

Appendix A-1

Region 1

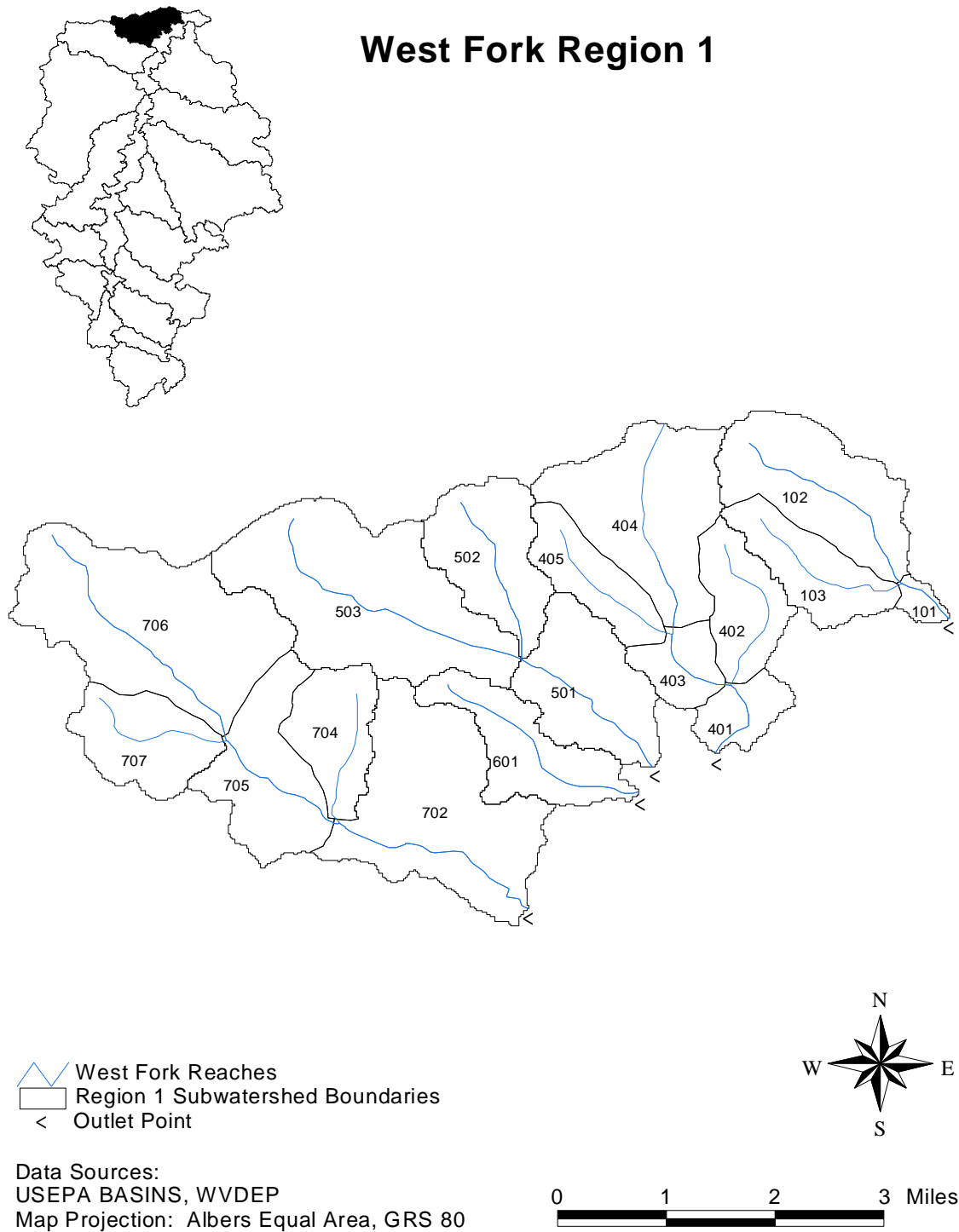


Figure 1. Region 1 - West Fork watershed

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 1

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
102
103
401
402
403
404
405
501
601
705
707

Metals and pH TMDLs for the West Fork Watershed

Table 3a. Water quality data for aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
101	MW-001-0001	100.00	100	100	1	07/31/00	07/31/00
401	21WV7IWQ_550585	226.86	100	720	14	03/15/78	06/25/75
403	WVMW-4_STA4	80.00	80	80	1	07/31/00	07/31/00
404	21WV7IWQ_550586	3700.00	3700	3700	1	07/02/74	07/02/74
501	MW-005-0001	60.00	60	60	1	08/01/00	08/01/00
503	WVMW-5_STA3	90.00	90	90	1	07/18/00	07/18/00
601	WVMW-6_STA1	50.00	50	50	1	08/01/00	08/01/00
702	WVMW-7-A_STA13	190.00	190	190	1	08/01/00	08/01/00

Table 3b. Water quality data for iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
101	MW-001-0001	210.00	210	210	1	07/31/00	07/31/00
401	21WV7IWQ_550585	342.94	100	1340	17	09/21/76	06/24/74
403	WVMW-4_STA4	400.00	400	400	1	07/31/00	07/31/00
404	21WV7IWQ_550586	3100.00	3100	3100	1	07/02/74	07/02/74
501	MW-005-0001	60.00	60	60	1	08/01/00	08/01/00
503	WVMW-5_STA3	270.00	270	270	1	07/18/00	07/18/00
601	WVMW-6_STA1	60.00	60	60	1	08/01/00	08/01/00
702	WVMW-7-A_STA13	340.00	340	340	1	08/01/00	08/01/00

Table 3c. Water quality data for manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
101	MW-001-0001	20	20	20	1	31-Jul-00	31-Jul-00
401	21WV7IWQ_550585	59.57142857	28	168	14	01-Jun-77	09-Dec-75
403	WVMW-4_STA4	10	10	10	1	31-Jul-00	31-Jul-00
404	21WV7IWQ_550586	2980	2980	2980	1	02-Jul-74	02-Jul-74
501	MW-005-0001	10	10	10	1	01-Aug-00	01-Aug-00
503	WVMW-5_STA3	20	20	20	1	18-Jul-00	18-Jul-00
601	WVMW-6_STA1	10	10	10	1	01-Aug-00	01-Aug-00
702	WVMW-7-A_STA13	20.00	20	20	1	08/01/00	08/01/00

Table 3d. Water quality data for Total Nonfilterable Residue

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
101	MW-001-0001	1.00	1	1	1	07/31/00	07/31/00
401	21WV7IWQ_550585	8.77	1	30	13	12/09/75	06/16/76
403	WVMW-4_STA4	1.00	1	1	1	07/31/00	07/31/00
501	MW-005-0001	1.00	1	1	1	08/01/00	08/01/00
503	WVMW-5_STA3	4.00	4	4	1	07/18/00	07/18/00
601	WVMW-6_STA1	2.00	2	2	1	08/01/00	08/01/00
702	WVMW-7-A_STA13	1.00	1	1	1	08/01/00	08/01/00

Metals and pH TMDLs for the West Fork Watershed

Table 3e. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
101	MW-001-0001	8.24	8.18	8.3	2	07/31/00	07/31/00
401	21WV7IWQ_550585	7.44	6.8	8.2	16	12/14/76	09/21/76
403	WVMW-4_STA4	8.15	8.15	8.2	1	07/31/00	07/31/00
501	MW-005-0001	8.21	8.11	8.3	2	08/01/00	08/01/00
503	WVMW-5_STA3	7.73	7.73	7.7	1	07/18/00	07/18/00
601	WVMW-6_STA1	7.93	7.93	7.9	1	08/01/00	08/01/00
702	WVMW-7-A_STA13	8.31	8.31	8.3	1	08/01/00	08/01/00

Table 3f. Water quality data for dissolved zinc

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
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(not applicable to this region)

Metals and pH TMDLs for the West Fork Watershed

Table 4a. 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
503	WV0091006	3,173	1,586	2.42	50

Table 4b. 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
503	WV0091006	2,180	2,180	3.20	0

Table 4c. 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
503	WV0091006	1,421	1,421	2.00	0

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
101	0	0	0	0	31	31	
102	87	87	0	0	370	370	
103	909	182	0	0	233	233	x
401	216	216	0	0	117	117	
402	448	134	0	0	219	219	x
403	4	4	0	0	129	129	
404	1,293	194	0	0	505	505	x
405	2,339	47	0	0	181	181	x
501	1,408	422	0	0	351	351	x
502	0	0	0	0	332	332	
503	0	0	0	0	587	587	
601	391	196	0	0	290	290	x
702	0	0	0	0	690	690	
704	0	0	0	0	234	234	
705	82	82	0	0	359	359	
706	0	0	0	0	780	780	
707	199	199	0	0	266	266	

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
101	0	0	0	0	58	58	
102	304	304	0	0	746	746	
103	3,143	314	0	0	473	473	x
401	745	745	0	0	233	233	
402	1,547	387	0	0	446	446	x
403	15	15	0	0	266	266	
404	4,472	671	0	0	986	986	x
405	8,087	323	0	0	348	348	x
501	4,867	1,217	0	0	721	721	x
502	0	0	0	0	680	680	
503	0	0	0	0	1,182	1,182	
601	1,353	406	0	0	593	593	x
702	0	0	0	0	1,422	1,422	
704	0	0	0	0	484	484	
705	283	283	0	0	726	726	
706	0	0	0	0	1,595	1,595	
707	688	344	0	0	547	547	x

Metals and pH TMDLs for the West Fork Watershed

Table 5c. Manganese baseline conditions and allocations (LAs) for n

SWS	AML		Revoked Mines		Nonpoint Source		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)	
101	0	0	0	0	27	27	
102	53	53	0	0	306	306	
103	545	382	0	0	186	186	x
401	129	129	0	0	95	95	
402	268	121	0	0	174	174	x
403	3	3	0	0	102	102	
404	776	116	0	0	417	417	x
405	1,403	210	0	0	150	150	x
501	844	844	0	0	280	280	
502	0	0	0	0	264	264	
503	0	0	0	0	475	475	
601	235	235	0	0	231	231	
702	0	0	0	0	548	548	x
704	0	0	0	0	186	186	
705	49	49	0	0	289	289	
706	0	0	0	0	623	623	
707	119	119	0	0	211	211	

Appendix A-2

Region 2

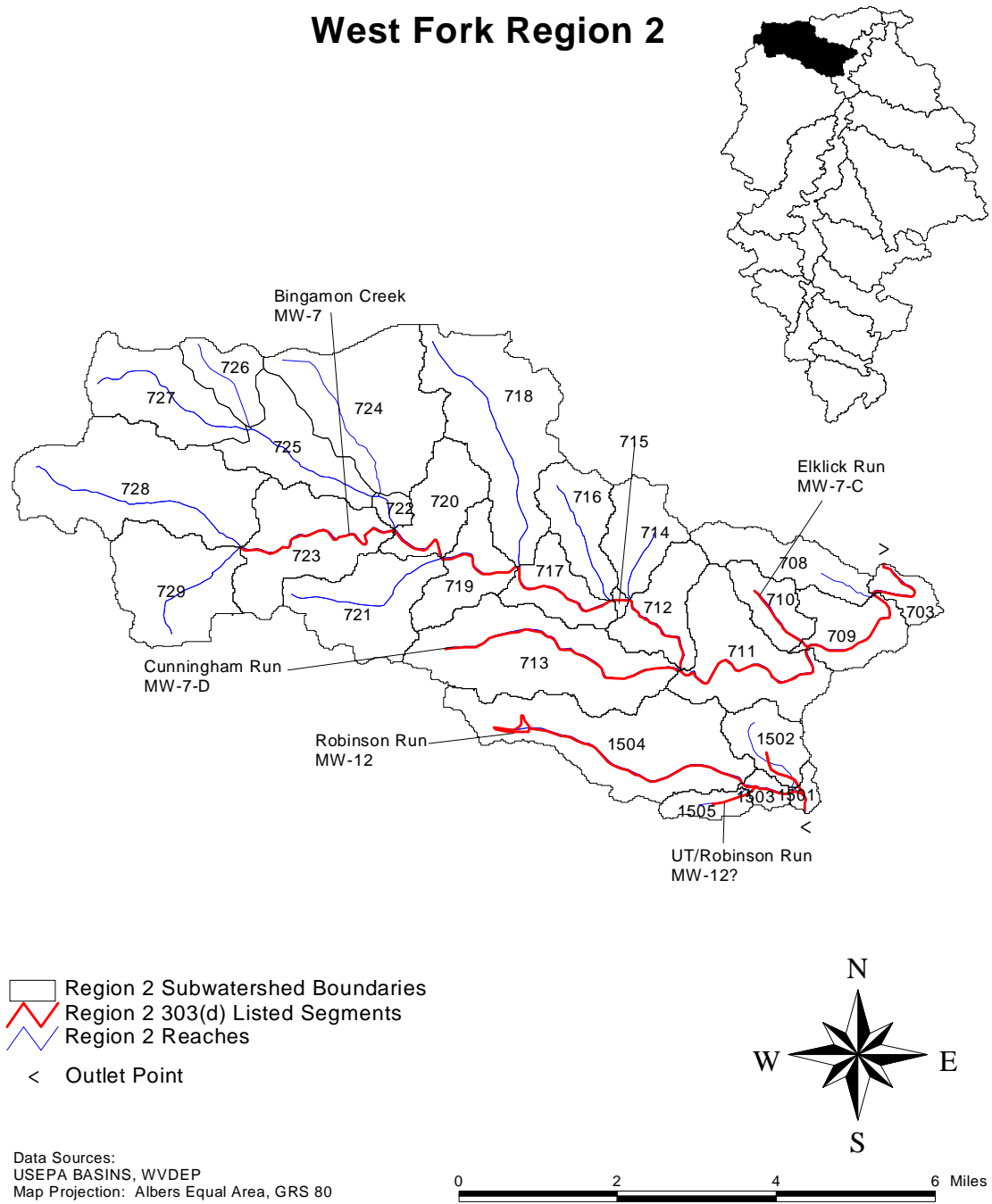


Figure 1. Region 2 -West Fork watershed

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 2

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
Elk Lick Run	MW-7-C	Metals	710		Aquatic Life
Cunningham	MW-7-D	Al, Fe	713		Aquatic Life
Robinson Run	MW-12	Metals	1501, 1502,		Aquatic Life
Pigotts Run	MW-12-A	Metals	1502		Aquatic Life
Robinson Run:	MW-12?	Metals	1505		Aquatic Life

T = Aquatic Life Trout Waters

W = Warm Water Fishery

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

SWS
708
709
710
711
712
713
1501
1502
1503
1504
1505

Metals and pH TMDLs for the West Fork Watershed

Table 3a. Water quality data for aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
703	WVMW-7_STA4	130	130	130	1	8/1/2000	8/1/2000
708	WVMW-7-B_STA16	483	483	483	1	3/22/2001	3/22/2001
709	MW-007-0007	410	410	410	1	8/2/2000	8/2/2000
711	WVMW-7_STA1	510	490	530	2	7/20/2000	7/20/2000
713	WVMW-7-D_STA20	50	50	50	1	8/2/2000	8/2/2000
714	WV0093505_UUBC-1	198.3333	30	590	12	1/16/2001	8/4/1998
720	WVMW-7_STA9	180	180	180	1	7/19/2000	7/19/2000
722	MW-007-0010	180	180	180	1	8/2/2000	8/2/2000
724	WV0093505_URF-7	986.6667	40	10000	12	10/26/2000	4/22/1998
729	WV0093505_UHF-3	202	50	690	15	4/22/1998	4/3/2001
1501	WVMW-12_STA2	340	340	340	1	8/2/2000	8/2/2000
1504	WVMW-12_STA4	220	220	220	1	8/1/2000	8/1/2000

Table 3b. Water quality data for iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
703	WVMW-7_STA4	620.00	620	620	1	08/01/00	08/01/00
708	WVMW-7-B_STA16	445.00	445	445	1	03/22/01	03/22/01
709	MW-007-0007	180.00	180	180	1	08/02/00	08/02/00
711	WVMW-7_STA1	1740.00	1540	1940	2	07/20/00	07/20/00
713	WVMW-7-D_STA20	140.00	140	140	1	08/02/00	08/02/00
714	WV0093505_UUBC-1	292.86	70	1170	21	02/02/96	01/20/99
720	WVMW-7_STA9	270.00	270	270	1	07/19/00	07/19/00
722	MW-007-0010	270.00	270	270	1	08/02/00	08/02/00
724	WV0093505_URF-7	1146.19	110	8200	21	01/06/00	08/05/97
729	WV0093505_UHF-3	587.92	170	2090	24	04/08/99	10/09/96
1501	WVMW-12_STA2	5060.00	5060	5060	1	08/02/00	08/02/00
1504	WVMW-12_STA4	2170.00	2170	2170	1	08/01/00	08/01/00

Table 3c. Water quality data for manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
703	WVMW-7_STA4	60	60	60	1	8/1/2000	8/1/2000
708	WVMW-7-B_STA16	41	41	41	1	3/22/2001	3/22/2001
709	MW-007-0007	80	80	80	1	8/2/2000	8/2/2000
711	WVMW-7_STA1	85	80	90	2	7/20/2000	7/20/2000
713	WVMW-7-D_STA20	40	40	40	1	8/2/2000	8/2/2000
714	WV0093505_UUBC-1	49.52381	10	140	21	2/2/1996	1/20/1999
720	WVMW-7_STA9	100	100	100	1	7/19/2000	7/19/2000
722	MW-007-0010	40	40	40	1	8/2/2000	8/2/2000
724	WV0093505_URF-7	190	20	720	21	10/26/2000	7/12/2001
729	WV0093505_UHF-3	357.5	40	1680	24	4/12/2000	10/2/1997
1501	WVMW-12_STA2	300	300	300	1	8/2/2000	8/2/2000
1504	WVMW-12_STA4	360	360	360	1	8/1/2000	8/1/2000

Metals and pH TMDLs for the West Fork Watershed

Table 3d. Water quality data for Total Nonfilterable Residue

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
703	WVMW-7_STA4	2.00	2	2	1	08/01/00	08/01/00
708	WVMW-7-B_STA16	12.80	12.8	12.8	1	03/22/01	03/22/01
709	MW-007-0007	1.00	1	1	1	08/02/00	08/02/00
711	WVMW-7_STA1	3.00	3	3	2	07/20/00	07/20/00
713	WVMW-7-D_STA20	1.00	1	1	1	08/02/00	08/02/00
720	WVMW-7_STA9	3.00	3	3	1	07/19/00	07/19/00
722	MW-007-0010	1.00	1	1	1	08/02/00	08/02/00
1501	WVMW-12_STA2	10.00	10	10	1	08/02/00	08/02/00
1504	WVMW-12_STA4	12.00	12	12	1	08/01/00	08/01/00

Table 3e. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
703	WVMW-7_STA4	8.04	8.04	8.04	1	8/1/2000	8/1/2000
708	WVMW-7-B_STA16	7.78	7.78	7.78	1	3/22/2001	3/22/2001
709	MW-007-0007	8.155	8.1	8.21	2	8/2/2000	8/2/2000
711	WVMW-7_STA1	7.73	7.73	7.73	2	7/20/2000	7/20/2000
713	WVMW-7-D_STA20	8.09	8.09	8.09	1	8/2/2000	8/2/2000
714	WV0093505_UUBC-1	8.057143	7.3	9.3	21	1/16/2001	8/4/1998
720	WVMW-7_STA9	8.1	8.1	8.1	1	7/19/2000	7/19/2000
722	MW-007-0010	8.77	8.74	8.8	2	8/2/2000	8/2/2000
724	WV0093505_URF-7	8.028571	7.3	8.7	21	1/6/2000	1/6/1998
729	WV0093505_UHF-3	7.979167	6.8	8.8	24	1/6/1998	4/4/1996
1501	WVMW-12_STA2	7.14	7.14	7.14	1	8/2/2000	8/2/2000
1504	WVMW-12_STA4	7.41	7.41	7.41	1	8/1/2000	8/1/2000

Table 3f. Water quality data for dissolved zinc

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
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(not applicable to this region)

Metals and pH TMDLs for the West Fork Watershed

Table 4a. 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
711	WV0067733	115	115	4.60	0
713	WV0093505	615	615	4.60	0
714	WV0093505	307	307	4.60	0
718	WV0093505	307	307	4.60	0
720	WV0093505	615	615	4.60	0
723	WV0093505	307	307	4.60	0
724	WV0093505	615	615	4.60	0
728	WV0093505	615	615	4.60	0
729	WV0093505	307	307	4.60	0
1504	WV0061662	1,230	615	2.42	50
1504	WV0093505	1,537	769	2.42	50

Table 4b. 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
711	WV0067733	79	79	3.20	0
713	WV0093505	422	422	3.20	0
714	WV0093505	211	211	3.20	0
718	WV0093505	211	211	3.20	0
720	WV0093505	422	422	3.20	0
723	WV0093505	211	211	3.20	0
724	WV0093505	422	422	3.20	0
728	WV0093505	422	422	3.20	0
729	WV0093505	211	211	3.20	0
1504	WV0061662	845	845	3.20	0
1504	WV0093505	1,056	1,056	3.20	0

Table 4c. 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
711	WV0067733	51	51	2.00	0
713	WV0093505	275	275	2.00	0
714	WV0093505	138	138	2.00	0
718	WV0093505	138	138	2.00	0
720	WV0093505	275	275	2.00	0
723	WV0093505	138	138	2.00	0
724	WV0093505	275	275	2.00	0
728	WV0093505	275	275	2.00	0
729	WV0093505	138	138	2.00	0
1504	WV0061662	551	551	2.00	0
1504	WV0093505	689	689	2.00	0

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
703	0	0	0	0	105	105	
708	65	65	0	0	309	309	
709	2,294	2,294	0	0	252	252	
710	664	133	0	0	185	185	x
711	1,214	1,214	0	0	562	562	
712	278	278	0	0	299	299	
713	2,395	359	97	15	783	783	x
714	0	0	0	0	255	255	
715	0	0	0	0	15	15	
716	0	0	0	0	299	299	
717	0	0	0	0	240	240	
718	0	0	0	0	811	811	
719	0	0	0	0	275	275	
720	0	0	0	0	264	264	
721	0	0	0	0	479	479	x
722	0	0	0	0	47	47	
723	0	0	0	0	515	515	
724	0	0	0	0	741	741	
725	0	0	0	0	388	388	
726	0	0	0	0	193	193	
727	0	0	0	0	458	458	
728	0	0	0	0	909	909	
729	0	0	0	0	506	506	
1501	709	177	0	0	34	34	x
1502	493	49	0	0	247	247	x
1503	203	122	0	0	55	55	x
1504	1,057	21	0	0	702	702	x
1505	1,300	91	0	0	88	88	x

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
703	0	0	0	0	218	218	
708	223	223	0	0	614	614	
709	7,931	4,759	0	0	513	513	x
710	2,297	276	0	0	365	365	x
711	4,197	4,197	0	0	1,066	1,066	
712	963	963	0	0	597	597	
713	8,280	1,242	67	10	1,545	1,545	x
714	0	0	0	0	513	513	
715	0	0	0	0	28	28	
716	0	0	0	0	616	616	
717	0	0	0	0	481	481	
718	0	0	0	0	1,679	1,679	
719	0	0	0	0	562	562	
720	0	0	0	0	543	543	
721	0	0	0	0	996	996	
722	0	0	0	0	97	97	
723	0	0	0	0	1,071	1,071	
724	0	0	0	0	1,535	1,535	
725	0	0	0	0	806	806	
726	0	0	0	0	402	402	
727	0	0	0	0	951	951	
728	0	0	0	0	1,878	1,878	
729	0	0	0	0	1,049	1,049	
1501	2,450	123	0	0	55	55	x
1502	1,703	256	0	0	382	382	x
1503	702	140	0	0	96	96	x
1504	3,654	548	0	0	1,314	1,314	x
1505	4,494	180	0	0	170	170	x

