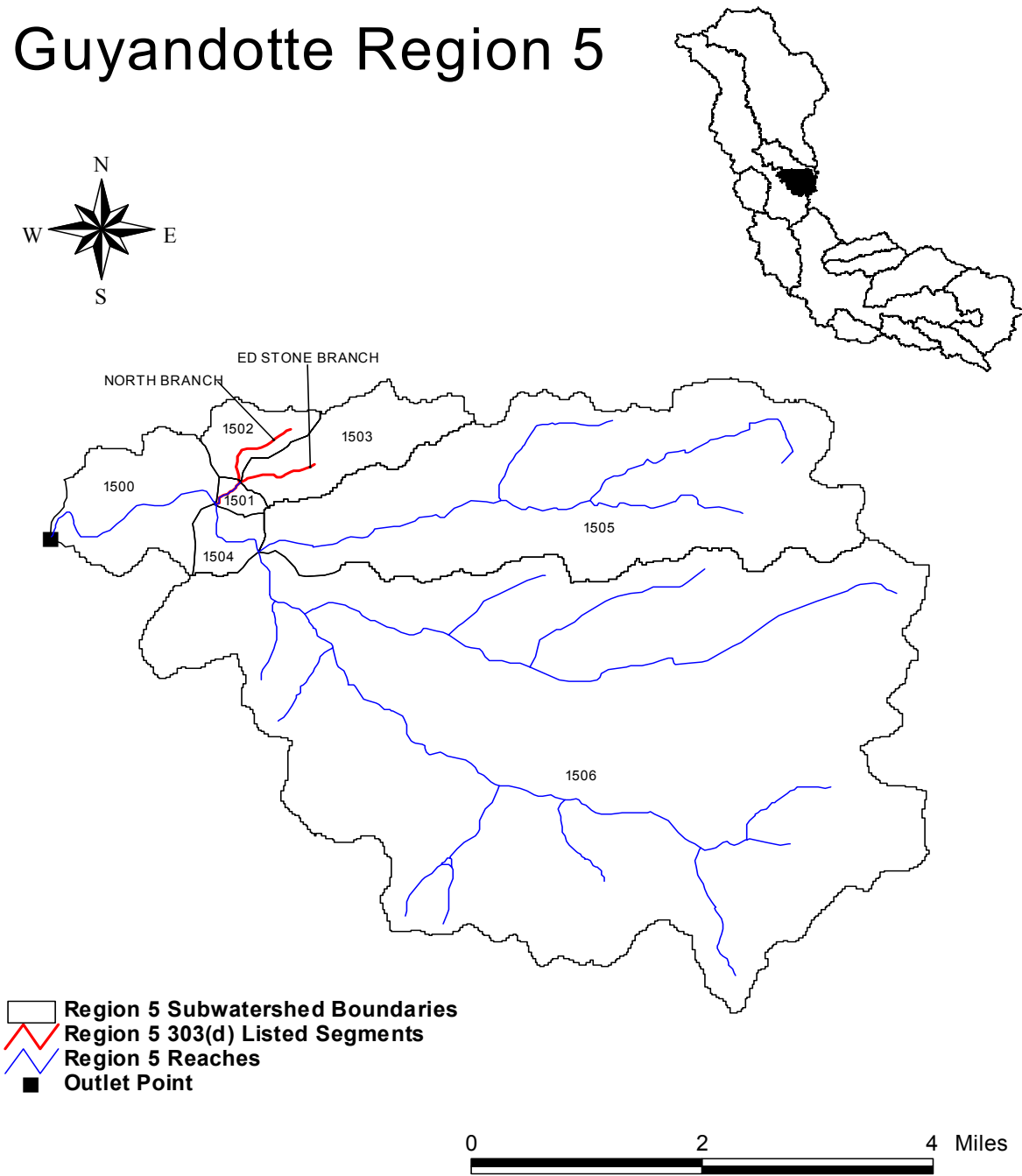


Appendix A-5

Region 5

Guyandotte Region 5



Data Sources:
USEPA Basins, WVDEP
Map Projection: Albers Equal Area GRS 80

Figure 1. Region 5 - Guyandotte Watershed

Metals, pH and Fecal Coliform TMDLs for the 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

Metals, pH and Fecal Coliform TMDLs for the Guyandotte Watershed

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

Metals, pH and Fecal Coliform TMDLs for the Guyandotte Watershed

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

Metals, pH and Fecal Coliform TMDLs for the Guyandotte Watershed

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

Metals, pH and Fecal Coliform TMDLs for the Guyandotte Watershed

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

* Other 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	0	181	181	x
1501	0	0	0	0	2	2	1	1	0	0	0	0	0	3	3	
1502	0	0	0	0	7	7	1	1	0	0	6	6	0	13	13	
1503	0	0	0	0	8	8	2	2	0	0	0	0	0	31	31	
1504	358	161	0	0	15	15	0	0	0	0	0	0	0	44	44	x
1505	219	219	0	0	123	123	3	3	0	0	173	173	0	926	926	
1506	992	248	0	0	593	593	4	4	0	0	85	85	0	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	0	120	120	
1501	0	0	0	0	2	2	1	1	0	0	0	0	0	11	11	
1502	0	0	0	0	425	425	65	65	0	0	403	403	0	44	44	
1503	0	0	0	0	489	489	130	130	0	0	0	0	0	105	105	
1504	609	609	0	0	3	3	0	0	0	0	0	0	0	29	29	
1505	275	275	0	0	20	20	8	8	0	0	468	468	0	616	616	
1506	1,354	1,354	0	0	79	79	10	10	0	0	231	231	0	1,865	1,865	

Metals, pH and Fecal Coliform TMDLs for the Guyandotte Watershed

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

Metals, pH and Fecal Coliform TMDLs for the Guyandotte Watershed

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