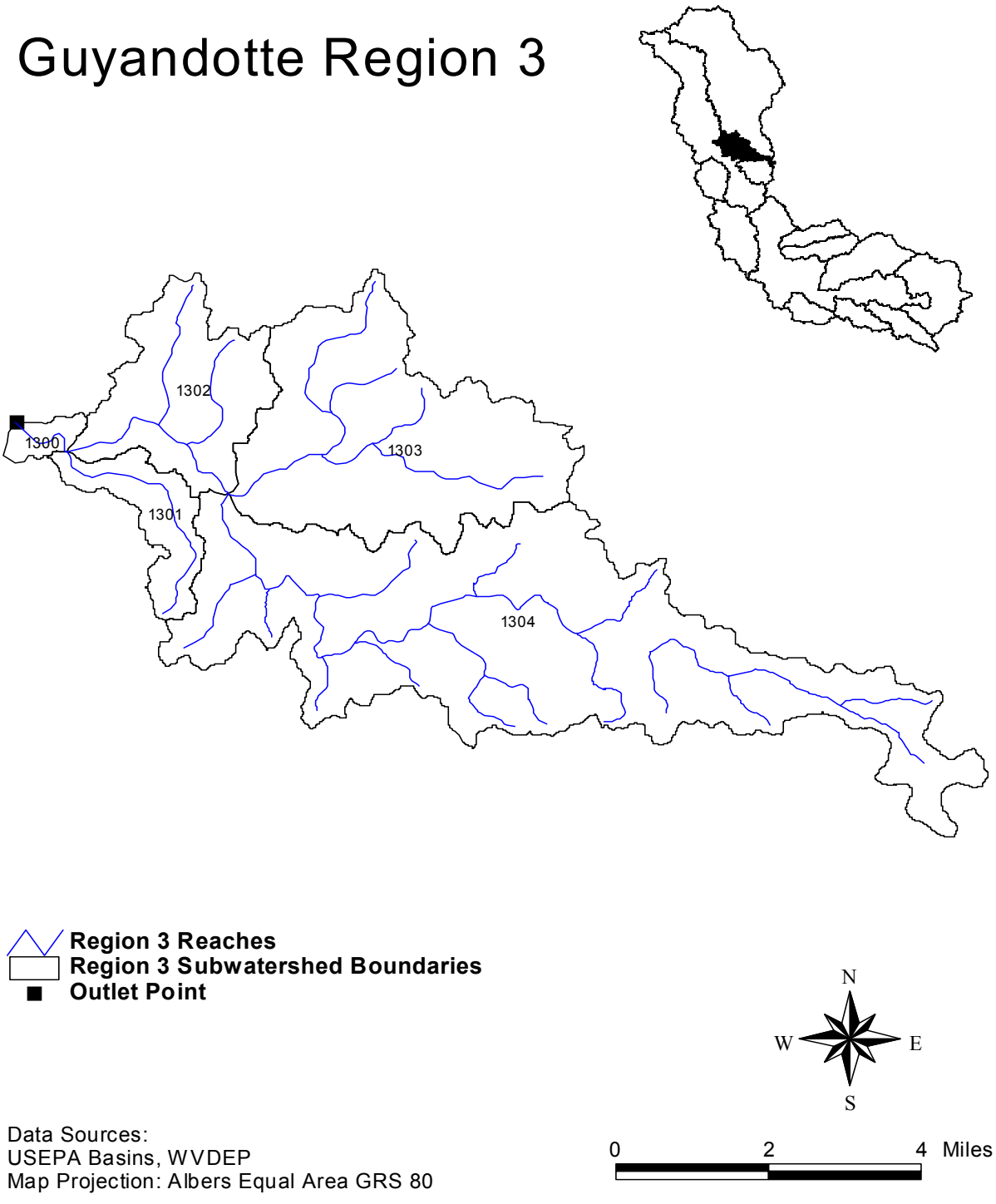


Figure 1. Region 3 - Guyandotte Watershed

Table 1. Impaired waterbodies in Region 3

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Affected Use
Not Applicable to this Region					

T = Aquatic Life Trout Waters

W = Warm Water Fishery

Table 2. Locations of abandoned mines (seep, deep mine, and/or leachate)

SWS
**Not
Applicable
to
this
Region**

Table 3a. Water quality data for dissolved aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1300	87	76.38	21	280	8	09/24/02	07/16/03

Table 3b. Water quality data for total aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1300	87	164.22	34	500	9	09/24/02	07/16/03
1300	OG-38m0.8	141.00	141	141	1	05/19/98	05/19/98
1301	OG-38-Am	68.60	68.6	68.6	1	05/19/98	05/19/98
1303	OG-38-Dm3.9	570.00	570	570	1	05/18/98	05/18/98
1303	OG-38-Dm4.5	810.00	810	810	1	05/18/98	05/18/98
1304	OG-38m11.6	70.10	70.1	70.1	1	05/19/98	05/19/98

Table 3c. Water quality data for dissolved iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1300	87	195.00	90	440	8	09/24/02	07/16/03

Table 3d. Water quality data for total iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1300	87	391.00	260	760	10	09/24/02	07/16/03
1300	OG-38m0.8	438.00	438	438	1	05/19/98	05/19/98
1301	OG-38-Am	211.00	211	211	1	05/19/98	05/19/98
1303	OG-38-Dm3.9	140.00	140	140	1	05/18/98	05/18/98
1303	OG-38-Dm4.5	140.00	140	140	1	05/18/98	05/18/98
1304	OG-38m11.6	184.00	184	184	1	05/19/98	05/19/98

Table 3e. Water quality data for dissolved manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1300	87	90.00	30	170.0	4	09/24/02	07/16/03

Table 3f. Water quality data for total manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1300	87	86.25	30.00	330.0	8	9/24/2002	7/16/2003
1300	OG-38m0.8	33.80	33.80	33.8	1	5/19/1998	5/19/1998
1301	OG-38-Am	28.80	28.80	28.8	1	5/19/1998	5/19/1998
1303	OG-38-Dm3.9	20.00	20.00	20.0	1	5/18/1998	5/18/1998
1303	OG-38-Dm4.5	20.00	20.00	20.0	1	5/18/1998	5/18/1998
1304	OG-38m11.6	19.90	19.90	19.9	1	5/19/1998	5/19/1998

Table 3g. Water quality data for total selenium

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
No available data							

Table 3h. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1300	87	6.83	6.4	8.0	10	9/24/2002	7/16/2003
1300	OG-38m0.8	8.14	8.1	8.1	1	5/19/1998	5/19/1998
1301	OG-38-Am	8.12	8.1	8.1	1	5/19/1998	5/19/1998
1303	OG-38-Dm3.9	8.12	8.1	8.1	1	5/18/1998	5/18/1998
1303	OG-38-Dm4.5	8.11	8.1	8.1	1	5/18/1998	5/18/1998
1304	OG-38-Gm	8.10	8.1	8.1	1	5/19/1998	5/19/1998
1304	OG-38-K.7m	8.10	8.1	8.1	1	5/19/1998	5/19/1998
1304	OG-38-K-5m	8.09	8.1	8.1	1	5/19/1998	5/19/1998
1304	OG-38-Km	8.10	8.1	8.1	1	5/19/1998	5/19/1998
1304	OG-38m11.6	8.13	8.1	8.1	1	5/19/1998	5/19/1998

Table 3i. Water quality data for fecal coliforms

SWS	WQ Station	Avg (#/100 mL)	Min (#/100 mL)	Max (#/100 mL)	Count	Start Date	End Date
1300	OG-38m0.8	110.00	110.0	110.0	1	5/19/1998	5/19/1998
1301	OG-38-Am	83.00	83.0	83.0	1	5/19/1998	5/19/1998
1303	OG-38-Dm3.9	44.00	44.0	44.0	1	5/18/1998	5/18/1998
1303	OG-38-Dm4.5	33.00	33.0	33.0	1	5/18/1998	5/18/1998
1304	OG-38-Gm	50.00	50.0	50.0	1	5/19/1998	5/19/1998
1304	OG-38-K.7m	500.00	500.0	500.0	1	5/19/1998	5/19/1998
1304	OG-38-K-5m	160.00	160.0	160.0	1	5/19/1998	5/19/1998
1304	OG-38-Km	800.00	800.0	800.0	1	5/19/1998	5/19/1998
1304	OG-38m11.6	160.00	160.0	160.0	1	5/19/1998	5/19/1998

Table 4a. Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction

Table 4b. Manganese baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction

Table 4c. Aluminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction

* No mining permits exist in this region

Table 5a. Iron baseline conditions and allocations (LAs) for nonpoint sources * Othen Nonpoint Sources include: Forest, Wetland, Agriculture, Pasture, and Urban)

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1300	0	0	0	0	13	13	1	1	0	0	20	20	14	14	
1301	0	0	0	0	42	42	6	6	0	0	4	4	59	59	
1302	0	0	0	0	65	65	24	24	0	0	488	488	142	142	
1303	0	0	0	0	99	99	64	64	14	14	990	990	315	315	
1304	0	0	0	0	181	181	98	98	104	104	3,789	3,789	553	553	

Table 5b. Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1300	0	0	0	0	4	4	0	0	0	0	7	7	49	49	
1301	0	0	0	0	14	14	2	2	0	0	2	2	199	199	
1302	0	0	0	0	22	22	8	8	0	0	171	171	474	474	
1303	0	0	0	0	33	33	22	22	12	12	347	347	1,048	1,048	
1304	0	0	0	0	64	64	37	37	102	102	1,429	1,429	1,840	1,840	

Table 5c. Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1300	0	0	0	0	8	8	1	1	0	0	13	13	21	21	
1301	0	0	0	0	28	28	4	4	0	0	3	3	85	85	
1302	0	0	0	0	43	43	16	16	0	0	333	333	203	203	
1303	0	0	0	0	66	66	44	44	10	10	676	676	452	452	
1304	0	0	0	0	119	119	68	68	76	76	2,613	2,613	819	819	

Table 6. Fecal Coliform baseline and allocations

SWS	Stream	Agriculture		Natural Sources		Failing Septics		Residential	
		Baseline Load (counts)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)
1300	Big Ugly Creek	5.64E+12	3.95E+12	8.23E+12	8.23E+12	1.25E+14	0.00E+00	0.00E+00	0.00E+00

Appendix A-4
Region 4

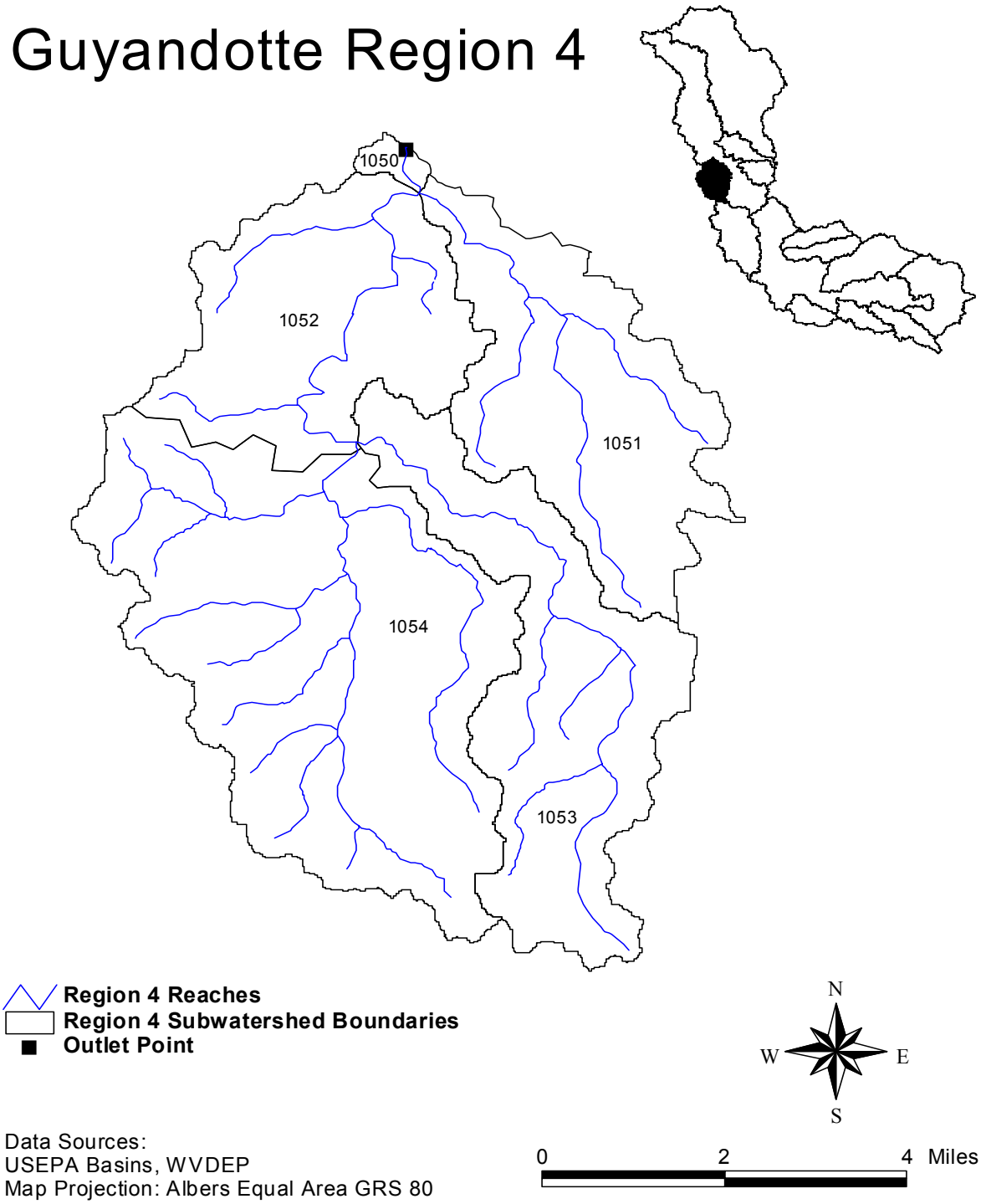


Figure 1. Region 4 - Guyandotte Watershed

Table 1. Impaired waterbodies in Region 4

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Affected Use
Not Applicable to this Region					

T = Aquatic Life Trout Waters

W = Warm Water Fishery

Table 2. Locations of abandoned mines (seep, deep mine, and/or leachate)

SWS
1054

Table 3a. Water quality data for dissolved aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	1, WVO-4	16.90	15	27	10	09/04/03	10/21/03
1002	OG-000-002.8	48.33	36	69	3	08/02/00	08/08/02
1003	2, WVO-4	18.70	15	47	10	09/04/03	10/21/03
1018	OG-17m0.8	50.00	50	50	1	06/04/02	06/04/02
1029	OG-29m2.4	50.00	50	50	1	06/04/02	06/04/02
1033	OG-32-Em0.2	40.00	40	40	1	06/03/02	06/03/02
1033	OG-32-Fm	100.00	100	100	3	07/10/00	04/05/01
1033	OG-32-Fm0.2	50.00	50	50	1	05/30/02	05/30/02
1062	69	177.44	27	600	9	09/21/02	07/16/03
1065	OG-000-073.1	77.60	52	110	5	08/02/00	08/15/02
1066	3, WVOG-2	23.80	15	47	10	09/04/03	10/21/03

Table 3b. Water quality data for total aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
Region 4	1, WVO-4	605.00	135	1700	10	09/04/03	10/21/03
1002	550639	2611.60	50	19000	65	01/10/90	06/06/95
1002	OG-000-002.8	1788.82	71	8900	11	11/29/99	08/08/02
1002	WA96-G01	827.50	50	2400	12	03/21/96	11/24/98
1003	2, WVO-4	353.60	81	1440	10	09/04/03	10/21/03
1008	OG-6m0.1	354.00	354	354	1	05/18/98	05/18/98
1012	OG-9-Am0.3	84.90	84.9	84.9	1	05/21/98	05/21/98
1017	OG-14-Dm0.4	237.00	237	237	1	05/12/98	05/12/98
1027	OG-27-Hm1.8	248.00	248	248	1	05/27/98	05/27/98
1029	OG-29m2.4	60.00	60	60	1	06/04/02	06/04/02
1032	OG-30m1.2	139.00	139	139	1	05/13/98	05/13/98
1033	OG-32-Em0.2	120.00	120	120	1	06/03/02	06/03/02
1033	OG-32-Fm	122.50	50	240	4	05/27/98	04/05/01
1033	OG-32-Fm0.2	70.00	70	70	1	05/30/02	05/30/02
1041	OG-34-E-1m0.8	116.00	116	116	1	05/11/98	05/11/98
1048	OG-42-Cm0.2	66.70	66.7	66.7	1	05/11/98	05/11/98
1062	69	489.00	30	2400	10	09/21/02	07/16/03
1062	OG-51-G.5m	440.00	440	440	1	05/13/98	05/13/98
1063	OG-51.5m	1560.00	1560	1560	1	05/13/98	05/13/98
1064	OG-000-070.0	239.00	239	239	1	05/20/98	05/20/98
1065	OG-000-073.1	534.80	46	2000	15	02/09/99	08/15/02
1065	WA96-G02	590.68	56.5	1570	11	05/31/96	11/24/98
1066	3, WVOG-2	1147.70	132	4480	10	09/04/03	10/21/03
1400	OG-48m	903.00	903	903	1	05/06/98	05/06/98
1600	OG-53m	4650.00	4650	4650	1	05/13/98	05/13/98
1700	OG-61m	821.00	821	821	1	05/13/98	05/13/98

Table 3c. Water quality data for dissolved iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	1, WVO-4	32.30	15	59	10	09/04/03	10/21/03
1000	OG-000.5-0002	28.00	28	28	1	03/22/00	03/22/00
1000	OG-000.5-0004	60.00	28	92	2	03/24/00	03/29/00
1000	OG-000.5-0005	20.00	20	20	1	03/29/00	03/29/00
1000	OG-000.5-0006	230.00	230	230	1	03/29/00	03/29/00
1002	OG-000-002.8	50.67	20	79	9	11/29/99	08/08/02
1003	2, WVO-4	27.80	15	86	10	09/04/03	10/21/03
1018	OG-17m0.8	120.00	120	120	1	06/04/02	06/04/02
1029	OG-29m2.4	20	20	20	1	04-Jun-02	04-Jun-02
1033	OG-32-Em0.2	40	40	40	1	03-Jun-02	03-Jun-02
1033	OG-32-Fm	20.33	20	21	3	10-Jul-00	05-Apr-01
1033	OG-32-Fm0.2	20	20	20	1	30-May-02	30-May-02
1062	69	370	60	1650	9	21-Sep-02	16-Jul-03
1065	OG-000-073.1	153.83	32	477	6	16-May-00	28-Nov-01
1066	3, WVOG-2	121.2	25	261	10	04-Sep-03	21-Oct-03

Table 3d. Water quality data for total iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	1, WVO-4	997.70	367	2760	10	09/04/03	10/21/03
1000	OG-000.5-0001	138.50	77	200	2	03/22/00	03/29/00
1000	OG-000.5-0002	570.00	570	570	1	03/22/00	03/22/00
1000	OG-000.5-0003	295.00	200	390	2	03/24/00	03/29/00
1000	OG-000.5-0004	1395.00	490	2300	2	03/24/00	03/29/00
1000	OG-000.5-0005	810.00	810	810	1	03/29/00	03/29/00
1000	OG-000.5-0006	3400.00	3400	3400	1	03/29/00	03/29/00
1000	OG-000.5-0007	1195.00	390	2000	2	03/24/00	03/29/00
1002	550639	2197.72	25	14000	65	01/10/90	06/06/95
1002	OG-000-002.8	2119.27	53	12000	15	02/09/99	08/08/02
1002	WA96-G01	1396.67	319	4000	12	03/21/96	11/24/98
1003	2, WVO-4	660.10	281	2320	10	09/04/03	10/21/03
1008	OG-6m0.1	1030.00	1030	1030	1	05/18/98	05/18/98
1012	OG-9-Am0.3	174.00	174	174	1	05/21/98	05/21/98
1017	OG-14-Dm0.4	527.00	527	527	1	05/12/98	05/12/98
1018	OG-17m0.8	1090.00	1090	1090	1	06/04/02	06/04/02
1027	OG-27-Hm1.8	540.00	540	540	1	05/27/98	05/27/98
1029	OG-29m2.4	110.00	110	110	1	06/04/02	06/04/02
1032	OG-30m1.2	260.00	260	260	1	05/13/98	05/13/98
1033	OG-32-Em0.2	170.00	170	170	1	06/03/02	06/03/02
1033	OG-32-Fm	81.25	20	140	4	05/27/98	04/05/01
1033	OG-32-Fm0.2	80.00	80	80	1	05/30/02	05/30/02
1041	OG-34-E-1m0.8	192.00	192	192	1	05/11/98	05/11/98
1048	OG-42-Cm0.2	252.00	252	252	1	05/11/98	05/11/98
1062	69	1271.00	260	5240	10	09/21/02	07/16/03
1062	OG-51-G.5m	957.00	957	957	1	05/13/98	05/13/98
1063	OG-51.5m	681.00	681	681	1	05/13/98	05/13/98
1064	OG-000-070.0	535.00	535	535	1	05/20/98	05/20/98
1065	OG-000-073.1	777.14	247	1960	14	02/09/99	08/15/02

Table 3d. (Continued) Water quality data for total iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1065	WA96-G02	923.00	250	3130	11	05/31/96	11/24/98
1066	3, WVOG-2	1806.50	804	3640	10	09/04/03	10/21/03
1400	OG-48m	920.00	920	920	1	05/06/98	05/06/98
1600	OG-53m	636.00	636	636	1	05/13/98	05/13/98
1700	OG-61m	1210.00	1210	1210	1	05/13/98	05/13/98

Table 3e. Water quality data for dissolved manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	OG-000.5-0001	55.00	55	55.0	1	03/29/00	03/29/00
1000	OG-000.5-0002	130.00	130	130.0	1	03/22/00	03/22/00
1000	OG-000.5-0004	1720.00	240	3200.0	2	03/24/00	03/29/00
1000	OG-000.5-0005	22.00	22	22.0	1	03/29/00	03/29/00
1000	OG-000.5-0006	640.00	640	640.0	1	03/29/00	03/29/00
1000	OG-000.5-0007	1925.00	350	3500.0	2	03/24/00	03/29/00
1002	OG-000-002.8	28.00	28	28.0	1	11/29/99	11/29/99
1062	69	119.00	60	180.0	10	09/21/02	07/16/03

Table 3f. Water quality data for total manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	OG-000.5-0001	41.5	24.00	59.0	2.0	3/22/2000	3/29/2000
1000	OG-000.5-0002	150.0	150.00	150.0	1.0	3/22/2000	3/22/2000
1000	OG-000.5-0004	1775.0	250.00	3300.0	2.0	3/24/2000	3/29/2000
1000	OG-000.5-0005	51.0	51.00	51.0	1.0	3/29/2000	3/29/2000
1000	OG-000.5-0006	650.0	650.00	650.0	1.0	3/29/2000	3/29/2000
1000	OG-000.5-0007	1930.0	360.00	3500.0	2.0	3/24/2000	3/29/2000
1002	550639	117.0	5.00	750.0	65.0	1/10/1990	6/6/1995
1002	OG-000-002.8	815.8	45.00	10600.0	15.0	2/9/1999	8/8/2002
1002	WA96-G01	118.6	38.00	286.0	12.0	3/21/1996	11/24/1998
1008	OG-6m0.1	531.0	531.00	531.0	1.0	5/18/1998	5/18/1998
1012	OG-9-Am0.3	51.2	51.20	51.2	1.0	5/21/1998	5/21/1998
1017	OG-14-Dm0.4	191.0	191.00	191.0	1.0	5/12/1998	5/12/1998
1018	OG-17m0.8	330.0	330.00	330.0	1.0	6/4/2002	6/4/2002
1027	OG-27-Hm1.8	34.3	34.30	34.3	1.0	5/27/1998	5/27/1998
1029	OG-29m2.4	20.0	20.00	20.0	1.0	6/4/2002	6/4/2002
1032	OG-30m1.2	26.8	26.80	26.8	1.0	5/13/1998	5/13/1998
1033	OG-32-Em0.2	20.0	20.00	20.0	1.0	6/3/2002	6/3/2002
1033	OG-32-Fm	17.5	10.00	20.0	4.0	5/27/1998	4/5/2001
1033	OG-32-Fm0.2	20.0	20.00	20.0	1.0	5/30/2002	5/30/2002
1041	OG-34-E-1m0.8	10.0	10.00	10.0	1.0	5/11/1998	5/11/1998
1048	OG-42-Cm0.2	49.3	49.30	49.3	1.0	5/11/1998	5/11/1998
1062	69	194.0	80.00	440.0	10.0	9/21/2002	7/16/2003
1062	OG-51-G.5m	258.0	258.00	258.0	1.0	5/13/1998	5/13/1998
1063	OG-51.5m	611.0	611.00	611.0	1.0	5/13/1998	5/13/1998
1064	OG-000-070.0	79.2	79.20	79.2	1.0	5/20/1998	5/20/1998
1065	OG-000-073.1	979.6	39.00	11600.0	15.0	2/9/1999	8/15/2002

Table 3f. (Continued) Water quality data for total manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1065	WA96-G02	90.2	54.70	152.0	11.0	5/31/1996	11/24/1998
1400	OG-48m	174.0	174.00	174.0	1.0	5/6/1998	5/6/1998
1600	OG-53m	726.0	726.00	726.0	1.0	5/13/1998	5/13/1998
1700	OG-61m	375.0	375.00	375.0	1.0	5/13/1998	5/13/1998

Table 3g. Water quality data for total selenium

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	1, WVO-4	2.8	1.0	3.0	10.0	9/4/2003	10/21/2003
1003	2, WVO-4	2.8	1.0	3.0	10.0	9/4/2003	10/21/2003
1018	OG-17m0.8	5.0	5.0	5.0	1.0	6/4/2002	6/4/2002
1029	OG-29m2.4	5.0	5.0	5.0	1.0	6/4/2002	6/4/2002
1033	OG-32-Em0.2	5.0	5.0	5.0	1.0	6/3/2002	6/3/2002
1033	OG-32-Fm0.2	5.0	5.0	5.0	1.0	5/30/2002	5/30/2002
1066	3, WVOG-2	2.8	1.0	3.0	10.0	9/4/2003	10/21/2003

Table 3h. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	OG-000.5-0001	8.1	7.2	8.6	3.0	3/22/2000	5/24/2000
1000	OG-000.5-0002	8.2	8.2	8.2	1.0	3/22/2000	3/22/2000
1000	OG-000.5-0003	8.5	8.4	8.6	2.0	3/24/2000	3/29/2000
1000	OG-000.5-0004	8.0	8.0	8.0	2.0	3/24/2000	3/29/2000
1000	OG-000.5-0005	8.3	8.3	8.3	1.0	3/29/2000	3/29/2000
1000	OG-000.5-0006	7.7	7.7	7.7	1.0	3/29/2000	3/29/2000
1000	OG-000.5-0007	8.1	8.1	8.1	1.0	3/29/2000	3/29/2000
1002	550639	7.3	6.6	8.0	64.0	1/10/1990	6/6/1995
1002	OG-000-002.8	7.3	6.6	7.9	12.0	2/9/1999	8/8/2002
1002	WA96-G01	7.5	7.1	8.2	8.0	3/21/1996	11/24/1998
1004	OG-3-0.5Am	8.3	8.3	8.3	1.0	5/18/1998	5/18/1998
1004	OG-3m	8.3	8.3	8.3	1.0	5/18/1998	5/18/1998
1008	OG-6m0.1	7.8	7.8	7.8	1.0	5/18/1998	5/18/1998
1012	OG-9-Am0.3	7.8	7.8	7.8	1.0	5/21/1998	5/21/1998
1014	OG-10-Am	8.7	8.7	8.7	1.0	5/21/1998	5/21/1998
1014	OG-10m	8.7	8.7	8.7	1.0	5/21/1998	5/21/1998
1015	OG-11m	8.5	8.5	8.5	1.0	5/12/1998	5/12/1998
1017	OG-14-Dm0.4	8.5	8.5	8.5	1.0	5/12/1998	5/12/1998
1018	OG-17m0.8	4.6	4.6	4.6	1.0	6/4/2002	6/4/2002
1024	OG-23.5m	8.3	8.3	8.3	1.0	5/22/1998	5/22/1998
1027	OG-27-Am	8.3	8.3	8.3	1.0	5/22/1998	5/22/1998
1027	OG-27-Hm1.8	8.3	8.3	8.3	1.0	5/27/1998	5/27/1998
1027	OG-27m	8.3	8.3	8.3	1.0	5/22/1998	5/22/1998
1029	OG-29-Cm	8.3	8.3	8.3	1.0	5/13/1998	5/13/1998
1029	OG-29m2.4	4.0	4.0	4.0	1.0	6/4/2002	6/4/2002
1032	OG-30m1.2	8.2	8.2	8.2	1.0	5/13/1998	5/13/1998
1033	OG-32-Em0.2	3.7	3.7	3.7	1.0	6/3/2002	6/3/2002
1033	OG-32-Fm	6.0	5.0	8.2	4.0	5/27/1998	4/5/2001

Table 3h. (Continued) Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1037	OG-34-Am	8.2	8.2	8.2	1.0	5/6/1998	5/6/1998
1037	OG-34m	8.2	8.2	8.2	1.0	5/6/1998	5/6/1998
1038	OG-34-Bm	8.2	8.2	8.2	1.0	5/6/1998	5/6/1998
1041	OG-34-E-1m	8.2	8.2	8.2	1.0	5/6/1998	5/6/1998
1041	OG-34-E-1m0.8	8.2	8.2	8.2	1.0	5/11/1998	5/11/1998
1043	WVOG-35	8.2	8.2	8.2	1.0	5/11/1998	5/11/1998
1044	OG-36m	8.1	8.0	8.2	2.0	5/4/1998	5/11/1998
1044	OG-37m	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1047	OG-40m	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1047	OG-41m	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1048	OG-42-Am	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1048	OG-42-Cm0.2	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1048	OG-42-Dm	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1048	OG-42-Em	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1059	OG-50m	7.8	7.8	7.8	1.0	5/6/1998	5/6/1998
1062	69	7.5	7.2	7.9	10.0	9/21/2002	7/16/2003
1062	OG-51-Bm	7.8	7.8	7.8	1.0	5/6/1998	5/6/1998
1062	OG-51-G.5m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998
1063	OG-51.5m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998
1064	OG-000-070.0	7.6	7.6	7.6	1.0	5/20/1998	5/20/1998
1065	OG-000-073.1	7.5	7.1	8.0	12.0	2/9/1999	8/15/2002
1065	WA96-G02	7.6	7.2	7.9	9.0	8/30/1996	11/24/1998
1066	OG-59m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998
1067	OG-60m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998
1400	OG-48m	8.0	8.0	8.0	1.0	5/6/1998	5/6/1998
1600	OG-53m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998
1700	OG-61m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998

Table 3i. Water quality data for fecal coliforms

SWS	WQ Station	Avg (#/100 mL)	Min (#/100 mL)	Max (#/100 mL)	Count	Start Date	End Date
1000	OG-000.5-0001	773.0	91.0	1455.0	2.0	3/22/2000	3/29/2000
1000	OG-000.5-0002	12000.0	12000.0	12000.0	1.0	3/22/2000	3/22/2000
1000	OG-000.5-0004	15.0	10.0	20.0	2.0	3/24/2000	3/29/2000
1000	OG-000.5-0005	91.0	91.0	91.0	1.0	3/29/2000	3/29/2000
1000	OG-000.5-0007	90.0	90.0	90.0	1.0	3/29/2000	3/29/2000
1002	OG-000-002.8	1125.6	6.0	2400.0	12.0	5/26/1999	8/8/2002
1065	OG-000-073.1	2553.8	4.0	22000.0	12.0	5/26/1999	8/15/2002
1004	OG-3-0.5Am	210.0	210.0	210.0	1.0	5/18/1998	5/18/1998
1004	OG-3m	330.0	330.0	330.0	1.0	5/18/1998	5/18/1998
1008	OG-6m0.1	1900.0	1900.0	1900.0	1.0	5/18/1998	5/18/1998
1012	OG-9-Am0.3	3300.0	3300.0	3300.0	1.0	5/21/1998	5/21/1998
1014	OG-10-Am	900.0	900.0	900.0	1.0	5/21/1998	5/21/1998
1014	OG-10m	3000.0	3000.0	3000.0	1.0	5/21/1998	5/21/1998
1015	OG-11m	2000.0	2000.0	2000.0	1.0	5/12/1998	5/12/1998
1017	OG-14-Dm0.4	6400.0	6400.0	6400.0	1.0	5/12/1998	5/12/1998
1018	OG-17m0.8	6.0	6.0	6.0	1.0	6/4/2002	6/4/2002
1024	OG-23.5m	5000.0	5000.0	5000.0	1.0	5/22/1998	5/22/1998

Table 3i. (Continued) Water quality data for fecal coliforms

SWS	WQ Station	Avg (#/100 mL)	Min (#/100 mL)	Max (#/100 mL)	Count	Start Date	End Date
1027	OG-27-Am	740.0	740.0	740.0	1.0	5/22/1998	5/22/1998
1027	OG-27-Hm1.8	420.0	420.0	420.0	1.0	5/27/1998	5/27/1998
1027	OG-27m	70.0	70.0	70.0	1.0	5/22/1998	5/22/1998
1029	OG-29-Cm	30.0	30.0	30.0	1.0	5/13/1998	5/13/1998
1029	OG-29m2.4	2.0	2.0	2.0	1.0	6/4/2002	6/4/2002
1032	OG-30m1.2	3300.0	3300.0	3300.0	1.0	5/13/1998	5/13/1998
1033	OG-32-Em0.2	2.0	2.0	2.0	1.0	6/3/2002	6/3/2002
1033	OG-32-Fm	32.0	32.0	32.0	1.0	5/27/1998	5/27/1998
1033	OG-32-Fm0.2	2.0	2.0	2.0	1.0	5/30/2002	5/30/2002
1037	OG-34-Am	1300.0	1300.0	1300.0	1.0	5/6/1998	5/6/1998
1037	OG-34m	2000.0	2000.0	2000.0	1.0	5/6/1998	5/6/1998
1038	OG-34-Bm	2200.0	2200.0	2200.0	1.0	5/6/1998	5/6/1998
1041	OG-34-E-1m	6000.0	6000.0	6000.0	1.0	5/6/1998	5/6/1998
1041	OG-34-E-1m0.8	6.0	6.0	6.0	1.0	5/11/1998	5/11/1998
1043	WVOG-35	5600.0	5600.0	5600.0	1.0	5/11/1998	5/11/1998
1044	OG-36m	810.0	420.0	1200.0	2.0	5/4/1998	5/11/1998
1044	OG-37m	28.0	28.0	28.0	1.0	5/11/1998	5/11/1998
1047	OG-40m	380.0	380.0	380.0	1.0	5/11/1998	5/11/1998
1047	OG-41m	4200.0	4200.0	4200.0	1.0	5/11/1998	5/11/1998
1048	OG-42-Am	20000.0	20000.0	20000.0	1.0	5/11/1998	5/11/1998
1048	OG-42-Cm0.2	6400.0	6400.0	6400.0	1.0	5/11/1998	5/11/1998
1048	OG-42-Dm	3200.0	3200.0	3200.0	1.0	5/11/1998	5/11/1998
1048	OG-42-Em	230.0	230.0	230.0	1.0	5/11/1998	5/11/1998
1059	OG-50m	52.0	52.0	52.0	1.0	5/6/1998	5/6/1998
1062	OG-51-Bm	4200.0	4200.0	4200.0	1.0	5/6/1998	5/6/1998
1062	OG-51-G.5m	150.0	150.0	150.0	1.0	5/13/1998	5/13/1998
1063	OG-51.5m	2000.0	2000.0	2000.0	1.0	5/13/1998	5/13/1998
1066	OG-59m	3800.0	3800.0	3800.0	1.0	5/13/1998	5/13/1998
1067	OG-60m	240.0	240.0	240.0	1.0	5/13/1998	5/13/1998
1400	OG-48m	44.0	44.0	44.0	1.0	5/6/1998	5/6/1998
1600	OG-53m	20.0	20.0	20.0	1.0	5/13/1998	5/13/1998
1700	OG-61m	150.0	150.0	150.0	1.0	5/13/1998	5/13/1998
1002	550639	3110.7	20.0	25000.0	63.0	1/10/1990	6/6/1995
1002	WA96-G01	6054.5	320.0	22000.0	11.0	3/21/1996	11/24/1998
1065	WA96-G02	4055.6	12.0	16000.0	11.0	5/31/1996	11/24/1998

Table 4a. Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1053	WV1004000	23	23	3.20	0

Table 4b. Manganese baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1053	WV1004000	13	13	2.00	0

Table 4c. ALuminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1053	WV1004000	23	23	3.27	0

Table 5a. Iron baseline conditions and allocations (LAs) for nonpoint sources * Othen Nonpoint Sources include: Forest, Wetland, Agriculture, Pasture, and Urban)

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1050	0	0	0	0	7	7	2	2	0	0	396	396	6	6	
1051	0	0	0	0	79	79	23	23	0	0	664	664	258	258	
1052	0	0	0	0	118	118	27	27	0	0	224	224	252	252	
1053	0	0	0	0	116	116	25	25	14	14	243	243	294	294	
1054	53	53	0	0	175	175	55	55	0	0	7,305	7,305	485	485	

Table 5b. Manganese baseline conditions and allocations (LAs) for nonpoint sources * Othen Nonpoint Sources include: Forest, Wetland, Agriculture, Pasture, and Urban)

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1050	0	0	0	0	3	3	1	1	0	0	149	149	20	20	
Appendix A-	0	0	0	0	28	28	9	9	0	0	251	251	847	847	
1052	0	0	0	0	43	43	10	10	0	0	85	85	809	809	
Region 4	0	0	0	0	41	41	10	10	14	14	92	92	971	971	
1054	300	300	0	0	62	62	21	21	0	0	2,755	2,755	1,582	1,582	

Table 5c. Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1050	0	0	0	0	5	5	1	1	0	0	273	273	9	9	
1051	0	0	0	0	51	51	16	16	0	0	458	458	382	382	
1052	0	0	0	0	79	79	19	19	0	0	155	155	372	372	
1053	0	0	0	0	75	75	18	18	10	10	167	167	434	434	
1054	776	776	0	0	114	114	38	38	0	0	5,039	5,039	717	717	

Table 6. Fecal Coliform baseline and allocations

SWS	Stream	Agriculture		Natural Sources		Failing Septics		Residential	
		Baseline Load (counts)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)
1050	Big Harts Creek	1.57E+13	1.10E+13	8.80E+12	8.80E+12	3.10E+14	0.00E+00	5.11E+11	3.58E+11

Appendix A-5
Region 5

Figure 1. Region 5 - Guyandotte Watershed

Table 1. Impaired waterbodies in Region 5

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Affected Use
Ed Stone Branch of Big Creek	OG-49-A	Metals, pH	1501, 1503		Aquatic Life, Human Health
North Branch of Big Creek	OG-49-A-1	Metals, pH	1502		Aquatic Life, Human Health

T = Aquatic Life Trout Waters

W = Warm Water Fishery

Table 2. Locations of abandoned mines (seep, deep mine, and/or leachate)

SWS
1500
1504
1505
1506

Table 3a. Water quality data for dissolved aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1500	73	148.20	40	700	10	09/21/02	07/16/03

Table 3b. Water quality data for total aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1052	OG-49-A-1m	1520.00	1520	1520	1	05/05/98	05/05/98
1500	73	520.10	47	1300	10	09/21/02	07/16/03
1500	OG-49-0.3Am	583.00	583	583	1	05/06/98	05/06/98
1501	OG-49-Am	868.00	868	868	1	05/05/98	05/05/98
1506	OG-49-C.1m	3755.00	3755	3755	1	05/06/98	05/06/98
1506	OG-49-Cm	1450.00	1450	1450	1	05/05/98	05/05/98
1506	OG-49-E-1m	2405.00	2405	2405	1	05/06/98	05/06/98
1506	OG-49m3.3	575.00	575	575	1	05/20/98	05/20/98

Table 3c. Water quality data for dissolved iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1500	73	154.00	60	340	10	09/21/02	07/16/03

Table 3d. Water quality data for total iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1052	OG-49-A-1m	1640.00	1640	1640	1	05/05/98	05/05/98
1500	73	716.00	210	2930	10	09/21/02	07/16/03
1500	OG-49-0.3Am	296.00	296	296	1	05/06/98	05/06/98
1501	OG-49-Am	761.00	761	761	1	05/05/98	05/05/98
1506	OG-49-C.1m	320.00	320	320	1	05/06/98	05/06/98
1506	OG-49-Cm	814.00	814	814	1	05/05/98	05/05/98
1506	OG-49-E-1m	434.00	434	434	1	05/06/98	05/06/98
1506	OG-49m3.3	561.00	561	561	1	05/20/98	05/20/98

Table 3e. Water quality data for dissolved manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1500	73	120.00	50	280.0	10	09/21/02	07/16/03

Table 3f. Water quality data for total manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1052	OG-49-A-1m	97.5	97.50	97.5	1.0	5/5/1998	5/5/1998
1500	73	170.0	60.00	320.0	10.0	9/21/2002	7/16/2003
1500	OG-49-0.3Am	128.0	128.00	128.0	1.0	5/6/1998	5/6/1998
1501	OG-49-Am	112.0	112.00	112.0	1.0	5/5/1998	5/5/1998
1506	OG-49-C.1m	500.0	500.00	500.0	1.0	5/6/1998	5/6/1998
1506	OG-49-Cm	261.0	261.00	261.0	1.0	5/5/1998	5/5/1998
1506	OG-49-E-1m	541.0	541.00	541.0	1.0	5/6/1998	5/6/1998
1506	OG-49m3.3	322.0	322.00	322.0	1.0	5/20/1998	5/20/1998

Table 3g. Water quality data for total selenium

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
No data available							

Table 3h. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1052	OG-49-A-1m	7.9	7.9	7.9	1.0	5/5/1998	5/5/1998
1500	73	7.1	6.8	7.4	10.0	9/21/2002	7/16/2003
1500	OG-49-0.3Am	7.9	7.9	7.9	1.0	5/6/1998	5/6/1998
1501	OG-49-Am	7.9	7.9	7.9	1.0	5/5/1998	5/5/1998
1505	OG-49-B-1m	7.9	7.9	7.9	1.0	5/5/1998	5/5/1998
1506	OG-49-C.1m	7.8	7.8	7.8	1.0	5/6/1998	5/6/1998
1506	OG-49-Cm	7.9	7.9	7.9	1.0	5/5/1998	5/5/1998
1506	OG-49-D-2m	7.8	7.8	7.8	1.0	5/5/1998	5/5/1998
1506	OG-49-E-1m	7.8	7.8	7.8	1.0	5/6/1998	5/6/1998
1506	OG-49m3.3	7.9	7.9	7.9	1.0	5/20/1998	5/20/1998

Table 3i. Water quality data for fecal coliforms

SWS	WQ Station	Avg (#/100 mL)	Min (#/100 mL)	Max (#/100 mL)	Count	Start Date	End Date
1052	OG-49-A-1m	3000.0	3000.0	3000.0	1.0	5/5/1998	5/5/1998
1500	OG-49-0.3Am	4.0	4.0	4.0	1.0	5/6/1998	5/6/1998
1501	OG-49-Am	420.0	420.0	420.0	1.0	5/5/1998	5/5/1998
1505	OG-49-B-1m	3200.0	3200.0	3200.0	1.0	5/5/1998	5/5/1998
1506	OG-49-C.1m	16.0	16.0	16.0	1.0	5/6/1998	5/6/1998
1506	OG-49-Cm	800.0	800.0	800.0	1.0	5/5/1998	5/5/1998
1506	OG-49-D-2m	900.0	900.0	900.0	1.0	5/5/1998	5/5/1998
1506	OG-49-E-1m	20.0	20.0	20.0	1.0	5/6/1998	5/6/1998
1506	OG-49m3.3	860.0	860.0	860.0	1.0	5/20/1998	5/20/1998

Table 4a. Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1506	WV0093211	98	98	3.20	0
1506	WV1012487	73	73	3.20	0
1506	WV1018922	832	832	3.20	0

Table 4b. Manganese baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1506	WV0093211	40	40	2.00	0
1506	WV1012487	30	30	2.00	0
1506	WV1018922	340	340	2.00	0

Table 4c. Aluminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1506	WV0093211	101	101	3.27	0
1506	WV1012487	75	75	3.27	0
1506	WV1018922	850	850	3.27	0

Table 5a. Iron baseline conditions and allocations (LAs) for nonpoint sources * Othen Nonpoint Sources include: Forest, Wetland, Agriculture, Pasture, and Urban)

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1500	1,953	976	0	0	44	44	1	1	0	0	0	0	181	181	x
1501	0	0	0	0	2	2	1	1	0	0	0	0	3	3	
1502	0	0	0	0	7	7	1	1	0	0	6	6	13	13	
1503	0	0	0	0	8	8	2	2	0	0	0	0	31	31	
1504	358	161	0	0	15	15	0	0	0	0	0	0	44	44	x
1505	219	219	0	0	123	123	3	3	0	0	173	173	926	926	
1506	992	248	0	0	593	593	4	4	0	0	85	85	2,801	2,801	x

Table 5b. Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1500	3,089	3,089	0	0	7	7	1	1	0	0	0	0	120	120	
1501	0	0	0	0	2	2	1	1	0	0	0	0	11	11	
1502	0	0	0	0	425	425	65	65	0	0	403	403	44	44	
1503	0	0	0	0	489	489	130	130	0	0	0	0	105	105	
1504	609	609	0	0	3	3	0	0	0	0	0	0	29	29	
1505	275	275	0	0	20	20	8	8	0	0	468	468	616	616	
1506	1,354	1,354	0	0	79	79	10	10	0	0	231	231	1,865	1,865	

Table 5c. Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1500	14,870	5,948	0	0	45	45	1	1	0	0	0	0	202	202	x
1501	0	0	0	0	1	1	1	1	0	0	0	0	5	5	
1502	0	0	0	0	4	4	1	1	0	0	4	4	20	20	
1503	0	0	0	0	5	5	1	1	0	0	0	0	46	46	
1504	2,377	594	0	0	15	15	0	0	0	0	0	0	50	50	x
1505	1,097	1,097	0	0	125	125	3	3	0	0	207	207	1,033	1,033	
1506	3,697	555	0	0	598	598	4	4	0	0	103	103	3,126	3,126	x

Table 6. Fecal Coliform baseline and allocations

SWS	Stream	Agriculture		Natural Sources		Failing Septics		Residential	
		Baseline Load (counts)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)
1500	Big Creek	4.78E+12	3.35E+12	5.78E+12	5.78E+12	1.86E+14	0.00E+00	1.92E+12	1.34E+12

Appendix A-6
Region 6

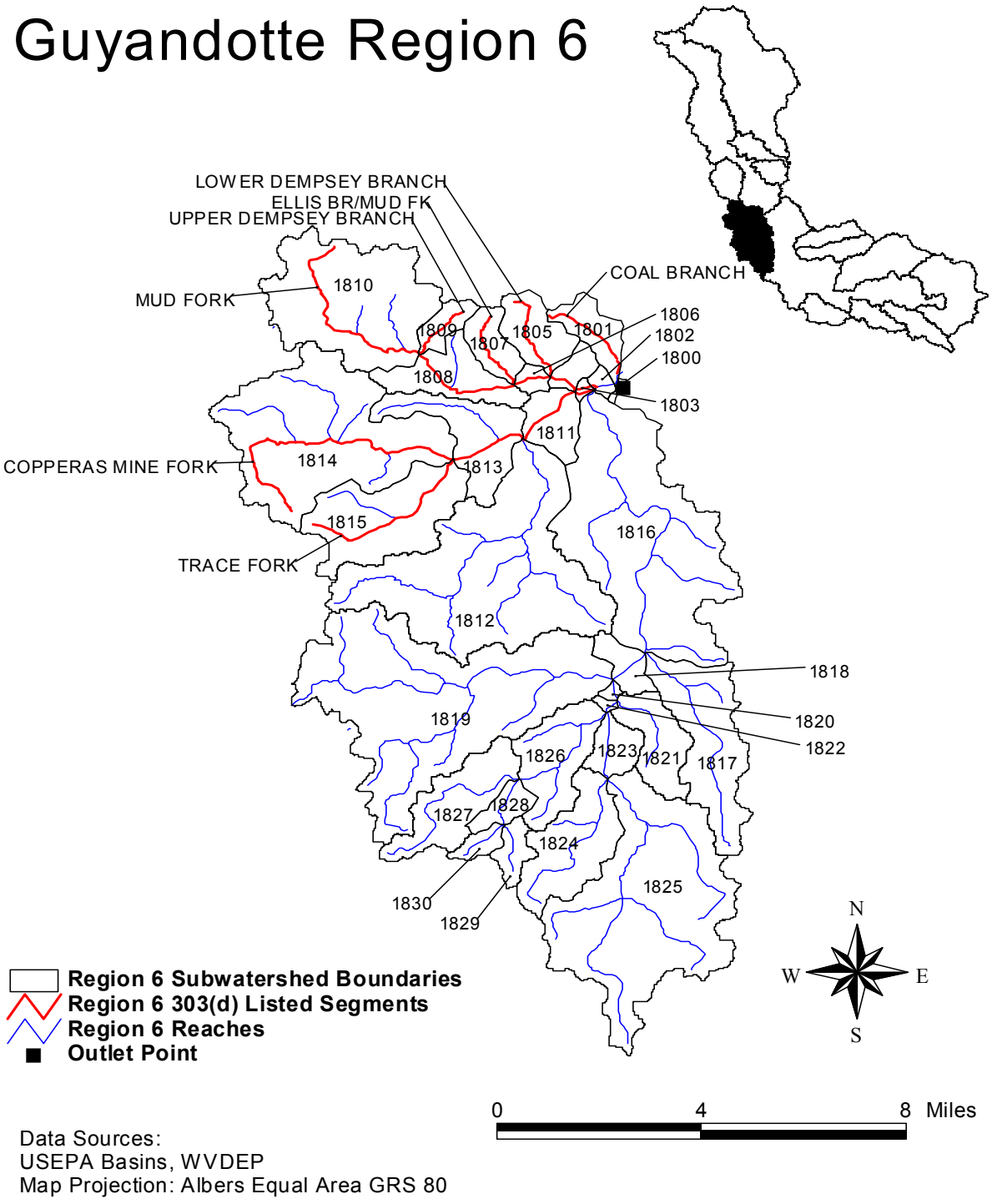


Figure 1. Region 6 - Guyandotte Watershed

Table 1. Impaired waterbodies in Region 6

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Affected Use
Coal Branch of Island Creek	OG-65-A	Metals, pH	1801		Aquatic Life, Human Health
Copperas Mine Fork	OG-65-B	Metals, pH	1803, 1811, 1813, 1814		Aquatic Life, Human Health
Ellis Branch of Mud Fork	OG-65-B-1-B	Metals, pH	1807		Aquatic Life, Human Health
Lower Dempsey Branch	OG-65-B-1-A	Metals, pH	1805		Aquatic Life, Human Health
Mud Fork	OG-65-B-1	Metals, pH	1804, 1806, 1808, 1810		Aquatic Life, Human Health
Trace Fork of Copperas Mine Fork	OG-65-B-4	Metals, pH	1815		Aquatic Life, Human Health
Upper Dempsey Branch	OG-65-B-1-E	Metals, pH	1809		Aquatic Life, Human Health

T = Aquatic Life Trout Waters

W = Warm Water Fishery

Table 2. Locations of abandoned mines (seep, deep mine, and/or leachate)

SWS
1801
1802
1804
1805
1806
1807
1808
1809
1810
1811
1812
1813
1814
1815
1816
1817
1818
1819
1820
1821
1822
1823
1824
1825
1826
1827
1828

Table 3a. Water quality data for dissolved aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1801	54	150.89	50	500	9	10/05/02	07/17/03
1801	OG-65-Am	100.00	100	100	1	08/22/00	08/22/00
1802	OG-65m0	100.00	100	100	1	08/22/00	08/22/00
1803	OG-65-Bm	100.00	100	100	1	08/22/00	08/22/00
1804	OG-65-B-1m	100.00	100	100	1	08/23/00	08/23/00
1805	OG-065-0008	190.00	190	190	1	08/23/00	08/23/00
1807	OG-65-B-1-Bm	100.00	100	100	1	08/23/00	08/23/00
1810	OG-65-B-1-Fm0	100.00	100	100	1	08/23/00	08/23/00
1811	52	216.56	56	500	9	10/05/02	07/17/03
1812	OG-65-B-2m0.5	100.00	100	100	1	08/22/00	08/22/00
1815	OG-65-B-4m	100.00	100	100	1	08/22/00	08/22/00
1816	OG-65m3.5	100.00	100	100	1	08/21/00	08/21/00
1819	OG-65-H-1m	100.00	100	100	1	08/21/00	08/21/00
1820	OG-65m9.6	100.00	100	100	1	08/21/00	08/21/00
1821	38	201.10	62	500	10	09/20/02	07/02/03
1830	11, WVOG-65-J-3-A	15.50	15	20	10	09/02/03	10/20/03

Table 3b. Water quality data for total aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1801	54	704.22	238	1300	9	10/05/02	07/17/03
1801	OG-65-Am	3000.00	3000	3000	1	08/22/00	08/22/00
1802	OG-65m0	100.00	100	100	1	08/22/00	08/22/00
1803	OG-65-Bm	200.00	200	200	1	08/22/00	08/22/00
1804	OG-065-0006	1800.00	1800	1800	1	08/23/00	08/23/00
1804	OG-065-0007	11000.00	11000	11000	1	08/23/00	08/23/00
1805	OG-065-0008	3700.00	3700	3700	1	08/23/00	08/23/00
1807	OG-065-0009	290.00	290	290	1	08/23/00	08/23/00
1810	OG-65-B-1-Fm0	100.00	100	100	1	08/23/00	08/23/00
1811	52	1020.33	204	3900	9	10/05/02	07/17/03
1812	OG-65-B-2m0.5	100.00	100	100	1	08/22/00	08/22/00
1815	OG-065-0013	3000.00	3000	3000	1	08/22/00	08/22/00
1816	OG-65m3.5	100.00	100	100	1	08/21/00	08/21/00
1819	OG-65-H-1m	100.00	100	100	1	08/21/00	08/21/00
1820	OG-65m9.6	100.00	100	100	1	08/21/00	08/21/00
1821	38	395.00	154	700	10	09/20/02	07/02/03
1830	11, WVOG-65-J-3-A	171.50	26	452	10	09/02/03	10/20/03

Table 3c. Water quality data for dissolved iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1801	54	196.67	70	490	6	10/05/02	07/17/03
1801	OG-065-0004	130.00	130	130	1	08/22/00	08/22/00
1802	OG-65m0	20.00	20	20	1	08/22/00	08/22/00
1804	OG-065-0006	94.00	94	94	1	08/23/00	08/23/00
1805	OG-065-0008	440.00	440	440	1	08/23/00	08/23/00
1805	OG-65-B-1-Am	440.00	440	440	1	08/23/00	08/23/00
1807	OG-65-B-1-Bm	20.00	20	20	1	08/23/00	08/23/00
1811	52	386.25	70	1010	8	10/05/02	07/17/03
1812	OG-65-B-2m0.5	20.00	20	20	1	08/22/00	08/22/00
1815	OG-065-0013	23.00	23	23	1	08/22/00	08/22/00
1816	OG-65m3.5	20.00	20	20	1	08/21/00	08/21/00
1819	OG-65-H-1m	20.00	20	20	1	08/21/00	08/21/00
1820	OG-65m9.6	20	20	20	1	21-Aug-00	21-Aug-00
1821	38	95	60	130	2	20-Sep-02	02-Jul-03
1830	11, WVOG-65-J-3-A	15.80	15	23	10	02-Sep-03	20-Oct-03

Table 3d. Water quality data for total iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1801	54	671.00	530	1020	10	10/05/02	07/17/03
1801	OG-065-0004	260.00	260	260	1	08/22/00	08/22/00
1802	OG-065-0001	740.00	740	740	1	08/22/00	08/22/00
1804	OG-065-0006	540.00	540	540	1	08/23/00	08/23/00
1804	OG-065-0007	50.00	50	50	1	08/23/00	08/23/00
1804	OG-65-B-1-0.2	50.00	50	50	1	08/23/00	08/23/00
1805	OG-065-0008	990.00	990	990	1	08/23/00	08/23/00
1807	OG-065-0009	140.00	140	140	1	08/23/00	08/23/00
1809	OG-65-B-1-Em	460.00	460	460	1	08/23/00	08/23/00
1811	52	1175.00	70	4420	10	10/05/02	07/17/03
1812	OG-065-0012	180.00	180	180	1	08/22/00	08/22/00
1815	OG-065-0013	2600.00	2600	2600	1	08/22/00	08/22/00
1816	OG-065-0002	480.00	480	480	1	08/21/00	08/21/00
1819	OG-065-0017	50.00	50	50	1	08/21/00	08/21/00
1819	OG-65-H-1m	50.00	50	50	1	08/21/00	08/21/00
1820	OG-065-0003	110.00	110	110	1	08/21/00	08/21/00
1821	38	188.89	60	590	9	09/20/02	07/02/03
1830	11, WVOG-65-J-3-A	569.50	97	1410	10	09/02/03	10/20/03

Table 3e. Water quality data for dissolved manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1801	54	203.00	110	350.0	10	10/05/02	07/17/03
1811	52	204.00	80	300.0	10	10/05/02	07/17/03
1815	OG-065-0013	500.00	500	500.0	1	08/22/00	08/22/00
1821	38	72.50	60	100.0	4	09/20/02	07/02/03

Table 3f. Water quality data for total manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1801	54	227.0	120.00	390.0	10.0	10/5/2002	7/17/2003
1801	OG-065-0004	590.0	590.00	590.0	1.0	8/22/2000	8/22/2000
1802	OG-065-0001	150.0	150.00	150.0	1.0	8/22/2000	8/22/2000
1804	OG-065-0006	1400.0	1400.00	1400.0	1.0	8/23/2000	8/23/2000
1804	OG-065-0007	2000.0	2000.00	2000.0	1.0	8/23/2000	8/23/2000
1805	OG-065-0008	1600.0	1600.00	1600.0	1.0	8/23/2000	8/23/2000
1807	OG-065-0009	780.0	780.00	780.0	1.0	8/23/2000	8/23/2000
1810	OG-65-B-1-Fm0	44.0	44.00	44.0	1.0	8/23/2000	8/23/2000
1811	52	244.4	170.00	320.0	9.0	10/5/2002	7/17/2003
1812	OG-065-0012	41.0	41.00	41.0	1.0	8/22/2000	8/22/2000
1815	OG-065-0013	570.0	570.00	570.0	1.0	8/22/2000	8/22/2000
1816	OG-065-0002	150.0	150.00	150.0	1.0	8/21/2000	8/21/2000
1816	OG-65m3.5	75.0	75.00	75.0	1.0	8/21/2000	8/21/2000
1819	OG-065-0017	88.0	88.00	88.0	1.0	8/21/2000	8/21/2000
1820	OG-065-0003	27.0	27.00	27.0	1.0	8/21/2000	8/21/2000
1821	38	78.8	30.00	150.0	8.0	9/20/2002	7/2/2003

Table 3g. Water quality data for total selenium

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1830	11, WVOG-65-J-3-A	2.9	2.0	3.0	10.0	9/2/2003	10/20/2003

Table 3h. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1801	54	7.78	6.97	8.54	10	10/05/02	07/17/03
1801	OG-065-0004	7.00	7	7	1	08/22/00	08/22/00
1801	OG-65-Am	7.44	7.44	7.44	1	08/22/00	08/22/00
1802	OG-065-0001	7.40	7.4	7.4	1	08/22/00	08/22/00
1802	OG-65m0	7.48	7.48	7.48	1	08/22/00	08/22/00
1803	OG-65-Bm	7.41	7.41	7.41	1	08/22/00	08/22/00
1804	OG-065-0006	7.22	7.22	7.22	1	08/23/00	08/23/00
1804	OG-065-0007	4.20	4.2	4.2	1	08/23/00	08/23/00
1804	OG-65-B-1-0.2	7.40	7.4	7.4	1	08/23/00	08/23/00
1804	OG-65-B-1m	7.41	7.41	7.41	1	08/23/00	08/23/00
1805	OG-065-0008	5.62	5.62	5.62	1	08/23/00	08/23/00
1805	OG-65-B-1-Am	7.40	7.4	7.4	1	08/23/00	08/23/00
1807	OG-065-0009	5.94	5.94	5.94	1	08/23/00	08/23/00
1807	OG-65-B-1-Bm	7.40	7.4	7.4	1	08/23/00	08/23/00
1809	OG-65-B-1-Em	7.40	7.4	7.4	1	08/23/00	08/23/00
1810	OG-65-B-1-Fm0	7.40	7.4	7.4	1	08/23/00	08/23/00
1811	52	7.60	6.86	8.09	10	10/05/02	07/17/03
1812	OG-065-0012	7.44	7.44	7.44	1	08/22/00	08/22/00
1812	OG-65-B-2m0.5	7.4	7.4	7.4	1.0	8/22/2000	8/22/2000
1814	OG-065-0014	7.5	7.5	7.5	1.0	8/22/2000	8/22/2000
1814	OG-065-0015	7.8	7.8	7.8	1.0	8/22/2000	8/22/2000
1814	OG-65-B-5m	7.4	7.4	7.4	1.0	8/22/2000	8/22/2000
1814	OG-65-B-8m	7.4	7.4	7.4	1.0	8/22/2000	8/22/2000
1815	OG-065-0013	7.3	7.3	7.3	1.0	8/22/2000	8/22/2000
1815	OG-65-B-4m	7.4	7.4	7.4	1.0	8/22/2000	8/22/2000
1816	OG-065-0002	7.2	7.2	7.2	1.0	8/21/2000	8/21/2000
1816	OG-065-0016	7.4	7.4	7.4	1.0	8/21/2000	8/21/2000
1816	OG-65-Cm	7.4	7.4	7.4	1.0	8/21/2000	8/21/2000
1816	OG-65m3.5	7.5	7.5	7.5	1.0	8/21/2000	8/21/2000
1819	OG-065-0017	6.5	6.5	6.5	1.0	8/21/2000	8/21/2000
1819	OG-065-0018	7.4	7.4	7.4	1.0	8/21/2000	8/21/2000
1819	OG-65-H-1m	7.4	7.4	7.4	1.0	8/21/2000	8/21/2000
1819	OG-65-H-2m	7.4	7.4	7.4	1.0	8/21/2000	8/21/2000
1820	OG-065-0003	7.5	7.5	7.5	1.0	8/21/2000	8/21/2000
1820	OG-65m9.6	7.4	7.4	7.4	1.0	8/21/2000	8/21/2000
1821	38	8.0	7.1	8.7	10.0	9/20/2002	7/2/2003
1825	OG-065-0020	8.5	8.5	8.5	1.0	8/21/2000	8/21/2000
1825	OG-65-L.5m	7.4	7.4	7.4	1.0	8/21/2000	8/21/2000
1826	OG-65-Jm	7.4	7.4	7.4	1.0	8/21/2000	8/21/2000

Table 3i. Water quality data for fecal coliforms

SWS	WQ Station	Avg (#/100 mL)	Min (#/100 mL)	Max (#/100 mL)	Count	Start Date	End Date
1801	OG-065-0004	32000.0	32000.0	32000.0	1.0	8/22/2000	8/22/2000
1802	OG-065-0001	37000.0	37000.0	37000.0	1.0	8/22/2000	8/22/2000
1804	OG-065-0006	12000.0	12000.0	12000.0	1.0	8/23/2000	8/23/2000
1805	OG-065-0008	160.0	160.0	160.0	1.0	8/23/2000	8/23/2000
1807	OG-065-0009	73.0	73.0	73.0	1.0	8/23/2000	8/23/2000
1812	OG-065-0012	52000.0	52000.0	52000.0	1.0	8/22/2000	8/22/2000
1814	OG-065-0014	9000.0	9000.0	9000.0	1.0	8/22/2000	8/22/2000
1814	OG-065-0015	910.0	910.0	910.0	1.0	8/22/2000	8/22/2000
1815	OG-065-0013	13000.0	13000.0	13000.0	1.0	8/22/2000	8/22/2000
1816	OG-065-0002	2300.0	2300.0	2300.0	1.0	8/21/2000	8/21/2000
1816	OG-065-0016	560.0	560.0	560.0	1.0	8/21/2000	8/21/2000
1819	OG-065-0017	36.0	36.0	36.0	1.0	8/21/2000	8/21/2000
1819	OG-065-0018	10.0	10.0	10.0	1.0	8/21/2000	8/21/2000
1820	OG-065-0003	1300.0	1300.0	1300.0	1.0	8/21/2000	8/21/2000
1825	OG-065-0020	1800.0	1800.0	1800.0	1.0	8/21/2000	8/21/2000
1809	OG-65-B-1-Em	200.0	200.0	200.0	1.0	8/23/2000	8/23/2000
1810	OG-65-B-1-Fm0	20000.0	20000.0	20000.0	1.0	8/23/2000	8/23/2000
1815	OG-65-B-4m	13000.0	13000.0	13000.0	1.0	8/22/2000	8/22/2000

Table 4a. Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1812	WV0095753	1,970	1,477	2.40	25
1812	WV0095885	2,110	1,582	2.40	25
1812	WV0095991	5,389	4,042	2.40	25
1812	WV0099252	3,076	2,307	2.40	25
1812	WV1003712	3,082	2,312	2.40	25
1812	WV1005111	2,586	1,939	2.40	25
1812	WV1008277	5,712	4,284	2.40	25
1812	WV1008285	2,417	1,813	2.40	25
1813	WV0095885	1,432	1,432	3.20	0
1813	WV0095991	1,775	1,775	3.20	0
1814	WV0092649	6,987	4,751	2.18	32
1814	WV0096083	158	107	2.18	32
1814	WV1007939	723	492	2.18	32
1814	WV1008170	812	552	2.18	32
1814	WV1008251	6,445	4,383	2.18	32
1815	WV0045608	2,341	1,404	1.92	40
1815	WV0095885	1,595	957	1.92	40
1815	WV0096083	83	50	1.92	40
1815	WV1003712	2,696	1,617	1.92	40
1815	WV1008277	4,856	2,914	1.92	40
1815	WV1008285	1,827	1,096	1.92	40
1815	WV1011022	480	288	1.92	40
1816	WV1011073	237	237	3.20	0
1816	WV1020366	1,769	1,769	3.20	0
1817	WV0057797	183	119	2.08	35
1817	WV1020366	969	630	2.08	35
1819	WV0053091	2,049	1,639	2.56	20
1819	WV0060801	255	204	2.56	20
1819	WV0064858	1,970	1,576	2.56	20
1819	WV0068764	5,696	4,557	2.56	20
1819	WV0090174	313	250	2.56	20
1819	WV0095753	423	338	2.56	20
1819	WV0095966	185	148	2.56	20
1819	WV1004727	45	36	2.56	20
1819	WV1005111	66	53	2.56	20
1819	WV1008145	844	675	2.56	20
1819	WV1015800	420	336	2.56	20
1819	WV1015923	4,040	3,232	2.56	20
1819	WV1016865	123	98	2.56	20
1821	WV0066630	618	618	3.20	0
1823	WV0057797	131	131	3.20	0
1824	WV0050865	70	49	2.24	30
1824	WV0066630	1,133	793	2.24	30
1824	WV1015478	1,225	857	2.24	30
1824	WV1019988	4,195	2,937	2.24	30
1825	WV0057797	277	249	2.88	10
1825	WV0066630	1,127	1,015	2.88	10
1825	WV1004271	29	27	2.88	10
1825	WV1011138	112	101	2.88	10
1825	WV1013246	239	215	2.88	10
1825	WV1013343	216	194	2.88	10
1825	WV1013505	4,814	4,333	2.88	10
1825	WV1019988	3,339	3,005	2.88	10
1826	WV0096229	216	216	3.20	0
1826	WV1019988	386	386	3.20	0

Table 4a. (Continued) Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1827	WV0092797	478	287	1.92	40
1827	WV0096229	112	67	1.92	40
1827	WV1003984	51	31	1.92	40
1827	WV1005120	1,324	794	1.92	40
1827	WV1008081	3,742	2,245	1.92	40
1827	WV1015907	154	92	1.92	40
1828	WV1008081	777	622	2.56	20
1829	WV1015478	1,427	685	1.54	52
1830	WV1003984	58	28	1.54	52
1830	WV1005120	747	359	1.54	52
1830	WV1008081	1,006	483	1.54	52
1830	WV1015478	1,319	633	1.54	52