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
703	0	0	0	0	83	83	
708	39	39	0	0	253	253	
709	1,376	1,376	0	0	202	202	
710	398	319	0	0	152	152	x
711	728	728	0	0	474	474	
712	167	167	0	0	242	242	x
713	1,436	1,436	43	43	642	642	
714	0	0	0	0	206	206	
715	0	0	0	0	12	12	
716	0	0	0	0	237	237	
717	0	0	0	0	195	195	
718	0	0	0	0	642	642	
719	0	0	0	0	220	220	x
720	0	0	0	0	211	211	
721	0	0	0	0	377	377	x
722	0	0	0	0	37	37	
723	0	0	0	0	406	406	
724	0	0	0	0	586	586	
725	0	0	0	0	307	307	
726	0	0	0	0	153	153	
727	0	0	0	0	361	361	
728	0	0	0	0	720	720	x
729	0	0	0	0	401	401	
1501	425	425	0	0	32	32	
1502	295	118	0	0	236	236	x
1503	122	122	0	0	48	48	
1504	634	634	0	0	598	598	x
1505	779	78	0	0	73	73	x

Appendix A-3

Region 3

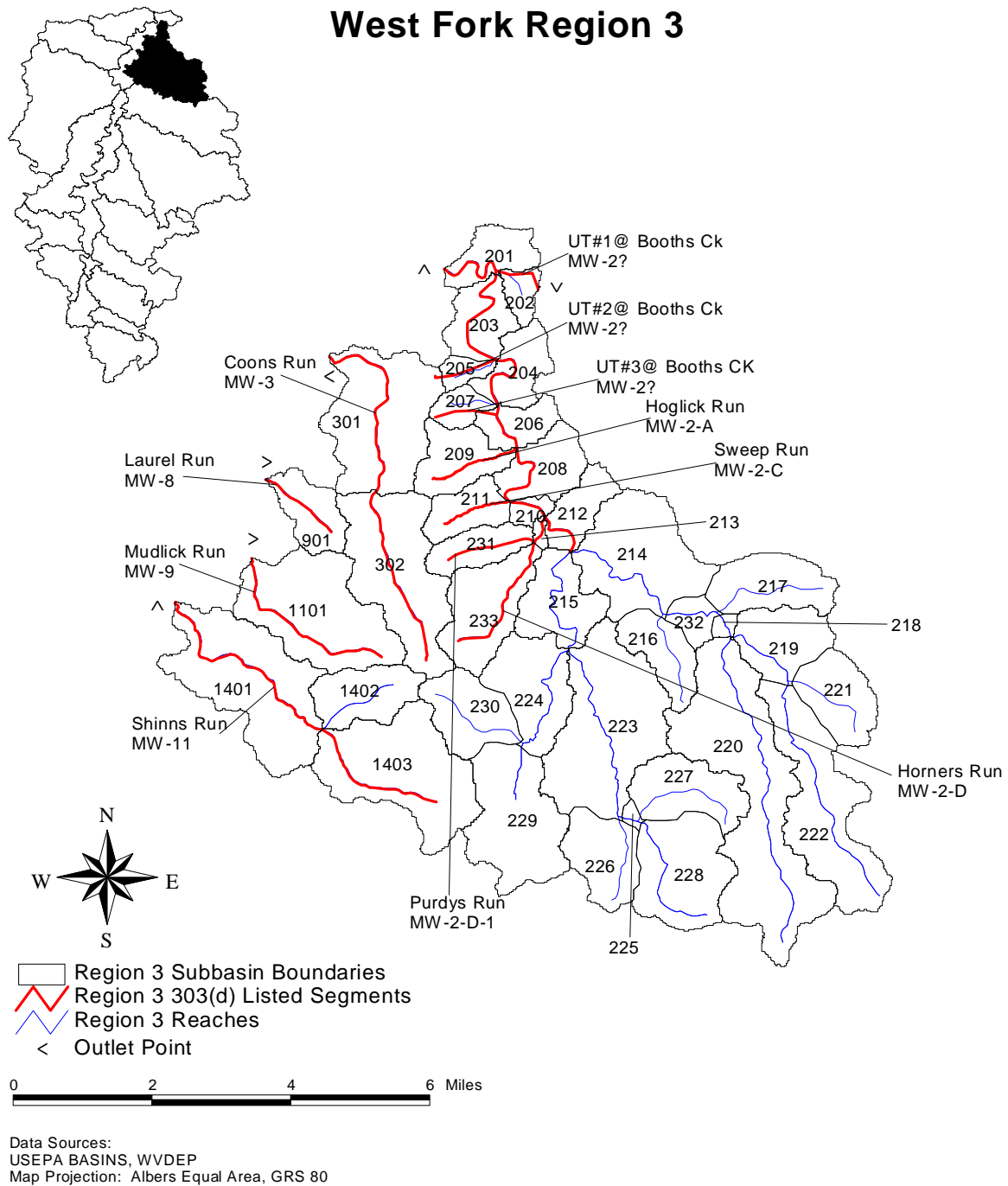


Figure 1. Region 3 - West Fork watershed

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 3

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
Booth Creek	MW-2	pH, Metals	201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233		Aquatic Life
Booth Creek: UT#1	MW-2?a	pH, Metals	202		Aquatic Life
Booth Creek: UT#2	MW-2?b	pH, Metals	205		Aquatic Life
Booth Creek: UT#3	MW-2?c	Metals	207		Aquatic Life
Hog Lick Run	MW-2-A	Metals	209		Aquatic Life
Sweep Run	MW-2-C	Metals	211		Aquatic Life
Horners Run	MW-2-D	pH, Metals	213, 233		Aquatic Life
Purdys Run	MW-2-D-1	pH, Metals	231		Aquatic Life
Coons Run	MW-3	pH, Metals	301, 302		Aquatic Life
Laurel Run	MW-8	Metals	901		Aquatic Life
Mudlick Run	MW-9	pH, Metals	1101		Aquatic Life
Shinns Run	MW-11	Metals	1401, 1402,		Aquatic Life

T = Aquatic Life Trout Waters

W = Warm Water Fishery

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

SWS	SWS
203	302
204	901
205	1101
206	1401
207	1402
209	1403
210	
211	
212	
215	
220	
224	
229	
230	
231	
233	
301	

Metals and pH TMDLs for the West Fork Watershed

Table 3a. Water quality data for aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
201	MW-002-0001	470.00	470	470	1	08/01/00	08/01/00
204	WVMW-2-0.6A_STA5	150.00	150	150	1	08/01/00	08/01/00
205	MW-002-0004	4230.00	4230	4230	1	08/11/00	08/11/00
208	MW-002-0008	210.00	210	210	1	08/01/00	08/01/00
209	WVMW-2-A_STA1	11100.00	11100	11100	1	03/21/01	03/21/01
211	MW-002-0009	50.00	50	50	1	08/01/00	08/01/00
212	WVMW-2-D.5_STA9	1610.00	1610	1610	1	03/21/01	03/21/01
213	MW-002-0010	640.00	640	640	1	07/20/00	07/20/00
214	WVMW-2-E_STA13	50.00	50	50	1	08/02/00	08/02/00
223	WVMW-2-F_STA15	130.00	130	130	1	08/02/00	08/02/00
231	WVMW-2-D-1_STA11	2380.00	2380	2380	1	03/21/01	03/21/01
301	WVMW-3_STA1	330.00	330	330	1	07/31/00	07/31/00
901	WVMW-8_STA2	349.00	349	349	1	03/22/01	03/22/01
1101	MW-009-0001	440.00	440	440	1	08/02/00	08/02/00
1401	WVMW-11-{2.5}-MINE_STA20	139.00	139	139	1	03/19/01	03/19/01
1402	MW-011-0012	1420.00	1420	1420	1	07/31/00	07/31/00
1403	WVMW-11-{6.43}-MINE_STA2	36000.00	36000	36000	1	03/20/01	03/20/01

Table 3b. Water quality data for iron

SWS	WQ Station	Avg (ug/L)	(ug/L)	(ug/L)	Count	Start Date	End Date
201	MW-002-0001	550.00	550	550	1	08/01/00	08/01/00
204	WVMW-2-0.6A_STA5	430.00	430	430	1	08/01/00	08/01/00
205	MW-002-0004	1150.00	1150	1150	1	08/11/00	08/11/00
208	MW-002-0008	280.00	280	280	1	08/01/00	08/01/00
209	WVMW-2-A_STA1	8630.00	8630	8630	1	03/21/01	03/21/01
211	MW-002-0009	120.00	120	120	1	08/01/00	08/01/00
212	WVMW-2-D.5_STA9	1590.00	1590	1590	1	03/21/01	03/21/01
213	MW-002-0010	1370.00	1370	1370	1	07/20/00	07/20/00
214	WVMW-2-E_STA13	130.00	130	130	1	08/02/00	08/02/00
215	112WRD_392335080114839	428.00	310	590	5	05/04/79	09/11/79
223	WVMW-2-F_STA15	390.00	390	390	1	08/02/00	08/02/00
224	112WRD_392149080123139	594.00	320	900	5	08/22/80	07/20/81
231	WVMW-2-D-1_STA11	2300.00	2300	2300	1	03/21/01	03/21/01
301	WVMW-3_STA1	620.00	620	620	1	07/31/00	07/31/00
901	WVMW-8_STA2	4390.00	4390	4390	1	03/22/01	03/22/01
1101	MW-009-0001	1270.00	1270	1270	1	08/02/00	08/02/00
1401	WVMW-11-{2.5}-MINE_STA20	175.00	175	175	1	03/19/01	03/19/01
1402	MW-011-0012	1130.00	1130	1130	1	07/31/00	07/31/00
1403	WVMW-11-{6.43}-MINE_STA2	79700.00	79700	79700	1	03/20/01	03/20/01

Metals and pH TMDLs for the West Fork Watershed

Table 3c. Water quality data for manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
201	MW-002-0001	60.00	60	60	1	08/01/00	08/01/00
204	WVMW-2-0.6A_STA5	290.00	290	290	1	08/01/00	08/01/00
205	MW-002-0004	4810.00	4810	4810	1	08/11/00	08/11/00
208	MW-002-0008	40.00	40	40	1	08/01/00	08/01/00
209	WVMW-2-A_STA1	376.00	376	376	1	03/21/01	03/21/01
211	MW-002-0009	90.00	90	90	1	08/01/00	08/01/00
212	WVMW-2-D.5_STA9	138.00	138	138	1	03/21/01	03/21/01
213	MW-002-0010	1290.00	1290	1290	1	07/20/00	07/20/00
214	WVMW-2-E_STA13	10.00	10	10	1	08/02/00	08/02/00
215	112WRD_392335080114839	30.00	20	40	5	07/20/81	05/04/79
223	WVMW-2-F_STA15	50.00	50	50	1	08/02/00	08/02/00
224	112WRD_392149080123139	270.00	40	430	5	05/04/79	07/20/81
231	WVMW-2-D-1_STA11	608.00	608	608	1	03/21/01	03/21/01
301	WVMW-3_STA1	300.00	300	300	1	07/31/00	07/31/00
901	WVMW-8_STA2	853.00	853	853	1	03/22/01	03/22/01
1101	MW-009-0001	1430.00	1430	1430	1	08/02/00	08/02/00
1401	WVMW-11-{2.5}-MINE_STA20	47.00	47	47	1	03/19/01	03/19/01
1402	MW-011-0012	950.00	950	950	1	07/31/00	07/31/00
1403	WVMW-11-{6.43}-MINE_STA2	9050.00	9050	9050	1	03/20/01	03/20/01

Table 3d. Water quality data for Total Nonfilterable Residue

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
201	MW-002-0001	1.00	1	1	1	08/01/00	08/01/00
204	WVMW-2-0.6A_STA5	3.00	3	3	1	08/01/00	08/01/00
205	MW-002-0004	11.00	11	11	1	08/11/00	08/11/00
208	MW-002-0008	1.00	1	1	1	08/01/00	08/01/00
209	WVMW-2-A_STA1	225.00	225	225	1	03/21/01	03/21/01
211	MW-002-0009	1.00	1	1	1	08/01/00	08/01/00
212	WVMW-2-D.5_STA9	34.00	34	34	1	03/21/01	03/21/01
213	MW-002-0010	2.00	2	2	1	07/20/00	07/20/00
214	WVMW-2-E_STA13	1.00	1	1	1	08/02/00	08/02/00
223	WVMW-2-F_STA15	2.00	2	2	1	08/02/00	08/02/00
231	WVMW-2-D-1_STA11	33.50	33.5	33.5	1	03/21/01	03/21/01
301	WVMW-3_STA1	7.00	7	7	1	07/31/00	07/31/00
901	WVMW-8_STA2	12.50	12.5	12.5	1	03/22/01	03/22/01
1101	MW-009-0001	3.00	3	3	1	08/02/00	08/02/00
1401	WVMW-11-{2.5}-MINE_STA20	1.00	1	1	1	03/19/01	03/19/01
1402	MW-011-0012	1.00	1	1	1	07/31/00	07/31/00
1403	WVMW-11-{6.43}-MINE_STA2	2.20	2.2	2.2	1	03/20/01	03/20/01

Metals and pH TMDLs for the West Fork Watershed

Table 3e. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
201	MW-002-0001	7.93	7.86	8.0	2	08/01/00	08/01/00
204	WVMW-2-0.6A_STA5	7.54	7.54	7.5	1	08/01/00	08/01/00
205	MW-002-0004	6.81	6.81	6.8	1	08/11/00	08/11/00
208	MW-002-0008	8.01	8	8.0	2	08/01/00	08/01/00
209	WVMW-2-A_STA1	7.76	7.76	7.8	1	03/21/01	03/21/01
211	MW-002-0009	7.93	7.93	7.9	1	08/01/00	08/01/00
212	WVMW-2-D.5_STA9	7.51	7.51	7.5	1	03/21/01	03/21/01
213	MW-002-0010	6.85	6.85	6.9	1	07/20/00	07/20/00
214	WVMW-2-E_STA13	7.98	7.98	8.0	1	08/02/00	08/02/00
215	112WRD_392335080114839	6.92	6.1	7.9	6	09/28/83	07/20/81
223	WVMW-2-F_STA15	7.94	7.94	7.9	1	08/02/00	08/02/00
224	112WRD_392149080123139	6.92	6	7.8	6	09/28/83	03/26/80
231	WVMW-2-D-1_STA11	7.14	7.14	7.1	1	03/21/01	03/21/01
301	WVMW-3_STA1	7.79	7.79	7.8	1	07/31/00	07/31/00
901	WVMW-8_STA2	6.51	6.51	6.5	1	03/22/01	03/22/01
1101	MW-009-0001	7.04	6.97	7.1	2	08/02/00	08/02/00
1401	WVMW-11-{2.5}-MINE_STA20	6.94	6.94	6.9	1	03/19/01	03/19/01
1402	MW-011-0012	7.56	7.31	7.8	2	07/31/00	07/31/00
1403	WVMW-11-{6.43}-MINE_STA24	2.84	2.84	2.8	1	03/20/01	03/20/01

Table 3f. Water quality data for dissolved zinc

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
215	112WRD_392335080114839	1	1	1	1	8/22/1980	8/22/1980
224	112WRD_392149080123139	22	22	22	1	8/22/1980	8/22/1980

Metals and pH TMDLs for the West Fork Watershed

Table 4a. 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
206	WVG021503	209	209	4.60	0
209	WVG021503	399	319	3.87	20
211	WV1017284	234	234	4.60	0
231	WV1017284	78	78	4.60	0
901	WV1017292	145	145	4.60	0
1101	WV1007556	47	47	4.60	0
1101	WV1017365	170	170	4.60	0
1101	WV1017411	178	178	4.60	0
1401	WV1011359	31	31	4.60	0
1401	WV1017411	183	183	4.60	0

Table 4b. 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
206	WVG021503	144	144	3.20	0
209	WVG021503	275	248	3.03	10
211	WV1017284	161	161	3.20	0
231	WV1017284	54	54	3.20	0
901	WV1017292	100	100	3.20	0
1101	WV1007556	33	33	3.20	0
1101	WV1017365	117	117	3.20	0
1101	WV1017411	123	123	3.20	0
1401	WV1011359	21	21	3.20	0
1401	WV1017411	126	126	3.20	0

Table 4c. 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
206	WVG021503	93	93	2.00	0
209	WVG021503	178	178	2.00	0
211	WV1017284	104	104	2.00	0
231	WV1017284	35	35	2.00	0
901	WV1017292	64	64	2.00	0
1101	WV1007556	21	21	2.00	0
1101	WV1017365	75	75	2.00	0
1101	WV1017411	79	79	2.00	0
1401	WV1011359	14	14	2.00	0
1401	WV1017411	81	81	2.00	0

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
201	0	0	64	64	178	178	
202	0	0	0	0	74	74	
203	1,695	1,695	0	0	190	190	
204	76	76	0	0	214	214	
205	101	35	0	0	57	57	x
206	439	439	0	0	125	125	
207	927	65	0	0	75	75	x
208	0	0	0	0	231	231	
209	3,467	69	339	7	200	200	x
210	35	35	0	0	46	46	
211	390	78	0	0	184	184	x
212	94	94	0	0	158	158	
213	0	0	0	0	18	18	
214	0	0	0	0	554	554	
215	649	649	0	0	276	276	
216	0	0	0	0	212	212	
217	0	0	0	0	291	291	
218	0	0	0	0	26	26	
219	0	0	0	0	270	270	
220	49	49	0	0	1,171	1,171	
221	0	0	0	0	258	258	
222	0	0	0	0	642	642	
223	0	0	0	0	806	806	
224	2,277	455	0	0	390	390	x
225	0	0	0	0	22	22	
226	0	0	0	0	320	320	
227	0	0	0	0	308	308	
228	0	0	0	0	460	460	
229	124	124	0	0	662	662	
230	1,747	210	0	0	303	303	x
231	783	117	0	0	195	195	x
232	0	0	0	0	86	86	
233	2,873	287	0	0	396	396	x
301	2,662	532	453	91	687	687	x
302	4,619	693	0	0	711	711	x
901	1,944	97	139	7	198	198	x
1101	6,529	326	0	0	681	681	x
1401	2,324	1,162	0	0	854	854	x
1402	1,535	230	0	0	292	292	x
1403	3,242	486	0	0	765	765	x

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		Requires Reduction
	Load (lb/yr)	Load (lb/yr)	Load (lb/yr)	Load (lb/yr)	Load (lb/yr)	Load (lb/yr)	
201	0	0	44	44	342	342	
202	0	0	0	0	149	149	
203	5,922	5,922	0	0	379	379	
204	267	267	0	0	385	385	
205	352	70	0	0	115	115	x
206	1,535	1,535	0	0	210	210	
207	3,237	129	0	0	151	151	x
208	0	0	0	0	425	425	
209	11,987	240	234	5	402	402	x
210	121	121	0	0	87	87	
211	1,350	229	0	0	375	375	x
212	328	328	0	0	313	313	
213	0	0	0	0	29	29	
214	0	0	0	0	1,116	1,116	
215	2,269	2,269	0	0	530	530	
216	0	0	0	0	436	436	
217	0	0	0	0	601	601	
218	0	0	0	0	53	53	
219	0	0	0	0	555	555	
220	172	172	0	0	2,136	2,136	
221	0	0	0	0	514	514	
222	0	0	0	0	1,242	1,242	
223	0	0	0	0	1,494	1,494	
224	7,871	1,023	0	0	723	723	x
225	0	0	0	0	35	35	
226	0	0	0	0	630	630	
227	0	0	0	0	607	607	
228	0	0	0	0	881	881	
229	430	430	0	0	1,149	1,149	
230	6,040	483	0	0	616	616	x
231	2,707	325	0	0	382	382	x
232	0	0	0	0	177	177	
233	9,934	695	0	0	775	775	x
301	9,202	1,380	312	47	1,387	1,387	x
302	15,968	1,118	0	0	1,403	1,403	x
901	6,721	336	96	5	391	391	x
1101	22,572	1,129	0	0	1,346	1,346	x
1401	8,034	1,607	0	0	1,631	1,631	x
1402	5,307	425	0	0	582	582	x
1403	11,210	1,121	0	0	1,528	1,528	x

Metals and pH TMDLs for the West Fork Watershed

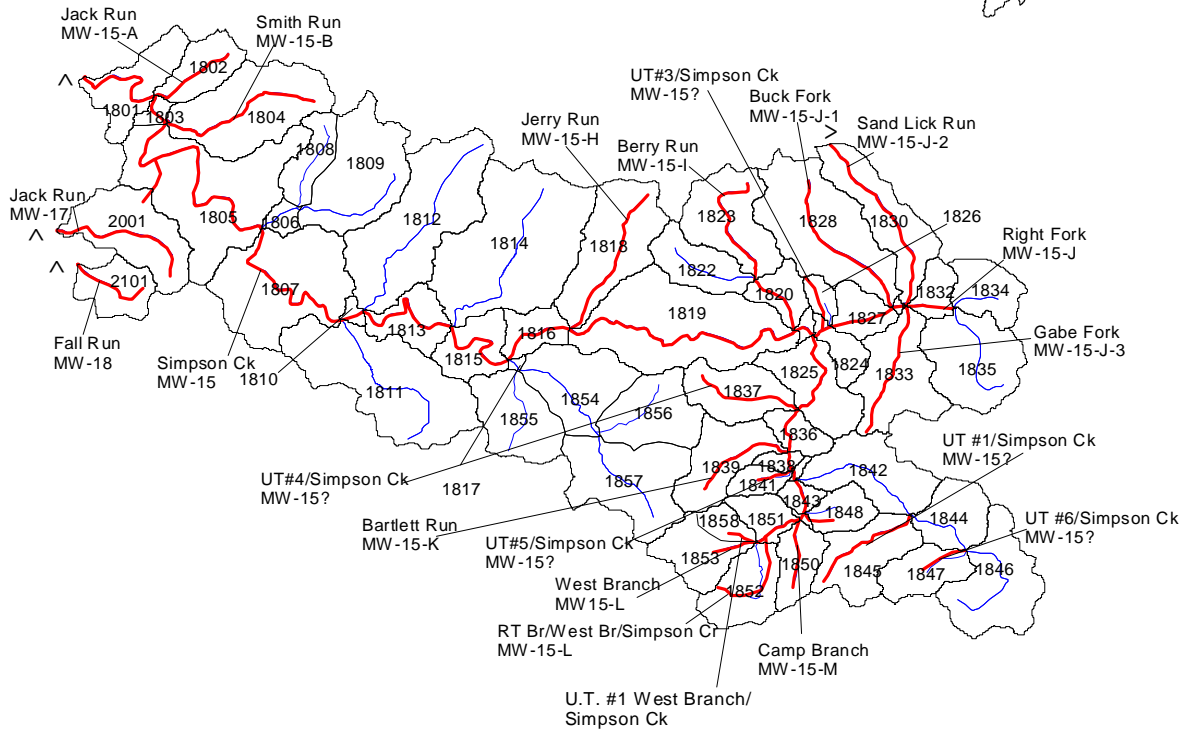
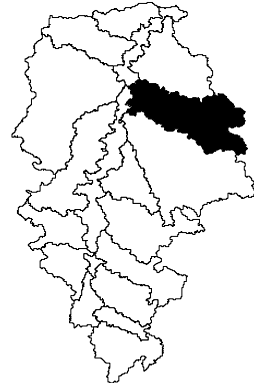
Table 5c. Manganese baseline conditions and allocations (LAs) for nonpoint sources

