Appendix A-9
Region 9

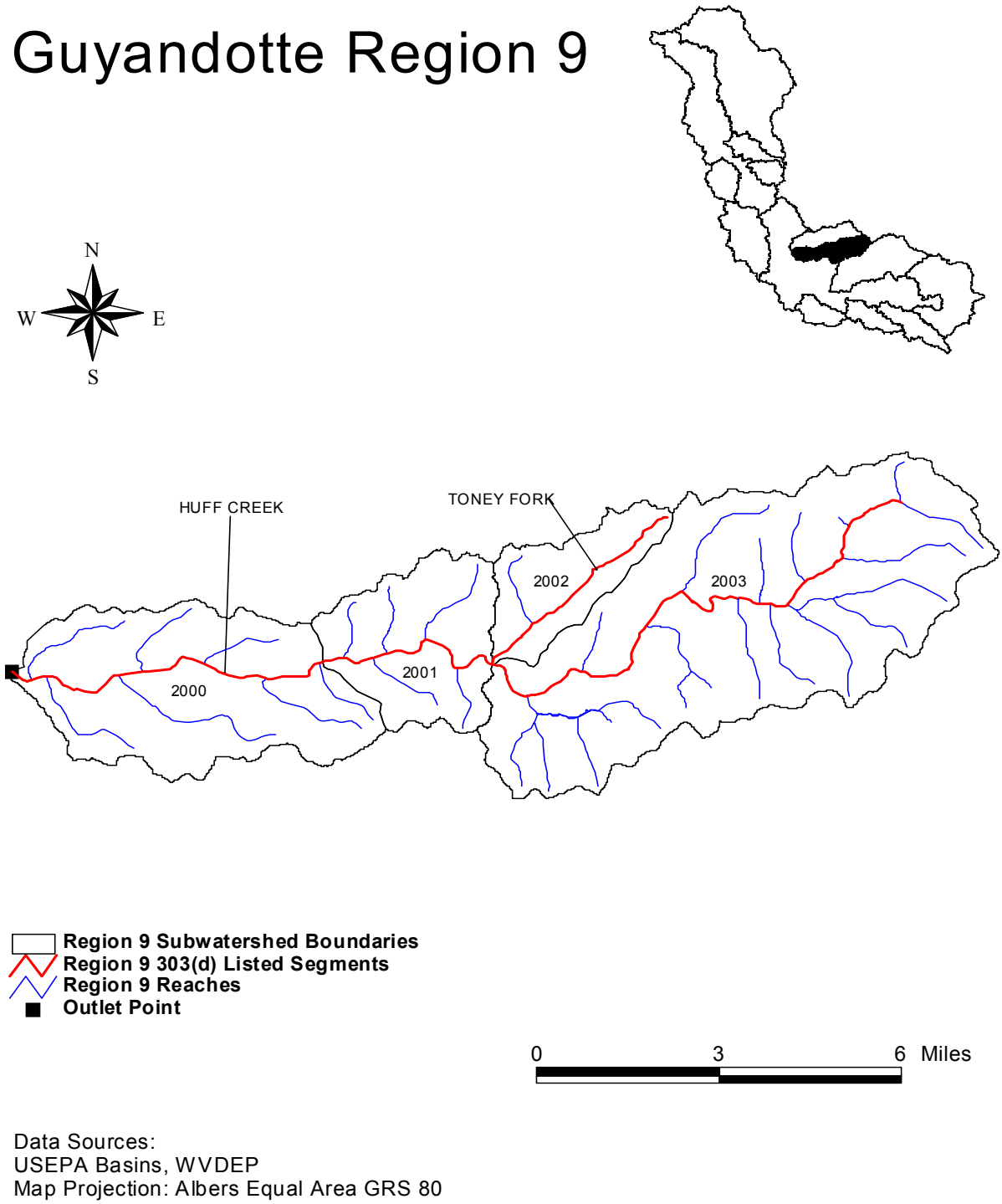

Figure 1. Region 9 - Guyandotte Watershed

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