Table 4b. Manganese baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1812	WV0095753	803	803	2.00	0
1812	WV0095885	860	860	2.00	0
1812	WV0095991	2,196	2,196	2.00	0
1812	WV0099252	1,253	1,253	2.00	0
1812	WV1003712	1,256	1,256	2.00	0
1812	WV1005111	1,053	1,053	2.00	0
1812	WV1008277	2,327	2,327	2.00	0
1812	WV1008285	985	985	2.00	0
1813	WV0095885	573	573	2.00	0
1813	WV0095991	710	710	2.00	0
1814	WV0092649	3,090	3,090	2.00	0
1814	WV0096083	70	70	2.00	0
1814	WV1007939	320	320	2.00	0
1814	WV1008170	359	359	2.00	0
1814	WV1008251	2,850	2,850	2.00	0
1815	WV0045608	981	981	2.00	0
1815	WV0095885	669	669	2.00	0
1815	WV0096083	35	35	2.00	0
1815	WV1003712	1,130	1,130	2.00	0
1815	WV1008277	2,036	2,036	2.00	0
1815	WV1008285	766	766	2.00	0
1815	WV1011022	201	201	2.00	0
1816	WV1011073	99	99	2.00	0
1816	WV1020366	736	736	2.00	0
1817	WV0057797	77	77	2.00	0
1817	WV1020366	409	409	2.00	0
1819	WV0053091	934	934	2.00	0
1819	WV0060801	116	116	2.00	0
1819	WV0064858	898	898	2.00	0
1819	WV0068764	2,595	2,595	2.00	0
1819	WV0090174	142	142	2.00	0
1819	WV0095753	193	193	2.00	0
1819	WV0095966	84	84	2.00	0
1819	WV1004727	20	20	2.00	0
1819	WV1005111	30	30	2.00	0
1819	WV1008145	384	384	2.00	0
1819	WV1015800	192	192	2.00	0
1819	WV1015923	1,840	1,840	2.00	0

Table 4b. (Continued) Manganese baseline conditions and allocations (WLAs) for permitted mining point

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1819	WV1016865	56	56	2.00	0
1821	WV0066630	315	315	2.00	0
1823	WV0057797	77	77	2.00	0
1824	WV0050865	29	29	2.00	0
1824	WV0066630	472	472	2.00	0
1824	WV1015478	510	510	2.00	0
1824	WV1019988	1,747	1,747	2.00	0
1825	WV0057797	116	116	2.00	0
1825	WV0066630	472	472	2.00	0
1825	WV1004271	12	12	2.00	0
1825	WV1011138	47	47	2.00	0
1825	WV1013246	100	100	2.00	0
1825	WV1013343	90	90	2.00	0
1825	WV1013505	2,015	2,015	2.00	0
1825	WV1019988	1,398	1,398	2.00	0
1826	WV0096229	98	98	2.00	0
1826	WV1019988	175	175	2.00	0
1827	WV0092797	209	209	2.00	0
1827	WV0096229	49	49	2.00	0
1827	WV1003984	22	22	2.00	0
1827	WV1005120	578	578	2.00	0
1827	WV1008081	1,633	1,633	2.00	0
1827	WV1015907	67	67	2.00	0
1828	WV1008081	311	311	2.00	0
1829	WV1015478	510	510	2.00	0
1830	WV1003984	22	22	2.00	0
1830	WV1005120	289	289	2.00	0
1830	WV1008081	389	389	2.00	0
1830	WV1015478	510	510	2.00	0

Table 4c. Aluminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1812	WV0095753	2,013	2,013	3.27	0
1812	WV0095885	2,156	2,156	3.27	0
1812	WV0095991	5,507	5,507	3.27	0
1812	WV0099252	3,143	3,143	3.27	0
1812	WV1003712	3,149	3,149	3.27	0
1812	WV1005111	2,642	2,642	3.27	0
1812	WV1008277	5,836	5,836	3.27	0
1812	WV1008285	2,470	2,470	3.27	0
1813	WV0095885	1,463	1,463	3.27	0
1813	WV0095991	1,813	1,813	3.27	0
1814	WV0092649	7,140	7,140	3.27	0
1814	WV0096083	161	161	3.27	0
1814	WV1007939	739	739	3.27	0
1814	WV1008170	830	830	3.27	0
1814	WV1008251	6,585	6,585	3.27	0
1815	WV0045608	2,392	2,392	3.27	0
1815	WV0095885	1,629	1,629	3.27	0
1815	WV0096083	85	85	3.27	0
1815	WV1003712	2,754	2,754	3.27	0
1815	WV1008277	4,962	4,962	3.27	0
1815	WV1008285	1,867	1,867	3.27	0

Table 4c. Continued) Aluminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1815	WV1011022	490	490	3.27	0
1816	WV1011073	242	242	3.27	0
1816	WV1020366	1,807	1,807	3.27	0
1817	WV0057797	187	187	3.27	0
1817	WV1020366	990	990	3.27	0
1819	WV0053091	2,094	2,094	3.27	0
1819	WV0060801	260	260	3.27	0
1819	WV0064858	2,013	2,013	3.27	0
1819	WV0068764	5,821	5,821	3.27	0
1819	WV0090174	320	320	3.27	0
1819	WV0095753	432	432	3.27	0
1819	WV0095966	189	189	3.27	0
1819	WV1004727	46	46	3.27	0
1819	WV1005111	68	68	3.27	0
1819	WV1008145	862	862	3.27	0
1819	WV1015800	430	430	3.27	0
1819	WV1015923	4,128	4,128	3.27	0
1819	WV1016865	126	126	3.27	0
1821	WV0066630	632	632	3.27	0
1823	WV0057797	134	134	3.27	0
1824	WV0050865	71	71	3.27	0
1824	WV0066630	1,158	1,158	3.27	0
1824	WV1015478	1,252	1,252	3.27	0
1824	WV1019988	4,287	4,287	3.27	0
1825	WV0057797	283	283	3.27	0
1825	WV0066630	1,152	1,152	3.27	0
1825	WV1004271	30	30	3.27	0
1825	WV1011138	114	114	3.27	0
1825	WV1013246	244	244	3.27	0
1825	WV1013343	220	220	3.27	0
1825	WV1013505	4,919	4,919	3.27	0
1825	WV1019988	3,412	3,412	3.27	0
1826	WV0096229	221	221	3.27	0
1826	WV1019988	395	395	3.27	0
1827	WV0092797	488	488	3.27	0
1827	WV0096229	114	114	3.27	0
1827	WV1003984	52	52	3.27	0
1827	WV1005120	1,353	1,353	3.27	0
1827	WV1008081	3,824	3,824	3.27	0
1827	WV1015907	157	157	3.27	0
1828	WV1008081	794	794	3.27	0
1829	WV1015478	1,399	1,399	3.27	0
1830	WV1003984	57	57	3.27	0
1830	WV1005120	738	738	3.27	0
1830	WV1008081	993	993	3.27	0
1830	WV1015478	1,303	1,303	3.27	0

Table 5a. Iron baseline conditions and allocations (LAs) for nonpoint sources * Othen Nonpoint Sources include: Forest, Wetland, Agriculture, Pasture, and Urban)

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1800	0	0	0	0	3	3	0	0	0	0	76	76	2	2	
1801	742	148	0	0	36	36	0	0	0	0	0	0	182	182	x
1802	83	83	0	0	20	20	0	0	0	0	15	15	29	29	
1803	0	0	0	0	9	9	0	0	0	0	54	54	6	6	
1804	452	452	0	0	42	42	0	0	0	0	2	2	148	148	
1805	1,147	229	0	0	34	34	1	1	0	0	1	1	252	252	x
1806	747	523	0	0	31	31	0	0	0	0	0	0	133	133	x
1807	1,743	523	0	0	84	84	0	0	0	0	101	101	120	120	x
1808	4,927	1,478	0	0	95	95	1	1	0	0	0	0	341	341	x
1809	324	55	0	0	7	7	0	0	0	0	0	0	104	104	x
1810	1,054	158	0	0	157	157	2	2	0	0	1	1	1,056	1,056	x
1811	584	584	0	0	51	51	1	1	0	0	255	255	188	188	
1812	3,847	231	0	0	163	163	1	1	59	59	485	485	1,314	1,314	x
1813	272	272	367	367	144	144	0	0	0	0	133	133	389	389	
1814	733	44	0	0	124	124	1	1	0	0	179	179	1,196	1,196	x
1815	6,009	361	0	0	177	177	0	0	79	79	83	83	330	330	x
1816	3,109	311	8,411	8,411	402	402	2	2	0	0	73	73	1,662	1,662	x
1817	643	39	892	321	25	25	0	0	15	15	0	0	614	614	x
1818	389	389	0	0	43	43	0	0	0	0	2	2	129	129	
1819	1,657	94	0	0	129	129	1	1	0	0	412	412	1,769	1,769	x
1820	197	197	0	0	15	15	0	0	0	0	1	1	16	16	
1821	3,508	526	0	0	30	30	0	0	37	37	0	0	234	234	x
1822	609	609	0	0	13	13	0	0	0	0	10	10	19	19	
1823	10,287	514	0	0	46	46	0	0	0	0	0	0	12	12	x
1824	12,764	766	0	0	26	26	0	0	0	0	0	0	265	265	x
1825	41,048	2,463	2,820	1,015	294	294	1	1	0	0	17	17	1,119	1,119	x
1826	15,574	1,557	0	0	46	46	1	1	0	0	46	46	195	195	x
1827	6,552	393	0	0	37	37	0	0	0	0	0	0	286	286	x
1828	2,816	169	0	0	5	5	0	0	0	0	0	0	58	58	x
1829	0	0	0	0	0	0	0	0	0	0	0	0	17	17	
1830	0	0	0	0	0	0	1	1	0	0	0	0	5	5	

Table 5b. Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1800	0	0	0	0	1	1	0	0	0	0	28	28	4	4	
1801	4,604	4,604	0	0	18	18	0	0	0	0	0	0	120	120	
1802	122	122	0	0	2	2	0	0	0	0	40	40	18	18	
1803	0	0	0	0	9	9	0	0	0	0	59	59	8	8	
1804	1,610	1,610	0	0	15	15	0	0	0	0	17	17	53	53	
1805	6,891	6,891	0	0	14	14	4	4	0	0	6	6	156	156	
1806	3,703	3,703	0	0	12	12	0	0	0	0	0	0	27	27	
1807	9,662	9,662	0	0	17	17	1	1	0	0	790	790	80	80	
1808	24,378	24,378	0	0	53	53	4	4	0	0	0	0	191	191	
1809	1,946	1,946	0	0	4	4	3	3	0	0	0	0	69	69	
1810	8,290	8,290	0	0	73	73	14	14	0	0	6	6	705	705	
1811	3,711	3,711	0	0	27	27	4	4	0	0	1,994	1,994	83	83	
1812	5,153	5,153	0	0	31	31	2	2	130	130	1,312	1,312	843	843	
1813	2,028	2,028	1,116	1,116	46	46	0	0	0	0	1,037	1,037	238	238	
1814	4,524	4,524	0	0	566	566	72	72	0	0	9,259	9,259	778	778	
1815	27,854	27,854	0	0	57	57	0	0	449	449	651	651	218	218	
1816	4,649	4,649	8,515	8,515	54	54	4	4	0	0	199	199	1,079	1,079	
1817	1,052	1,052	903	903	12	12	1	1	32	32	0	0	410	410	
1818	588	588	0	0	5	5	0	0	0	0	6	6	84	84	
1819	2,296	2,296	0	0	24	24	2	2	0	0	1,116	1,116	1,168	1,168	
1820	456	456	0	0	1	1	0	0	0	0	3	3	11	11	
1821	6,178	6,178	0	0	11	11	0	0	81	81	0	0	145	145	
1822	996	996	0	0	1	1	0	0	0	0	27	27	4	4	
1823	13,213	13,213	0	0	3	3	0	0	0	0	0	0	7	7	
1824	18,166	18,166	0	0	9	9	1	1	0	0	0	0	176	176	
1825	40,508	40,508	2,854	2,854	24	24	4	4	0	0	46	46	748	748	
1826	19,948	19,948	0	0	9	9	2	2	0	0	124	124	124	124	
1827	6,756	6,756	0	0	7	7	0	0	0	0	0	0	191	191	
1828	3,702	3,702	0	0	1	1	0	0	0	0	0	0	39	39	
1829	0	0	0	0	0	0	0	0	0	0	0	0	57	57	
1830	0	0	0	0	0	0	0	0	0	0	0	0	17	17	

Table 5c. Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1800	0	0	0	0	2	2	0	0	0	0	52	52	2	2	
1801	2,673	134	0	0	37	37	0	0	0	0	0	0	203	203	x
1802	197	197	0	0	21	21	0	0	0	0	18	18	32	32	
1803	0	0	0	0	6	6	0	0	0	0	37	37	6	6	
1804	1,743	1,743	0	0	43	43	0	0	0	0	3	3	158	158	
1805	806	40	0	0	34	34	1	1	0	0	1	1	279	279	x
1806	3,761	188	0	0	32	32	0	0	0	0	0	0	138	138	x
1807	4,560	228	0	0	85	85	0	0	0	0	121	121	134	134	x
1808	24,938	1,247	0	0	96	96	1	1	0	0	0	0	376	376	x
1809	227	11	0	0	7	7	0	0	0	0	0	0	117	117	x
1810	1,031	52	0	0	159	159	2	2	0	0	1	1	1,178	1,178	x
1811	1,965	1,965	0	0	51	51	1	1	0	0	306	306	204	204	
1812	15,478	785	0	0	165	165	1	1	66	66	582	582	1,464	1,464	x
1813	440	440	76	76	145	145	0	0	0	0	159	159	432	432	
1814	2,683	136	0	0	126	126	2	2	0	0	215	215	1,332	1,332	x
1815	36,593	1,840	0	0	179	179	0	0	88	88	100	100	368	368	x
1816	6,709	359	1,737	1,737	406	406	2	2	0	0	88	88	1,855	1,855	x
1817	307	18	184	74	26	26	0	0	16	16	0	0	685	685	x
1818	767	767	0	0	43	43	0	0	0	0	3	3	144	144	
1819	5,753	293	0	0	131	131	1	1	0	0	495	495	1,973	1,973	x
1820	276	276	0	0	15	15	0	0	0	0	1	1	18	18	
1821	21,431	1,072	0	0	31	31	0	0	41	41	0	0	259	259	x
1822	4,370	4,370	0	0	14	14	0	0	0	0	12	12	20	20	
1823	104,113	10,411	0	0	47	47	0	0	0	0	0	0	13	13	x
1824	114,268	5,733	0	0	27	27	0	0	0	0	0	0	295	295	x
1825	338,395	16,939	613	245	295	295	2	2	0	0	20	20	1,248	1,248	x
1826	158,097	9,486	0	0	46	46	1	1	0	0	55	55	217	217	x
1827	50,536	2,532	0	0	38	38	0	0	0	0	0	0	319	319	x
1828	27,781	1,117	0	0	5	5	0	0	0	0	0	0	65	65	x
1829	0	0	0	0	0	0	0	0	0	0	0	0	25	25	
1830	0	0	0	0	0	0	1	1	0	0	0	0	8	8	

Table 6. Fecal Coliform baseline and allocations

SWS	Stream	Agriculture		Natural Sources		Failing Septics		Residential	
		Baseline Load (counts)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)
1800	Island Creek	3.49E+12	2.44E+12	2.04E+13	2.04E+13	2.32E+15	0.00E+00	3.96E+13	2.77E+13

Appendix A-7
Region 7

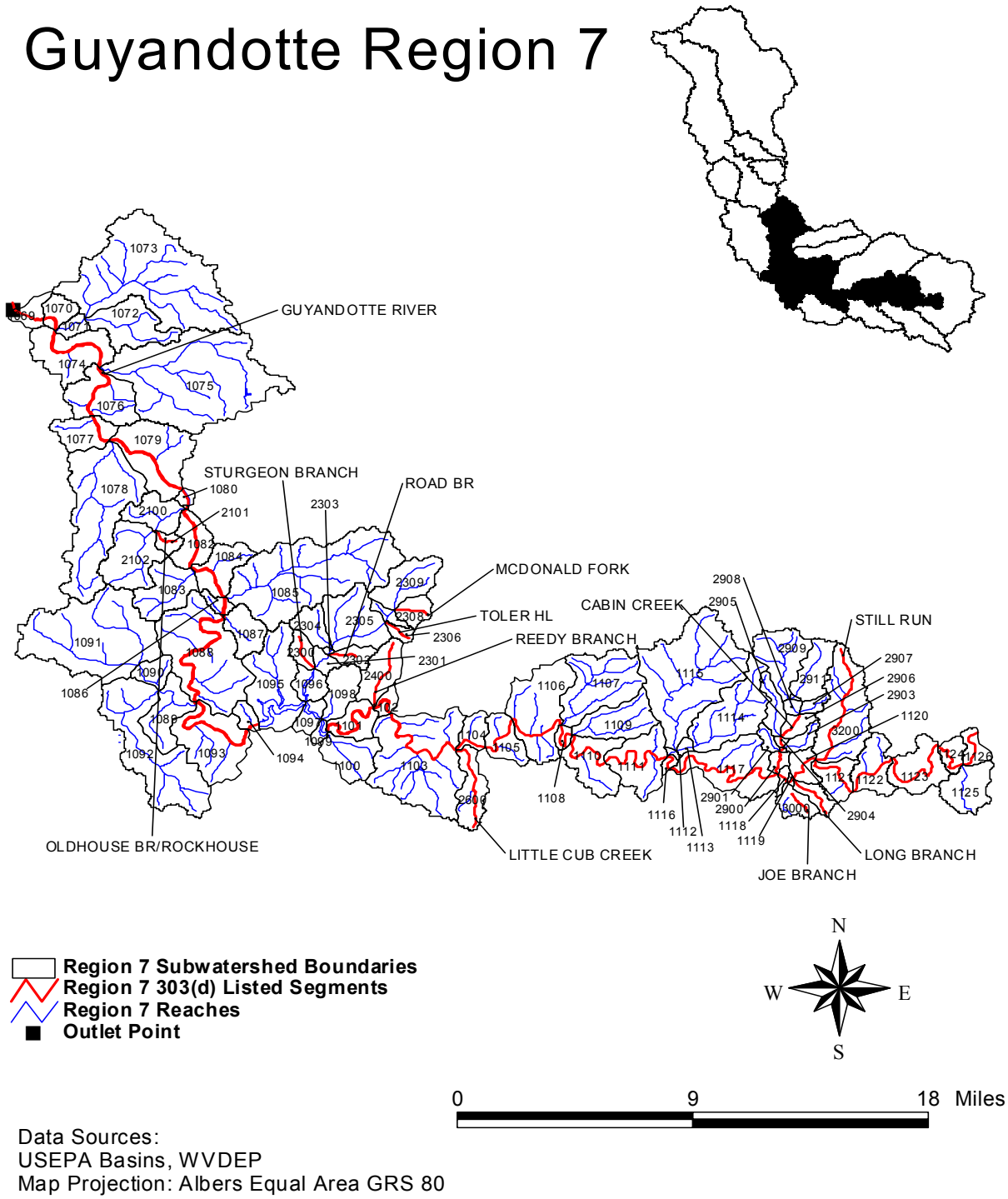


Figure 1. Region 7 - Guyandotte Watershed

Table 1. Impaired waterbodies in Region 7

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Affected Use
Cabin Creek	OG-127	Metals	2900, 2904, 2908		Aquatic Life, Human Health
Guyandotte River	OG-4	Metals, Fecal Coliforms	All SWS in this Region	8-14	Aquatic Life, Human Health
Joe Branch	OG-128	Metals	3000		Aquatic Life, Human Health
Little Cub Creek	OG-108	Metals	2600		Aquatic Life, Human Health
Long Branch	OG-129	Metals	3100		Aquatic Life, Human Health
McDonald Fork	OG-96-H	Metals	2308		Aquatic Life, Human Health
Oldhouse Branch of Rockhouse Creek	OG-77-A.5	Metals, pH	2101		Aquatic Life, Human Health
Reedy Branch	OG-99	Metals	2400		Aquatic Life, Human Health
Road Branch	OG-96-B	Metals	2302		Aquatic Life, Human Health
Still Run	0OG-130	Metals	3200		Aquatic Life, Human Health
Sturgeon Branch	OG-96-A	Metals	2300		Aquatic Life, Human Health
Toler Hollow	OG-96-F	Metals	2306		Aquatic Life, Human Health

T = Aquatic Life Trout Waters

W = Warm Water Fishery

Table 2. Locations of abandoned mines (seep, deep mine, and/or leachate)

SWS
1069
1071
1072
1073
1075
1077
1078
1079
1085
1087
1088
1089
1090
1091
1092
1093

Table 2. (Continued) Locations of abandoned mines (seep, deep mine, and/or leachate)

SWS
1095
1103
1106
1110
1120
1121
1123
1124
1125
1126
2101
2102
2304
2305
2306
2307
2308
2309
2600
3000
3100
3200

Table 3a. Water quality data for dissolved aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	1, WVO-4	16.90	15	27	10	09/04/03	10/21/03
1002	OG-000-002.8	48.33	36	69	3	08/02/00	08/08/02
1003	2, WVO-4	18.70	15	47	10	09/04/03	10/21/03
1018	OG-17m0.8	50.00	50	50	1	06/04/02	06/04/02
1029	OG-29m2.4	50.00	50	50	1	06/04/02	06/04/02
1033	OG-32-Em0.2	40.00	40	40	1	06/03/02	06/03/02
1033	OG-32-Fm	100.00	100	100	3	07/10/00	04/05/01
1033	OG-32-Fm0.2	50.00	50	50	1	05/30/02	05/30/02
1062	69	177.44	27	600	9	09/21/02	07/16/03
1065	OG-000-073.1	77.60	52	110	5	08/02/00	08/15/02
1066	3, WVOG-2	23.80	15	47	10	09/04/03	10/21/03

Table 3b. Water quality data for total aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	1, WVO-4	605.00	135	1700	10	09/04/03	10/21/03
1002	550639	2611.60	50	19000	65	01/10/90	06/06/95
1002	OG-000-002.8	1788.82	71	8900	11	11/29/99	08/08/02
1002	WA96-G01	827.50	50	2400	12	03/21/96	11/24/98
1003	2, WVO-4	353.60	81	1440	10	09/04/03	10/21/03
1008	OG-6m0.1	354.00	354	354	1	05/18/98	05/18/98
1012	OG-9-Am0.3	84.90	84.9	84.9	1	05/21/98	05/21/98
1017	OG-14-Dm0.4	237.00	237	237	1	05/12/98	05/12/98
1027	OG-27-Hm1.8	248.00	248	248	1	05/27/98	05/27/98
1029	OG-29m2.4	60.00	60	60	1	06/04/02	06/04/02
1032	OG-30m1.2	139.00	139	139	1	05/13/98	05/13/98
1033	OG-32-Em0.2	120.00	120	120	1	06/03/02	06/03/02
1033	OG-32-Fm	122.50	50	240	4	05/27/98	04/05/01
1033	OG-32-Fm0.2	70.00	70	70	1	05/30/02	05/30/02
1041	OG-34-E-1m0.8	116.00	116	116	1	05/11/98	05/11/98
1048	OG-42-Cm0.2	66.70	66.7	66.7	1	05/11/98	05/11/98
1062	69	489.00	30	2400	10	09/21/02	07/16/03
1062	OG-51-G.5m	440.00	440	440	1	05/13/98	05/13/98
1063	OG-51.5m	1560.00	1560	1560	1	05/13/98	05/13/98
1064	OG-000-070.0	239.00	239	239	1	05/20/98	05/20/98
1065	OG-000-073.1	534.80	46	2000	15	02/09/99	08/15/02
1065	WA96-G02	590.68	56.5	1570	11	05/31/96	11/24/98
1066	3, WVOG-2	1147.70	132	4480	10	09/04/03	10/21/03
1400	OG-48m	903.00	903	903	1	05/06/98	05/06/98
1600	OG-53m	4650.00	4650	4650	1	05/13/98	05/13/98
1700	OG-61m	821.00	821	821	1	05/13/98	05/13/98

Table 3c. Water quality data for dissolved iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	1, WVO-4	32.30	15	59	10	09/04/03	10/21/03
1000	OG-000.5-0002	28.00	28	28	1	03/22/00	03/22/00
1000	OG-000.5-0004	60.00	28	92	2	03/24/00	03/29/00
1000	OG-000.5-0005	20.00	20	20	1	03/29/00	03/29/00
1000	OG-000.5-0006	230.00	230	230	1	03/29/00	03/29/00
1002	OG-000-002.8	50.67	20	79	9	11/29/99	08/08/02
1003	2, WVO-4	27.80	15	86	10	09/04/03	10/21/03
1018	OG-17m0.8	120.00	120	120	1	06/04/02	06/04/02
1029	OG-29m2.4	20	20	20	1	04-Jun-02	04-Jun-02
1033	OG-32-Em0.2	40	40	40	1	03-Jun-02	03-Jun-02
1033	OG-32-Fm	20.33	20	21	3	10-Jul-00	05-Apr-01
1033	OG-32-Fm0.2	20	20	20	1	30-May-02	30-May-02
1062	69	370	60	1650	9	21-Sep-02	16-Jul-03
1065	OG-000-073.1	153.83	32	477	6	16-May-00	28-Nov-01
1066	3, WVOG-2	121.2	25	261	10	04-Sep-03	21-Oct-03

Table 3d. Water quality data for total iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	1, WVO-4	997.70	367	2760	10	09/04/03	10/21/03
1000	OG-000.5-0001	138.50	77	200	2	03/22/00	03/29/00
1000	OG-000.5-0002	570.00	570	570	1	03/22/00	03/22/00
1000	OG-000.5-0003	295.00	200	390	2	03/24/00	03/29/00
1000	OG-000.5-0004	1395.00	490	2300	2	03/24/00	03/29/00
1000	OG-000.5-0005	810.00	810	810	1	03/29/00	03/29/00
1000	OG-000.5-0006	3400.00	3400	3400	1	03/29/00	03/29/00
1000	OG-000.5-0007	1195.00	390	2000	2	03/24/00	03/29/00
1002	550639	2197.72	25	14000	65	01/10/90	06/06/95
1002	OG-000-002.8	2119.27	53	12000	15	02/09/99	08/08/02
1002	WA96-G01	1396.67	319	4000	12	03/21/96	11/24/98
1003	2, WVO-4	660.10	281	2320	10	09/04/03	10/21/03
1008	OG-6m0.1	1030.00	1030	1030	1	05/18/98	05/18/98
1012	OG-9-Am0.3	174.00	174	174	1	05/21/98	05/21/98
1017	OG-14-Dm0.4	527.00	527	527	1	05/12/98	05/12/98
1018	OG-17m0.8	1090.00	1090	1090	1	06/04/02	06/04/02
1027	OG-27-Hm1.8	540.00	540	540	1	05/27/98	05/27/98
1029	OG-29m2.4	110.00	110	110	1	06/04/02	06/04/02
1032	OG-30m1.2	260.00	260	260	1	05/13/98	05/13/98
1033	OG-32-Em0.2	170.00	170	170	1	06/03/02	06/03/02
1033	OG-32-Fm	81.25	20	140	4	05/27/98	04/05/01
1033	OG-32-Fm0.2	80.00	80	80	1	05/30/02	05/30/02
1041	OG-34-E-1m0.8	192.00	192	192	1	05/11/98	05/11/98
1048	OG-42-Cm0.2	252.00	252	252	1	05/11/98	05/11/98
1062	69	1271.00	260	5240	10	09/21/02	07/16/03
1062	OG-51-G.5m	957.00	957	957	1	05/13/98	05/13/98
1063	OG-51.5m	681.00	681	681	1	05/13/98	05/13/98
1064	OG-000-070.0	535.00	535	535	1	05/20/98	05/20/98
1065	OG-000-073.1	777.14	247	1960	14	02/09/99	08/15/02
1065	WA96-G02	923.00	250	3130	11	05/31/96	11/24/98
1066	3, WVOG-2	1806.50	804	3640	10	09/04/03	10/21/03
1400	OG-48m	920.00	920	920	1	05/06/98	05/06/98
1600	OG-53m	636.00	636	636	1	05/13/98	05/13/98
1700	OG-61m	1210.00	1210	1210	1	05/13/98	05/13/98

Table 3e. Water quality data for dissolved manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	OG-000.5-0001	55.00	55	55.0	1	03/29/00	03/29/00
1000	OG-000.5-0002	130.00	130	130.0	1	03/22/00	03/22/00
1000	OG-000.5-0004	1720.00	240	3200.0	2	03/24/00	03/29/00
1000	OG-000.5-0005	22.00	22	22.0	1	03/29/00	03/29/00
1000	OG-000.5-0006	640.00	640	640.0	1	03/29/00	03/29/00
1000	OG-000.5-0007	1925.00	350	3500.0	2	03/24/00	03/29/00
1002	OG-000-002.8	28.00	28	28.0	1	11/29/99	11/29/99
1062	69	119.00	60	180.0	10	09/21/02	07/16/03

Table 3f. Water quality data for total manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	OG-000.5-0001	41.5	24.00	59.0	2.0	3/22/2000	3/29/2000
1000	OG-000.5-0002	150.0	150.00	150.0	1.0	3/22/2000	3/22/2000
1000	OG-000.5-0004	1775.0	250.00	3300.0	2.0	3/24/2000	3/29/2000
1000	OG-000.5-0005	51.0	51.00	51.0	1.0	3/29/2000	3/29/2000
1000	OG-000.5-0006	650.0	650.00	650.0	1.0	3/29/2000	3/29/2000
1000	OG-000.5-0007	1930.0	360.00	3500.0	2.0	3/24/2000	3/29/2000
1002	550639	117.0	5.00	750.0	65.0	1/10/1990	6/6/1995
1002	OG-000-002.8	815.8	45.00	10600.0	15.0	2/9/1999	8/8/2002
1002	WA96-G01	118.6	38.00	286.0	12.0	3/21/1996	11/24/1998
1008	OG-6m0.1	531.0	531.00	531.0	1.0	5/18/1998	5/18/1998
1012	OG-9-Am0.3	51.2	51.20	51.2	1.0	5/21/1998	5/21/1998
1017	OG-14-Dm0.4	191.0	191.00	191.0	1.0	5/12/1998	5/12/1998
1018	OG-17m0.8	330.0	330.00	330.0	1.0	6/4/2002	6/4/2002
1027	OG-27-Hm1.8	34.3	34.30	34.3	1.0	5/27/1998	5/27/1998
1029	OG-29m2.4	20.0	20.00	20.0	1.0	6/4/2002	6/4/2002
1032	OG-30m1.2	26.8	26.80	26.8	1.0	5/13/1998	5/13/1998
1033	OG-32-Em0.2	20.0	20.00	20.0	1.0	6/3/2002	6/3/2002
1033	OG-32-Fm	17.5	10.00	20.0	4.0	5/27/1998	4/5/2001
1033	OG-32-Fm0.2	20.0	20.00	20.0	1.0	5/30/2002	5/30/2002
1041	OG-34-E-1m0.8	10.0	10.00	10.0	1.0	5/11/1998	5/11/1998
1048	OG-42-Cm0.2	49.3	49.30	49.3	1.0	5/11/1998	5/11/1998
1062	69	194.0	80.00	440.0	10.0	9/21/2002	7/16/2003
1062	OG-51-G.5m	258.0	258.00	258.0	1.0	5/13/1998	5/13/1998
1063	OG-51.5m	611.0	611.00	611.0	1.0	5/13/1998	5/13/1998
1064	OG-000-070.0	79.2	79.20	79.2	1.0	5/20/1998	5/20/1998
1065	OG-000-073.1	979.6	39.00	11600.0	15.0	2/9/1999	8/15/2002
1065	WA96-G02	90.2	54.70	152.0	11.0	5/31/1996	11/24/1998
1400	OG-48m	174.0	174.00	174.0	1.0	5/6/1998	5/6/1998
1600	OG-53m	726.0	726.00	726.0	1.0	5/13/1998	5/13/1998
1700	OG-61m	375.0	375.00	375.0	1.0	5/13/1998	5/13/1998

Table 3g. Water quality data for total selenium

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	1, WVO-4	2.8	1.0	3.0	10.0	9/4/2003	10/21/2003
1003	2, WVO-4	2.8	1.0	3.0	10.0	9/4/2003	10/21/2003
1018	OG-17m0.8	5.0	5.0	5.0	1.0	6/4/2002	6/4/2002
1029	OG-29m2.4	5.0	5.0	5.0	1.0	6/4/2002	6/4/2002
1033	OG-32-Em0.2	5.0	5.0	5.0	1.0	6/3/2002	6/3/2002
1033	OG-32-Fm0.2	5.0	5.0	5.0	1.0	5/30/2002	5/30/2002
1066	3, WVOG-2	2.8	1.0	3.0	10.0	9/4/2003	10/21/2003

Table 3h. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1000	OG-000.5-0001	8.1	7.2	8.6	3.0	3/22/2000	5/24/2000
1000	OG-000.5-0002	8.2	8.2	8.2	1.0	3/22/2000	3/22/2000
1000	OG-000.5-0003	8.5	8.4	8.6	2.0	3/24/2000	3/29/2000
1000	OG-000.5-0004	8.0	8.0	8.0	2.0	3/24/2000	3/29/2000
1000	OG-000.5-0005	8.3	8.3	8.3	1.0	3/29/2000	3/29/2000
1000	OG-000.5-0006	7.7	7.7	7.7	1.0	3/29/2000	3/29/2000
1000	OG-000.5-0007	8.1	8.1	8.1	1.0	3/29/2000	3/29/2000
1002	550639	7.3	6.6	8.0	64.0	1/10/1990	6/6/1995
1002	OG-000-002.8	7.3	6.6	7.9	12.0	2/9/1999	8/8/2002
1002	WA96-G01	7.5	7.1	8.2	8.0	3/21/1996	11/24/1998
1004	OG-3-0.5Am	8.3	8.3	8.3	1.0	5/18/1998	5/18/1998
1004	OG-3m	8.3	8.3	8.3	1.0	5/18/1998	5/18/1998
1008	OG-6m0.1	7.8	7.8	7.8	1.0	5/18/1998	5/18/1998
1012	OG-9-Am0.3	7.8	7.8	7.8	1.0	5/21/1998	5/21/1998
1014	OG-10-Am	8.7	8.7	8.7	1.0	5/21/1998	5/21/1998
1014	OG-10m	8.7	8.7	8.7	1.0	5/21/1998	5/21/1998
1015	OG-11m	8.5	8.5	8.5	1.0	5/12/1998	5/12/1998
1017	OG-14-Dm0.4	8.5	8.5	8.5	1.0	5/12/1998	5/12/1998
1018	OG-17m0.8	4.6	4.6	4.6	1.0	6/4/2002	6/4/2002
1024	OG-23.5m	8.3	8.3	8.3	1.0	5/22/1998	5/22/1998
1027	OG-27-Am	8.3	8.3	8.3	1.0	5/22/1998	5/22/1998
1027	OG-27-Hm1.8	8.3	8.3	8.3	1.0	5/27/1998	5/27/1998
1027	OG-27m	8.3	8.3	8.3	1.0	5/22/1998	5/22/1998
1029	OG-29-Cm	8.3	8.3	8.3	1.0	5/13/1998	5/13/1998
1029	OG-29m2.4	4.0	4.0	4.0	1.0	6/4/2002	6/4/2002
1032	OG-30m1.2	8.2	8.2	8.2	1.0	5/13/1998	5/13/1998
1033	OG-32-Em0.2	3.7	3.7	3.7	1.0	6/3/2002	6/3/2002
1033	OG-32-Fm	6.0	5.0	8.2	4.0	5/27/1998	4/5/2001
1037	OG-34-Am	8.2	8.2	8.2	1.0	5/6/1998	5/6/1998
1037	OG-34m	8.2	8.2	8.2	1.0	5/6/1998	5/6/1998
1038	OG-34-Bm	8.2	8.2	8.2	1.0	5/6/1998	5/6/1998
1041	OG-34-E-1m	8.2	8.2	8.2	1.0	5/6/1998	5/6/1998
1041	OG-34-E-1m0.8	8.2	8.2	8.2	1.0	5/11/1998	5/11/1998
1043	WVOG-35	8.2	8.2	8.2	1.0	5/11/1998	5/11/1998
1044	OG-36m	8.1	8.0	8.2	2.0	5/4/1998	5/11/1998
1044	OG-37m	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1047	OG-40m	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1047	OG-41m	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1048	OG-42-Am	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1048	OG-42-Cm0.2	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1048	OG-42-Dm	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1048	OG-42-Em	8.1	8.1	8.1	1.0	5/11/1998	5/11/1998
1059	OG-50m	7.8	7.8	7.8	1.0	5/6/1998	5/6/1998
1062	69	7.5	7.2	7.9	10.0	9/21/2002	7/16/2003
1062	OG-51-Bm	7.8	7.8	7.8	1.0	5/6/1998	5/6/1998
1062	OG-51-G.5m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998
1063	OG-51.5m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998
1064	OG-000-070.0	7.6	7.6	7.6	1.0	5/20/1998	5/20/1998
1065	OG-000-073.1	7.5	7.1	8.0	12.0	2/9/1999	8/15/2002
1065	WA96-G02	7.6	7.2	7.9	9.0	8/30/1996	11/24/1998
1066	OG-59m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998
1067	OG-60m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998
1400	OG-48m	8.0	8.0	8.0	1.0	5/6/1998	5/6/1998
1600	OG-53m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998
1700	OG-61m	7.8	7.8	7.8	1.0	5/13/1998	5/13/1998

Table 3i. Water quality data for fecal coliforms

SWS	WQ Station	Avg (#/100 mL)	Min (#/100 mL)	Max (#/100 mL)	Count	Start Date	End Date
1000	OG-000.5-0001	773.0	91.0	1455.0	2.0	3/22/2000	3/29/2000
1000	OG-000.5-0002	12000.0	12000.0	12000.0	1.0	3/22/2000	3/22/2000
1000	OG-000.5-0004	15.0	10.0	20.0	2.0	3/24/2000	3/29/2000
1000	OG-000.5-0005	91.0	91.0	91.0	1.0	3/29/2000	3/29/2000
1000	OG-000.5-0007	90.0	90.0	90.0	1.0	3/29/2000	3/29/2000
1002	OG-000-002.8	1125.6	6.0	2400.0	12.0	5/26/1999	8/8/2002
1065	OG-000-073.1	2553.8	4.0	22000.0	12.0	5/26/1999	8/15/2002
1004	OG-3-0.5Am	210.0	210.0	210.0	1.0	5/18/1998	5/18/1998
1004	OG-3m	330.0	330.0	330.0	1.0	5/18/1998	5/18/1998
1008	OG-6m0.1	1900.0	1900.0	1900.0	1.0	5/18/1998	5/18/1998
1012	OG-9-Am0.3	3300.0	3300.0	3300.0	1.0	5/21/1998	5/21/1998
1014	OG-10-Am	900.0	900.0	900.0	1.0	5/21/1998	5/21/1998
1014	OG-10m	3000.0	3000.0	3000.0	1.0	5/21/1998	5/21/1998
1015	OG-11m	2000.0	2000.0	2000.0	1.0	5/12/1998	5/12/1998
1017	OG-14-Dm0.4	6400.0	6400.0	6400.0	1.0	5/12/1998	5/12/1998
1018	OG-17m0.8	6.0	6.0	6.0	1.0	6/4/2002	6/4/2002
1024	OG-23.5m	5000.0	5000.0	5000.0	1.0	5/22/1998	5/22/1998
1027	OG-27-Am	740.0	740.0	740.0	1.0	5/22/1998	5/22/1998
1027	OG-27-Hm1.8	420.0	420.0	420.0	1.0	5/27/1998	5/27/1998
1027	OG-27m	70.0	70.0	70.0	1.0	5/22/1998	5/22/1998
1029	OG-29-Cm	30.0	30.0	30.0	1.0	5/13/1998	5/13/1998
1029	OG-29m2.4	2.0	2.0	2.0	1.0	6/4/2002	6/4/2002
1032	OG-30m1.2	3300.0	3300.0	3300.0	1.0	5/13/1998	5/13/1998
1033	OG-32-Em0.2	2.0	2.0	2.0	1.0	6/3/2002	6/3/2002
1033	OG-32-Fm	32.0	32.0	32.0	1.0	5/27/1998	5/27/1998
1033	OG-32-Fm0.2	2.0	2.0	2.0	1.0	5/30/2002	5/30/2002
1037	OG-34-Am	1300.0	1300.0	1300.0	1.0	5/6/1998	5/6/1998
1037	OG-34m	2000.0	2000.0	2000.0	1.0	5/6/1998	5/6/1998
1038	OG-34-Bm	2200.0	2200.0	2200.0	1.0	5/6/1998	5/6/1998
1041	OG-34-E-1m	6000.0	6000.0	6000.0	1.0	5/6/1998	5/6/1998
1041	OG-34-E-1m0.8	6.0	6.0	6.0	1.0	5/11/1998	5/11/1998
1043	WVOG-35	5600.0	5600.0	5600.0	1.0	5/11/1998	5/11/1998
1044	OG-36m	810.0	420.0	1200.0	2.0	5/4/1998	5/11/1998
1044	OG-37m	28.0	28.0	28.0	1.0	5/11/1998	5/11/1998
1047	OG-40m	380.0	380.0	380.0	1.0	5/11/1998	5/11/1998
1047	OG-41m	4200.0	4200.0	4200.0	1.0	5/11/1998	5/11/1998
1048	OG-42-Am	20000.0	20000.0	20000.0	1.0	5/11/1998	5/11/1998
1048	OG-42-Cm0.2	6400.0	6400.0	6400.0	1.0	5/11/1998	5/11/1998
1048	OG-42-Dm	3200.0	3200.0	3200.0	1.0	5/11/1998	5/11/1998
1048	OG-42-Em	230.0	230.0	230.0	1.0	5/11/1998	5/11/1998
1059	OG-50m	52.0	52.0	52.0	1.0	5/6/1998	5/6/1998
1062	OG-51-Bm	4200.0	4200.0	4200.0	1.0	5/6/1998	5/6/1998
1062	OG-51-G.5m	150.0	150.0	150.0	1.0	5/13/1998	5/13/1998
1063	OG-51.5m	2000.0	2000.0	2000.0	1.0	5/13/1998	5/13/1998
1066	OG-59m	3800.0	3800.0	3800.0	1.0	5/13/1998	5/13/1998
1067	OG-60m	240.0	240.0	240.0	1.0	5/13/1998	5/13/1998
1400	OG-48m	44.0	44.0	44.0	1.0	5/6/1998	5/6/1998
1600	OG-53m	20.0	20.0	20.0	1.0	5/13/1998	5/13/1998
1700	OG-61m	150.0	150.0	150.0	1.0	5/13/1998	5/13/1998
1002	550639	3110.7	20.0	25000.0	63.0	1/10/1990	6/6/1995
1002	WA96-G01	6054.5	320.0	22000.0	11.0	3/21/1996	11/24/1998
1065	WA96-G02	4055.6	12.0	16000.0	11.0	5/31/1996	11/24/1998

Table 4a. Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1071	WV1010689	36	36	3.20	0
1072	WV0049603	459	459	3.20	0
1072	WV0093211	187	187	3.20	0
1072	WV1010689	88	88	3.20	0
1072	WV1015753	1,384	1,384	3.20	0
1072	WV1016938	918	918	3.20	0
1072	WV1020102	468	468	3.20	0
1073	WV0047074	199	199	3.20	0
1073	WV0096369	416	416	3.20	0
1073	WV1004956	1,195	1,195	3.20	0
1073	WV1010689	1,816	1,816	3.20	0
1073	WV1013424	201	201	3.20	0
1073	WV1015567	1,545	1,545	3.20	0
1073	WV1016938	12,352	12,352	3.20	0
1074	WV1001230	980	980	3.20	0
1074	WV1001931	607	607	3.20	0
1074	WV1002775	67	67	3.20	0
1074	WV1003836	89	89	3.20	0
1074	WV1004573	38	38	3.20	0
1075	WV0036579	83	83	3.20	0
1075	WV0047074	171	171	3.20	0
1075	WV0053163	60	60	3.20	0
1075	WV0053210	948	948	3.20	0
1075	WV0066346	2,204	2,204	3.20	0
1075	WV0093211	4,089	4,089	3.20	0
1075	WV0099520	4,477	4,477	3.20	0
1075	WV1008331	3,729	3,729	3.20	0
1075	WV1013319	240	240	3.20	0
1075	WV1013424	103	103	3.20	0
1075	WV1013599	22,238	22,238	3.20	0
1075	WV1015559	10,482	10,482	3.20	0
1075	WV1015737	16,790	16,790	3.20	0
1075	WV1015753	10,343	10,343	3.20	0
1075	WV1016849	5,097	5,097	3.20	0
1075	WV1016938	2,939	2,939	3.20	0
1075	WV1017209	616	616	3.20	0
1075	WV1020111	799	799	3.20	0
1076	WV1005359	201	201	3.20	0
1076	WV1015559	8,609	8,609	3.20	0
1077	WV1004611	185	185	3.20	0
1077	WV1020366	2,467	2,467	3.20	0
1078	WV0066702	675	675	3.20	0
1078	WV1004867	87	87	3.20	0
1078	WV1004948	166	166	3.20	0
1078	WV1016851	299	299	3.20	0
1078	WV1017004	7,427	7,427	3.20	0
1078	WV1020277	98	98	3.20	0
1078	WV1020340	65	65	3.20	0
1078	WV1020366	399	399	3.20	0
1079	WV0096172	161	161	3.20	0
1079	WV1004093	160	160	3.20	0
1079	WV1005057	414	414	3.20	0
1079	WV1015559	7,078	7,078	3.20	0
1079	WV1016849	4,302	4,302	3.20	0
1082	WV1005243	62	62	3.20	0
1083	WV0000418	226	226	3.20	0
1085	WV0064840	2,496	2,496	3.20	0
1085	WV1003895	128	128	3.20	0
1085	WV1004671	311	311	3.20	0

Table 4a. (Continued) Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1085	WV1004751	108	108	3.20	0
1085	WV1004905	167	167	3.20	0
1085	WV1011031	132	132	3.20	0
1085	WV1013327	137	137	3.20	0
1085	WV1017039	218	218	3.20	0
1085	WV1017136	99	99	3.20	0
1088	WV0000418	117	117	3.20	0
1088	WV0029726	1,141	1,141	3.20	0
1088	WV0052515	2,473	2,473	3.20	0
1088	WV0069396	763	763	3.20	0
1088	WV0092860	1,384	1,384	3.20	0
1088	WV0099643	2,724	2,724	3.20	0
1088	WV1005006	3,602	3,602	3.20	0
1088	WV1007980	89	89	3.20	0
1089	WV0069396	407	407	3.20	0
1089	WV0099929	1,606	1,606	3.20	0
1089	WV1004760	221	221	3.20	0
1089	WV1007980	57	57	3.20	0
1089	WV1013220	2,617	2,617	3.20	0
1089	WV1017195	152	152	3.20	0
1090	WV0069396	430	430	3.20	0
1090	WV1004760	78	78	3.20	0
1090	WV1020196	1,433	1,433	3.20	0
1091	WV0096253	313	313	3.20	0
1091	WV1004361	27	27	3.20	0
1091	WV1004760	1,809	1,809	3.20	0
1091	WV1004948	480	480	3.20	0
1091	WV1008099	858	858	3.20	0
1091	WV1013343	3,094	3,094	3.20	0
1091	WV1016806	156	156	3.20	0
1091	WV1016881	490	490	3.20	0
1091	WV1018914	1,499	1,499	3.20	0
1091	WV1020196	2,128	2,128	3.20	0
1092	WV0099929	2,516	2,264	3.20	10
1092	WV1004760	177	160	3.20	10
1092	WV1018914	519	467	3.20	10
1092	WV1020196	7,963	7,166	3.20	10
1093	WV1013220	1,474	1,474	3.20	0
1094	WV1005006	429	429	3.20	0
1095	WVG015033	143	143	3.20	0
1096	WV1016539	1,241	1,241	3.20	0
1096	WVG015033	162	162	3.20	0
1097	WV1016539	370	370	3.20	0
1098	WV1016539	5,552	5,552	3.20	0
1106	WV1006592	235	235	3.20	0
1107	WV1006584	983	983	3.20	0
1107	WV1006592	236	236	3.20	0
1107	WV1008641	143	143	3.20	0
1107	WV1008706	135	135	3.20	0
1108	WV1006592	844	844	3.20	0
1110	WV0061336	870	870	3.20	0
1110	WV1006592	117	117	3.20	0
1110	WV1008749	79	79	3.20	0
1110	WV1018493	826	826	3.20	0
1111	WV0061336	1,339	1,339	3.20	0
1114	WV0092401	407	407	3.20	0

Table 4a. (Continued) Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1114	WV1016407	40	40	3.20	0
1117	WV0044024	110	110	3.20	0
1117	WV0090042	160	160	3.20	0
1117	WV1016229	75	75	3.20	0
1117	WV1016237	31	31	3.20	0
1117	WV1016342	61	61	3.20	0
1117	WV1016385	112	112	3.20	0
1117	WV1016407	82	82	3.20	0
1118	WV0044024	119	119	3.20	0
1118	WV0053121	1,280	1,280	3.20	0
1118	WV1018523	49	49	3.20	0
1119	WV0050521	836	836	3.20	0
1119	WV0053121	798	798	3.20	0
1119	WV1018523	46	46	3.20	0
1120	WV0044024	115	115	3.20	0
1120	WV0053121	1,239	1,239	3.20	0
1121	WV0049671	46	46	3.20	0
1121	WV0050521	1,606	1,606	3.20	0
1121	WV0053121	383	383	3.20	0
1122	WV0049671	22	22	3.20	0
1122	WV0093530	128	128	3.20	0
2100	WV0000418	676	676	3.20	0
2100	WV1004247	68	68	3.20	0
2100	WV1016032	316	316	3.20	0
2100	WV1017004	1,865	1,865	3.20	0
2101	WV1004247	48	48	3.20	0
2102	WV0000418	861	861	3.20	0
2102	WV1004361	49	49	3.20	0
2102	WV1004948	61	61	3.20	0
2102	WV1008102	130	130	3.20	0
2301	WV1016539	740	740	3.20	0
2302	WV1006681	153	153	3.20	0
2302	WV1016539	2,722	2,722	3.20	0
2305	WV1006681	144	144	3.20	0
2305	WV1016539	3,916	3,916	3.20	0
2306	WV0062961	79	79	3.20	0
2306	WV1016539	374	374	3.20	0
2308	WV1006037	2,652	2,652	3.20	0
2400	WV0062961	78	78	3.20	0
2400	WV1016539	4,052	4,052	3.20	0
2900	WV1018523	44	44	3.20	0
2903	WV1016466	169	169	3.20	0
2906	WV0044024	106	106	3.20	0
2906	WV1016342	20	20	3.20	0
3000	WV0050521	413	413	3.20	0
3000	WV0053121	395	395	3.20	0
3100	WV0050521	425	425	3.20	0
3100	WV0053121	1,216	1,216	3.20	0
3200	WV0049671	137	137	3.20	0
3200	WV1005596	57	57	3.20	0
3200	WV1016181	162	162	3.20	0
3200	WV1016199	70	70	3.20	0
3200	WV1016466	161	161	3.20	0
3200	WV1018566	86	86	3.20	0
3200	WV1018612	100	100	3.20	0
3200	WV1018621	313	313	3.20	0
3200	WV1018981	74	74	3.20	0
1069*	WV0115509	706.69	706.69	4.00	0
1082*	WVG640090	2,749.99	2,749.99	3.70	0
1088*	WVG640023	90.16	90.16	3.70	0

* Denotes actual Office of Water Resources Permit

Table 4b. Manganese baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1071	WV1010689	19	19	2.00	0
1072	WV0049603	197	197	2.00	0
1072	WV0093211	80	80	2.00	0
1072	WV1010689	38	38	2.00	0
1072	WV1015753	595	595	2.00	0
1072	WV1016938	394	394	2.00	0
1072	WV1020102	201	201	2.00	0
1073	WV0047074	82	82	2.00	0
1073	WV0096369	173	173	2.00	0
1073	WV1004956	496	496	2.00	0
1073	WV1010689	754	754	2.00	0
1073	WV1013424	83	83	2.00	0
1073	WV1015567	641	641	2.00	0
1073	WV1016938	5,126	5,126	2.00	0
1074	WV1001230	491	491	2.00	0
1074	WV1001931	304	304	2.00	0
1074	WV1002775	34	34	2.00	0
1074	WV1003836	45	45	2.00	0
1074	WV1004573	19	19	2.00	0
1075	WV0036579	34	34	2.00	0
1075	WV0047074	69	69	2.00	0
1075	WV0053163	24	24	2.00	0
1075	WV0053210	382	382	2.00	0
1075	WV0066346	887	887	2.00	0
1075	WV0093211	1,646	1,646	2.00	0
1075	WV0099520	1,802	1,802	2.00	0
1075	WV1008331	1,501	1,501	2.00	0
1075	WV1013319	97	97	2.00	0
1075	WV1013424	42	42	2.00	0
1075	WV1013599	8,952	8,952	2.00	0
1075	WV1015559	4,219	4,219	2.00	0
1075	WV1015737	6,759	6,759	2.00	0
1075	WV1015753	4,164	4,164	2.00	0
1075	WV1016849	2,052	2,052	2.00	0
1075	WV1016938	1,183	1,183	2.00	0
1075	WV1017209	248	248	2.00	0
1075	WV1020111	322	322	2.00	0
1076	WV1005359	74	74	2.00	0
1076	WV1015559	3,165	3,165	2.00	0
1077	WV1004611	74	74	2.00	0
1077	WV1020366	981	981	2.00	0
1078	WV0066702	277	277	2.00	0
1078	WV1004867	36	36	2.00	0
1078	WV1004948	68	68	2.00	0
1078	WV1016851	123	123	2.00	0
1078	WV1017004	3,045	3,045	2.00	0
1078	WV1020277	40	40	2.00	0
1078	WV1020340	27	27	2.00	0
1078	WV1020366	163	163	2.00	0
1079	WV0096172	64	64	2.00	0
1079	WV1004093	64	64	2.00	0
1079	WV1005057	164	164	2.00	0
1079	WV1015559	2,813	2,813	2.00	0
1079	WV1016849	1,710	1,710	2.00	0
1082	WV1005243	30	30	2.00	0
1083	WV0000418	110	110	2.00	0
1085	WV0064840	1,303	1,303	2.00	0
1085	WV1003895	67	67	2.00	0
1085	WV1004671	162	162	2.00	0
1085	WV1004751	56	56	2.00	0
1085	WV1004905	87	87	2.00	0
1085	WV1011031	69	69	2.00	0

Table 4b. (Continued) Manganese baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1085	WV1013327	71	71	2.00	0
1085	WV1017039	114	114	2.00	0
1085	WV1017136	52	52	2.00	0
1088	WV0000418	55	55	2.00	0
1088	WV0029726	536	536	2.00	0
1088	WV0052515	1,162	1,162	2.00	0
1088	WV0069396	359	359	2.00	0
1088	WV0092860	650	650	2.00	0
1088	WV0099643	1,280	1,280	2.00	0
1088	WV1005006	1,692	1,692	2.00	0
1088	WV1007980	42	42	2.00	0
1089	WV0069396	179	179	2.00	0
1089	WV0099929	708	708	2.00	0
1089	WV1004760	97	97	2.00	0
1089	WV1007980	25	25	2.00	0
1089	WV1013220	1,153	1,153	2.00	0
1089	WV1017195	67	67	2.00	0
1090	WV0069396	179	179	2.00	0
1090	WV1004760	32	32	2.00	0
1090	WV1020196	597	597	2.00	0
1091	WV0096253	143	143	2.00	0
1091	WV1004361	12	12	2.00	0
1091	WV1004760	825	825	2.00	0
1091	WV1004948	219	219	2.00	0
1091	WV1008099	391	391	2.00	0
1091	WV1013343	1,411	1,411	2.00	0
1091	WV1016806	71	71	2.00	0
1091	WV1016881	223	223	2.00	0
1091	WV1018914	684	684	2.00	0
1091	WV1020196	971	971	2.00	0
1092	WV0099929	1,169	1,169	2.00	0
1092	WV1004760	82	82	2.00	0
1092	WV1018914	241	241	2.00	0
1092	WV1020196	3,701	3,701	2.00	0
1093	WV1013220	717	717	2.00	0
1094	WV1005006	211	211	2.00	0
1095	WVG015033	82	82	2.00	0
1096	WV1016539	472	472	2.00	0
1096	WVG015033	62	62	2.00	0
1097	WV1016539	135	135	2.00	0
1098	WV1016539	2,024	2,024	2.00	0
1106	WV1006592	127	127	2.00	0
1107	WV1006584	529	529	2.00	0
1107	WV1006592	127	127	2.00	0
1107	WV1008641	77	77	2.00	0
1107	WV1008706	72	72	2.00	0
1108	WV1006592	444	444	2.00	0
1110	WV0061336	469	469	2.00	0
1110	WV1006592	63	63	2.00	0
1110	WV1008749	43	43	2.00	0
1110	WV1018493	446	446	2.00	0
1111	WV0061336	704	704	2.00	0
1114	WV0092401	217	217	2.00	0
1114	WV1016407	21	21	2.00	0
1117	WV0044024	63	63	2.00	0
1117	WV0090042	93	93	2.00	0
1117	WV1016229	43	43	2.00	0
1117	WV1016237	18	18	2.00	0
1117	WV1016342	35	35	2.00	0
1117	WV1016385	65	65	2.00	0
1117	WV1016407	47	47	2.00	0
1118	WV0044024	63	63	2.00	0
1118	WV0053121	683	683	2.00	0

Table 4b. (Continued) Manganese baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1118	WV1018523	26	26	2.00	0
1119	WV0050521	462	462	2.00	0
1119	WV0053121	441	441	2.00	0
1119	WV1018523	25	25	2.00	0
1120	WV0044024	61	61	2.00	0
1120	WV0053121	661	661	2.00	0
1121	WV0049671	26	26	2.00	0
1121	WV0050521	924	924	2.00	0
1121	WV0053121	220	220	2.00	0
1122	WV0049671	13	13	2.00	0
1122	WV0093530	76	76	2.00	0
2100	WV0000418	276	276	2.00	0
2100	WV1004247	28	28	2.00	0
2100	WV1016032	129	129	2.00	0
2100	WV1017004	761	761	2.00	0
2101	WV1004247	28	28	2.00	0
2102	WV0000418	442	442	2.00	0
2102	WV1004361	25	25	2.00	0
2102	WV1004948	31	31	2.00	0
2102	WV1008102	67	67	2.00	0
2301	WV1016539	270	270	2.00	0
2302	WV1006681	57	57	2.00	0
2302	WV1016539	1,012	1,012	2.00	0
2305	WV1006681	57	57	2.00	0
2305	WV1016539	1,552	1,552	2.00	0
2306	WV0062961	36	36	2.00	0
2306	WV1016539	171	171	2.00	0
2308	WV1006037	1,432	1,432	2.00	0
2400	WV0062961	28	28	2.00	0
2400	WV1016539	1,484	1,484	2.00	0
2900	WV1018523	26	26	2.00	0
2903	WV1016466	101	101	2.00	0
2906	WV0044024	63	63	2.00	0
2906	WV1016342	12	12	2.00	0
3000	WV0050521	231	231	2.00	0
3000	WV0053121	220	220	2.00	0
3100	WV0050521	231	231	2.00	0
3100	WV0053121	661	661	2.00	0
3200	WV0049671	82	82	2.00	0
3200	WV1005596	34	34	2.00	0
3200	WV1016181	96	96	2.00	0
3200	WV1016199	42	42	2.00	0
3200	WV1016466	96	96	2.00	0
3200	WV1018566	51	51	2.00	0
3200	WV1018612	60	60	2.00	0
3200	WV1018621	186	186	2.00	0
3200	WV1018981	44	44	2.00	0

Table 4c. Aluminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1071	WV1010689	36	36	3.27	0
1072	WV0049603	459	459	3.27	0
1072	WV0093211	187	187	3.27	0
1072	WV1010689	88	88	3.27	0
1072	WV1015753	1,384	1,384	3.27	0
1072	WV1016938	918	918	3.27	0
1072	WV1020102	468	468	3.27	0
1073	WV0047074	199	199	3.27	0
1073	WV0096369	416	416	3.27	0
1073	WV1004956	1,195	1,195	3.27	0
1073	WV1010689	1,816	1,816	3.27	0
1073	WV1013424	201	201	3.27	0
1073	WV1015567	1,545	1,545	3.27	0
1073	WV1016938	12,352	12,352	3.27	0
1074	WV1001230	980	980	3.27	0
1074	WV1001931	607	607	3.27	0
1074	WV1002775	67	67	3.27	0
1074	WV1003836	89	89	3.27	0
1074	WV1004573	38	38	3.27	0
1075	WV0036579	83	83	3.27	0
1075	WV0047074	171	171	3.27	0
1075	WV0053163	60	60	3.27	0
1075	WV0053210	948	948	3.27	0
1075	WV0066346	2,204	2,204	3.27	0
1075	WV0093211	4,089	4,089	3.27	0
1075	WV0099520	4,477	4,477	3.27	0
1075	WV1008331	3,729	3,729	3.27	0
1075	WV1013319	240	240	3.27	0
1075	WV1013424	103	103	3.27	0
1075	WV1013599	22,238	22,238	3.27	0
1075	WV1015559	10,482	10,482	3.27	0
1075	WV1015737	16,790	16,790	3.27	0
1075	WV1015753	10,343	10,343	3.27	0
1075	WV1016849	5,097	5,097	3.27	0
1075	WV1016938	2,939	2,939	3.27	0
1075	WV1017209	616	616	3.27	0
1075	WV1020111	799	799	3.27	0
1076	WV1005359	201	201	3.27	0
1076	WV1015559	8,609	8,609	3.27	0
1077	WV1004611	185	185	3.27	0
1077	WV1020366	2,467	2,467	3.27	0
1078	WV0066702	675	675	3.27	0
1078	WV1004867	87	87	3.27	0
1078	WV1004948	166	166	3.27	0
1078	WV1016851	299	299	3.27	0
1078	WV1017004	7,427	7,427	3.27	0
1078	WV1020277	98	98	3.27	0
1078	WV1020340	65	65	3.27	0
1078	WV1020366	399	399	3.27	0
1079	WV0096172	161	161	3.27	0
1079	WV1004093	160	160	3.27	0
1079	WV1005057	414	414	3.27	0
1079	WV1015559	7,078	7,078	3.27	0
1079	WV1016849	4,302	4,302	3.27	0
1082	WV1005243	62	62	3.27	0
1083	WV0000418	226	226	3.27	0
1085	WV0064840	2,496	2,496	3.27	0
1085	WV1003895	128	128	3.27	0
1085	WV1004671	311	311	3.27	0
1085	WV1004751	108	108	3.27	0
1085	WV1004905	167	167	3.27	0
1085	WV1011031	132	132	3.27	0
1085	WV1013327	137	137	3.27	0
1085	WV1017039	218	218	3.27	0

Table 4c. (Continued) Aluminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1085	WV1017136	99	99	3.27	0
1088	WV0000418	117	117	3.27	0
1088	WV0029726	1,141	1,141	3.27	0
1088	WV0052515	2,473	2,473	3.27	0
1088	WV0069396	763	763	3.27	0
1088	WV0092860	1,384	1,384	3.27	0
1088	WV0099643	2,724	2,724	3.27	0
1088	WV1005006	3,602	3,602	3.27	0
1088	WV1007980	89	89	3.27	0
1089	WV0069396	407	407	3.27	0
1089	WV0099929	1,606	1,606	3.27	0
1089	WV1004760	221	221	3.27	0
1089	WV1007980	57	57	3.27	0
1089	WV1013220	2,617	2,617	3.27	0
1089	WV1017195	152	152	3.27	0
1090	WV0069396	430	430	3.27	0
1090	WV1004760	78	78	3.27	0
1090	WV1020196	1,433	1,433	3.27	0
1091	WV0096253	313	313	3.27	0
1091	WV1004361	27	27	3.27	0
1091	WV1004760	1,809	1,809	3.27	0
1091	WV1004948	480	480	3.27	0
1091	WV1008099	858	858	3.27	0
1091	WV1013343	3,094	3,094	3.27	0
1091	WV1016806	156	156	3.27	0
1091	WV1016881	490	490	3.27	0
1091	WV1018914	1,499	1,499	3.27	0
1091	WV1020196	2,128	2,128	3.27	0
1092	WV0099929	2,516	2,264	2.94	10
1092	WV1004760	177	160	2.94	10
1092	WV1018914	519	467	2.94	10
1092	WV1020196	7,963	7,166	2.94	10
1093	WV1013220	1,474	1,474	3.27	0
1094	WV1005006	429	429	3.27	0
1095	WVG015033	143	143	3.27	0
1096	WV1016539	1,241	1,241	3.27	0
1096	WVG015033	162	162	3.27	0
1097	WV1016539	370	370	3.27	0
1098	WV1016539	5,552	5,552	3.27	0
1106	WV1006592	235	235	3.27	0
1107	WV1006584	983	983	3.27	0
1107	WV1006592	236	236	3.27	0
1107	WV1008641	143	143	3.27	0
1107	WV1008706	135	135	3.27	0
1108	WV1006592	844	844	3.27	0
1110	WV0061336	870	870	3.27	0
1110	WV1006592	117	117	3.27	0
1110	WV1008749	79	79	3.27	0
1110	WV1018493	826	826	3.27	0
1111	WV0061336	1,339	1,339	3.27	0
1114	WV0092401	407	407	3.27	0
1114	WV1016407	40	40	3.27	0
1117	WV0044024	110	110	3.27	0
1117	WV0090042	160	160	3.27	0
1117	WV1016229	75	75	3.27	0
1117	WV1016237	31	31	3.27	0
1117	WV1016342	61	61	3.27	0
1117	WV1016385	112	112	3.27	0
1117	WV1016407	82	82	3.27	0
1118	WV0044024	119	119	3.27	0
1118	WV0053121	1,280	1,280	3.27	0
1118	WV1018523	49	49	3.27	0
1119	WV0050521	836	836	3.27	0
1119	WV0053121	798	798	3.27	0

1119	WV1018523	46	46	3.27	0

Table 4c. (Continued) Aluminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1120	WV0044024	115	115	3.27	0
1120	WV0053121	1,239	1,239	3.27	0
1121	WV0049671	46	46	3.27	0
1121	WV0050521	1,606	1,606	3.27	0
1121	WV0053121	383	383	3.27	0
1122	WV0049671	22	22	3.27	0
1122	WV0093530	128	128	3.27	0
2100	WV0000418	676	676	3.27	0
2100	WV1004247	68	68	3.27	0
2100	WV1016032	316	316	3.27	0
2100	WV1017004	1,865	1,865	3.27	0
2101	WV1004247	48	48	3.27	0
2102	WV0000418	861	861	3.27	0
2102	WV1004361	49	49	3.27	0
2102	WV1004948	61	61	3.27	0
2102	WV1008102	130	130	3.27	0
2301	WV1016539	740	740	3.27	0
2302	WV1006681	153	153	3.27	0
2302	WV1016539	2,722	2,722	3.27	0
2305	WV1006681	144	144	3.27	0
2305	WV1016539	3,916	3,916	3.27	0
2306	WV0062961	79	79	3.27	0
2306	WV1016539	374	374	3.27	0
2308	WV1006037	2,652	2,652	3.27	0
2400	WV0062961	78	78	3.27	0
2400	WV1016539	4,052	4,052	3.27	0
2900	WV1018523	44	44	3.27	0
2903	WV1016466	169	169	3.27	0
2906	WV0044024	106	106	3.27	0
2906	WV1016342	20	20	3.27	0
3000	WV0050521	413	413	3.27	0
3000	WV0053121	395	395	3.27	0
3100	WV0050521	425	425	3.27	0
3100	WV0053121	1,216	1,216	3.27	0
3200	WV0049671	137	137	3.27	0
3200	WV1005596	57	57	3.27	0
3200	WV1016181	162	162	3.27	0
3200	WV1016199	70	70	3.27	0
3200	WV1016466	161	161	3.27	0
3200	WV1018566	86	86	3.27	0
3200	WV1018612	100	100	3.27	0
3200	WV1018621	313	313	3.27	0
3200	WV1018981	74	74	3.27	0

Table 5a. Iron baseline conditions and allocations (LAs) for nonpoint sources * Othen Nonpoint Sources include: Forest, Wetland, Agriculture, Pasture, and Urban