SWS	AML		Revoked Mines		Nonpoint Source		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)	
201	0	0	28	28	152	152	
202	0	0	0	0	61	61	
203	1,034	1,034	0	0	158	158	
204	47	47	0	0	191	191	
205	61	61	0	0	47	47	
206	268	268	0	0	116	116	
207	565	170	0	0	62	62	x
208	0	0	0	0	202	202	
209	2,079	62	150	5	161	161	x
210	21	21	0	0	40	40	
211	234	234	0	0	147	147	
212	57	57	0	0	132	132	
213	0	0	0	0	17	17	
214	0	0	0	0	457	457	
215	396	396	0	0	236	236	
216	0	0	0	0	173	173	
217	0	0	0	0	237	237	
218	0	0	0	0	21	21	
219	0	0	0	0	220	220	
220	30	30	0	0	1,033	922	
221	0	0	0	0	214	214	
222	0	0	0	0	544	544	
223	0	0	0	0	702	702	
224	1,365	683	0	0	333	333	x
225	0	0	0	0	21	21	
226	0	0	0	0	261	261	
227	0	0	0	0	259	259	
228	0	0	0	0	392	392	
229	75	75	0	0	591	591	
230	1,048	314	0	0	242	242	x
231	469	329	0	0	160	160	x
232	0	0	0	0	70	70	
233	1,723	517	0	0	325	325	x
301	1,596	1,596	201	201	552	552	
302	2,770	1,385	0	0	581	581	x
901	1,166	175	62	9	162	162	x
1101	3,915	1,370	0	0	556	556	x
1401	1,394	1,394	0	0	718	718	
1402	920	368	0	0	238	238	x
1403	1,944	972	0	0	620	620	x

Appendix A-4

Region 4

West Fork Region 4



- Region 4 Subbasin Boundaries
- Region 4 303(d) Listed Segments
- Region 4 Reaches
- Outlet Point

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

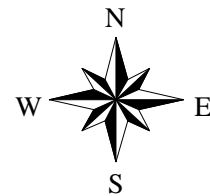


Figure 1. Region 4 - West Fork watershed

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 4

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
Simpson Creek	MW-15	pH, Metals	1801, 1802, 1803, 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, 1829, 1830, 1831, 1832, 1833, 1834, 1835, 1836, 1837, 1838, 1839, 1840, 1841, 1842, 1843, 1844, 1845, 1846, 1847, 1848, 1849, 1850, 1851, 1852, 1853, 1854, 1855, 1856, 1857		Aquatic Life
Jack Run	MW-15-A	pH, Metals	1802		Aquatic Life
Smith Run	MW-15-B	pH, Metals	1804		Aquatic Life
Jerry Run	MW-15-H	pH, Metals	1818		Aquatic Life
Berry Run	MW-15-I	pH, Metals	1820, 1822, 1823		Aquatic Life
Right Fork	MW-15-J	pH, Metals	1824, 1826, 1827, 1828, 1829, 1830, 1831, 1832, 1833, 1834, 1835		Aquatic Life
Simpson Creek: UT#3	MW-15?c	pH, Metals	1826		Aquatic Life
Buck Fork	MW-15-J-1	pH, Metals	1828		Aquatic Life
Sand Lick Run	MW-15-J-2	pH, Metals	1830		Aquatic Life
Gabe Fork	MW-15-J-3	pH, Metals	1833		Aquatic Life
Simpson Creek: UT#4	MW-15?d	pH, Metals	1837		Aquatic Life
Bartlett Run	MW-15-K	pH, Metals	1839		Aquatic Life
Simpson Creek: UT#5	MW-15?e	pH, Metals	1841		Aquatic Life
West Branch	MW-15-L	pH, Metals	1843, 1848, 1849, 1850, 1851, 1852, 1853		Aquatic Life
Camp Branch	MW-15-M	pH, Metals	1845		Aquatic Life
Simpson Creek: UT#6	MW-15?f	pH, Metals	1847		Aquatic Life
Simpson Creek: UT#1	MW-15?a	pH, Metals	1848		Aquatic Life
Stillhouse Run	MW-15-L-1	pH, Metals	1850		Aquatic Life

Metals and pH TMDLs for the West Fork Watershed

Table 1. (cont.) Impaired waterbodies in Region 4

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
Right Branch-West Branch-Simpson Creek	MW-15-L?	pH, Metals	1852		Aquatic Life
UT#1 West Br/Simpson Ck	MW-15-L?	pH, Metals	1858		Aquatic Life
Jack Run	MW-17	Metals	2001		Aquatic Life
Fall Run	MW-18	pH, Metals	2101		Aquatic Life

T = Aquatic Life Trout Waters

W = Warm Water Fishery

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

SWS	SWS
1801	1848
1802	1849
1804	1850
1805	1851
1807	1852
1808	1853
1809	1854
1811	1855
1812	1856
1814	1857
1815	2001
1816	2101
1818	
1819	
1820	
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1847	

Metals and pH TMDLs for the West Fork Watershed

Table 3a. Water quality data for aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1801	WVMW-15-0.5A_STA11	5030.00	5030	5030	1	08/01/00	08/01/00
1802	WVMW-15-A_STA13	310.00	310	310	1	08/01/00	08/01/00
1804	MW-015-0007	310.00	310	310	1	08/01/00	08/01/00
1805	WVMW-15_STA6	260.00	260	260	1	08/01/00	08/01/00
1806	WVMW-15-C_STA18	940.00	940	940	1	08/01/00	08/01/00
1807	MW-015-0003	160.00	160	160	1	07/26/00	07/26/00
1811	WVMW-15-D_STA20	90.00	90	90	1	08/15/00	08/15/00
1812	MW-015-0013	240.00	240	240	1	07/26/00	07/26/00
1814	WVMW-15-F_STA25	80.00	80	80	2	08/15/00	08/15/00
1817	WVMW-15-G_STA27	147.00	147	147	1	03/19/01	03/19/01
1818	WVMW-15-H_STA31	240.00	240	240	1	03/19/01	03/19/01
1819	WVMW-15_STA4	1150.00	1150	1150	1	03/19/01	03/19/01
1820	WVMW-15-I_STA32	120.00	120	120	1	08/08/00	08/08/00
1824	WVMW-15-J_STA35	2200.00	2200	2200	1	03/19/01	03/19/01
1825	21WV7IWQ_550590	740.00	740	740	1	07/15/74	07/15/74
1826	WVMW-15-J-0.3_STA39	15500.00	15500	15500	1	08/08/00	08/08/00
1828	MW-015-0020	3820.00	3820	3820	1	08/07/00	08/07/00
1830	WVMW-15-J-2_STA42	1290.00	1290	1290	1	08/07/00	08/07/00
1833	WVMW-15-J-3_STA46	240.00	240	240	1	08/08/00	08/08/00
1837	MW-015-0024	150.00	150	150	1	08/08/00	08/08/00
1839	MW-015-0025	190.00	190	190	1	08/08/00	08/08/00
1841	WVMW-15-K.7_STA49	180.00	180	180	1	08/08/00	08/08/00
1842	WVMW-15_STA2	2420.00	2420	2420	1	03/19/01	03/19/01
1843	MW-015-0027	660.00	660	660	1	08/08/00	08/08/00
1845	WVMW-15-M_STA68	110.00	110	110	1	03/19/01	03/19/01
1846	WVMW-15-N_STA70	6550.00	6550	6550	1	08/08/00	08/08/00
1847	MW-015-0036	6555.00	6550	6560	2	08/08/00	08/08/00
1848	WVMW-15-L-0.5-{0.17}-MINE_	53.00	53	53	1	03/20/01	03/20/01
1850	WVMW-15-L-1_STA61	77.00	77	77	1	03/20/01	03/20/01
1853	MW-015-0034	240.00	240	240	1	08/08/00	08/08/00
2001	WVMW-17_STA2	380.00	380	380	1	08/16/00	08/16/00

Metals and pH TMDLs for the West Fork Watershed

Table 3b. Water quality data for iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1801	WVMW-15-0.5A_STA11	4550.00	4550	4550	1	08/01/00	08/01/00
1802	WVMW-15-A_STA13	960.00	960	960	1	08/01/00	08/01/00
1804	MW-015-0007	960.00	960	960	1	08/01/00	08/01/00
1805	WVMW-15_STA6	360.00	360	360	1	08/01/00	08/01/00
1806	WVMW-15-C_STA18	1150.00	1150	1150	1	08/01/00	08/01/00
1807	MW-015-0003	260.00	260	260	1	07/26/00	07/26/00
1811	WVMW-15-D_STA20	240.00	240	240	1	08/15/00	08/15/00
1812	MW-015-0013	320.00	320	320	1	07/26/00	07/26/00
1814	WVMW-15-F_STA25	210.00	210	210	2	08/15/00	08/15/00
1817	WVMW-15-G_STA27	287.00	287	287	1	03/19/01	03/19/01
1818	WVMW-15-H_STA31	132.00	132	132	1	03/19/01	03/19/01
1819	WVMW-15_STA4	1370.00	1370	1370	1	03/19/01	03/19/01
1820	WVMW-15-I_STA32	70.00	70	70	1	08/08/00	08/08/00
1824	WVMW-15-J_STA35	1080.00	1080	1080	1	03/19/01	03/19/01
1825	21WV7IWQ_550590	260.00	260	260	1	07/15/74	07/15/74
1826	WVMW-15-J-0.3_STA39	4120.00	4120	4120	1	08/08/00	08/08/00
1828	MW-015-0020	890.00	890	890	1	08/07/00	08/07/00
1830	WVMW-15-J-2_STA42	760.00	760	760	1	08/07/00	08/07/00
1833	WVMW-15-J-3_STA46	360.00	360	360	1	08/08/00	08/08/00
1837	MW-015-0024	420.00	420	420	1	08/08/00	08/08/00
1839	MW-015-0025	750.00	750	750	1	08/08/00	08/08/00
1841	WVMW-15-K.7_STA49	1630.00	1630	1630	1	08/08/00	08/08/00
1842	WVMW-15_STA2	6510.00	6510	6510	1	03/19/01	03/19/01
1843	MW-015-0027	5830.00	5830	5830	1	08/08/00	08/08/00
1845	WVMW-15-M_STA68	13500.00	13500	13500	1	03/19/01	03/19/01
1846	WVMW-15-N_STA70	1580.00	1580	1580	1	08/08/00	08/08/00
1847	MW-015-0036	1665.00	1580	1750	2	08/08/00	08/08/00
1848	WVMW-15-L-0.5-{0.17}-MINE_	18500.00	18500	18500	1	03/20/01	03/20/01
1850	WVMW-15-L-1_STA61	2570.00	2570	2570	1	03/20/01	03/20/01
1853	MW-015-0034	780.00	780	780	1	08/08/00	08/08/00
2001	WVMW-17_STA2	10200.00	10200	10200	1	08/16/00	08/16/00

Metals and pH TMDLs for the West Fork Watershed

Table 3c. Water quality data for manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1801	WVMW-15-0.5A_STA11	2490.00	2490	2490	1	08/01/00	08/01/00
1802	WVMW-15-A_STA13	1090.00	1090	1090	1	08/01/00	08/01/00
1804	MW-015-0007	1090.00	1090	1090	1	08/01/00	08/01/00
1805	WVMW-15_STA6	80.00	80	80	1	08/01/00	08/01/00
1806	WVMW-15-C_STA18	160.00	160	160	1	08/01/00	08/01/00
1807	MW-015-0003	100.00	100	100	1	07/26/00	07/26/00
1811	WVMW-15-D_STA20	110.00	110	110	1	08/15/00	08/15/00
1812	MW-015-0013	80.00	80	80	1	07/26/00	07/26/00
1814	WVMW-15-F_STA25	40.00	40	40	2	08/15/00	08/15/00
1817	WVMW-15-G_STA27	71.00	71	71	1	03/19/01	03/19/01
1818	WVMW-15-H_STA31	82.00	82	82	1	03/19/01	03/19/01
1819	WVMW-15_STA4	660.00	660	660	1	03/19/01	03/19/01
1820	WVMW-15-I_STA32	260.00	260	260	1	08/08/00	08/08/00
1824	WVMW-15-J_STA35	834.00	834	834	1	03/19/01	03/19/01
1825	21WV7IWQ_550590	840.00	840	840	1	07/15/74	07/15/74
1826	WVMW-15-J-0.3_STA39	3850.00	3850	3850	1	08/08/00	08/08/00
1828	MW-015-0020	2260.00	2260	2260	1	08/07/00	08/07/00
1830	WVMW-15-J-2_STA42	740.00	740	740	1	08/07/00	08/07/00
1833	WVMW-15-J-3_STA46	360.00	360	360	1	08/08/00	08/08/00
1837	MW-015-0024	400.00	400	400	1	08/08/00	08/08/00
1839	MW-015-0025	300.00	300	300	1	08/08/00	08/08/00
1841	WVMW-15-K.7_STA49	470.00	470	470	1	08/08/00	08/08/00
1842	WVMW-15_STA2	652.00	652	652	1	03/19/01	03/19/01
1843	MW-015-0027	750.00	750	750	1	08/08/00	08/08/00
1845	WVMW-15-M_STA68	611.00	611	611	1	03/19/01	03/19/01
1846	WVMW-15-N_STA70	5360.00	5360	5360	1	08/08/00	08/08/00
1847	MW-015-0036	5290.00	5220	5360	2	08/08/00	08/08/00
1848	MW-15-L-0.5-{0.17}-MINE_STA	667.00	667	667	1	03/20/01	03/20/01
1850	WVMW-15-L-1_STA61	650.00	650	650	1	03/20/01	03/20/01
1853	MW-015-0034	1780.00	1780	1780	1	08/08/00	08/08/00
2001	WVMW-17_STA2	4140.00	4140	4140	1	08/16/00	08/16/00

Metals and pH TMDLs for the West Fork Watershed

Table 3d. Water quality data for Total Nonfilterable Residue

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Coun t	Start Date	End Date
1801	WVMW-15-0.5A_STA11	4.00	4	4	1	08/01/00	08/01/00
1802	WVMW-15-A_STA13	1.00	1	1	1	08/01/00	08/01/00
1804	MW-015-0007	1.00	1	1	1	08/01/00	08/01/00
1805	WVMW-15_STA6	1.00	1	1	1	08/01/00	08/01/00
1806	WVMW-15-C_STA18	7.00	7	7	1	08/01/00	08/01/00
1807	MW-015-0003	2.00	2	2	1	07/26/00	07/26/00
1811	WVMW-15-D_STA20	1.00	1	1	1	08/15/00	08/15/00
1812	MW-015-0013	1.00	1	1	1	07/26/00	07/26/00
1814	WVMW-15-F_STA25	2.00	2	2	2	08/15/00	08/15/00
1817	WVMW-15-G_STA27	2.80	2.8	2.8	1	03/19/01	03/19/01
1818	WVMW-15-H_STA31	1.40	1.4	1.4	1	03/19/01	03/19/01
1819	WVMW-15_STA4	12.50	12.5	12.5	1	03/19/01	03/19/01
1820	WVMW-15-I_STA32	2.00	2	2	1	08/08/00	08/08/00
1824	WVMW-15-J_STA35	18.00	18	18	1	03/19/01	03/19/01
1825	21WV7IWQ_550590	16.00	16	16	1	07/15/74	07/15/74
1826	WVMW-15-J-0.3_STA39	1.00	1	1	1	08/08/00	08/08/00
1828	MW-015-0020	1.00	1	1	1	08/07/00	08/07/00
1830	WVMW-15-J-2_STA42	1.00	1	1	1	08/07/00	08/07/00
1833	WVMW-15-J-3_STA46	9.00	9	9	1	08/08/00	08/08/00
1837	MW-015-0024	4.00	4	4	1	08/08/00	08/08/00
1839	MW-015-0025	3.00	3	3	1	08/08/00	08/08/00
1841	WVMW-15-K.7_STA49	2.00	2	2	1	08/08/00	08/08/00
1842	WVMW-15_STA2	36.00	36	36	1	03/19/01	03/19/01
1843	MW-015-0027	10.00	10	10	1	08/08/00	08/08/00
1845	WVMW-15-M_STA68	38.50	38.5	38.5	1	03/19/01	03/19/01
1846	WVMW-15-N_STA70	4.00	4	4	1	08/08/00	08/08/00
1847	MW-015-0036	3.50	3	4	2	08/08/00	08/08/00
1848	WVMW-15-L-0.5-{0.17}- MINE_STA58	33.50	33.5	33.5	1	03/20/01	03/20/01
1850	WVMW-15-L-1_STA61	3.50	3.5	3.5	1	03/20/01	03/20/01
1853	MW-015-0034	1.00	1	1	1	08/08/00	08/08/00
2001	WVMW-17_STA2	7.00	7	7	1	08/16/00	08/16/00

Metals and pH TMDLs for the West Fork Watershed

Table 3e. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1801	WVMW-15-0.5A_STA11	4.60	4.6	4.6	1	08/01/00	08/01/00
1802	WVMW-15-A_STA13	7.16	7.16	7.2	1	08/01/00	08/01/00
1804	MW-015-0007	7.58	7.16	8.0	2	08/01/00	08/01/00
1805	WVMW-15_STA6	7.98	7.98	8.0	1	08/01/00	08/01/00
1806	WVMW-15-C_STA18	7.56	7.56	7.6	1	08/01/00	08/01/00
1807	MW-015-0003	7.71	7.71	7.7	1	07/26/00	07/26/00
1811	WVMW-15-D_STA20	8.01	8.01	8.0	1	08/15/00	08/15/00
1812	MW-015-0013	7.64	7.64	7.6	1	07/26/00	07/26/00
1814	WVMW-15-F_STA25	7.93	7.93	7.9	2	08/15/00	08/15/00
1817	WVMW-15-G_STA27	8.11	8.11	8.1	1	03/19/01	03/19/01
1818	WVMW-15-H_STA31	8.51	8.51	8.5	1	03/19/01	03/19/01
1819	WVMW-15_STA4	7.44	7.44	7.4	1	03/19/01	03/19/01
1820	WVMW-15-I_STA32	7.47	7.47	7.5	1	08/08/00	08/08/00
1824	WVMW-15-J_STA35	6.94	6.94	6.9	1	03/19/01	03/19/01
1826	WVMW-15-J-0.3_STA39	3.35	3.35	3.4	1	08/08/00	08/08/00
1828	MW-015-0020	6.13	5.6	6.7	2	08/07/00	08/07/00
1830	WVMW-15-J-2_STA42	7.41	7.41	7.4	1	08/07/00	08/07/00
1833	WVMW-15-J-3_STA46	7.58	7.58	7.6	1	08/08/00	08/08/00
1837	MW-015-0024	7.65	7.6	7.7	2	08/08/00	08/08/00
1839	MW-015-0025	7.81	7.52	8.1	2	08/08/00	08/08/00
1841	WVMW-15-K.7_STA49	7.45	7.45	7.5	1	08/08/00	08/08/00
1842	WVMW-15_STA2	7.84	7.84	7.8	1	03/19/01	03/19/01
1843	MW-015-0027	7.93	7.93	7.9	1	08/08/00	08/08/00
1845	WVMW-15-M_STA68	7.92	7.92	7.9	1	03/19/01	03/19/01
1846	WVMW-15-N_STA70	4.51	4.51	4.5	1	08/08/00	08/08/00
1847	MW-015-0036	4.51	4.51	4.5	2	08/08/00	08/08/00
1848	WVMW-15-L-0.5-{0.17}-MINE_	7.88	7.88	7.9	1	03/20/01	03/20/01
1850	WVMW-15-L-1_STA61	7.94	7.94	7.9	1	03/20/01	03/20/01
1853	MW-015-0034	7.11	7.11	7.1	1	08/08/00	08/08/00
2001	WVMW-17_STA2	7.07	7.07	7.1	1	08/16/00	08/16/00

Table 3f. Water quality data for dissolved zinc

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
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(not applicable to this region)

Metals and pH TMDLs for the West Fork Watershed

Table 4a. 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
1846	WV0043273	2,072	518	1.21	75
1846	WV1010115	64	16	1.21	75

Table 4b. 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
1846	WV0043273	1,425	1,140	2.69	20
1846	WV1010115	44	35	2.69	20

Table 4c. 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
1846	WV0043273	926	926	2.00	0
1846	WV1010115	29	29	2.00	0

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
1801	1,241	1,241	0	0	301	301	
1802	777	155	0	0	218	218	x
1803	0	0	0	0	57	57	
1804	3,706	556	0	0	641	641	x
1805	5,393	3,236	0	0	902	902	x
1806	0	0	0	0	61	61	
1807	325	325	0	0	776	776	
1808	288	86	0	0	224	224	x
1809	280	280	0	0	584	584	
1810	0	0	0	0	28	28	
1811	267	267	0	0	916	916	
1812	118	118	0	0	897	897	
1813	0	0	0	0	241	241	
1814	412	412	0	0	1,136	1,136	
1815	1,202	240	0	0	224	224	x
1816	3,383	507	0	0	128	128	x
1817	0	0	0	0	11	11	
1818	457	251	0	0	468	468	x
1819	6,021	1,806	0	0	744	744	x
1820	321	193	0	0	123	123	x
1821	0	0	0	0	23	23	
1822	471	141	0	0	213	213	x
1823	1,818	200	0	0	343	343	x
1824	0	0	0	0	109	109	
1825	0	0	0	0	295	295	
1826	1,738	35	0	0	43	43	x
1827	122	122	0	0	141	141	
1828	3,872	387	0	0	599	599	x
1829	0	0	0	0	7	7	
1830	5,293	371	0	0	330	330	x
1831	0	0	0	0	0	0	
1832	174	174	0	0	100	100	
1833	1,576	236	0	0	356	356	x
1834	0	0	0	0	193	193	
1835	420	252	0	0	417	417	x
1836	128	64	0	0	111	111	x
1837	2,697	216	127	10	238	238	x
1838	421	84	0	0	38	38	x
1839	2,132	213	0	0	283	283	x
1840	0	0	0	0	13	13	
1841	669	67	0	0	73	73	x
1842	4,180	334	0	0	323	323	x
1843	446	45	0	0	52	52	x
1844	1,145	229	0	0	210	210	x

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
1845	2,171	217	0	0	291	291	x
1846	2,680	54	0	0	297	297	x
1847	1,898	190	0	0	179	179	x
1848	1,784	125	0	0	115	115	x
1849	361	47	0	0	5	5	x
1850	1,416	142	0	0	155	155	x
1851	743	223	0	0	112	112	x
1852	3,510	246	0	0	225	225	x
1853	1,390	139	0	0	198	198	x
1854	442	442	0	0	421	421	
1855	499	200	805	322	342	342	x
1856	1,164	233	0	0	308	308	x
1857	1,191	357	0	0	566	566	x
1858	568	57	0	0	81	81	x
2001	11,987	240	0	0	370	370	x
2101	513	205	0	0	228	228	x

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
1801	4,290	1,716	0	0	579	579	x
1802	2,686	322	0	0	449	449	x
1803	0	0	0	0	87	87	
1804	12,813	897	0	0	1,193	1,193	x
1805	18,645	7,458	0	0	1,672	1,672	x
1806	0	0	0	0	87	87	
1807	1,125	1,125	0	0	1,160	1,160	
1808	996	249	0	0	374	374	x
1809	967	774	0	0	1,060	1,060	x
1810	0	0	0	0	42	42	
1811	922	922	0	0	1,678	1,678	
1812	406	406	0	0	1,499	1,499	
1813	0	0	0	0	418	418	
1814	1,423	1,423	0	0	2,045	2,045	
1815	4,155	416	0	0	431	431	x
1816	11,696	1,170	0	0	250	250	x
1817	0	0	0	0	23	23	
1818	1,596	638	0	0	886	886	x
1819	21,036	2,104	0	0	1,472	1,472	x
1820	1,123	225	0	0	242	242	x
1821	0	0	0	0	41	41	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		Requires Reduction
	Baseline Load (lb/yr)	Allocated Load	Baseline Load (lb/yr)	Allocated Load (lb/yr)	Baseline Load	Allocated Load (lb/yr)	
1822	1,646	329	0	0	423	423	x
1823	6,351	445	0	0	683	683	x
1824	0	0	0	0	206	206	
1825	0	0	0	0	576	576	
1826	6,071	121	0	0	76	76	x
1827	426	426	0	0	249	249	
1828	13,528	812	0	0	1,172	1,172	x
1829	0	0	0	0	12	12	
1830	18,491	555	0	0	635	635	x
1831	0	0	0	0	1	1	
1832	609	548	0	0	190	190	x
1833	5,505	551	0	0	724	724	x
1834	0	0	0	0	380	380	
1835	1,467	587	0	0	820	820	x
1836	448	224	0	0	217	217	x
1837	9,422	377	88	4	466	466	x
1838	1,470	147	0	0	71	71	x
1839	7,448	447	0	0	556	556	x
1840	0	0	0	0	23	23	
1841	2,336	117	0	0	145	145	x
1842	14,604	730	0	0	635	635	x
1843	1,557	156	0	0	101	101	x
1844	4,001	400	0	0	413	413	x
1845	7,585	531	0	0	586	586	x
1846	9,361	187	0	0	562	562	x
1847	6,630	265	0	0	358	358	x
1848	6,234	249	0	0	228	228	x
1849	1,263	126	0	0	8	8	x
1850	4,946	247	0	0	303	303	x
1851	2,595	260	0	0	219	219	x
1852	12,264	368	0	0	433	433	x
1853	4,855	388	0	0	396	396	x
1854	1,530	765	0	0	834	834	x
1855	1,724	604	556	195	698	698	x
1856	4,067	407	0	0	607	607	x
1857	4,119	824	0	0	1,107	1,107	x
1858	1,983	159	0	0	162	162	x
2001	41,442	829	0	0	729	729	x
2101	1,774	355	0	0	450	450	x

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
1801	744	744	0	0	251	251	
1802	466	466	0	0	173	173	
1803	0	0	0	0	55	55	
1804	2,222	1,111	0	0	549	549	x
1805	3,234	3,234	0	0	773	773	
1806	0	0	0	0	60	60	
1807	195	195	0	0	754	754	
1808	173	173	0	0	205	205	
1809	168	168	0	0	506	506	
1810	0	0	0	0	28	28	
1811	160	160	0	0	792	792	
1812	70	70	0	0	817	817	
1813	0	0	0	0	217	217	
1814	247	247	0	0	991	991	
1815	721	721	0	0	187	187	
1816	2,029	2,029	0	0	105	105	
1817	0	0	0	0	9	9	
1818	279	279	0	0	403	403	
1819	3,674	3,674	0	0	622	622	
1820	196	196	0	0	103	103	
1821	0	0	0	0	20	20	
1822	287	287	0	0	177	177	
1823	1,109	333	0	0	284	284	x
1824	0	0	0	0	94	94	
1825	0	0	0	0	249	249	
1826	1,060	106	0	0	39	39	x
1827	74	74	0	0	127	127	
1828	2,363	473	0	0	505	505	x
1829	0	0	0	0	7	7	
1830	3,230	807	0	0	282	270	x
1831	0	0	0	0	0	0	
1832	106	106	0	0	86	86	
1833	962	625	0	0	292	292	x
1834	0	0	0	0	162	162	
1835	256	256	0	0	351	351	
1836	78	39	0	0	94	94	x
1837	1,646	494	56	17	201	201	x
1838	257	128	0	0	33	33	x
1839	1,301	520	0	0	239	239	x
1840	0	0	0	0	12	12	
1841	408	163	0	0	61	61	x
1842	2,551	893	0	0	272	272	x
1843	272	136	0	0	44	44	x
1844	699	699	0	0	176	176	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
1845	1,325	530	0	0	242	242	x
1846	1,635	49	0	0	256	256	x
1847	1,158	347	0	0	149	149	x
1848	1,089	218	0	0	96	96	x
1849	221	176	0	0	5	5	x
1850	864	259	0	0	131	131	x
1851	453	204	0	0	94	94	x
1852	2,142	428	0	0	191	191	x
1853	848	424	0	0	164	164	x
1854	265	265	0	0	343	343	
1855	299	299	357	357	273	273	
1856	710	568	0	0	259	259	x
1857	714	714	0	0	468	468	
1858	346	173	0	0	67	67	x
2001	7,188	719	0	0	303	303	x
2101	308	308	0	0	187	187	

Appendix A-5

Region 5

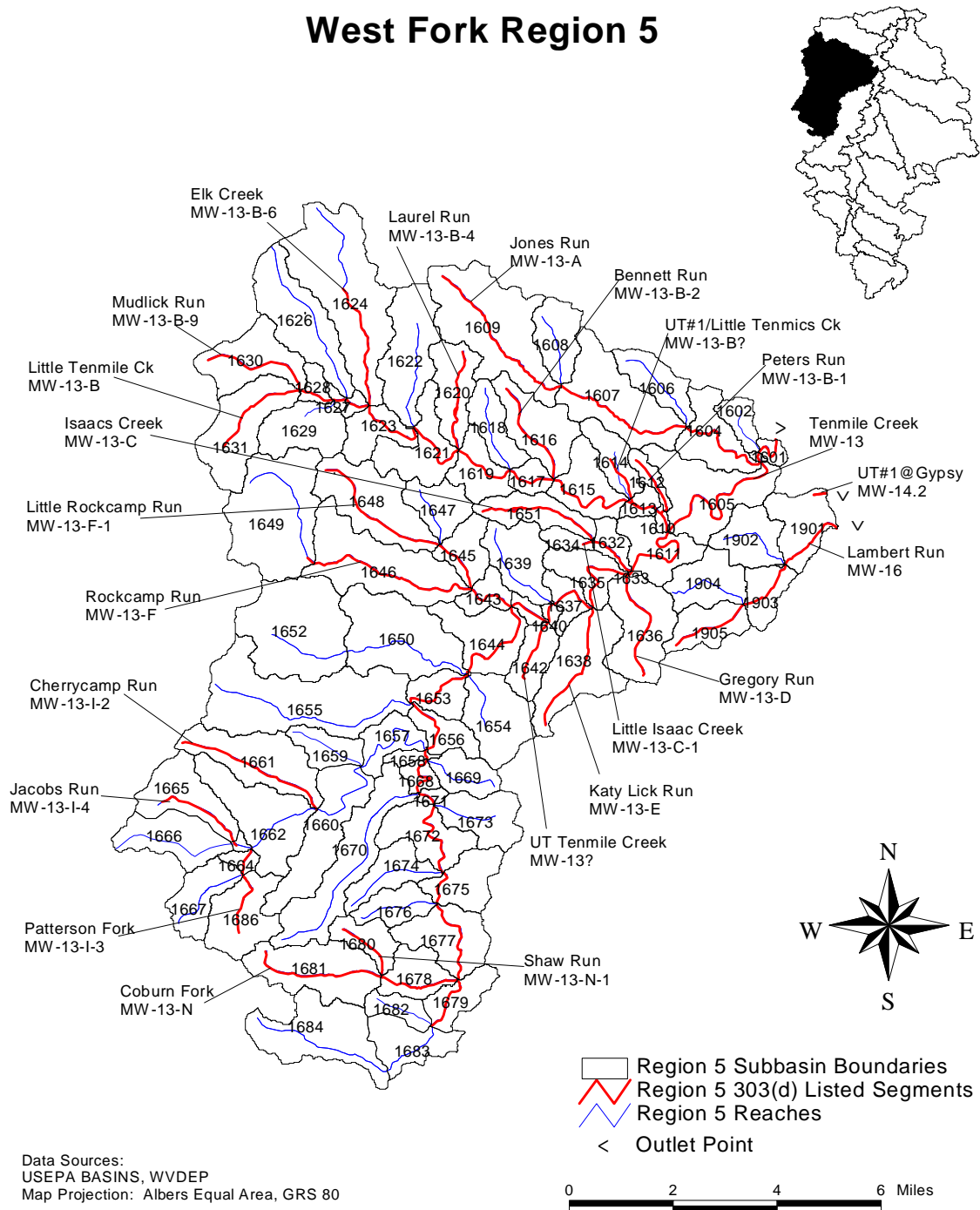


Figure 1. Region 5 - West Fork watershed

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 5

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
Ten Mile Creek	MW-13	Metals	1601, 1602, 1603, 1604, 1605, 1606, 1607, 1608, 1609, 1610, 1611, 1612, 1613, 1614, 1615, 1616, 1617, 1618, 1619, 1620, 1621, 1622, 1623, 1624, 1625, 1626, 1627, 1628, 1629, 1630, 1631, 1632, 1633, 1634, 1635, 1636, 1637, 1638, 1639, 1640, 1641, 1642, 1643, 1644, 1645, 1646, 1647, 1648, 1649, 1650, 1651, 1652, 1653, 1654, 1655, 1656, 1657, 1658, 1659, 1660, 1661, 1662, 1663, 1664, 1665, 1666, 1667, 1668, 1669, 1670, 1671, 1672, 1673, 1674, 1675, 1676, 1677, 1678, 1679, 1680, 1681, 1682, 1683, 1684, 1685, 1686		Aquatic Life
Jack Run	MW-13.5-A	Metals	1602		Aquatic Life
Jones Run	MW-13-A	Metals	1604, 1606, 1607, 1608, 1609		Aquatic Life
Little Ten Mile Creek	MW-13-B	Metals	1610, 1612, 1613, 1614, 1615, 1616, 1617, 1618, 1619, 1620, 1621, 1622, 1623, 1624, 1625, 1626, 1627, 1628, 1629, 1630, 1631		Aquatic Life
Peters Run	MW-13-B-1	Metals	1612		Aquatic Life
Little Ten Mile Creek: UT#1	MW-13-B?	Metals	1614		Aquatic Life
Bennett Run	MW-13-B-2	pH, Metals	1616		Aquatic Life
Laurel Run	MW-13-B-4	Metals	1620		Aquatic Life
Elk Creek	MW-13-B-6	Metals	1624		Aquatic Life
Mudlick Run	MW-13-B-9	pH, Metals	1630		Aquatic Life

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 5

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
Isaacs Creek	MW-13-C	Metals	1632, 1634, 1651		Aquatic Life
Little Isaacs Creek	MW-13-C-1	Metals	1634		Aquatic Life
Gregorey Run	MW-13-D	Metals	1636		Aquatic Life
Katy Lick Run	MW-13-E	Metals	1638		Aquatic Life
Tenmile Creek: UT#3	MW-13?	Metals	1642		Aquatic Life
Rockcamp Run	MW-13-F	Metals	1643, 1645, 1646, 1647, 1648, 1649		Aquatic Life
Little Rockcamp Run	MW-13-F-1	Metals	1645, 1647, 1648		Aquatic Life
Cherry Camp Run	MW-13-I-2	Metals	1661		Aquatic Life
Patterson Fork	MW-13-I-3	Metals	1664, 1667, 1686		Aquatic Life
Coburn Fork	MW-13-N	pH, Metals	1678, 1680, 1681		Aquatic Life
Shaw Run	MW-13-N-1	pH, Metals	1680		Aquatic Life
Lambert Run	MW-16	pH, Metals	1901, 1902, 1903, 1904, 1905		Aquatic Life

T = Aquatic Life Trout Waters

W = Warm Water Fishery

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

SWS	SWS	SWS
1601	1633	1901
1602	1634	1902
1604	1635	1903
1605	1636	1904
1606	1637	1905
1607	1638	
1608	1639	
1609	1640	
1611	1641	
1612	1642	
1614	1645	
1615	1646	
1616	1647	
1617	1651	
1619	1673	
1632	1677	

Metals and pH TMDLs for the West Fork Watershed

Table 3a. Water quality data for aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1602	WVMW-13-0.5A_STA5	1450.00	1450	1450	1	08/01/00	08/01/00
1603	WVMW-13_STA4	260.00	260	260	1	08/01/00	08/01/00
1604	WVMW-13-A_STA7	110.00	110	110	1	08/01/00	08/01/00
1606	WV0093505_URR-10	406.92	100	1540	13	10/26/00	07/13/00
1607	MW-013-0006	100.00	100	100	1	07/24/00	07/24/00
1610	WVMW-13-B_STA11	15400.00	15400	15400	1	03/21/01	03/21/01
1614	WVMW-13-B-1_STA14	80.00	80	80	1	07/31/00	07/31/00
1616	MW-013-0011	50.00	50	50	1	07/24/00	07/24/00
1620	WVMW-13-B-4_STA19	5430.00	5430	5430	1	03/21/01	03/21/01
1626	WVMW-13-B-7_STA21	140.00	140	140	1	08/01/00	08/01/00
1628	MW-013-0008	150.00	150	150	1	07/25/00	07/25/00
1630	WVMW-13-B-9_STA23	70.00	70	70	1	08/01/00	08/01/00
1632	WVMW-13-C_STA25	2750.00	2750	2750	1	03/21/01	03/21/01
1635	WVMW-13_STA2	90.00	90	90	1	07/25/00	07/25/00
1636	MW-013-0017	60.00	60	60	1	08/02/00	08/02/00
1638	MW-013-0018	110.00	110	110	1	08/02/00	08/02/00
1639	MW-013-0019	140.00	140	140	1	08/02/00	08/02/00
1640	WVMW-13_STA1	110.00	110	110	1	07/25/00	07/25/00
1642	MW-013-0020	180.00	180	180	1	08/02/00	08/02/00
1643	WVMW-13-F_STA36	50.00	50	50	1	08/03/00	08/03/00
1645	MW-013-0024	160.00	160	160	1	08/03/00	08/03/00
1646	WVMW-13-F_STA38	200.00	200	200	1	07/17/00	07/17/00
1651	WV1011375_DIC-2	810.60	108.1	8060	48	01/16/01	12/03/01
1657	WVMW-13-I_STA44	11000.00	11000	11000	1	03/21/01	03/21/01
1660	21WV7IWQ_550587	1153.57	80	8600	14	09/17/75	06/14/78
1661	WVMW-13-I-2_STA45	5740.00	5740	5740	1	03/21/01	03/21/01
1662	WVMW-13-I-2.5_STA47	1460.00	1460	1460	1	03/21/01	03/21/01
1664	WVMW-13-I-3_STA50	6070.00	6070	6070	1	03/21/01	03/21/01
1668	WVMW-13-J_STA52	220.00	220	220	1	08/02/00	08/02/00
1673	21WV7IWQ_550592	110.00	110	110	1	07/15/74	07/15/74
1678	MW-013-0031	100.00	100	100	1	08/02/00	08/02/00
1680	WVMW-13-N-1_STA56	52300.00	52300	52300	1	03/21/01	03/21/01
1901	WVMW-16_STA3	4760.00	4760	4760	1	03/21/01	03/21/01
1903	WVMW-16_STA1	3980.00	3980	3980	1	03/21/01	03/21/01

Metals and pH TMDLs for the West Fork Watershed

Table 3b. Water quality data for iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1602	WVMW-13-0.5A_STA5	3720.00	3720	3720	1	08/01/00	08/01/00
1603	WVMW-13_STA4	1380.00	1380	1380	1	08/01/00	08/01/00
1604	WVMW-13-A_STA7	230.00	230	230	1	08/01/00	08/01/00
1606	WV0093505_URR-10	493.91	120	2560	23	10/21/99	07/09/96
1607	MW-013-0006	470.00	470	470	1	07/24/00	07/24/00
1610	WVMW-13-B_STA11	23100.00	23100	23100	1	03/21/01	03/21/01
1614	WVMW-13-B-1_STA14	100.00	100	100	1	07/31/00	07/31/00
1615	112WRD_392203080243739	7940.00	3900	12000	5	05/03/79	07/22/81
1616	MW-013-0011	21900.00	21900	21900	1	07/24/00	07/24/00
1620	WVMW-13-B-4_STA19	6080.00	6080	6080	1	03/21/01	03/21/01
1626	WVMW-13-B-7_STA21	300.00	300	300	1	08/01/00	08/01/00
1628	MW-013-0008	0.00	0	0	1	07/25/00	07/25/00
1630	WVMW-13-B-9_STA23	320.00	320	320	1	08/01/00	08/01/00
1632	WVMW-13-C_STA25	4570.00	4570	4570	1	03/21/01	03/21/01
1635	WVMW-13_STA2	610.00	610	610	1	07/25/00	07/25/00
1636	MW-013-0017	360.00	360	360	1	08/02/00	08/02/00
1638	MW-013-0018	360.00	360	360	1	08/02/00	08/02/00
1639	MW-013-0019	18900.00	18900	18900	1	08/02/00	08/02/00
1640	WVMW-13_STA1	1490.00	1490	1490	1	07/25/00	07/25/00
1642	MW-013-0020	59900.00	59900	59900	1	08/02/00	08/02/00
1643	WVMW-13-F_STA36	110.00	110	110	1	08/03/00	08/03/00
1645	MW-013-0024	280.00	280	280	1	08/03/00	08/03/00
1646	WVMW-13-F_STA38	650.00	650	650	1	07/17/00	07/17/00
1651	WV1011375_DIC-2	1316.68	21.7	15314	48	03/27/01	05/05/00
1657	WVMW-13-I_STA44	14100.00	14100	14100	1	03/21/01	03/21/01
1660	21WV7IWQ_550587	2311.29	68	13800	14	06/14/78	03/09/76
1661	WVMW-13-I-2_STA45	7150.00	7150	7150	1	03/21/01	03/21/01
1662	WVMW-13-I-2.5_STA47	6180.00	6180	6180	1	03/21/01	03/21/01
1664	WVMW-13-I-3_STA50	6780.00	6780	6780	1	03/21/01	03/21/01
1668	WVMW-13-J_STA52	580.00	580	580	1	08/02/00	08/02/00
1672	112WRD_391632080292039	1084.00	460	1800	5	05/03/79	07/20/81
1673	21WV7IWQ_550592	3733.33	3000	4200	3	08/11/50	07/15/74
1678	MW-013-0031	910.00	910	910	1	08/02/00	08/02/00
1680	WVMW-13-N-1_STA56	79200.00	79200	79200	1	03/21/01	03/21/01
1901	WVMW-16_STA3	11700.00	11700	11700	1	03/21/01	03/21/01
1903	WVMW-16_STA1	7570.00	7570	7570	1	03/21/01	03/21/01
1904	11COEHUN_4WFS12353	92500.00	92500	92500	1	05/04/78	05/04/78

Metals and pH TMDLs for the West Fork Watershed

Table 3c. Water quality data for manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1602	WVMW-13-0.5A_STA5	240.00	240	240	1	08/01/00	08/01/00
1603	WVMW-13_STA4	40.00	40	40	1	08/01/00	08/01/00
1604	WVMW-13-A_STA7	30.00	30	30	1	08/01/00	08/01/00
1606	WV0093505_URR-10	165.22	40	370	23	10/26/00	08/05/97
1607	MW-013-0006	270.00	270	270	1	07/24/00	07/24/00
1610	WVMW-13-B_STA11	719.00	719	719	1	03/21/01	03/21/01
1614	WVMW-13-B-1_STA14	20.00	20	20	1	07/31/00	07/31/00
1615	112WRD_392203080243739	578.00	320	1200	5	03/25/80	05/03/79
1616	MW-013-0011	1080.00	1080	1080	1	07/24/00	07/24/00
1620	WVMW-13-B-4_STA19	295.00	295	295	1	03/21/01	03/21/01
1626	WVMW-13-B-7_STA21	100.00	100	100	1	08/01/00	08/01/00
1628	MW-013-0008	0.00	0	0	1	07/25/00	07/25/00
1630	WVMW-13-B-9_STA23	170.00	170	170	1	08/01/00	08/01/00
1632	WVMW-13-C_STA25	385.00	385	385	1	03/21/01	03/21/01
1635	WVMW-13_STA2	70.00	70	70	1	07/25/00	07/25/00
1636	MW-013-0017	290.00	290	290	1	08/02/00	08/02/00
1638	MW-013-0018	40.00	40	40	1	08/02/00	08/02/00
1639	MW-013-0019	750.00	750	750	1	08/02/00	08/02/00
1640	WVMW-13_STA1	130.00	130	130	1	07/25/00	07/25/00
1642	MW-013-0020	2330.00	2330	2330	1	08/02/00	08/02/00
1643	WVMW-13-F_STA36	10.00	10	10	1	08/03/00	08/03/00
1645	MW-013-0024	70.00	70	70	1	08/03/00	08/03/00
1646	WVMW-13-F_STA38	120.00	120	120	1	07/17/00	07/17/00
1651	WV1011375_DIC-2	745.90	20	2660	48	03/27/01	04/26/00
1657	WVMW-13-I_STA44	745.00	745	745	1	03/21/01	03/21/01
1660	21WV7IWQ_550587	413.29	140	1160	14	06/14/78	03/09/76
1661	WVMW-13-I-2_STA45	315.00	315	315	1	03/21/01	03/21/01
1662	WVMW-13-I-2.5_STA47	544.00	544	544	1	03/21/01	03/21/01
1664	WVMW-13-I-3_STA50	298.00	298	298	1	03/21/01	03/21/01
1668	WVMW-13-J_STA52	100.00	100	100	1	08/02/00	08/02/00
1672	112WRD_391632080292039	118.00	50	160	5	05/03/79	09/10/79
1673	21WV7IWQ_550592	1206.67	1200	1220	3	08/11/50	07/15/74
1678	MW-013-0031	280.00	280	280	1	08/02/00	08/02/00
1680	WVMW-13-N-1_STA56	3990.00	3990	3990	1	03/21/01	03/21/01
1901	WVMW-16_STA3	1250.00	1250	1250	1	03/21/01	03/21/01
1903	WVMW-16_STA1	1230.00	1230	1230	1	03/21/01	03/21/01
1904	11COEHUN_4WFS12353	9000.00	9000	9000	1	05/04/78	05/04/78