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1069	303	303	0	0	99	99	0	0	0	0	66	66	205	205	
1070	0	0	0	0	19	19	2	2	0	0	835	835	35	35	
1071	662	662	0	0	47	47	0	0	0	0	0	0	118	118	
1072	594	36	0	0	33	33	0	0	0	0	1	1	600	600	x
1073	19,731	1,184	0	0	399	399	3	3	0	0	32	32	2,282	2,282	x
1074	0	0	22,195	22,195	65	65	2	2	0	0	0	0	107	107	
1075	4,225	254	0	0	249	249	1	1	12	12	261	261	1,459	1,459	x
1076	0	0	1,573	1,573	76	76	1	1	0	0	0	0	111	111	
1077	1,071	1,071	3,152	3,152	58	58	0	0	0	0	0	0	308	308	
1078	3,516	211	9,523	3,428	190	190	2	2	48	48	276	276	1,346	1,346	x
1079	4,493	4,493	0	0	199	199	0	0	116	116	1	1	617	617	
1080	0	0	0	0	10	10	0	0	0	0	18	18	12	12	
1081	0	0	0	0	1	1	0	0	0	0	15	15	0	0	
1082	0	0	0	0	37	37	1	1	0	0	21	21	71	71	
1083	0	0	0	0	37	37	11	11	0	0	3,357	3,357	87	87	
1084	0	0	212	212	38	38	9	9	0	0	5	5	83	83	
1085	6,754	405	1,685	607	206	204	6	5	0	0	1,177	1,059	1,855	1,855	x
1086	0	0	0	0	10	10	2	2	0	0	5	5	18	18	
1087	1,113	167	0	0	70	70	1	1	0	0	0	0	330	330	x
1088	3,919	3,919	0	0	314	314	5	5	0	0	403	403	1,248	1,248	
1089	2,997	180	0	0	111	111	2	2	0	0	17	17	390	390	x
1090	437	26	0	0	51	51	1	1	0	0	0	0	177	177	x
1091	4,439	266	0	0	356	356	3	3	0	0	264	264	1,786	1,786	x
1092	3,375	202	0	0	221	221	4	4	0	0	367	367	1,849	1,849	x
1093	2,075	2,075	0	0	246	246	2	2	0	0	930	930	932	932	
1094	0	0	0	0	2	2	2	2	0	0	2	2	24	24	
1095	1,830	1,830	0	0	30	30	1	1	0	0	11	11	866	866	
1096	0	0	0	0	14	14	4	4	0	0	0	0	36	36	
1097	0	0	0	0	5	5	2	2	0	0	6	6	28	28	
1098	0	0	0	0	32	18	3	1	0	0	226	113	53	53	x
1099	0	0	0	0	5	5	0	0	0	0	0	0	10	10	
1100	0	0	0	0	27	27	1	1	0	0	213	213	116	116	
1101	0	0	0	0	2	2	1	1	0	0	104	104	57	57	
1102	0	0	0	0	7	7	0	0	0	0	5	5	19	19	
1103	2,508	2,508	0	0	242	242	3	3	0	0	12	12	2,528	2,528	

Table 5a. (Continued) Iron baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load	Allocated Load	Baseline Load	Allocated Load	Baseline Load	Allocated Load	Baseline Load	Allocated Load	Baseline Load	Allocated Load	Baseline Load	Allocated Load	Baseline Load	Allocated Load	
1104	0	0	0	0	28	28	3	3	0	0	196	196	51	51	
1105	0	0	0	0	10	10	11	11	0	0	217	217	89	89	
1106	2,584	2,584	0	0	243	243	4	4	0	0	21	21	1,409	1,409	
1107	0	0	574	574	137	137	16	16	0	0	107	107	243	243	
1108	0	0	161	161	5	5	1	1	0	0	0	0	19	19	
1109	0	0	0	0	53	53	14	14	0	0	0	0	158	158	
1110	925	925	0	0	107	107	3	3	0	0	23	23	722	722	
1111	0	0	0	0	32	32	9	9	0	0	7	7	160	160	
1112	0	0	0	0	5	5	0	0	0	0	0	0	3	3	
1113	0	0	0	0	8	8	0	0	0	0	0	0	13	13	
1114	0	0	0	0	67	67	14	14	0	0	0	0	243	243	
1115	0	0	18	18	238	238	50	50	0	0	71	71	526	526	
1116	0	0	0	0	11	11	0	0	0	0	0	0	14	14	
1117	0	0	0	0	57	57	0	0	286	286	0	0	227	227	
1118	0	0	0	0	1	1	1	1	0	0	0	0	10	10	
1119	0	0	0	0	0	0	0	0	0	0	0	0	4	4	
1120	2,520	2,520	0	0	48	48	1	1	0	0	6	6	277	277	
1121	3	3	0	0	26	26	3	3	0	0	0	0	73	73	
1122	0	0	0	0	57	57	0	0	0	0	107	107	124	124	
1123	1,756	1,756	0	0	164	164	0	0	166	166	7	7	704	704	
1124	1,344	1,344	0	0	61	61	0	0	111	111	0	0	115	115	
1125	376	30	0	0	98	98	0	0	4	4	38	38	641	641	x
1126	162	162	0	0	51	51	0	0	67	67	2	2	191	191	
2100	0	0	0	0	22	22	0	0	0	0	0	0	67	67	
2101	287	29	0	0	3	3	0	0	0	0	0	0	105	105	x
2102	5,240	1,572	0	0	41	41	0	0	0	0	225	225	591	591	x
2300	0	0	0	0	0	0	3	3	0	0	0	0	31	31	
2301	0	0	0	0	8	8	0	0	0	0	0	0	20	20	
2302	0	0	0	0	9	5	1	1	0	0	1,549	930	13	13	x
2303	0	0	0	0	2	2	1	1	0	0	0	0	3	3	
2304	1,405	84	139	70	1	1	0	0	0	0	0	0	247	247	x
2305	1,899	114	0	0	65	65	2	2	0	0	405	405	542	542	x
2306	169	10	0	0	22	22	0	0	0	0	0	0	113	113	x
2307	1,109	67	0	0	7	7	0	0	0	0	0	0	138	138	x
2308	577	35	0	0	35	35	0	0	0	0	8	8	216	216	x
2309	2,566	154	0	0	108	108	1	1	0	0	312	312	566	566	x
2400	0	0	0	0	25	25	5	5	0	0	2,063	2,063	59	59	

Table 5a. (Continued) Iron baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2600	1,512	91	0	0	75	75	1	1	0	0	0	0	597	597	x
2900	0	0	0	0	8	8	3	3	0	0	18	18	22	22	
2901	0	0	0	0	2	2	5	5	0	0	0	0	21	21	
2902	0	0	0	0	2	2	0	0	0	0	29	29	2	2	
2903	0	0	0	0	19	19	2	2	0	0	0	0	32	32	
2904	0	0	0	0	4	4	0	0	0	0	10	10	7	7	
2905	0	0	0	0	17	17	7	7	0	0	0	0	57	57	
2906	0	0	0	0	9	9	5	5	0	0	0	0	37	37	
2907	0	0	0	0	6	6	0	0	0	0	0	0	21	21	
2908	0	0	0	0	0	0	0	0	0	0	2	2	15	15	
2909	0	0	0	0	67	67	12	12	0	0	81	81	163	163	
2910	0	0	0	0	1	1	0	0	0	0	0	0	3	3	
2911	0	0	0	0	61	61	3	3	0	0	0	0	108	108	
3000	2,451	147	0	0	43	43	0	0	0	0	0	0	292	292	x
3100	1,300	78	0	0	48	48	0	0	0	0	0	0	191	191	x
3200	3,076	185	0	0	131	131	1	1	0	0	0	0	1,503	1,503	x

Table 5b. Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1069	422	422	0	0	14	14	0	0	0	0	180	180	101	101	
1070	0	0	0	0	7	7	1	1	0	0	315	315	108	108	
1071	875	875	0	0	3	3	0	0	0	0	0	0	73	73	
1072	971	971	0	0	7	7	0	0	0	0	2	2	400	400	
1073	22,878	22,878	0	0	60	60	8	8	0	0	87	87	1,523	1,523	
1074	0	0	15,382	15,382	23	23	1	1	0	0	0	0	345	345	
1075	5,600	5,600	0	0	61	61	3	3	25	25	707	707	962	962	
1076	0	0	1,057	1,057	27	27	0	0	0	0	0	0	365	365	
1077	2,572	2,572	3,191	3,191	8	8	0	0	0	0	0	0	204	204	
1078	5,029	5,029	9,641	9,641	41	41	5	5	105	105	746	746	900	900	
1079	6,260	6,260	0	0	25	25	1	1	255	255	2	2	407	407	
1080	0	0	0	0	3	3	0	0	0	0	7	7	34	34	
1081	0	0	0	0	0	0	0	0	0	0	6	6	1	1	
1082	0	0	0	0	12	12	0	0	0	0	8	8	236	236	
1083	0	0	0	0	13	13	4	4	0	0	1,266	1,266	293	293	
1084	0	0	142	142	13	13	3	3	0	0	2	2	278	278	
1085	16,164	16,164	1,706	1,706	48	48	16	16	0	0	3,184	3,184	1,239	1,239	
1086	0	0	0	0	3	3	1	1	0	0	2	2	60	60	
1087	2,675	2,675	0	0	11	11	2	2	0	0	0	0	220	220	
1088	6,405	6,405	0	0	32	32	14	14	0	0	1,091	1,091	827	827	
1089	5,954	5,954	0	0	10	10	6	6	0	0	45	45	258	258	
1090	714	714	0	0	1	1	2	2	0	0	0	0	117	117	
1091	7,023	7,023	0	0	40	40	7	7	0	0	713	713	1,191	1,191	
1092	5,900	5,900	0	0	49	49	14	14	0	0	1,180	1,180	1,163	1,163	
1093	3,718	3,718	0	0	28	28	7	7	0	0	2,995	2,995	583	583	
1094	0	0	0	0	1	1	1	1	0	0	1	1	78	78	
1095	2,994	2,994	0	0	5	5	2	2	0	0	29	29	579	579	
1096	0	0	0	0	5	5	1	1	0	0	0	0	121	121	
1097	0	0	0	0	2	2	1	1	0	0	2	2	96	96	
1098	0	0	0	0	11	11	1	1	0	0	85	85	179	179	
1099	0	0	0	0	2	2	0	0	0	0	0	0	32	32	
1100	0	0	0	0	10	10	0	0	0	0	94	94	405	405	
1101	0	0	0	0	1	1	0	0	0	0	39	39	193	193	
1102	0	0	0	0	2	2	0	0	0	0	2	2	63	63	

Table 5b. (Continued) Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1103	3,605	3,605	0	0	43	43	10	10	0	0	38	38	1,593	1,593	
1104	0	0	0	0	11	11	1	1	0	0	86	86	170	170	
1105	0	0	0	0	4	4	5	5	0	0	96	96	301	301	
1106	4,589	4,589	0	0	63	63	11	11	0	0	67	67	883	883	
1107	0	0	399	399	58	58	7	7	0	0	47	47	836	836	
1108	0	0	112	112	2	2	0	0	0	0	0	0	51	51	
1109	0	0	0	0	22	22	6	6	0	0	0	0	517	517	
1110	1,300	1,300	0	0	15	15	9	9	0	0	74	74	452	452	
1111	0	0	0	0	12	12	4	4	0	0	3	3	545	545	
1112	0	0	0	0	2	2	0	0	0	0	0	0	4	4	
1113	0	0	0	0	3	3	0	0	0	0	0	0	42	42	
1114	0	0	0	0	26	26	6	6	0	0	0	0	817	817	
1115	0	0	12	12	97	97	22	22	0	0	31	31	1,760	1,760	
1116	0	0	0	0	4	4	0	0	0	0	0	0	35	35	
1117	0	0	0	0	22	22	0	0	305	305	0	0	689	689	
1118	0	0	0	0	0	0	0	0	0	0	0	0	23	23	
1119	0	0	0	0	0	0	0	0	0	0	0	0	3	3	
1120	4,313	4,313	0	0	4	4	2	2	0	0	18	18	120	120	
1121	36	36	0	0	9	9	1	1	0	0	0	0	221	221	
1122	0	0	0	0	22	22	0	0	0	0	45	45	349	349	
1123	2,588	2,588	0	0	19	19	0	0	350	350	21	21	344	344	
1124	2,592	2,592	0	0	6	6	0	0	235	235	0	0	67	67	
1125	595	595	0	0	27	27	1	1	9	9	116	116	378	378	
1126	255	255	0	0	3	3	0	0	142	142	6	6	103	103	
2100	0	0	0	0	8	8	0	0	0	0	0	0	225	225	
2101	1,840	736	0	0	20	20	1	1	0	0	0	0	70	70	x
2102	8,829	8,829	0	0	14	14	1	1	0	0	609	609	395	395	
2300	0	0	0	0	0	0	195	175	0	0	0	0	105	105	x
2301	0	0	0	0	3	3	0	0	0	0	0	0	67	67	
2302	0	0	0	0	56	22	7	3	0	0	11,173	4,469	41	41	x
2303	0	0	0	0	1	1	0	0	0	0	0	0	9	9	
2304	8,443	1,689	422	422	1	1	3	3	0	0	0	0	165	165	x
2305	3,088	3,088	0	0	13	13	4	4	0	0	1,097	1,097	362	362	
2306	1,398	349	0	0	22	22	3	3	0	0	0	0	71	71	x
2307	2,224	2,224	0	0	3	3	1	1	0	0	0	0	72	72	
2308	3,807	3,807	0	0	25	25	4	4	0	0	72	72	133	133	

Table 5b. (Continued) Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2309	5,242	5,242	0	0	28	28	4	4	0	0	1,003	1,003	356	356	
2400	0	0	0	0	164	66	39	16	0	0	14,876	5,951	197	197	x
2600	2,732	2,732	0	0	19	19	3	3	0	0	0	0	376	376	
2900	0	0	0	0	64	64	29	29	0	0	150	150	73	73	
2901	0	0	0	0	19	19	38	38	0	0	0	0	74	74	
2902	0	0	0	0	17	17	0	0	0	0	250	250	6	6	
2903	0	0	0	0	145	145	19	19	0	0	0	0	109	109	
2904	0	0	0	0	33	33	0	0	0	0	87	87	22	22	
2905	0	0	0	0	135	135	58	58	0	0	0	0	193	193	
2906	0	0	0	0	69	69	38	38	0	0	0	0	125	125	
2907	0	0	0	0	45	45	0	0	0	0	0	0	71	71	
2908	0	0	0	0	0	0	0	0	0	0	13	13	52	52	
2909	0	0	0	0	496	496	106	106	0	0	690	690	519	519	
2910	0	0	0	0	8	8	0	0	0	0	0	0	9	9	
2911	0	0	0	0	485	485	29	29	0	0	0	0	359	359	
3000	15,589	1,559	0	0	32	32	3	3	0	0	0	0	155	155	x
3100	8,268	661	0	0	36	36	1	1	0	0	0	0	109	109	x
3200	27,790	11,116	0	0	117	117	9	9	0	0	0	0	945	945	x

Table 5c. Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1069	1,030	1,030	0	0	100	100	0	0	0	0	80	80	225	225	
1070	0	0	0	0	12	12	1	1	0	0	576	576	51	51	
1071	2,799	2,799	0	0	47	47	0	0	0	0	0	0	131	131	
1072	284	284	0	0	34	34	0	0	0	0	1	1	670	670	
1073	121,911	12,191	0	0	403	403	3	3	0	0	39	39	2,545	2,545	x
1074	0	0	15,119	15,119	43	43	1	1	0	0	0	0	158	158	
1075	17,722	1,772	0	0	254	254	1	1	13	13	314	314	1,629	1,629	x
1076	0	0	1,071	1,071	51	51	1	1	0	0	0	0	164	164	
1077	752	752	651	651	59	59	0	0	0	0	0	0	343	343	
1078	10,339	1,034	2,007	803	193	193	2	2	53	53	331	331	1,501	1,501	x
1079	15,182	15,182	0	0	201	201	0	0	129	129	1	1	689	689	
1080	0	0	0	0	6	6	0	0	0	0	13	13	18	18	
1081	0	0	0	0	1	1	0	0	0	0	11	11	0	0	
1082	0	0	0	0	23	23	1	1	0	0	14	14	104	104	
1083	0	0	0	0	25	25	8	8	0	0	2,315	2,315	129	129	
1084	0	0	144	144	24	24	6	6	0	0	4	4	124	124	
1085	5,295	529	348	139	209	209	7	7	0	0	1,412	1,412	2,069	2,069	x
1086	0	0	0	0	6	6	1	1	0	0	3	3	27	27	
1087	782	78	0	0	71	71	1	1	0	0	0	0	368	368	x
1088	1,935	1,935	0	0	316	316	6	6	0	0	484	484	1,392	1,392	
1089	12,609	883	0	0	112	112	3	3	0	0	20	20	436	436	x
1090	222	16	0	0	52	52	1	1	0	0	0	0	198	198	x
1091	4,986	499	0	0	359	359	3	3	0	0	316	316	1,992	1,992	x
1092	3,802	266	0	0	224	224	5	5	0	0	435	435	2,038	2,038	x
1093	1,351	1,351	0	0	248	248	3	3	0	0	1,104	1,104	1,027	1,027	
1094	0	0	0	0	1	1	1	1	0	0	1	1	35	35	
1095	875	875	0	0	30	30	1	1	0	0	13	13	966	966	
1096	0	0	0	0	9	9	3	3	0	0	0	0	53	53	
1097	0	0	0	0	4	4	1	1	0	0	4	4	42	42	
1098	0	0	0	0	21	21	2	2	0	0	156	156	79	79	
1099	0	0	0	0	3	3	0	0	0	0	0	0	14	14	
1100	0	0	0	0	17	17	1	1	0	0	146	146	168	168	
1101	0	0	0	0	2	2	1	1	0	0	72	72	85	85	
1102	0	0	0	0	4	4	0	0	0	0	4	4	28	28	

Table 5c. (Continued) Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1103	11,298	11,298	0	0	245	245	4	4	0	0	14	14	2,786	2,786	
1104	0	0	0	0	18	18	2	2	0	0	135	135	73	73	
1105	0	0	0	0	6	6	8	8	0	0	149	149	129	129	
1106	2,145	2,145	0	0	246	246	4	4	0	0	25	25	1,553	1,553	
1107	0	0	389	389	91	91	11	11	0	0	74	74	352	352	
1108	0	0	109	109	3	3	1	1	0	0	0	0	25	25	
1109	0	0	0	0	35	35	9	9	0	0	0	0	225	225	
1110	4,484	4,484	0	0	108	108	3	3	0	0	27	27	797	797	
1111	0	0	0	0	19	19	6	6	0	0	5	5	232	232	
1112	0	0	0	0	3	3	0	0	0	0	0	0	3	3	
1113	0	0	0	0	5	5	0	0	0	0	0	0	18	18	
1114	0	0	0	0	42	42	9	9	0	0	0	0	351	351	
1115	0	0	12	12	154	154	34	34	0	0	49	49	757	757	
1116	0	0	0	0	7	7	0	0	0	0	0	0	18	18	
1117	0	0	0	0	36	36	0	0	206	206	0	0	303	303	
1118	0	0	0	0	0	0	1	1	0	0	0	0	11	11	
1119	0	0	0	0	0	0	0	0	0	0	0	0	2	2	
1120	18,900	18,900	0	0	48	48	1	1	0	0	7	7	298	298	
1121	26	26	0	0	16	16	2	2	0	0	0	0	99	99	
1122	0	0	0	0	37	37	0	0	0	0	73	73	162	162	
1123	6,221	6,221	0	0	165	165	0	0	181	181	8	8	763	763	
1124	7,693	7,693	0	0	61	61	0	0	121	121	0	0	127	127	
1125	863	129	0	0	100	100	1	1	5	5	45	45	705	705	x
1126	400	400	0	0	52	52	0	0	73	73	2	2	209	209	
2100	0	0	0	0	15	15	0	0	0	0	0	0	99	99	
2101	944	94	0	0	4	4	0	0	0	0	0	0	117	117	x
2102	35,353	7,071	0	0	42	42	0	0	0	0	270	270	659	659	x
2300	0	0	0	0	0	0	2	2	0	0	0	0	46	46	
2301	0	0	0	0	5	5	0	0	0	0	0	0	30	30	
2302	0	0	0	0	6	4	1	1	0	0	1,069	748	19	19	x
2303	0	0	0	0	1	1	1	1	0	0	0	0	4	4	
2304	987	99	29	17	1	1	0	0	0	0	0	0	276	276	x
2305	1,123	112	0	0	66	66	2	2	0	0	487	487	604	604	x
2306	272	27	0	0	23	23	0	0	0	0	0	0	124	124	x
2307	6,233	623	0	0	7	7	0	0	0	0	0	0	150	150	x
2308	414	41	0	0	35	35	1	1	0	0	9	9	238	238	x

Table 5c. (Continued) Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2309	13,680	1,368	0	0	110	110	1	1	0	0	370	370	624	624	x
2400	0	0	0	0	16	16	4	4	0	0	1,423	1,423	88	88	
2600	743	74	0	0	76	76	1	1	0	0	0	0	659	659	x
2900	0	0	0	0	5	5	2	2	0	0	12	12	31	31	
2901	0	0	0	0	2	2	3	3	0	0	0	0	31	31	
2902	0	0	0	0	1	1	0	0	0	0	20	20	3	3	
2903	0	0	0	0	12	12	2	2	0	0	0	0	46	46	
2904	0	0	0	0	3	3	0	0	0	0	7	7	10	10	
2905	0	0	0	0	11	11	5	5	0	0	0	0	82	82	
2906	0	0	0	0	6	6	3	3	0	0	0	0	54	54	
2907	0	0	0	0	4	4	0	0	0	0	0	0	30	30	
2908	0	0	0	0	0	0	0	0	0	0	1	1	22	22	
2909	0	0	0	0	43	43	9	9	0	0	56	56	234	234	
2910	0	0	0	0	1	1	0	0	0	0	0	0	4	4	
2911	0	0	0	0	41	41	2	2	0	0	0	0	156	156	
3000	1,742	174	0	0	44	44	0	0	0	0	0	0	318	318	x
3100	924	92	0	0	49	49	0	0	0	0	0	0	209	209	x
3200	1,512	151	0	0	133	133	1	1	0	0	0	0	1,659	1,659	x

Table 6. Fecal Coliform baseline and allocations

SWS	Stream	Agriculture		Natural Sources		Failing Septics		Residential	
		Baseline Load (counts)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)
1071	Dingess Run	6.39E+11	4.47E+11	4.74E+12	4.74E+12	1.17E+14	0.00E+00	2.67E+12	1.87E+12
1075	Rum Creek	3.26E+11	2.28E+11	3.46E+12	3.46E+12	6.07E+13	0.00E+00	4.57E+12	3.20E+12
1078	Rich Creek	7.62E+10	5.34E+10	2.38E+12	2.38E+12	6.27E+13	0.00E+00	4.80E+11	3.36E+11
1083	Sandlick Creek	0.00E+00	0.00E+00	8.01E+11	8.01E+11	2.10E+13	0.00E+00	3.22E+11	2.25E+11
1085	Elk Creek	1.47E+11	1.03E+11	3.19E+12	3.19E+12	8.36E+13	0.00E+00	8.02E+11	5.61E+11
1087	Spice Creek	2.89E+10	2.02E+10	4.67E+11	4.67E+11	1.75E+13	0.00E+00	0.00E+00	0.00E+00
1089	Gilbert Creek	1.15E+12	8.06E+11	7.07E+12	7.07E+12	2.45E+14	0.00E+00	7.22E+12	5.06E+12
1098	Long Branch	4.47E+10	3.13E+10	4.78E+11	4.78E+11	1.39E+13	0.00E+00	1.58E+11	1.11E+11
1100	Big Branch	0.00E+00	0.00E+00	1.02E+12	1.02E+12	2.05E+13	0.00E+00	0.00E+00	0.00E+00
1107	Turkey Creek	1.31E+12	9.16E+11	2.11E+12	2.11E+12	2.79E+13	0.00E+00	5.50E+11	3.85E+11
1109	Skin Fork	2.25E+12	1.58E+12	1.19E+12	1.19E+12	1.42E+13	0.00E+00	1.65E+12	1.15E+12
1112	Rockcastle Creek	8.68E+12	6.07E+12	6.16E+12	6.16E+12	2.68E+13	0.00E+00	1.31E+13	9.20E+12
1125	Big Branch	2.23E+12	1.56E+12	8.45E+11	8.45E+11	1.03E+13	0.00E+00	9.47E+11	6.63E+11
2100	Rockhouse Creek	4.99E+10	3.50E+10	1.67E+12	1.67E+12	4.39E+13	0.00E+00	2.67E+11	1.87E+11
2301	Big Cub Creek	1.05E+12	7.32E+11	3.79E+12	3.79E+12	1.33E+14	0.00E+00	3.62E+12	2.54E+12
2400	Reedy Branch	6.05E+10	4.23E+10	5.96E+11	5.96E+11	1.71E+13	0.00E+00	0.00E+00	0.00E+00
2600	Little Cub Creek	6.94E+11	4.86E+11	9.16E+11	9.16E+11	1.87E+13	0.00E+00	5.40E+11	3.78E+11
2900	Cabin Creek	1.27E+13	8.87E+12	3.63E+12	3.63E+12	3.77E+13	0.00E+00	2.03E+12	1.42E+12
3000	Joe Branch	7.92E+11	5.55E+11	3.74E+11	3.74E+11	4.94E+12	0.00E+00	6.29E+11	4.40E+11
3100	Long Branch	2.87E+11	2.01E+11	3.06E+11	3.06E+11	3.60E+12	0.00E+00	2.93E+11	2.05E+11
3200	Still Run	3.54E+12	2.48E+12	2.29E+12	2.29E+12	2.49E+13	0.00E+00	3.06E+11	2.14E+11

Appendix A-8
Region 8

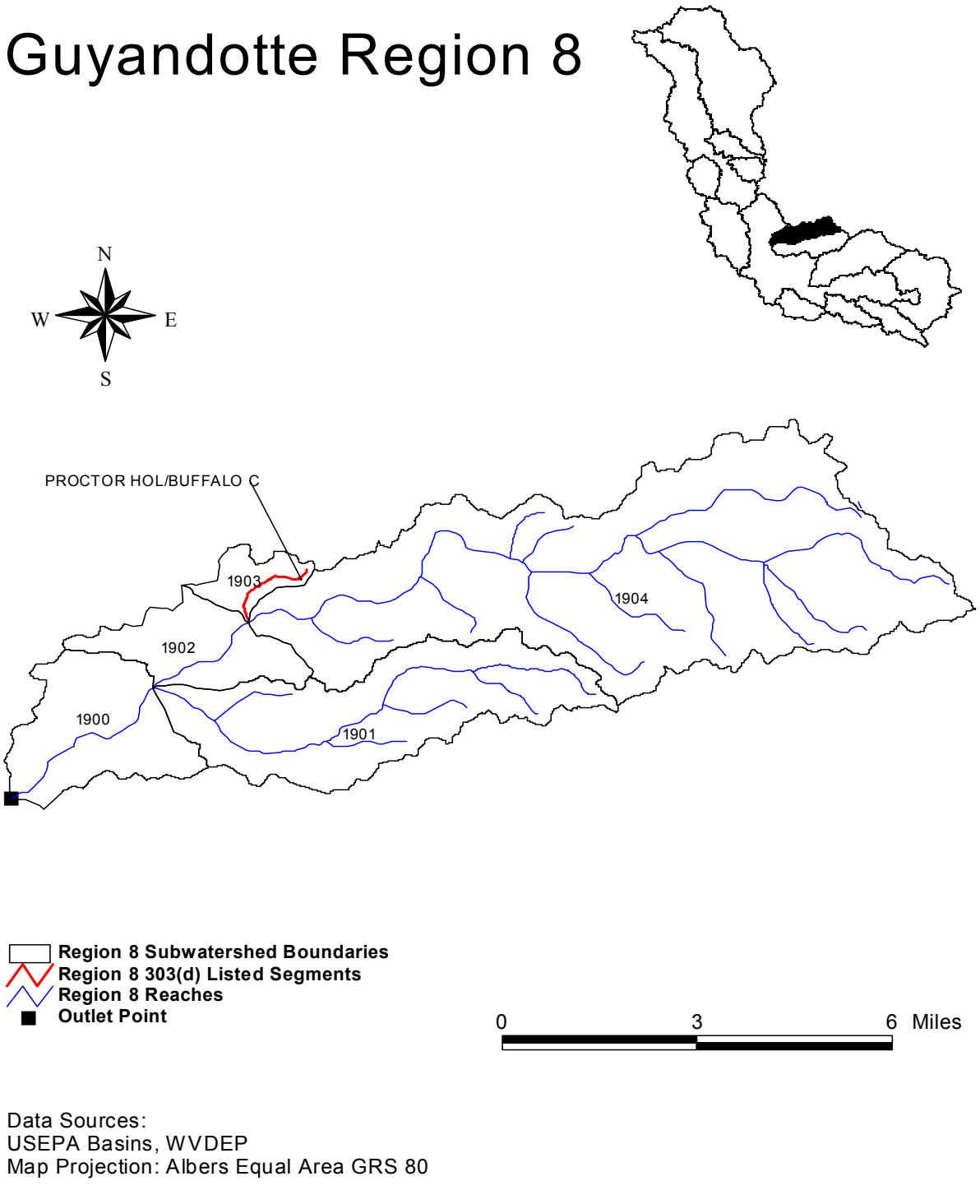


Figure 1. Region 8 - Guyandotte Watershed

Table 1. Impaired waterbodies in Region 8

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Affected Use
Proctor Hollow of Buffalo Creek	OG-75-C.5	Metals, pH	1903		Aquatic Life, Human Health

T = Aquatic Life Trout Waters

W = Warm Water Fishery

Table 2. Locations of abandoned mines (seep, deep mine, and/or leachate)

SWS
1900
1901
1902
1903
1904

Table 3a. Water quality data for dissolved aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1901	OG-75-Am3.1	100.00	100	100	1	08/23/00	08/23/00
1902	42	171.10	75	600	10	09/20/02	07/03/03
1903	OG-75-C.5m	100.00	100	100	1	08/23/00	08/23/00
1904	OG-075-0003	2260.00	2260	2260	1	08/30/00	08/30/00
1904	OG-075-0007	950.00	950	950	1	08/28/00	08/28/00
1904	OG-75-Dm	100.00	100	100	1	08/28/00	08/28/00

Table 3b. Water quality data for total aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1901	OG-75-Am3.1	100.00	100	100	1	08/23/00	08/23/00
1902	42	398.20	80	1200	10	09/20/02	07/03/03
1903	OG-075-0005	2900.00	2800	3000	2	08/23/00	08/24/00
1904	OG-075-0003	9960.00	9960	9960	1	08/30/00	08/30/00
1904	OG-075-0007	6680.00	6680	6680	1	08/28/00	08/28/00
1904	OG-75-Dm	100.00	100	100	1	08/28/00	08/28/00

Table 3c. Water quality data for dissolved iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1901	OG-75-Am3.1	20.00	20	20	1	08/23/00	08/23/00
1902	42	216.67	120	280	3	09/20/02	07/03/03
1903	OG-75-C.5m	20.00	20	20	1	08/23/00	08/23/00
1904	OG-75-Dm	30.00	30	30	1	08/28/00	08/28/00
1904	OG-75-Lm	30.00	30	30	1	08/28/00	08/28/00
1904	OG-75m18	30.00	30	30	1	08/30/00	08/30/00

Table 3d. Water quality data for total iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1901	OG-075-0004	100.00	100	100	1	08/24/00	08/24/00
1901	OG-75-Am3.1	100.00	100	100	1	08/23/00	08/23/00
1902	42	378.00	130	1560	10	09/20/02	07/03/03
1903	OG-075-0005	6900.00	6600	7200	2	08/23/00	08/24/00
1904	OG-075-0003	120.00	120	120	1	08/30/00	08/30/00
1904	OG-075-0006	100.00	100	100	1	08/28/00	08/28/00
1904	OG-075-0007	200.00	200	200	1	08/28/00	08/28/00
1904	OG-75-Dm	100.00	100	100	1	08/28/00	08/28/00

Table 3e. Water quality data for dissolved manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1902	42	119.00	40	230.0	10	09/20/02	07/03/03

Table 3f. Water quality data for total manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1901	OG-75-Am3.1	20.0	20.00	20.0	1.0	8/23/2000	8/23/2000
1902	42	145.0	100.00	240.0	10.0	9/20/2002	7/3/2003
1903	OG-075-0005	1350.0	1300.00	1400.0	2.0	8/23/2000	8/24/2000
1904	OG-075-0003	1050.0	1050.00	1050.0	1.0	8/30/2000	8/30/2000
1904	OG-075-0006	280.0	280.00	280.0	1.0	8/28/2000	8/28/2000
1904	OG-075-0007	1610.0	1610.00	1610.0	1.0	8/28/2000	8/28/2000

Table 3g. Water quality data for total selenium

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
No data available							

Table 3h. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1900	OG-075-0001	8.1	8.1	8.1	1.0	8/24/2000	8/24/2000
1900	OG-75m0.2	7.4	7.4	7.4	1.0	8/23/2000	8/23/2000
1901	OG-075-0004	8.1	8.1	8.1	1.0	8/24/2000	8/24/2000
1901	OG-75-Am3.1	7.4	7.4	7.4	1.0	8/23/2000	8/23/2000
1902	42	7.8	7.1	8.4	10.0	9/20/2002	7/3/2003
1903	OG-075-0005	7.5	7.5	7.5	1.0	8/24/2000	8/24/2000
1903	OG-75-C.5m	7.4	7.4	7.4	1.0	8/23/2000	8/23/2000
1904	OG-075-0002	7.8	7.8	7.8	1.0	8/28/2000	8/28/2000
1904	OG-075-0003	4.8	3.3	6.2	3.0	8/30/2000	8/30/2000
1904	OG-075-0006	7.6	7.6	7.6	1.0	8/28/2000	8/28/2000
1904	OG-075-0007	5.0	5.0	5.0	1.0	8/28/2000	8/28/2000
1904	OG-75-Dm	7.4	7.4	7.4	1.0	8/28/2000	8/28/2000
1904	OG-75-Lm	7.3	7.3	7.3	1.0	8/28/2000	8/28/2000
1904	OG-75m18	7.4	7.4	7.4	1.0	8/30/2000	8/30/2000
1904	OG-75m9.9	7.4	7.4	7.4	1.0	8/28/2000	8/28/2000

Table 3i. Water quality data for fecal coliforms

SWS	WQ Station	Avg (#/100 mL)	Min (#/100 mL)	Max (#/100 mL)	Count	Start Date	End Date
1900	OG-075-0001	270.0	270.0	270.0	1.0	8/24/2000	8/24/2000
1901	OG-075-0004	20.0	20.0	20.0	1.0	8/24/2000	8/24/2000
1903	OG-075-0005	40.0	20.0	60.0	2.0	8/23/2000	8/24/2000
1904	OG-075-0002	232.0	232.0	232.0	1.0	8/28/2000	8/28/2000
1904	OG-075-0006	214.0	214.0	214.0	1.0	8/28/2000	8/28/2000
1900	OG-75m0.2	270.0	270.0	270.0	1.0	8/23/2000	8/23/2000
1901	OG-75-Am3.1	20.0	20.0	20.0	1.0	8/23/2000	8/23/2000
1904	OG-75-Lm	20.0	20.0	20.0	1.0	8/28/2000	8/28/2000

Table 4a. Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1900	WV1016849	5,981	5,981	3.20	0
1901	WV0053171	8,736	4,805	1.76	45
1901	WV1008340	38	21	1.76	45
1901	WV1010921	10,703	5,887	1.76	45
1902	WV0053163	57	28	1.60	50
1902	WV0096393	3,113	1,557	1.60	50
1902	WV0099520	14,414	7,207	1.60	50
1902	WV1008331	3,531	1,765	1.60	50
1902	WV1010921	286	143	1.60	50
1902	WV1016849	804	402	1.60	50
1903	WV0099520	2,906	1,511	1.66	48
1903	WV1013319	220	115	1.66	48
1904	WV0053171	13,184	9,229	2.24	30
1904	WV0064572	227	159	2.24	30
1904	WV0093122	102	72	2.24	30
1904	WV0095699	2,843	1,990	2.24	30
1904	WV0096156	1,479	1,035	2.24	30
1904	WV0096385	117	82	2.24	30
1904	WV0096393	167	117	2.24	30
1904	WV1008340	121	85	2.24	30
1904	WV1010921	2,056	1,439	2.24	30
1904	WV1013408	138	96	2.24	30
1904	WV1013530	2,494	1,746	2.24	30
1904	WV1020510	4,513	3,159	2.24	30
1904	WVG015034	64	45	2.24	30

Table 4b. Manganese baseline conditions and allocations (WLAs) for permitted mining point source

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1900	WV1016849	2,394	2,394	2.00	0
1901	WV0053171	3,870	3,870	2.00	0
1901	WV1008340	17	17	2.00	0
1901	WV1010921	4,741	4,741	2.00	0
1902	WV0053163	24	24	2.00	0
1902	WV0096393	1,323	1,323	2.00	0
1902	WV0099520	6,128	6,128	2.00	0
1902	WV1008331	1,501	1,501	2.00	0
1902	WV1010921	122	122	2.00	0
1902	WV1016849	342	342	2.00	0
1903	WV0099520	1,273	1,273	2.00	0
1903	WV1013319	97	97	2.00	0
1904	WV0053171	6,935	6,935	2.00	0
1904	WV0064572	119	119	2.00	0
1904	WV0093122	54	54	2.00	0
1904	WV0095699	1,496	1,496	2.00	0
1904	WV0096156	778	778	2.00	0
1904	WV0096385	62	62	2.00	0
1904	WV0096393	88	88	2.00	0
1904	WV1008340	64	64	2.00	0
1904	WV1010921	1,081	1,081	2.00	0
1904	WV1013408	72	72	2.00	0
1904	WV1013530	1,312	1,312	2.00	0
1904	WV1020510	2,374	2,374	2.00	0
1904	WVG015034	34	34	2.00	0

Table 4c. Aluminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
1900	WV1016849	6111	6111	3.27	0
1901	WV0053171	8927	6249	2.29	30
1901	WV1008340	39	27	2.29	30
1901	WV1010921	10936	7655	2.29	30
1902	WV0053163	58	41	2.29	30
1902	WV0096393	3181	2227	2.29	30
1902	WV0099520	14728	10310	2.29	30
1902	WV1008331	3608	2525	2.29	30
1902	WV1010921	292	205	2.29	30
1902	WV1016849	822	575	2.29	30
1903	WV0099520	2970	2227	2.45	25
1903	WV1013319	225	169	2.45	25
1904	WV0053171	13472	10777	2.62	20
1904	WV0064572	232	185	2.62	20
1904	WV0093122	104	84	2.62	20
1904	WV0095699	2905	2324	2.62	20
1904	WV0096156	1512	1209	2.62	20
1904	WV0096385	120	96	2.62	20
1904	WV0096393	171	136	2.62	20
1904	WV1008340	124	99	2.62	20
1904	WV1010921	2101	1681	2.62	20
1904	WV1013408	141	113	2.62	20
1904	WV1013530	2548	2039	2.62	20
1904	WV1020510	4612	3689	2.62	20
1904	WVG015034	65	52	2.62	20

Table 5a. Iron baseline conditions and allocations (LAs) for nonpoint sources * Othen Nonpoint Sources include: Forest, Wetland, Agriculture, Pasture, and Urba

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1900	898	90	0	0	159	159	2	2	63	63	0	0	596	596	x
1901	1,853	111	0	0	121	121	3	3	0	0	58	58	1,084	1,084	x
1902	149	9	217	78	81	81	1	1	0	0	0	0	185	185	x
1903	326	20	482	174	33	33	0	0	0	0	0	0	115	115	x
1904	11,542	693	3,550	1,278	901	901	7	7	41	41	168	168	4,744	4,744	x

Table 5b. Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1900	1,255	1,255	0	0	33	33	4	4	139	139	0	0	389	389	
1901	2,500	2,500	0	0	26	26	7	7	0	0	157	157	721	721	
1902	215	215	219	219	15	15	2	2	0	0	0	0	98	98	
1903	1,580	32	1,465	806	18	18	3	3	0	0	0	0	76	76	x
1904	18,760	18,760	4,107	4,107	250	250	24	24	92	92	540	540	2,979	2,979	

Table 5c. Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
1900	2,987	209	0	0	161	161	2	2	71	71	0	0	666	666	x
1901	7,254	508	0	0	123	123	3	3	0	0	70	70	1,209	1,209	x
1902	410	29	45	18	82	82	1	1	0	0	0	0	203	203	x
1903	1,874	131	100	75	33	33	0	0	0	0	0	0	128	128	x
1904	28,415	1,989	751	300	915	915	9	9	45	45	199	199	5,230	5,230	x

Table 6. Fecal Coliform baseline and allocations

SWS	Stream	Agriculture		Natural Sources		Failing Septics		Residential	
		Baseline Load (counts)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)
1900	Buffalo Creek	1.63E+12	1.14E+12	1.19E+13	1.19E+13	1.30E+14	0.00E+00	2.18E+13	1.52E+13

Appendix A-9
Region 9

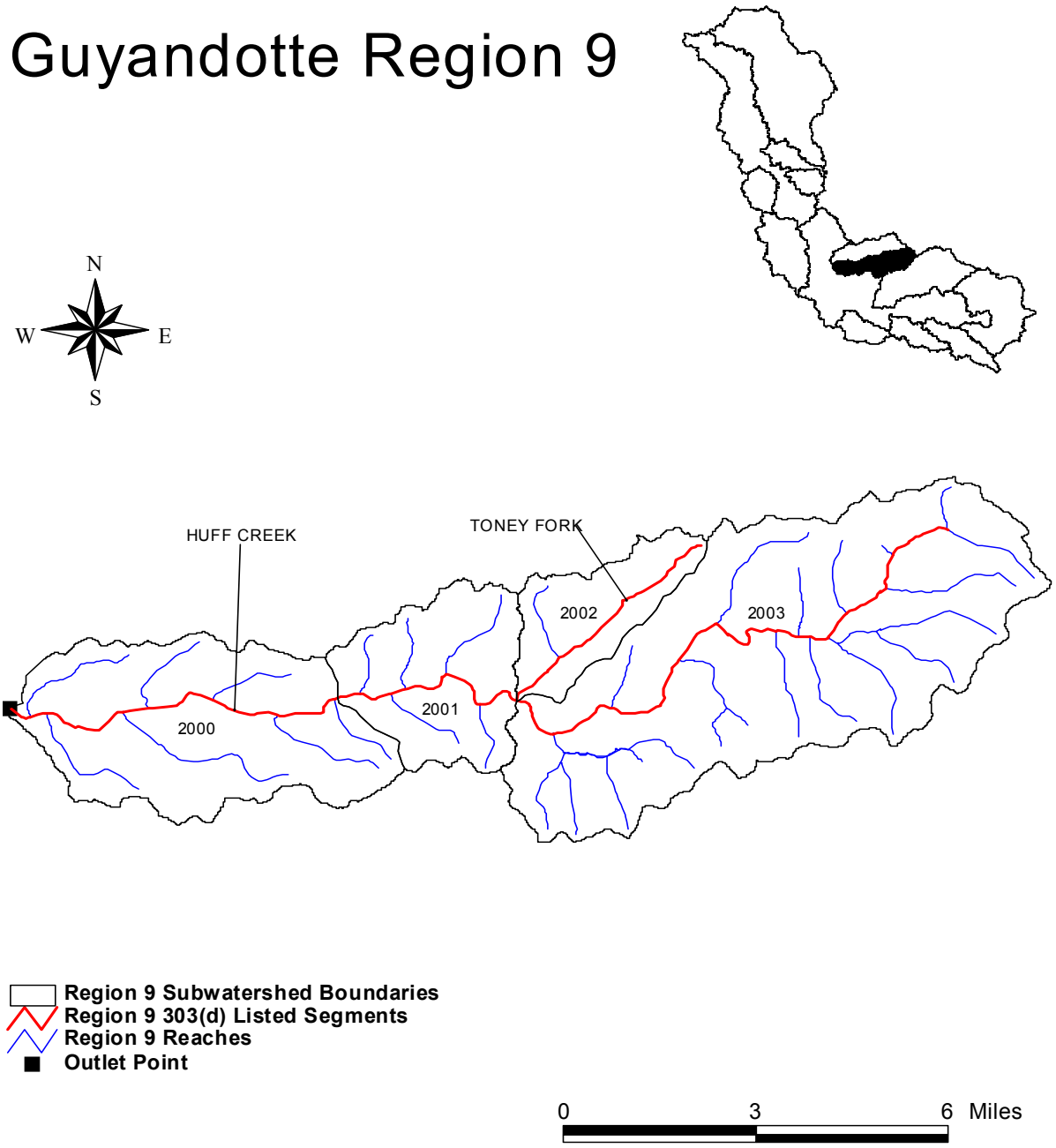


Figure 1. Region 9 - Guyandotte Watershed

Table 1. Impaired waterbodies in Region 9

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Affected Use
Huff Creek	OG-76	Metals	2000, 2001, 2002, 2003		Aquatic Life, Human Health
Toney Fork	OGC-19	Metals	2002		Aquatic Life, Human Health

T = Aquatic Life Trout Waters

W = Warm Water Fishery

Table 2. Locations of abandoned mines (seep, deep mine, and/or leachate)

SWS
2000
2002
2003

Table 3a. Water quality data for dissolved aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2000	OG-76m0	100.00	100	100	1	08/30/00	08/30/00
2000	OG-76m3	100.00	100	100	1	08/30/00	08/30/00
2000	OG-76m4	100.00	100	100	1	08/30/00	08/30/00
2001	36	105.50	21	500	10	09/20/02	07/03/03
2001	OG-76m9	100.00	100	100	1	08/29/00	08/29/00
2002	OG-76-Lm	100.00	100	100	1	08/29/00	08/29/00
2003	OG-76m12.1	100.00	100	100	1	08/29/00	08/29/00
2003	OG-76m13.9	100.00	100	100	1	08/29/00	08/29/00
2003	OG-76-Mm0.2	100.00	100	100	1	08/29/00	08/29/00

Table 3b. Water quality data for total aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2000	OG-076-0001	140.00	140	140	1	08/30/00	08/30/00
2000	OG-076-0003	100.00	100	100	1	08/30/00	08/30/00
2000	OG-76m4	100.00	100	100	1	08/30/00	08/30/00
2001	36	156.20	41	500	10	09/20/02	07/03/03
2001	OG-76m9	100.00	100	100	1	08/29/00	08/29/00
2002	OG-076-0008	150.00	150	150	1	08/29/00	08/29/00
2003	OG-076-0005	140.00	140	140	1	08/29/00	08/29/00
2003	OG-076-0006	140.00	140	140	1	08/29/00	08/29/00
2003	OG-076-0009	120.00	120	120	1	08/29/00	08/29/00

Table 3c. Water quality data for dissolved iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2000	OG-076-0001	50.00	50	50	1	08/30/00	08/30/00
2000	OG-076-0002	30.00	30	30	1	08/30/00	08/30/00
2000	OG-76m4	30.00	30	30	1	08/30/00	08/30/00
2001	36	76.67	60	100	3	09/20/02	07/03/03
2001	OG-76m9	30.00	30	30	1	08/29/00	08/29/00
2002	OG-76-Lm	30.00	30	30	1	08/29/00	08/29/00
2003	OG-076-0005	50.00	50	50	1	08/29/00	08/29/00
2003	OG-76m13.9	30.00	30	30	1	08/29/00	08/29/00
2003	OG-76-Mm0.2	30	30	30	1	29-Aug-00	29-Aug-00

Table 3d. Water quality data for total iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2000	OG-076-0001	90.00	90	90	1	08/30/00	08/30/00
2000	OG-076-0002	120.00	120	120	1	08/30/00	08/30/00
2000	OG-076-0003	40.00	40	40	1	08/30/00	08/30/00
2001	36	238.33	70	650	6	09/20/02	07/03/03
2001	OG-076-0004	50.00	50	50	1	08/29/00	08/29/00
2001	OG-76m9	50.00	50	50	1	08/29/00	08/29/00
2002	OG-076-0008	30.00	30	30	1	08/29/00	08/29/00
2003	OG-076-0005	70.00	70	70	1	08/29/00	08/29/00
2003	OG-076-0006	40.00	40	40	1	08/29/00	08/29/00
2003	OG-076-0009	40.00	40	40	1	08/29/00	08/29/00

Table 3e. Water quality data for dissolved manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
No data available							

Table 3f. Water quality data for total manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2000	OG-76m0	50.0	50.00	50.0	1.0	8/30/2000	8/30/2000
2000	OG-76m3	50.0	50.00	50.0	1.0	8/30/2000	8/30/2000
2000	OG-76m4	50.0	50.00	50.0	1.0	8/30/2000	8/30/2000
2001	36	40.0	40.00	40.0	1.0	9/20/2002	7/3/2003
2001	OG-76m9	50.0	50.00	50.0	1.0	8/29/2000	8/29/2000
2002	OG-76-Lm	50.0	50.00	50.0	1.0	8/29/2000	8/29/2000
2003	OG-76m12.1	50.0	50.00	50.0	1.0	8/29/2000	8/29/2000
2003	OG-76m13.9	50.0	50.00	50.0	1.0	8/29/2000	8/29/2000
2003	OG-76-Mm0.2	50.0	50.00	50.0	1.0	8/29/2000	8/29/2000

Table 3g. Water quality data for total selenium

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
No data available							

Table 3h. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2000	OG-076-0001	8.2	8.2	8.2	1.0	8/30/2000	8/30/2000
2000	OG-076-0002	8.1	8.1	8.1	1.0	8/30/2000	8/30/2000
2000	OG-076-0003	7.9	7.9	7.9	1.0	8/30/2000	8/30/2000
2000	OG-76m0	7.3	7.3	7.3	1.0	8/30/2000	8/30/2000
2000	OG-76m3	7.3	7.3	7.3	1.0	8/30/2000	8/30/2000
2000	OG-76m4	7.3	7.3	7.3	1.0	8/30/2000	8/30/2000
2001	36	7.5	6.7	8.3	10.0	9/20/2002	7/3/2003
2001	OG-076-0004	8.2	8.2	8.2	1.0	8/29/2000	8/29/2000
2001	OG-76m9	7.3	7.3	7.3	1.0	8/29/2000	8/29/2000
2002	OG-076-0008	7.7	7.7	7.7	1.0	8/29/2000	8/29/2000
2002	OG-76-Lm	7.3	7.3	7.3	1.0	8/29/2000	8/29/2000
2003	OG-076-0005	7.5	7.5	7.5	1.0	8/29/2000	8/29/2000
2003	OG-076-0009	8.1	8.1	8.1	1.0	8/29/2000	8/29/2000
2003	OG-76m12.1	7.3	7.3	7.3	1.0	8/29/2000	8/29/2000
2003	OG-76m13.9	7.3	7.3	7.3	1.0	8/29/2000	8/29/2000
2003	OG-76-Mm0.2	7.3	7.3	7.3	1.0	8/29/2000	8/29/2000

Table 3i. Water quality data for fecal coliforms

SWS	WQ Station	Avg (#/100 mL)	Min (#/100 mL)	Max (#/100 mL)	Count	Start Date	End Date
2000	OG-076-0001	15160.00	320.0	30000.0	2	8/30/2000	8/30/2000
2000	OG-076-0002	1429.00	1429.0	1429.0	1	8/30/2000	8/30/2000
2000	OG-076-0003	2821.00	2821.0	2821.0	1	8/30/2000	8/30/2000
2000	OG-76m0	321.00	321.0	321.0	1	8/30/2000	8/30/2000

Table 4a. Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2000	WV1004671	46	46	3.20	0
2000	WV1011031	78	78	3.20	0
2000	WV1017136	88	88	3.20	0
2001	WV0053171	2,173	2,173	3.20	0
2001	WV1011031	110	110	3.20	0
2001	WV1016954	712	712	3.20	0
2001	WV1018761	141	141	3.20	0
2001	WV1018825	3,022	3,022	3.20	0
2002	WV0053171	4,441	2,887	2.08	35
2002	WV1018761	217	141	2.08	35
2002	WV1018825	1,425	927	2.08	35
2003	WV0053333	68	44	2.08	35
2003	WV0093548	198	129	2.08	35
2003	WV1012231	7,664	4,981	2.08	35
2003	WV1015982	56	36	2.08	35
2003	WV1016440	7,688	4,997	2.08	35
2003	WV1016504	191	124	2.08	35
2003	WV1018680	1,713	1,114	2.08	35
2003	WV1018906	6,255	4,066	2.08	35

Table 4b. Manganese baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2000	WV1004671	27	27	2.00	0
2000	WV1011031	46	46	2.00	0
2000	WV1017136	52	52	2.00	0
2001	WV0053171	911	911	2.00	0
2001	WV1011031	46	46	2.00	0
2001	WV1016954	299	299	2.00	0
2001	WV1018761	59	59	2.00	0
2001	WV1018825	1,267	1,267	2.00	0
2002	WV0053171	2,316	2,316	2.00	0
2002	WV1018761	113	113	2.00	0
2002	WV1018825	743	743	2.00	0
2003	WV0053333	31	31	2.00	0
2003	WV0093548	90	90	2.00	0
2003	WV1012231	3,499	3,499	2.00	0
2003	WV1015982	26	26	2.00	0
2003	WV1016440	3,510	3,510	2.00	0
2003	WV1016504	87	87	2.00	0
2003	WV1018680	782	782	2.00	0
2003	WV1018906	2,856	2,856	2.00	0

Table 4c. Aluminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2000	WV1004671	47	47	3.27	0
2000	WV1011031	80	80	3.27	0
2000	WV1017136	90	90	3.27	0
2001	WV0053171	2,156	2,156	3.27	0
2001	WV1011031	109	109	3.27	0
2001	WV1016954	707	707	3.27	0
2001	WV1018761	140	140	3.27	0
2001	WV1018825	2,999	2,999	3.27	0
2002	WV0053171	4,538	4,538	3.27	0
2002	WV1018761	221	221	3.27	0
2002	WV1018825	1,456	1,456	3.27	0
2003	WV0053333	69	69	3.27	0
2003	WV0093548	202	202	3.27	0
2003	WV1012231	7,830	7,830	3.27	0
2003	WV1015982	57	57	3.27	0
2003	WV1016440	7,855	7,855	3.27	0
2003	WV1016504	195	195	3.27	0
2003	WV1018680	1,751	1,751	3.27	0
2003	WV1018906	6,391	6,391	3.27	0

Table 5a. Iron baseline conditions and allocations (LAs) for nonpoint sources

* Othen Nonpoint Sources include: Forest, Wetland, Agriculture, Pasture, and Urban

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2000	519	519	0	0	341	341	5	5	2	2	221	221	1,926	1,926	
2001	0	0	0	0	28	28	20	20	0	0	2,344	2,344	168	168	
2002	2,395	144	0	0	177	177	3	3	0	0	0	0	744	744	x
2003	6,401	384	147	147	522	522	7	7	39	39	2,132	2,132	4,493	4,493	x

Table 5b. Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2000	3,426	3,426	0	0	110	110	42	42	13	13	1,731	1,731	1,277	1,277	
2001	0	0	0	0	24	24	22	22	0	0	2,555	2,555	560	560	
2002	15,799	5,056	0	0	131	131	30	30	0	0	2	2	469	469	x
2003	55,997	16,799	509	509	264	264	62	62	234	234	19,973	19,973	2,832	2,832	x

Table 5c. Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2000	1,544	1,544	0	0	344	344	6	6	2	2	266	266	2,149	2,149	
2001	0	0	0	0	17	17	14	14	0	0	1,617	1,617	249	249	
2002	1,719	172	0	0	180	180	4	4	0	0	0	0	819	819	x
2003	5,800	580	31	31	527	527	8	8	43	43	2,530	2,530	4,950	4,950	x

Table 6. Fecal Coliform baseline and allocations

SWS	Stream	Agriculture		Natural Sources		Failing Septics		Residential	
		Baseline Load (counts)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)
2000	Huff Creek	2.03E+12	1.42E+12	1.43E+13	1.43E+13	2.74E+14	0.00E+00	7.70E+12	5.39E+12

Appendix A-10
Region 10

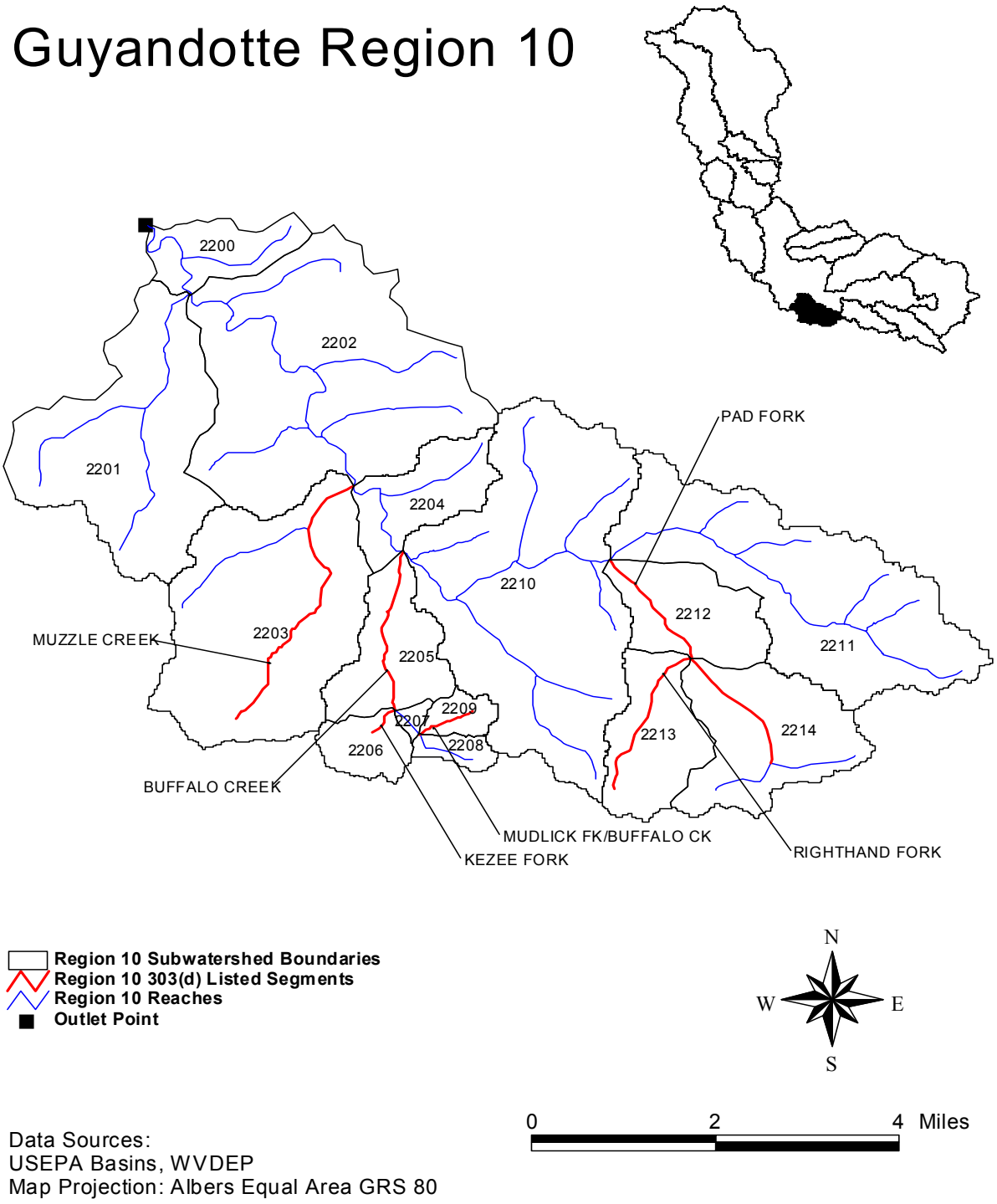


Figure 1. Region 10 - Guyandotte Watershed

Table 1. Impaired waterbodies in Region 10

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Affected Use
Buffalo Creek	OG-92-K	Metals, pH	2205, 2206, 2207, 2208, 2209		Aquatic Life, Human Health
Kezee Fork	OG-93-K-1	Metals	2206		Aquatic Life, Human Health
Mudlick Fork of Buffalo Creek	OG-92-K-2	Metals	2209		Aquatic Life, Human Health
Muzzle Creek	OG-92-I	Metals	2203		Aquatic Life, Human Health
Pad Fork	OG-92-Q	Metals	2212, 2213, 2214		Aquatic Life, Human Health
Righthand Fork of Pad Fork	OG-92-Q-1	Metals	2213		Aquatic Life, Human Health

T = Aquatic Life Trout Waters

W = Warm Water Fishery

Table 2. Locations of abandoned mines (seep, deep mine, and/or leachate)

SWS
2200
2202
2203
2205
2211
2212
2213
2214

Table 3a. Water quality data for dissolved aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2201	OG-92-Bm1.2	100.00	100	100	1	08/30/00	08/30/00
2202	22	136.10	21	600	10	10/11/02	07/01/03
2203	OG-92-Im	100.00	100	100	1	08/28/00	08/28/00
2205	OG-92-Km0	100.00	100	100	1	08/28/00	08/28/00
2205	OG-92-Km1.8	100.00	100	100	1	09/12/00	09/12/00
2206	OG-092-0007	53.00	53	53	1	09/11/00	09/11/00
2209	OG-92-K-2m	100.00	100	100	1	09/11/00	09/11/00
2212	OG-92-Q-1m	100.00	100	100	1	09/07/00	09/07/00
2212	OG-92-Qm0.4	100.00	100	100	1	09/07/00	09/07/00

Table 3b. Water quality data for total aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2201	OG-92-Bm1.2	100.00	100	100	1	08/30/00	08/30/00
2202	22	399.90	63	2300	10	10/11/02	07/01/03
2203	OG-92-Im	100.00	100	100	1	08/28/00	08/28/00
2205	OG-92-Km0	200.00	200	200	1	08/28/00	08/28/00
2205	OG-92-Km1.8	100.00	100	100	1	09/12/00	09/12/00
2206	OG-092-0007	76.00	76	76	1	09/11/00	09/11/00
2209	OG-092-0008	230.00	230	230	1	09/12/00	09/12/00
2209	OG-92-K-2m	230.00	230	230	1	09/11/00	09/11/00
2212	OG-92-Qm0.4	100.00	100	100	1	09/07/00	09/07/00
2213	OG-092-0011	110.00	110	110	1	09/07/00	09/07/00
	OG-092-0009	1100.00	1100	1100	1	09/11/00	09/11/00

Table 3c. Water quality data for dissolved iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2201	OG-92-Bm1.2	20.00	20	20	1	08/30/00	08/30/00
2202	22	207.50	60	610	4	10/11/02	07/01/03
2203	OG-92-Im	20.00	20	20	1	08/28/00	08/28/00
2205	OG-092-0006	120.00	120	120	1	09/12/00	09/12/00
2205	OG-92-Km0	20.00	20	20	1	08/28/00	08/28/00
2206	OG-092-0007	25.00	24	26	2	09/11/00	09/12/00
2209	OG-092-0008	24.00	24	24	1	09/12/00	09/12/00
2209	OG-92-K-2m	24.00	24	24	1	09/11/00	09/11/00
2212	OG-092-0010	75	75	75	1	07-Sep-00	07-Sep-00
2213	OG-092-0011	51	51	51	1	07-Sep-00	07-Sep-00

Table 3d. Water quality data for total iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2201	OG-092-0003	990.00	990	990	1	08/30/00	08/30/00
2202	22	633.00	90	4360	10	10/11/02	07/01/03
2203	OG-092-0004	490.00	490	490	1	08/28/00	08/28/00
2205	OG-092-0005	340.00	340	340	1	08/28/00	08/28/00
2205	OG-092-0006	450.00	450	450	1	09/12/00	09/12/00
2206	OG-092-0007	170.00	140	200	2	09/11/00	09/12/00
2209	OG-092-0008	290.00	290	290	1	09/12/00	09/12/00
2209	OG-92-K-2m	290.00	290	290	1	09/11/00	09/11/00
2212	OG-092-0010	240.00	240	240	1	09/07/00	09/07/00
2213	OG-092-0011	280.00	280	280	1	09/07/00	09/07/00

Table 3e. Water quality data for dissolved manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2202	22	50.00	30	70.0	7	10/11/02	07/01/03

Table 3f. Water quality data for total manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2201	OG-092-0003	280.0	280.00	280.0	1	8/30/2000	8/30/2000
2202	22	83.8	30.00	300.0	8	10/11/2002	7/1/2003
2203	OG-092-0004	75.0	75.00	75.0	1	8/28/2000	8/28/2000
2205	OG-092-0005	250.0	250.00	250.0	1	8/28/2000	8/28/2000
2205	OG-092-0006	150.0	150.00	150.0	1	9/12/2000	9/12/2000
2206	OG-092-0007	68.0	68.00	68.0	1	9/11/2000	9/11/2000
2209	OG-092-0008	21.0	21.00	21.0	1	9/12/2000	9/12/2000
2209	OG-92-K-2m	21.0	21.00	21.0	1	9/11/2000	9/11/2000
2212	OG-092-0010	33.0	33.00	33.0	1	9/7/2000	9/7/2000
2213	OG-092-0011	22.0	22.00	22.0	1	9/7/2000	9/7/2000

Table 3g. Water quality data for total selenium

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
No Data Available							

Table 3h. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2200	OG-92m0.2	7.3	7.3	7.3	1	8/30/2000	8/30/2000
2201	OG-92-Bm1.2	7.2	7.2	7.2	1	8/30/2000	8/30/2000
2202	22	7.5	6.6	8.2	10	10/11/2002	7/1/2003
2203	OG-92-Im	7.2	7.2	7.2	1	8/28/2000	8/28/2000
2204	OG-92m6.6	7.2	7.2	7.2	1	8/28/2000	8/28/2000
2205	OG-92-Km0	7.2	7.2	7.2	1	8/28/2000	8/28/2000
2205	OG-92-Km1.8	7.2	7.2	7.2	1	9/12/2000	9/12/2000
2206	OG-092-0007	7.7	7.7	7.7	1	9/11/2000	9/11/2000
2206	OG-92-K-1m	7.2	7.2	7.2	1	9/11/2000	9/11/2000
2209	OG-92-K-2m	7.2	7.2	7.2	1	9/11/2000	9/11/2000
2210	OG-92-Mm	7.2	7.2	7.2	1	9/11/2000	9/11/2000
2212	OG-92-Q-1m	7.2	7.2	7.2	1	9/7/2000	9/7/2000
2212	OG-92-Qm0.4	7.2	7.2	7.2	1	9/7/2000	9/7/2000

Table 3i. Water quality data for fecal coliforms

SWS	WQ Station	Avg (#/100 mL)	Min (#/100 mL)	Max (#/100 mL)	Count	Start Date	End Date
2200	OG-092-0001	480.0	480.0	480.0	1	8/30/2000	8/30/2000
2201	OG-092-0003	2100.0	2100.0	2100.0	1	8/30/2000	8/30/2000
2203	OG-092-0004	2600.0	2600.0	2600.0	1	8/28/2000	8/28/2000
2204	OG-092-0002	1700.0	1700.0	1700.0	1	8/28/2000	8/28/2000
2205	OG-092-0005	1100.0	1100.0	1100.0	1	8/28/2000	8/28/2000
2205	OG-092-0006	110.0	110.0	110.0	1	9/12/2000	9/12/2000
2206	OG-092-0007	108.0	16.0	200.0	2	9/11/2000	9/12/2000
2209	OG-092-0008	130.0	130.0	130.0	1	9/12/2000	9/12/2000
2212	OG-092-0010	11.0	11.0	11.0	1	9/7/2000	9/7/2000
2213	OG-092-0011	60.0	60.0	60.0	1	9/7/2000	9/7/2000
2209	OG-92-K-2m	130.0	130.0	130.0	1	9/11/2000	9/11/2000

Table 4a. Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2205	WV0097969	65	65	3.20	0
2205	WV1006291	47	47	3.20	0
2213	WV0061409	67	67	3.20	0
2213	WV0061417	67	67	3.20	0
2213	WV0061441	55	55	3.20	0
2213	WV0061450	30	30	3.20	0
2213	WV1016539	161	161	3.20	0
2214	WV0061522	126	126	3.20	0
2200*	WVG640014	11.27	11.27	3.70	0

* Denotes actual Office of Water Resources Permit

Table 4b. Manganese baseline conditions and allocations (WLAs) for permitted mining point

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2205	WV0097969	40	40	2.00	0
2205	WV1006291	28	28	2.00	0
2213	WV0061409	36	36	2.00	0
2213	WV0061417	36	36	2.00	0
2213	WV0061441	29	29	2.00	0
2213	WV0061450	16	16	2.00	0
2213	WV1016539	86	86	2.00	0
2214	WV0061522	77	77	2.00	0