Metals and pH TMDLs for the West Fork Watershed

Table 3d. Water quality data for Total Nonfilterable Residue

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1602	WVMW-13-0.5A_STA5	24.00	24	24	1	08/01/00	08/01/00
1603	WVMW-13_STA4	3.00	3	3	1	08/01/00	08/01/00
1604	WVMW-13-A_STA7	1.00	1	1	1	08/01/00	08/01/00
1607	MW-013-0006	2.00	2	2	1	07/24/00	07/24/00
1610	WVMW-13-B_STA11	456.50	456.5	456.5	1	03/21/01	03/21/01
1614	WVMW-13-B-1_STA14	3.00	3	3	1	07/31/00	07/31/00
1616	MW-013-0011	42.00	42	42	1	07/24/00	07/24/00
1620	WVMW-13-B-4_STA19	167.00	167	167	1	03/21/01	03/21/01
1626	WVMW-13-B-7_STA21	4.00	4	4	1	08/01/00	08/01/00
1628	MW-013-0008	2.00	2	2	1	07/25/00	07/25/00
1630	WVMW-13-B-9_STA23	1.00	1	1	1	08/01/00	08/01/00
1632	WVMW-13-C_STA25	67.00	67	67	1	03/21/01	03/21/01
1635	WVMW-13_STA2	3.00	3	3	1	07/25/00	07/25/00
1636	MW-013-0017	1.00	1	1	1	08/02/00	08/02/00
1638	MW-013-0018	2.00	2	2	1	08/02/00	08/02/00
1639	MW-013-0019	40.00	40	40	1	08/02/00	08/02/00
1640	WVMW-13_STA1	1.00	1	1	1	07/25/00	07/25/00
1642	MW-013-0020	74.00	74	74	1	08/02/00	08/02/00
1643	WVMW-13-F_STA36	1.00	1	1	1	08/03/00	08/03/00
1645	MW-013-0024	1.00	1	1	1	08/03/00	08/03/00
1646	WVMW-13-F_STA38	1.00	1	1	1	07/17/00	07/17/00
1657	WVMW-13-I_STA44	512.00	512	512	1	03/21/01	03/21/01
1660	21WV7IWQ_550587	60.53	5	424	17	06/14/78	03/14/78
1661	WVMW-13-I-2_STA45	145.00	145	145	1	03/21/01	03/21/01
1662	WVMW-13-I-2.5_STA47	43.50	43.5	43.5	1	03/21/01	03/21/01
1664	WVMW-13-I-3_STA50	121.00	121	121	1	03/21/01	03/21/01
1666	21WV7IWQ_550588	59.50	27	97	6	08/23/54	08/23/54
1668	WVMW-13-J_STA52	1.00	1	1	1	08/02/00	08/02/00
1673	21WV7IWQ_550592	30.00	19	41	2	07/20/54	07/15/74
1678	MW-013-0031	1.00	1	1	1	08/02/00	08/02/00
1680	WVMW-13-N-1_STA56	1732	1732	1732	1	3/21/2001	3/21/2001
1901	WVMW-16_STA3	87.00	87	87.0	1	03/21/01	03/21/01
1903	WVMW-16_STA1	63.00	63	63.0	1	03/21/01	03/21/01

Metals and pH TMDLs for the West Fork Watershed

Table 3e. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1601	112WRD_03060750	3.56	3.56	3.6	1	05/09/63	05/09/63
1602	WVMW-13-0.5A_STA5	7.36	7.36	7.4	1	08/01/00	08/01/00
1603	WVMW-13_STA4	7.23	7.23	7.2	1	08/01/00	08/01/00
1604	WVMW-13-A_STA7	6.89	6.89	6.9	1	08/01/00	08/01/00
1606	WV0093505_URR-10	7.87	7.2	8.5	23	04/12/00	04/10/98
1607	MW-013-0006	6.72	6.72	6.7	1	07/24/00	07/24/00
1610	WVMW-13-B_STA11	7.22	7.22	7.2	1	03/21/01	03/21/01
1614	WVMW-13-B-1_STA14	8.06	8.06	8.1	1	07/31/00	07/31/00
1615	112WRD_392203080243739	6.98	5.7	8.5	6	05/03/79	09/27/83
1616	MW-013-0011	6.70	6.7	6.7	1	07/24/00	07/24/00
1620	WVMW-13-B-4_STA19	7.43	7.43	7.4	1	03/21/01	03/21/01
1626	WVMW-13-B-7_STA21	7.80	7.8	7.8	1	08/01/00	08/01/00
1628	MW-013-0008	7.16	7.16	7.2	1	07/25/00	07/25/00
1630	WVMW-13-B-9_STA23	7.69	7.69	7.7	1	08/01/00	08/01/00
1632	WVMW-13-C_STA25	7.24	7.24	7.2	1	03/21/01	03/21/01
1635	WVMW-13_STA2	7.36	7.36	7.4	1	07/25/00	07/25/00
1636	MW-013-0017	8.09	7.97	8.2	2	08/02/00	08/02/00
1638	MW-013-0018	8.17	8.14	8.2	2	08/02/00	08/02/00
1639	MW-013-0019	8.07	8.04	8.1	2	08/02/00	08/02/00
1640	WVMW-13_STA1	7.36	7.36	7.4	1	07/25/00	07/25/00
1642	MW-013-0020	7.51	7.32	7.7	2	08/02/00	08/02/00
1643	WVMW-13-F_STA36	7.99	7.99	8.0	1	08/03/00	08/03/00
1645	MW-013-0024	7.82	7.8	7.8	2	08/03/00	08/03/00
1646	WVMW-13-F_STA38	7.20	7.2	7.2	1	07/17/00	07/17/00
1651	WV1011375_DIC-2	7.68	6.6	8.6	48	01/16/01	12/03/01
1657	WVMW-13-I_STA44	7.90	7.9	7.9	1	03/21/01	03/21/01
1660	21WV7IWQ_550587	7.14	6.4	7.8	18	12/15/76	07/09/74
1661	WVMW-13-I-2_STA45	7.24	7.24	7.2	1	03/21/01	03/21/01
1662	WVMW-13-I-2.5_STA47	7.49	7.49	7.5	1	03/21/01	03/21/01
1664	WVMW-13-I-3_STA50	7.19	7.185	7.2	1	03/21/01	03/21/01
1666	21WV7IWQ_550588	7.10	6.4	7.9	18	08/23/54	08/25/48
1668	WVMW-13-J_STA52	7.83	7.83	7.8	1	08/02/00	08/02/00
1672	112WRD_391632080292039	7.17	5.7	7.9	6	08/20/80	09/10/79
1673	21WV7IWQ_550592	4.80	4	5.2	3	07/20/54	08/15/50
1678	MW-013-0031	7.49	7.28	7.7	2	08/02/00	08/02/00
1680	WVMW-13-N-1_STA56	7.45	7.45	7.5	1	03/21/01	03/21/01
1901	WVMW-16_STA3	7.66	7.66	7.7	1	03/21/01	03/21/01
1903	WVMW-16_STA1	7.56	7.56	7.56	1	03/21/01	03/21/01
1904	11COEHUN_4WFS12353	2.70	2.7	2.7	1	05/04/78	05/04/78

Table 3f. Water quality data for dissolved zinc

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1615	112WRD_392203080243739	55	55	55	1	8/20/1980	8/20/1980
1660	21WV7IWQ_550587	50	50	50	1	7/9/1974	7/9/1974
1672	112WRD_391632080292039	4	4	4	1	8/20/1980	8/20/1980

Metals and pH TMDLs for the West Fork Watershed

Table 4a. 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
1606	WV0093505	307	307	4.60	0
1609	WV0093505	615	615	4.60	0
1635	WV1011600	565	565	4.60	0
1637	WV1011472	239	239	4.60	0
1637	WV1017268	35	35	4.60	0
1639	WV1011472	239	239	4.60	0
1639	WV1017268	35	35	4.60	0
1651	WV1011375	423	423	4.60	0

Table 4b. 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
1606	WV0093505	211	211	3.20	0
1609	WV0093505	422	422	3.20	0
1635	WV1011600	390	390	3.20	0
1637	WV1011472	165	165	3.20	0
1637	WV1017268	24	24	3.20	0
1639	WV1011472	165	165	3.20	0
1639	WV1017268	24	24	3.20	0
1651	WV1011375	291	291	3.20	0

Table 4c. 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
1606	WV0093505	138	138	2.00	0
1609	WV0093505	275	275	2.00	0
1635	WV1011600	250	250	2.00	0
1637	WV1011472	106	106	2.00	0
1637	WV1017268	16	16	2.00	0
1639	WV1011472	106	106	2.00	0
1639	WV1017268	16	16	2.00	0
1651	WV1011375	188	188	2.00	0

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
1601	229	115	0	0	50	50	x
1602	546	27	0	0	137	137	x
1603	0	0	0	0	11	11	
1604	1,521	456	0	0	383	383	x
1605	7,194	3,597	0	0	615	615	x
1606	998	50	90	5	243	243	x
1607	4,256	1,277	0	0	709	709	x
1608	229	229	0	0	313	313	
1609	75	75	0	0	998	998	
1610	0	0	0	0	32	32	
1611	1,050	1,050	0	0	334	334	
1612	309	77	0	0	93	93	x
1613	0	0	0	0	89	89	
1614	2,900	53	0	0	213	213	x
1615	3,896	1,169	0	0	332	332	x
1616	2,292	458	0	0	456	456	x
1617	2,785	2,785	0	0	91	91	
1618	0	0	0	0	291	291	
1619	951	951	0	0	286	286	
1620	0	0	0	0	364	364	
1621	0	0	0	0	420	420	
1622	0	0	0	0	598	598	
1623	0	0	0	0	265	265	
1624	0	0	0	0	1,176	1,176	
1625	0	0	0	0	43	43	
1626	0	0	0	0	658	658	
1627	0	0	0	0	29	29	
1628	0	0	0	0	88	88	
1629	0	0	0	0	400	400	x
1630	0	0	0	0	476	476	
1631	0	0	0	0	594	594	
1632	609	152	0	0	125	125	x
1633	56	56	0	0	4	4	
1634	678	54	0	0	83	83	x
1635	2,565	2,565	0	0	216	216	
1636	576	259	0	0	648	648	x
1637	941	941	0	0	131	131	
1638	5,231	418	0	0	608	608	x
1639	2,215	111	0	0	368	368	x
1640	53	53	0	0	30	30	
1641	874	874	0	0	52	52	
1642	2,570	154	0	0	227	227	x
1643	0	0	0	0	165	165	
1644	0	0	0	0	439	439	
1645	2,996	599	0	0	217	217	x
1646	214	214	0	0	852	852	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		Requires Reduction
	Baseline	Allocated	Baseline	Allocated	Baseline	Allocated	
1647	1,139	171	0	0	276	276	x
1648	0	0	0	0	667	667	
1649	0	0	0	0	984	984	
1650	0	0	0	0	830	830	
1651	2,481	99	0	0	278	278	x
1652	0	0	0	0	945	945	
1653	0	0	0	0	212	212	
1654	0	0	0	0	496	496	
1655	0	0	0	0	1,256	1,256	
1656	0	0	0	0	200	200	
1657	0	0	0	0	245	245	
1658	0	0	0	0	53	53	
1659	0	0	0	0	224	224	
1660	0	0	0	0	621	621	
1661	0	0	0	0	593	593	
1662	0	0	0	0	615	615	
1663	0	0	0	0	24	24	
1664	0	0	0	0	61	61	
1665	0	0	0	0	429	429	
1666	0	0	0	0	429	429	
1667	0	0	0	0	308	308	
1668	0	0	0	0	83	83	
1669	0	0	0	0	242	242	
1670	0	0	0	0	723	723	
1671	0	0	0	0	36	36	
1672	0	0	0	0	394	394	
1673	1,744	262	0	0	345	345	x
1674	0	0	0	0	303	303	
1675	0	0	0	0	331	331	
1676	0	0	0	0	237	237	
1677	599	599	0	0	432	432	
1678	0	0	0	0	273	273	
1679	0	0	0	0	221	221	
1680	0	0	0	0	220	220	
1681	0	0	0	0	583	583	
1682	0	0	0	0	146	146	
1683	0	0	0	0	323	323	
1684	0	0	0	0	645	645	
1685	0	0	0	0	0	0	
1686	0	0	0	0	426	426	
1901	2,853	713	0	0	352	352	x
1902	546	273	0	0	341	341	x
1903	2,227	290	0	0	203	203	x
1904	740	111	3,815	572	211	211	x
1905	845	186	0	0	287	287	x

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		Requires Reduction
	Baseline	Allocated	Baseline	Allocated	Baseline	Allocated	
1601	792	198	0	0	87	87	x
1602	1,888	189	0	0	244	244	x
1603	0	0	0	0	16	16	
1604	5,257	1,051	0	0	701	701	x
1605	24,872	6,218	0	0	1,174	1,174	x
1606	3,450	311	62	6	463	463	x
1607	14,715	2,207	0	0	1,379	1,379	x
1608	793	476	0	0	616	616	x
1609	259	259	0	0	2,028	2,028	
1610	0	0	0	0	60	60	
1611	3,632	3,632	0	0	658	658	
1612	1,068	128	0	0	183	183	x
1613	0	0	0	0	175	175	
1614	10,027	197	0	0	417	417	x
1615	13,469	1,347	0	0	642	642	x
1616	7,925	792	0	0	899	899	x
1617	9,630	5,778	0	0	173	173	x
1618	0	0	0	0	565	565	
1619	3,288	3,288	0	0	560	560	
1620	0	0	0	0	751	751	
1621	0	0	0	0	857	857	
1622	0	0	0	0	1,224	1,224	
1623	0	0	0	0	547	547	
1624	0	0	0	0	2,444	2,444	
1625	0	0	0	0	84	84	
1626	0	0	0	0	1,357	1,357	
1627	0	0	0	0	53	53	
1628	0	0	0	0	178	178	
1629	0	0	0	0	834	834	
1630	0	0	0	0	994	994	
1631	0	0	0	0	1,229	1,229	
1632	2,105	316	0	0	239	239	x
1633	193	193	0	0	9	9	
1634	2,345	117	0	0	161	161	x
1635	8,867	8,867	0	0	421	421	
1636	1,991	797	0	0	1,110	1,110	x
1637	3,252	3,252	0	0	252	252	
1638	18,084	904	0	0	1,188	1,188	x
1639	7,657	383	0	0	745	745	x
1640	183	183	0	0	61	61	
1641	3,022	3,022	0	0	99	99	
1642	8,885	355	0	0	459	459	x
1643	0	0	0	0	338	338	
1644	0	0	0	0	886	886	
1645	10,357	1,554	0	0	444	444	x
1646	739	739	0	0	1,770	1,770	
1647	3,938	394	0	0	546	546	x

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		Requires Reduction
	Load (lb/yr)	Load (lb/yr)	Load (lb/yr)	Load (lb/yr)	Load (lb/yr)	Load (lb/yr)	
1648	0	0	0	0	1,368	1,368	
1649	0	0	0	0	2,032	2,032	
1650	0	0	0	0	1,678	1,678	
1651	8,577	429	0	0	545	545	x
1652	0	0	0	0	1,940	1,940	
1653	0	0	0	0	436	436	
1654	0	0	0	0	997	997	
1655	0	0	0	0	2,564	2,564	
1656	0	0	0	0	409	409	
1657	0	0	0	0	497	497	
1658	0	0	0	0	110	110	
1659	0	0	0	0	452	452	
1660	0	0	0	0	1,250	1,250	
1661	0	0	0	0	1,212	1,212	
1662	0	0	0	0	1,172	1,172	
1663	0	0	0	0	32	32	
1664	0	0	0	0	114	114	
1665	0	0	0	0	808	808	
1666	0	0	0	0	782	782	
1667	0	0	0	0	616	616	
1668	0	0	0	0	165	165	
1669	0	0	0	0	493	493	
1671	0	0	0	0	72	72	
1672	0	0	0	0	786	786	
1673	6,031	603	0	0	668	668	x
1674	0	0	0	0	626	626	
1675	0	0	0	0	647	647	
1676	0	0	0	0	487	487	
1677	2,072	2,072	0	0	869	869	
1678	0	0	0	0	536	536	
1679	0	0	0	0	442	442	
1680	0	0	0	0	445	445	
1681	0	0	0	0	1,197	1,197	
1682	0	0	0	0	298	298	
1683	0	0	0	0	621	621	
1684	0	0	0	0	1,275	1,275	
1685	0	0	0	0	1	1	
1686	0	0	0	0	862	862	
1901	9,865	987	0	0	706	706	x
1902	1,888	472	0	0	678	678	x
1903	7,700	385	0	0	413	413	x
1904	2,558	512	2,634	527	388	388	x
1905	2,923	438	0	0	576	576	x

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
1601	137	137	0	0	45	45	
1602	327	82	0	0	121	121	x
1603	0	0	0	0	11	11	
1604	912	912	0	0	332	332	
1605	4,314	4,314	0	0	516	516	
1606	598	120	40	8	203	203	x
1607	2,552	2,552	0	0	587	587	
1608	138	138	0	0	256	256	
1609	45	45	0	0	801	801	
1610	0	0	0	0	27	27	
1611	630	630	0	0	274	274	
1612	185	148	0	0	77	77	x
1613	0	0	0	0	73	73	
1614	1,739	28	0	0	176	176	x
1615	2,336	2,336	0	0	276	276	
1616	1,375	1,100	0	0	374	374	x
1617	1,670	1,670	0	0	77	77	
1618	0	0	0	0	241	241	
1619	570	570	0	0	237	237	
1620	0	0	0	0	289	289	
1621	0	0	0	0	336	336	
1622	0	0	0	0	478	478	
1623	0	0	0	0	210	210	
1624	0	0	0	0	927	927	
1625	0	0	0	0	35	35	
1626	0	0	0	0	522	522	
1627	0	0	0	0	24	24	
1628	0	0	0	0	70	70	
1629	0	0	0	0	315	315	
1630	0	0	0	0	374	374	
1631	0	0	0	0	470	470	
1632	365	365	0	0	104	104	
1633	34	34	0	0	3	3	
1634	407	61	0	0	69	69	x
1635	1,538	1,538	0	0	179	179	
1636	345	345	0	0	585	585	
1637	564	564	0	0	110	110	
1638	3,137	941	0	0	501	501	x
1639	1,328	266	0	0	296	296	x
1640	32	32	0	0	23	23	
1641	524	524	0	0	43	43	
1642	1,541	462	0	0	182	182	x
1643	0	0	0	0	132	132	
1644	0	0	0	0	355	355	
1645	1,796	1,796	0	0	173	173	
1646	128	128	0	0	672	672	
1647	683	546	0	0	226	226	x

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
1648	0	0	0	0	532	532	
1649	0	0	0	0	779	779	
1650	0	0	0	0	669	669	
1651	1,488	446	0	0	228	228	x
1652	0	0	0	0	753	753	
1653	0	0	0	0	168	168	
1654	0	0	0	0	401	401	
1655	0	0	0	0	1,005	1,005	
1656	0	0	0	0	161	161	
1657	0	0	0	0	196	196	
1658	0	0	0	0	42	42	
1659	0	0	0	0	181	181	
1660	0	0	0	0	501	501	
1661	0	0	0	0	473	473	
1662	0	0	0	0	518	518	
1663	0	0	0	0	24	24	
1664	0	0	0	0	52	52	
1665	0	0	0	0	364	364	
1666	0	0	0	0	371	371	
1667	0	0	0	0	267	267	
1668	0	0	0	0	68	68	
1670	0	0	0	0	577	577	
1671	0	0	0	0	29	29	
1672	0	0	0	0	321	321	
1673	1,046	282	0	0	286	286	x
1674	0	0	0	0	240	240	
1675	0	0	0	0	274	274	
1676	0	0	0	0	188	188	
1677	359	359	0	0	349	349	
1678	0	0	0	0	241	241	
1679	0	0	0	0	193	193	
1680	0	0	0	0	177	177	
1681	0	0	0	0	498	498	
1682	0	0	0	0	125	125	
1683	0	0	0	0	288	288	
1684	0	0	0	0	565	565	
1685	0	0	0	0	0	0	
1686	0	0	0	0	367	367	
1901	1,711	1,711	0	0	285	285	
1902	327	327	0	0	279	279	
1903	1,336	601	0	0	163	163	x
1904	444	222	1,690	845	182	182	x
1905	507	507	0	0	233	233	

Appendix A-6

Region 6

West Fork Region 6

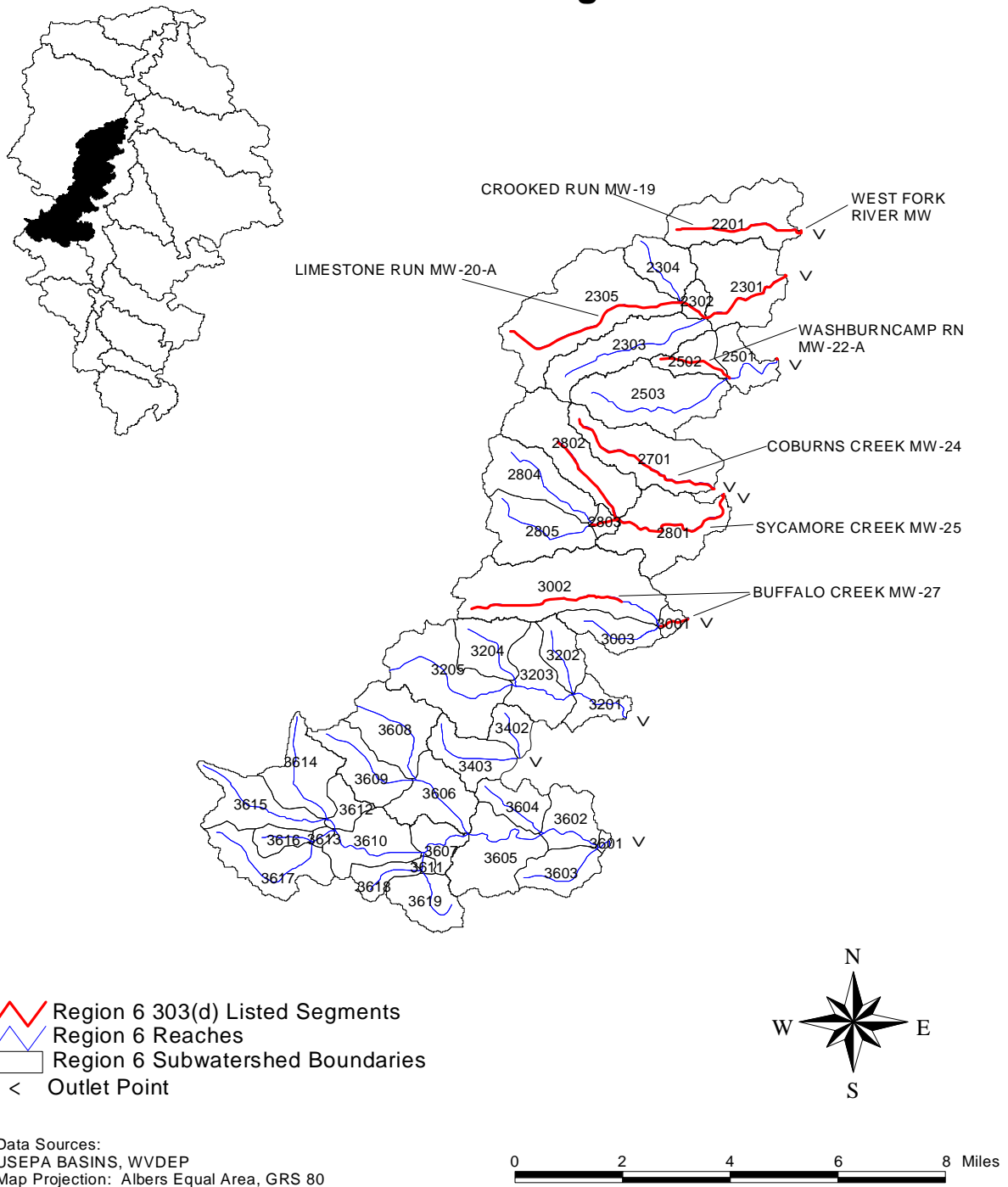


Figure 1. Region 6 - West Fork watershed

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 6

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
Crooked Run	MW-19	pH, Metals	2201		Aquatic Life
Limestone Run	MW-20-A	Metals	2301, 2301, 2302, 2303, 2304, 2305		Aquatic Life
Washburn Camp Run	MW-22-A	Metals	2502		Aquatic Life
Coburns Creek	MW-24	Metals	2701		Aquatic Life
Sycamore Creek	MW-25	Metals	2801, 2802, 2803, 2804, 2805		Aquatic Life
Buffalo Creek	MW-27	Metals	3001, 3002, 3003		Aquatic Life

T = Aquatic Life Trout Waters

W = Warm Water Fishery

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

SWS
2201
2301
2303
2304
2305
2502
2503
2701
2801
2802
2803
2804
2805
3002
3003
3201
3202
3203
3204
3205
3403
3602
3603
3604
3605

Metals and pH TMDLs for the West Fork Watershed

Table 3a. Water quality data for aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2201	WVMW-19_STA2	4510.00	4510	4510	1	03/21/01	03/21/01
2301	MW-020-0002	50.00	50	50	1	08/09/00	08/09/00
2304	MW-020-0003	320.00	320	320	1	08/09/00	08/09/00
2305	WVMW-20-D_STA5	60.00	60	60	1	08/09/00	08/09/00
2501	WVMW-22_STA1	15040.00	80	30000	2	03/21/01	08/16/00
2502	MW-022-0002	50.00	50	50	1	08/16/00	08/16/00
2701	MW-024-0001	150.00	150	150	1	08/07/00	08/07/00
2801	WVMW-25_STA1	13900.00	100	27700	2	08/07/00	03/21/01
2802	WV1011723_DSS-14	561.69	108.1	10000	53	12/18/01	02/02/00
3001	WVMW-27_STA1	50.00	50	50	1	08/16/00	08/16/00
3002	WVMW-27_STA2	140.00	140	140	1	07/27/00	07/27/00
3201	WVMW-29_STA2	125.00	125	125	1	03/20/01	03/20/01
3205	WVMW-29_STA3	197.00	60	334	2	08/09/00	03/20/01
3601	MW-032-0001	160.00	160	160	1	08/15/00	08/15/00
3604	WVMW-32-B_STA5	119.00	60	178	2	03/19/01	08/15/00
3606	WVMW-32-E_STA7	247.00	247	247	1	03/19/01	03/19/01
3610	MW-032-0002	120.00	120	120	2	07/25/00	07/25/00

Table 3b. Water quality data for iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2201	WVMW-19_STA2	5890.00	5890	5890	1	03/21/01	03/21/01
2301	MW-020-0002	140.00	140	140	1	08/09/00	08/09/00
2304	MW-020-0003	480.00	480	480	1	08/09/00	08/09/00
2305	WVMW-20-D_STA5	1760.00	1760	1760	1	08/09/00	08/09/00
2501	WVMW-22_STA1	20765.00	130	41400	2	03/21/01	08/16/00
2502	MW-022-0002	110.00	110	110	1	08/16/00	08/16/00
2701	MW-024-0001	270.00	270	270	1	08/07/00	08/07/00
2801	WVMW-25_STA1	21685.00	170	43200	2	08/07/00	03/21/01
2802	WV1011723_DSS-14	362.79	30	2160	53	01/10/01	03/16/00
3001	WVMW-27_STA1	80.00	80	80	1	08/16/00	08/16/00
3002	WVMW-27_STA2	390.00	390	390	1	07/27/00	07/27/00
3201	WVMW-29_STA2	278.00	278	278	1	03/20/01	03/20/01
3205	WVMW-29_STA3	254.00	160	348	2	08/09/00	03/20/01
3601	MW-032-0001	520.00	520	520	1	08/15/00	08/15/00
3604	WVMW-32-B_STA5	172.50	110	235	2	03/19/01	08/15/00
3605	112WRD_390855080295539	870.00	450	1400	4	05/04/79	08/19/80
3606	WVMW-32-E_STA7	374.00	374	374	1	03/19/01	03/19/01
3610	MW-032-0002	480.00	480	480	2	07/25/00	07/25/00

Metals and pH TMDLs for the West Fork Watershed

Table 3c. Water quality data for manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2201	WVMW-19_STA2	500.00	500	500	1	03/21/01	03/21/01
2301	MW-020-0002	60.00	60	60	1	08/09/00	08/09/00
2304	MW-020-0003	480.00	480	480	1	08/09/00	08/09/00
2305	WVMW-20-D_STA5	280.00	280	280	1	08/09/00	08/09/00
2501	WVMW-22_STA1	980.00	80	1880	2	03/21/01	08/16/00
2502	MW-022-0002	120.00	120	120	1	08/16/00	08/16/00
2701	MW-024-0001	40.00	40	40	1	08/07/00	08/07/00
2801	WVMW-25_STA1	1160.00	40	2280	2	08/07/00	03/21/01
2802	WV1011723_DSS-14	156.09	27.9	510	53	12/18/01	11/10/99
3001	WVMW-27_STA1	40.00	40	40	1	08/16/00	08/16/00
3002	WVMW-27_STA2	80.00	80	80	1	07/27/00	07/27/00
3201	WVMW-29_STA2	79.00	79	79	1	03/20/01	03/20/01
3205	WVMW-29_STA3	207.00	34	380	2	08/09/00	03/20/01
3601	MW-032-0001	60.00	60	60	1	08/15/00	08/15/00
3604	WVMW-32-B_STA5	110.00	80	140	2	03/19/01	08/15/00
3605	112WRD_390855080295539	60.00	50	80	4	03/24/80	05/04/79
3606	WVMW-32-E_STA7	56.00	56	56	1	03/19/01	03/19/01
3610	MW-032-0002	70.00	70	70	2	07/25/00	07/25/00

Table 3d. Water quality data for Total Nonfilterable Residue

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2201	WVMW-19_STA2	82.00	82	82	1	03/21/01	03/21/01
2301	MW-020-0002	1.00	1	1	1	08/09/00	08/09/00
2304	MW-020-0003	2.00	2	2	1	08/09/00	08/09/00
2305	WVMW-20-D_STA5	4.00	4	4	1	08/09/00	08/09/00
2501	WVMW-22_STA1	585.00	2	1168	2	08/16/00	03/21/01
2502	MW-022-0002	1.00	1	1	1	08/16/00	08/16/00
2701	MW-024-0001	0.00	0	0	1	08/07/00	08/07/00
2801	WVMW-25_STA1	605.50	2	1209	2	03/21/01	08/07/00
3001	WVMW-27_STA1	1.00	1	1	1	08/16/00	08/16/00
3002	WVMW-27_STA2	2.00	2	2	1	07/27/00	07/27/00
3201	WVMW-29_STA2	4.40	4.4	4.4	1	03/20/01	03/20/01
3205	WVMW-29_STA3	3.50	3	4	2	08/09/00	03/20/01
3601	MW-032-0001	2.00	2	2	1	08/15/00	08/15/00
3604	WVMW-32-B_STA5	5.75	1	10.5	2	08/15/00	03/19/01
3606	WVMW-32-E_STA7	4.80	4.8	4.8	1	03/19/01	03/19/01
3610	MW-032-0002	2.00	2	2	2	07/25/00	07/25/00

Metals and pH TMDLs for the West Fork Watershed

Table 3e. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2201	WVMW-19_STA2	7.78	7.78	7.8	1	03/21/01	03/21/01
2301	MW-020-0002	7.99	7.99	8.0	1	08/09/00	08/09/00
2304	MW-020-0003	7.64	7.64	7.6	1	08/09/00	08/09/00
2305	WVMW-20-D_STA5	7.60	7.6	7.6	1	08/09/00	08/09/00
2501	WVMW-22_STA1	7.81	7.65	8.0	2	03/21/01	08/16/00
2502	MW-022-0002	7.92	7.92	7.9	1	08/16/00	08/16/00
2701	MW-024-0001	7.94	7.94	7.9	1	08/07/00	08/07/00
2801	WVMW-25_STA1	7.87	7.63	8.1	2	08/07/00	03/21/01
2802	WV1011723_DSS-14	7.80	7.6	8.2	53	12/18/01	11/03/00
3001	WVMW-27_STA1	7.60	7.6	7.6	1	08/16/00	08/16/00
3002	WVMW-27_STA2	8.02	8.02	8.0	1	07/27/00	07/27/00
3201	WVMW-29_STA2	8.05	8.05	8.1	1	03/20/01	03/20/01
3205	WVMW-29_STA3	7.82	7.56	8.1	2	08/09/00	03/20/01
3601	MW-032-0001	7.77	7.7	7.8	2	08/15/00	08/15/00
3604	WVMW-32-B_STA5	8.01	7.91	8.1	2	03/19/01	08/15/00
3605	112WRD_390855080295539	7.62	7	8.2	5	05/04/79	09/29/83
3606	WVMW-32-E_STA7	7.84	7.84	7.8	1	03/19/01	03/19/01
3610	MW-032-0002	7.48	7.48	7.5	1	07/25/00	07/25/00

Table 3f. Water quality data for dissolved zinc

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
3605	112WRD_390855080295539	12	12	12	1	8/19/1980	8/19/1980

Metals and pH TMDLs for the West Fork Watershed

Table 4a. 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
2304	WV1007823	122	122	4.60	0
2305	WV1007122	656	656	4.60	0
2305	WV1007823	603	603	4.60	0
2802	WV1011723	204	204	4.60	0

Table 4b. 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
2304	WV1007823	84	84	3.20	0
2305	WV1007122	453	453	3.20	0
2305	WV1007823	416	416	3.20	0
2802	WV1011723	140	140	3.20	0

Table 4c. 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
2304	WV1007823	54	54	2.00	0
2305	WV1007122	290	290	2.00	0
2305	WV1007823	267	267	2.00	0
2802	WV1011723	91	91	2.00	0

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
2201	5,614	393	0	0	579	579	x
2301	7,948	795	382	38	532	532	x
2302	0	0	0	0	80	80	
2303	1,633	408	0	0	565	565	x
2304	1,655	199	0	0	271	271	x
2305	3,385	339	0	0	1,031	1,031	x
2501	0	0	0	0	232	232	
2502	289	58	0	0	186	186	x
2503	3,222	516	0	0	697	697	x
2701	2,627	473	0	0	626	626	x
2801	1,528	459	0	0	617	617	x
2802	2,570	386	0	0	621	621	x
2803	137	82	0	0	56	56	x
2804	2,790	363	0	0	445	445	x
2805	1,425	371	0	0	504	504	x
3001	0	0	0	0	48	48	
3002	2,586	776	0	0	1,000	1,000	x
3003	1,203	180	0	0	221	221	x
3201	478	143	0	0	159	159	x
3202	853	171	0	0	203	203	x
3203	1,011	657	0	0	345	345	x
3204	159	159	0	0	306	306	
3205	269	269	0	0	705	705	
3402	0	0	0	0	146	146	
3403	20	20	0	0	311	311	
3601	0	0	0	0	18	18	
3602	792	792	0	0	246	246	
3603	2,714	217	0	0	230	230	x
3604	665	180	0	0	209	209	x
3605	1,181	1,181	0	0	480	480	
3606	0	0	0	0	374	374	
3607	0	0	0	0	168	168	
3608	0	0	0	0	492	492	
3609	0	0	0	0	349	349	
3610	0	0	0	0	356	356	
3611	0	0	0	0	25	25	
3612	0	0	0	0	121	121	
3613	0	0	0	0	29	29	
3614	0	0	0	0	407	407	
3615	0	0	0	0	381	381	
3616	0	0	0	0	110	110	
3617	0	0	0	0	435	435	
3618	0	0	0	0	134	134	
3619	0	0	0	0	287	287	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
2201	19,408	970	0	0	1,110	1,110	x
2301	27,479	1,374	263	13	973	973	x
2302	0	0	0	0	152	152	
2303	5,644	677	0	0	1,085	1,085	x
2304	5,724	401	0	0	526	526	x
2305	11,704	1,404	0	0	1,953	1,953	x
2501	0	0	0	0	405	405	
2502	1,000	320	0	0	369	369	x
2503	11,141	1,226	0	0	1,384	1,384	x
2701	9,083	999	0	0	1,246	1,246	x
2801	5,284	1,057	0	0	1,219	1,219	x
2802	8,886	977	0	0	1,210	1,210	x
2803	475	166	0	0	109	109	x
2804	9,645	772	0	0	884	884	x
2805	4,927	838	0	0	1,001	1,001	x
3001	0	0	0	0	97	97	
3002	9,268	1,668	0	0	1,950	1,950	x
3003	4,312	388	0	0	446	446	x
3201	1,713	343	0	0	313	313	x
3202	3,057	306	0	0	388	388	x
3203	3,624	725	0	0	673	673	x
3204	570	456	0	0	597	597	x
3205	964	964	0	0	1,397	1,397	
3402	0	0	0	0	288	288	
3403	71	71	0	0	631	631	
3601	0	0	0	0	37	37	
3602	2,840	2,840	0	0	490	490	
3603	9,725	389	0	0	467	467	x
3604	2,383	357	0	0	425	425	x
3605	4,233	4,233	0	0	988	988	
3606	0	0	0	0	747	747	
3607	0	0	0	0	346	346	
3608	0	0	0	0	968	968	
3609	0	0	0	0	694	694	
3610	0	0	0	0	729	729	
3611	0	0	0	0	52	52	
3612	0	0	0	0	253	253	
3613	0	0	0	0	61	61	
3614	0	0	0	0	813	813	
3615	0	0	0	0	767	767	
3616	0	0	0	0	222	222	
3617	0	0	0	0	896	896	
3618	0	0	0	0	272	272	
3619	0	0	0	0	585	585	

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
2201	3,366	1,010	0	0	484	484	x
2301	4,766	953	170	34	459	459	x
2302	0	0	0	0	67	67	
2303	979	979	0	0	472	472	
2304	993	496	0	0	225	225	x
2305	2,030	1,827	0	0	870	870	x
2501	0	0	0	0	207	207	x
2502	173	173	0	0	152	152	
2503	1,932	1,295	0	0	568	568	x
2701	1,575	1,229	0	0	509	509	x
2801	917	917	0	0	503	503	
2802	1,541	1,156	0	0	513	513	x
2803	82	82	0	0	46	46	
2804	1,673	836	0	0	364	364	x
2805	855	855	0	0	412	412	
3001	0	0	0	0	41	41	
3002	1,643	1,643	0	0	882	882	
3003	764	466	0	0	192	192	x
3201	304	304	0	0	139	139	
3202	542	406	0	0	181	181	x
3203	642	642	0	0	305	305	
3204	101	101	0	0	270	270	
3205	171	171	0	0	616	616	
3402	0	0	0	0	128	128	
3403	13	13	0	0	269	269	
3601	0	0	0	0	15	15	
3602	503	503	0	0	213	213	
3603	1,724	517	0	0	198	198	x
3604	422	422	0	0	180	180	
3605	750	750	0	0	409	409	
3606	0	0	0	0	325	325	
3607	0	0	0	0	143	143	
3608	0	0	0	0	433	433	
3609	0	0	0	0	303	303	
3610	0	0	0	0	304	304	
3611	0	0	0	0	21	21	
3612	0	0	0	0	102	102	
3613	0	0	0	0	25	25	
3614	0	0	0	0	354	354	
3615	0	0	0	0	330	330	
3616	0	0	0	0	95	95	
3617	0	0	0	0	371	371	
3618	0	0	0	0	115	115	
3619	0	0	0	0	246	246	

Appendix A-7

Region 7

West Fork Region 7

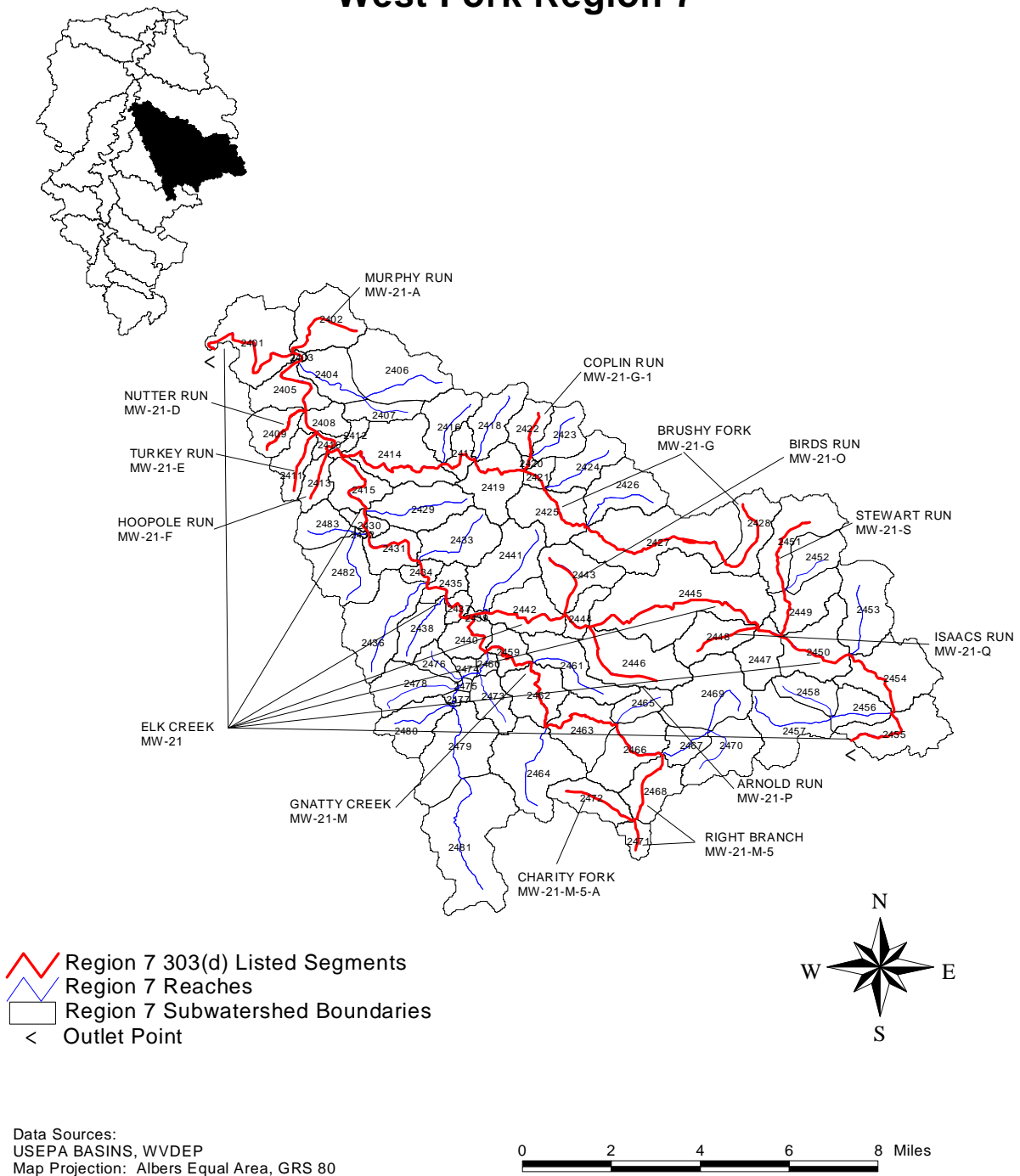


Figure 1. Region 7 - West Fork watershed

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 7

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
Elk Creek	MW-21	Metals	2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483		Aquatic Life
Murphy Run	MW-21-A	pH, Metals	2402		Aquatic Life
Nutter Run	MW-21-D	Metals	2409		Aquatic Life
Turkey Run	MW-21-E	Metals	2411		Aquatic Life
Hoopole Run	MW-21-F	Metals	2413		Aquatic Life
Brushy Fork	MW-21-G	Metals	2414, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428		Aquatic Life
Coplin run	MW-21-G-1	Metals	2420, 2422, 2423		Aquatic Life
Gnatty Creek	MW-21-M	Metals	2440, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481		Aquatic Life
Birds Run	MW-21-O	Metals	2443		Aquatic Life
Arnold Run	MW-21-P	Metals	2446		Aquatic Life

Metals and pH TMDLs for the West Fork Watershed

Table 1. (cont.) Impaired waterbodies in Region 7

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
Isaacs Run	MW-21-Q	Metals	2448		Aquatic Life
Stewart Run	MW-21-S	Metals	2449, 2451, 2452		Aquatic Life
Right Branch	MW-21-M-5	Metals	2468, 2471, 2472		Aquatic Life
Charity Fork	MW-21-M-5-A	Metals	2472		Aquatic Life

T = Aquatic Life Trout Waters

W = Warm Water Fishery

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

SWS	SWS
2401	2461
2402	2462
2404	2463
2405	2464
2406	2465
2408	2466
2409	2467
2411	2468
2413	2469
2415	2470
2418	2471
2419	2472
2421	2473
2422	2479
2423	2480
2424	2481
2425	2482
2426	2483
2427	
2428	
2429	
2433	
2441	
2442	
2443	
2445	
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2459	

Metals and pH TMDLs for the West Fork Watershed

Table 3a. Water quality data for aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2401	MW-021-0001	370.00	370	370	1	08/14/00	08/14/00
2402	MW-021-0006	2810.00	2810	2810	1	08/08/00	08/08/00
2404	MW-021-0007	420.00	420	420	1	08/08/00	08/08/00
2406	1114O100_551495	0.30	0.3	0.3	1	06/08/70	06/08/70
2409	WVMW-21-D_STA13	125.00	125	125	1	03/20/01	03/20/01
2410	MW-021-0002	310.00	310	310	1	07/25/00	07/25/00
2411	WVMW-21-E_STA14	100.00	100	100	1	08/07/00	08/07/00
2413	MW-021-0010	50.00	50	50	1	08/07/00	08/07/00
2414	WVMW-21-G_STA22	163.00	163	163	1	03/20/01	03/20/01
2416	1114O100_551496	0.20	0.2	0.2	1	06/08/70	06/08/70
2419	MW-021-0012	70.00	70	70	1	07/26/00	07/26/00
2420	MW-021-0014	240.00	240	240	1	08/08/00	08/08/00
2424	WVMW-21-G-2_STA25	111.00	111	111	1	03/19/01	03/19/01
2426	WVMW-21-G-3_STA27	60.00	60	60	1	08/08/00	08/08/00
2428	WVMW-21-G_STA18	70.00	70	70	1	08/14/00	08/14/00
2433	1114O100_551497	0.00	0	0	1	06/08/70	06/08/70
2434	WVMW-21_STA3	330.00	330	330	1	08/07/00	08/07/00
2436	1114O100_551499	0.7	0.7	0.7	1	6/8/1970	6/8/1970
2437	MW-029-0001	90	90	90	1	8/16/2000	8/16/2000
2441	WVMW-21-N_STA39	840	840	840	1	8/8/2000	8/8/2000
2443	WVMW-21-O_STA41	60	60	60	1	8/8/2000	8/8/2000
2446	MW-021-0024	330	330	330	1	8/9/2000	8/9/2000
2448	WVMW-21-Q_STA44	109	109	109	1	3/20/2001	3/20/2001
2449	WV1013688_DSW2	700.03	108.1	7155	50	4/25/2001	11/17/1999
2451	MW-021-0027	50	50	50	1	7/26/2000	7/26/2000
2452	WV1013688_USW1	382.345	108.1	2300	20	6/22/2001	3/8/2000
2453	1114O100_551502	0	0	0	1	6/8/1970	6/8/1970
2454	WVMW-21_STA1	50	50	50	1	7/26/2000	7/26/2000
2460	1114O100_551500	0.4	0.4	0.4	1	6/8/1970	6/8/1970
2462	MW-021-0017	530	530	530	1	7/26/2000	7/26/2000
2463	WVMW-21-M_STA30	410	410	410	1	8/9/2000	8/9/2000
2468	WVMW-21-M-5-A_STA35	71.33333	50	114	3	3/20/2001	8/9/2000
2479	1114O100_551501	0.2	0.2	0.2	1	6/8/1970	6/8/1970