Table 4c. Aluminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2205	WV0097969	67	67	3.27	0
2205	WV1006291	48	48	3.27	0
2213	WV0061409	68	68	3.27	0
2213	WV0061417	69	69	3.27	0
2213	WV0061441	56	56	3.27	0
2213	WV0061450	30	30	3.27	0
2213	WV1016539	165	165	3.27	0
2214	WV0061522	129	129	3.27	0

Table 5a. Iron baseline conditions and allocations (LAs) for nonpoint sources

* Othen Nonpoint Sources include: Forest, Wetland, Agriculture, Pasture, and Urban)

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2200	83	83	0	0	51	51	0	0	0	0	3	3	225	225	
2201	0	0	0	0	59	59	16	16	0	0	465	465	171	171	
2202	659	659	134	134	264	264	3	3	11	11	45	45	1,444	1,444	
2203	432	26	0	0	176	176	3	3	0	0	43	43	1,095	1,095	x
2204	0	0	0	0	11	11	5	5	0	0	853	853	45	45	
2205	893	89	0	0	20	20	1	1	0	0	0	0	319	319	x
2206	0	0	0	0	0	0	3	3	0	0	37	37	24	24	
2207	0	0	0	0	4	4	1	1	0	0	0	0	4	4	
2208	0	0	0	0	5	5	0	0	0	0	0	0	11	11	
2209	0	0	0	0	1	1	1	1	0	0	0	0	13	13	
2210	0	0	0	0	54	54	14	14	15	15	536	536	274	274	
2211	2,258	135	0	0	89	89	1	1	7	7	31	31	1,084	1,084	x
2212	138	8	0	0	17	17	0	0	0	0	36	36	323	323	x
2213	520	31	0	0	4	4	0	0	0	0	12	12	337	337	x
2214	2,334	140	70	70	3	3	0	0	0	0	0	0	515	515	x

Table 5b. Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2200	149	149	0	0	4	4	0	0	0	0	9	9	137	137	
2201	0	0	0	0	25	25	7	7	0	0	205	205	593	593	
2202	1,063	1,063	156	156	28	28	8	8	24	24	144	144	907	907	
2203	3,747	75	0	0	2,810	563	1,619	324	0	0	26,569	5,314	691	691	x
2204	0	0	0	0	5	5	2	2	0	0	376	376	155	155	
2205	7,189	5,032	0	0	15	15	9	9	0	0	0	0	201	201	x
2206	0	0	0	0	23	5	286	57	0	0	3,125	625	85	85	x
2207	0	0	0	0	5	5	1	1	0	0	0	0	13	13	
2208	0	0	0	0	6	6	0	0	0	0	0	0	37	37	
2209	0	0	0	0	113	113	95	95	0	0	0	0	45	45	
2210	0	0	0	0	23	23	6	6	16	16	236	236	950	950	
2211	4,018	4,018	0	0	25	25	4	4	16	16	101	101	683	683	
2212	1,247	1,247	0	0	14	14	4	4	0	0	337	337	204	204	
2213	4,702	2,586	0	0	31	31	1	1	0	0	108	108	212	212	x
2214	15,395	4,157	244	244	2	2	0	0	0	0	0	0	325	325	x

Table 5c. Anuminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2200	41	41	0	0	51	51	0	0	0	0	3	3	248	248	
2201	0	0	0	0	39	39	11	11	0	0	319	319	247	247	
2202	1,715	1,715	28	28	266	266	3	3	12	12	53	53	1,591	1,591	
2203	442	44	0	0	177	177	3	3	0	0	51	51	1,207	1,207	x
2204	0	0	0	0	7	7	3	3	0	0	585	585	65	65	
2205	1,711	171	0	0	21	21	1	1	0	0	0	0	351	351	x
2206	0	0	0	0	0	0	2	2	0	0	25	25	35	35	
2207	0	0	0	0	3	3	1	1	0	0	0	0	6	6	
2208	0	0	0	0	3	3	0	0	0	0	0	0	15	15	
2209	0	0	0	0	1	1	1	1	0	0	0	0	19	19	
2210	0	0	0	0	36	36	9	9	11	11	368	368	396	396	
2211	1,777	178	0	0	90	90	1	1	8	8	37	37	1,195	1,195	x
2212	68	7	0	0	18	18	1	1	0	0	43	43	357	357	x
2213	256	26	0	0	4	4	0	0	0	0	14	14	371	371	x
2214	1,675	168	15	15	3	3	0	0	0	0	0	0	567	567	x

Table 6. Fecal Coliform basline and allocations

SWS	Stream	Agriculture		Natural Sources		Failing Septics		Residential	
		Baseline Load (counts)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)
2200	Little Huff Creek	1.42E+12	9.97E+11	1.32E+13	1.32E+13	2.14E+14	0.00E+00	7.15E+12	5.01E+12

Appendix A-11
Region 11

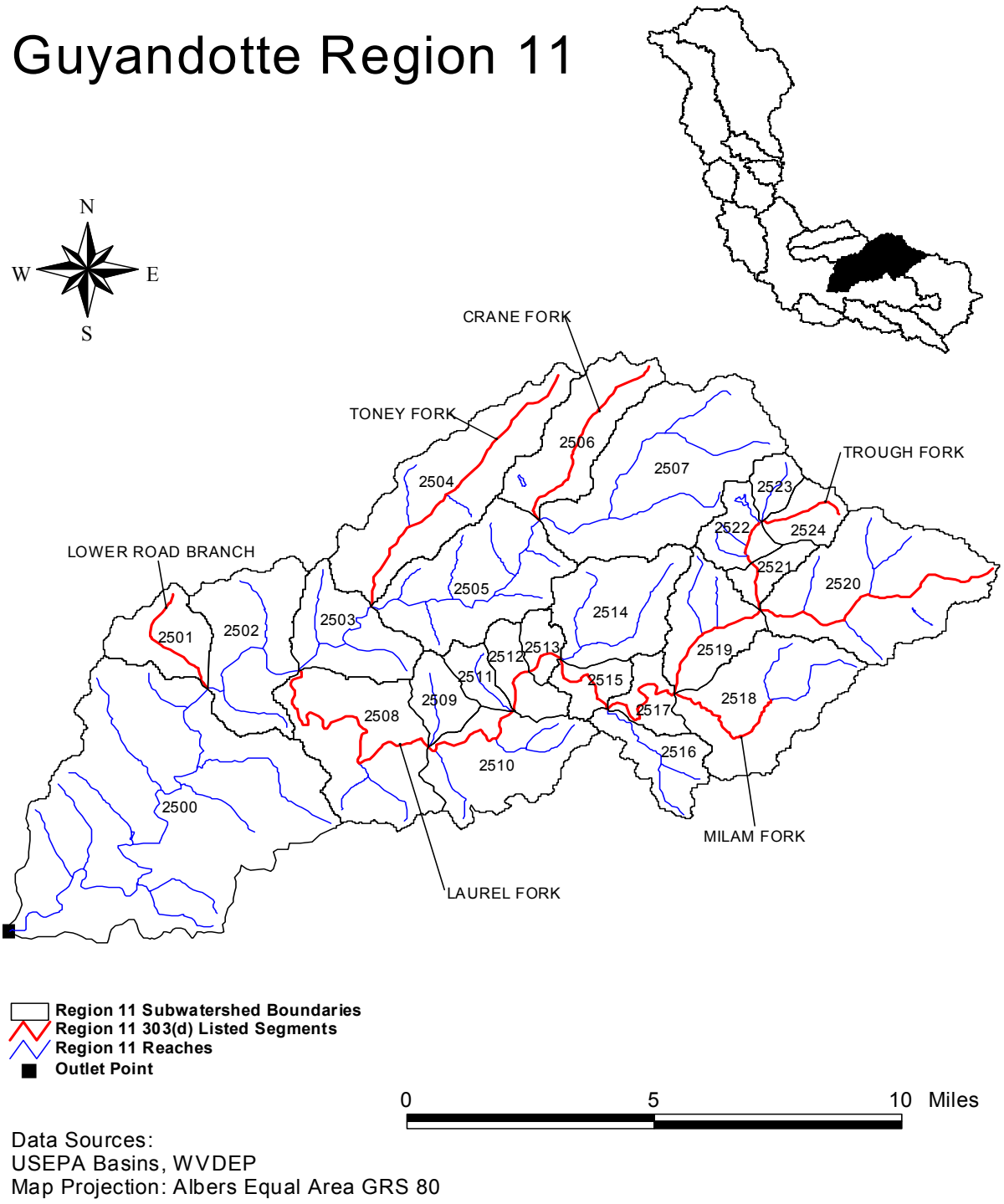


Figure 1. Region 11 - Guyandotte Watershed

Table 1. Impaired waterbodies in Region 11

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Affected Use
Crane Fork	OGC-26	Metals	2506		Aquatic Life, Human Health
Laurel Fork	OGC-16	Metals	2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524		Aquatic Life, Human Health
Lower Road Branch	OGC-12	Metals	2501		Aquatic Life, Human Health
Milam Fork	OGC-16-M	Metals	2518		Aquatic Life, Human Health
Toney Fork	OGC-19	Metals	2504		Aquatic Life, Human Health
Trough Fork	OGC-16-P	Metals	2521, 2522, 2523, 2524		Aquatic Life, Human Health

T = Aquatic Life Trout Waters

W = Warm Water Fishery

Table 2. Locations of abandoned mines (seep, deep mine, and/or leachate)

SWS
2500
2501
2502
2504
2506
2507
2512
2513
2514
2515
2516
2517
2518
2519
2520
2521
2523
2524

Table 3a. Water quality data for dissolved aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2500	28	105.56	26	600	9	10/11/02	07/03/03
2500	OG-100m4.6	100.00	100	100	1	08/28/00	08/28/00
2501	OGC-12m	100.00	100	100	1	08/28/00	08/28/00
2503	33	194.30	42	700	10	10/11/02	07/03/03
2504	OGC-19m	100.00	100	100	1	08/30/00	08/30/00
2506	OGC-026-0001	130.00	130	130	1	08/30/00	08/30/00
2507	OG-100m25	100.00	100	100	1	08/30/00	08/30/00
2508	OGC-16m0	100.00	100	100	1	08/28/00	08/28/00
2509	OGC-016-0004	120.00	120	120	1	08/29/00	08/29/00
2513	32	146.50	28	700	8	10/11/02	07/03/03
2514	OGC-016-0005	130.00	130	130	1	08/29/00	08/29/00
2518	OGC-16-Mm0.5	100.00	100	100	1	08/29/00	08/29/00
2520	OGC-016-0009	110.00	110	110	1	08/29/00	08/29/00
2520	OGC-16-Qm0.7	30.00	30	30	1	08/21/00	08/21/00
2521	OGC-16-Pm	100.00	100	100	1	08/29/00	08/29/00

Table 3b. Water quality data for total aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2500	1RDBW0015	109.50	30	640	14	08/14/95	12/29/97
2500	28	266.50	41	1500	10	10/11/02	07/03/03
2500	OG-100m4.6	100.00	100	100	1	08/28/00	08/28/00
2501	OGC-012-0001	100.00	100	100	1	08/28/00	08/28/00
2503	33	523.50	113	1300	10	10/11/02	07/03/03
2504	OGC-019-0001	190.00	190	190	1	08/30/00	08/30/00
2506	OGC-026-0001	1040.00	1040	1040	1	08/30/00	08/30/00
2507	551018	219.58	75	380	12	10/21/91	09/14/92
2507	OGC-000-025.0	180.00	180	180	1	08/30/00	08/30/00
2508	550987	310.56	60	1200	9	01/12/90	09/21/90
2508	OGC-016-0001	100.00	100	100	1	08/28/00	08/28/00
2509	OGC-016-0004	220.00	220	220	1	08/29/00	08/29/00
2513	32	178.10	31	900	10	10/11/02	07/03/03
2514	OGC-016-0005	220.00	220	220	1	08/29/00	08/29/00
2518	OGC-016-0006	200.00	200	200	1	08/29/00	08/29/00
2520	OGC-016-0008	145.00	145	145	1	08/21/00	08/21/00
2520	OGC-016-0009	180.00	180	180	1	08/29/00	08/29/00
2521	OGC-016-0007	200.00	200	200	1	08/29/00	08/29/00

Table 3c. Water quality data for dissolved iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2500	28	111.67	80	180	6	10/11/02	7/3/03
2500	OG-100m4.6	30.00	30	30	1	8/28/00	8/28/00
2501	OGC-12m	30.00	30	30	1	8/28/00	8/28/00
2503	33	221.67	70	500	6	10/11/02	7/3/03
2504	OGC-019-0001	40.00	40	40	1	8/30/00	8/30/00
2506	OGC-026-0001	830.00	830	830	1	8/30/00	8/30/00
2507	OGC-000-025.0	40.00	40	40	1	8/30/00	8/30/00
2508	OGC-016-0001	120.00	120	120	1	8/28/00	8/28/00
2509	OGC-016-0004	130	130	130	1	8/29/00	8/29/00
2513	32	218	60	730	10	10/11/02	7/3/03
2514	OGC-016-0005	120.00	120	120	1	8/29/00	8/29/00
2518	OGC-016-0006	560	560	560	1	8/29/00	8/29/00
2520	OGC-016-0008	149	149	149	1	8/21/00	8/21/00
2520	OGC-016-0009	250.00	250	250	1	8/29/00	8/29/00
2521	OGC-016-0007	60	60	60	1	8/29/00	8/29/00

Table 3d. Water quality data for total iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2500	1RDBW0015	727.02	32	6920	44	08/14/95	12/29/97
2500	28	475.00	130	2210	10	10/11/02	07/03/03
2500	OGC-000-004.6	420.00	420	420	1	08/28/00	08/28/00
2501	OGC-012-0001	170.00	170	170	1	08/28/00	08/28/00
2503	33	427.00	80	1470	10	10/11/02	07/03/03
2504	OGC-019-0001	120.00	120	120	1	08/30/00	08/30/00
2506	OGC-026-0001	1210.00	1210	1210	1	08/30/00	08/30/00
2507	551018	102.50	20	360	12	10/21/91	09/14/92
2507	OGC-000-025.0	160.00	160	160	1	08/30/00	08/30/00
2508	550987	335.00	30	980	9	01/12/90	09/21/90
2508	OGC-016-0001	520.00	520	520	1	08/28/00	08/28/00
2509	OGC-016-0004	190.00	190	190	1	08/29/00	08/29/00
2513	32	363.00	180	840	10	10/11/02	07/03/03
2514	OGC-016-0005	170.00	170	170	1	08/29/00	08/29/00
2518	OGC-016-0006	1390.00	1390	1390	1	08/29/00	08/29/00
2520	OGC-016-0008	779.00	779	779	1	08/21/00	08/21/00
2520	OGC-016-0009	510.00	510	510	1	08/29/00	08/29/00
2521	OGC-016-0007	1570.00	1570	1570	1	08/29/00	08/29/00

Table 3e. Water quality data for dissolved manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2500	28	51.43	30	80.0	7	10/11/02	07/03/03
2503	33	111.00	50	160.0	10	10/11/02	07/03/03
2513	32	81.43	40	150.0	7	10/11/02	07/03/03

Table 3f. Water quality data for total manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2500	1RDBW0015	62.66	6.00	330.0	44	8/14/1995	12/29/1997
2500	28	88.75	30.00	260.0	8	10/11/2002	7/3/2003
2500	OG-100m4.6	50.00	50.00	50.0	1	8/28/2000	8/28/2000
2501	OGC-012-0001	230.00	230.00	230.0	1	8/28/2000	8/28/2000
2503	33	154.00	70.00	300.0	10	10/11/2002	7/3/2003
2504	OGC-19m	50.00	50.00	50.0	1	8/30/2000	8/30/2000
2506	OGC-026-0001	930.00	930.00	930.0	1	8/30/2000	8/30/2000
2507	551018	21.67	5.00	70.0	12	10/21/1991	9/14/1992
2507	OG-100m25	50.00	50.00	50.0	1	8/30/2000	8/30/2000
2508	550987	61.11	10.00	150.0	9	1/12/1990	9/21/1990
2508	OGC-16m0	50.00	50.00	50.0	1	8/28/2000	8/28/2000
2509	OGC-16-Cm0.1	50.00	50.00	50.0	1	8/29/2000	8/29/2000
2513	32	97.50	30.00	210.0	8	10/11/2002	7/3/2003
2514	OGC-16-J-1m0.	50.00	50.00	50.0	1	8/29/2000	8/29/2000
2518	OGC-16-Mm0.5	50.00	50.00	50.0	1	8/29/2000	8/29/2000
2520	OGC-016-0008	77.00	77.00	77.0	1	8/21/2000	8/21/2000
2520	OGC-016-0009	140.00	140.00	140.0	1	8/29/2000	8/29/2000
2521	OGC-016-0007	150.00	150.00	150.0	1	8/29/2000	8/29/2000

Table 3g. Water quality data for total selenium

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2500	1RDBW0015	2.00	1.0	3.0	2	8/14/1995	9/9/1997
2507	551018	2.00	2.0	2.0	3	7/20/1992	9/14/1992
2508	550987	2.00	2.0	2.0	3	7/13/1990	9/21/1990

Table 3h. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2500	1RDBW0015	7.70	6.9	8.7	47	4/25/1990	12/29/1997
2500	28	7.36	6.7	7.9	10	10/11/2002	7/3/2003
2500	OG-100m4.6	6.51	6.5	6.5	1	8/28/2000	8/28/2000
2501	OGC-12m	6.50	6.5	6.5	1	8/28/2000	8/28/2000
2502	OG-100m13.9	6.50	6.5	6.5	1	8/28/2000	8/28/2000
2503	33	7.29	6.6	7.8	10	10/11/2002	7/3/2003
2504	OGC-19m	5.84	5.8	5.8	1	8/30/2000	8/30/2000
2506	OGC-26m	5.62	5.6	5.6	1	8/30/2000	8/30/2000
2507	OG-100m25	6.50	6.5	6.5	1	8/30/2000	8/30/2000
2508	OGC-16-B-1m	6.40	6.4	6.4	1	8/29/2000	8/29/2000
2508	OGC-16m0	6.50	6.5	6.5	1	8/28/2000	8/28/2000
2509	OGC-16-Cm0.1	6.16	6.2	6.2	1	8/29/2000	8/29/2000
2513	32	7.33	6.5	8.2	10	10/11/2002	7/3/2003
2513	OGC-16m10.9	6.40	6.4	6.4	1	8/29/2000	8/29/2000
2514	OGC-16-J-1m0.	6.11	6.1	6.1	1	8/29/2000	8/29/2000
2518	OGC-16-Mm0.5	6.10	6.1	6.1	1	8/29/2000	8/29/2000
2520	OGC-16-Qm0.7	6.00	6.0	6.0	1	8/21/2000	8/21/2000
2520	OGC-16-Um	5.94	5.9	5.9	1	8/29/2000	8/29/2000
2521	OGC-16-Pm	6.10	6.1	6.1	1	8/29/2000	8/29/2000

Table 3i. Water quality data for fecal coliforms

SWS	WQ Station	Avg (#/100 mL)	Min (#/100 mL)	Max (#/100 mL)	Count	Start Date	End Date
2500	OGC-000-004.6	760.00	760.0	760.0	1	8/28/2000	8/28/2000
2501	OGC-012-0001	36.00	36.0	36.0	1	8/28/2000	8/28/2000
2503	OGC-000-013.9	1200.00	1200.0	1200.0	1	8/28/2000	8/28/2000
2504	OGC-019-0001	1250.00	1250.0	1250.0	1	8/30/2000	8/30/2000
2506	OGC-026-0001	1232.00	1232.0	1232.0	1	8/30/2000	8/30/2000
2507	OGC-000-025.0	54.00	54.0	54.0	1	8/30/2000	8/30/2000
2508	OGC-016-0001	196.00	196.0	196.0	1	8/28/2000	8/28/2000
2508	OGC-016-0003	1446.00	1446.0	1446.0	1	8/29/2000	8/29/2000
2509	OGC-016-0004	840.00	840.0	840.0	1	8/29/2000	8/29/2000
2513	OGC-016-0002	4400.00	4400.0	4400.0	1	8/29/2000	8/29/2000
2514	OGC-016-0005	4000.00	4000.0	4000.0	1	8/29/2000	8/29/2000
2518	OGC-016-0006	800.00	800.0	800.0	1	8/29/2000	8/29/2000
2520	OGC-016-0008	30.00	30.0	30.0	1	8/21/2000	8/21/2000
2520	OGC-016-0009	640.00	640.0	640.0	1	8/29/2000	8/29/2000
2521	OGC-016-0007	2143.00	2143.0	2143.0	1	8/29/2000	8/29/2000
2507	OG-100m25	54.00	54.0	54.0	1	8/30/2000	8/30/2000

Table 4a. Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2500	WV1013581	20	20	3.20	0
2500	WV1016539	1,317	1,317	3.20	0
2501	WV0056693	2,528	1,390	1.76	45
2501	WV0058700	16	9	1.76	45
2501	WV1018680	1,209	665	1.76	45
2502	WV0053333	26	26	3.20	0
2502	WV1009079	9,222	9,222	3.20	0
2502	WV1012231	3,131	3,131	3.20	0
2502	WV1018680	1,568	1,568	3.20	0
2503	WV1008901	186	140	2.40	25
2503	WV1009079	4,926	3,694	2.40	25
2503	WV1012231	2,431	1,823	2.40	25
2503	WV1016431	5,478	4,109	2.40	25
2504	WV0041122	2,739	2,739	3.20	0
2504	WV0066702	285	285	3.20	0
2504	WV1012231	943	943	3.20	0
2504	WV1012355	95	95	3.20	0
2505	WV1016431	2,507	2,507	3.20	0
2506	WV0041122	2,154	2,154	3.20	0
2506	WV0066702	89	89	3.20	0
2506	WV1012355	536	536	3.20	0
2507	WV0024937	209	167	2.56	20
2507	WV0042544	926	741	2.56	20
2507	WV0092347	342	274	2.56	20
2508	WV1016431	3,761	3,761	3.20	0
2509	WV1016431	5,014	2,507	1.60	50
2511	WV1016431	627	407	2.08	35
2516	WV0039535	141	141	3.20	0
2516	WV0097446	289	289	3.20	0
2517	WV0039535	4,791	4,791	3.20	0
2520	WV1016156	1,122	1,010	2.88	10
2520	WV1016393	497	447	2.88	10
2520	WV1016491	3,959	3,563	2.88	10
2522	WV0025615	337	337	3.20	0
2522	WV0042544	2,899	2,899	3.20	0
2524	WV0042544	463	324	2.24	30
2508*	WVG640075	1,127.04	1,127.04	3.70	0
2518*	WVG640056	563.52	563.52	3.70	0

* Denotes actual Office of Water Resources Permit

Table 4b. Manganese baseline conditions and allocations (WLAs) for permitted mining point

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2500	WV1013581	9	9	2.00	0
2500	WV1016539	600	600	2.00	0
2501	WV0056693	1,309	1,309	2.00	0
2501	WV0058700	9	9	2.00	0
2501	WV1018680	626	626	2.00	0
2502	WV0053333	10	10	2.00	0
2502	WV1009079	3,681	3,681	2.00	0
2502	WV1012231	1,250	1,250	2.00	0
2502	WV1018680	626	626	2.00	0
2503	WV1008901	77	77	2.00	0
2503	WV1009079	2,026	2,026	2.00	0
2503	WV1012231	1,000	1,000	2.00	0
2503	WV1016431	2,253	2,253	2.00	0
2504	WV0041122	1,451	871	1.20	40
2504	WV0066702	151	91	1.20	40
2504	WV1012231	500	300	1.20	40
2504	WV1012355	50	30	1.20	40
2505	WV1016431	1,002	1,002	2.00	0
2506	WV0041122	1,214	1,214	2.00	0
2506	WV0066702	50	50	2.00	0
2506	WV1012355	302	302	2.00	0
2507	WV0024937	115	115	2.00	0
2507	WV0042544	511	511	2.00	0
2507	WV0092347	189	189	2.00	0
2508	WV1016431	1,502	1,502	2.00	0
2509	WV1016431	2,003	2,003	2.00	0
2511	WV1016431	250	250	2.00	0
2516	WV0039535	68	68	2.00	0
2516	WV0097446	139	139	2.00	0
2517	WV0039535	2,643	2,643	2.00	0
2520	WV1016156	636	636	2.00	0
2520	WV1016393	282	282	2.00	0
2520	WV1016491	2,245	2,245	2.00	0
2522	WV0025615	178	178	2.00	0
2522	WV0042544	1,533	1,533	2.00	0
2524	WV0042544	256	256	2.00	0

Table 4c. Aluminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2500	WV1013581	21	21	3.27	0
2500	WV1016539	1345	1345	3.27	0
2501	WV0056693	2583	1808	2.29	30
2501	WV0058700	17	12	2.29	30
2501	WV1018680	1235	865	2.29	30
2502	WV0053333	25	25	3.27	0
2502	WV1009079	8991	8991	3.27	0
2502	WV1012231	3052	3052	3.27	0
2502	WV1018680	1529	1529	3.27	0
2503	WV1008901	182	146	2.62	20
2503	WV1009079	4818	3854	2.62	20
2503	WV1012231	2377	1902	2.62	20
2503	WV1016431	5358	4287	2.62	20
2504	WV0041122	2799	2799	3.27	0
2504	WV0066702	291	291	3.27	0
2504	WV1012231	964	964	3.27	0
2504	WV1012355	97	97	3.27	0
2505	WV1016431	2445	2445	3.27	0
2506	WV0041122	2201	2201	3.27	0
2506	WV0066702	91	91	3.27	0
2506	WV1012355	548	548	3.27	0
2507	WV0024937	213	170	2.62	20
2507	WV0042544	947	757	2.62	20
2507	WV0092347	350	280	2.62	20
2508	WV1016431	3668	3668	3.27	0
2509	WV1016431	4890	2690	1.80	45
2511	WV1016431	611	428	2.29	30
2516	WV0039535	144	144	3.27	0
2516	WV0097446	295	295	3.27	0
2517	WV0039535	4895	4895	3.27	0
2520	WV1016156	1146	1032	2.94	10
2520	WV1016393	508	457	2.94	10
2520	WV1016491	4045	3641	2.94	10
2522	WV0025615	339	339	3.27	0
2522	WV0042544	2915	2915	3.27	0
2524	WV0042544	473	355	2.45	25
2508*	WVG640075	228	228	0.75	0
2518*	WVG640056	114	114	0.75	0

* Denotes actual Office of Water Resources Permit

Table 5a. Iron baseline conditions and allocations (LAs) for nonpoint sources * Othen Nonpoint Sources include: Forest, Wetland, Agriculture, Pasture, and Urbar

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2500	7,343	2,937	225	225	631	631	8	8	12	12	7	7	5,305	5,305	x
2501	1,343	81	0	0	128	128	1	1	0	0	0	0	523	523	x
2502	3	3	0	0	63	63	26	26	0	0	0	0	211	211	
2503	0	0	0	0	21	21	15	15	0	0	0	0	119	119	
2504	897	54	0	0	338	338	2	2	260	260	8	8	1,507	1,507	x
2505	0	0	0	0	72	72	21	21	0	0	0	0	280	280	
2506	7,062	706	0	0	41	41	2	2	33	33	5	5	890	890	x
2507	14,044	2,107	0	0	162	162	4	4	145	145	173	173	2,075	2,075	x
2508	0	0	0	0	103	103	26	26	0	0	0	0	295	295	
2509	0	0	0	0	7	7	6	6	0	0	0	0	51	51	
2510	0	0	0	0	37	37	6	6	71	71	0	0	206	206	
2511	0	0	0	0	3	3	1	1	0	0	0	0	40	40	
2512	2,788	1,673	0	0	23	23	1	1	0	0	0	0	357	357	x
2513	5,138	3,083	0	0	40	40	0	0	0	0	0	0	143	143	x
2514	2,313	185	0	0	57	57	1	1	0	0	5	5	1,075	1,075	x
2515	10,028	5,515	0	0	87	87	1	1	0	0	0	0	134	134	x
2516	5,080	305	0	0	38	38	2	2	0	0	1	1	481	481	x
2517	10,837	650	0	0	32	32	1	1	0	0	0	0	140	140	x
2518	451	81	0	0	109	109	2	2	0	0	6	6	1,509	1,509	x
2519	2,237	2,237	0	0	83	83	2	2	0	0	0	0	794	794	
2520	886	53	0	0	91	91	4	4	22	22	359	359	1,947	1,947	x
2521	626	313	0	0	16	16	1	1	0	0	2	2	234	234	x
2522	0	0	0	0	27	27	5	5	0	0	1,540	1,540	47	47	
2523	1,000	130	0	0	7	7	1	1	0	0	0	0	212	212	x
2524	558	33	0	0	20	20	1	1	0	0	0	0	326	326	x

Table 5b. Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2500	11,015	11,015	260	260	127	127	27	27	27	27	22	22	3,323	3,323	
2501	9,506	3,517	0	0	91	91	9	9	0	0	0	0	329	329	x
2502	41	41	0	0	24	24	11	11	0	0	0	0	669	669	
2503	0	0	0	0	8	8	6	6	0	0	0	0	404	404	
2504	5,989	120	0	0	8,237	1,238	1,143	171	98,078	14,712	5,126	769	947	947	x
2505	0	0	0	0	30	30	9	9	0	0	0	0	959	959	
2506	45,005	900	0	0	16	16	20	20	196	196	45	45	561	561	x
2507	35,161	19,338	0	0	39	39	14	14	325	325	555	555	1,308	1,308	x
2508	0	0	0	0	117	117	33	33	0	0	0	0	981	981	
2509	0	0	0	0	9	9	7	7	0	0	0	0	174	174	
2510	0	0	0	0	42	42	7	7	202	202	0	0	706	706	
2511	0	0	0	0	3	3	1	1	0	0	0	0	140	140	
2512	13,032	1,955	0	0	18	18	9	9	0	0	0	0	225	225	x
2513	21,302	4,260	0	0	30	30	4	4	0	0	0	0	86	86	x
2514	10,323	10,323	0	0	63	63	13	13	0	0	45	45	677	677	
2515	40,665	2,847	0	0	63	63	7	7	0	0	0	0	84	84	x
2516	19,953	5,587	0	0	29	29	16	16	0	0	9	9	303	303	x
2517	44,993	20,247	0	0	24	24	6	6	0	0	0	0	41	41	x
2518	3,222	64	0	0	6,424	3,533	1,143	629	0	0	3,796	2,088	946	946	x
2519	9,673	9,673	0	0	50	50	16	16	0	0	0	0	497	497	
2520	8,005	8,005	0	0	122	122	38	38	131	131	3,358	3,358	1,114	1,114	
2521	4,087	4,087	0	0	9	9	6	6	0	0	18	18	147	147	
2522	0	0	0	0	32	32	6	6	0	0	1,975	1,975	162	162	
2523	5,906	1,949	0	0	6	6	12	12	0	0	0	0	134	134	x
2524	5,039	2,671	0	0	20	20	10	10	0	0	0	0	205	205	x

Table 5c. Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2500	28,074	2,807	48	48	639	639	10	10	13	13	8	8	5,859	5,859	x
2501	4,469	313	0	0	130	130	1	1	0	0	0	0	576	576	x
2502	19	19	0	0	39	39	18	18	0	0	0	0	299	299	
2503	0	0	0	0	13	13	10	10	0	0	0	0	172	172	
2504	3,501	245	0	0	341	341	2	2	286	286	10	10	1,663	1,663	x
2505	0	0	0	0	47	47	15	15	0	0	0	0	404	404	
2506	11,016	1,102	0	0	42	42	3	3	36	36	6	6	981	981	x
2507	24,753	2,475	0	0	164	164	5	5	159	159	205	205	2,287	2,287	x
2508	0	0	0	0	66	66	18	18	0	0	0	0	424	424	
2509	0	0	0	0	5	5	4	4	0	0	0	0	73	73	
2510	0	0	0	0	24	24	4	4	51	51	0	0	298	298	
2511	0	0	0	0	2	2	1	1	0	0	0	0	58	58	
2512	18,975	1,897	0	0	24	24	1	1	0	0	0	0	394	394	x
2513	51,297	5,130	0	0	41	41	1	1	0	0	0	0	158	158	x
2514	16,450	1,481	0	0	59	59	2	2	0	0	6	6	1,185	1,185	x
2515	103,567	51,783	0	0	89	89	1	1	0	0	0	0	147	147	x
2516	40,076	2,805	0	0	39	39	2	2	0	0	1	1	530	530	x
2517	107,974	7,558	0	0	33	33	1	1	0	0	0	0	148	148	x
2518	1,459	219	0	0	111	111	2	2	0	0	7	7	1,666	1,666	x
2519	16,366	16,366	0	0	84	84	2	2	0	0	0	0	876	876	
2520	435	30	0	0	93	93	5	5	24	24	425	425	2,131	2,131	x
2521	2,582	516	0	0	16	16	1	1	0	0	2	2	259	259	x
2522	0	0	0	0	18	18	3	3	0	0	1,057	1,057	68	68	
2523	3,325	499	0	0	7	7	1	1	0	0	0	0	234	234	x
2524	274	19	0	0	20	20	1	1	0	0	0	0	359	359	x

Table 6. Fecal Coliform baseline and allocations

SWS	Stream	Agriculture		Natural Sources		Failing Septics		Residential	
		Baseline Load (counts)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)
2500	Clear Fork	3.15E+13	2.20E+13	3.99E+13	3.99E+13	5.57E+14	0.00E+00	4.98E+13	3.49E+13

Appendix A-12
Region 12

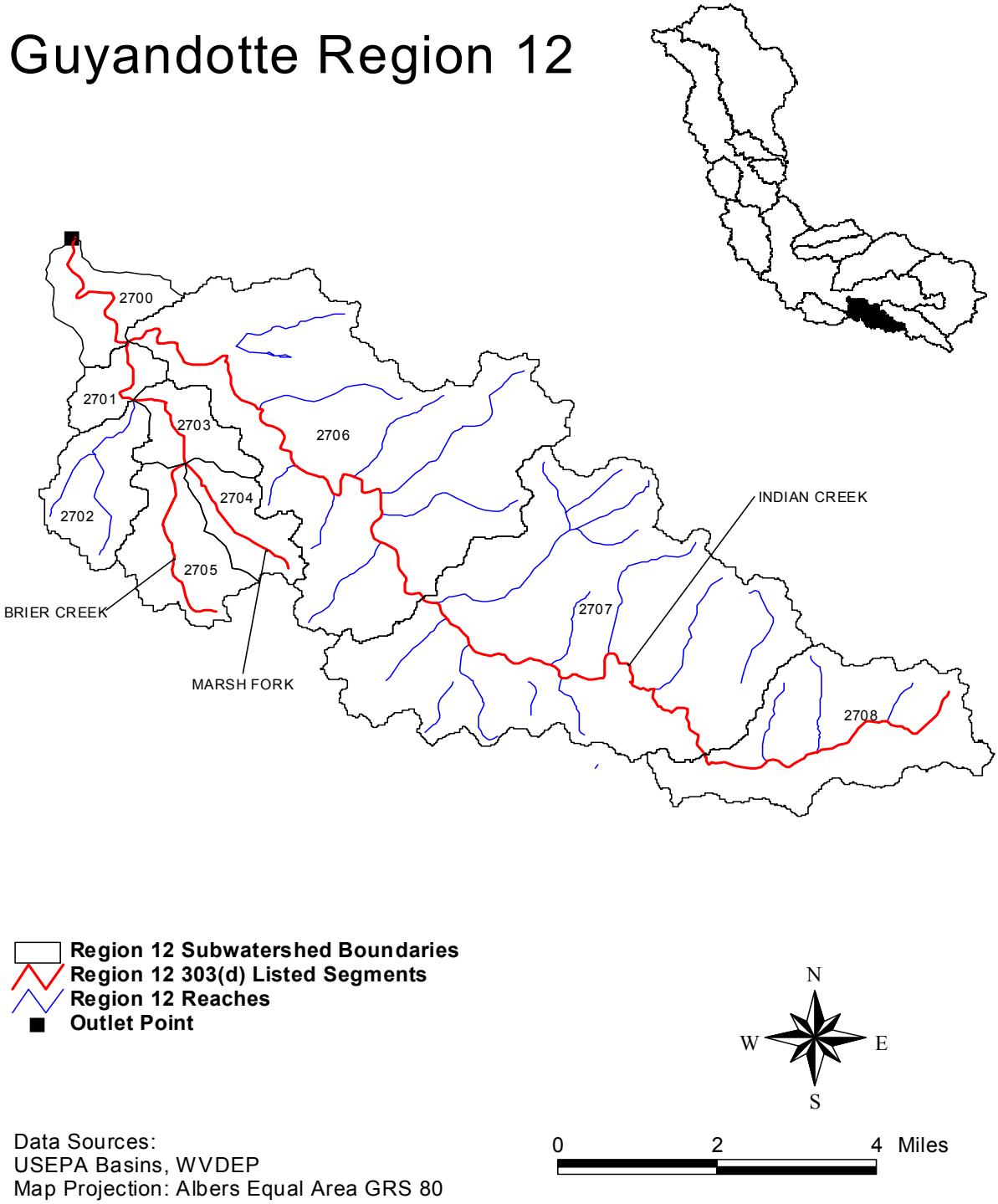


Figure 1. Region 12 - Guyandotte Watershed

Table 1. Impaired waterbodies in Region 12

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Affected Use
Brier Creek	OG-110-A	Metals	2701, 2702, 2703, 2704, 2705		Aquatic Life, Human Health
Indian Creek	OG-110	Metals	2700, 2701, 2702, 2703, 2704, 2705, 2706, 2707, 2708		Aquatic Life, Human Health
Marsh Fork	OG-110-A-2	Metals	2704		Aquatic Life, Human Health

T = Aquatic Life Trout Waters

W = Warm Water Fishery

Table 2. Locations of abandoned mines (seep, deep mine, and/or leachate)

SWS
2706

Table 3a. Water quality data for dissolved aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2700	OG-110-0001	110.00	110	110	1	09/06/00	09/06/00
2702	OG-110-A-1m0.	100.00	100	100	1	09/05/00	09/05/00
2704	OG-110-A-2m	100.00	100	100	1	09/05/00	09/05/00
2706	20	239.63	31	1000	8	10/14/02	07/02/03
2706	OG-110-Am	100.00	100	100	1	09/05/00	09/05/00
2707	OG-110-K.3m0.	100.00	100	100	1	08/30/00	08/30/00

Table 3b. Water quality data for total aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2700	OG-110-0001	450.00	450	450	1	09/06/00	09/06/00
2702	OG-110-0004	360.00	360	360	1	09/05/00	09/05/00
2703	OG-110-0005	120.00	120	120	1	09/05/00	09/05/00
2706	20	279.70	22	1100	10	10/14/02	07/02/03
2706	OG-110-0003	250.00	250	250	1	09/05/00	09/05/00
2706	OG-110m3	320.00	320	320	1	01/30/01	01/30/01
2706	OG-110m9	740.00	740	740	1	01/30/01	01/30/01
2707	OG-110-0007	380.00	380	380	1	08/30/00	08/30/00
2707	OG-110m11	1620.00	1620	1620	1	01/30/01	01/30/01
2707	OG-110m11.2	340.00	340	340	1	01/30/01	01/30/01

Table 3c. Water quality data for dissolved iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2700	OG-110-0001	160.00	160	160	1	09/06/00	09/06/00
2702	OG-110-0004	360.00	360	360	1	09/05/00	09/05/00
2703	OG-110-0005	110.00	110	110	1	09/05/00	09/05/00
2706	20	112.50	70	150	8	10/14/02	07/02/03
2706	OG-110-0003	310.00	310	310	1	09/05/00	09/05/00
2707	OG-110-0007	60.00	60	60	1	08/30/00	08/30/00

Table 3d. Water quality data for total iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2700	OG-110-0001	520.00	520	520	1	09/06/00	09/06/00
2700	OG-110m0.2	520.00	520	520	1	09/06/00	09/06/00
2702	OG-110-0004	360.00	360	360	1	09/05/00	09/05/00
2702	OG-110-A-1m0.	900.00	900	900	1	09/05/00	09/05/00
2703	OG-110-0005	250.00	250	250	1	09/05/00	09/05/00
2706	20	232.00	140	300	10	10/14/02	07/02/03
2706	OG-110-0003	590.00	590	590	1	09/05/00	09/05/00
2706	OG-110m3	440.00	440	440	1	01/30/01	01/30/01
2706	OG-110m9	320.00	320	320	1	01/30/01	01/30/01
2707	OG-110-0007	440.00	440	440	1	08/30/00	08/30/00
2707	OG-110m11	370.00	370	370	1	01/30/01	01/30/01
2707	OG-110m11.2	130.00	130	130	1	01/30/01	01/30/01

Table 3e. Water quality data for dissolved manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2706	20	52.50	40	90.0	4	10/14/02	07/02/03

Table 3f. Water quality data for total manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2700	OG-110m0.2	50.0	50.00	50.0	1	9/6/2000	9/6/2000
2702	OG-110-0004	180.0	180.00	180.0	1	9/5/2000	9/5/2000
2704	OG-110-A-2m	50.0	50.00	50.0	1	9/5/2000	9/5/2000
2706	20	55.0	30.00	110.0	6	10/14/2002	7/2/2003
2706	OG-110-0003	50.0	50.00	50.0	1	9/5/2000	9/5/2000
2706	OG-110m3	50.0	50.00	50.0	1	1/30/2001	1/30/2001
2706	OG-110m9	50.0	50.00	50.0	1	1/30/2001	1/30/2001
2707	OG-110-K.3m0.	50.0	50.00	50.0	1	8/30/2000	8/30/2000
2707	OG-110m11	50.0	50.00	50.0	1	1/30/2001	1/30/2001
2707	OG-110m11.2	50.0	50.00	50.0	1	1/30/2001	1/30/2001

Table 3g. Water quality data for total selenium

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
No data available							

Table 3h. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2700	OG-110m0.2	7.1	7.1	7.1	1	9/6/2000	9/6/2000
2702	OG-110-A-1m0.	7.1	7.1	7.1	1	9/5/2000	9/5/2000
2704	OG-110-A-2m	7.1	7.1	7.1	1	9/5/2000	9/5/2000
2706	20	7.4	6.5	8.2	10	10/14/2002	7/2/2003
2706	OG-110-Am	7.1	7.1	7.1	1	9/5/2000	9/5/2000
2706	OG-110-Gm	7.1	7.1	7.1	1	9/5/2000	9/5/2000
2706	OG-110m3	5.0	5.0	5.0	1	1/30/2001	1/30/2001
2706	OG-110m9	4.9	4.9	4.9	1	1/30/2001	1/30/2001
2707	OG-110-K.3m0.	7.1	7.1	7.1	1	8/30/2000	8/30/2000
2707	OG-110m11	5.9	4.7	7.1	2	9/6/2000	1/30/2001
2707	OG-110m11.2	4.6	4.6	4.6	1	1/30/2001	1/30/2001

Table 3i. Water quality data for fecal coliforms

SWS	WQ Station	Avg (#/100 mL)	Min (#/100 mL)	Max (#/100 mL)	Count	Start Date	End Date
2700	OG-110-0001	36.0	36.0	36.0	1	9/6/2000	9/6/2000
2702	OG-110-0004	321.0	321.0	321.0	1	9/5/2000	9/5/2000
2703	OG-110-0005	71.0	71.0	71.0	1	9/5/2000	9/5/2000
2706	OG-110-0002	232.0	232.0	232.0	1	9/6/2000	9/6/2000
2706	OG-110-0003	1020.0	1020.0	1020.0	1	9/5/2000	9/5/2000
2706	OG-110-0006	1268.0	1268.0	1268.0	1	9/5/2000	9/5/2000
2707	OG-110-0007	540.0	540.0	540.0	1	8/30/2000	8/30/2000
2700	OG-110m0.2	36.0	36.0	36.0	1	9/6/2000	9/6/2000
2706	OG-110m3	280.0	280.0	280.0	1	1/30/2001	1/30/2001
2706	OG-110m9	2720.0	2720.0	2720.0	1	1/30/2001	1/30/2001
2707	OG-110m11	20.0	20.0	20.0	1	1/30/2001	1/30/2001
2707	OG-110m11.2	120.0	120.0	120.0	1	1/30/2001	1/30/2001

Table 4a. Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2704	WV1011863	109	109	3.20	0
2705	WV1011863	44	44	3.20	0
2706	WV0061336	413	413	3.20	0
2706	WV1006266	45	45	3.20	0
2706	WV1008544	75	75	3.20	0
2706	WV1011871	74	74	3.20	0
2707	WV0090000	2,153	1,615	2.40	25
2707	WV1018531	10,362	7,771	2.40	25
2707	WV1018965	12,611	9,458	2.40	25
2708	WV0090000	499	289	1.86	42
2708	WV0097446	14,201	8,237	1.86	42

Table 4b. Manganese baseline conditions and allocations (WLAs) for permitted mining point

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2704	WV1011863	67	67	2.00	0
2705	WV1011863	27	27	2.00	0
2706	WV0061336	235	235	2.00	0
2706	WV1006266	26	26	2.00	0
2706	WV1008544	43	43	2.00	0
2706	WV1011871	42	42	2.00	0
2707	WV0090000	872	872	2.00	0
2707	WV1018531	4,198	4,198	2.00	0
2707	WV1018965	5,110	5,110	2.00	0
2708	WV0090000	194	126	1.30	35
2708	WV0097446	5,528	3,593	1.30	35

Table 4c. Aluminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2704	WV1011863	111	111	3.27	0
2705	WV1011863	45	45	3.27	0
2706	WV0061336	422	422	3.27	0
2706	WV1006266	46	46	3.27	0
2706	WV1008544	77	77	3.27	0
2706	WV1011871	76	76	3.27	0
2707	WV0090000	2,097	2,097	3.27	0
2707	WV1018531	10,091	10,091	3.27	0
2707	WV1018965	12,281	12,281	3.27	0
2708	WV0090000	486	486	3.27	0
2708	WV0097446	13,851	13,851	3.27	0

Table 5a. Iron baseline conditions and allocations (LAs) for nonpoint sources * Othen Nonpoint Sources include: Forest, Wetland, Agriculture, Pasture, and Urba

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2700	0	0	0	0	23	23	6	6	0	0	21	21	56	56	
2701	0	0	0	0	9	9	5	5	0	0	0	0	33	33	
2702	0	0	0	0	15	15	5	5	0	0	0	0	72	72	
2703	0	0	0	0	15	15	11	11	0	0	0	0	46	46	
2704	0	0	0	0	9	9	10	10	0	0	0	0	51	51	
2705	0	0	0	0	25	25	7	7	0	0	0	0	81	81	
2706	1,180	71	0	0	298	298	12	12	20	20	78	78	2,789	2,789	x
2707	0	0	0	0	119	119	40	40	181	181	1,845	1,845	469	469	
2708	0	0	0	0	20	20	3	3	0	0	93	93	164	164	

Table 5b. Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2700	0	0	0	0	28	28	7	7	0	0	27	27	190	190	
2701	0	0	0	0	11	11	6	6	0	0	0	0	110	110	
2702	0	0	0	0	18	18	6	6	0	0	0	0	250	250	
2703	0	0	0	0	18	18	14	14	1	1	0	0	159	159	
2704	0	0	0	0	712	605	857	729	0	0	0	0	175	175	x
2705	0	0	0	0	1,944	1,653	572	486	0	0	0	0	277	277	x
2706	8,017	8,017	0	0	194	194	112	112	120	120	734	734	1,756	1,756	
2707	0	0	0	0	141	141	51	51	511	511	2,366	2,366	1,601	1,601	
2708	0	0	0	0	1,503	601	276	110	0	0	7,419	2,968	539	539	x

Table 5c. Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2700	0	0	0	0	15	15	4	4	0	0	14	14	81	81	
2701	0	0	0	0	6	6	3	3	0	0	0	0	47	47	
2702	0	0	0	0	10	10	3	3	0	0	0	0	104	104	
2703	0	0	0	0	10	10	8	8	0	0	0	0	67	67	
2704	0	0	0	0	6	6	7	7	0	0	0	0	74	74	
2705	0	0	0	0	16	16	5	5	0	0	0	0	117	117	
2706	4,413	441	0	0	302	302	14	14	22	22	93	93	3,075	3,075	x
2707	0	0	0	0	78	78	27	27	130	130	1,267	1,267	677	677	
2708	0	0	0	0	13	13	2	2	0	0	63	63	233	233	

Table 6. Fecal Coliform baseline and allocations

SWS	Stream	Agriculture		Natural Sources		Failing Septics		Residential	
		Baseline Load (counts)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)
2700	Indian Creek	7.03E+12	4.92E+12	1.19E+13	1.19E+13	1.39E+14	0.00E+00	4.56E+12	3.19E+12

Appendix A-13
Region 13

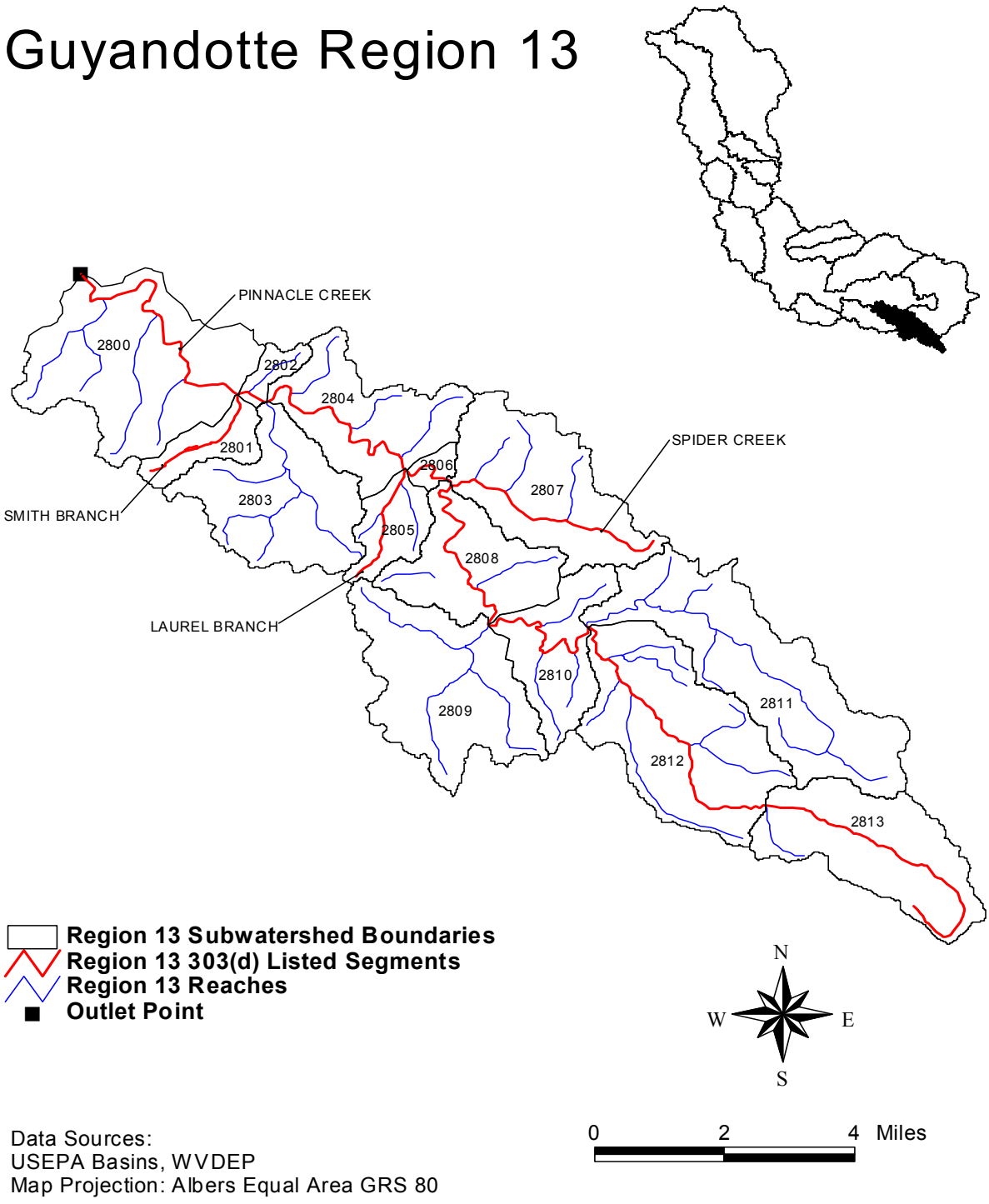


Figure 1. Region 13 - Guyandotte Watershed

Table 1. Impaired waterbodies in Region 13

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Affected Use
Laurel Branch	OG-124-H	Metals	2805		Aquatic Life, Human Health
Pinnacle Creek	OG-124	Metals	2800, 2801, 2802, 2803, 2804, 2805, 2806, 2807, 2808, 2809, 2810, 2811, 2812, 2813		Aquatic Life (T), Human Health
Smith Branch	OG-124-D	Metals	2801		Aquatic Life, Human Health
Spider Creek	OG-124-I	Metals	2807		Aquatic Life, Human Health

T = Aquatic Life Trout Waters

W = Warm Water Fishery

Table 2. Locations of abandoned mines (seep, deep mine, and/or leachate)

SWS
2804
2811
2812
2813

Table 3a. Water quality data for dissolved aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2800	OG-124-0001	150.00	150	150	1	09/06/00	09/06/00
2800	OG-124m3.7	100.00	100	100	1	08/29/00	08/29/00
2801	OG-124-0007	220.00	220	220	1	09/06/00	09/06/00
2804	OG-124m6.7	100.00	100	100	1	08/29/00	08/29/00
2804	OG-124m8.3	100.00	100	100	1	08/29/00	08/29/00
2805	OG-124-Hm	100.00	100	100	1	08/29/00	08/29/00
2806	16	60.17	27	137	6	11/02/02	07/02/03
2807	OG-124-Im	100.00	100	100	1	08/29/00	08/29/00
2811	OG-124-Nm3.7	100.00	100	100	1	09/05/00	09/05/00
2812	OG-124m20.6	100.00	100	100	1	09/05/00	09/05/00

Table 3b. Water quality data for total aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2800	OG-124-0001	180.00	180	180	1	09/06/00	09/06/00
2800	OG-124-0002	130.00	130	130	1	08/29/00	08/29/00
2801	OG-124-0007	350.00	350	350	1	09/06/00	09/06/00
2804	OG-124-0003	100.00	100	100	1	08/29/00	08/29/00
2804	OG-124-0004	110.00	110	110	1	08/29/00	08/29/00
2804	OG-124-0006	140.00	140	140	1	08/29/00	08/29/00
2805	OG-124-Hm	100.00	100	100	1	08/29/00	08/29/00
2806	16	154.71	70	278	7	11/02/02	07/02/03
2807	OG-124-0010	170.00	170	170	1	08/29/00	08/29/00
2811	OG-124-0011	660.00	660	660	1	09/05/00	09/05/00
2812	OG-124-0005	240.00	240	240	1	09/05/00	09/05/00

Table 3c. Water quality data for dissolved iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2800	OG-124-0001	60.00	60	60	1	9/6/00	9/6/00
2800	OG-124m0.7	60.00	60	60	1	9/5/00	9/5/00
2800	OG-124m3.7	30.00	30	30	1	8/29/00	8/29/00
2801	OG-124-Dm	30.00	30	30	1	9/6/00	9/6/00
2804	OG-124m6.7	30.00	30	30	1	8/29/00	8/29/00
2804	OG-124m8.3	30.00	30	30	1	8/29/00	8/29/00
2805	OG-124-Hm	30.00	30	30	1	8/29/00	8/29/00
2806	16	126.67	90	170	3	11/2/02	7/2/03
2807	OG-124-0010	40	40	40	1	8/29/00	8/29/00
2811	OG-124-0011	160	160	160	1	9/5/00	9/5/00
2812	OG-124-0005	350.00	350	350	1	9/5/00	9/5/00

Table 3d. Water quality data for total iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2800	OG-124-0001	170.00	170	170	1	09/06/00	09/06/00
2800	OG-124-0002	90.00	90	90	1	08/29/00	08/29/00
2800	OG-124m0.7	170.00	170	170	1	09/05/00	09/05/00
2801	OG-124-0007	60.00	60	60	1	09/06/00	09/06/00
2804	OG-124-{7.0}-	30.00	30	30	1	08/29/00	08/29/00
2804	OG-124-0003	80.00	80	80	1	08/29/00	08/29/00
2804	OG-124-0004	90.00	90	90	1	08/29/00	08/29/00
2805	OG-124-0009	420.00	420	420	1	08/29/00	08/29/00
2806	16	323.33	70	1570	9	11/02/02	07/02/03
2807	OG-124-0010	40.00	40	40	1	08/29/00	08/29/00
2811	OG-124-0011	930.00	930	930	1	09/05/00	09/05/00
2812	OG-124-0005	480.00	480	480	1	09/05/00	09/05/00

Table 3e. Water quality data for dissolved manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2806	16	74.44	30	150.0	9	11/02/02	07/02/03

Table 3f. Water quality data for total manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2800	OG-124m0.7	50.0	50.00	50.0	1	9/5/00	9/5/00
2800	OG-124m3.7	50.0	50.00	50.0	1	8/29/00	8/29/00
2801	OG-124-Dm	50.0	50.00	50.0	1	9/6/00	9/6/00
2804	OG-124-{7.0}-	50.0	50.00	50.0	1	8/29/00	8/29/00
2804	OG-124m6.7	50.0	50.00	50.0	1	8/29/00	8/29/00
2804	OG-124m8.3	50.0	50.00	50.0	1	8/29/00	8/29/00
2805	OG-124-0009	70.0	70.00	70.0	1	8/29/00	8/29/00
2806	16	105.6	50.00	240.0	9	11/2/02	7/2/03
2807	OG-124-Im	50.0	50.00	50.0	1	8/29/00	8/29/00
2811	OG-124-0011	110.0	110.00	110.0	1	9/5/00	9/5/00
2812	OG-124-0005	80.0	80.00	80.0	1	9/5/00	9/5/00
2812	OG-124m20.6	80.0	80.00	80.0	1	9/5/00	9/5/00

Table 3g. Water quality data for total selenium

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
No available data							

Table 3h. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2800	OG-124m0.7	7.00	7.0	7.0	1	9/5/00	9/5/00
2800	OG-124m3.7	7.00	7.0	7.0	1	8/29/00	8/29/00
2801	OG-124-Dm	7.00	7.0	7.0	1	9/6/00	9/6/00
2804	OG-124-{7.0}-	7.00	7.0	7.0	1	8/29/00	8/29/00
2804	OG-124m6.7	7.00	7.0	7.0	1	8/29/00	8/29/00
2804	OG-124m8.3	7.00	7.0	7.0	1	8/29/00	8/29/00
2805	OG-124-Hm	7.00	7.0	7.0	1	8/29/00	8/29/00
2806	16	7.70	7.2	8.3	9	11/2/02	7/2/03
2807	OG-124-Im	7.00	7.0	7.0	1	8/29/00	8/29/00
2811	OG-124-Nm3.7	7.00	7.0	7.0	1	9/5/00	9/5/00
2812	OG-124m20.6	7.00	7.0	7.0	1	9/5/00	9/5/00

Table 3i. Water quality data for fecal coliforms

SWS	WQ Station	Avg (#/100 mL)	Min (#/100 mL)	Max (#/100 mL)	Count	Start Date	End Date
2800	OG-124m0.7	143.0	143.0	143.0	1	9/5/00	9/5/00
2800	OG-124m3.7	20.0	20.0	20.0	1	8/29/00	8/29/00
2801	OG-124-Dm	20.0	20.0	20.0	1	9/6/00	9/6/00
2804	OG-124m6.7	20.0	20.0	20.0	1	8/29/00	8/29/00
2804	OG-124m8.3	20.0	20.0	20.0	1	8/29/00	8/29/00
2807	OG-124-Im	20.0	20.0	20.0	1	8/29/00	8/29/00
2811	OG-124-Nm3.7	640.0	640.0	640.0	1	9/5/00	9/5/00
2812	OG-124m20.6	250.0	250.0	250.0	1	9/5/00	9/5/00

Table 4a. Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2800	WV0090042	1,341	1,341	3.20	0
2800	WV0090051	1,377	1,377	3.20	0
2800	WV1018531	1,382	1,382	3.20	0
2800	WV1018965	10,387	10,387	3.20	0
2801	WV0090051	240	240	3.20	0
2802	WV0090000	536	536	3.20	0
2803	WV0090000	487	268	1.76	45
2803	WV0090042	473	260	1.76	45
2803	WV0097446	7,104	3,907	1.76	45
2803	WV1018965	1,307	719	1.76	45
2804	WV0050521	827	827	3.20	0
2804	WV0090042	803	803	3.20	0
2805	WV0090000	156	117	2.40	25
2805	WV0097446	652	489	2.40	25
2807	WV0001848	34	34	3.20	0
2808	WV0097446	2,478	2,230	2.88	10
2808	WV1018736	6,961	6,265	2.88	10
2809	WV0097446	707	566	2.56	20
2809	WV1018736	4,967	3,973	2.56	20
2809	WV1018833	44	35	2.56	20
2810	WV1005936	433	433	3.20	0
2811	WV0001848	29	29	3.20	0
2811	WV1006649	179	179	3.20	0
2811	WV1018787	461	461	3.20	0
2812	WV1018779	6,615	5,954	2.88	10
2812	WV1018787	312	280	2.88	10

Table 4b. Manganese baseline conditions and allocations (WLAs) for permitted mining point

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2800	WV0090042	556	556	2.00	0
2800	WV0090051	570	570	2.00	0
2800	WV1018531	573	573	2.00	0
2800	WV1018965	4,303	4,303	2.00	0
2801	WV0090051	127	127	2.00	0
2802	WV0090000	324	324	2.00	0
2803	WV0090000	194	194	2.00	0
2803	WV0090042	189	189	2.00	0
2803	WV0097446	2,831	2,831	2.00	0
2803	WV1018965	521	521	2.00	0
2804	WV0050521	462	462	2.00	0
2804	WV0090042	448	448	2.00	0
2805	WV0090000	65	65	2.00	0
2805	WV0097446	270	270	2.00	0
2807	WV0001848	18	18	2.00	0
2808	WV0097446	944	944	2.00	0
2808	WV1018736	2,651	2,651	2.00	0
2809	WV0097446	270	270	2.00	0
2809	WV1018736	1,894	1,894	2.00	0
2809	WV1018833	17	17	2.00	0
2810	WV1005936	261	261	2.00	0
2811	WV0001848	18	18	2.00	0
2811	WV1006649	107	107	2.00	0
2811	WV1018787	277	277	2.00	0
2812	WV1018779	2,936	2,936	2.00	0
2812	WV1018787	138	138	2.00	0

Table 4c. Aluminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
2800	WV0090042	1,309	1,309	3.27	0
2800	WV0090051	1,344	1,344	3.27	0
2800	WV1018531	1,349	1,349	3.27	0
2800	WV1018965	10,141	10,141	3.27	0
2801	WV0090051	241	241	3.27	0
2802	WV0090000	547	547	3.27	0
2803	WV0090000	476	476	3.27	0
2803	WV0090042	462	462	3.27	0
2803	WV0097446	6,940	6,940	3.27	0
2803	WV1018965	1,277	1,277	3.27	0
2804	WV0050521	838	838	3.27	0
2804	WV0090042	814	814	3.27	0
2805	WV0090000	153	153	3.27	0
2805	WV0097446	639	639	3.27	0
2807	WV0001848	34	34	3.27	0
2808	WV0097446	2,407	2,407	3.27	0
2808	WV1018736	6,761	6,761	3.27	0
2809	WV0097446	687	687	3.27	0
2809	WV1018736	4,823	4,823	3.27	0
2809	WV1018833	43	43	3.27	0
2810	WV1005936	442	442	3.27	0
2811	WV0001848	30	30	3.27	0
2811	WV1006649	182	182	3.27	0
2811	WV1018787	471	471	3.27	0
2812	WV1018779	6,759	6,759	3.27	0
2812	WV1018787	318	318	3.27	0

Table 5a. Iron baseline conditions and allocations (LAs) for nonpoint sources * Othen Nonpoint Sources include: Forest, Wetland, Agriculture, Pasture, and Urban)

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2800	0	0	0	0	69	69	0	0	472	472	155	155	247	247	
2801	0	0	0	0	12	12	0	0	0	0	432	432	52	52	
2802	0	0	0	0	4	4	0	0	0	0	0	0	25	25	
2803	0	0	0	0	47	47	5	5	0	0	631	631	149	149	
2804	5	0	0	0	18	18	5	5	0	0	0	0	163	163	x
2805	0	0	0	0	1	1	1	1	0	0	0	0	52	52	
2806	0	0	0	0	2	2	0	0	0	0	0	0	14	14	
2807	0	0	0	0	88	88	1	1	0	0	0	0	196	196	
2808	0	0	0	0	40	40	1	1	0	0	0	0	112	112	
2809	0	0	0	0	67	67	3	3	0	0	0	0	210	210	
2810	0	0	0	0	31	31	2	2	3	3	0	0	109	109	
2811	419	25	0	0	178	178	3	3	26	26	58	58	1,527	1,527	x
2812	5,242	314	0	0	114	114	2	2	58	58	3	3	1,265	1,265	x
2813	12,332	740	0	0	146	146	3	3	0	0	0	0	942	942	x

Table 5b. Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2800	0	0	0	0	82	82	0	0	1,337	1,337	198	198	671	671	
2801	0	0	0	0	95	33	0	0	0	0	3,672	1,285	151	151	x
2802	0	0	0	0	5	5	0	0	0	0	0	0	59	59	
2803	0	0	0	0	53	53	6	6	0	0	768	768	506	506	
2804	312	312	0	0	21	21	6	6	0	0	0	0	496	496	
2805	0	0	0	0	110	110	92	92	0	0	0	0	179	179	
2806	0	0	0	0	2	2	0	0	0	0	0	0	48	48	
2807	0	0	0	0	6,607	4,955	92	69	4	4	0	0	663	663	x
2808	0	0	0	0	47	47	1	1	0	0	0	0	381	381	
2809	0	0	0	0	78	78	4	4	0	0	0	0	705	705	
2810	0	0	0	0	37	37	3	3	8	8	0	0	368	368	
2811	2,844	2,844	0	0	140	140	29	29	148	148	521	521	904	904	
2812	26,208	9,173	0	0	83	83	18	18	329	329	26	26	750	750	x
2813	50,338	10,571	0	0	86	86	22	22	0	0	0	0	558	558	x

Table 5c. Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
2800	0	0	0	0	46	46	0	0	339	339	106	106	301	301	
2801	0	0	0	0	8	8	0	0	0	0	297	297	67	67	
2802	0	0	0	0	3	3	0	0	0	0	0	0	29	29	
2803	0	0	0	0	31	31	3	3	0	0	432	432	214	214	
2804	30	3	0	0	12	12	3	3	0	0	0	0	218	218	x
2805	0	0	0	0	1	1	1	1	0	0	0	0	75	75	
2806	0	0	0	0	1	1	0	0	0	0	0	0	20	20	
2807	0	0	0	0	59	59	1	1	0	0	0	0	280	280	
2808	0	0	0	0	27	27	1	1	0	0	0	0	160	160	
2809	0	0	0	0	45	45	2	2	0	0	0	0	301	301	
2810	0	0	0	0	21	21	2	2	2	2	0	0	155	155	
2811	1,418	142	0	0	180	180	4	4	29	29	69	69	1,677	1,677	x
2812	31,912	3,191	0	0	116	116	2	2	64	64	3	3	1,388	1,388	x
2813	92,273	9,227	0	0	148	148	3	3	0	0	0	0	1,033	1,033	x

Table 6. Fecal Coliform basline and allocations

SWS	Stream	Agriculture		Natural Sources		Failing Septics		Residential	
		Baseline Load (counts)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)
2800	Pinnacle Creek	1.40E+13	9.78E+12	1.67E+13	1.67E+13	1.99E+14	0.00E+00	9.40E+12	6.58E+12