Metals and pH TMDLs for the West Fork Watershed

Table 3b. Water quality data for iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2401	MW-021-0001	610.00	610	610	1	08/14/00	08/14/00
2402	MW-021-0006	3470.00	3470	3470	1	08/08/00	08/08/00
2404	MW-021-0007	520.00	520	520	1	08/08/00	08/08/00
2406	1114O100_551495	0.60	0.6	0.6	1	06/08/70	06/08/70
2409	WVMW-21-D_STA13	1780.00	1780	1780	1	03/20/01	03/20/01
2410	MW-021-0002	550.00	550	550	1	07/25/00	07/25/00
2411	WVMW-21-E_STA14	220.00	220	220	1	08/07/00	08/07/00
2413	MW-021-0010	60.00	60	60	1	08/07/00	08/07/00
2414	WVMW-21-G_STA22	296.00	296	296	1	03/20/01	03/20/01
2416	1114O100_551496	0.60	0.6	0.6	1	06/08/70	06/08/70
2419	MW-021-0012	210.00	210	210	1	07/26/00	07/26/00
2420	MW-021-0014	540.00	540	540	1	08/08/00	08/08/00
2424	WVMW-21-G-2_STA25	105.00	105	105	1	03/19/01	03/19/01
2426	WVMW-21-G-3_STA27	310.00	310	310	1	08/08/00	08/08/00
2428	WVMW-21-G_STA18	730.00	730	730	1	08/14/00	08/14/00
2433	1114O100_551497	1.00	1	1	1	06/08/70	06/08/70
2434	WVMW-21_STA3	590.00	590	590	1	08/07/00	08/07/00
2436	1114O100_551499	1.00	1	1	1	06/08/70	06/08/70
2437	MW-029-0001	180.00	180	180	1	08/16/00	08/16/00
2440	112WRD_390947080154239	990.00	520	2200	5	05/04/79	09/11/79
2441	WVMW-21-N_STA39	1340.00	1340	1340	1	08/08/00	08/08/00
2442	112WRD_391023080140539	1760.00	330	5200	5	09/10/79	08/18/80
2443	WVMW-21-O_STA41	170.00	170	170	1	08/08/00	08/08/00
2446	MW-021-0024	730.00	730	730	1	08/09/00	08/09/00
2448	WVMW-21-Q_STA44	107.00	107	107	1	03/20/01	03/20/01
2449	WV1013688_DSW2	7268.20	28	20700	50	10/10/01	08/23/00
2451	MW-021-0027	140.00	140	140	1	07/26/00	07/26/00
2452	WV1013688_USW1	312.55	50	690	20	06/22/01	04/12/00
2453	1114O100_551502	0.70	0.7	0.7	1	06/08/70	06/08/70
2454	WVMW-21_STA1	150	150	150	1	7/26/2000	7/26/2000
2460	1114O100_551500	0.5	0.5	0.5	1	6/8/1970	6/8/1970
2462	MW-021-0017	800	800	800	1	7/26/2000	7/26/2000
2463	WVMW-21-M_STA30	870	870	870	1	8/9/2000	8/9/2000
2468	WVMW-21-M-5-A_STA35	174.3333	170	180	3	8/9/2000	3/20/2001
2479	1114O100_551501	0.4	0.4	0.4	1	6/8/1970	6/8/1970

Metals and pH TMDLs for the West Fork Watershed

Table 3c. Water quality data for manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2401	MW-021-0001	70.00	70	70	1	08/14/00	08/14/00
2402	MW-021-0006	1550.00	1550	1550	1	08/08/00	08/08/00
2404	MW-021-0007	60.00	60	60	1	08/08/00	08/08/00
2406	1114O100_551495	0.10	0.1	0.1	1	06/08/70	06/08/70
2409	WVMW-21-D_STA13	467.00	467	467	1	03/20/01	03/20/01
2410	MW-021-0002	70.00	70	70	1	07/25/00	07/25/00
2411	WVMW-21-E_STA14	40.00	40	40	1	08/07/00	08/07/00
2413	MW-021-0010	10.00	10	10	1	08/07/00	08/07/00
2414	WVMW-21-G_STA22	66.00	66	66	1	03/20/01	03/20/01
2416	1114O100_551496	1.00	1	1	1	06/08/70	06/08/70
2419	MW-021-0012	100.00	100	100	1	07/26/00	07/26/00
2420	MW-021-0014	210.00	210	210	1	08/08/00	08/08/00
2424	WVMW-21-G-2_STA25	58.00	58	58	1	03/19/01	03/19/01
2426	WVMW-21-G-3_STA27	120.00	120	120	1	08/08/00	08/08/00
2428	WVMW-21-G_STA18	630.00	630	630	1	08/14/00	08/14/00
2433	1114O100_551497	0.40	0.4	0.4	1	06/08/70	06/08/70
2434	WVMW-21_STA3	70.00	70	70	1	08/07/00	08/07/00
2436	1114O100_551499	0.40	0.4	0.4	1	06/08/70	06/08/70
2437	MW-029-0001	100.00	100	100	1	08/16/00	08/16/00
2440	112WRD_390947080154239	260.00	220	290	5	07/22/81	08/19/80
2441	WVMW-21-N_STA39	140	140	140	1	8/8/2000	8/8/2000
2442	112WRD_391023080140539	688	490	1100	5	7/22/1981	5/9/1979
2443	WVMW-21-O_STA41	120	120	120	1	8/8/2000	8/8/2000
2446	MW-021-0024	160	160	160	1	8/9/2000	8/9/2000
2448	WVMW-21-Q_STA44	335	335	335	1	3/20/2001	3/20/2001
2449	WV1013688_DSW2	1033.28	17	7860	50	6/22/2001	12/5/2001
2451	MW-021-0027	150	150	150	1	7/26/2000	7/26/2000
2452	WV1013688_USW1	560.07	21.5	2656	20	8/13/2001	6/22/2001
2453	1114O100_551502	4.2	4.2	4.2	1	6/8/1970	6/8/1970
2454	WVMW-21_STA1	20	20	20	1	7/26/2000	7/26/2000
2460	1114O100_551500	0.7	0.7	0.7	1	6/8/1970	6/8/1970
2462	MW-021-0017	120	120	120	1	7/26/2000	7/26/2000
2463	WVMW-21-M_STA30	140	140	140	1	8/9/2000	8/9/2000
2468	WVMW-21-M-5-A_STA35	112.6667	110	118	3	8/9/2000	3/20/2001
2479	1114O100_551501	0.1	0.1	0.1	1	6/8/1970	6/8/1970

Metals and pH TMDLs for the West Fork Watershed

Table 3d. Water quality data for Total Nonfilterable Residue

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2401	MW-021-0001	2.00	2	2	1	08/14/00	08/14/00
2402	MW-021-0006	12.00	12	12	1	08/08/00	08/08/00
2404	MW-021-0007	10.00	10	10	1	08/08/00	08/08/00
2406	1114O100_551495	4.00	4	4	1	06/08/70	06/08/70
2409	WVMW-21-D_STA13	11.70	11.7	11.7	1	03/20/01	03/20/01
2410	MW-021-0002	2.00	2	2	1	07/25/00	07/25/00
2411	WVMW-21-E_STA14	2.00	2	2	1	08/07/00	08/07/00
2413	MW-021-0010	2.00	2	2	1	08/07/00	08/07/00
2414	WVMW-21-G_STA22	3.00	3	3	1	03/20/01	03/20/01
2416	1114O100_551496	59.00	59	59	1	06/08/70	06/08/70
2419	MW-021-0012	1.00	1	1	1	07/26/00	07/26/00
2420	MW-021-0014	1.00	1	1	1	08/08/00	08/08/00
2424	WVMW-21-G-2_STA25	1.60	1.6	1.6	1	03/19/01	03/19/01
2426	WVMW-21-G-3_STA27	1.00	1	1	1	08/08/00	08/08/00
2428	WVMW-21-G_STA18	2.00	2	2	1	08/14/00	08/14/00
2433	1114O100_551497	35.00	35	35	1	06/08/70	06/08/70
2434	WVMW-21_STA3	13.00	13	13	1	08/07/00	08/07/00
2436	1114O100_551499	24.00	24	24	1	06/08/70	06/08/70
2437	MW-029-0001	1.00	1	1	1	08/16/00	08/16/00
2441	WVMW-21-N_STA39	1.00	1	1	1	08/08/00	08/08/00
2443	WVMW-21-O_STA41	1.00	1	1	1	08/08/00	08/08/00
2446	MW-021-0024	8.00	8	8	1	08/09/00	08/09/00
2448	WVMW-21-Q_STA44	1.00	1	1	1	03/20/01	03/20/01
2451	MW-021-0027	1.00	1	1	1	07/26/00	07/26/00
2453	1114O100_551502	24.00	24	24	1	06/08/70	06/08/70
2454	WVMW-21_STA1	1.00	1	1	1	07/26/00	07/26/00
2460	1114O100_551500	30.00	30	30	1	06/08/70	06/08/70
2462	MW-021-0017	1.00	1	1	1	07/26/00	07/26/00
2463	WVMW-21-M_STA30	1.00	1	1	1	08/09/00	08/09/00
2468	WVMW-21-M-5-A_STA35	10.00	3	21	3	03/20/01	08/09/00
2479	1114O100_551501	21.00	21	21	1	06/08/70	06/08/70

Metals and pH TMDLs for the West Fork Watershed

Table 3e. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2401	MW-021-0001	8.07	8.07	8.1	1	08/14/00	08/14/00
2402	MW-021-0006	8.75	8.75	8.8	1	08/08/00	08/08/00
2404	MW-021-0007	7.91	7.91	7.9	1	08/08/00	08/08/00
2406	1114O100_551495	6.40	6.4	6.4	1	06/08/70	06/08/70
2409	WVMW-21-D_STA13	8.90	8.9	8.9	1	03/20/01	03/20/01
2410	MW-021-0002	8.19	8.19	8.2	1	07/25/00	07/25/00
2411	WVMW-21-E_STA14	7.72	7.72	7.7	1	08/07/00	08/07/00
2413	MW-021-0010	7.87	7.87	7.9	1	08/07/00	08/07/00
2414	WVMW-21-G_STA22	8.22	8.22	8.2	1	03/20/01	03/20/01
2415	112WRD_03059500	6.65	6.5	6.8	2	06/02/70	04/20/70
2416	1114O100_551496	6.60	6.6	6.6	1	06/08/70	06/08/70
2419	MW-021-0012	7.96	7.96	8.0	1	07/26/00	07/26/00
2420	MW-021-0014	7.6	7.6	7.6	1	8/8/2000	8/8/2000
2424	WVMW-21-G-2_STA25	7.86	7.86	7.86	1	3/19/2001	3/19/2001
2426	WVMW-21-G-3_STA27	7.72	7.72	7.72	1	8/8/2000	8/8/2000
2428	WVMW-21-G_STA18	7.31	7.31	7.31	1	8/14/2000	8/14/2000
2433	1114O100_551497	5.9	5.9	5.9	1	6/8/1970	6/8/1970
2434	WVMW-21_STA3	8	8	8	1	8/7/2000	8/7/2000
2436	1114O100_551499	6.2	6.2	6.2	1	6/8/1970	6/8/1970
2437	MW-029-0001	8.03	8.03	8.03	1	8/16/2000	8/16/2000
2440	112WRD_390947080154239	7.55	7.2	7.8	6	9/29/1983	7/22/1981
2441	WVMW-21-N_STA39	7.68	7.68	7.68	1	8/8/2000	8/8/2000
2442	112WRD_391023080140539	7.566667	7.1	8.2	6	5/9/1979	9/29/1983
2443	WVMW-21-O_STA41	8.03	8.03	8.03	1	8/8/2000	8/8/2000
2446	MW-021-0024	7.98	7.98	7.98	1	8/9/2000	8/9/2000
2448	WVMW-21-Q_STA44	7.95	7.95	7.95	1	3/20/2001	3/20/2001
2449	WV1013688_DSW2	7.8358	7	8.2	50	10/22/2001	3/22/2000
2451	MW-021-0027	8.01	8.01	8.01	1	7/26/2000	7/26/2000
2452	WV1013688_USW1	7.5645	6.86	8.2	20	3/28/2001	6/28/2000
2453	1114O100_551502	6.6	6.6	6.6	1	6/8/1970	6/8/1970
2460	1114O100_551500	6.2	6.2	6.2	1	6/8/1970	6/8/1970
2462	MW-021-0017	7.97	7.97	7.97	1	7/26/2000	7/26/2000
2463	WVMW-21-M_STA30	7.97	7.97	7.97	1	8/9/2000	8/9/2000
2468	WVMW-21-M-5-A_STA35	8.076667	8.05	8.13	3	8/9/2000	3/20/2001
2479	1114O100_551501	6.7	6.7	6.7	1	6/8/1970	6/8/1970

Table 3f. Water quality data for dissolved zinc

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2440	112WRD_390947080154239	8	8	8	1	8/19/1980	8/19/1980
2442	112WRD_391023080140539	5	5	5	1	8/18/1980	8/18/1980

Metals and pH TMDLs for the West Fork Watershed

Table 4a. 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
2404	WVG021504	631	631	4.60	0
2427	WV1010051	108	108	4.60	0
2428	WV1010051	95	95	4.60	0
2445	WV0056111	179	179	4.60	0
2445	WV0060674	245	245	4.60	0
2445	WV1010051	194	194	4.60	0
2446	WV0067008	298	298	4.60	0
2446	WV1013696	72	72	4.60	0
2447	WV1010026	112	112	4.60	0
2448	WV0056430	167	83	2.42	50
2448	WV0067008	559	279	2.42	50
2448	WV1010069	228	114	2.42	50
2450	WV1010026	112	112	4.60	0
2452	WV1013688	95	95	4.60	0
2457	WV0098388	686	480	3.39	30
2457	WV1010026	144	100	3.39	30
2457	WV1010077	101	70	3.39	30
2465	WV0067008	310	217	3.39	30
2465	WV1013696	19	13	3.39	30
2466	WV1014013	68	68	4.60	0
2468	WV0066036	141	141	4.60	0
2468	WV1010379	61	61	4.60	0
2470	WV0024619	188	150	3.87	20
2470	WV1002406	68	54	3.87	20
2470	WV1003461	553	443	3.87	20
2470	WV1010361	153	122	3.87	20
2471	WV1014013	205	205	4.60	0
2472	WV1014013	454	454	4.60	0

Metals and pH TMDLs for the West Fork Watershed

Table 4b. 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
2404	WVG021504	434	434	3.20	0*
2407	WV0005339	5,500	5,500	1.50	0
2427	WV1010051	74	74	3.20	0
2428	WV1010051	66	66	3.20	0
2445	WV0056111	123	123	3.20	0
2445	WV0060674	169	169	3.20	0
2445	WV1010051	133	133	3.20	0
2446	WV0067008	206	206	3.20	0
2446	WV1013696	50	50	3.20	0
2447	WV1010026	77	77	3.20	0
2448	WV0056430	115	115	3.20	0
2448	WV0067008	385	385	3.20	0
2448	WV1010069	157	157	3.20	0
2450	WV1010026	77	77	3.20	0
2452	WV1013688	66	66	3.20	0
2457	WV0098388	473	473	3.20	0
2457	WV1010026	99	99	3.20	0
2457	WV1010077	69	69	3.20	0
2465	WV0067008	214	214	3.20	0
2465	WV1013696	13	13	3.20	0
2466	WV1014013	47	47	3.20	0
2468	WV0066036	97	97	3.20	0
2468	WV1010379	42	42	3.20	0
2470	WV0024619	130	130	3.20	0
2470	WV1002406	47	47	3.20	0
2470	WV1003461	381	381	3.20	0
2470	WV1010361	105	105	3.20	0
2471	WV1014013	142	142	3.20	0
2472	WV1014013	313	313	3.20	0

* Non Mining Permit - UCAR Carbon Inc.

Metals and pH TMDLs for the West Fork Watershed

Table 4c. 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
2404	WVG021504	281	281	2.00	0
2427	WV1010051	48	48	2.00	0
2428	WV1010051	42	42	2.00	0
2445	WV0056111	80	80	2.00	0
2445	WV0060674	109	109	2.00	0
2445	WV1010051	86	86	2.00	0
2446	WV0067008	132	132	2.00	0
2446	WV1013696	32	32	2.00	0
2447	WV1010026	50	50	2.00	0
2448	WV0056430	74	74	2.00	0
2448	WV0067008	248	248	2.00	0
2448	WV1010069	101	101	2.00	0
2450	WV1010026	50	50	2.00	0
2452	WV1013688	43	43	2.00	0
2457	WV0098388	305	305	2.00	0
2457	WV1010026	64	64	2.00	0
2457	WV1010077	45	45	2.00	0
2465	WV0067008	138	138	2.00	0
2465	WV1013696	8	8	2.00	0
2466	WV1014013	30	30	2.00	0
2468	WV0066036	63	63	2.00	0
2468	WV1010379	27	27	2.00	0
2470	WV0024619	84	84	2.00	0
2470	WV1002406	30	30	2.00	0
2470	WV1003461	246	246	2.00	0
2470	WV1010361	68	68	2.00	0
2471	WV1014013	91	91	2.00	0
2472	WV1014013	201	201	2.00	0

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
2401	7,994	7,994	0	0	627	627	
2402	6,161	123	0	0	439	439	x
2403	0	0	0	0	18	18	
2404	374	112	0	0	301	301	x
2405	900	900	0	0	319	319	
2406	314	157	0	0	767	767	x
2407	0	0	0	0	200	200	
2408	543	543	0	0	163	163	
2409	6,779	136	0	0	219	219	x
2410	0	0	0	0	72	72	
2411	8	8	0	0	252	252	
2412	0	0	0	0	94	94	
2413	477	143	0	0	178	178	x
2414	0	0	0	0	678	678	
2415	324	324	0	0	313	313	
2416	0	0	0	0	351	351	
2417	0	0	0	0	165	165	
2418	626	125	2,013	403	261	261	x
2419	996	319	805	258	392	392	x
2420	0	0	0	0	22	22	
2421	295	295	0	0	93	93	
2422	649	130	805	161	190	190	x
2423	274	192	0	0	277	277	x
2424	2,915	291	0	0	327	327	x
2425	2,313	463	0	0	430	430	x
2426	3,793	379	0	0	427	427	x
2427	4,476	671	0	0	1,074	1,074	x
2428	556	195	215	75	313	313	x
2429	102	102	0	0	495	495	
2430	0	0	0	0	108	108	
2431	0	0	0	0	284	284	
2432	0	0	0	0	10	10	
2433	353	353	0	0	463	463	
2434	0	0	0	0	106	106	
2435	0	0	0	0	165	165	
2436	0	0	0	0	678	678	
2437	0	0	0	0	91	91	
2438	0	0	0	0	285	285	
2439	0	0	0	0	19	19	
2440	0	0	0	0	246	246	
2441	2,079	416	0	0	548	548	x
2442	1,079	1,079	0	0	417	417	
2443	2,149	322	0	0	455	455	x
2444	0	0	0	0	165	165	
2445	6,868	2,404	863	302	1,329	1,329	x

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
2446	1,205	301	0	0	667	667	x
2447	0	0	0	0	275	275	x
2448	1,140	23	0	0	312	312	x
2449	2	2	0	0	348	348	
2450	250	250	0	0	468	468	
2451	4,050	324	0	0	456	456	x
2452	4,579	229	0	0	215	215	x
2453	343	343	0	0	502	502	
2454	0	0	0	0	546	546	
2455	0	0	0	0	456	456	
2456	0	0	0	0	210	210	
2457	476	10	0	0	498	498	x
2458	155	124	0	0	244	244	x
2459	218	218	0	0	202	202	
2460	0	0	0	0	55	55	
2461	163	163	0	0	522	522	
2462	674	674	0	0	400	400	
2463	669	669	0	0	479	479	
2464	1,414	424	0	0	715	715	x
2465	24	0	0	0	209	209	x
2466	2,600	520	0	0	433	433	x
2467	1,585	238	0	0	178	178	x
2468	774	155	0	0	313	313	x
2469	1,152	345	0	0	763	763	x
2470	186	4	0	0	410	410	x
2471	159	16	0	0	114	114	x
2472	1,182	83	0	0	255	255	x
2473	601	180	0	0	235	235	x
2474	0	0	0	0	59	59	
2475	0	0	0	0	23	23	
2476	0	0	0	0	138	138	
2477	0	0	0	0	39	39	
2478	0	0	0	0	359	359	
2479	695	695	0	0	661	661	
2480	124	124	0	0	337	337	
2481	1,144	572	819	410	1,051	1,051	x
2482	312	312	0	0	478	478	
2483	843	211	0	0	254	254	x

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
2401	27,637	13,819	0	0	910	910	x
2402	21,302	639	0	0	772	772	x
2403	0	0	0	0	32	32	
2404	1,294	259	0	0	502	502	x
2405	3,110	3,110	0	0	495	495	
2406	1,084	1,084	0	0	1,330	1,330	
2407	0	0	0	0	327	327	
2408	1,879	1,879	0	0	248	248	
2409	23,439	469	0	0	431	431	x
2410	0	0	0	0	124	124	
2411	27	27	0	0	520	520	
2412	0	0	0	0	166	166	
2413	1,648	297	0	0	360	360	x
2414	0	0	0	0	1,313	1,313	
2415	1,122	1,122	0	0	604	604	
2416	0	0	0	0	695	695	
2417	0	0	0	0	305	305	
2418	2,165	433	1,390	278	517	517	x
2419	3,444	689	556	111	790	790	x
2420	0	0	0	0	44	44	
2421	1,021	408	0	0	188	188	x
2422	2,243	336	556	83	390	390	x
2423	946	473	0	0	564	564	x
2424	10,078	605	0	0	655	655	x
2425	7,997	800	0	0	877	877	x
2426	13,115	787	0	0	866	866	x
2427	15,476	1,548	0	0	2,117	2,117	x
2428	1,942	485	148	37	614	614	x
2429	352	352	0	0	985	985	
2430	0	0	0	0	199	199	
2431	0	0	0	0	574	574	
2432	0	0	0	0	17	17	
2433	1,221	610	0	0	953	953	x
2434	0	0	0	0	212	212	
2435	0	0	0	0	332	332	
2436	0	0	0	0	1,383	1,383	
2437	0	0	0	0	176	176	
2438	0	0	0	0	579	579	
2439	0	0	0	0	39	39	
2440	0	0	0	0	495	495	
2441	7,189	863	0	0	1,115	1,115	x
2442	3,731	2,985	0	0	795	795	x
2443	7,430	743	0	0	913	913	x
2444	0	0	0	0	326	326	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
2445	23,745	4,749	594	119	2,659	2,659	x
2446	4,166	833	0	0	1,258	1,258	x
2447	0	0	0	0	530	530	
2448	3,941	315	0	0	600	600	x
2449	6	6	0	0	638	638	
2450	873	873	0	0	872	872	
2451	14,150	708	0	0	849	849	x
2452	15,998	480	0	0	417	417	x
2453	1,197	718	0	0	976	976	x
2454	0	0	0	0	1,074	1,074	
2455	0	0	0	0	900	900	
2456	0	0	0	0	416	416	
2457	1,662	499	0	0	823	823	x
2458	543	326	0	0	413	413	x
2459	753	753	0	0	406	406	
2460	0	0	0	0	110	110	
2461	564	564	0	0	936	936	
2462	2,332	933	0	0	794	794	x
2463	2,312	694	0	0	858	858	x
2464	5,066	1,013	0	0	1,420	1,420	x
2465	82	82	0	0	353	353	
2466	9,316	932	0	0	891	891	x
2467	5,479	548	0	0	364	364	x
2468	2,773	416	0	0	645	645	x
2470	645	387	0	0	826	826	x
2471	570	171	0	0	220	220	x
2472	4,237	297	0	0	525	525	x
2473	2,153	323	0	0	475	475	x
2474	0	0	0	0	116	116	
2475	0	0	0	0	47	47	
2476	0	0	0	0	276	276	
2477	0	0	0	0	79	79	
2478	0	0	0	0	706	706	
2479	2,492	1,246	0	0	1,328	1,328	x
2480	444	444	0	0	696	696	
2481	4,099	1,640	566	226	2,046	2,046	x
2482	1,080	756	0	0	949	949	x
2483	2,915	437	0	0	521	521	x