Appendix A-14
Region 14

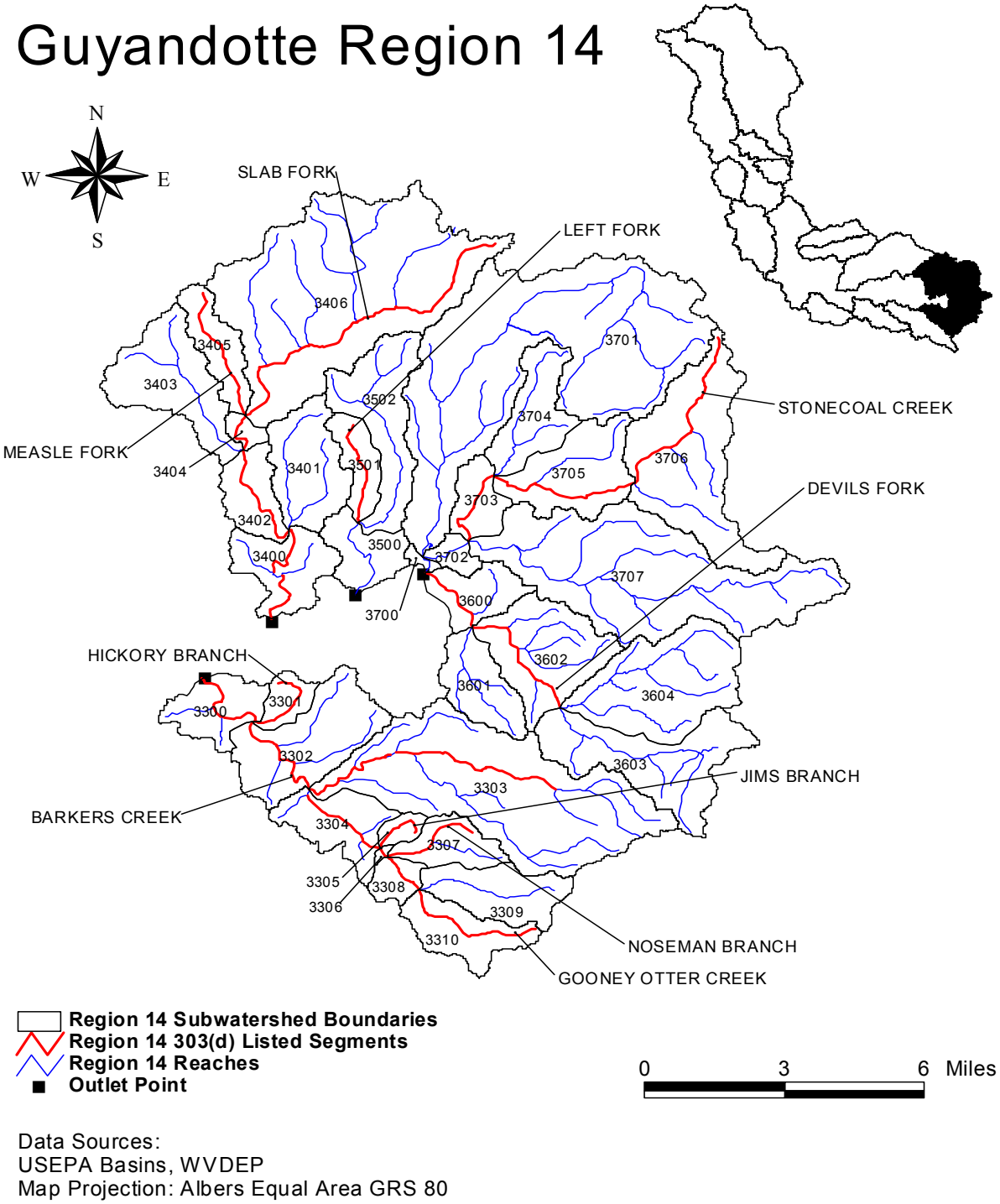


Figure 1. Region 14 - Guyandotte Watershed

Table 1. Impaired waterbodies in Region 14

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Affected Use
Barkers Creek	OG-131	Metals	3300, 3301, 3302, 3303, 3304, 3305, 3306, 3307, 3308, 3309, 3310		Aquatic Life, Human Health
Devil's Fork	OG-137	Metals	3600, 3601, 3602, 3603, 3604		Aquatic Life, Human Health
Gooney Otter Creek	OG-131-F	Metals	3304, 3305, 3306, 3307, 3308, 3309, 3310		Aquatic Life, Human Health
Hickory Branch	OG-131-B	Metals	3301		Aquatic Life, Human Health
Jims Branch	OG-131-F-1	Metals	3305		Aquatic Life, Human Health
Left Fork	OG-135-A	Metals	3501		Aquatic Life, Human Health
Measle Fork	OG-134-D	Metals, pH	3405		Aquatic Life, Human Health
Noseman Branch	OG-131-F-2	Metals	3307		Aquatic Life, Human Health
Slab Fork	OG-134	Metals	3400, 3401, 3402, 3403, 3405, 3406		Aquatic Life, Human Health
Stonecoal Creek	OG-139	Metals	3703, 3705, 3706		Aquatic Life, Human Health

T = Aquatic Life Trout Waters

W = Warm Water Fishery

Table 2. Locations of abandoned mines (seep, deep mine, and/or leachate)

SWS
3300
3302
3303
3304
3305
3307
3309
3310
3402
3406
3500
3501
3600
3602
3701
3702
3704

Table 2. (Continued) Locations of abandoned mines (seep, deep mine, and/or leachate)

SWS
3705
3706
3707

Table 3a. Water quality data for dissolved aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
3300	19	106.22	23	500	9	10/11/02	07/03/03
3300	OG-131-0003	150.00	150	150	1	09/06/00	09/06/00
3302	OG-131-0004	170.00	170	170	1	09/06/00	09/06/00
3303	OG-131-0001	120.00	120	120	1	09/06/00	09/06/00
3303	OG-131-0002	160.00	160	160	1	09/06/00	09/06/00
3304	OG-131-0005	190.00	190	190	1	09/05/00	09/05/00
3304	OG-131-F-1m	100.00	100	100	1	09/05/00	09/05/00
3306	OG-131-F-2m	100.00	100	100	1	09/05/00	09/05/00
3400	23	302.56	53	1800	9	10/11/02	07/03/03
3400	OG-134-0001	165.00	165	165	1	09/05/00	09/05/00
3403	OG-134-0004	40.00	40	40	1	09/05/00	09/05/00
3405	OG-134-0005	5790.00	5790	5790	1	09/05/00	09/05/00
3406	OG-134-0002	95.00	95	95	1	09/06/00	09/06/00
3406	OG-134-0006	130.00	130	130	1	08/30/00	08/30/00
3501	OG-135-0002	36.00	36	36	1	09/06/00	09/06/00
3600	25	127.88	36	500	8	10/11/02	07/03/03
3600	OG-137-0001	83.00	83	83	1	09/07/00	09/07/00
3603	OG-137-0002	260.00	260	260	1	09/11/00	09/11/00
3604	OG-137-0003	240.00	240	240	1	09/11/00	09/11/00
3701	26	143.50	30	600	10	10/11/02	07/03/03
3701	OG-138-0001	175.00	175	175	1	09/06/00	09/06/00
3701	OG-138-0003	58.00	58	58	1	09/07/00	09/07/00
3701	OG-138-0004	930.00	930	930	1	09/11/00	09/11/00
3701	OG-138m3.4	100.00	100	100	1	09/11/00	09/11/00
3702	27	208.33	21	800	9	10/11/02	07/03/03
3702	OG-139-0001	89.00	89	89	1	09/06/00	09/06/00
3703	OG-139m3.1	100.00	100	100	1	09/11/00	09/11/00
3705	OG-139-Cm	100.00	100	100	1	09/11/00	09/11/00
3707	OG-139-0003	70.00	70	70	1	09/07/00	09/07/00

Table 3b. Water quality data for total aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
3300	19	173.10	26	700	10	10/11/02	07/03/03
3300	OG-131-0003	230.00	230	230	1	09/06/00	09/06/00
3301	OG-131-Bm	230.00	230	230	1	09/06/00	09/06/00
3302	OG-131-0004	340.00	340	340	1	09/06/00	09/06/00
3303	OG-131-0001	150.00	150	150	1	09/06/00	09/06/00
3303	OG-131-0002	190.00	190	190	1	09/06/00	09/06/00
3304	OG-131-0005	380.00	380	380	1	09/05/00	09/05/00
3305	OG-131-0006	180.00	180	180	1	09/05/00	09/05/00
3306	OG-131-0007	250.00	250	250	1	09/05/00	09/05/00
3400	23	1017.60	73	2200	10	10/11/02	07/03/03
3400	OG-134-0001	868.00	868	868	1	09/05/00	09/05/00
3403	OG-134-0004	102.00	102	102	1	09/05/00	09/05/00
3405	OG-134-0005	5790.00	5790	5790	1	09/05/00	09/05/00
3406	OG-134-0002	414.00	414	414	1	09/06/00	09/06/00
3406	OG-134-0006	200.00	200	200	1	08/30/00	08/30/00
3501	OG-135-0002	48.00	48	48	1	09/06/00	09/06/00
3600	25	184.67	24	700	9	10/11/02	07/03/03
3600	OG-137-0001	113.00	113	113	1	09/07/00	09/07/00
3603	OG-137-0002	290.00	290	290	1	09/11/00	09/11/00
3604	OG-137-0003	280.00	280	280	1	09/11/00	09/11/00
3604	OG-137-Cm0.7	280.00	280	280	1	09/11/00	09/11/00
3701	26	280.10	62	600	10	10/11/02	07/03/03
3701	OG-138-0001	354.00	354	354	1	09/06/00	09/06/00
3701	OG-138-0002	430.00	430	430	1	09/11/00	09/11/00
3701	OG-138-0003	66.00	66	66	1	09/07/00	09/07/00
3701	OG-138-0004	1200.00	1200	1200	1	09/11/00	09/11/00
3702	27	252.50	24	1000	10	10/11/02	07/03/03
3702	OG-139-0001	164.00	164	164	1	09/06/00	09/06/00
3703	OG-139-0002	130.00	130	130	1	09/11/00	09/11/00
3705	OG-139-Cm	100.00	100	100	1	09/11/00	09/11/00
3707	OG-139-0003	97.00	97	97	1	09/07/00	09/07/00

Table 3c. Water quality data for dissolved iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
3300	19	100.00	60	140	8	10/11/02	7/3/03
3300	OG-131-0003	40.00	40	40	1	9/6/00	9/6/00
3300	WVOG-131	30.00	30	30	1	9/6/00	9/6/00
3302	OG-131-Cm	30.00	30	30	1	9/6/00	9/6/00
3303	OG-131-0001	40.00	40	40	1	9/6/00	9/6/00
3304	OG-131-0005	30.00	30	30	1	9/5/00	9/5/00
3304	OG-131-F-1m	30.00	30	30	1	9/5/00	9/5/00
3306	OG-131-0007	30.00	30	30	1	9/5/00	9/5/00
3400	23	273.33	80	840	6	10/11/02	7/3/03
3400	OG-134-0001	42.00	42	42	1	9/5/00	9/5/00
3403	OG-134-0004	329.00	329	329	1	9/5/00	9/5/00
3405	OG-134-0005	1950.00	1950	1950	1	9/5/00	9/5/00
3406	OG-134-0002	123.00	123	123	1	9/6/00	9/6/00
3406	OG-134-0006	140.00	140	140	1	8/30/00	8/30/00
3501	OG-135-0002	138.00	138	138	1	9/6/00	9/6/00
3600	25	132.22	70	250	9	10/11/02	7/3/03
3600	OG-137-0001	216.00	216	216	1	9/7/00	9/7/00
3600	OG-137m	104.00	104	104	1	9/7/00	9/7/00
3603	OG-137-Bm0.5	30.00	30	30	1	9/11/00	9/11/00
3604	OG-137-Cm0.7	30.00	30	30	1	9/11/00	9/11/00
3701	26	91.43	60	180	7	10/11/02	7/3/03
3701	OG-138-0001	25.00	25	25	1	9/6/00	9/6/00
3701	OG-138-0003	21.00	21	21	1	9/7/00	9/7/00
3701	OG-138-Em	20.00	20	20	1	9/11/00	9/11/00
3701	OG-138m3.4	20.00	20	20	1	9/11/00	9/11/00
3702	27	306.67	80	970	9	10/11/02	7/3/03
3702	OG-139-0001	25.00	25	25	1	9/6/00	9/6/00
3703	OG-139m3.1	20.00	20	20	1	9/11/00	9/11/00
3705	OG-139-Cm	20.00	20	20	1	9/11/00	9/11/00
3707	OG-139-0003	96	96	96	1	9/7/00	9/7/00

Table 3d. Water quality data for total iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
3300	19	350.00	140	1030	10	10/11/02	07/03/03
3300	OG-131-0003	180.00	180	180	1	09/06/00	09/06/00
3302	OG-131-0004	150.00	150	150	1	09/06/00	09/06/00
3303	OG-131-0001	590.00	590	590	1	09/06/00	09/06/00
3303	OG-131-0002	40.00	40	40	1	09/06/00	09/06/00
3304	OG-131-0005	240.00	240	240	1	09/05/00	09/05/00
3305	OG-131-0006	40.00	40	40	1	09/05/00	09/05/00
3306	OG-131-0007	430.00	430	430	1	09/05/00	09/05/00
3400	23	477.00	150	1690	10	10/11/02	07/03/03
3400	OG-134-0001	943.00	943	943	1	09/05/00	09/05/00
3403	OG-134-0004	827.00	827	827	1	09/05/00	09/05/00
3405	OG-134-0005	1980.00	1980	1980	1	09/05/00	09/05/00
3406	OG-134-0002	684.00	684	684	1	09/06/00	09/06/00
3406	OG-134-0006	420.00	420	420	1	08/30/00	08/30/00
3501	OG-135-0002	229.00	229	229	1	09/06/00	09/06/00
3600	25	261.00	60	830	10	10/11/02	07/03/03
3600	OG-137-0001	216.00	216	216	1	09/07/00	09/07/00
3603	OG-137-Bm0.5	30.00	30	30	1	09/11/00	09/11/00
3604	OG-137-0003	70.00	70	70	1	09/11/00	09/11/00
3701	26	300.00	120	680	10	10/11/02	07/03/03
3701	OG-138-0001	519.00	519	519	1	09/06/00	09/06/00
3701	OG-138-0002	520.00	520	520	1	09/11/00	09/11/00
3701	OG-138-0003	74.00	74	74	1	09/07/00	09/07/00
3701	OG-138-0004	170.00	170	170	1	09/11/00	09/11/00
3702	27	435.00	90	1460	10	10/11/02	07/03/03
3702	OG-139-0001	485.00	485	485	1	09/06/00	09/06/00
3703	OG-139-0002	190.00	190	190	1	09/11/00	09/11/00
3705	OG-139-0004	35.00	35	35	1	09/11/00	09/11/00
3707	OG-139-0003	291.00	291	291	1	09/07/00	09/07/00

Table 3e. Water quality data for dissolved manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
3300	19	40.00	30.0	70.0	9	10/11/02	07/03/03
3400	23	166.67	70.0	300.0	9	10/11/02	07/03/03
3600	25	40.00	30.0	50.0	3	10/11/02	07/03/03
3701	26	88.89	50.0	130.0	9	10/11/02	07/03/03
3702	27	71.11	30.0	190.0	9	10/11/02	07/03/03

Table 3f. Water quality data for total manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
3300	19	74.44	30.00	170.0	9	10/11/02	7/3/03
3300	OG-131-0003	60.00	60.00	60.0	1	9/6/00	9/6/00
3300	WVOG-131	50.00	50.00	50.0	1	9/6/00	9/6/00
3302	OG-131-0004	70.00	70.00	70.0	1	9/6/00	9/6/00
3303	OG-131-0001	90.00	90.00	90.0	1	9/6/00	9/6/00
3304	OG-131-F-1m	50.00	50.00	50.0	1	9/5/00	9/5/00
3304	OG-131-Fm	50.00	50.00	50.0	1	9/5/00	9/5/00
3306	OG-131-0007	60.00	60.00	60.0	1	9/5/00	9/5/00
3400	23	204.44	130.00	320.0	9	10/11/02	7/3/03
3400	OG-134-0001	74.00	74.00	74.0	1	9/5/00	9/5/00
3403	OG-134-0004	31.00	31.00	31.0	1	9/5/00	9/5/00
3405	OG-134-0005	908.00	908.00	908.0	1	9/5/00	9/5/00
3406	OG-134-0002	81.00	81.00	81.0	1	9/6/00	9/6/00
3406	OG-134-0006	70.00	70.00	70.0	1	8/30/00	8/30/00
3501	OG-135-0002	136.00	136.00	136.0	1	9/6/00	9/6/00
3600	25	78.00	40.00	170.0	5	10/11/02	7/3/03
3600	OG-137m	24.00	24.00	24.0	1	9/7/00	9/7/00
3603	OG-137-0002	50.00	50.00	50.0	1	9/11/00	9/11/00
3604	OG-137-Cm0.7	50.00	50.00	50.0	1	9/11/00	9/11/00
3701	26	99.00	30.00	160.0	10	10/11/02	7/3/03
3701	OG-138-0001	112.00	112.00	112.0	1	9/6/00	9/6/00
3701	OG-138-0002	180.00	180.00	180.0	1	9/11/00	9/11/00
3701	OG-138-0003	9.00	9.00	9.0	1	9/7/00	9/7/00
3701	OG-138-0004	89.00	89.00	89.0	1	9/11/00	9/11/00
3702	27	83.00	30.00	190.0	10	10/11/02	7/3/03
3702	OG-139-0001	108.00	108.00	108.0	1	9/6/00	9/6/00
3703	OG-139-0002	120.00	120.00	120.0	1	9/11/00	9/11/00
3705	OG-139-Cm	20.00	20.00	20.0	1	9/11/00	9/11/00
3707	OG-139-0003	18.00	18.00	18.0	1	9/7/00	9/7/00

Table 3g. Water quality data for total selenium

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
No Data Available							

Table 3h. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
3300	19	7.92	7.2	8.4	10	10/11/02	7/3/03
3300	WVOG-131	6.91	6.9	6.9	2	9/6/00	9/6/00
3301	OG-131-Bm	6.90	6.9	6.9	1	9/6/00	9/6/00
3302	OG-131-Cm	6.90	6.9	6.9	1	9/6/00	9/6/00
3304	OG-131-F-1m	6.90	6.9	6.9	1	9/5/00	9/5/00
3304	OG-131-Fm	6.90	6.9	6.9	1	9/5/00	9/5/00
3306	OG-131-F-2m	6.90	6.9	6.9	1	9/5/00	9/5/00
3400	23	7.59	7.2	8.4	10	10/11/02	7/3/03
3400	OG-134m0.3	6.87	6.9	6.9	1	9/5/00	9/5/00
3403	OG-134-Cm1	6.80	6.8	6.8	1	9/5/00	9/5/00
3405	OG-134-Dm	6.80	6.8	6.8	1	9/5/00	9/5/00
3406	OG-134-Em	6.80	6.8	6.8	1	8/30/00	8/30/00
3406	OG-134m7.8	6.84	6.8	6.8	1	9/6/00	9/6/00
3501	OG-135-Am	6.80	6.8	6.8	1	9/6/00	9/6/00
3600	25	6.95	6.4	7.7	10	10/11/02	7/3/03
3600	OG-137m	6.80	6.8	6.8	1	9/7/00	9/7/00
3603	OG-137-Bm0.5	6.80	6.8	6.8	1	9/11/00	9/11/00
3604	OG-137-Cm0.7	6.77	6.8	6.8	1	9/11/00	9/11/00
3701	26	8.17	7.7	8.5	10	10/11/02	7/3/03
3701	OG-138-Em	6.70	6.7	6.7	1	9/11/00	9/11/00
3701	OG-138m0.7	6.71	6.7	6.7	1	9/6/00	9/6/00
3701	OG-138m3.4	6.71	6.7	6.7	1	9/11/00	9/11/00
3701	OG-138m9.8	6.70	6.7	6.7	1	9/7/00	9/7/00
3702	27	7.40	6.8	8.2	10	10/11/02	7/3/03
3702	OG-139m0	6.67	6.7	6.7	1	9/6/00	9/6/00
3703	OG-139m3.1	6.60	6.6	6.6	1	9/11/00	9/11/00
3705	OG-139-Cm	6.58	6.6	6.6	1	9/11/00	9/11/00
3707	OG-139-Am	6.60	6.6	6.6	1	9/7/00	9/7/00

Table 3i. Water quality data for fecal coliforms

SWS	WQ Station	Avg (#/100 mL)	Min (#/100 mL)	Max (#/100 mL)	Count	Start Date	End Date
3400	OG-134-0001	1400.00	1400.0	1400.0	1	9/5/00	9/5/00
3403	OG-134-0004	480.00	480.0	480.0	1	9/5/00	9/5/00
3405	OG-134-0005	1.00	1.0	1.0	1	9/5/00	9/5/00
3406	OG-134-0002	73.00	73.0	73.0	1	9/6/00	9/6/00
3406	OG-134-0006	89.00	89.0	89.0	1	8/30/00	8/30/00
3501	OG-135-0002	52.00	52.0	52.0	1	9/6/00	9/6/00
3600	OG-137-0001	820.00	820.0	820.0	1	9/7/00	9/7/00
3701	OG-138-0001	1060.00	1060.0	1060.0	1	9/6/00	9/6/00
3701	OG-138-0002	360.00	360.0	360.0	1	9/11/00	9/11/00
3701	OG-138-0003	28.00	28.0	28.0	1	9/7/00	9/7/00
3701	OG-138-0004	4400.00	4400.0	4400.0	1	9/11/00	9/11/00
3702	OG-139-0001	490.00	490.0	490.0	1	9/6/00	9/6/00
3703	OG-139-0002	91000.00	91000.0	91000.0	1	9/11/00	9/11/00
3705	OG-139-0004	10.00	10.0	10.0	1	9/11/00	9/11/00
3707	OG-139-0003	2200.00	2200.0	2200.0	1	9/7/00	9/7/00
3300	WVOG-131	4400.00	4400.0	4400.0	1	9/6/00	9/6/00
3301	OG-131-Bm	20.00	20.0	20.0	1	9/6/00	9/6/00
3302	OG-131-Cm	2071.00	2071.0	2071.0	1	9/6/00	9/6/00
3304	OG-131-F-1m	1000.00	1000.0	1000.0	1	9/5/00	9/5/00
3304	OG-131-Fm	1589.00	1589.0	1589.0	1	9/5/00	9/5/00
3306	OG-131-F-2m	36.00	36.0	36.0	1	9/5/00	9/5/00
3603	OG-137-Bm0.5	20.00	20.0	20.0	1	9/11/00	9/11/00
3604	OG-137-Cm0.7	20.00	20.0	20.0	1	9/11/00	9/11/00

Table 4a. Iron baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
3300	WV0050521	766	766	3.20	0
3302	WV0001848	32	32	3.20	0
3303	WV0001848	482	482	3.20	0
3304	WV0001848	3,049	3,049	3.20	0
3307	WV1011979	123	123	3.20	0
3307	WV1012029	96	96	3.20	0
3307	WV1016245	188	188	3.20	0
3307	WV1016253	40	40	3.20	0
3307	WV1018604	125	125	3.20	0
3310	WV1011936	937	937	3.20	0
3402	WV0065633	480	480	3.20	0
3406	WV0050521	783	783	3.20	0
3406	WV1018884	1,226	1,226	3.20	0
3701	WV0001864	2,400	2,400	3.20	0
3701	WV1015389	6,844	6,844	3.20	0
3705	WV1000063	2,272	2,272	3.20	0
3706	WV1015397	1,188	1,188	3.20	0
3707	WV1000063	1,262	1,262	3.20	0
3400*	WVG640091	649.18	649.18	3.70	0
3406*	WV0115916	467.27	467.27	1.30	0
3701*	WVG640049	0.37	0.37	1.20	0

* Denotes actual Office of Water Resources Permit

Table 4b. Manganese baseline conditions and allocations (WLAs) for permitted mining point

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
3300	WV0050521	462	462	2.00	0
3302	WV0001848	18	18	2.00	0
3303	WV0001848	261	261	2.00	0
3304	WV0001848	1,679	1,679	2.00	0
3307	WV1011979	74	74	2.00	0
3307	WV1012029	58	58	2.00	0
3307	WV1016245	113	113	2.00	0
3307	WV1016253	24	24	2.00	0
3307	WV1018604	75	75	2.00	0
3310	WV1011936	507	507	2.00	0
3402	WV0065633	260	260	2.00	0
3406	WV0050521	477	477	2.00	0
3406	WV1018884	746	746	2.00	0
3701	WV0001864	1,108	1,108	2.00	0
3701	WV1015389	3,159	3,159	2.00	0
3705	WV1000063	1,370	1,370	2.00	0
3706	WV1015397	521	521	2.00	0
3707	WV1000063	761	761	2.00	0
3406*	WV0115916	359.44	359.44	1.00	0

* Denotes actual Office of Water Resources Permit

Table 4c. Aluminum baseline conditions and allocations (WLAs) for permitted mining point sources

SWS	NPDES Permit ID	Baseline (lb/yr)	Allocation (lb/yr)	Allocation (mg/L)	% Reduction
3300	WV0050521	783	783	3.27	0
3302	WV0001848	33	33	3.27	0
3303	WV0001848	493	493	3.27	0
3304	WV0001848	3,116	3,116	3.27	0
3307	WV1011979	126	126	3.27	0
3307	WV1012029	99	99	3.27	0
3307	WV1016245	192	192	3.27	0
3307	WV1016253	41	41	3.27	0
3307	WV1018604	128	128	3.27	0
3310	WV1011936	958	958	3.27	0
3402	WV0065633	491	491	3.27	0
3406	WV0050521	800	800	3.27	0
3406	WV1018884	1,253	1,253	3.27	0
3701	WV0001864	2,452	2,452	3.27	0
3701	WV1015389	6,993	6,993	3.27	0
3705	WV1000063	2,322	2,322	3.27	0
3706	WV1015397	1,214	1,214	3.27	0
3707	WV1000063	1,290	1,290	3.27	0
3400*	WVG640091	131.59	131.59	0.75	0
3701*	WVG640049	0.11	0.11	0.37	0

* Denotes actual Office of Water Resources Permit

Table 5a. Iron baseline conditions and allocations (LAs) for nonpoint sources * Other Nonpoint Sources include: Forest, Wetland, Agriculture, Pasture, and Urba

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
3300	1,248	1,248	0	0	101	101	0	0	7	7	2	2	610	610	
3301	0	0	0	0	17	17	0	0	0	0	294	294	41	41	
3302	543	543	0	0	290	290	0	0	0	0	255	255	1,105	1,105	
3303	523	31	0	0	442	442	5	5	69	69	7	7	3,188	3,188	x
3304	1,158	93	0	0	102	102	1	1	4	4	9	9	629	629	x
3305	244	15	0	0	25	25	0	0	0	0	0	0	120	120	x
3306	0	0	0	0	1	1	0	0	0	0	16	16	4	4	
3307	820	49	0	0	70	70	1	1	0	0	0	0	409	409	x
3308	0	0	0	0	24	24	3	3	0	0	44	44	36	36	
3309	1,982	119	0	0	92	92	0	0	0	0	0	0	685	685	x
3310	1,612	97	0	0	140	140	0	0	0	0	0	0	553	553	x
3400	0	0	2	2	67	67	0	0	118	118	0	0	129	129	
3401	0	0	341	341	26	26	5	5	65	65	0	0	143	143	
3402	1,775	1,775	0	0	91	91	0	0	0	0	0	0	591	591	
3403	0	0	0	0	57	57	11	11	0	0	64	64	187	187	
3404	0	0	0	0	8	8	1	1	82	82	0	0	13	13	
3405	0	0	0	0	14	14	1	1	25	25	0	0	85	85	
3406	2,461	148	0	0	359	359	6	6	476	476	11	11	3,417	3,417	x
3500	2,548	2,548	3	3	33	33	0	0	0	0	0	0	511	511	
3501	2,221	133	54	54	33	33	0	0	17	17	0	0	326	326	x
3502	0	0	54	54	14	14	0	0	60	60	0	0	1,017	1,017	
3600	754	754	25	25	17	17	0	0	396	396	378	378	51	51	
3601	0	0	0	0	8	8	7	7	0	0	33	33	104	104	
3602	284	284	452	452	72	72	1	1	0	0	3	3	1,126	1,126	
3603	0	0	0	0	57	57	22	22	0	0	87	87	257	257	
3604	0	0	0	0	96	96	26	26	0	0	0	0	265	265	
3700	0	0	0	0	1	1	0	0	0	0	18	18	7	7	
3701	20,339	1,220	0	0	665	665	2	2	797	797	85	85	3,729	3,729	x
3702	545	545	0	0	24	24	0	0	27	27	0	0	141	141	
3703	0	0	17	17	30	30	0	0	195	195	0	0	51	51	
3704	2,046	123	0	0	21	21	0	0	5	5	0	0	688	688	x
3705	2,371	142	302	302	93	93	0	0	60	60	2	2	835	835	x
3706	5,210	313	99	99	269	269	5	5	187	187	316	316	1,526	1,526	x
3707	785	47	1,708	615	297	297	3	3	145	145	0	0	2,955	2,955	x

Table 5b. Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
3300	6,779	6,779	0	0	37	37	0	0	41	41	17	17	293	293	
3301	0	0	0	0	126	63	0	0	0	0	2,369	1,185	132	132	x
3302	3,815	3,815	0	0	167	167	0	0	0	0	2,273	2,273	645	645	
3303	4,543	4,543	0	0	370	370	49	49	389	389	64	64	1,882	1,882	
3304	8,294	5,806	0	0	39	39	6	6	25	25	78	78	333	333	x
3305	1,877	976	0	0	13	13	1	1	0	0	0	0	71	71	x
3306	0	0	0	0	0	0	0	0	0	0	19	19	11	11	
3307	6,334	3,230	0	0	66	66	10	10	0	0	0	0	242	242	x
3308	0	0	0	0	26	26	4	4	0	0	53	53	120	120	
3309	12,568	6,032	0	0	60	60	3	3	0	0	0	0	406	406	x
3310	8,461	4,907	0	0	65	65	1	1	0	0	0	0	327	327	x
3400	0	0	22	22	73	73	0	0	317	317	0	0	363	363	
3401	0	0	422	422	10	10	2	2	65	65	0	0	483	483	
3402	10,885	10,885	0	0	23	23	3	3	0	0	0	0	262	262	
3403	0	0	0	0	23	23	5	5	0	0	28	28	638	638	
3404	0	0	0	0	8	8	1	1	231	231	0	0	43	43	
3405	0	0	0	0	1,057	529	95	47	2,392	1,610	0	0	287	287	x
3406	16,671	333	0	0	888	755	403	343	18,509	17,671	653	555	2,124	2,124	x
3500	5,034	5,034	4	4	13	13	0	0	0	0	0	0	265	265	
3501	11,251	3,038	182	182	24	24	4	4	97	97	0	0	193	193	x
3502	0	0	61	61	4	4	1	1	126	126	0	0	577	577	
3600	14,759	295	356	21	1,221	305	0	0	66,708	16,677	30,247	7,562	153	153	x
3601	0	0	0	0	3	3	3	3	0	0	14	14	353	353	
3602	1,948	1,948	1,518	1,518	55	55	11	11	0	0	24	24	660	660	
3603	0	0	0	0	23	23	9	9	0	0	37	37	795	795	
3604	0	0	0	0	38	38	11	11	0	0	0	0	891	891	
3700	0	0	0	0	0	0	0	0	0	0	8	8	24	24	
3701	39,825	35,842	0	0	129	129	6	6	1,687	1,687	260	260	2,057	2,057	x
3702	1,091	1,091	0	0	4	4	0	0	58	58	0	0	71	71	
3703	0	0	83	83	34	34	0	0	522	522	0	0	166	166	
3704	14,102	5,926	0	0	15	15	1	1	30	30	0	0	392	392	x
3705	13,377	6,689	1,016	1,016	91	91	0	0	336	336	22	22	472	170	x
3706	38,444	13,455	331	331	243	243	42	42	1,056	1,056	2,824	2,824	893	893	x
3707	1,155	1,155	1,914	1,914	94	94	10	10	307	307	0	0	1,739	1,739	

Table 5c. Aluminum baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Roads		Oil and Gas Wells		Harvested Forest		Barren Land		Other Non-Point Sources		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load (lb/yr)	Allocated Load (lb/yr)	
3300	6,776	6,776	0	0	102	102	0	0	8	8	2	2	659	659	
3301	0	0	0	0	11	11	0	0	0	0	201	201	58	58	
3302	1,630	1,630	0	0	293	293	0	0	0	0	301	301	1,216	1,216	
3303	254	25	0	0	450	450	6	6	76	76	9	9	3,503	3,503	x
3304	3,242	324	0	0	102	102	1	1	5	5	10	10	686	686	x
3305	484	48	0	0	25	25	0	0	0	0	0	0	132	132	x
3306	0	0	0	0	0	0	0	0	0	0	11	11	5	5	
3307	1,603	160	0	0	71	71	1	1	0	0	0	0	449	449	x
3308	0	0	0	0	16	16	2	2	0	0	30	30	52	52	
3309	8,033	803	0	0	93	93	0	0	0	0	0	0	751	751	x
3310	9,212	921	0	0	142	142	0	0	0	0	0	0	606	606	x
3400	0	0	1	1	43	43	0	0	85	85	0	0	168	168	
3401	0	0	237	237	17	17	3	3	46	46	0	0	205	205	
3402	2,876	2,876	0	0	92	92	0	0	0	0	0	0	635	635	
3403	0	0	0	0	37	37	8	8	0	0	44	44	269	269	
3404	0	0	0	0	5	5	1	1	59	59	0	0	19	19	
3405	0	0	0	0	9	9	1	1	18	18	0	0	122	122	
3406	9,265	926	0	0	362	362	8	8	522	522	12	12	3,768	3,768	x
3500	13,616	13,616	1	1	33	33	0	0	0	0	0	0	556	556	
3501	13,101	1,310	11	11	33	33	1	1	19	19	0	0	358	358	x
3502	0	0	11	11	14	14	1	1	65	65	0	0	1,111	1,111	
3600	10,652	10,652	20	20	11	11	0	0	283	283	259	259	69	69	
3601	0	0	0	0	6	6	5	5	0	0	22	22	149	149	
3602	929	929	95	95	73	73	1	1	0	0	3	3	1,235	1,235	
3603	0	0	0	0	38	38	15	15	0	0	60	60	356	356	
3604	0	0	0	0	63	63	18	18	0	0	0	0	379	379	
3700	0	0	0	0	1	1	0	0	0	0	13	13	10	10	
3701	111,686	11,169	0	0	672	672	2	2	871	871	100	100	4,079	4,079	x
3702	2,795	2,795	0	0	25	25	0	0	30	30	0	0	153	153	
3703	0	0	11	11	20	20	0	0	139	139	0	0	71	71	
3704	6,582	658	0	0	21	21	0	0	6	6	0	0	752	752	x
3705	8,505	851	64	64	95	95	0	0	65	65	3	3	913	913	x
3706	12,899	1,290	21	21	274	274	6	6	205	205	374	374	1,679	1,679	x
3707	2,794	279	363	145	303	303	4	4	159	159	0	0	3,249	3,249	x

Table 6. Fecal Coliform basline and allocations

SWS	Stream	Agriculture		Natural Sources		Failing Septics		Residential	
		Baseline Load (counts)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)	Baseline Load (count)	Allocated Load (count)
3300	Barkers Creek	1.89E+13	1.32E+13	1.03E+13	1.03E+13	1.26E+14	0.00E+00	1.72E+13	1.20E+13
3400	Slab Fork	1.09E+13	7.64E+12	1.07E+13	1.07E+13	1.65E+14	0.00E+00	1.98E+13	1.39E+13
3500	Allen Creek	2.05E+12	1.44E+12	2.52E+12	2.52E+12	3.89E+13	0.00E+00	1.49E+12	1.04E+12
3600	Devils Fork	1.41E+13	9.90E+12	6.59E+12	6.59E+12	1.20E+14	0.00E+00	4.05E+12	2.84E+12
3700	Winding Gulf	3.08E+13	2.15E+13	1.52E+13	1.52E+13	5.45E+14	0.00E+00	2.23E+13	1.56E+13

Appendix B

Mining Permits in the Guyandotte Watershed

Article 3 Status Legend:	
ACT	Active
IN	Inactive
IPH1	Incremental Phase 1 Released
NW	New
P1	Phase 1 Released
RN	Renewed

Table B-1. Mining Permits in the Guyandotte Watershed

NPDES Permit ID	Responsible Party	Article 3 Permit ID	Status	Disturbed Acres
WV0000418	ROCKHOUSE CREEK DEV CORP	O003584	IN	131.8
WV0001848	HERNDON PROCESSING COMPANY	O005983	RN	189.6
WV0001848	HERNDON PROCESSING COMPANY	O007882	RN	17.0
WV0001848	HERNDON PROCESSING COMPANY	U002183	P1	34.8
WV0001864	WHITE MOUNTAIN MINING COMPANY LLC	O000183	RN	23.0
WV0001864	WHITE MOUNTAIN MINING COMPANY LLC	O000283	P1	103.2
WV0001864	WHITE MOUNTAIN MINING COMPANY LLC	U002483	IN	8.0
WV0024937	PEACHTREE RIDGE MINING COMPANY INC.	E012000	RN	13.5
WV0025615	WYOMING POCAHONTAS LAND CO	E008800	RN	20.9
WV0029726	HAMPDEN COAL CO INC	O000981	RN	80.0
WV0036579	BANDMILL COAL CORPORATION	U031900	P1	5.0
WV0039535	PEACHTREE RIDGE MINING COMPANY INC.	E010500	P1	88.0
WV0039535	PEACHTREE RIDGE MINING COMPANY INC.	P072600	P1	230.3
WV0041122	EASTERN ASSOCIATED COAL CORP.	O001983	IN	277.0
WV0041122	EASTERN ASSOCIATED COAL CORP.	O008182	RN	35.9
WV0042544	PEACHTREE RIDGE MINING COMPANY INC.	P064700	RN	270.0
WV0044024	CONSOLIDATION COAL COMPANY	U001784	RN	29.7
WV0045608	TRACE CREEK COAL COMPANY	O003782	RN	56.0
WV0045608	TRACE CREEK COAL COMPANY	O003785	ACT	76.8
WV0045608	TRACE CREEK COAL COMPANY	P058100	RN	13.7
WV0047074	BANDMILL COAL CORPORATION	U061600	RN	22.6
WV0049603	FERRELL EXCAVATING CO INC	Q506587	RN	29.4
WV0049671	CONSOLIDATION COAL COMPANY	U001684	ACT	14.4
WV0050521	CONSOLIDATION COAL COMPANY	U001584	RN	391.7
WV0050865	STIRRAT COAL COMPANY	D003782	P1	4.3
WV0052515	CHAFIN BRANCH COAL CO	S018077	P1	173.3
WV0053091	HOBET MINING INC	I051600	P1	3.3
WV0053091	HOBET MINING INC	O001381	RN	136.0
WV0053121	CONSOLIDATION COAL COMPANY	O001185	RN	347.3
WV0053163	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	U003283	RN	7.2
WV0053171	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	S001376	P1	571.0
WV0053171	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	S015974	P1	1228.3
WV0053210	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	U006084	P1	57.0
WV0053333	EASTERN ASSOCIATED COAL CORP.	U061700	RN	4.8
WV0056693	BIG BEAR MINING COMPANY	D006982	RN	2.7
WV0056693	BIG BEAR MINING COMPANY	O010783	ACT	54.6
WV0056693	BIG BEAR MINING COMPANY	O017483	RN	87.6
WV0056693	BIG BEAR MINING COMPANY	U058900	RN	8.8
WV0057797	SPARTAN MINING COMPANY	U501100	NW	40.4
WV0058700	BIG BEAR MINING COMPANY	D006982	RN	1.0
WV0060801	OLD BEN COAL CO	O500392	RN	10.8
WV0060801	OLD BEN COAL CO	U022683	P1	6.0
WV0060801	OLD BEN COAL CO	U046700	P1	0.5
WV0061336	KEPLER PROCESSING COMPANY INC.	E004500	RN	165.4
WV0061409	DAYTON RESOURCES COMPANY	U003984	P1	4.2

NPDES Permit ID	Responsible Party	Article 3 Permit ID	Status	Disturbed Acres
WV0061417	DAYTON RESOURCES COMPANY	U016983	P1	4.2
WV0061441	DAYTON RESOURCES COMPANY	U020383	P1	3.5
WV0061450	DAYTON RESOURCES COMPANY	U016883	P1	1.9
WV0061522	DAYTON RESOURCES COMPANY	U042100	P1	9.0
WV0062961	LAUREL RUN MINING COMPANY	E007400	P1	8.5
WV0064572	BUFFALO MINING CO	U019683	RN	14.0
WV0064840	ISLAND CREEK COAL COMPANY	H045600	RN	66.5
WV0064840	ISLAND CREEK COAL COMPANY	P059000	RN	127.9
WV0064858	FALCON LAND CO INC	P060600	RN	128.9
WV0064858	FALCON LAND CO INC	U501995	RN	5.0
WV0065633	LODESTAR ENERGY INC.	R000584	RN	31.5
WV0066346	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	O000584	RN	99.5
WV0066346	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	O016383	RN	32.9
WV0066630	STIRRAT COAL COMPANY	O004484	RN	187.7
WV0066702	EASTERN ASSOCIATED COAL CORP.	U004783	RN	64.9
WV0068764	HOBET MINING INC	I051600	P1	6.6
WV0068764	HOBET MINING INC	S006983	P1	12.5
WV0068764	HOBET MINING INC	S007280	RN	122.8
WV0068764	HOBET MINING INC	S501494	RN	167.9
WV0068764	HOBET MINING INC	S505289	P1	72.9
WV0068764	HOBET MINING INC	U503595	P1	4.6
WV0069396	DONNAWAY COAL INC	S004784	P1	107.0
WV0090000	U. S. STEEL MINING COMPANYLLC	O400892	RN	47.5
WV0090000	U. S. STEEL MINING COMPANYLLC	U020483	RN	149.0
WV0090042	U. S. STEEL MINING COMPANYLLC	E002500	RN	130.4
WV0090042	U. S. STEEL MINING COMPANYLLC	U070700	RN	22.9
WV0090051	U. S. STEEL MINING COMPANYLLC	O013883	RN	81.8
WV0090174	PINE CREEK MINING INC	U005184	P1	21.3
WV0092347	B & L EXCAVATING CO INC	Q000282	RN	9.8
WV0092347	B & L EXCAVATING CO INC	Q302787	RN	3.5
WV0092347	B & L EXCAVATING CO INC	Q400593	RN	8.9
WV0092401	BRADFORD STONE INC	Q017878	RN	25.4
WV0092649	ALEX ENERGY INC.	S508486	RN	461.0
WV0092797	ANCHOR MINING INC	S500386	P1	31.1
WV0092860	CHAFIN BRANCH COAL CO	S501586	P1	97.0
WV0093122	BUFFALO MINING CO	U506686	RN	6.3
WV0093211	BANDMILL COAL CORPORATION	P071800	RN	84.0
WV0093211	BANDMILL COAL CORPORATION	R074900	RN	179.6
WV0093530	CLEAR FORK COAL COMPANY	U008383	RN	3.6
WV0093530	CLEAR FORK COAL COMPANY	U013000	IN	5.6
WV0093548	EASTERN ASSOCIATED COAL CORP.	U501386	RN	10.6
WV0095699	BUFFALO MINING CO	O001984	IN	120.0
WV0095699	BUFFALO MINING CO	O009883	ACT	55.6
WV0095753	FALCON LAND CO INC	H040900	RN	120.0
WV0095753	FALCON LAND CO INC	U501096	RN	28.5
WV0095885	TRACE CREEK COAL COMPANY	S504288	ACT	327.7
WV0095966	PINE CREEK MINING INC	U505688	P1	12.6
WV0095991	TRACE CREEK COAL COMPANY	S506288	IN	433.6
WV0096083	TRACE CREEK COAL COMPANY	U506188	P1	15.6
WV0096156	BUFFALO MINING CO	O012383	RN	91.3
WV0096172	BANDMILL COAL CORPORATION	U021383	IN	9.6
WV0096229	SPARTAN MINING COMPANY	U506688	IN	21.9
WV0096253	MINGO LOGAN COAL COMPANY	U501391	RN	21.3
WV0096369	HOBET MINING INC	U500389	P1	9.9
WV0096369	HOBET MINING INC	U500489	P1	15.8

NPDES Permit ID	Responsible Party	Article 3 Permit ID	Status	Disturbed Acres
WV0096385	BUFFALO MINING CO	U500789	RN	7.2
WV0096393	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	O000185	RN	41.2
WV0096393	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	O014983	RN	166.5
WV0097446	BLUESTONE COAL CORPORATION	S402586	RN	1209.0
WV0097969	H & S COAL CO	U071800	NW	4.7
WV0099252	ALEX ENERGY INC.	S000985	RN	187.0
WV0099392	HOBET MINING INC	S501692	RN	1177.9
WV0099520	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	O502394	RN	243.8
WV0099520	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	S007585	RN	774.6
WV0099520	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	S507986	RN	354.7
WV0099643	CHAFIN BRANCH COAL CO	S009085	RN	191.0
WV0099929	CHAFIN BRANCH COAL CO	S508286	P1	242.9
WV1000063	LEFT FORK PROCESSING LLC	U016283	RN	258.2
WV1001230	TERRY EAGLE COAL COMPANY LLC	S306987	P1	73.3
WV1001931	NEW LAND LEASING COMPANY INC.	S307188	P1	45.4
WV1002775	DECONDOR COAL COMPANY INC.	U108086	RN	5.0
WV1003712	TRACE CREEK COAL COMPANY	S504186	RN	356.0
WV1003836	EASTERN ASSOCIATED COAL CORP.	U507086	IN	6.7
WV1003895	ISLAND CREEK COAL COMPANY	U507686	P1	10.0
WV1003984	RENATA MINING INC	U509286	P1	6.7
WV1004000	RUM CREEK COAL SALES INC	U009283	IN	2.0
WV1004093	BANDMILL COAL CORPORATION	O008582	P1	9.5
WV1004247	ROCKHOUSE CREEK DEV CORP	U500887	RN	8.3
WV1004271	STIRRAT COAL COMPANY	U501087	RN	1.8
WV1004361	ROCKHOUSE CREEK DEV CORP	U000685	RN	5.6
WV1004573	WIND RIVER RESOURCES CORP	U504387	P1	2.8
WV1004611	ERAM LLC.	D001982	RN	11.0
WV1004671	ISLAND CREEK COAL COMPANY	U502596	IN	20.6
WV1004671	ISLAND CREEK COAL COMPANY	U505187	P1	7.7
WV1004727	H & L CONSTRUCTION INC	U505387	RN	3.0
WV1004751	ISLAND CREEK COAL COMPANY	U505687	RN	8.4
WV1004760	HAMPDEN COAL CO INC	O501388	RN	24.2
WV1004760	HAMPDEN COAL CO INC	U500195	RN	8.9
WV1004760	HAMPDEN COAL CO INC	U503199	NW	7.1
WV1004760	HAMPDEN COAL CO INC	U506087	RN	112.0
WV1004867	REGENCY LAND CO.	U506987	RN	5.3
WV1004905	ISLAND CREEK COAL COMPANY	U507487	RN	13.0
WV1004948	HAMPDEN COAL CO INC	U500800	NW	5.5
WV1004948	HAMPDEN COAL CO INC	U508087	RN	42.0
WV1004956	HOBET MINING INC	O501591	RN	48.7
WV1004956	HOBET MINING INC	U508886	IN	25.3
WV1005006	CHAFIN BRANCH COAL CO	S509087	P1	284.0
WV1005057	BANDMILL COAL CORPORATION	O005082	RN	24.5
WV1005111	ALEX ENERGY INC.	S000580	RN	161.7
WV1005120	COAL-MAC INC. DBA PHOENIX COAL-MAC MINING INC.	S500188	P1	129.3
WV1005138	PERFORMANCE COAL COMPANY	U500488	IN	3.9
WV1005243	W. W. MCDONALD LAND CO	O008983	P1	4.5
WV1005359	ARACOMA DEVELOPMENT INC	U012983	P1	11.0
WV1005596	RIVERSIDE ENERGY INC	U047100	RN	4.0
WV1005936	BLUESTONE COAL CORPORATION	U401587	IN	19.7
WV1005936	BLUESTONE COAL CORPORATION	U401687	IN	11.9
WV1006037	LAUREL RUN MINING COMPANY	P058600	RN	168.1
WV1006266	CLICK & LEFFEW COAL CO INC	U400388	P1	3.0
WV1006291	DAYTON RESOURCES COMPANY	U400488	P1	3.3
WV1006584	SHANE COAL COMPANY	O000184	P1	12.0

NPDES Permit ID	Responsible Party	Article 3 Permit ID	Status	Disturbed Acres
WV1006584	SHANE COAL COMPANY	O004782	ACT	50.1
WV1006592	SHANE COAL COMPANY	O000684	ACT	89.4
WV1006649	BLUESTONE COAL CORPORATION	U007183	P1	13.0
WV1006681	ISLAND CREEK COAL COMPANY	U043200	NW	17.0
WV1007939	ALEX ENERGY INC.	S501796	RN	47.7
WV1007980	DONNAWAY COAL INC	S501189	P1	10.0
WV1008081	COAL-MAC INC. DBA PHOENIX COAL-MAC MINING INC.	S502789	RN	348.1
WV1008099	HAMPDEN COAL CO INC	S503489	P1	46.0
WV1008099	HAMPDEN COAL CO INC	U503689	P1	12.4
WV1008102	ROCKHOUSE CREEK DEV CORP	U502589	IN	9.9
WV1008145	FALCON LAND CO INC	S502889	RN	57.3
WV1008170	ALEX ENERGY INC.	S006482	RN	53.6
WV1008251	LAUREL CREEK CO INC	S504689	P1	420.3
WV1008251	LAUREL CREEK CO INC	U507692	P1	4.9
WV1008277	ALEX ENERGY INC.	S505389	ACT	651.0
WV1008285	ALEX ENERGY INC.	S505489	RN	261.2
WV1008331	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	S500190	RN	447.9
WV1008340	BUFFALO MINING CO	U004485	IN	10.0
WV1008544	DAYTON RESOURCES COMPANY	U400489	P1	5.0
WV1008641	STILL RUN COAL COMPANYINC	U401189	P1	9.0
WV1008706	STILL RUN COAL COMPANYINC	U401289	RN	8.5
WV1008749	STILL RUN COAL COMPANYINC	O401689	RN	5.0
WV1008901	PIONEER FUEL CORPORATION	O016283	RN	9.0
WV1009079	PIONEER FUEL CORPORATION	H030900	RN	65.0
WV1009079	PIONEER FUEL CORPORATION	S011977	RN	605.0
WV1010689	ARACOMA COAL COMPANY INC.	O502090	RN	78.0
WV1010689	ARACOMA COAL COMPANY INC.	U502190	ACT	42.9
WV1010921	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	S500691	RN	852.4
WV1011022	TRACE CREEK COAL COMPANY	O504691	RN	30.0
WV1011031	ISLAND CREEK COAL COMPANY	U504291	RN	24.0
WV1011073	LYNN BRANCH COAL COMPANY INC	U505591	RN	14.7
WV1011138	RAWL SALES & PROCESSING CO	U506691	RN	7.0
WV1011863	SHANE COAL COMPANY	U401191	RN	10.9
WV1011871	DAYTON RESOURCES COMPANY	U401291	P1	5.0
WV1011936	HERNDON PROCESSING COMPANY	O401991	RN	61.4
WV1011979	HERNDON PROCESSING COMPANY	U400292	P1	9.0
WV1012029	HERNDON PROCESSING COMPANY	U400992	RN	7.1
WV1012231	PIONEER FUEL CORPORATION	S401595	RN	733.5
WV1012355	EASTERN ASSOCIATED COAL CORP.	U400394	IN	41.4
WV1012487	NEW LAND LEASING COMPANY INC.	S300295	RN	4.5
WV1013220	CHAFIN BRANCH COAL CO	O501394	NW	41.2
WV1013220	CHAFIN BRANCH COAL CO	S001078	RN	215.0
WV1013246	COAL-MAC INC. DBA PHOENIX COAL-MAC MINING INC.	S507492	RN	14.9
WV1013319	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	U502692	RN	28.8
WV1013327	ISLAND CREEK COAL COMPANY	U502992	P1	10.7
WV1013343	MINGO LOGAN COAL COMPANY	S503392	RN	141.5
WV1013343	MINGO LOGAN COAL COMPANY	U503592	RN	24.2
WV1013343	MINGO LOGAN COAL COMPANY	U503792	RN	21.5
WV1013343	MINGO LOGAN COAL COMPANY	U504391	IN	10.0
WV1013343	MINGO LOGAN COAL COMPANY	U504491	RN	27.0
WV1013408	BUFFALO MINING CO	U505392	RN	8.5
WV1013424	HOBET MINING INC	O505692	IN	18.0
WV1013424	HOBET MINING INC	U506392	IN	0.6
WV1013505	COAL-MAC INC. DBA PHOENIX COAL-MAC MINING INC.	S506692	RN	300.6
WV1013530	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	S506992	P1	154.0

NPDES Permit ID	Responsible Party	Article 3 Permit ID	Status	Disturbed Acres
WV1013581	EASTERN ASSOCIATED COAL CORP.	U500693	RN	1.1
WV1013599	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	S500593	RN	1335.7
WV1015389	BLUESTONE COAL CORPORATION	S300998	IN	382.9
WV1015397	PLUM TREE MINERALS LLC	S301098	IN	63.1
WV1015478	COAL-MAC INC. DBA PHOENIX COAL-MAC MINING INC.	S501693	RN	228.3
WV1015559	BANDMILL COAL CORPORATION	S502393	RN	1521.5
WV1015567	RUM CREEK COAL SALES INC	S502493	RN	95.7
WV1015737	BANDMILL COAL CORPORATION	S501095	RN	708.6
WV1015737	BANDMILL COAL CORPORATION	S504193	NW	299.9
WV1015753	BANDMILL COAL CORPORATION	S500194	RN	710.0
WV1015796	JAUNT INC	Q502590	RN	20.0
WV1015796	JAUNT INC	Q503393	RN	20.0
WV1015800	PATTERSON EXCAVATING CO	Q000684	RN	28.6
WV1015907	RUM CREEK COAL SALES INC	U502194	RN	10.0
WV1015923	FALCON LAND CO INC	S500395	IN	199.2
WV1015923	FALCON LAND CO INC	U502199	NW	54.0
WV1015923	FALCON LAND CO INC	U502299	NW	19.9
WV1015923	FALCON LAND CO INC	U502899	NW	1.4
WV1015982	INDEPENDENCE COAL COMPANY INC.	U501295	RN	3.0
WV1016032	ROCKHOUSE CREEK DEV CORP	U506489	RN	19.2
WV1016156	WYOMING POCAHONTAS LAND CO	U401994	IN	74.7
WV1016181	RIVERSIDE ENERGY INC	U400295	RN	11.3
WV1016199	RIVERSIDE ENERGY INC	U400395	RN	4.9
WV1016229	RIVERSIDE ENERGY INC	U400595	RN	5.1
WV1016237	RIVERSIDE ENERGY INC	U400695	RN	2.1
WV1016245	HERNDON PROCESSING COMPANY	U400995	RN	13.8
WV1016253	HERNDON PROCESSING COMPANY	U401095	NW	2.9
WV1016342	RIVERSIDE ENERGY INC	U402195	RN	5.5
WV1016385	RIVERSIDE ENERGY INC	U402595	RN	7.6
WV1016393	WYOMING POCAHONTAS LAND CO	U402795	P1	33.1
WV1016407	RIVERSIDE ENERGY INC	U400196	RN	5.0
WV1016407	RIVERSIDE ENERGY INC	U400496	RN	3.0
WV1016431	PIONEER FUEL CORPORATION	S400596	RN	823.0
WV1016440	PAYNTER BRANCH MINING INC	S400896	ACT	412.1
WV1016466	RIVERSIDE ENERGY INC	U400996	RN	5.4
WV1016466	RIVERSIDE ENERGY INC	U401497	NW	17.8
WV1016491	WYOMING POCAHONTAS LAND CO	S401396	IPH1	263.6
WV1016504	PIONEER FUEL CORPORATION	U401596	P1	10.2
WV1016539	LAUREL RUN MINING COMPANY	S402096	RN	1137.5
WV1016695	HOBET MINING INC	S502295	NW	36.2
WV1016776	HOBET MINING INC	S500396	RN	2731.2
WV1016776	HOBET MINING INC	S501101	NW	0.0
WV1016806	HAMPDEN COAL CO INC	U500596	RN	10.6
WV1016849	BANDMILL COAL CORPORATION	S501596	RN	969.5
WV1016851	SNAP CREEK MINING INC	O501696	RN	18.3
WV1016865	DELBARTON MINING COMPANY	U501996	IN	8.4
WV1016881	HAMPDEN COAL CO INC	U502096	RN	33.3
WV1016938	HIGHLAND MINING COMPANY	S503096	ACT	1000.2
WV1016954	PIONEER MINING INC	U503496	RN	13.5
WV1016954	PIONEER MINING INC	U503596	RN	31.1
WV1016989	CUMBERLAND RIVER COAL CO	O500797	NW	0.0
WV1017004	SNAP CREEK MINING INC	S501396	RN	568.0
WV1017039	ISLAND CREEK COAL COMPANY	U501497	RN	17.0
WV1017136	ISLAND CREEK COAL COMPANY	U502697	NW	15.4
WV1017195	CHAFIN BRANCH COAL CO	U020583	RN	10.0

NPDES Permit ID	Responsible Party	Article 3 Permit ID	Status	Disturbed Acres
WV1017209	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	U500598	NW	37.0
WV1017225	HOBET MINING INC	U500798	NW	17.2
WV1018493	KEPLER PROCESSING COMPANY INC.	O402496	RN	52.4
WV1018523	RIVERSIDE ENERGY INC	U400297	RN	9.2
WV1018531	U. S. STEEL MINING COMPANYLLC	S400397	NW	560.1
WV1018566	RIVERSIDE ENERGY INC	U400697	NW	6.0
WV1018604	HERNDON PROCESSING COMPANY	U401397	NW	9.1
WV1018612	RIVERSIDE ENERGY INC	U401697	NW	7.0
WV1018621	RIVERSIDE ENERGY INC	U400498	NW	10.9
WV1018621	RIVERSIDE ENERGY INC	U400598	NW	10.9
WV1018680	PAYNTER BRANCH MINING INC	S401298	NW	238.8
WV1018728	HUFF CREEK ENERGY COMPANY	U400299	NW	0.0
WV1018736	BLUESTONE COAL CORPORATION	S400399	NW	550.8
WV1018761	MOUNTAIN HAUS PROPERTIES INC	S400699	NW	22.1
WV1018779	BLUESTONE COAL CORPORATION	S400899	NW	355.8
WV1018787	BLUESTONE COAL CORPORATION	U400999	NW	0.9
WV1018787	BLUESTONE COAL CORPORATION	U401099	NW	1.0
WV1018787	BLUESTONE COAL CORPORATION	U401199	NW	48.3
WV1018825	JMAC LEASING INC	S401499	NW	276.3
WV1018833	BLUESTONE COAL CORPORATION	U401699	NW	2.0
WV1018884	CREEKSIDE ENERGY DEVELOPMENT COMPANY	U402199	NW	87.6
WV1018906	PAYNTER BRANCH MINING INC	S400300	NW	335.3
WV1018914	PREMIUM ENERGY INC	S400400	NW	130.4
WV1018922	INDEPENDENCE COAL COMPANY INC.	S400500	NW	50.8
WV1018965	BLUESTONE COAL CORPORATION	S400900	NW	1168.2
WV1018981	RIVERSIDE ENERGY INC	U401100	NW	5.2
WV1019988	COAL-MAC INC. DBA PHOENIX COAL-MAC MINING INC.	S501998	NW	495.3
WV1020102	ARACOMA COAL COMPANY INC.	U500499	NW	30.0
WV1020111	ARACOMA COAL COMPANY INC.	U500699	NW	48.0
WV1020196	PREMIUM ENERGY INC	S502099	NW	668.5
WV1020277	RUM CREEK COAL SALES INC	U500400	NW	6.0
WV1020340	ERAM LLC.	U500500	NW	4.0
WV1020366	HANNCO ENERGY CORPORATION	S501300	NW	341.5
WV1020510	APOGEE COAL CO DBA ARCH OF WEST VIRGINIA INC.	S500701	NW	278.7
WVG015022	LAUREL CREEK CO INC	O503290	IN	7.1
WVG015033	ISLAND CREEK COAL COMPANY	U505091	ACT	21.5
WVG015034	BUFFALO MINING CO	O009283	RN	4.0

Appendix C

Sewage Permits in the Guyandotte River Watershed

Table C-1. Sewage Permits in the Guyandotte River Watershed, West Virginia

Permit ID	Permit Type	Responsible Party	Inspectable Unit	Concentration - Geometric Mean (#/100 mL)	Concentration - Instantaneous Max (#/100 mL)	Flow (MGD)
WVG410010	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410028	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410035	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410042	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410049	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410063	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410065	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410086	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410095	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410109	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410127	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410128	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410139	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410151	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410153	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410155	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410171	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410192	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410196	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410211	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410226	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410227	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410245	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410255	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410260	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410264	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410265	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410272	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410273	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410300	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410305	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410307	Home Aeration Unit General	MORNING STAR FWB CHURCH	1	200	400	0.0006
WVG410312	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410313	Home Aeration Unit General	PORTER, SHONNA	1	200	400	0.0006
WVG410317	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410319	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410326	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006

Permit ID	Permit Type	Responsible Party	Inspectable Unit	Concentration - Geometric Mean (#/100 mL)	Concentration - Instantaneous Max (#/100 mL)	Flow (MGD)
WVG410334	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410344	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410356	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410372	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410378	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410380	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410381	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410394	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410402	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410404	Home Aeration Unit General	WINFIELD COMMUNITY CHURCH	1	200	400	0.0005
WVG410420	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410430	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410431	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410441	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410450	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410451	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410455	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410458	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410475	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410484	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410488	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410494	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410495	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410497	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410502	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.001
WVG410504	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410508	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410510	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410512	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410517	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410518	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410520	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410532	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410539	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410540	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410549	Home Aeration Unit General	OPTION ONE MORTGAGE	1	200	400	0.0005
WVG410555	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410566	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005

Permit ID	Permit Type	Responsible Party	Inspectable Unit	Concentration - Geometric Mean (#/100 mL)	Concentration - Instantaneous Max (#/100 mL)	Flow (MGD)
WVG410570	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410576	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410579	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410585	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410597	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410607	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410624	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410648	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410663	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410673	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410678	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410688	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410690	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410691	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410692	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410700	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410724	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410728	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410729	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0005
WVG410750	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410763	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410796	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410798	Home Aeration Unit General	PRIVATE HOMEOWNER	1	200	400	0.0006
WVG410806	Home Aeration Unit General	SPEEDWAY SUPERAMERICA LLC	1	200	400	0.0006
WVG410807	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410808	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410820	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410840	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410847	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410855	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410856	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410869	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410872	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410885	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410893	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410894	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410895	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410899	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006

Permit ID	Permit Type	Responsible Party	Inspectable Unit	Concentration - Geometric Mean (#/100 mL)	Concentration - Instantaneous Max (#/100 mL)	Flow (MGD)
WVG410902	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410908	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410910	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410917	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410935	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410942	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410954	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410958	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410968	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG410986	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG411026	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411051	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411053	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411058	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG411060	Home Aeration Unit General	BEULAH CHAPEL FWB CHURCH	001	200	400	0.0005
WVG411064	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411068	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411071	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411074	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411079	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411099	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411131	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411133	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG411137	Home Aeration Unit General	SOUSANAH FREEWILL BAPTIST CHURCH	001	200	400	0.0005
WVG411144	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG411162	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411174	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411200	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411202	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411204	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411209	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411216	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411225	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411246	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411249	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG411250	Home Aeration Unit General	BEAR BRANCH CHURCH OF CHRIST	001	200	400	0.0006
WVG411256	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411261	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005

Permit ID	Permit Type	Responsible Party	Inspectable Unit	Concentration - Geometric Mean (#/100 mL)	Concentration - Instantaneous Max (#/100 mL)	Flow (MGD)
WVG411262	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411274	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG411275	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411276	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411280	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411281	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411290	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411295	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG411296	Home Aeration Unit General	GUYAN FREEWILL BAPTIST CHURCH	001	200	400	0.0005
WVG411299	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411343	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411351	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411363	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411369	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG411375	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411380	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411384	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411397	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411398	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG411430	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411433	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411437	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG411456	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG411461	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411470	Home Aeration Unit General	MAYO CONSTRUCTION COMPANY	001	200	400	0.0005
WVG411473	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411502	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411503	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG411510	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411513	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411518	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411522	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411527	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411528	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411535	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411539	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411591	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411595	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005

Permit ID	Permit Type	Responsible Party	Inspectable Unit	Concentration - Geometric Mean (#/100 mL)	Concentration - Instantaneous Max (#/100 mL)	Flow (MGD)
WVG411613	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411637	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411638	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411685	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411691	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411692	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411698	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411700	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411734	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411746	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG411756	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411760	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411786	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411791	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411813	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411819	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411859	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG411860	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411866	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411895	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411928	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411934	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411952	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411954	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411965	Home Aeration Unit General	EAST RESOURCES, INC.	001	200	400	0.005
WVG411970	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411981	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411985	Home Aeration Unit General	WELTHA NELSON FREEWILL BAPTIST CHURCH	001	200	400	0.0005
WVG411986	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG411993	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG412001	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WVG412003	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0006
WVG412009	Home Aeration Unit General	PRIVATE HOMEOWNER	001	200	400	0.0005
WV0102059	Ind Other	OMAR LP	1	200	400	0.005
WV0105368	Ind Other	FOUNTAIN PLACE, LLC	001	200	400	0.075
WV0105368	Ind Other	FOUNTAIN PLACE, LLC	002	200	400	0.075
WV0020681	Ind POTW	MULLENS CITY OF	001	200	400	0.33
WV0024431	Ind POTW	OCEANA TOWN OF	001	200	400	0.5

Permit ID	Permit Type	Responsible Party	Inspectable Unit	Concentration - Geometric Mean (#/100 mL)	Concentration - Instantaneous Max (#/100 mL)	Flow (MGD)
WV0024481	Ind POTW	BARBOURSVILLE VILLAGE OF	001	200	400	0.6
WV0024538	Ind POTW	MILTON CITY OF	001	200	400	0.244
WV0024678	Ind POTW	CHAPMANVILLE TOWN OF	001	200	400	0.2
WV0027138	Ind POTW	CENTER PSD	001	200	400	0.4
WV0027413	Ind POTW	PEA RIDGE PSD	001	200	400	0.85
WV0027413	Ind POTW	PEA RIDGE PSD	002	200	400	0.364
WV0027693	Ind POTW	HAMLIN PSD	001	200	400	0.25
WV0027731	Ind POTW	CULLODEN PSD	001	200	400	0.2
WV0033821	Ind POTW	LOGAN CITY OF	001	200	400	0.53
WV0038351	Ind POTW	BUFFALO CREEK PSD	001	200	400	0.75
WV0050261	Ind POTW	PEA RIDGE PSD	001	200	400	0.1
WV0084450	Ind POTW	SALT ROCK SEWER PSD	001	200	400	0.256
WV0084778	Ind POTW	PEA RIDGE PSD	001	200	400	0.13
WV0103748	Ind POTW	GILBERT TOWN OF	001	200	400	0.1
WV0105171	Ind POTW	LOGAN CNTY PSD	001	200	400	1
WV0043877	Individual	ROLFE'S CUSTOM & COMMERCIAL MEATS	001	200	400	0.0004
WV0050962	Individual	CECIL I WALKER MACHINERY CO	002	200	400	0.004
WVG550028	Sewage General	STATE COLLEGE SYSTEM OF WV	001	200	400	0.01
WVG550041	Sewage General	US Army Corps of Engineers	001	200	400	0.005
WVG550056	Sewage General	HIRCO INC	001	200	400	0.004
WVG550077	Sewage General	SLAB FORK UTILITY CLUB	001	200	400	0.04
WVG550085	Sewage General	SCOTT & CHERYL RULEY	001	200	400	0.0035
WVG550091	Sewage General	WHITE, JAMES REXFORD	001	200	400	0.001
WVG550117	Sewage General	FOXFIRE CAMPING RESORT	001	200	400	0.0196
WVG550125	Sewage General	BARBOURSVILLE HOUSING ASSOCIATION	001	200	400	0.024
WVG550129	Sewage General	CLAY, LOWELL	001	200	400	0.0015
WVG550138	Sewage General	PINE ACRES SEWAGE CORP	001	200	400	0.008
WVG550150	Sewage General	LOGAN-MINGO AREA MENTAL HEALTH	001	200	400	0.006
WVG550153	Sewage General	NORTH POINTE DEVELOPMENT	001	200	400	0.016
WVG550173	Sewage General	AAA REALTY CO	001	200	400	0.004
WVG550188	Sewage General	GUYAN TERRACE LTD	001	200	400	0.003
WVG550193	Sewage General	DAWSON, MICHELLE D	001	200	400	0.0042
WVG550231	Sewage General	RODOCH MANAGEMENT	001	200	400	0.0015
WVG550246	Sewage General	HOWELL'S MILL CHRISTIAN ASSEM	001	200	400	0.016
WVG550257	Sewage General	BELMONT PROPERTIES	001	200	400	0.02
WVG550259	Sewage General	PIZZA HUT OF LOGAN INC	001	200	400	0.0028
WVG550261	Sewage General	HIDDEN VALLEY TREATMENT INC	001	200	400	0.04
WVG550267	Sewage General	LAMBERT CONSTRUCTION	001	200	400	0.005

Permit ID	Permit Type	Responsible Party	Inspectable Unit	Concentration - Geometric Mean (#/100 mL)	Concentration - Instantaneous Max (#/100 mL)	Flow (MGD)
WVG550269	Sewage General	ROY, RONALD L	001	200	400	0.0078
WVG550275	Sewage General	BARBOURSVILLE VILLAGE OF	001	200	400	0.003
WVG550279	Sewage General	BROWNING, KENNETH	001	200	400	0.0016
WVG550287	Sewage General	SWITZER LTD	001	200	400	0.0099
WVG550298	Sewage General	DAVIS, EDNA	001	200	400	0.009
WVG550319	Sewage General	JUSTICE, STEWART JR	001	200	400	0.006
WVG550321	Sewage General	O V SMITH & SONS	001	200	400	0.0015
WVG550325	Sewage General	MOUNTAIN VIEW LTD	001	200	400	0.006
WVG550326	Sewage General	GILBERT TERRACE LTD PARTNERSHIP	001	200	400	0.008
WVG550342	Sewage General	LONG JOHN SILVERS #3133	001	200	400	0.004
WVG550343	Sewage General	MIDWAY PLAZA INV ASSOC	001	200	400	0.018
WVG550347	Sewage General	PIZZA HUT OF LOGAN INC	001	200	400	0.0019
WVG550372	Sewage General	AMMAR'S INC	001	200	400	0.005
WVG550376	Sewage General	MYERS, MARY	001	200	400	0.008
WVG550378	Sewage General	RIVENBARK SUBDIVISION	001	200	400	0.002
WVG550394	Sewage General	KROGER CO	001	200	400	0.002
WVG550401	Sewage General	GUYAN LAND CORP	001	200	400	0.01
WVG550416	Sewage General	LOGAN PARK CARE CNTR INC	001	200	400	0.02
WVG550430	Sewage General	RIVERS EDGE CAMPGROUND	001	200	400	0.005
WVG550434	Sewage General	SAYER BROTHERS	001	200	400	0.02
WVG550461	Sewage General	SHERWOOD ESTATES PRPTY. OWNERS ASSOC., INC.	001	200	400	0.04
WVG550464	Sewage General	WITT ENVIRONMENTAL	001	200	400	0.02
WVG550478	Sewage General	LOGAN CNTY PSD	001	200	400	0.03
WVG550481	Sewage General	GENESIS ELDER CARE	001	200	400	0.017
WVG550482	Sewage General	TRI STATE AREA COUNCIL	001	200	400	0.005
WVG550488	Sewage General	JACKSON, GERALDINE	001	200	400	0.009
WVG550494	Sewage General	FERRELL EXCAVATING CO INC	001	200	400	0.003
WVG550503	Sewage General	GODBY HEIGHTS LP	001	200	400	0.0105
WVG550513	Sewage General	PERSINGER SUPPLY CO.	001	200	400	0.0015
WVG550520	Sewage General	VERNON CRADDOCK & DAVID EDMUND	001	200	400	0.035
WVG550528	Sewage General	BOWYER, DANNY	001	200	400	0.004
WVG550547	Sewage General	BUTCHER, FLEM	001	200	400	0.005
WVG550549	Sewage General	WOODLAND HILLS ESTATES INC	001	200	400	0.004
WVG550559	Sewage General	SOUTHERN WV COMMUNITY COLLEGE	001	200	400	0.006
WVG550570	Sewage General	HOUCHENS INDUSTRIES, DBA	001	200	400	0.0015
WVG550592	Sewage General	AFZALIRAD, MOHAMMAD	001	200	400	0.025
WVG550600	Sewage General	HILL, CARMEL	001	200	400	0.007

Permit ID	Permit Type	Responsible Party	Inspectable Unit	Concentration - Geometric Mean (#/100 mL)	Concentration - Instantaneous Max (#/100 mL)	Flow (MGD)
WVG550614	Sewage General	TALON MANUFACTURING CO INC	001	200	400	0.006
WVG550616	Sewage General	H & R RESOURCES	001	200	400	0.002
WVG550670	Sewage General	SYCAMORE COURT HOMEOWNERS ASSOC	001	200	400	0.01
WVG550687	Sewage General	COOK, HARLESS	001	200	400	0.0025
WVG550696	Sewage General	HALE, DEBORAH	001	200	400	0.0015
WVG550717	Sewage General	FERRELL, MICHAEL R	001	200	400	0.007
WVG550729	Sewage General	ESQUIRE GROUP INC	001	200	400	0.04
WVG550736	Sewage General	MT VIEW III LTD	001	200	400	0.003
WVG550755	Sewage General	V-MART INC	001	200	400	0.013
WVG550757	Sewage General	CRADDOCK, VERNON	001	200	400	0.0084
WVG550767	Sewage General	BOWL-MOR LANES	001	200	400	0.003
WVG550783	Sewage General	REGAL OAKS INC	001	200	400	0.018
WVG550835	Sewage General	LAKEVIEW TERRACE ASSOC	001	200	400	0.0026
WVG550848	Sewage General	COLANE CORP	001	200	400	0.0125
WVG550852	Sewage General	SUNSET ADDITION PROPERTY OWNERS	001	200	400	0.004
WVG550866	Sewage General	WAGNER, ROGER	001	200	400	0.008
WVG550871	Sewage General	HOLIDAY PARK	001	200	400	0.023
WVG550877	Sewage General	STANDARD HYDRAULICS	001	200	400	0.005
WVG550889	Sewage General	GO MART INC	001	200	400	0.0015
WVG550891	Sewage General	SPEEDWAY SUPERAMERICA LLC	001	200	400	0.001
WVG550893	Sewage General	BANDMILL COAL CORPORATION	001	200	400	0.0015
WVG550894	Sewage General	NEW LIFE CHURCH	001	200	400	0.0075
WVG550904	Sewage General	LINCOLN CNTY COMM	001	200	400	0.0171
WVG550907	Sewage General	M S DEVELOPERS	001	200	400	0.007
WVG550917	Sewage General	MONTERRA DEVELOPMENT CORPORATION	1	200	400	0.01
WVG550919	Sewage General	LOGAN MFG CO INC	001	200	400	0.006
WVG550933	Sewage General	MEEKS, ROBERT T	001	200	400	0.0015
WVG550958	Sewage General	EPLIN, BURGESS	001	200	400	0.013
WVG550975	Sewage General	SMITH, SHERMAN RAY	001	200	400	0.0001
WVG551004	Sewage General	MINGO COUNTY BOARD OF EDUCATION	001	200	400	0.00525
WVG551005	Sewage General	MINGO COUNTY BOARD OF EDUCATION	001	200	400	0.015
WVG551008	Sewage General	LINCOLN CNTY BD OF ED	1	200	400	0.015
WVG551010	Sewage General	LINCOLN CNTY BD OF ED	1	200	400	0.018
WVG551011	Sewage General	LINCOLN CNTY BD OF ED	1	200	400	0.01
WVG551012	Sewage General	LINCOLN CNTY BD OF ED	1	200	400	0.002
WVG551013	Sewage General	WEST HAMLIN V.F.D.	001	200	400	0.006
WVG551015	Sewage General	LINCOLN CNTY BD OF ED	1	200	400	0.003

Permit ID	Permit Type	Responsible Party	Inspectable Unit	Concentration - Geometric Mean (#/100 mL)	Concentration - Instantaneous Max (#/100 mL)	Flow (MGD)
WVG551016	Sewage General	LINCOLN CNTY BD OF ED	1	200	400	0.004
WVG551017	Sewage General	LINCOLN CNTY BD OF ED	001	200	400	0.006
WVG551036	Sewage General	CABELL CNTY BD OF ED	001	200	400	0.009
WVG551038	Sewage General	CABELL CNTY BD OF ED	001	200	400	0.009
WVG551039	Sewage General	CABELL CNTY BD OF ED	001	200	400	0.009
WVG551040	Sewage General	CABELL CNTY BD OF ED	001	200	400	0.016
WVG551072	Sewage General	WYOMING CNTY BD OF ED	001	200	400	0.014
WVG551074	Sewage General	WYOMING CNTY BD OF ED	001	200	400	0.0084
WVG551075	Sewage General	WYOMING CNTY BD OF ED	001	200	400	0.0072
WVG551076	Sewage General	WYOMING CNTY BD OF ED	001	200	400	0.02625
WVG551084	Sewage General	WYOMING CNTY BD OF ED	001	200	400	0.007
WVG551088	Sewage General	WYOMING CNTY BD OF ED	001	200	400	0.009
WVG551092	Sewage General	WV DIVISION OF NATURAL RESOURCES	001	200	400	0.018
WVG551093	Sewage General	WV DIVISION OF NATURAL RESOURCES	001	200	400	0.0062
WVG551094	Sewage General	LOGAN CNTY BD OF ED	001	200	400	0.012
WVG551095	Sewage General	LOGAN CNTY BD OF ED	001	200	400	0.004
WVG551096	Sewage General	LOGAN CNTY BD OF ED	001	200	400	0.00525
WVG551097	Sewage General	LOGAN CNTY BD OF ED	001	200	400	0.012
WVG551098	Sewage General	LOGAN CNTY BD OF ED	001	200	400	0.0025
WVG551099	Sewage General	LOGAN CNTY BD OF ED	001	200	400	0.006
WVG551100	Sewage General	LOGAN CNTY BD OF ED	001	200	400	0.006
WVG551103	Sewage General	WYOMING CNTY ECO DEV AUTH	001	200	400	0.0105
WVG551108	Sewage General	GOLF MEADOWS HOME OWNERS ASSOC	001	200	400	0.005
WVG551146	Sewage General	RALEIGH CNTY BD OF ED	001	200	400	0.028
WVG551161	Sewage General	WV DIVISION OF NATURAL RESOURCES	001	200	400	0.05
WVG551238	Sewage General	EPLIN, BURGESS	001	200	400	0.013
WVG551243	Sewage General	DINGESS RUM PROPERTIES INC	001	200	400	0.005
WVG551244	Sewage General	DINGESS RUM PROPERTIES INC	001	200	400	0.012
WVG551245	Sewage General	DINGESS RUM PROPERTIES INC	001	200	400	0.015
WVG551246	Sewage General	DINGESS RUM PROPERTIES INC	001	200	400	0.0123
WVG551247	Sewage General	DINGESS RUM PROPERTIES INC	001	200	400	0.013
WVG551248	Sewage General	DINGESS RUM PROPERTIES INC	001	200	400	0.015
WVG551252	Sewage General	WV HOUSING DEVELOPMENT FUND	001	200	400	0.009
WVG551259	Sewage General	LOGAN CNTY BD OF ED	001	200	400	0.007
WVG551266	Sewage General	BARNETTE DEVELOPMENT, LLC	001	200	400	0.011
WVG551279	Sewage General	WV HOUSING DEVELOPMENT FUND	001	200	400	0.003
WVG551287	Sewage General	J. BUCKS, INC.	001	200	400	0.009

Permit ID	Permit Type	Responsible Party	Inspectable Unit	Concentration - Geometric Mean (#/100 mL)	Concentration - Instantaneous Max (#/100 mL)	Flow (MGD)
WVG551291	Sewage General	LOGAN CNTY DEVELOPMENT AUTH	001	200	400	0.05
WVG551295	Sewage General	BARKER, SIDNEY	001	200	400	0.001
WVG551296	Sewage General	WV DIVISION OF NATURAL RESOURCES	001	200	400	0.0075
WVG551297	Sewage General	WV DIVISION OF NATURAL RESOURCES	001	200	400	0.003
WVG551308	Sewage General	LOGAN CNTY BD OF ED	001	200	400	0.004
WVG551309	Sewage General	WYOMING CNTY BD OF ED	001	200	400	0.0065

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

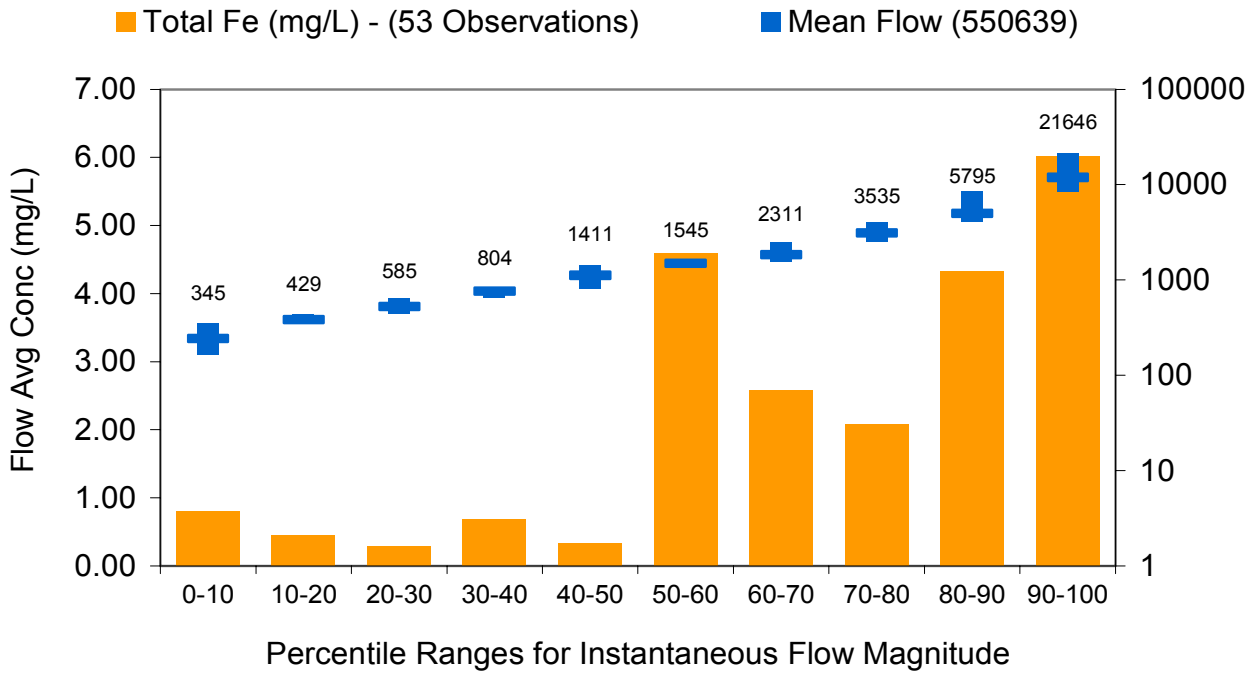


Figure 1 - Guyandotte River main stem at Huntington WV (550639) - Flow/Total Iron Relationship

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

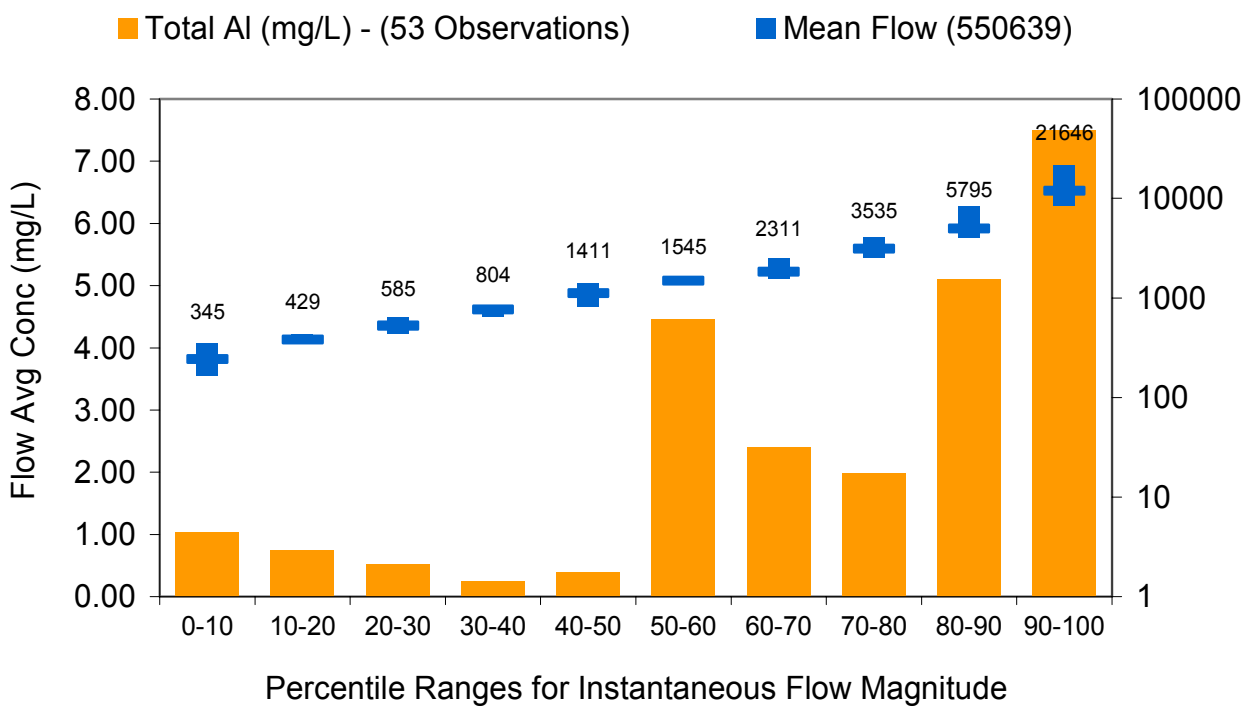


Figure 2 - Guyandotte River main stem at Huntington WV (550639) - Flow/Total Aluminum Relationship

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

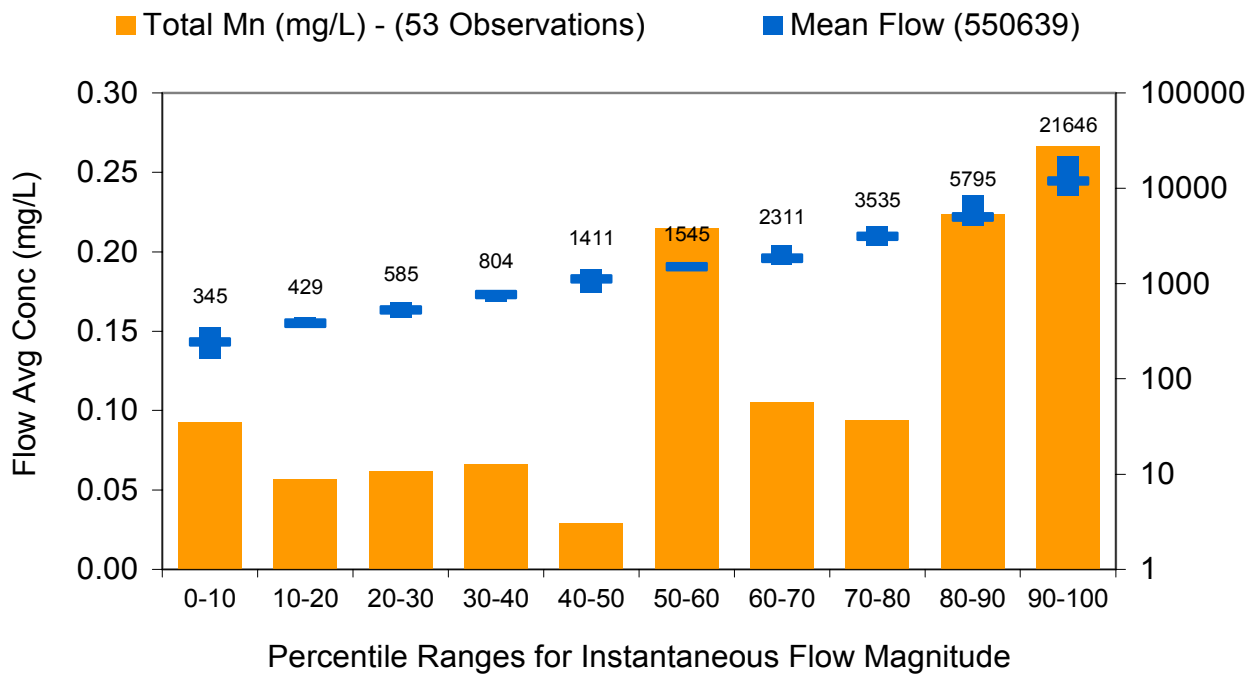


Figure 3 - Guyandotte River main stem at Huntington WV (550639) - Flow/Total Manganese Relationship

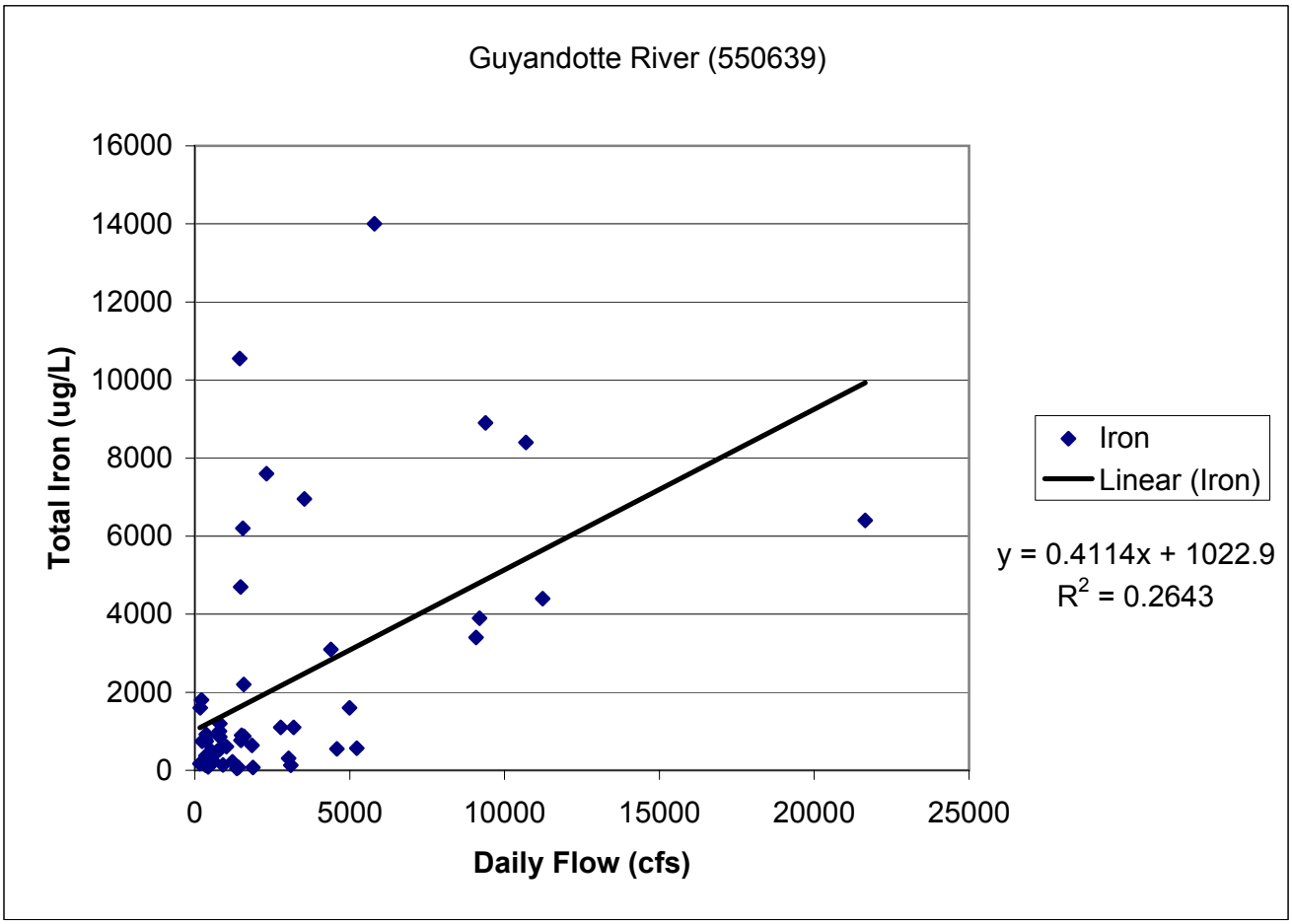


Figure 4 -Iron Correlation with Mean Daily Flow (Station 550639)

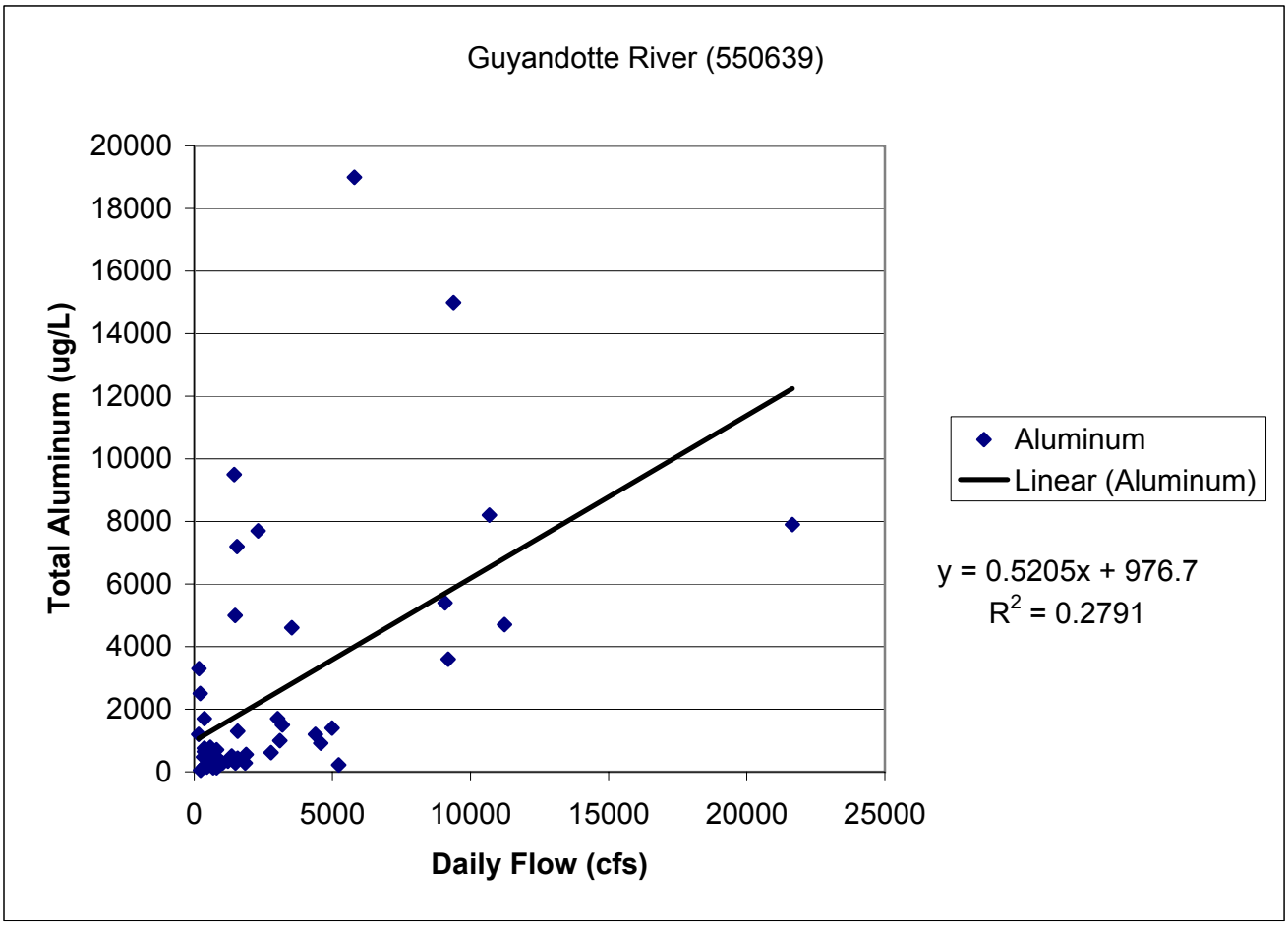


Figure 5 - Total Aluminum Correlation with Mean Daily Flow (Station 550639)

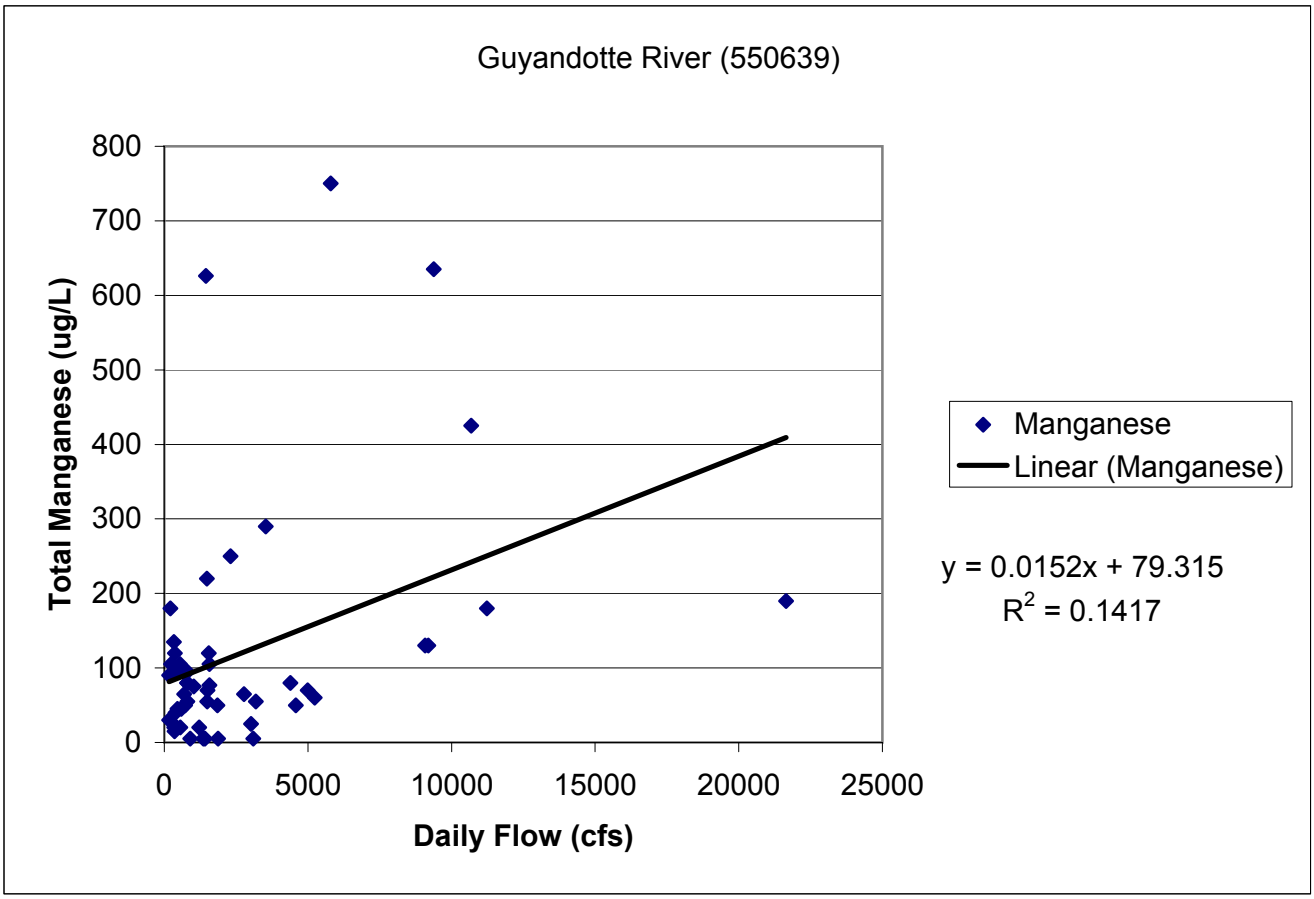


Figure 6 - Manganese Correlation with Mean Daily Flow (Station 550639)

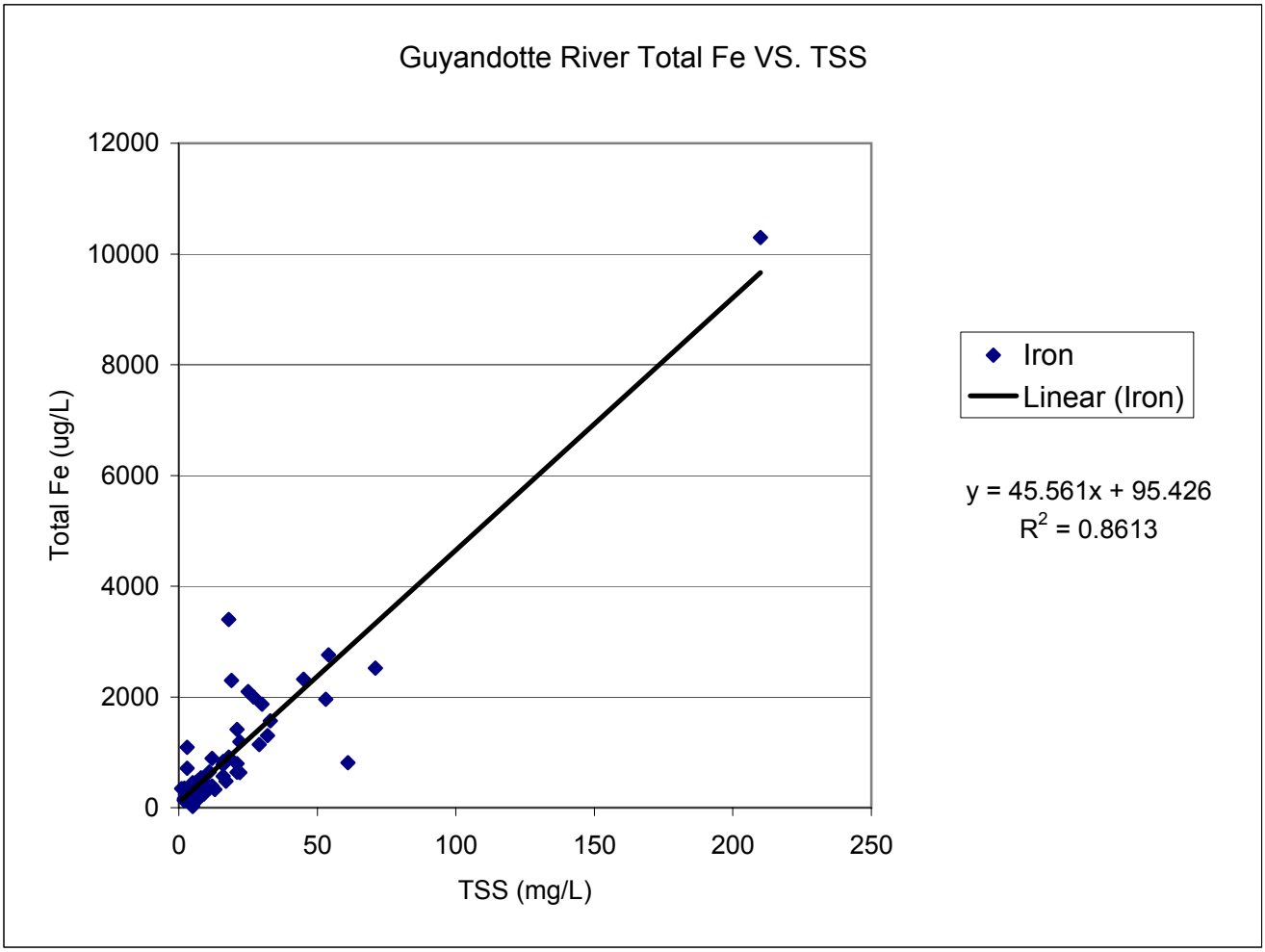


Figure 7 - Combined Guyandotte River Stations Total Iron/TSS Correlation

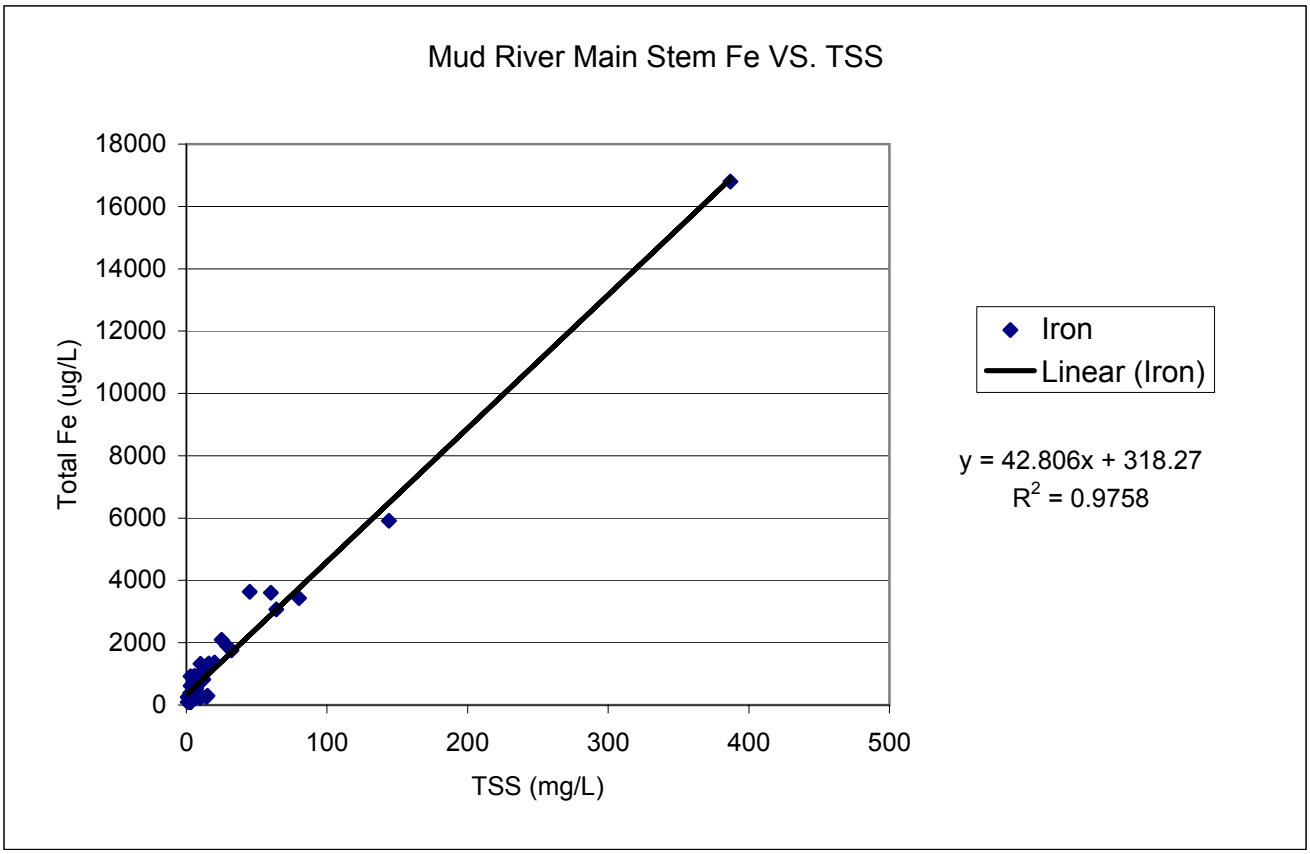


Figure 8 - Mud River Stations Total Iron/TSS Correlation

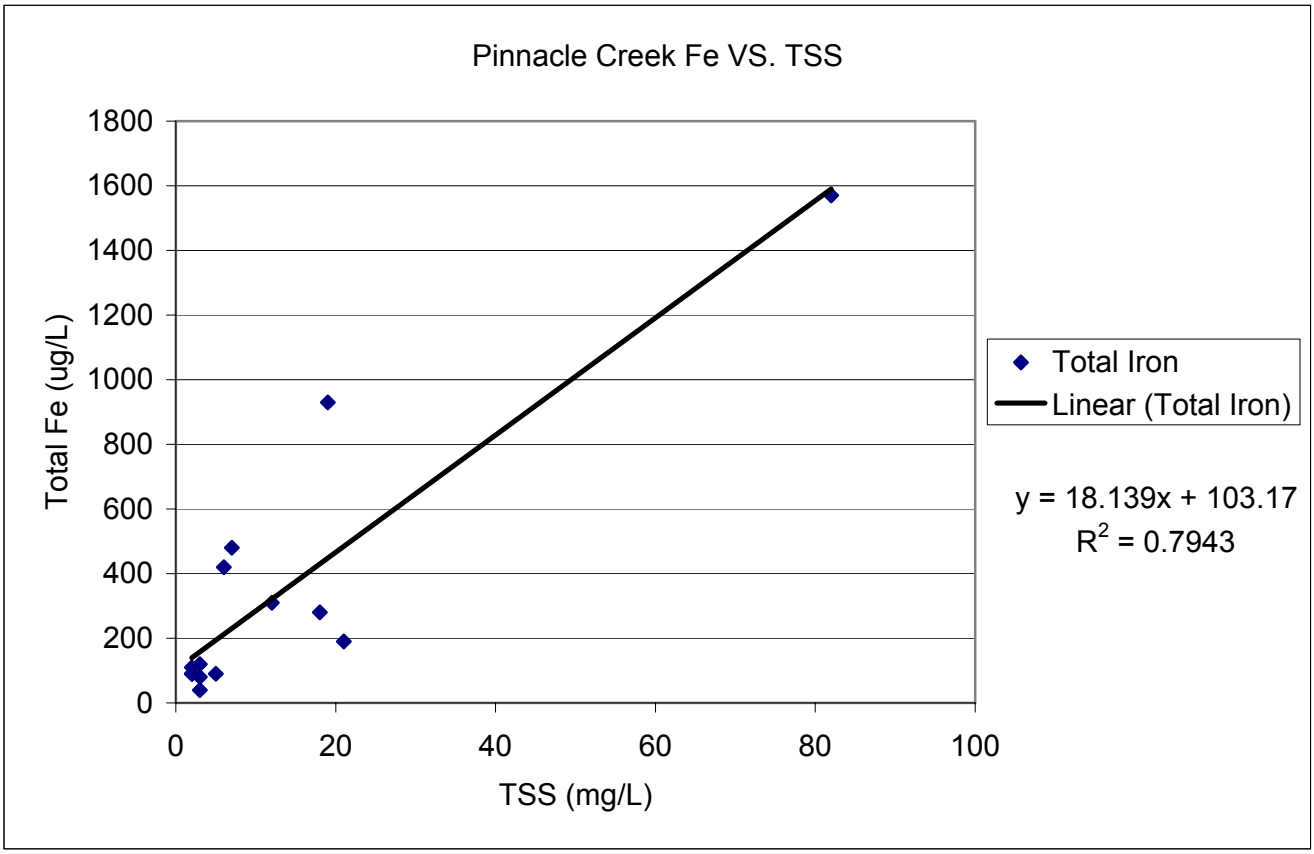


Figure 9 - Pinnacle Creek Stations Total Iron/TSS Correlation

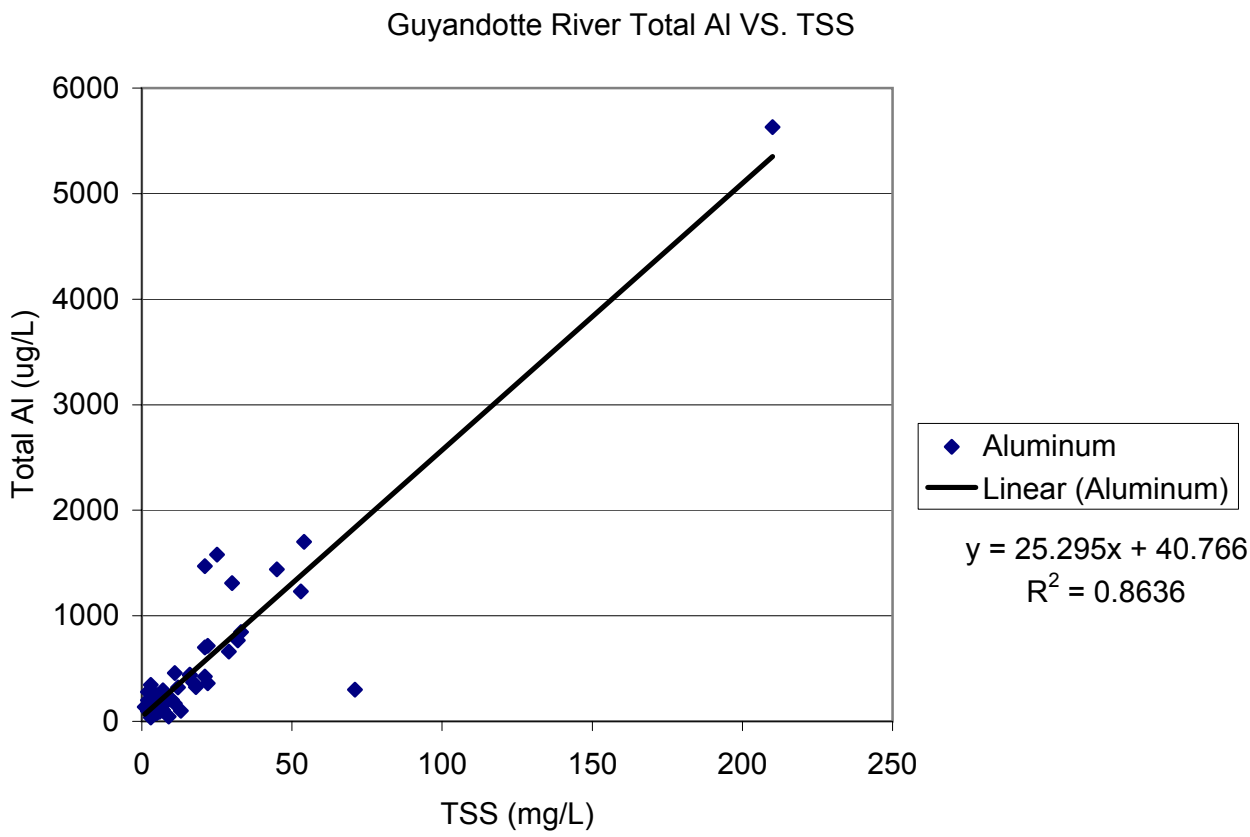


Figure 10 - Guyandotte River Stations Total Aluminum/TSS Correlation

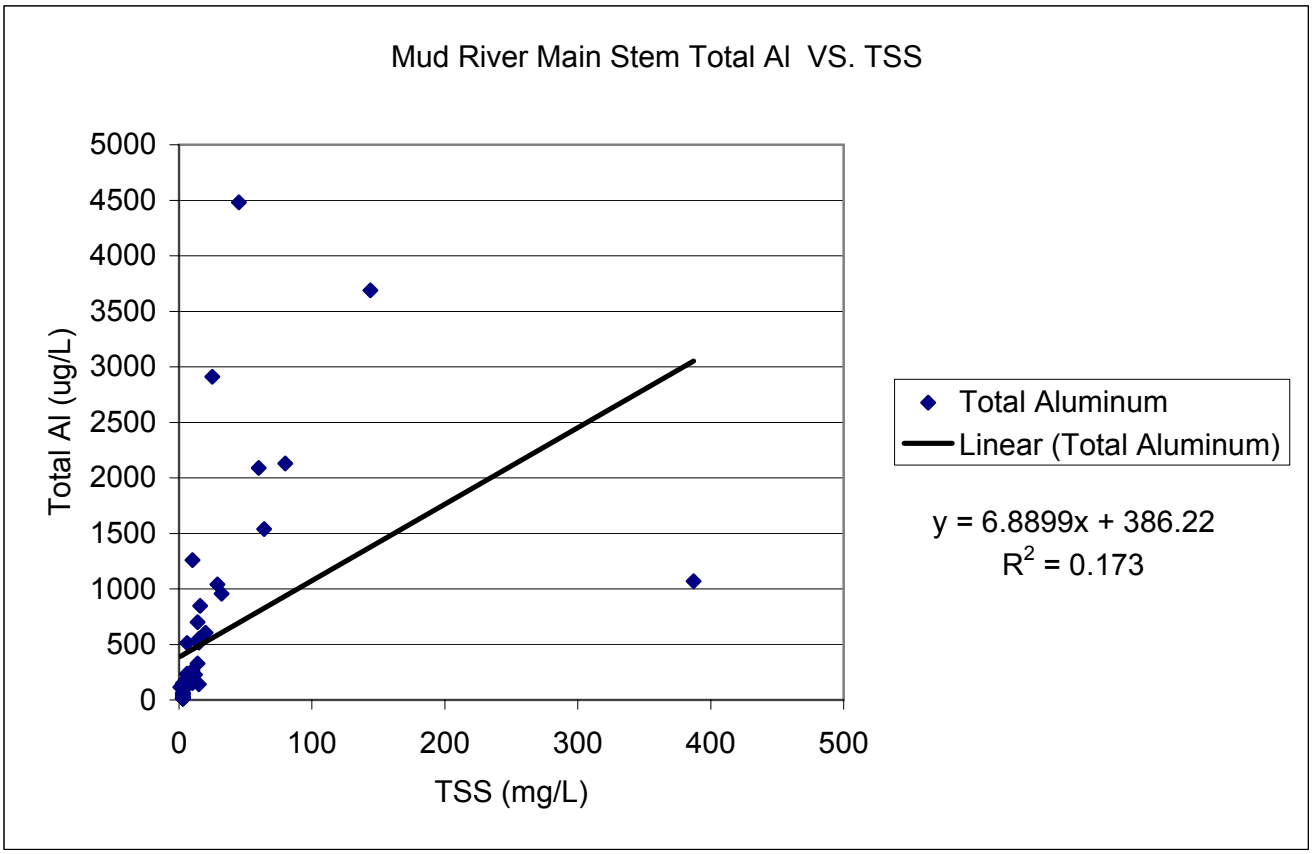


Figure 11 -Mud River Stations Total Aluminum/TSS Correlation

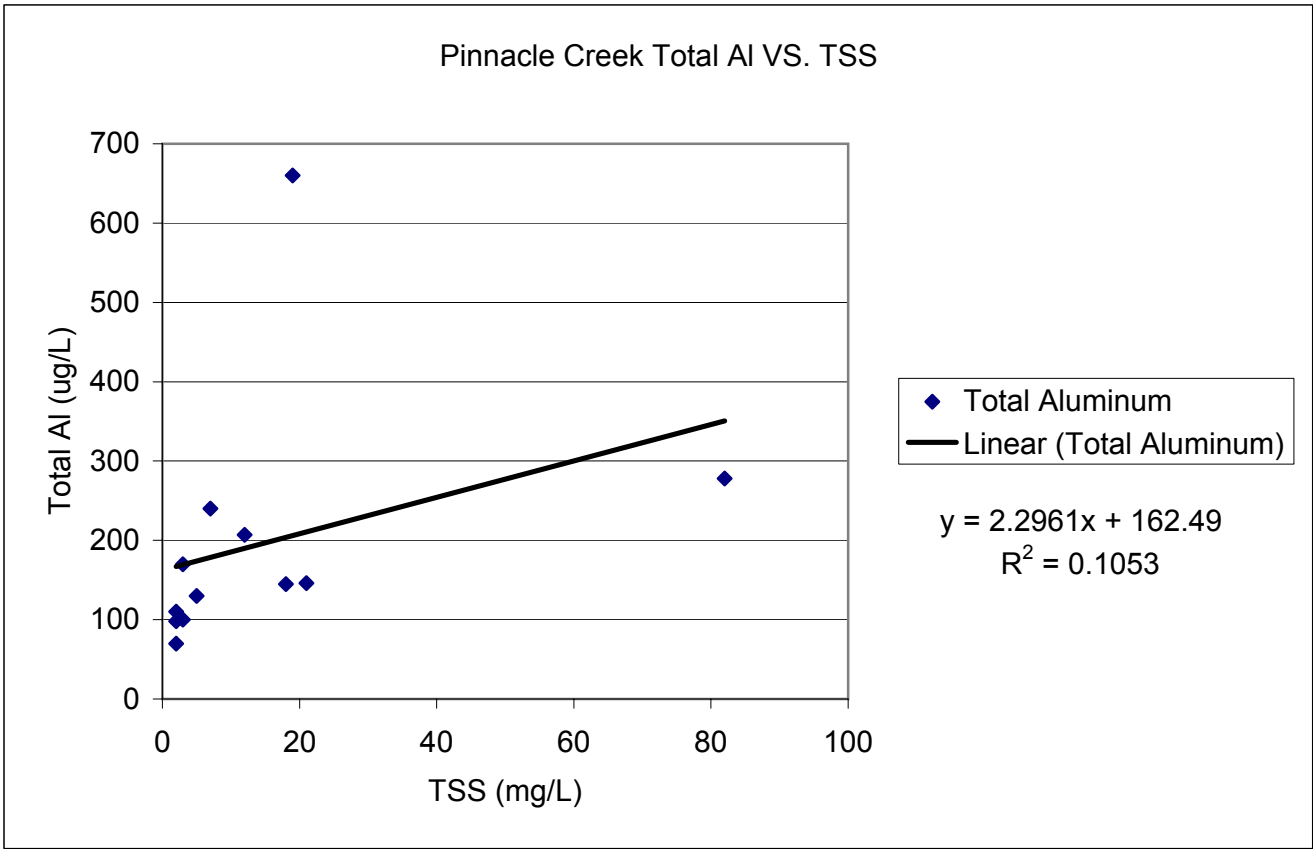


Figure 12-Mud River Stations Total Aluminum/TSS Correlation

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

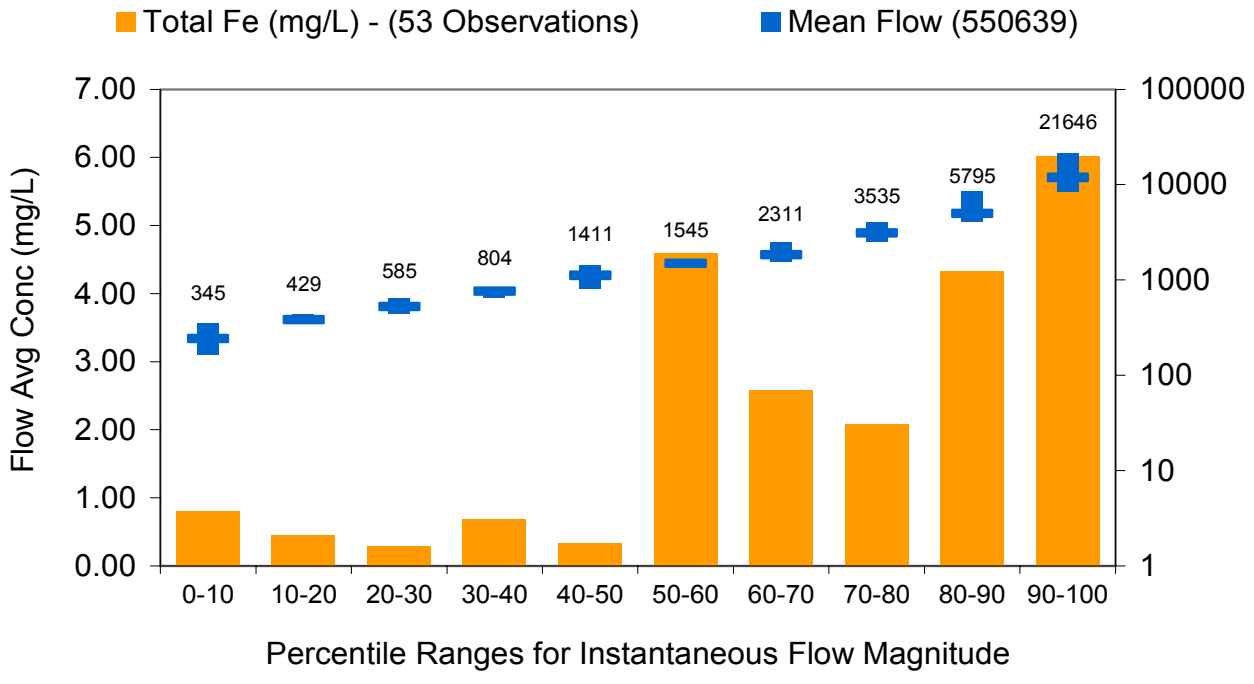


Figure 1 - Guyandotte River main stem at Huntington WV (550639) - Flow/Total Iron Relationship

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

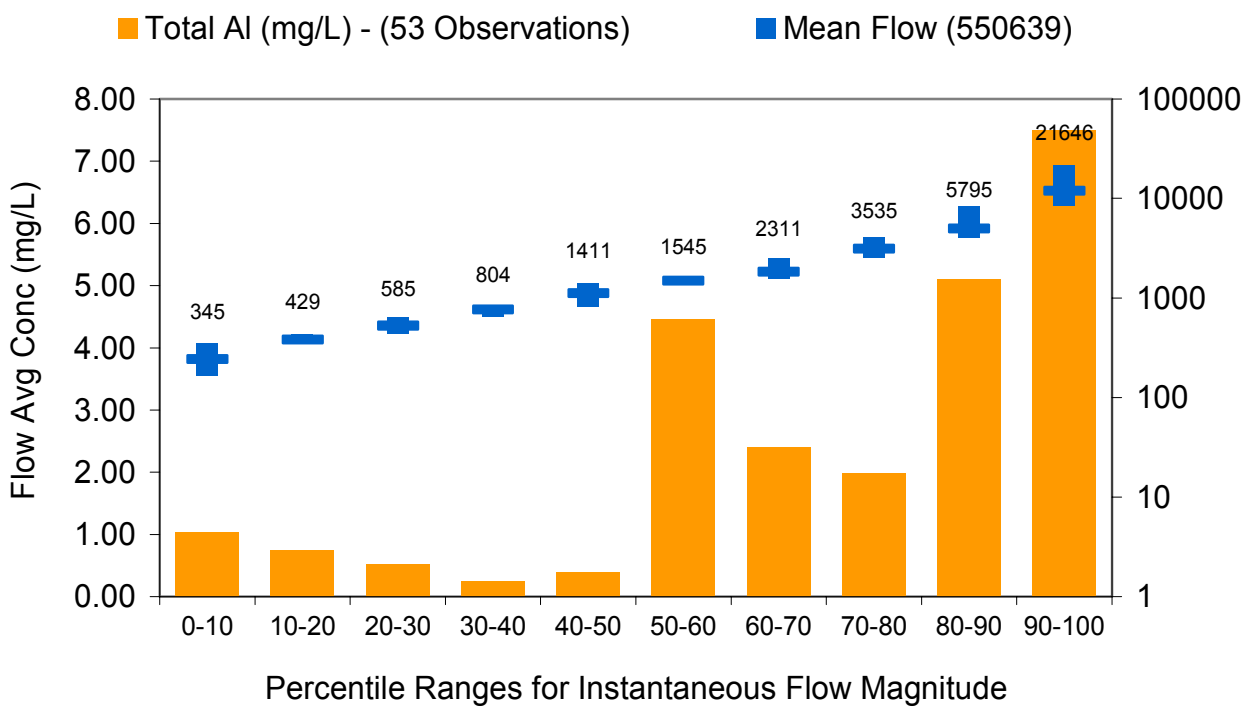


Figure 2 - Guyandotte River main stem at Huntington WV (550639) - Flow/Total Aluminum Relationship

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

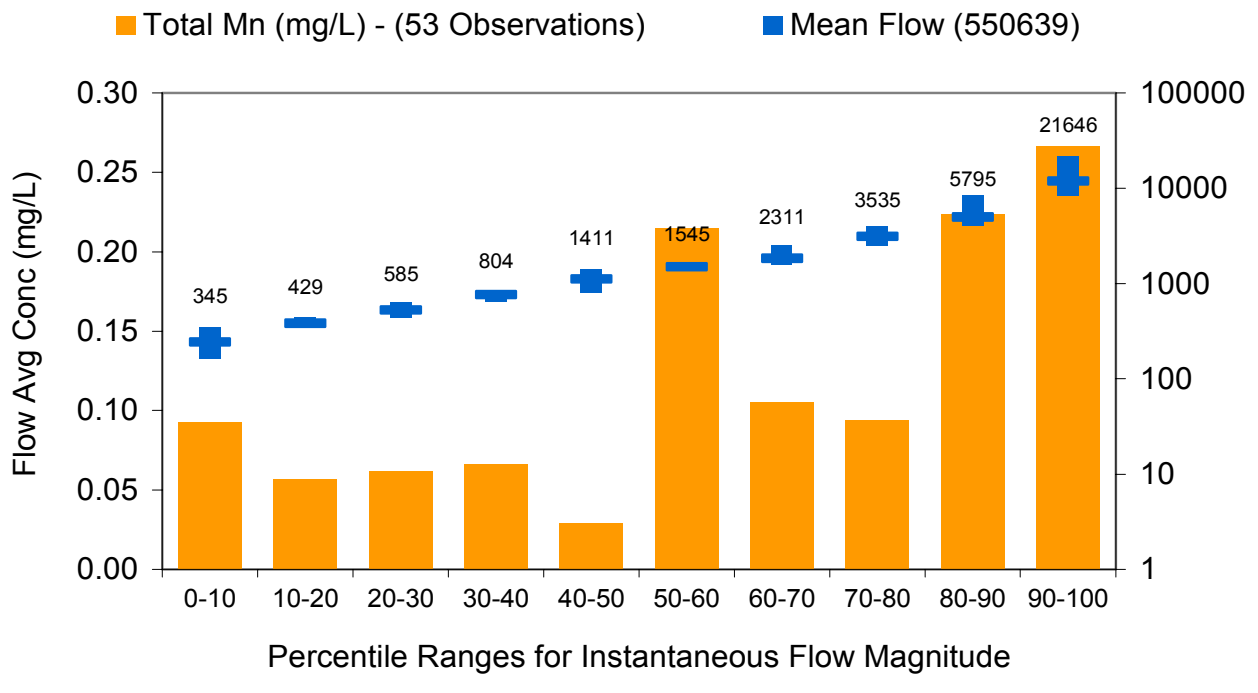


Figure 3 - Guyandotte River main stem at Huntington WV (550639) - Flow/Total Manganese Relationship

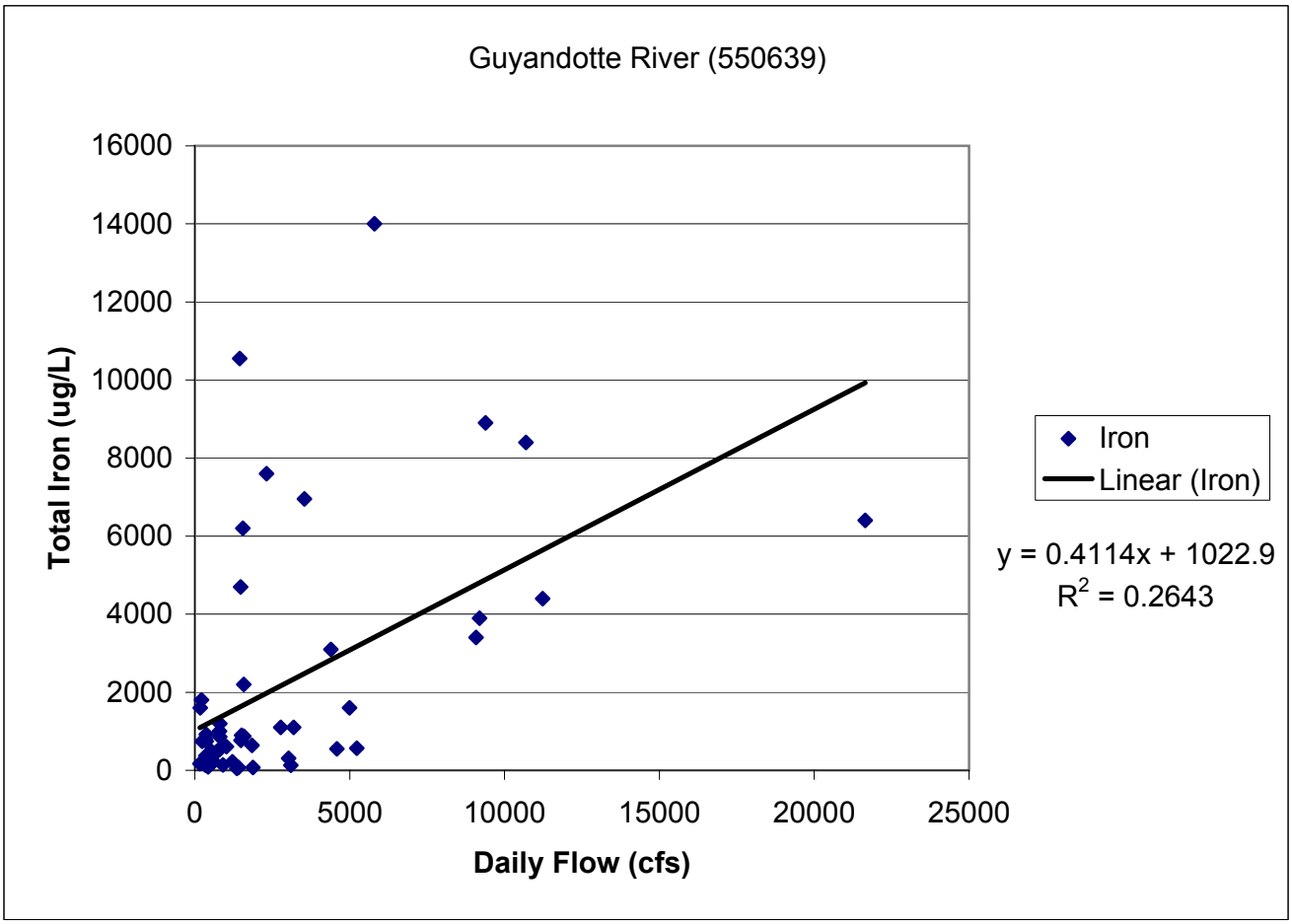


Figure 4 -Iron Correlation with Mean Daily Flow (Station 550639)

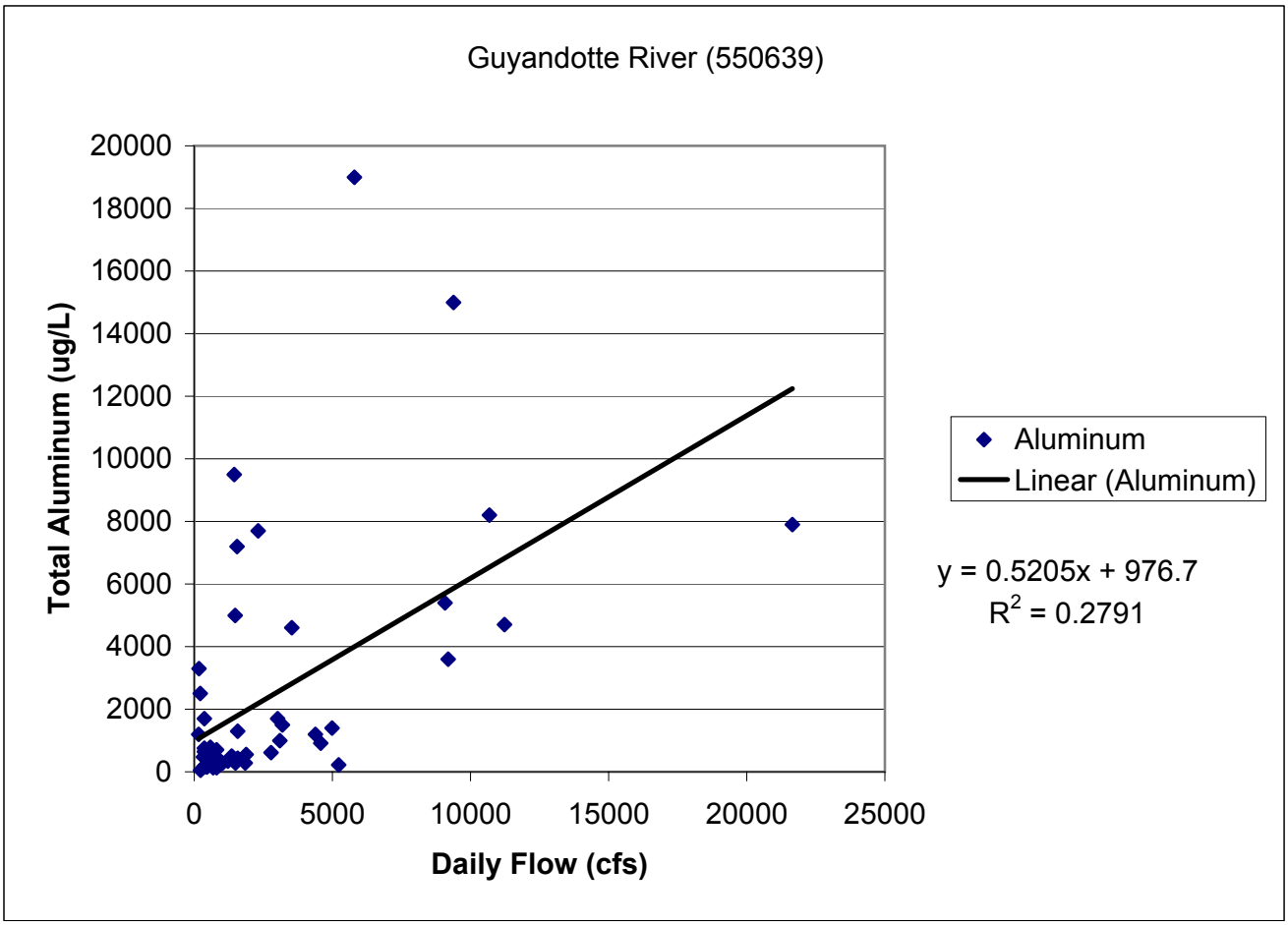


Figure 5 - Total Aluminum Correlation with Mean Daily Flow (Station 550639)

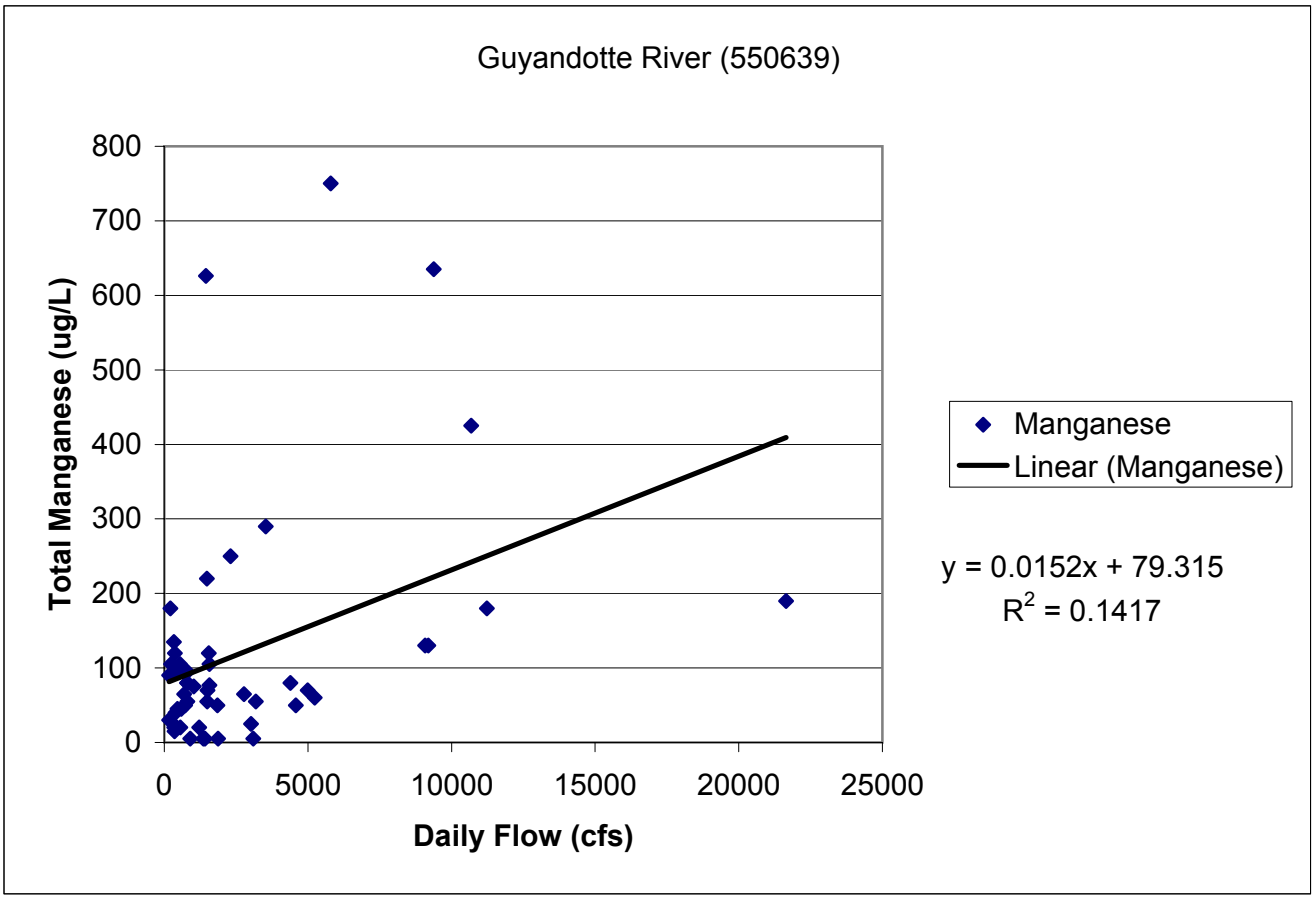


Figure 6 - Manganese Correlation with Mean Daily Flow (Station 550639)

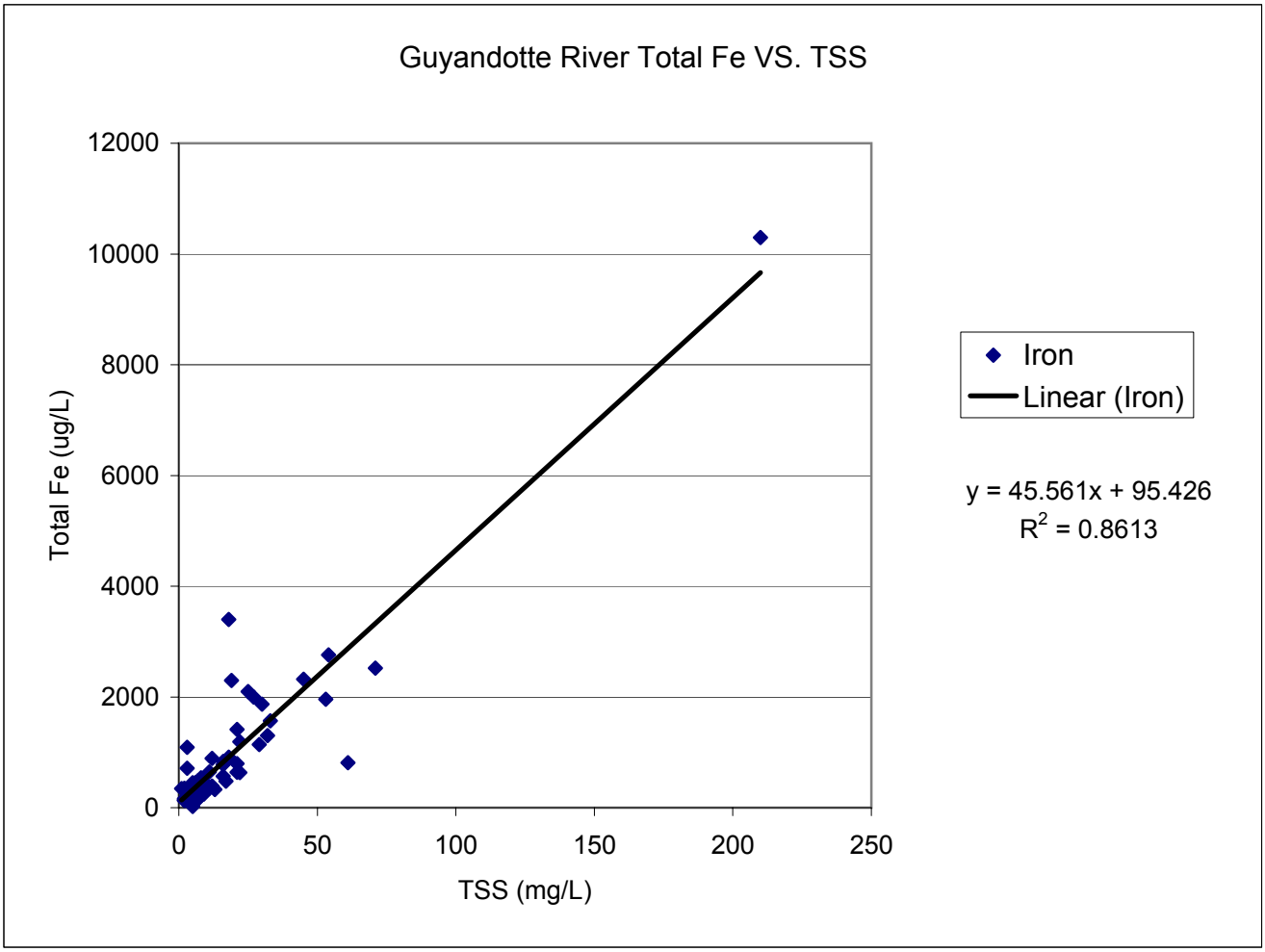


Figure 7 - Combined Guyandotte River Stations Total Iron/TSS Correlation

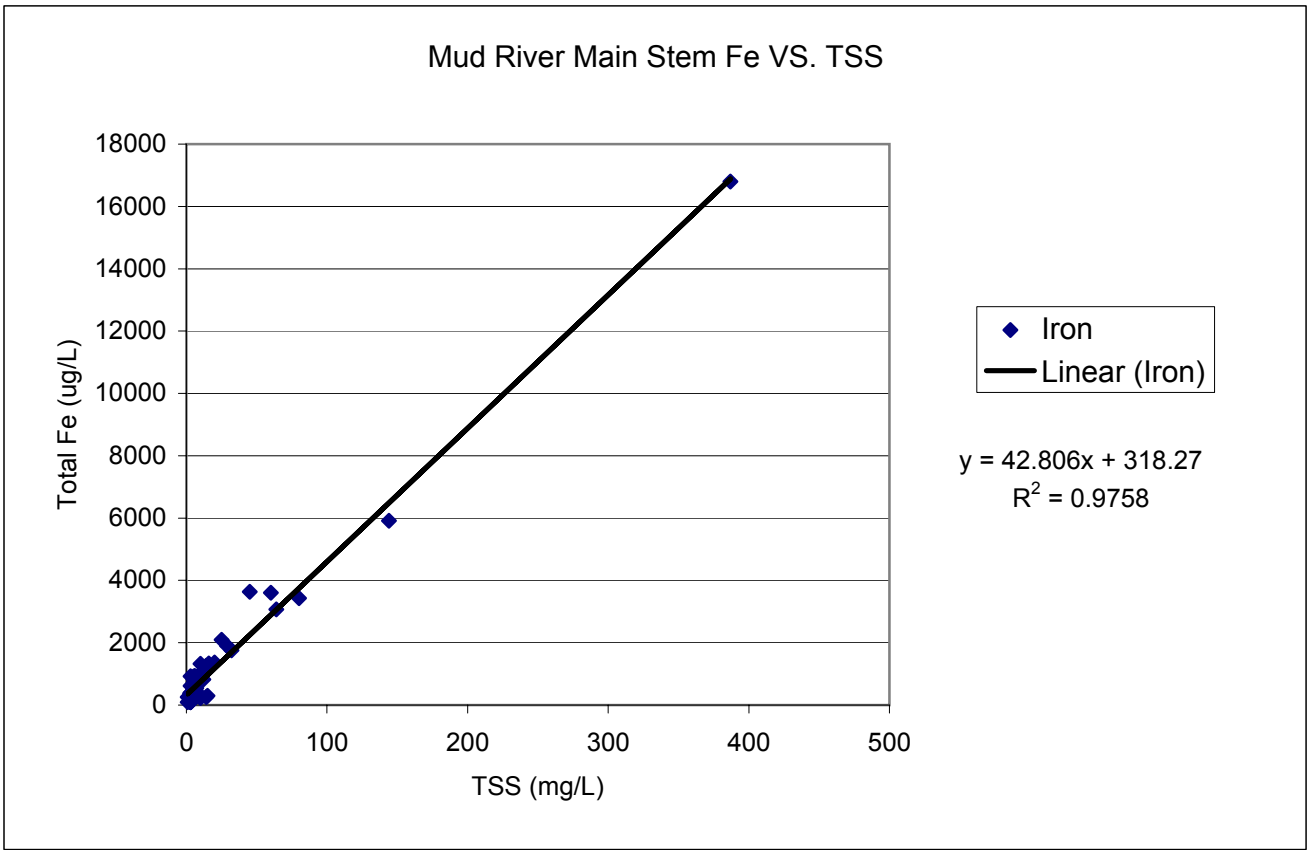


Figure 8 - Mud River Stations Total Iron/TSS Correlation

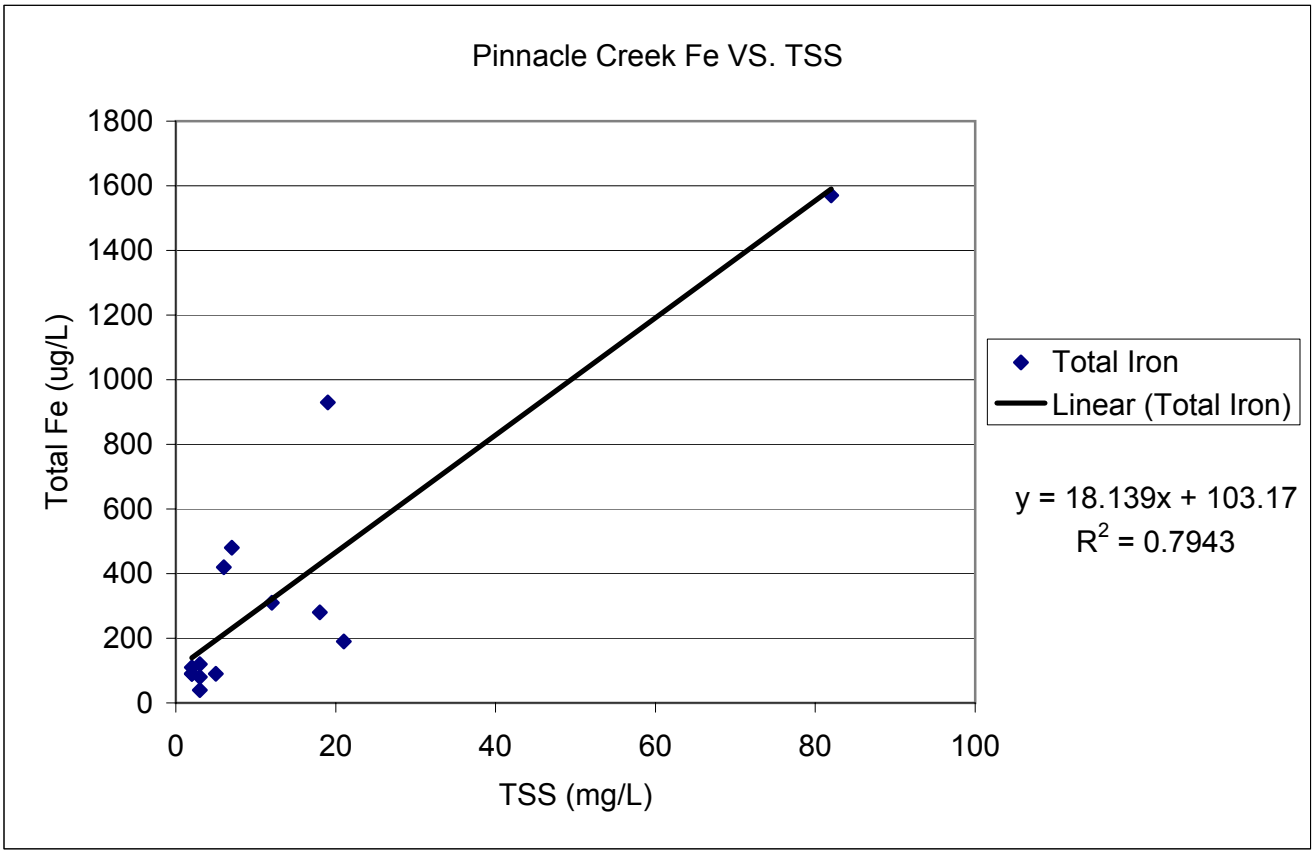


Figure 9 - Pinnacle Creek Stations Total Iron/TSS Correlation

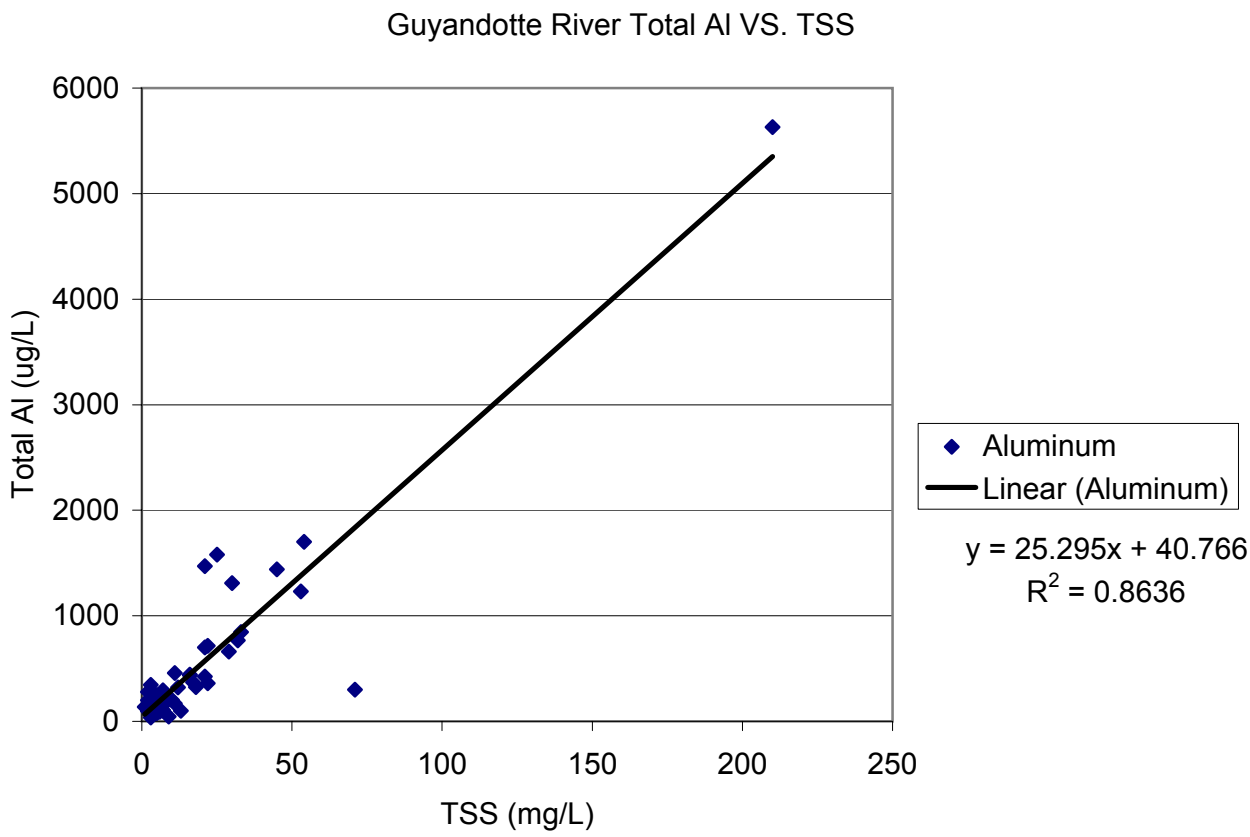


Figure 10 - Guyandotte River Stations Total Aluminum/TSS Correlation

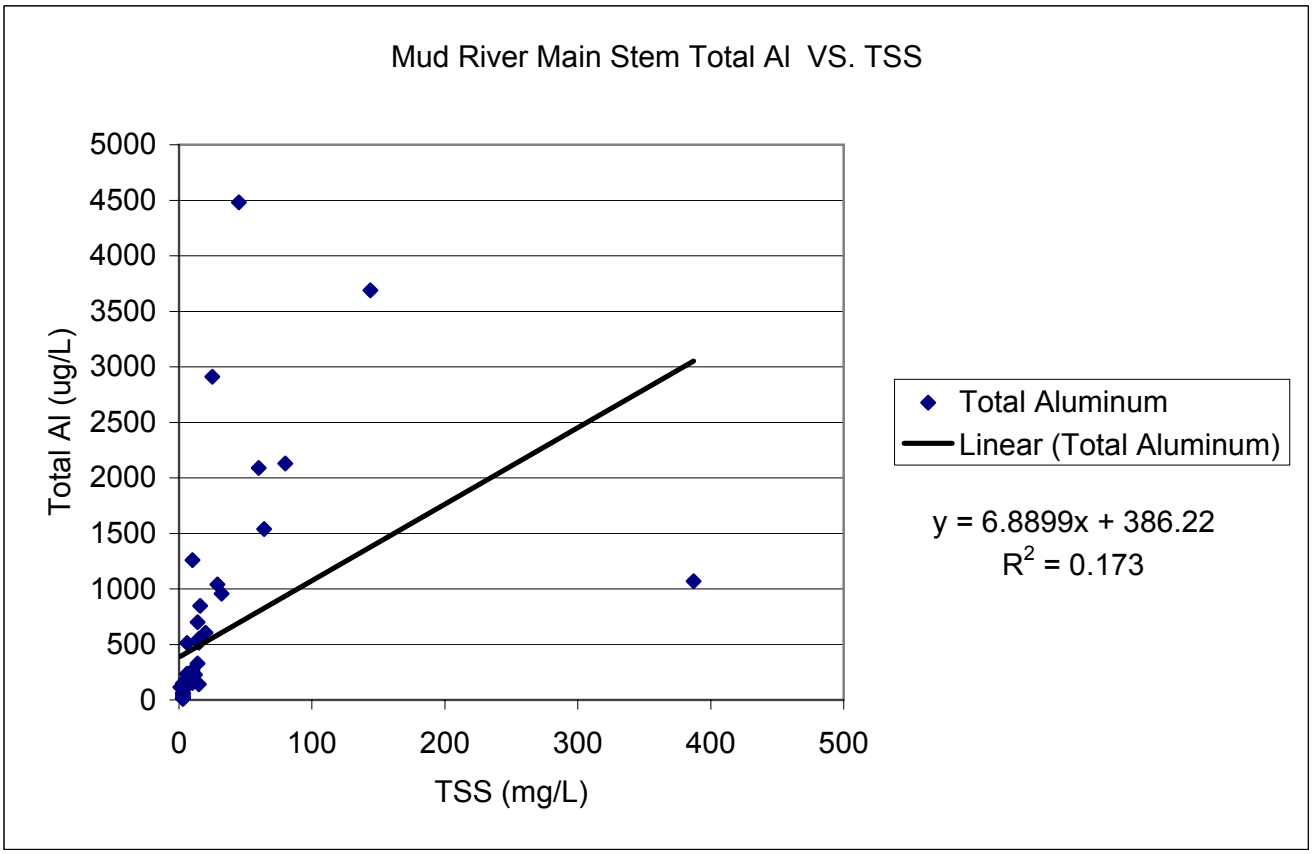


Figure 11 -Mud River Stations Total Aluminum/TSS Correlation

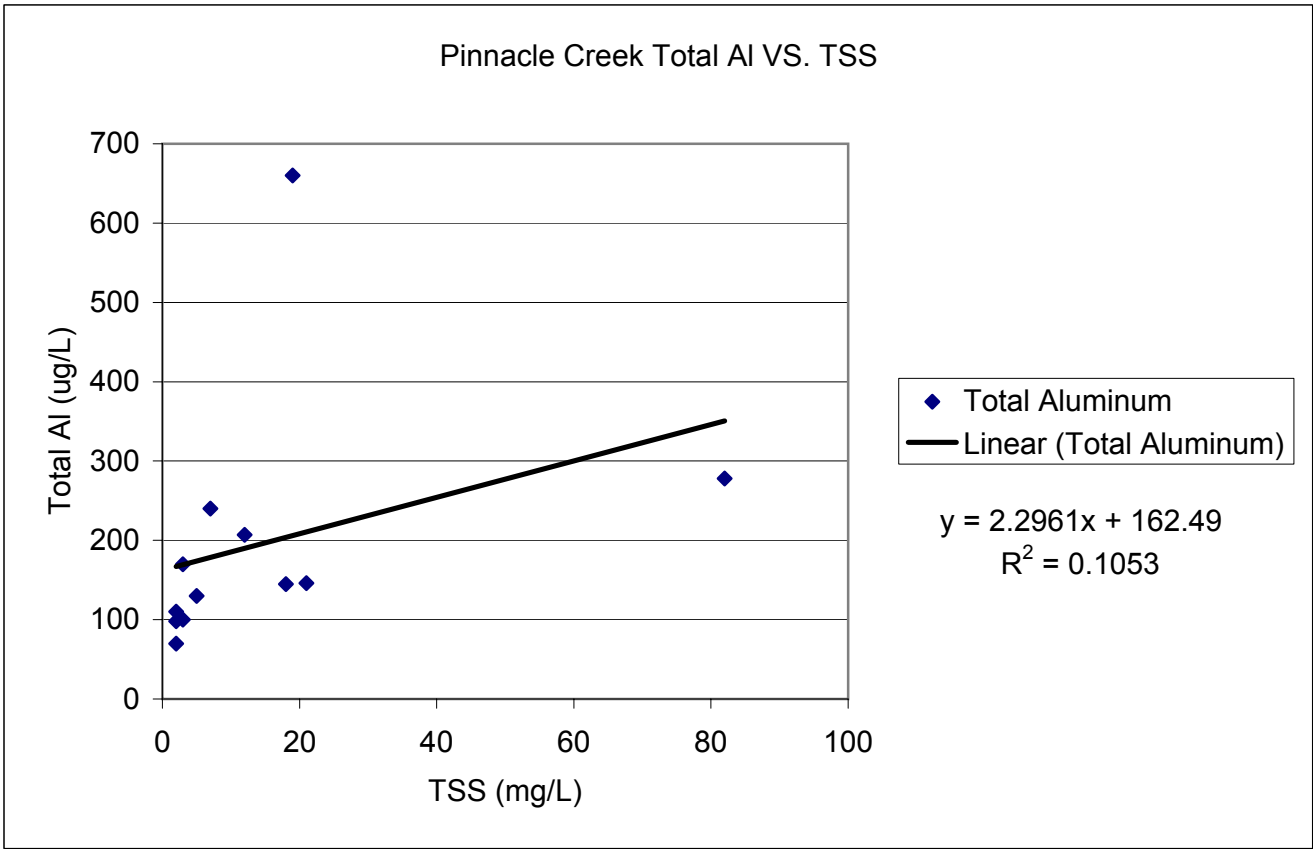


Figure 12-Mud River Stations Total Aluminum/TSS Correlation

Appendix E

Forest Harvest Operations and Forest Fires

Table E-1. Recent forest harvest operations in the Guyandotte River watershed.

NTFY NO.	County	Drainage	Acres	Date Start	Date End	Disturbance Factor	North Coord.	East Coord.	Projection
4012001	WYOMING	BARKERS CREEK	36.5	03/14/01	07/31/01	1	37° 31.09	81° 16.73	Deg
4014700	WYOMING	BARKERS CREEK	44	04/24/00	04/20/01	0	37° 30.56	81° 15.90	Deg
4015702	WYOMING	BARKERS CREEK	35	04/10/02	06/10/02	0.5	37°31.1766	81°16.4476	Deg
4029001	WYOMING	BARKERS CREEK	20	08/13/01	09/25/01	0.5	37° 32.56	81° 24.44	Deg
4032903	WYOMING	BARKERS CREEK	12	08/11/03	09/15/03	1	37°31.3172	81°15.4726	Deg
4048202	WYOMING	BARKERS CREEK	74	12/02/02	03/02/03	0	37°31.5142	81°21.0634	Deg
5012999	LOGAN	BUFFALO CK	255	04/16/99	04/15/00	0.35	4177947	423866	UTM
5023400	LOGAN	BUFFALO CK	176	07/17/00	09/30/00	0.25	4182864	445810	UTM
4000903	RALEIGH	CLEAR FORK	3	01/01/03	06/30/03	0.5	37°54.6534	81°20.7994	Deg
4004202	RALEIGH	CLEAR FORK	100	01/20/02	03/31/02	0	37°51.92	81°19.57	Deg
4009701	RALEIGH	CLEAR FORK	400	02/26/01	08/31/01	3	37°51.7285	81°19.0448	Deg
4012601	RALEIGH	CLEAR FORK	293	03/13/01	09/30/01	0	37°51.6850	81°19.3751	Deg
4022901	WYOMING	CLEAR FORK	162	05/08/01	12/30/01	0	37° 45.78	81° 28.07	Deg
4027302	WYOMING	CLEAR FORK	104	07/08/02	10/01/02	1	37°45.1716	81°30.6150	Deg
4036601	WYOMING	CLEAR FORK	170	10/01/01	01/01/02	0	37° 45.67	81° 27.64	Deg
4044702	RALEIGH	CLEAR FORK	13	11/15/02	12/31/02	1	37°54.15	81°21.48	Deg
4050502	RALEIGH	CLEAR FORK	160	12/17/02	02/17/03	0	37°57.09	81°24.95	Deg
4043701	RALEIGH	CLEAR FORK-COAL R.	60	12/12/01	03/12/02	0	37°53.0311	81°20.4306	Deg
4024901	WYOMING	CLEAR FORK-GUYANDOTT	34	06/19/01	07/30/01	1	37°37.4307	81°41.8449	Deg
4014403	RALEIGH	DINGESS BRANCH	7	05/01/03	05/30/03	0	37°47.8747	81°18.9065	Deg
4006702	RALEIGH	GUYANDOTT RIVER	400	01/18/02	06/01/02	1	37°35.43	81°18.16	Deg
4036702	WYOMING	GUYANDOTTE	246	09/03/02	11/30/02	2	37°33.9777	81°28.2293	Deg
4003600	WYOMING	GUYANDOTTE RIVER	200	01/24/00	03/20/00	0	37° 34.97	81° 21.60	Deg
4019902	WYOMING	GUYANDOTTE RIVER	131	05/13/02	07/13/02	2	37°33.9094	81° 29.2998	Deg
5002001	LOGAN	GUYANDOTTE RIVER	200	01/16/01	04/30/01	1.45	4177914	413558	UTM
5020598	LOGAN	GUYANDOTTE RIVER	636	07/20/98	07/31/00	20	4178685	420035	UTM
4018802	WYOMING	GUYANDOTTE RIVER FAC	153	05/01/02	08/01/02	0	37°33.8804	81°29.6262	Deg
4039100	WYOMING	HUFF CREEK	40	12/18/00	01/18/01	1	37° 43.31	81° 40.60	Deg

NTFY NO.	County	Drainage	Acres	Date Start	Date End	Disturbance Factor	North Coord.	East Coord.	Projection
4014602	WYOMING	INDIAN CREEK	57	04/03/02	10/01/02	1	37°33.6019	81°38.4168	Deg
4024301	WYOMING	INDIAN CREEK	250	06/12/01	09/12/01	1	37° 29.73	81° 33.22	Deg
4031101	WYOMING	INDIAN CREEK	250	08/22/01	08/22/02	0	37° 29.73	81° 33.22	Deg
4031101	WYOMING	INDIAN CREEK	250	08/22/01	08/22/02	0	37° 29.73	81° 33.22	Deg
4025103	WYOMING	LAUREL FORK	65	06/10/03	09/30/03	0.5	37°39.9628	81°33.7309	Deg
4031203	WYOMING	LAUREL FORK	30	07/23/03	08/30/03	0	37°39.9049	81°34.0731	Deg
4038702	WYOMING	LITTLE HUFF CREEK	40	10/05/02	11/12/02	2	37°33.2125	81°43.8883	Deg
4029700	WYOMING	PINNACLE CREEK	160	07/09/00	10/31/00	1	37°27.86	81° 20.98	Deg
4030400	WYOMING	PINNACLE CREEK	12.5	10/03/00	11/15/00	0.5	37°28.13	81° 21.05	Deg
4036101	WYOMING	PINNACLE CREEK	612	09/04/01	09/04/02	1	37° 32.71	81° 30.94	Deg
4036203	WYOMING	PINNACLE CREEK	34	08/27/03	09/24/03	0	37°29.9757	81°23.0260	Deg
4036802	WYOMING	PINNACLE CREEK	32	07/04/02	07/12/02	0	37°27.3752	81°19.9534	Deg
4038100	WYOMING	ROCKCASTLE CREEK	100	12/12/00	12/11/01	0	37° 37.53	81° 21.05	Deg
5032002	LOGAN	RUM CK OF GUYANDOTTE	50	12/03/02	01/14/03	2.25	4185170	427433	UTM
4004601	WYOMING	SLAB FORK	250	01/22/01	04/30/01	0	37 ° 42.39	81°22.9835	Deg
4006500	RALEIGH	SLAB FORK	30	02/22/00	04/01/00	1	37°40.74	81°24.44	Deg
4013002	RALEIGH	SLAB FORK	150	03/21/02	05/30/02	1	37°41.05	81°19.12	Deg
4017302	RALEIGH	SLAB FORK	75	04/06/02	09/30/02	1	37°42.50	81°17.85	Deg
4018202	RALEIGH	SLAB FORK	350	04/25/02	11/01/02	0	37°41.67	81°18.34	Deg
4021502	RALEIGH	SLAB FORK	40	05/28/02	07/12/02	0	37°40.87	81°19.39	Deg
4009702	WYOMING	SLAB FORK CREEK	300	02/20/02	05/30/02	0	37°38.8622	81°23.2128	Deg
4038900	RALEIGH	SLAB FORK SOUTH	200	12/15/00	06/30/01	1	37°43.42	81°19.68	Deg
4010700	WYOMING	SLAB FORK/GUYANDOTTE	600	03/17/00	05/31/00	0	37° 35.07	81° 21.87	Deg
4008700	RALEIGH	SLAB FORK/SURVEYORCR	15	03/02/00	05/30/00	0	37°43.36	81°18.58	Deg

NTFY NO.	County	Drainage	Acres	Date Start	Date End	Disturbance Factor	North Coord.	East Coord.	Projection
4015701	RALEIGH	STONE COAL CREEK	26	04/14/01	06/14/01	1	37°39.1936	81°13.5033	Deg
4000100	RALEIGH	STONECOAL CREEK	200	12/27/99	04/01/00	0	37°37.31	81°15.09	Deg
4003801	RALEIGH	STONECOAL CREEK	370	01/24/01	07/06/01	0	37°37.9398	81°13.6693	Deg
4004803	RALEIGH	STONECOAL CREEK	412	01/28/03	06/28/03	1	37°37.7624	81°18.4098	Deg
4033001	RALEIGH	STONECOAL CREEK	50	07/02/01	08/15/01	0	37°38.1177	81°12.9277	Deg
4044102	RALEIGH	STONECOAL CREEK	68	11/11/02	12/15/02	0	37°38.38	81°12.73	Deg
4017700	RALEIGH	TOMMY CREEK	100	02/28/00	06/30/00	1	37°35.06	81°10.70	Deg
4031700	RALEIGH	TOMMY'S CREEK	477	10/14/00	02/28/01	0	37°36.12	81°17.80	Deg
4031700	RALEIGH	TOMMY'S CREEK	477	10/14/00	02/28/01	0	37°36.12	81°17.80	Deg
4004900	WYOMING	TONEY FORK	711	12/17/99	10/30/00	0	37° 45.87	81° 32.67	Deg
4045602	RALEIGH	TONEY FORK -CLEAR CR	1	11/06/02	03/06/03	1	37°55.21	81°18.78	Deg
4028401	WYOMING	TONY FORK-CLEAR FORK	138	07/20/01	07/20/02	0	37°46.6004	81°32.7021	Deg
4028401	WYOMING	TONY FORK-CLEAR FORK	138	07/20/01	07/20/02	0	37°46.6004	81°32.7021	Deg
4011600	WYOMING	TRACE FORK-HUFF CR.	70	03/28/00	07/28/00	0	37° 44.66	81° 40.61	Deg
4002300	RALEIGH	U.T. OF SLAB FORK	25	01/16/00	05/30/00	2	37°42.61	81°18.01	Deg
4024500	RALEIGH	U.T. OF SLAB FORK	500	08/02/00	05/31/01	0	37°40.45	81°20.84	Deg
4046502	RALEIGH	U.T. OF WINDING GULF	450	11/21/02	05/31/02	0	37°38.54	81°19.38	Deg
5014900	LOGAN	UNNAMED BR GUYANDOTT	15	04/28/00	05/15/00	1.85	4202631	411551	UTM
5000801	LOGAN	WHITMAN CK	615	01/12/01	07/01/01	2.2	4182796	496145	UTM
5013500	LOGAN	WHITMAN CK	550	04/19/00	10/19/00	7.3	4183047	403605	UTM
4005300	WYOMING	WINDING GULF	500	02/17/00	08/17/00	0.5	37° 34.99	81° 19.99	Deg
4005602	RALEIGH	WINDING GULF	500	01/30/02	12/31/02	0	37°37.16	81°19.20	Deg
4017100	RALEIGH	WINDING GULF	200	05/08/00	07/30/00	0	37°40.50	81°14.96	Deg
4034600	RALEIGH	WINDING GULF	400	11/03/00	07/01/01	0	37°40.38	81°17.39	Deg

NTFY NO.	County	Drainage	Acres	Date Start	Date End	Disturbance Factor	North Coord.	East Coord.	Projection
NTFY NO.	County	Drainage	Acres	Date Start	Date End	Disturbance Factor	North Coord.	East Coord.	Projection
4040201	RALEIGH	WINDING GULF	218	11/07/01	02/15/02	0	37°41.8686	81°15.5008	Deg
4040201	RALEIGH	WINDING GULF	218	11/07/01	02/15/02	0	37°41.8686	81°15.5008	Deg
4044901	RALEIGH	WINDING GULF	234	12/22/01	04/22/02	0	37°41.8003	81°15.6064	Deg
4044901	RALEIGH	WINDING GULF	234	12/22/01	04/22/02	0	37°41.8003	81°15.6064	Deg
4016401	RALEIGH	WINDING GULF CREEK	300	04/19/01	06/30/01	0.5	37°37.1697	81°19.2281	Deg
5001002	LINCOLN	BIG CREEK	45	01/14/02	03/08/02	0.25	4234426	400362	UTM
5010802	LINCOLN	BIG CREEK	75	05/14/02	07/20/02	1.05	4222918	402722	UTM
5015302	LINCOLN	BIG CREEK	20	08/26/02	07/06/02	0.35	4234499	401293	UTM
5017503	LINCOLN	BIG UGLY CREEK	30	05/05/03	12/31/03	0.8	4225352	404425	UTM
5005701	LINCOLN	BIG UGLY CREEK	60	02/15/01	06/15/01	0.95	4210191	407373	UTM
5006001	LINCOLN	BIG UGLY CREEK	120	03/09/01	06/30/01	1	4210159	415471	UTM
5011503	LINCOLN	FOURMILE CREEK	56	03/14/03	04/30/03	1	4228297	392846	UTM
5000402	CABELL	FUDGES CREEK	30	01/02/02	01/15/02	0.4	4250471	396698	UTM
5000802	CABELL	FUDGES CREEK	40	01/15/02	02/28/02	0.4	4246215	397711	UTM
5017501	LINCOLN	GUYANDOTTE RIVER	165	05/31/01	07/31/01	1	4216136	398815	UTM
5031201	CABELL	KILGORE CREEK	223	10/24/01	06/01/02	4.25	4259983	404818	UTM
5000401	CABELL	MUD RIVER	20	12/15/00	12/15/01	0.3	4254115	406090	UTM
5030300	LINCOLN	MUD RIVER	36	08/11/00	08/11/00	1	4241835	402203	UTM
5032200	LINCOLN	MUD RIVER	93	10/12/00	11/30/00	0.3	4218135	410440	UTM
5040100	LINCOLN	MUD RIVER	80	12/11/00	03/14/01	0.85	4226652	411710	UTM
5004102	LINCOLN	MUD RIVER	43	02/18/02	04/15/02	1.41	4226185	405515	UTM
5007502	LINCOLN	MUD RIVER	200	03/27/02	12/31/02	1.91	4226313	401596	UTM
5015002	LINCOLN	MUD RIVER	53	04/25/02	07/06/02	3.75	4221362	406698	UTM
5016902	LINCOLN	MUD RIVER	176	01/28/02	12/15/02	4	4226874	401261	UTM

NTFY NO.	County	Drainage	Acres	Date Start	Date End	Disturbance Factor	North Coord.	East Coord.	Projection
NTFY NO.	County	Drainage	Acres	Date Start	Date End	Disturbance Factor	North Coord.	East Coord.	Projection
5018902	LINCOLN	MUD RIVER	90	06/05/02	09/09/02	1.64	4223945	404764	UTM
5021802	LINCOLN	MUD RIVER	102	08/23/02	09/23/02	0.96	4223911	404413	UTM
5025502	LINCOLN	MUD RIVER	65	09/17/02	09/26/02	1	4218942	408662	UTM
5025702	LINCOLN	MUD RIVER	211	09/12/02	12/31/02	2.03	4231908	401064	UTM
5027802	LINCOLN	MUD RIVER	27	10/15/02	12/15/02	0.25	4226921	405880	UTM
5017403	LINCOLN	NINEMILE CREEK	50	05/10/03	08/10/03	1.02	4224617	399787	UTM
5023501	CABELL	NINEMILE CREEK	70	08/10/01	10/30/01	0.45	4265699	389176	UTM
5011603	CABELL	NINEMILE CREEK	30	03/31/03	08/15/03	0.6	4264764	390671	UTM
5035203	CABELL	NINEMILE CREEK	100	09/22/03	03/01/04	2.35	4263883	391475	UTM
5026703	LINCOLN	SMOKE HOUSE FORK	25	07/10/03	09/01/03	0.25	4202236	402581	UTM
5016002	LINCOLN	TRACE CREEK	80	05/02/02	07/18/02	1.64	4234421	404256	UTM
5034601	CABELL	TRACE CREEK	80	11/19/01	01/19/02	0.9	4245142	399765	UTM
5002902	LINCOLN	TRACE FORK	45	02/15/02	04/30/02	0.25	4244238	405009	UTM
5016800	CABELL	UNNAMED TRIB GUYANDOTTE	3.5	05/24/00	07/26/00	0.15	4253416	385312	UTM

Table E-2. Recent forest fires in the Guyandotte River watershed.

Reference Id	Date	UTM EW	UTM NS	Quad Name	Forest Acres Burned	NonForest Acres Burned	Total Acres Burned
F20014005	9/27/2001	442980	4151946	BAILEYSVILLE	0	0	0
F20014010	10/11/2001	457045	4172965	MCGRAWS	0	0	0
F20014011	10/11/2001	472390	4171545	LESTER	0	0	0
F20014016	10/21/2001	437542	4169960	OCEANA	8	0	8
F20014029	10/23/2001	479540	4170125	CRAB ORCHARD	1	0	1
F20014030	10/23/2001	479099	4170310	CRAB ORCHARD	0	0	0
F20014047	10/25/2001	480343	4165989	CRAB ORCHARD	0	0	0
F20014048	10/24/2001	473083	4146108	CRUMPLER	1	0	1
F20014049	10/24/2001	472479	4146631	CRUMPLER	0	0	0
F20014056	10/26/2001	428595	4153932	GILBERT	45	0	45
F20014058	10/23/2001	469535	4147317	CRUMPLER	58	0	58
F20014075	10/30/2001	451519	4162719	PINEVILLE	2	0	2
F20014084	11/1/2001	430453	4156388	GILBERT	2	0	2
F20014095	11/1/2001	459681	4176095	MCGRAWS	195	25	220
F20014100	11/2/2001	482090	4166417	CRAB ORCHARD	11	0	11
F20014101	11/2/2001	481871	4163524	ODD	557	0	557
F20014103	11/2/2001	440553	4161641	BAILEYSVILLE	11	0	11
F20014104	11/2/2001	442601	4159420	BAILEYSVILLE	27	0	27
F20014107	11/3/2001	466397	4154678	MULLENS	250	26	276
F20014129	11/7/2001	434216	4163689	BAILEYSVILLE	0	0	0
F20014137	11/10/2001	465980	4174346	MCGRAWS	385	0	385
F20014145	11/11/2001	472777	4145417	CRUMPLER	1	0	1
F20014146	11/11/2001	453773	4148335	WELCH	13	0	13
F20014147	11/11/2001	467343	4155280	RHODELL	2	0	2
F20014151	11/11/2001	434336	4166689	OCEANA	1054	19	1073
F20014163	11/13/2001	465204	4157578	MULLENS	15	0	15
F20014167	11/13/2001	441925	4167187	OCEANA	6	0	6
F20014180	11/15/2001	459681	4176095	WELCH	1	0	1
F20014184	11/17/2001	471530	4157271	RHODELL	34	0	34
F20014198	11/23/2001	468956	4144270	CRUMPLER	2	0	2
F20014204	11/23/2001	469074	4144242	CRUMPLER	1	0	1
F20014205	11/24/2001	455361	4169880	MATHENY	0	1	1
F20014206	11/27/2001	435246	4168285	OCEANA	0	0	0

Reference Id	Date	UTM EW	UTM NS	Quad Name	Forest Acres Burned	NonForest Acres Burned	Total Acres Burned
Reference Id	Date	UTM EW	UTM NS	Quad Name	Forest Acres Burned	NonForest Acres Burned	Total Acres Burned
F20014213	12/2/2001	450456	4155769	PINEVILLE	13	0	13
F20014228	11/17/2001	470475	4155491	RHODELL	0	1	1
F20014231	10/23/2001	470708	4144776	CRUMPLER	0	0	0
F20014233	10/23/2001	473666	4145992	CRUMPLER	0	0	0
F20014234	10/23/2001	472837	4145252	CRUMPLER	0	0	0
F20015003	9/7/2001	403732	4208629	RANGER	1	0	1
F20015013	10/20/2001	399580	4243457	WEST HAMLIN	75	3	78
F20015014	10/19/2001	412406	4166272	MAN	106	0	106
F20015019	10/21/2001	405335	4215690	BIG CREEK	43	0	43
F20015020	10/21/2001	403856	4242288	HAMLIN	200	0	200
F20015022	10/20/2001	414403	4193179	HENLAWSON	5	0	5
F20015024	10/19/2001	394094	4212423	RANGER	2	0	2
F20015046	10/23/2001	399806	4199480	TRACE	0	0	0
F20015056	10/24/2001	420232	4241554	GARRETTS BEND	230	12	242
F20015063	10/24/2001	423384	4155665	GILBERT	18	0	18
F20015068	10/25/2001	422984	4159764	GILBERT	215	0	215
F20015069	10/25/2001	404123	4184275	HOLDEN	106	0	106
F20015076	10/26/2001	401719	4200006	CHAPMANVILLE	186	0	186
F20015079	10/26/2001	411252	4208124	BIG CREEK	1	0	1
F20015085	10/26/2001	436077	4184783	LORADO	102	0	102
F20015100	10/27/2001	409352	4249868	HURRICANE	2	0	2
F20015101	10/27/2001	411154	4250228	HURRICANE	0	0	0
F20015108	10/27/2001	392857	4215969	RANGER	1	0	1
F20015114	10/28/2001	422677	4159957	WHARNCLIFFE	287	0	287
F20015116	10/28/2001	406924	4223835	HAGER	0	0	0
F20015125	10/26/2001	399861	4246863	WEST HAMLIN	0	0	0
F20015131	10/29/2001	400431	4221236	RANGER	525	25	550
F20015132	10/29/2001	398549	4215007	RANGER	20	0	20
F20015133	10/29/2001	391962	4222342	BRANCHLAND	12	0	12
F20015135	10/29/2001	400096	4247550	WEST HAMLIN	4	0	4
F20015142	10/30/2001	435592	4173400	OCEANA	3186	0	3186
F20015143	10/30/2001	411758	4208619	BIG CREEK	0	0	0
F20015151	10/31/2001	412790	4218093	MUD	1	0	1

Reference Id	Date	UTM EW	UTM NS	Quad Name	Forest Acres Burned	NonForest Acres Burned	Total Acres Burned
F20015152	10/31/2001	426508	4186250	AMHERSTDALE	445	0	445
Reference Id	**Date**	**UTM EW**	**UTM NS**	**Quad Name**	**Forest Acres Burned**	**NonForest Acres Burned**	**Total Acres Burned**
F20015180	11/1/2001	409454	4186744	HOLDEN	1099	0	1099
F20015183	10/31/2001	382026	4253143	BARBOURSVILLE	0	0	0
F20015184	11/2/2001	402821	4178259	BARNABUS	192	0	192
F20015189	11/2/2001	425154	4175157	MALLORY	280	0	280
F20015194	11/2/2001	406047	4212661	BIG CREEK	78	0	78
F20015195	11/2/2001	406609	4179167	HOLDEN	337	0	337
F20015216	11/6/2001	399676	4223910	BRANCHLAND	1	0	1
F20015234	11/8/2001	401456	4201567	CHAPMANVILLE	180	0	180
F20015238	11/8/2001	405589	4213768	BIG CREEK	0	0	0
F20015239	11/8/2001	400322	4201370	TRACE	880	0	880
F20015247	11/9/2001	424787	4158513	GILBERT	813	0	813
F20015261	11/11/2001	425205	4165804	MALLORY	338	0	338
F20015262	11/11/2001	401447	4187263	HOLDEN	218	0	218
F20015272	11/12/2001	396022	4224876	BRANCHLAND	0	0	0
F20015276	10/13/2001	420784	4170904	MAN	883	0	883
F20015277	11/13/2001	406936	4234729	HAMLIN	0	0	0
F20015280	11/13/2001	400230	4209563	RANGER	170	4	174
F20015281	11/13/2001	397981	4207947	RANGER	1	0	1
F20015291	11/14/2001	400059	4244242	WEST HAMLIN	17	0	17
F20015294	11/15/2001	424586	4165120	MALLORY	206	0	206
F20015295	11/14/2001	400913	4243882	WEST HAMLIN	40	5	45
F20015298	11/16/2001	418251	4177401	MAN	351	0	351
F20015302	11/17/2001	397165	4208494	RANGER	2	0	2
F20015304	11/17/2001	400528	4210516	RANGER	30	0	30
F20015313	11/17/2001	385071	4251427	BARBOURSVILLE	0	0	0
F20015316	11/18/2001	422161	4156125	WHARNCLIFFE	290	0	290
F20015318	11/19/2001	403344	4222897	HAGER	740	14	754
F20015320	11/18/2001	396852	4235092	WEST HAMLIN	1	0	1
F20015323	11/19/2001	410925	4179679	HOLDEN	70	0	70
F20015343	11/24/2001	401592	4226519	HAGER	1	0	1
F20015345	11/24/2001	399893	4253852	MILTON	0	0	0
F20015351	12/1/2001	412126	4228755	HAGER	1	0	1

Reference Id	Date	UTM EW	UTM NS	Quad Name	Forest Acres Burned	NonForest Acres Burned	Total Acres Burned
F20015352	12/3/2001	402082	4195394	CHAPMANVILLE	2	0	2
F20015361	12/5/2001	435401	4184373	LORADO	21	0	21
Reference Id	**Date**	**UTM EW**	**UTM NS**	**Quad Name**	**Forest Acres Burned**	**NonForest Acres Burned**	**Total Acres Burned**
F2002400017.0	10/3/2002	456763	4182181	ARNETT	0	0	0
F2002500001.0	7/6/2002	407915	4191266	HOLDEN	0	1	1
F2002500003.0	8/10/2002	402092	4209753	BIG CREEK	0	0	0
F2002500011.0	9/8/2002	410450	4199310	CHAPMANVILLE	1	0	1
F2002500013.0	9/6/2002	400805	4230948	BRANCHLAND	15	0	15
F2002500025.0	9/9/2002	416324	4198644	HENLAWSON	0	0	0
F2002500032.0	9/10/2002	409038	4248749	HURRICANE	0	0	0
F2002500039.0	9/12/2002	392603	4246770	WEST HAMLIN	3	0	3
F2002500042.0	9/13/2002	400324	4221029	BRANCHLAND	15	0	15
F2002500050.0	10/3/2002	399578	4210888	RANGER	0	0	0
F2002500052.0	10/24/2002	426919	4185814	AMHERSTDALE	15	0	15
F2002500053.0	11/2/2002	399479	4218064	RANGER	3	0	3
F2002500054.0	10/12/2002	401309	4216608	BIG CREEK	1	0	1
F2002500056.0	11/13/2002	398338	4218538	RANGER	1	0	1
F2002500067.0	12/2/2002	406374	4187147	HOLDEN	1	0	1
F2002500078.0	12/23/2002	399559	4217883	RANGER	80	0	80
F2002500079.0	12/31/2002	402178	4220431	HAGER	45	0	45
S20014030	2/11/2001	429182	4159714	GILBERT	5	0	5
S20014031	2/13/2001	469383	4149264	CRUMPLER	0	0	0
S20014032	2/9/2001	471985	4157135	RHODELL	2	3	5
S20014059	3/12/2001	471269	4160724	RHODELL	2	0	2
S20014068	3/19/2001	427080	4157950	GILBERT	7	1	8
S20014069	3/20/2001	440184	4163750	BAILEYSVILLE	0	0	0
S20014073	3/25/2001	460510	4159024	MULLENS	4	1	5
S20014081	3/27/2001	469474	4150393	RHODELL	4	1	5
S20014086	3/28/2001	446465	4163040	PINEVILLE	0	0	0
S20014092	3/21/2001	469220	4157995	RHODELL	0	7	7
S20014096	4/9/2001	481141	4171580	CRAB ORCHARD	1	0	1
S20014109	4/11/2001	436103	4151386	BAILEYSVILLE	12	0	12
S20014128	4/9/2001	482779	4154753	ODD	0	0	0
S20014139	4/22/2001	433568	4163735	GILBERT	112	2	114

Reference Id	Date	UTM EW	UTM NS	Quad Name	Forest Acres Burned	NonForest Acres Burned	Total Acres Burned
S20014153	4/25/2001	441672	4163816	BAILEYSVILLE	0	0	0
S20014154	4/25/2001	466823	4153858	MULLENS	6	0	6
S20014160	4/25/2001	447969	4175660	MATHENY	0	0	0
Reference Id	**Date**	**UTM EW**	**UTM NS**	**Quad Name**	**Forest Acres Burned**	**NonForest Acres Burned**	**Total Acres Burned**
S20014167	4/27/2001	451669	4149485	WELCH	218	0	218
S20014168	4/27/2001	476091	4155197	RHODELL	0	1	1
S20014173	4/28/2001	439928	4160508	BAILEYSVILLE	16	1	17
S20014174	4/28/2001	446164	4163655	PINEVILLE	17	4	21
S20014178	4/28/2001	472178	4163818	RHODELL	0	0	0
S20014182	4/28/2001	456710	4177132	MCGRAWS	180	0	180
S20014183	4/28/2001	434807	4154411	BAILEYSVILLE	101	0	101
S20014184	4/29/2001	442991	4161658	BAILEYSVILLE	3	2	5
S20014187	4/29/2001	467728	4156393	RHODELL	3	2	5
S20014188	5/5/2001	433402	4157834	BAILEYSVILLE	40	0	40
S20014189	4/29/2001	455370	4152942	PINEVILLE	92	0	92
S20014198	4/29/2001	466509	4151702	MULLENS	4	0	4
S20014207	5/6/2001	472103	4167567	LESTER	4	0	4
S20014208	4/29/2001	454658	4152159	PINEVILLE	2	0	2
S20014215	5/11/2001	455725	4165753	MATHENY	7	0	7
S20014225	5/6/2001	451541	4162726	PINEVILLE	1	0	1
S20014237	6/27/2001	456290	4156441	MULLENS	0	8	8
S20015001	1/6/2001	400730	4215601	RANGER	30	0	30
S20015002	1/6/2001	406650	4194760	CHAPMANVILLE	3	0	3
S20015011	1/16/2001	403950	4203163	CHAPMANVILLE	118	0	118
S20015025	2/7/2001	406677	4196658	CHAPMANVILLE	10	0	10
S20015028	2/8/2001	409490	4185246	HOLDEN	1	0	1
S20015029	2/8/2001	420277	4189256	LOGAN	0	1	1
S20015030	2/8/2001	401741	4212178	BIG CREEK	200	4	204
S20015031	2/8/2001	420870	4156742	WHARNCLIFFE	25	0	25
S20015035	2/9/2001	411930	4216130	BIG CREEK	45	0	45
S20015052	2/19/2001	412642	4243173	GARRETTS BEND	0	0	0
S20015054	2/21/2001	412681	4224981	HAGER	1	0	1
S20015055	2/5/2001	401192	4239244	HAMLIN	29	0	29
S20015057	2/24/2001	398478	4197245	TRACE	148	0	148

Reference Id	Date	UTM EW	UTM NS	Quad Name	Forest Acres Burned	NonForest Acres Burned	Total Acres Burned
S20015058	2/24/2001	409115	4199157	CHAPMANVILLE	0	0	0
S20015075	2/24/2001	409493	4241484	HAMLIN	0	0	0
S20015079	2/11/2001	392934	4258674	MILTON	0	0	0
S20015085	2/26/2001	384626	4252157	BARBOURSVILLE	0	0	0
Reference Id	Date	UTM EW	UTM NS	Quad Name	Forest Acres Burned	NonForest Acres Burned	Total Acres Burned
S20015109	3/11/2001	403093	4252740	HURRICANE	0	0	0
S20015114	3/11/2001	393904	4254235	MILTON	0	0	0
S20015117	3/14/2001	396908	4225601	BRANCHLAND	0	0	0
S20015121	3/19/2001	399169	4242750	WEST HAMLIN	2	0	2
S20015126	3/23/2001	419987	4192373	HENLAWSON	41	0	41
S20015128	3/23/2001	396332	4223988	BRANCHLAND	0	0	0
S20015132	3/26/2001	416803	4182810	LOGAN	0	0	0
S20015136	3/28/2001	411347	4220349	HAGER	1	0	1
S20015141	3/28/2001	400955	4260425	MILTON	3	0	3
S20015142	3/28/2001	382147	4246748	WINSLOW	0	1	1
S20015143	3/28/2001	413981	4226412	GRIFFITHSVILLE	5	0	5
S20015147	3/28/2001	411719	4178980	BARNABUS	0	0	0
S20015148	3/28/2001	407033	4201123	CHAPMANVILLE	37	0	37
S20015151	3/28/2001	400539	4254580	MILTON	0	0	0
S20015163	4/2/2001	396307	4229156	BRANCHLAND	0	0	0
S20015167	4/5/2001	391562	4222287	BRANCHLAND	2	0	2
S20015178	4/6/2001	418200	4161920	WHARNCLIFFE	0	0	0
S20015186	4/8/2001	414997	4202773	HENLAWSON	1	0	1
S20015190	4/9/2001	419920	4160830	WHARNCLIFFE	12	0	12
S20015191	4/9/2001	407802	4190627	HOLDEN	0	1	1
S20015196	4/9/2001	382657	4252358	BARBOURSVILLE	0	0	0
S20015209	4/11/2001	408420	4190194	HOLDEN	2	0	2
S20015213	4/12/2001	383693	4250433	BARBOURSVILLE	1	0	1
S20015217	4/13/2001	398484	4225083	BRANCHLAND	57	0	57
S20015219	4/14/2001	413438	4211054	MUD	51	0	51
S20015228	4/16/2001	391970	4242481	WEST HAMLIN	11	0	11
S20015232	4/19/2001	402487	4215002	BIG CREEK	27	0	27
S20015234	4/22/2001	408295	4190501	HOLDEN	60	0	60
S20015235	4/22/2001	414175	4188956	LOGAN	57	0	57

Reference Id	Date	UTM EW	UTM NS	Quad Name	Forest Acres Burned	NonForest Acres Burned	Total Acres Burned
S20015236	4/22/2001	398979	4230451	BRANCHLAND	2	0	2
S20015238	4/23/2001	410160	4190099	HOLDEN	1	0	1
S20015240	4/23/2001	419333	4162727	WHARNCLIFFE	0	5	5
S20015241	4/23/2001	427986	4181500	AMHERSTDALE	0	0	0
S20015248	4/25/2001	397044	4224498	BRANCHLAND	46	0	46
Reference Id	Date	UTM EW	UTM NS	Quad Name	Forest Acres Burned	NonForest Acres Burned	Total Acres Burned
S20015261	4/27/2001	390423	4243119	WINSLOW	1	0	1
S20015264	4/27/2001	414780	4189291	LOGAN	110	0	110
S20015270	4/28/2001	406975	4222877	HAGER	15	0	15
S20015278	4/29/2001	422231	4158463	WHARNCLIFFE	3	0	3
S20015279	4/29/2001	418986	4169810	MAN	192	0	192
S20015281	4/29/2001	407620	4251843	HURRICANE	0	2	2
S20015291	4/25/2001	406486	4250062	HURRICANE	0	0	0
S20015299	5/3/2001	410412	4198643	CHAPMANVILLE	2	0	2
S20015301	5/3/2001	390958	4220958	BRANCHLAND	1	0	1
S20015304	5/3/2001	392100	4223670	BRANCHLAND	4	0	4
S20015305	5/4/2001	402128	4254682	SCOTT DEPOT	0	0	0
S20015308	5/6/2001	403619	4218311	BIG CREEK	10	0	10
S20015309	5/6/2001	402236	4219744	BIG CREEK	16	0	16
S20015310	5/6/2001	420757	4163380	WHARNCLIFFE	0	0	0
S20015311	5/6/2001	404892	4223184	HAGER	14	0	14
S20015317	5/10/2001	383686	4250410	BARBOURSVILLE	0	0	0
S20015320	4/28/2001	408187	4187195	HOLDEN	0	1	1
S20015321	5/14/2001	397016	4238413	WEST HAMLIN	0	0	0
S20024101	3/10/2002	447359	4174461	MATHENY	0	0	0
S20024103	3/11/2002	472735	4160227	RHODELL	0	0	0
S20024105	3/11/2002	480219	4151418	ODD	2	5	7
S20024116	3/14/2002	434798	4179272	LORADO	30	107	137
S20024124	3/24/2002	435708	4159521	BAILEYSVILLE	6	0	6
S20024131	3/25/2002	430538	4162638	GILBERT	1	0	1
S20024136	4/2/2002	478562	4166882	CRAB ORCHARD	0	3	3
S20024144	3/29/2002	454615	4181351	PILOT KNOB	5	0	5
S20024150	4/6/2002	479531	4170703	CRAB ORCHARD	0	0	0
S20024155	4/8/2002	435708	4179188	LORADO	0	11	11

Reference Id	Date	UTM EW	UTM NS	Quad Name	Forest Acres Burned	NonForest Acres Burned	Total Acres Burned
S20024159	4/8/2002	427142	4159105	GILBERT	17	0	17
S20024164	4/11/2002	443898	4172486	OCEANA	0	0	0
S20024166	4/11/2002	432419	4157085	GILBERT	88	0	88
S20024176	4/22/2002	445244	4170912	MATHENY	0	0	0
S20024180	4/30/2002	452884	4163411	PINEVILLE	1	0	1
S2002421	2/14/2002	458194	4172982	MCGRAWS	0	0	0
S2002442	2/24/2002	466853	4153738	MULLENS	1	0	1
S2002465	2/28/2002	443869	4161196	BAILEYSVILLE	0	0	0
S2002474	3/1/2002	427201	4159740	GILBERT	9	0	9
S2002408	1/28/2002	482144	4169181	CRAB ORCHARD	0	0	0
S2002495	3/9/2002	458723	4169786	MCGRAWS	0	0	0
S2002500089.0	3/12/2002	405096	4197579	CHAPMANVILLE	0	0	0
S2002500097.0	3/28/2003	418293	4180394	LOGAN	0	1	1
S2002500105.0	1/31/2002	400896	4222926	BRANCHLAND	6	0	6
S20025101	3/15/2002	425315	4170088	MALLORY	0	1	1
S20025102	3/15/2002	408122	4221101	HAGER	0	1	1
S20025103	3/15/2002	423865	4236040	ALUM CREEK	11	1	12
S20025104	2/15/2002	405243	4191033	HOLDEN	1	0	1
S20025106	2/12/2002	411578	4226562	HAGER	1	0	1
S20025107	2/16/2002	398134	4218685	RANGER	10	0	10
S20025109	3/15/2002	398224	4251434	MILTON	0	0	0
S20025011	2/14/2002	418107	4165631	MAN	68	0	68
S20025112	2/25/2002	396492	4243924	WEST HAMLIN	0	3	3
S20025114	2/25/2002	426621	4170178	MAN	60	0	60
S20025116	3/25/2002	422615	4159727	WHARNCLIFFE	15	0	15
S20025119	3/25/2002	397541	4225487	BRANCHLAND	1	0	1
S20025123	3/29/2002	432340	4182872	AMHERSTDALE	59	0	59
S20025124	4/1/2002	399706	4210094	RANGER	1	0	1
S20025128	4/2/2002	415404	4206934	MUD	1	0	1
S20025130	4/4/2002	402224	4215007	BIG CREEK	3	0	3
S20025133	4/7/2002	413720	4189835	LOGAN	74	0	74
S20025141	4/4/2002	397612	4217429	RANGER	102	0	102
S20025144	4/8/2002	408065	4192450	CHAPMANVILLE	0	6	6

Reference Id	Date	UTM EW	UTM NS	Quad Name	Forest Acres Burned	NonForest Acres Burned	Total Acres Burned
S20025146	4/9/2002	392990	4215937	RANGER	40	6	46
S20025155	4/12/2002	401070	4226653	BRANCHLAND	12	0	12
S20025159	4/12/2002	397058	4226032	BRANCHLAND	15	0	15
S20025160	4/12/2002	415157	4220830	GRIFFITHSVILLE	3	0	3
S20025167	4/16/2002	410960	4200651	CHAPMANVILLE	4	1	5
S20025017	2/17/2002	417882	4167325	MAN	38	0	38
S20025171	4/18/2002	400839	4216645	RANGER	5	0	5
Reference Id	Date	UTM EW	UTM NS	Quad Name	Forest Acres Burned	NonForest Acres Burned	Total Acres Burned
S20025018	2/20/2002	411210	4178234	HOLDEN / Barnabus	78	0	78
S2002529	2/25/2002	422300	4232826	GRIFFITHSVILLE	1	0	1
S2002531	2/25/2002	418252	4206842	MUD	85	5	90
S2002545	3/1/2002	391724	4239533	WEST HAMLIN	3	0	3
S2002553	3/8/2002	408799	4216813	BIG CREEK	141	0	141
S2002566	3/8/2002	408883	4252886	HURRICANE	0	0	0
S2002569	3/9/2002	393133	4218474	RANGER	30	1	31
S2002570	3/8/2002	401825	4234968	HAMLIN	0	1	1
S2002508	2/9/2002	417561	4201892	HENLAWSON	6	1	7
S2002584	3/12/2002	405016	4196770	CHAPMANVILLE	1	0	1
S2002586	3/12/2002	404996	4197169	CHAPMANVILLE	4	1	4
S2002587	3/12/2002	405228	4197633	CHAPMANVILLE	2	1	2
S2002588	3/12/2002	405142	4197812	CHAPMANVILLE	0	0	0
S2002590	2/25/2002	398661	4245610	WEST HAMLIN	1	1	2
S2002591	2/14/2002	393713	4251240	MILTON	3	0	3
S2002596	3/14/2002	401733	4214239	BIG CREEK	74	0	74
S2003400007.0	3/9/2003	445940	4162174	PINEVILLE	6	0	6
S2003400015.0	3/11/2003	446810	4179493	PILOT KNOB	18	0	18
S2003400017.0	3/11/2003	435980	4156278	BAILEYSVILLE	39	0	39
S2003400024.0	3/13/2003	449578	4159099	PINEVILLE	1	0	1
S2003400031.0	3/15/2003	432252	4164099	GILBERT	3	0	3
S2003400037.0	3/17/2003	445437	4161584	PINEVILLE	4	0	4
S2003400044.0	3/22/2003	448107	4178061	PILOT KNOB	12	0	12
S2003400048.0	3/23/2003	453962	4173594	MATHENY	5	0	5
S2003400052.0	3/24/2003	446721	4159473	PINEVILLE	24	0	24
S2003400053.0	3/24/2003	431226	4159606	GILBERT	4	0	4

Reference Id	Date	UTM EW	UTM NS	Quad Name	Forest Acres Burned	NonForest Acres Burned	Total Acres Burned
S2003400066.0	3/25/2003	472580	4160358	RHODELL	53	0	53
S2003400069.0	3/25/2003	461008	4158547	MULLENS	0	1	1
S2003400072.0	3/25/2003	479936	4163549	ODD	0	0	0
S2003400075.0	3/27/2003	464690	4156336	MULLENS	0	2	2
S2003400078.0	3/27/2003	442162	4158251	BAILEYSVILLE	3	0	3
S2003400080.0	3/27/2003	431770	4156281	GILBERT	73	0	73
S2003400083.0	4/1/2003	472886	4168804	LESTER	12	0	12
S2003400092.0	3/28/2003	448087	4178485	PILOT KNOB	13	0	13
Reference Id	Date	UTM EW	UTM NS	Quad Name	Forest Acres Burned	NonForest Acres Burned	Total Acres Burned
S2003400097.0	4/4/2003	459696	4174733	MCGRAWS	2	0	2
S2003400111.0	4/14/2003	442408	4166787	OCEANA	1	0	1
S2003400117.0	3/23/2003	443084	4172427	OCEANA	0	0	0
S2003400122.0	4/17/2003	454721	4156913	PINEVILLE	0	0	0
S2003400127.0	4/20/2003	434826	4168145	OCEANA	8	0	8
S2003400130.0	4/24/2003	483502	4160644	ODD	0	0	0
S2003400134.0	4/28/2003	440226	4163788	BAILEYSVILLE	0	0	0
S2003400137.0	5/13/2003	472214	4162840	RHODELL	9	0	9
S2003500001.0	1/10/2003	414865	4217735	MUD	15	0	15
S2003500003.0	1/12/2003	398296	4218217	RANGER	3	0	3
S2003500004.0	1/12/2003	400285	4217104	RANGER	0	0	0
S2003500006.0	1/16/2003	401210	4216406	RANGER	3	0	3
S2003500007.0	1/16/2003	400669	4216607	RANGER	0	0	0
S2003500009.0	3/7/2003	400013	4217519	RANGER	50	0	50
S2003500014.0	3/8/2003	400895	4223177	BRANCHLAND	20	0	20
S2003500015.0	3/8/2003	422569	4158074	WHARNCLIFFE	21	0	21
S2003500029.0	3/14/2003	402468	4230462	HAGER	0	0	0
S2003500034.0	3/16/2003	411812	4233097	HAGER	0	0	0
S2003500035.0	3/17/2003	419350	4231118	GRIFFITHSVILLE		0	0
S2003500038.0	3/18/2003	402693	4215030	BIG CREEK	0	0	0
S2003500041.0	3/19/2003	394334	4223803	BRANCHLAND	40	0	40
S2003500042.0	3/19/2003	383365	4251421	BARBOURSVILLE	0	0	0
S2003500043.0	3/19/2003	397139	4253925	MILTON	0	0	0
S2003500048.0	3/15/2003	398528	4227844	BRANCHLAND	1	0	1
S2003500050.0	3/17/2003	400552	4225628	BRANCHLAND	3	0	3

Reference Id	Date	UTM EW	UTM NS	Quad Name	Forest Acres Burned	NonForest Acres Burned	Total Acres Burned
S2003500052.0	3/22/2003	383149	4248013	WINSLOW	3	0	3
S2003500053.0	3/23/2003	414271	4174030	MAN	1	0	1
S2003500054.0	3/22/2003	435259	4180818	LORADO	0	33	33
S2003500064.0	3/24/2003	398182	4218258	RANGER	30	0	30
S2003500068.0	3/25/2003	418645	4161887	WHARNCLIFFE	4	0	4
S2003500073.0	3/25/2003	435810	4182003	LORADO	0	0	0
S2003500075.0	3/25/2003	436428	4181766	LORADO	0	0	0
S2003500081.0	3/27/2003	403238	4219545	BIG CREEK	10	0	10
S2003500100.0	3/29/2003	392236	4225946	BRANCHLAND	1	0	1
S2003500116.0	4/2/2003	395399	4237029	WEST HAMLIN	22	0	22
S2003500120.0	4/3/2003	418146	4208078	MUD	96	5	101
S2003500123.0	4/4/2003	399620	4224044	BRANCHLAND	40	0	40
S2003500133.0	4/5/2003	402869	4243613	HAMLIN	5	0	5
S2003500136.0	4/13/2003	425923	4176185	MALLORY	2	0	2
S2003500137.0	3/28/2003	381766	4252813	BARBOURSVILLE	0	0	0
S2003500143.0	4/15/2003	402452	4195956	CHAPMANVILLE	2	0	2
S2003500145.0	4/15/2003	411625	4217984	BIG CREEK	1	0	1
S2003500148.0	4/15/2003	390721	4252064	BARBOURSVILLE	0	0	0
S2003500151.0	4/15/2003	395983	4261179	MILTON	14	0	14
S2003500152.0	4/15/2003	391477	4249655	MILTON	0	0	0
S2003500153.0	4/15/2003	396460	4256499	MILTON	1	0	1
S2003500156.0	4/16/2003	419080	4208402	MUD	35	0	35
S2003500184.0	4/20/2003	409994	4182768	HOLDEN	25	0	25
S2003500185.0	4/22/2003	416955	4213204	MUD	0	0	0
S2003500187.0	4/24/2003	391955	4231988	BRANCHLAND	0	0	0
S2003500195.0	5/13/2003	419300	4184869	LOGAN	0	0	0
S2003500196.0	5/14/2003	398696	4229858	BRANCHLAND	0	0	0
S2003500197.0	4/15/2003	416505	4213355	MUD	0	0	0
S2003500198.0	4/21/2003	420887	4211341	MUD	0	0	0

Appendix F - 1

Hydrology Calibration

Subwatershed 2500

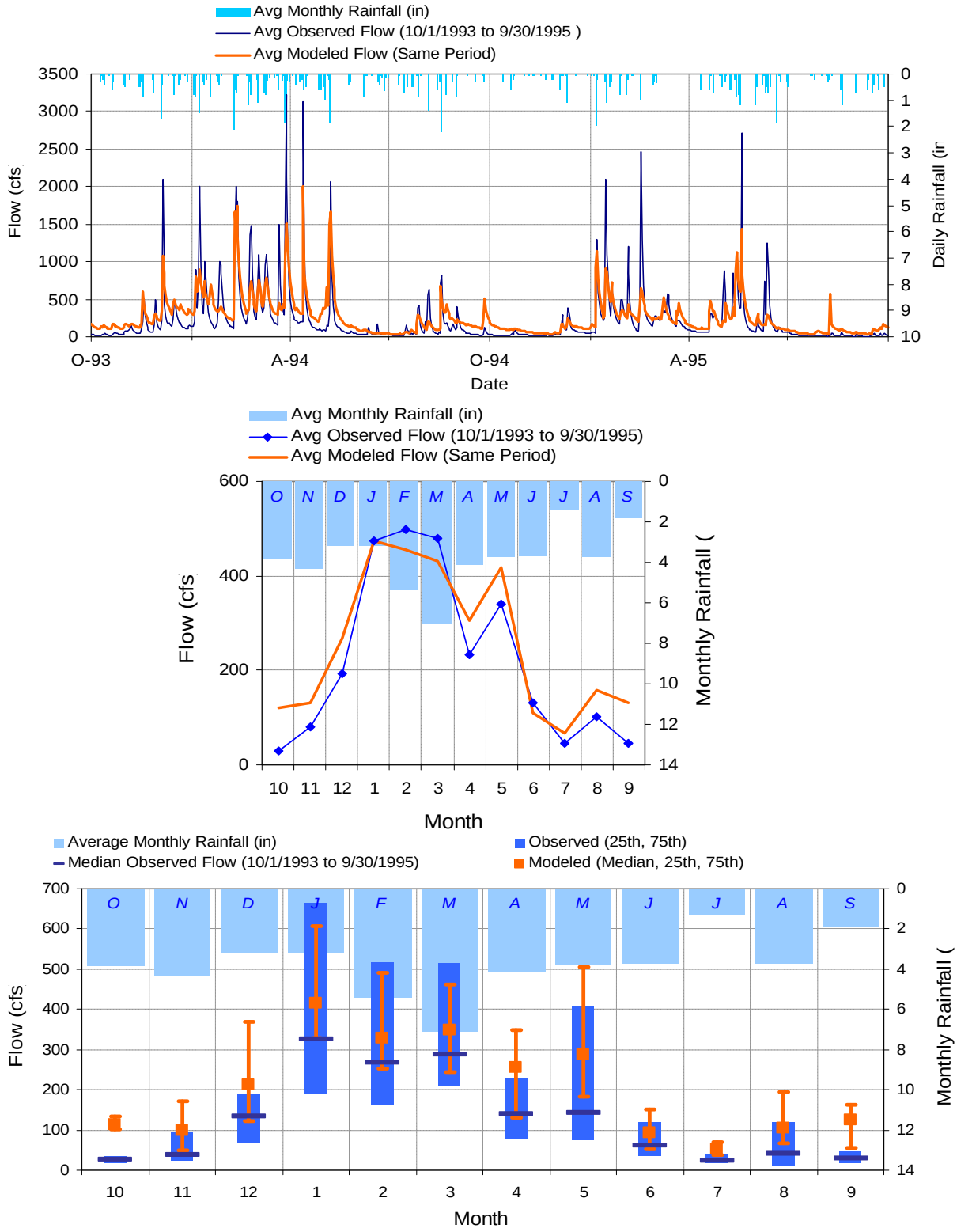
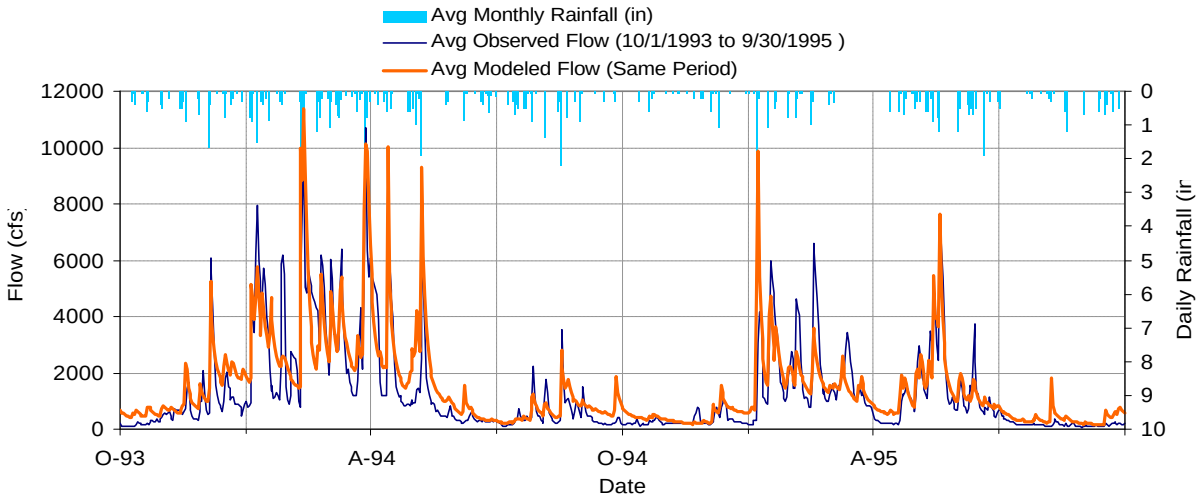
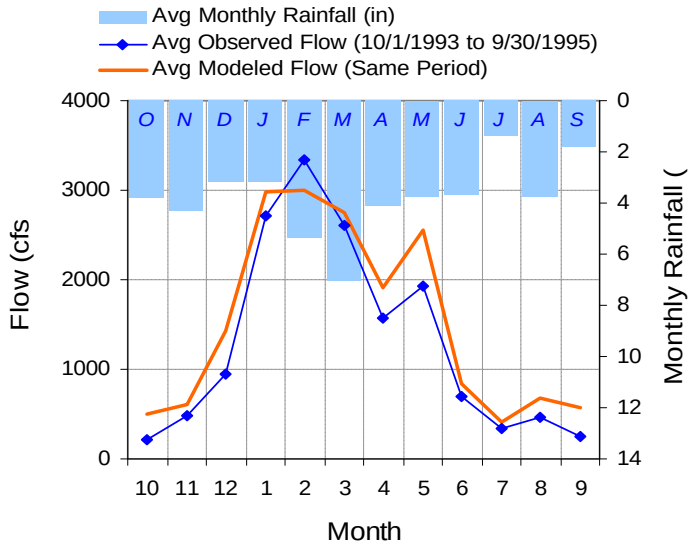
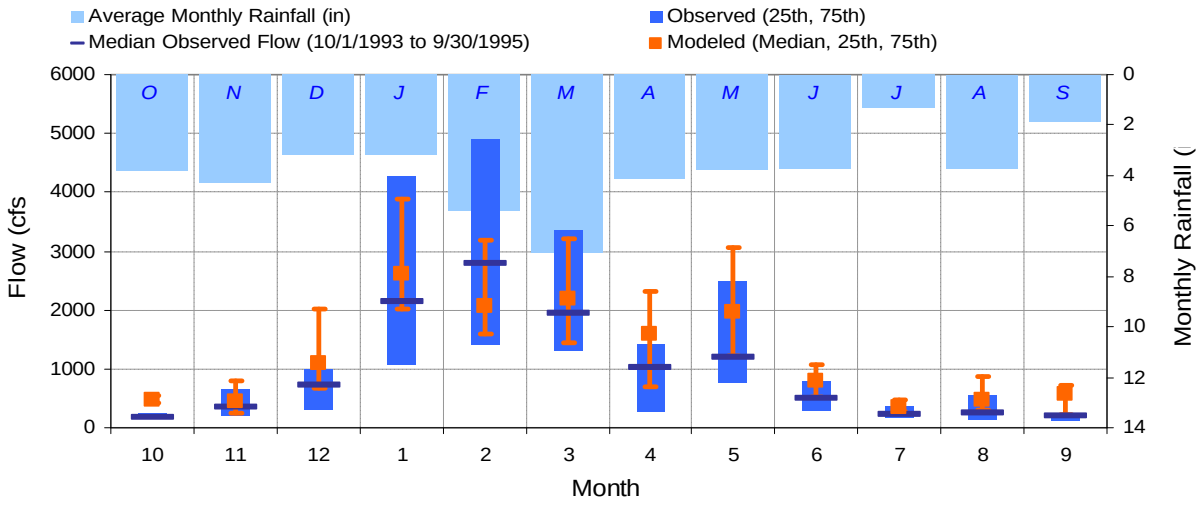


Figure F-1. Hydrology calibration at USGS 3202750 - Clear Fork at Clear Fork, WV

Subwatershed 1070







Subwatershed 41

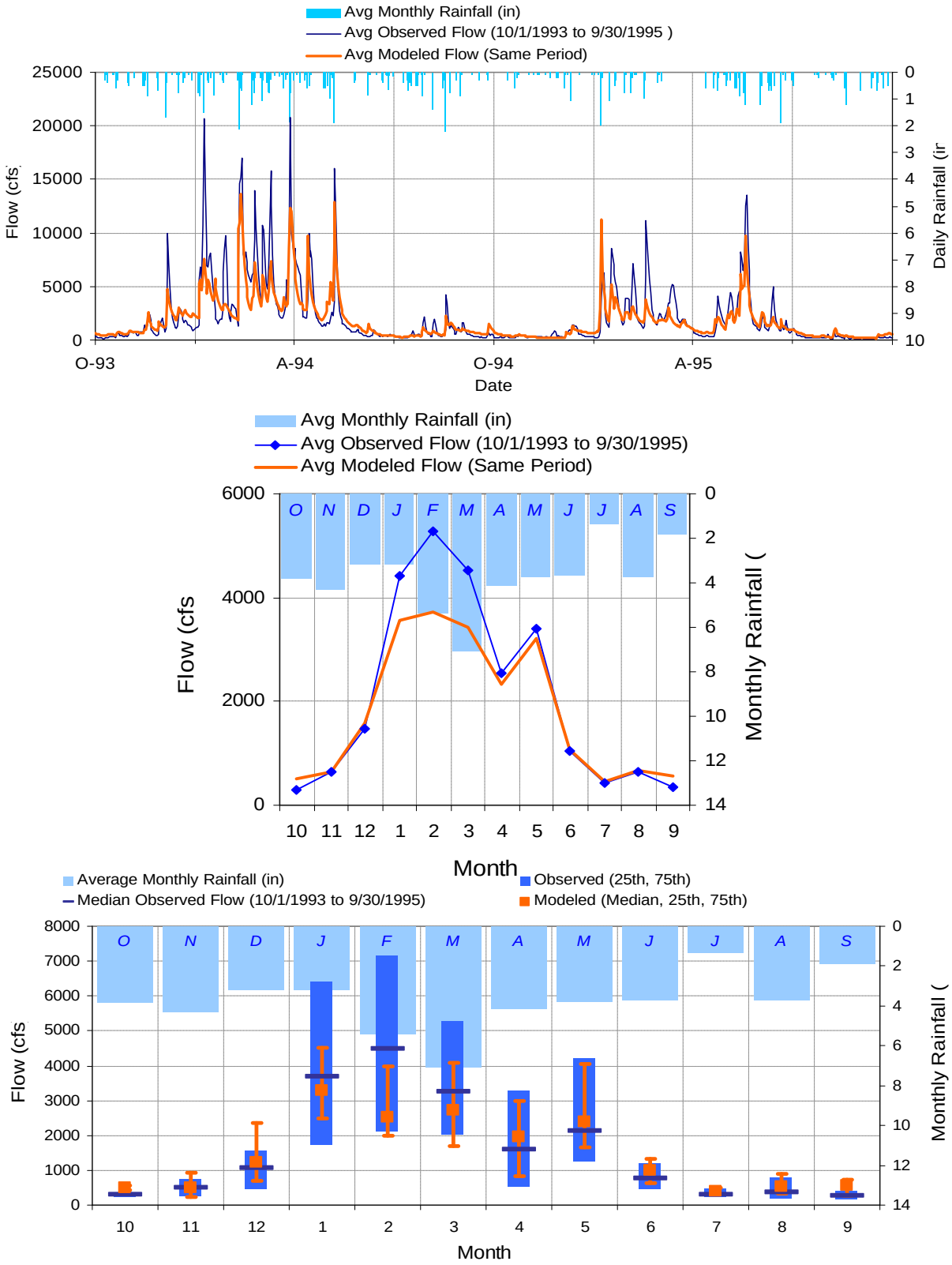
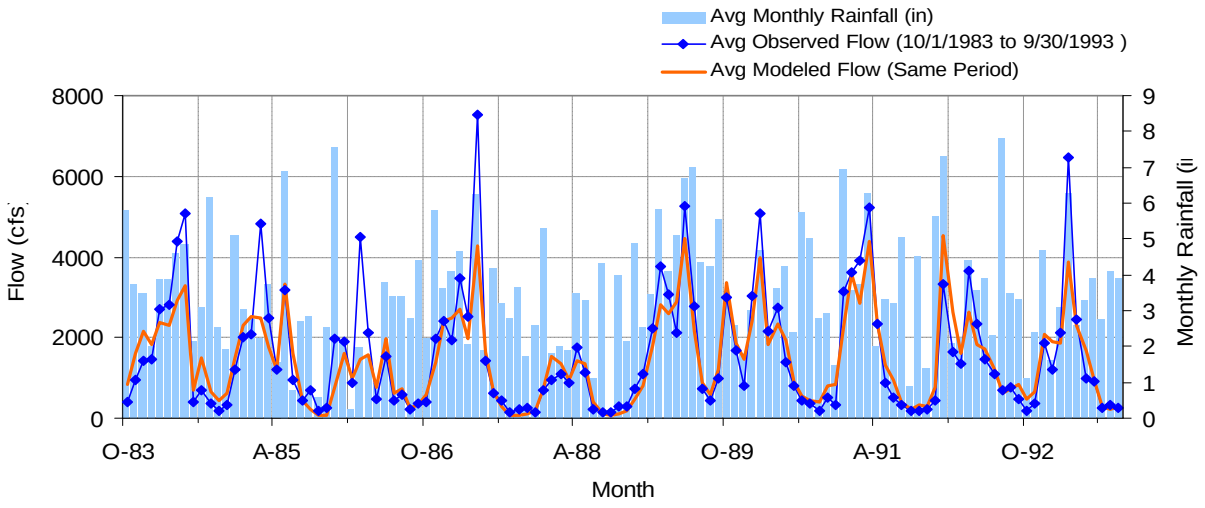


Figure F-3. Hydrology calibration at USGS 03204000 - Guyandotte at Branchland, WV

Subwatershed 1028



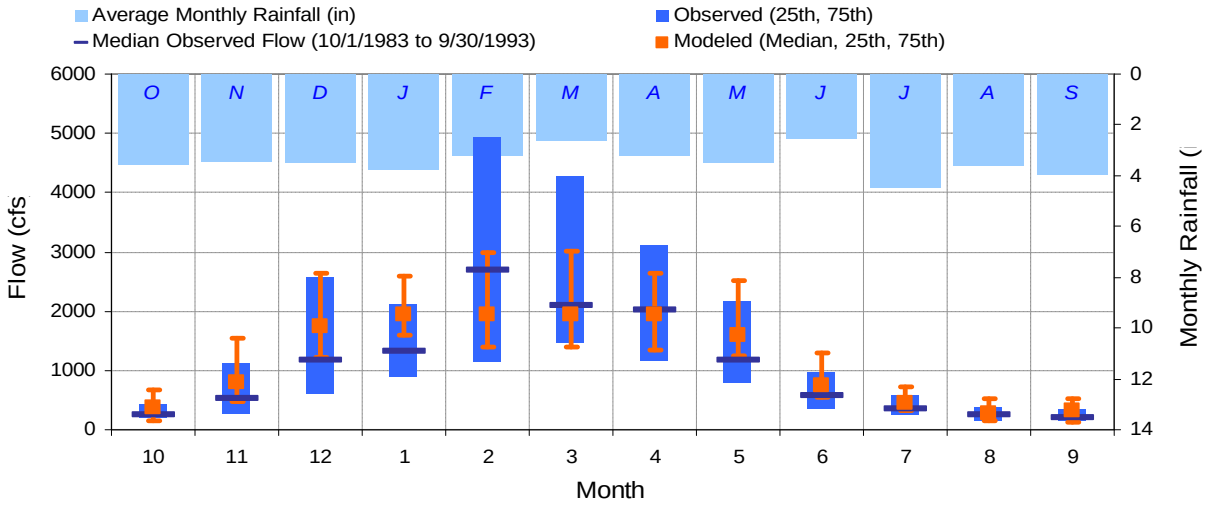
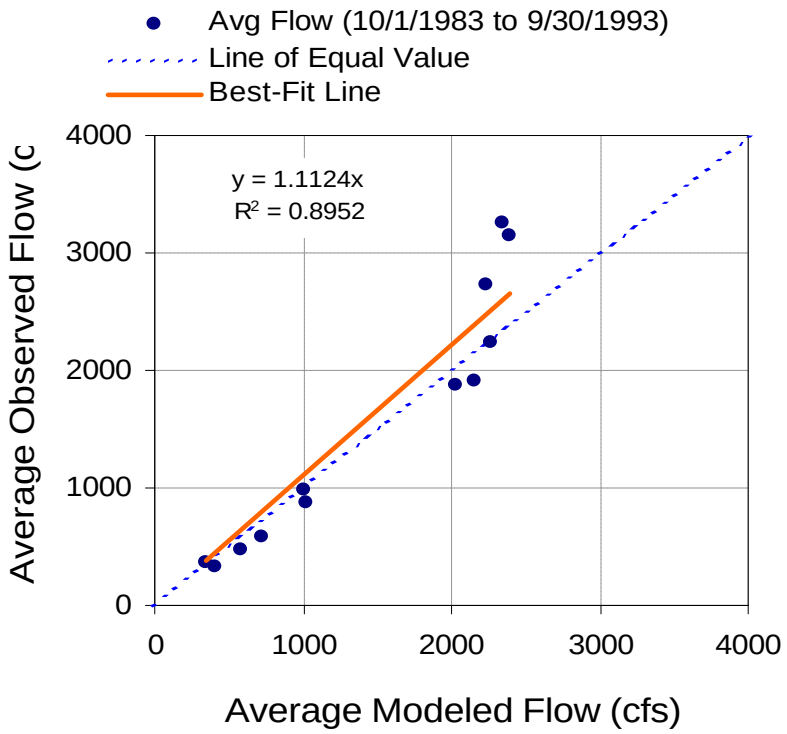


Figure F-4. Ten-year hydrology validation at USGS 03204000 - Guyandotte at Branchland, WV

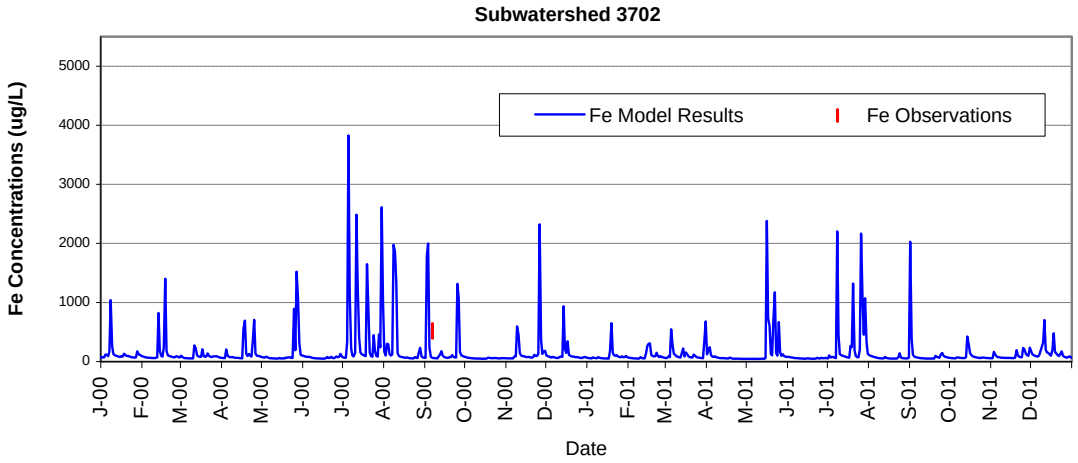


MONTH	OBSERVED FLOW (CFS)				MODELED FLOW (CFS)			
	MEAN	MEDIAN	25TH	75TH	MEAN	MEDIAN	25TH	75TH
Oct	586.07	260.50	209.00	432.25	727.18	379.84	140.99	678.96
Nov	985.23	514.00	266.50	1117.50	1001.85	808.60	479.62	1541.40
Dec	1872.34	1175.00	599.75	2557.50	2032.95	1734.44	1223.44	2631.52
Jan	1903.57	1325.00	898.50	2110.00	2164.46	1931.69	1588.76	2581.60
Feb	3258.48	2690.00	1145.00	4940.00	2340.71	1953.57	1393.59	2978.37
Mar	3136.80	2100.00	1472.50	4285.00	2386.99	1933.32	1403.80	3019.30
Apr	2735.33	2005.00	1180.00	3102.50	2231.19	1934.60	1334.41	2637.42
May	2232.04	1180.00	793.00	2167.50	2267.28	1583.28	1234.95	2512.90
Jun	876.62	568.00	352.50	959.00	1017.51	752.37	536.88	1303.67
Jul	471.32	357.00	244.50	570.25	576.24	439.90	313.45	734.02
Aug	367.69	258.00	158.00	384.25	344.16	273.57	150.70	519.06
Sep	329.02	208.00	156.75	340.25	413.51	318.92	122.06	528.19

Figure F-5. Ten-year hydrology validation at USGS 03204000 - Guyandotte at Branchland, WV

Appendix F - 2

Water Quality Calibration



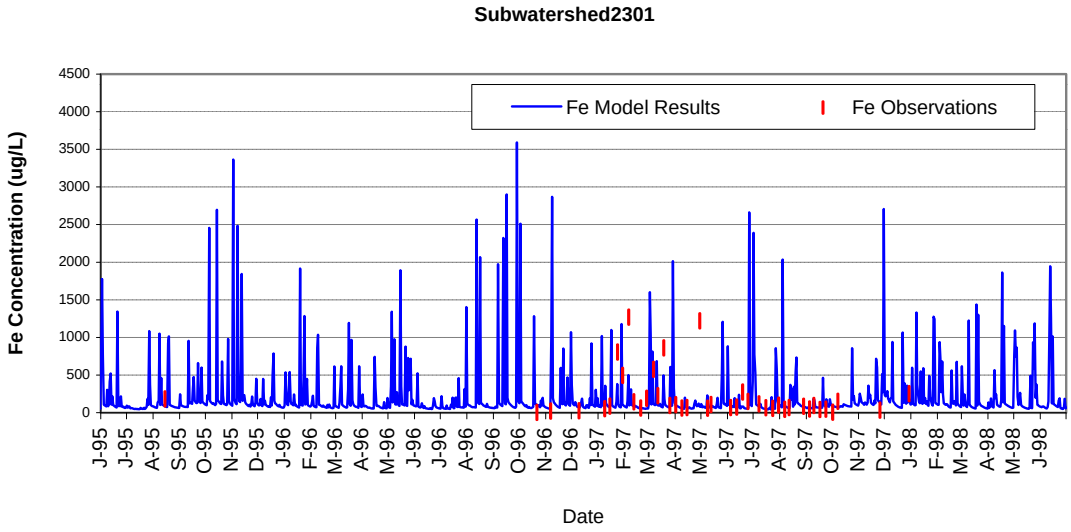
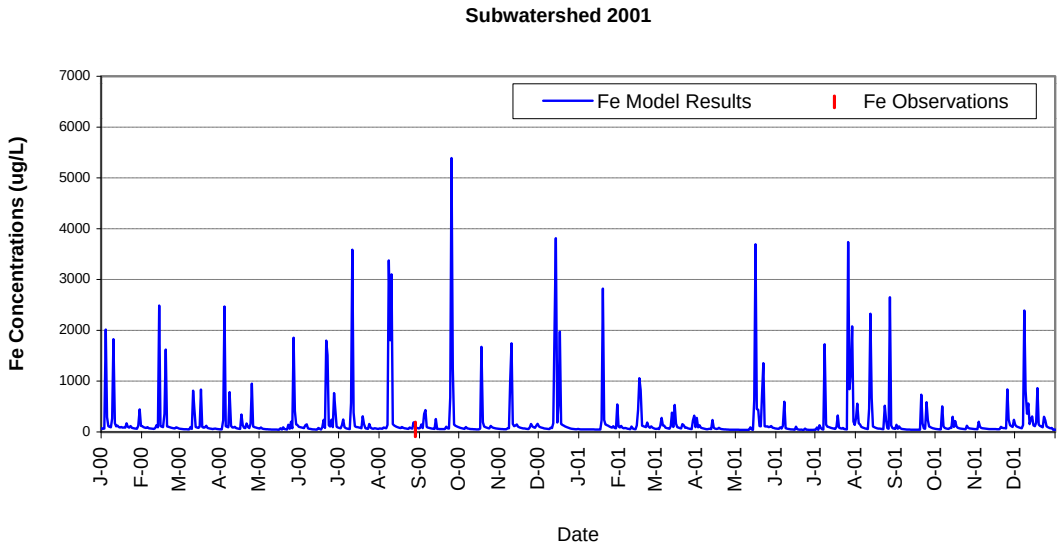


Figure F-6. Water Quality Calibration for Total Fe Stations



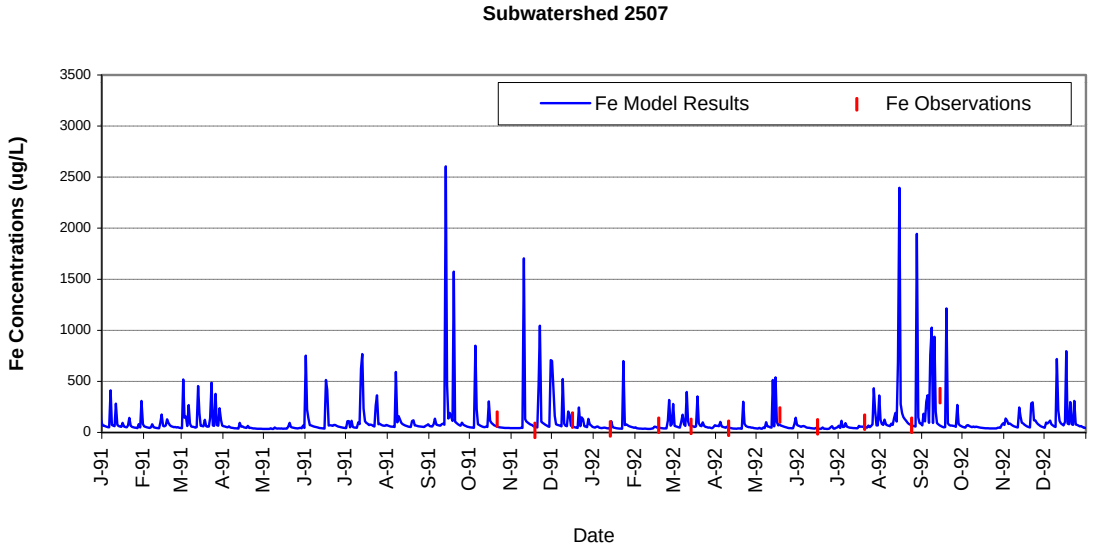
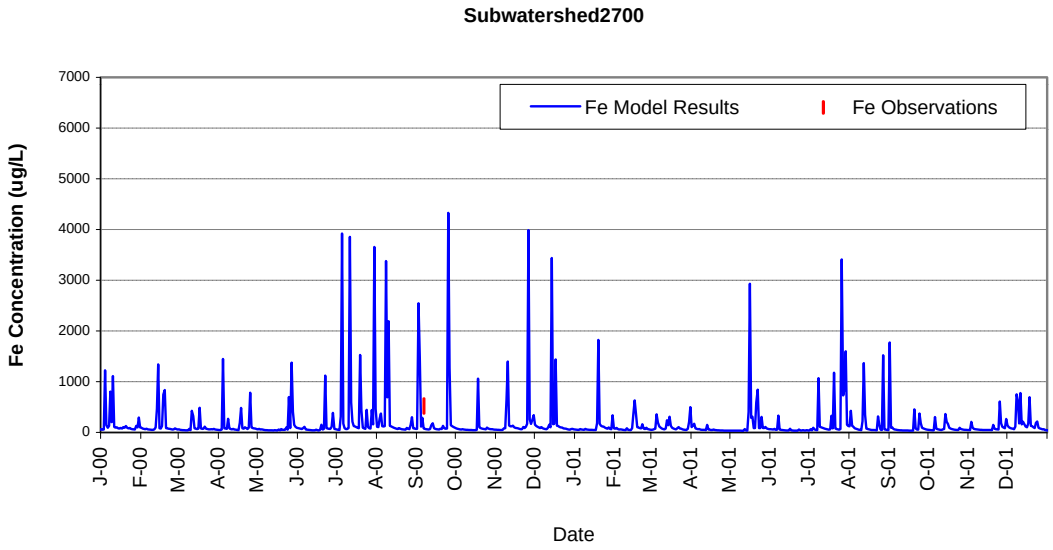


Figure F-7. Water Quality Calibration for Total Fe Stations



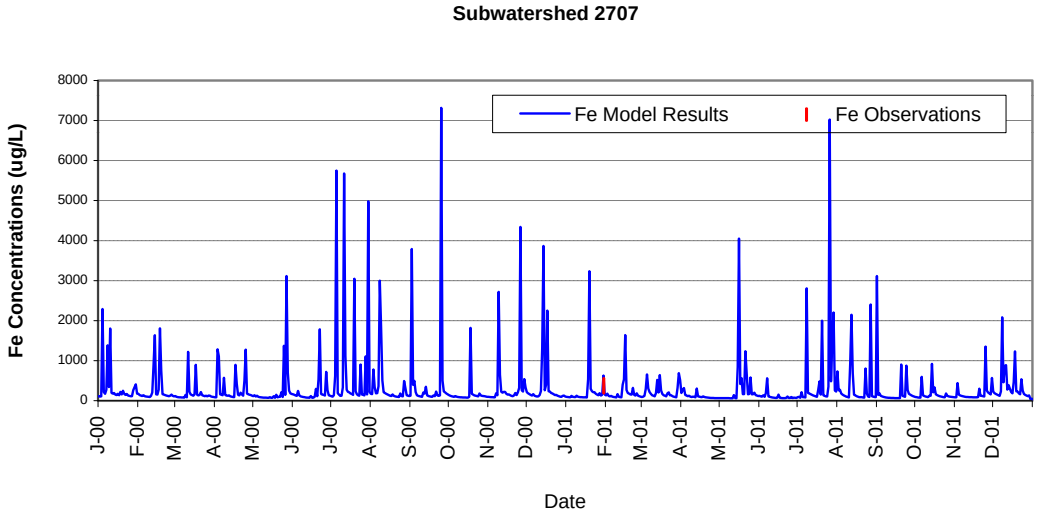
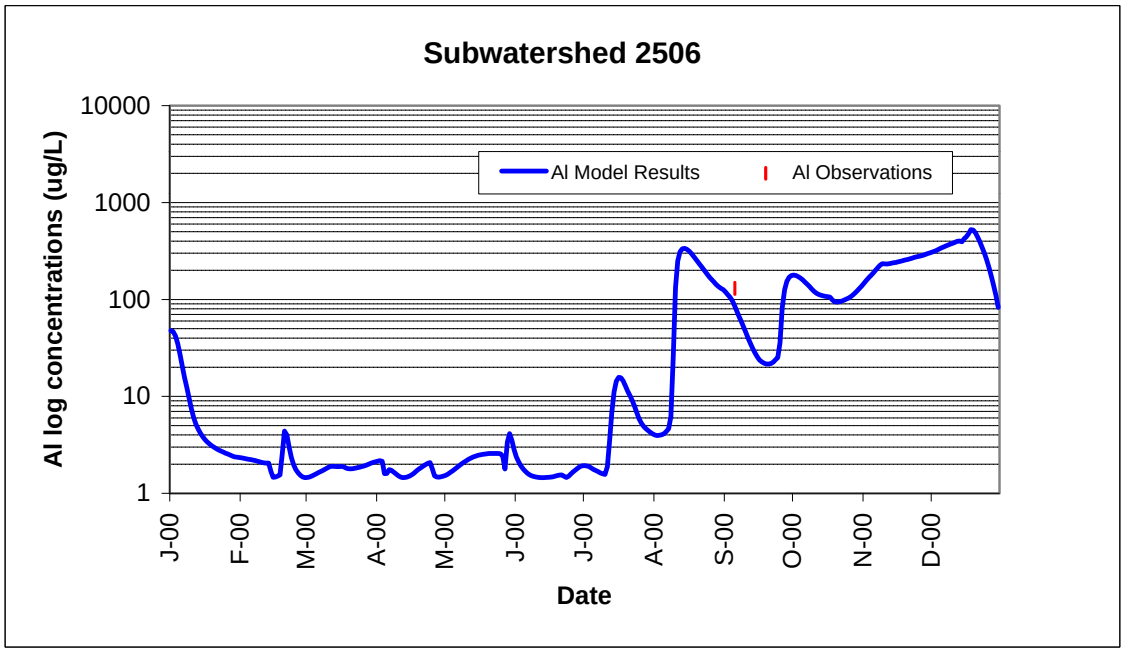


Figure F-8. Water Quality Calibration for Total Fe Stations



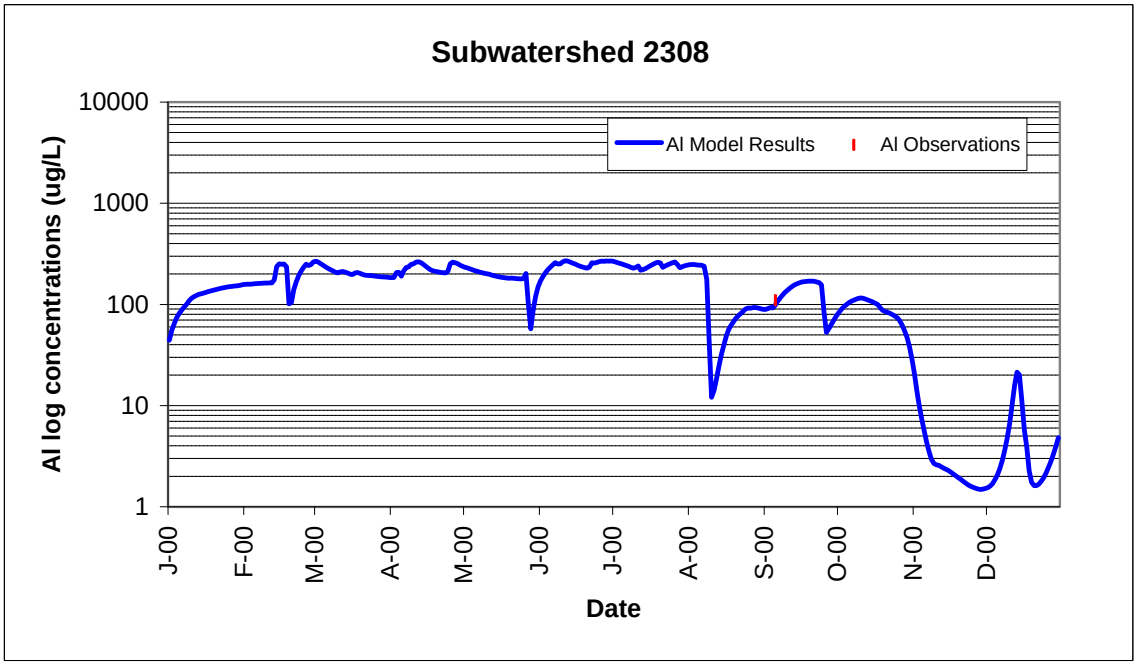
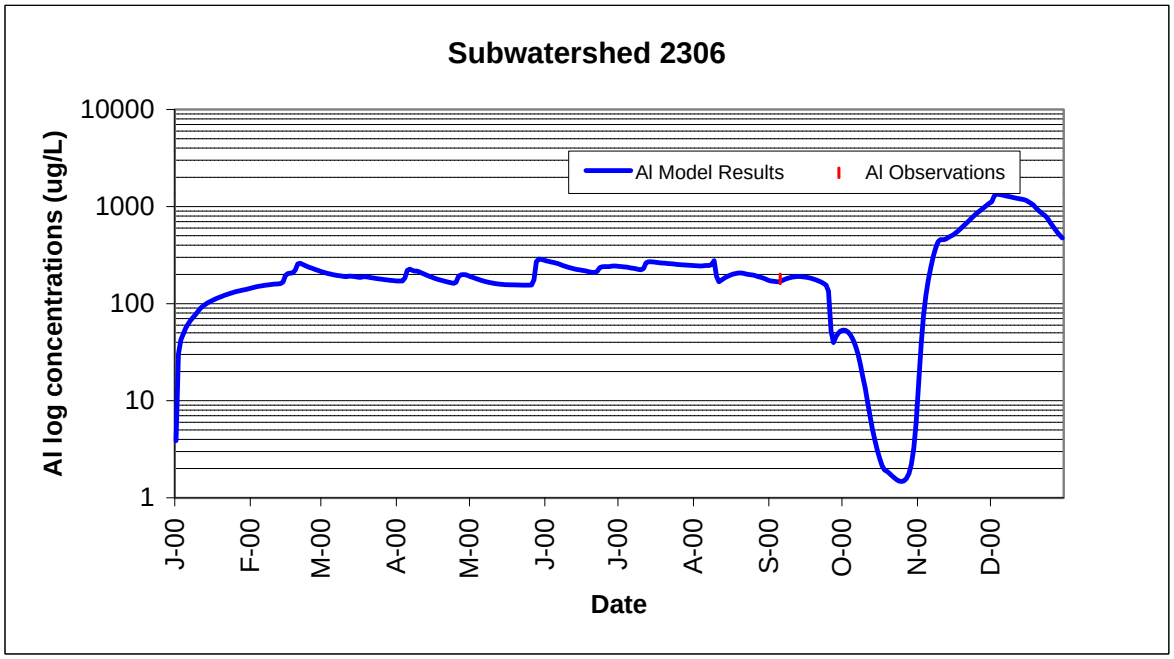


Figure F-9. Water Quality Calibration for Dissolved Al Stations



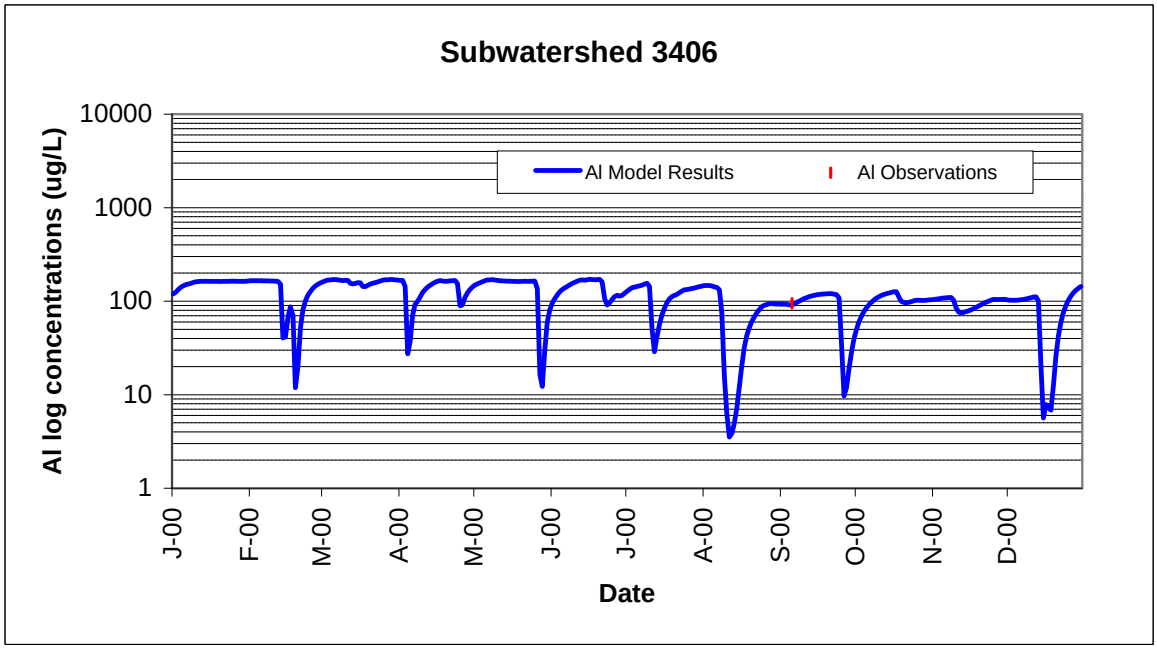


Figure F-10. Water Quality Calibration for Dissolved Al Stations

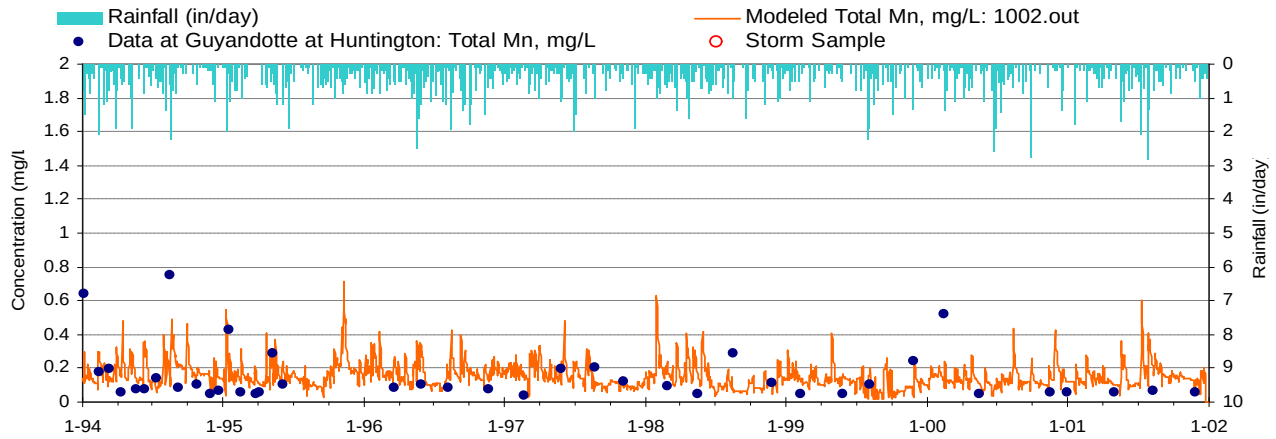


Figure F-11. Total Manganese calibration for Guyandotte at Hungtington (Stations: 550639, OG-000-002.8, WA96-G0

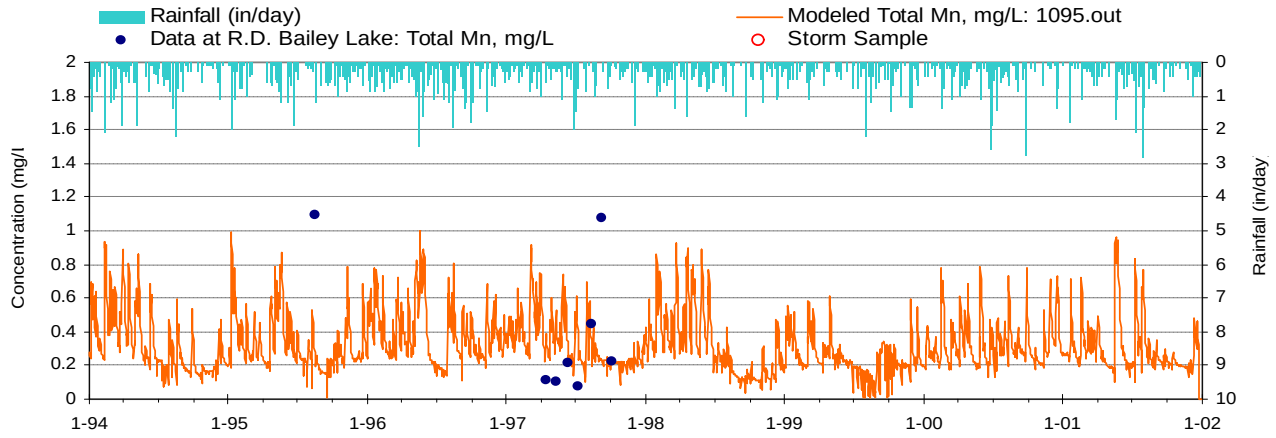


Figure F-12. Total Manganese calibration for Guyandotte at Bailey Lake (Station: 1RDBW0002)

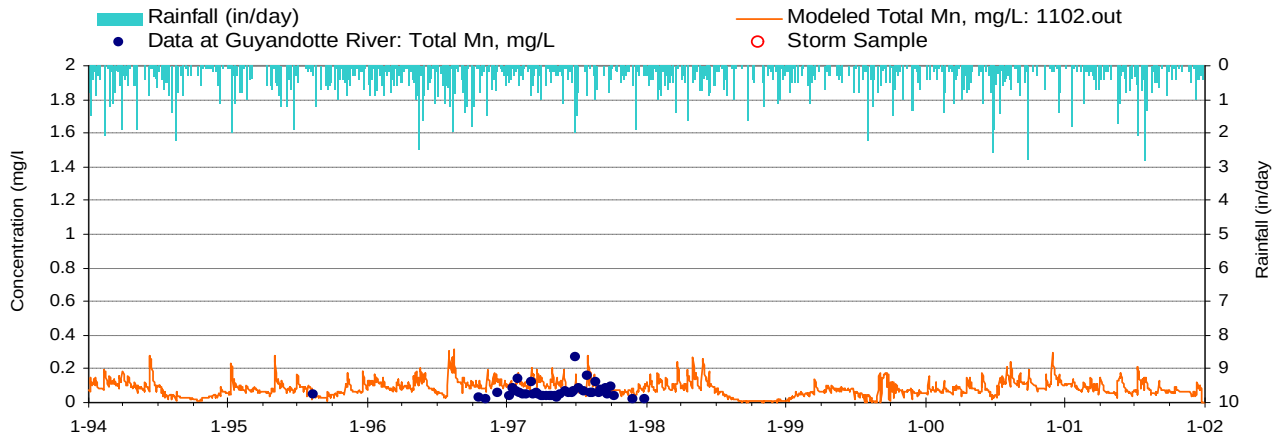


Figure F-13. Total Manganese calibration for Guyandotte River (Station: 1RDBW0012)

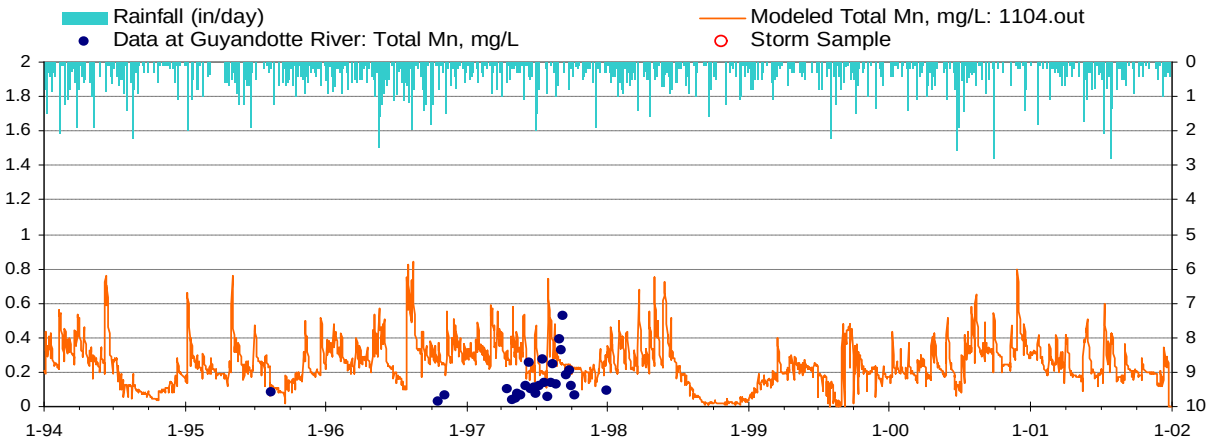


Figure F-14. Total Manganese calibration for Guyandotte River (Station: 1RDBW0001)

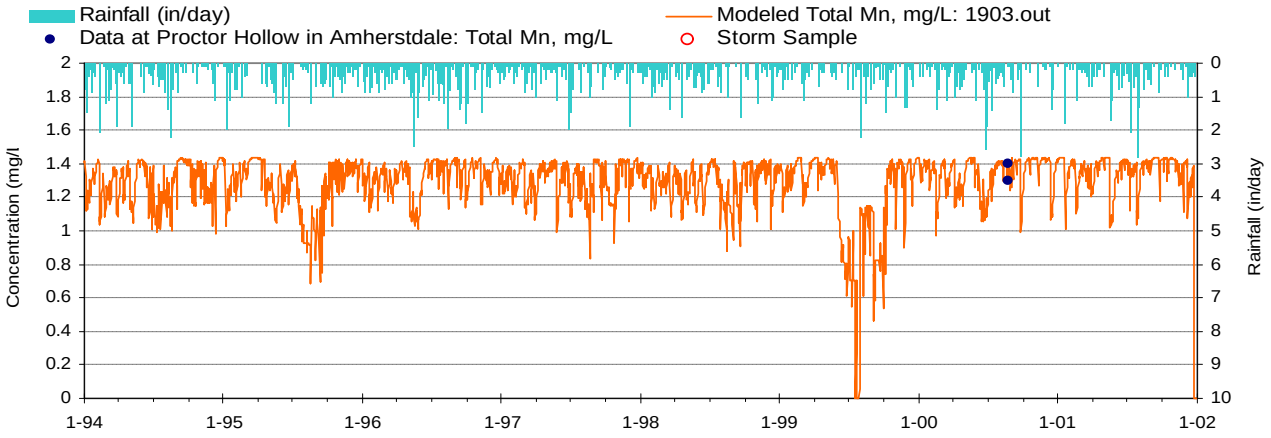


Figure F-15. Total Manganese calibration for Proctor Hollowin Amherstdale (Station: OG-075-0005)

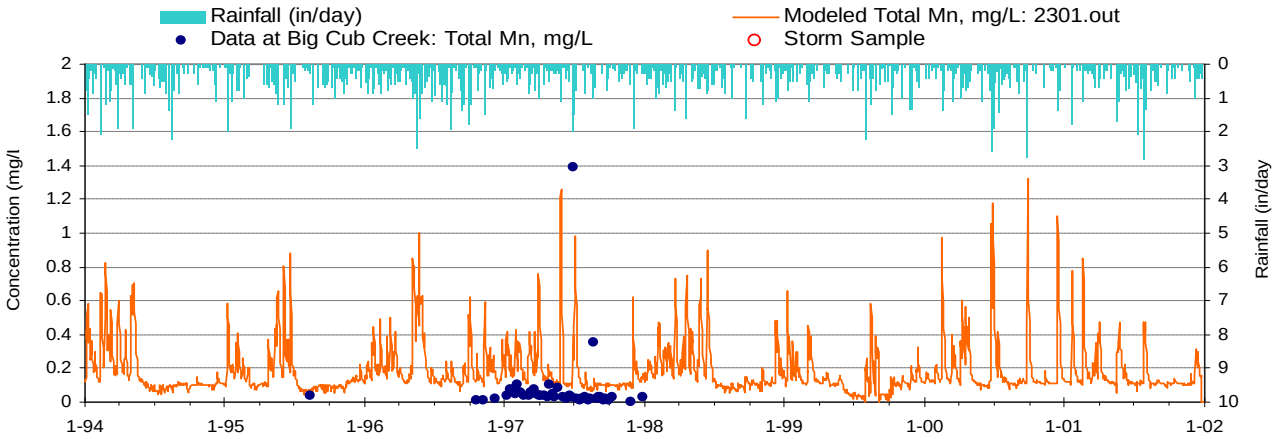


Figure F-16. Total Manganese calibration for Big Cub Creek (Station: 1RDBW0014)

Appendix G

Storm Water Permits and their Relationships to TMDLs

Phase II Stormwater Permits or MS4s

Under the Federal National Pollutant Discharge Elimination System (NPDES) storm water program, operators of large, medium and regulated small municipal separate storm sewer systems (MS4s) require authorization to discharge pollutants under an NPDES permit. West Virginia Department of Environmental Protection (DEP) has been authorized by EPA to implement the NPDES program in West Virginia. Phase I of the Federal Stormwater NPDES Program began in 1990 and covered municipalities having a municipal separate storm sewer system (MS4) and having a population greater than 100,000. Phase I also extended to construction activities which disturbed more than 5 acres of land and to 11 categories of industrial activity. Phase II extended the permittee requirement to small MS4s in urbanized areas as defined by the 1990 and 2000 census data and to construction activities requiring stormwater permits that disturb more than one acre.

MS4s were required to apply for permit coverage by March 10, 2003. The application must describe the stormwater management program they intend to implement, including a schedule, best management practices and measurable goals for each element of the municipal program.

Implementation of the Best Management Practices (BMPs) consistent with the stormwater management program and the Minimum Control Measures outlined in 40 CFR 132.34 is considered to constitute compliance with the standard of compliance, maximum extent practicable or MEP. To achieve reductions in stormwater discharges, EPA regulations establish six categories of Minimum Control Measures BMPs that must be met by permittees (these are "narrative" permit effluent limitations). The six BMP categories, also called "minimum control measures" in the Federal regulations, are:

1. Public education and outreach on stormwater impacts
2. Public involvement/participation consistent with state/local requirements in the development of a stormwater management plan.
3. Illicit discharge detection and elimination, including mapping of the existing stormwater sewer system (including at least the outfalls) and adoption of an ordinance to prohibit illicit connections and control erosion and sedimentation from development. .
4. Control of runoff from construction sites when one to five acres of land are disturbed. (Phase I covered sites larger than five acres.)
5. Post-construction stormwater monitoring and management in new development and redevelopment, and
6. Pollution prevention and good housekeeping for municipal operations and maintenance facilities

Under Phase II, permittees are also required to establish measurable goals for each BMP. EPA has developed a National Menu of BMPs available for meeting the minimum control measures. Information can be found on EPA's website at: http://cfpub.epa.gov/npdes/stormwater/menuofbmps/menu.cfm.

West Virginia's Municipal Separate Storm Sewer System (MS4) General Permit

The Municipal Separate Storm Sewer System (MS4) General Permit has been published and DWWM is requesting public comments until February 24, 2003. The MS4 General Permit will cover storm water discharges from small regulated urbanized areas as well as public institutions such hospitals, universities, highways within urbanized areas, and prisons.

Attachment A includes a copy of the factsheet describing West Virginia's MS4 General Permit. Additional information can be on WVDEP's website at:
http://www.wvdep.org/alt.cfm?asid=65#MS4

The Relationship of MS4 Permits to TMDLs

The MS4 communities in the Guyandotte River watershed have received wasteload allocations for fecal coliform bacteria. A November 22, 2002, EPA Memorandum entitled "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Stormwater Source and NPDES Permit Requirements Based on Those WLAs" clarified existing regulatory requirements for MS4s connected with TMDLs. The Memorandum also affirms EPA's view that an iterative adaptive management BMP approach is appropriate. Some of the major points raised in the Memorandum include the following:

- NPDES-regulated stormwater discharges must be considered in the TMDL as Wasteload allocations and may not be addressed by the load allocation component of the TMDL.
- Most water quality based effluent limitations for NPDES-regulated municipal and small construction stormwater discharges will be in the form of BMPs.
- Numeric limits will be used in permits only in rare instances.
- EPA expects WLAs and LA's in TMDLs to be in numeric form, although EPA recognizes that these allocations might be fairly rudimentary because of data limitations and variability in the system.
- Stormwater discharges from sources that are not currently subject to NPDES
- requirements may be listed as LAs.
- The NPDES permit should specify monitoring necessary to comply with effluent limitations, to determine if expected load reductions from BMPs are expected to achieve the WLA in the TMDL, i.e., BMP performance data
- The permit should also provide a mechanism to make adjustments to the required BMPs as necessary to insure adequate performance.

Attachment A

WEST VIRGINIA/NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
1201 GREENBRIER STREET
CHARLESTON, WV 25311-1088

WEST VIRGINIA/NPDES GENERAL PERMIT FOR STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)

FACT SHEET AND RATIONALE

1. NAME AND ADDRESS OF APPLICANT: Any entity with storm water discharges from a small MS4 agreeing to be regulated under the terms and conditions of this proposed General Permit (except as noted herein).

2. GENERAL WV/NPDES PERMIT NO.: WV0116025

3. COUNTY: Any WV county

4. RECEIVING STREAM: Any WV stream

5. PUBLIC COMMENT PERIOD FROM January 24, 2003 TO February 24, 2003

6. BACKGROUND: Federal regulations issued in 1999 establish a permit requirement for small MS4 discharges. Portions of the federal regulation require states such as West Virginia to set up a permit program for these requirements and for affected MS4s to obtain permit coverage by March 2003. The WVDEP estimates that there are at least 40 municipalities that must meet these new permit requirements. Other entities such as prisons, hospitals, colleges, etc., located within designated urbanized areas that operate an MS4 will also be required to obtain permit coverage.

   The federal regulations establish six categories of Best Management Practices (BMPs) that must be met by permittees. These are "narrative" permit effluent limitations. Those BMPs must be designed to reduce the discharge of pollutants from MS4s to the maximum extent practicable, to protect water quality and to satisfy the appropriate requirements of the federal Clean Water Act.

   The six BMP categories, also called "minimum control measures" in the federal regulations, are:

   * Public Education and Outreach;
   * Public Participation and Involvement;
   * Illicit Discharge Detection and Elimination;
   * Construction Site Runoff Control;
   * Post Construction Storm Water Management in New Development and Redevelopment; and
   * Pollution Prevention and Good Housekeeping for Municipal Operations and Maintenance.

The EPA has promulgated two phases of storm water permit regulations in the past ten years. Phase I covered large and medium municipalities, as a well as, industrial activities, including construction disturbances exceeding 5 acres in size. This was implemented in WV in 1992. However, WV did not have any municipalities meeting the population requirements to be considered a large or medium entity. As such, no Phase I permit was issued for separate storm sewer systems. Also, the permitting threshold for construction activities was lowered to 3 acres.

Phase II of the federal storm water regulations, the ones addressed in this Fact Sheet, expanded the universe of municipalities to smaller "urbanized areas" (UA) and lowered the threshold for construction activity requiring a permit to one acre.

7. TYPES OF DISCHARGES COVERED

This permit covers storm water discharges from small MS4s.

The federal regulations describe what constitutes a "small MS4" at 40 CFR 122.26(a)(16). The definition depends on a municipality's location in a UA as determined by the 1990 and 2000 censuses. The initial notice of these regulations in the Federal Register on December 8, 1999, listed seven UAs in WV, containing more than 40 municipalities, which are also listed. This list is based on the 1990 census and additional UAs and MS4s may be identified during 2003 based on the 2000 census.

The EPA's December 8, 1999 Federal Register notice also listed six potential UAs in WV. The federal regulations require the WVDEP to determine if the municipalities in those areas will be subject to the General Permit requirements. The WVDEP will make this determination and notify the effected entities.

8. MONITORING REQUIREMENTS

There are no numerical effluent limits or specific discharge monitoring requirements specified in this General Permit. Effluent limits are established in the General Permit in the form of storm water best management practices, which are designed to prevent the discharge of contaminated storm water to surface waters of the state to the maximum extent practicable.

40 CFR 122.44(k) allows an NPDES permit to include BMPs when numeric effluent limitations are infeasible or the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the Clean Water Act.

To aid in assessing achievement of improved water quality from the development and implementation of storm water BMPs, the permittee will be required to submit an annual report to the DWR The DWR will review the annual report and program implementation to assess the effectiveness of the permittee's NPDES program for eliminating non-storm water discharges and reducing the discharge of pollutants to the maximum extent possible.

The State of West Virginia, Department of Environmental Protection, Division of Water Resources, has made a tentative decision for a State NPDES Permit as listed on this Fact Sheet. In order to provide public participation on the proposed issuance of the required permit, the following information is being supplied in accordance with Title 47, Series 10, Section 11.3.e.2 and 3, of the West Virginia Legislative Rules.

Any interested persons may submit written comments on the Draft Permit by addressing such to the Director of the Division of Water Resources within 30 days of the date of the public notice. Comments will be accepted until February 24, 2003. Such comments or requests should be addressed to:

Director, Division of Water Resources
Department of Environmental Protection
1201 Greenbrier Street
Charleston, WV 25311-1088

ATTENTION: Anne Howell
Phone: (304) 558-4253
Fax: (304) 558-4530
E-mail: ahowell@mail.dep.state.wv.us

All comments received within this period will be considered prior to acting on the Draft General Permit. Correspondence should include the name, address and the telephone number of the writer and a concise statement of the nature of the issues raised. Comments will also be accepted in oral or written form at the public hearing.

All applicable information concerning any permit application and the tentative decisions is on file and may be inspected, by appointment, or copies obtained at a nominal cost, at the offices of the Division of Water Resources, at 1201 Greenbrier Street, Charleston, WV, between 8:00 a.m. and 4:00 p.m. on business days.

Hearing impaired individuals having access to a Telecommunication Device for the Deaf (TDD) may contact our agency by calling (304) 558-2751. Calls must be made 8:30 a.m. to 3:30 p.m. Monday through Friday.

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
1201 GREENBRIER STREET
CHARLESTON, WV 25311-1088

WEST VIRGINIA/NPDES
GENERAL PERMIT FOR STORM WATER DISCHARGES
FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s)

ADDENDUM TO FACT SHEET AND RATIONALE

Based on comments received from the public and the Environmental Protection Agency (EPA) during the public comment period, the following changes were made to the general permit.

1. The DWWM is now requiring the submittal of a Notice Of Intent (NOI) by March 10, 2003. The NOI will provide initial permit coverage until the submittal of the Storm Water Management Program (SWMP) with the Site Registration Application (SRA) form.

2. The SRA form and SWMP must be submitted within 12 months of the issuance date of the general permit. The SWMP will be reviewed by the DWWM and corrections required as may be necessary to ensure development of an appropriate program.

3. With the expiration of the Inter-modal Surface Transportation and Efficiency Act (ISTEA) exemption of 1991, municipally owned facilities discharging storm water associated with industrial activity must now receive permit coverage for those discharges. To facilitate this required permit coverage, language was added at Part II.B.6.c) to allow coverage for municipal facilities.

4. Two conditions were added to Part III Special Conditions. Part III.D was added to address Discharges to Impaired Waters. Also, Part III.E was added to address Endangered and Threatened Species.

5. Several minor wording changes were made respective of EPA's comments.

No other aspects of the terms and conditions of the draft General Permit for STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s) were changed.

3/2003