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
2401	4,794	4,794	0	0	616	616	
2402	3,695	443	0	0	389	389	x
2403	0	0	0	0	16	16	
2404	224	224	0	0	276	276	
2405	539	539	0	0	303	303	
2406	188	188	0	0	687	687	
2407	0	0	0	0	185	185	
2408	326	326	0	0	157	157	
2409	4,065	407	0	0	180	180	x
2410	0	0	0	0	65	65	
2411	5	5	0	0	200	200	
2412	0	0	0	0	84	84	
2413	286	286	0	0	143	143	
2414	0	0	0	0	563	563	
2415	195	195	0	0	261	261	
2416	0	0	0	0	287	287	
2417	0	0	0	0	142	142	
2418	376	319	892	758	214	214	x
2419	597	597	357	357	314	314	
2420	0	0	0	0	18	18	
2421	177	177	0	0	74	74	
2422	389	311	357	285	150	150	x
2423	164	164	0	0	221	221	
2424	1,748	524	0	0	264	264	x
2425	1,387	1,387	0	0	343	343	
2426	2,275	796	0	0	342	342	x
2427	2,684	1,879	0	0	881	881	x
2428	339	339	96	96	264	264	
2429	61	61	0	0	403	403	
2430	0	0	0	0	92	92	
2431	0	0	0	0	229	229	
2432	0	0	0	0	9	9	
2433	212	212	0	0	367	367	
2434	0	0	0	0	86	86	
2435	0	0	0	0	133	133	
2436	0	0	0	0	541	541	
2437	0	0	0	0	75	75	
2438	0	0	0	0	228	228	
2439	0	0	0	0	15	15	
2440	0	0	0	0	198	198	
2441	1,247	1,122	0	0	438	438	x
2442	647	647	0	0	350	350	
2443	1,289	644	0	0	369	369	x
2444	0	0	0	0	135	135	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
2445	4,118	4,118	384	384	1,078	1,078	
2446	722	722	0	0	565	565	
2447	0	0	0	0	234	234	
2448	683	103	0	0	261	261	x
2449	1	1	0	0	307	307	
2450	153	153	0	0	409	409	
2451	2,471	865	0	0	399	399	x
2452	2,794	559	0	0	182	182	x
2453	209	209	0	0	425	425	
2454	0	0	0	0	458	458	
2455	0	0	0	0	381	381	
2456	0	0	0	0	176	176	
2457	290	290	0	0	467	467	
2458	95	95	0	0	226	226	
2459	131	131	0	0	163	163	
2460	0	0	0	0	45	45	
2461	98	98	0	0	458	458	
2462	404	404	0	0	326	326	
2463	401	401	0	0	421	421	
2464	898	898	0	0	623	623	
2465	14	14	0	0	190	190	
2466	1,652	1,652	0	0	369	369	
2467	950	285	0	0	141	141	x
2468	492	492	0	0	267	267	
2470	112	112	0	0	331	331	
2471	101	101	0	0	101	101	
2472	751	376	0	0	217	217	x
2473	382	382	0	0	203	203	
2474	0	0	0	0	48	48	
2475	0	0	0	0	18	18	
2476	0	0	0	0	111	111	
2477	0	0	0	0	34	34	
2478	0	0	0	0	314	314	
2479	442	442	0	0	572	572	
2480	79	79	0	0	285	285	
2481	727	727	363	363	929	929	
2482	187	187	0	0	390	390	
2483	506	506	0	0	202	202	

Appendix A-8

Region 8

West Fork Region 8

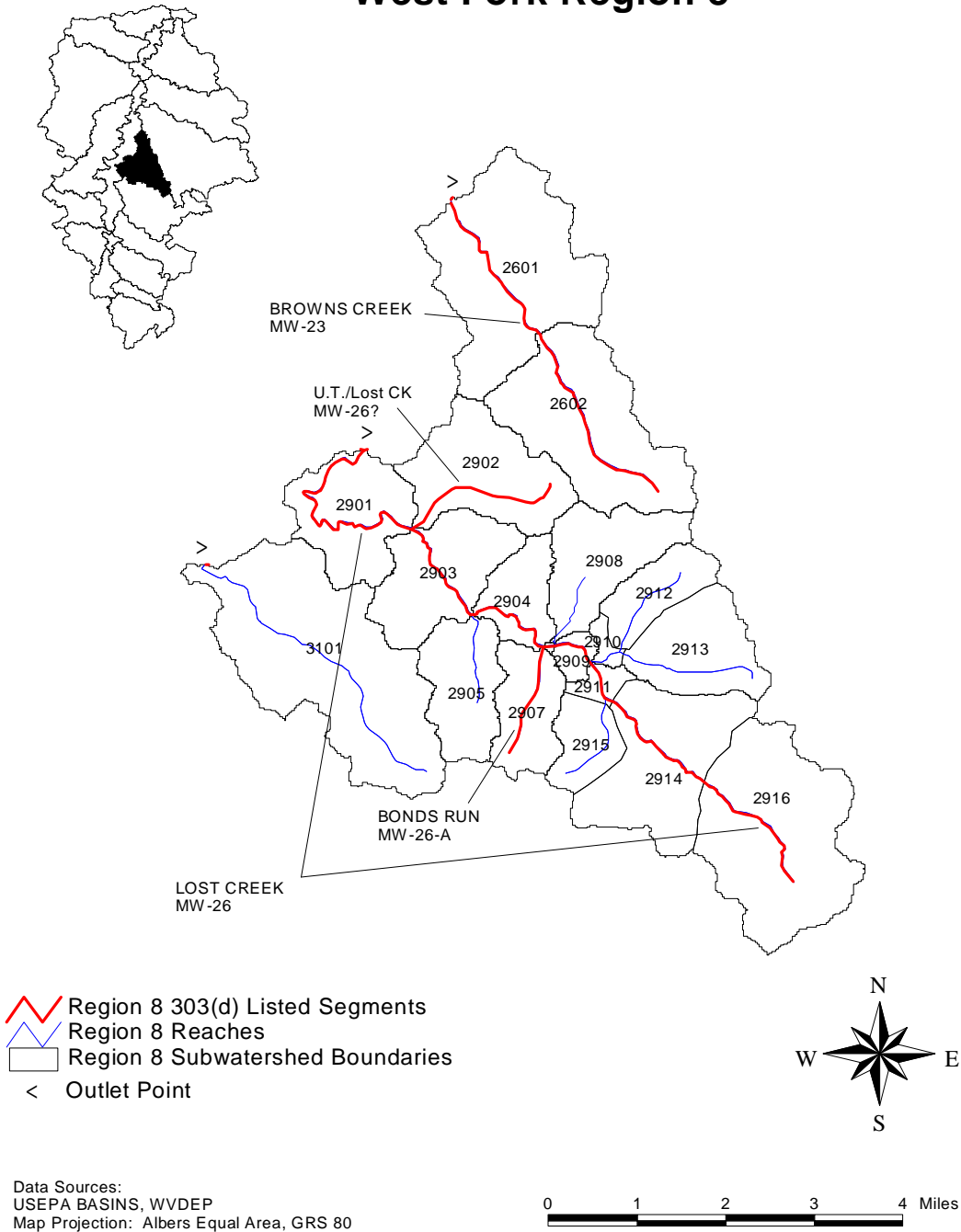


Figure 1. Region 8 - West Fork watershed

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 8

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
Browns Creek	MW-23	pH, Metals	2601, 2602		Aquatic Life
Lost Creek	MW-26	Metals	2901, 2902, 2903, 2904, 2905, 2906, 2907, 2908, 2909, 2910, 2911, 2912, 2913, 2914, 2915, 2916		Aquatic Life
Lost Creek: UT#1	MW-26?a	Metals	2902		Aquatic Life
Bonds Run	MW-26-A	Metals	2907		Aquatic Life

T = Aquatic Life Trout Waters

W = Warm Water Fishery

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

SWS
2601
2602
2901
2902
2903
2904
2905
2907
2908
2914
2916
3101

Metals and pH TMDLs for the West Fork Watershed

Table 3a. Water quality data for aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2601	MW-023-0001	60	60	60	1	8/16/2000	8/16/2000
2602	WVMW-23_STA2	2860	2860	2860	1	3/21/2001	3/21/2001
2901	MW-026-0001	140	80	200	2	8/17/2000	8/9/2000
2902	WVMW-26-0.5A_STA7	82	82	82	1	3/20/2001	3/20/2001
2903	21WV7IWQ_550595	1276.615	240	7600	13	6/14/1978	3/14/1978
2904	WVMW-26-A_STA9	50	50	50	1	8/8/2000	8/8/2000
2916	WVMW-26_STA1	117.5	100	135	2	8/8/2000	3/20/2001
3101	WVMW-28_STA1	90	90	90	1	8/16/2000	8/16/2000

Table 3b. Water quality data for iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2601	MW-023-0001	740	740	740	1	8/16/2000	8/16/2000
2602	WVMW-23_STA2	2680	2680	2680	1	3/21/2001	3/21/2001
2901	MW-026-0001	305	230	380	2	8/9/2000	8/17/2000
2902	WVMW-26-0.5A_STA7	138	138	138	1	3/20/2001	3/20/2001
2903	21WV7IWQ_550595	3820.25	720	12600	20	9/21/1976	3/9/1976
2904	WVMW-26-A_STA9	190	190	190	1	8/8/2000	8/8/2000
2914	112WRD_390749080205701	305	300	310	2	5/21/1984	8/6/1984
2916	WVMW-26_STA1	441.5	263	620	2	8/8/2000	3/20/2001
3101	WVMW-28_STA1	150	150	150	1	8/16/2000	8/16/2000

Table 3c. Water quality data for manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2601	MW-023-0001	340.00	340	340	1	08/16/00	08/16/00
2602	WVMW-23_STA2	101.00	101	101	1	03/21/01	03/21/01
2901	MW-026-0001	140.00	90	190	2	08/09/00	08/17/00
2902	WVMW-26-0.5A_STA7	172	172	172	1	3/20/2001	3/20/2001
2903	21WV7IWQ_550595	1392.647	242	3400	17	9/13/1977	3/9/1976
2904	WVMW-26-A_STA9	40	40	40	1	8/8/2000	8/8/2000
2914	112WRD_390749080205701	160	150	170	2	5/21/1984	8/6/1984
2916	WVMW-26_STA1	134.5	120	149	2	8/8/2000	3/20/2001
3101	WVMW-28_STA1	80	80	80	1	8/16/2000	8/16/2000

Metals and pH TMDLs for the West Fork Watershed

Table 3d. Water quality data for Total Nonfilterable Residue

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2601	MW-023-0001	1	1	1	1	8/16/2000	8/16/2000
2602	WVMW-23_STA2	43	43	43	1	3/21/2001	3/21/2001
2901	MW-026-0001	1	1	1	2	8/17/2000	8/9/2000
2902	WVMW-26-0.5A_STA7	1	1	1	1	3/20/2001	3/20/2001
2903	21WV7IWQ_550595	41.30769	5	224	13	6/15/1976	12/15/1976
2904	WVMW-26-A_STA9	1	1	1	1	8/8/2000	8/8/2000
2916	WVMW-26_STA1	2.1	1	3.2	2	8/8/2000	3/20/2001
3101	WVMW-28_STA1	1	1	1	1	8/16/2000	8/16/2000

Table 3e. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2601	MW-023-0001	7.84	7.84	7.84	1	8/16/2000	8/16/2000
2602	WVMW-23_STA2	7.66	7.66	7.66	1	3/21/2001	3/21/2001
2901	MW-026-0001	7.885	7.81	7.96	2	8/9/2000	8/17/2000
2902	WVMW-26-0.5A_STA7	7.99	7.99	7.99	1	3/20/2001	3/20/2001
2903	21WV7IWQ_550595	6.305263	3.9	7.6	19	6/23/1975	6/25/1959
2904	WVMW-26-A_STA9	7.88	7.88	7.88	1	8/8/2000	8/8/2000
2914	112WRD_390749080205701	8.55	8.4	8.7	2	5/21/1984	8/6/1984
2916	WVMW-26_STA1	8.185	8.14	8.23	2	8/8/2000	3/20/2001
3101	WVMW-28_STA1	7.89	7.89	7.89	1	8/16/2000	8/16/2000

Table 3f. Water quality data for dissolved zinc

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
2914	112WRD_390749080205701	7	7	7	1	8/6/1984	8/6/1984

Metals and pH TMDLs for the West Fork Watershed

Table 4a. 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
2901	WV1011570	11	11	4.60	0
2901	WV1011596	191	191	4.60	0
2902	WV1011596	700	700	4.60	0
2903	WV1011570	61	61	4.60	0
2905	WV0098761	367	367	4.60	0
2905	WV1011570	28	28	4.60	0
3101	WV0067571	572	572	4.60	0
3101	WV0098761	363	363	4.60	0
3101	WV1011570	44	44	4.60	0

Table 4b. 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
2901	WV1011570	8	8	3.20	0
2901	WV1011596	132	132	3.20	0
2902	WV1011596	483	483	3.20	0
2903	WV1011570	42	42	3.20	0
2905	WV0098761	254	254	3.20	0
2905	WV1011570	19	19	3.20	0
3101	WV0067571	395	395	3.20	0
3101	WV0098761	250	250	3.20	0
3101	WV1011570	30	30	3.20	0

Table 4c. 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
2901	WV1011570	5	5	2.00	0
2901	WV1011596	85	85	2.00	0
2902	WV1011596	310	310	2.00	0
2903	WV1011570	27	27	2.00	0
2905	WV0098761	163	163	2.00	0
2905	WV1011570	12	12	2.00	0
3101	WV0067571	253	253	2.00	0
3101	WV0098761	161	161	2.00	0
3101	WV1011570	19	19	2.00	0

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
2601	10,300	1,030	0	0	815	815	x
2602	2,759	552	0	0	716	716	x
2901	896	896	68	68	364	364	
2902	6,379	191	0	0	405	405	x
2903	8,258	826	136	14	317	317	x
2904	331	331	0	0	195	195	
2905	1,228	1,228	0	0	282	282	
2906	0	0	0	0	3	3	
2907	307	307	0	0	248	248	
2908	129	129	0	0	360	360	
2909	0	0	0	0	59	59	
2910	0	0	0	0	32	32	
2911	0	0	0	0	53	53	
2912	0	0	0	0	197	197	
2913	0	0	0	0	346	346	
2914	31	31	0	0	565	565	
2915	0	0	0	0	180	180	
2916	2,052	2,052	0	0	808	808	
3101	4,285	643	136	20	1,019	1,019	x

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
2601	35,611	2,849	0	0	1,674	1,674	x
2602	9,540	1,431	0	0	1,445	1,445	x
2901	3,210	3,210	47	47	727	727	
2902	22,053	882	0	0	833	833	x
2903	29,593	2,071	93	7	626	626	x
2904	1,187	1,187	0	0	391	391	
2905	4,401	4,401	0	0	581	581	
2906	0	0	0	0	5	5	
2907	1,099	1,099	0	0	487	487	
2908	464	464	0	0	669	669	
2909	0	0	0	0	103	103	
2910	0	0	0	0	63	63	
2911	0	0	0	0	105	105	
2912	0	0	0	0	398	398	
2913	0	0	0	0	717	717	
2914	113	113	0	0	1,137	1,137	
2915	0	0	0	0	348	348	
2916	7,354	5,148	0	0	1,663	1,663	x
3101	15,356	1,536	93	9	2,056	2,056	x

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
2601	6,176	1,853	0	0	649	649	x
2602	1,655	1,324	0	0	576	576	x
2901	569	569	30	30	316	316	
2902	3,825	1,339	0	0	321	321	x
2903	5,246	1,836	60	21	277	277	x
2904	210	210	0	0	169	169	
2905	780	780	0	0	240	240	
2906	0	0	0	0	3	3	
2907	195	195	0	0	218	218	
2908	82	82	0	0	326	326	
2909	0	0	0	0	55	55	
2910	0	0	0	0	27	27	
2911	0	0	0	0	45	45	
2912	0	0	0	0	170	170	
2913	0	0	0	0	294	294	
2914	20	20	0	0	488	488	
2915	0	0	0	0	160	160	
2916	1,304	1,304	0	0	687	687	
3101	2,722	1,089	60	24	880	880	x

Appendix A-9

Region 9

West Fork Region 9



Figure 1. Region 9 - West Fork watershed

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 9

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
HACKERS CREEK	MW-31	pH, Metals	3501, 3502, 3503, 3504, 3505, 3506, 3507, 3508, 3509, 3510, 3511, 3512, 3513, 3514, 3515, 3516, 3517, 3518, 3519, 3520, 3521, 3522, 3523, 3524, 3525, 3526, 3527, 3528, 3529, 3530, 3531, 3532, 3533, 3534, 3535, 3536, 3537, 3538		Aquatic Life

T = Aquatic Life Trout Waters

W = Warm Water Fishery

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

SWS	SWS
3502	3529
3504	3530
3506	3531
3508	3532
3509	3533
3510	3534
3511	3535
3513	3536
3514	3537
3515	3538
3517	
3518	
3519	
3520	
3521	
3522	
3523	
3524	
3527	
3528	

Metals and pH TMDLs for the West Fork Watershed

Table 3a. Water quality data for aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
3501	WVMW-31_STA7	100.00	100	100	1	08/09/00	08/09/00
3508	WVMW-31_STA6	560.00	560	560	1	07/24/00	07/24/00
3509	MW-031-0006	70.00	70	70	1	08/08/00	08/08/00
3510	MW-031-0007	80.00	80	80	1	08/08/00	08/08/00
3520	21WV7IWQ_551159	296.67	180	380	3	06/18/96	06/12/95
3526	MW-031-0003	270.00	270	270	1	07/24/00	07/24/00
3530	WVMW-31_STA2	260.00	260	260	1	08/08/00	08/08/00
3532	WV0098710_HC-UP	674.80	108.1	7390	53	04/25/01	12/21/99
3534	WV0098710_JR1	476.66	108.1	5825	52	02/23/00	09/21/01
3536	WVMW-31_STA5	287.00	287	287	1	03/19/01	03/19/01

Table 3b. Water quality data for iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
3501	WVMW-31_STA7	200.00	200	200	1	08/09/00	08/09/00
3508	WVMW-31_STA6	920.00	920	920	1	07/24/00	07/24/00
3509	MW-031-0006	1160.00	1160	1160	1	08/08/00	08/08/00
3510	MW-031-0007	420.00	420	420	1	08/08/00	08/08/00
3520	21WV7IWQ_551159	1591.67	285	4100	3	06/12/95	03/06/95
3521	112WRD_390349080241101	845.00	390	1300	2	08/06/84	05/21/84
3523	112WRD_390434080230801	960.00	220	1700	2	05/21/84	08/06/84
3526	MW-031-0003	600.00	600	600	1	07/24/00	07/24/00
3530	WVMW-31_STA2	810.00	810	810	1	08/08/00	08/08/00
3532	WV0098710_HC-UP	490.46	132.6	1450	53	10/10/01	01/13/00
3534	WV0098710_JR1	156.44	22	750	52	04/26/00	10/22/01
3536	WVMW-31_STA5	466.00	466	466	1	03/19/01	03/19/01

Table 3c. Water quality data for manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
3501	WVMW-31_STA7	80.00	80	80	1	08/09/00	08/09/00
3508	WVMW-31_STA6	130.00	130	130	1	07/24/00	07/24/00
3509	MW-031-0006	430.00	430	430	1	08/08/00	08/08/00
3510	MW-031-0007	110.00	110	110	1	08/08/00	08/08/00
3520	21WV7IWQ_551159	156.00	50	325	3	06/18/96	03/06/95
3521	112WRD_390349080241101	135.00	130	140	2	05/21/84	08/06/84
3523	112WRD_390434080230801	180.00	20	340	2	05/21/84	08/06/84
3526	MW-031-0003	170.00	170	170	1	07/24/00	07/24/00
3530	WVMW-31_STA2	150.00	150	150	1	08/08/00	08/08/00
3532	WV0098710_HC-UP	145.79	25	400	53	09/21/01	12/21/99
3534	WV0098710_JR1	117.59	17	480	52	02/23/00	10/10/01
3536	WVMW-31_STA5	203.00	203	203	1	03/19/01	03/19/01

Metals and pH TMDLs for the West Fork Watershed

Table 3d. Water quality data for Total Nonfilterable Residue

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
3501	WVMW-31_STA7	1.00	1	1	1	08/09/00	08/09/00
3508	WVMW-31_STA6	3.00	3	3	1	07/24/00	07/24/00
3509	MW-031-0006	1.00	1	1	1	08/08/00	08/08/00
3510	MW-031-0007	2.00	2	2	1	08/08/00	08/08/00
3520	21WV7IWQ_551159	53.33	14	127	3	03/06/95	06/18/96
3526	MW-031-0003	2.00	2	2	1	07/24/00	07/24/00
3530	WVMW-31_STA2	18.00	18	18	1	08/08/00	08/08/00
3536	WVMW-31_STA5	11.80	11.8	11.8	1	03/19/01	03/19/01

Table 3e. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
3501	WVMW-31_STA7	7.60	7.6	7.6	1	08/09/00	08/09/00
3508	WVMW-31_STA6	7.47	7.47	7.5	1	07/24/00	07/24/00
3509	MW-031-0006	7.48	7.48	7.5	1	08/08/00	08/08/00
3510	MW-031-0007	7.78	7.78	7.8	1	08/08/00	08/08/00
3520	21WV7IWQ_551159	7.50	7.2	7.8	2	06/12/95	06/18/96
3521	112WRD_390349080241101	7.95	7.9	8.0	2	08/06/84	05/21/84
3523	112WRD_390434080230801	7.75	7.7	7.8	2	05/21/84	08/06/84
3526	MW-031-0003	7.36	7.36	7.4	1	07/24/00	07/24/00
3530	WVMW-31_STA2	7.86	7.86	7.9	1	08/08/00	08/08/00
3532	WV0098710_HC-UP	7.89	7.33	8.3	53	09/21/01	05/10/00
3534	WV0098710_JR1	7.79	7.18	8.3	52	04/12/00	07/16/01
3536	WVMW-31_STA5	7.94	7.94	7.9	1	03/19/01	03/19/01

Table 3f. Water quality data for dissolved zinc

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
3520	21WV7IWQ_551159	6.50	3	10	2	06/12/95	03/06/95

Metals and pH TMDLs for the West Fork Watershed

Table 4a. 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
3519	WV0098710	373	373	4.60	0
3532	WV1013670	23	23	4.60	0
3532	WV1013734	152	152	4.60	0
3534	WV1013611	76	76	4.60	0
3534	WV1013637	53	53	4.60	0
3534	WV1013670	158	158	4.60	0
3534	WV1013823	131	131	4.60	0
3534	WV1013858	974	974	4.60	0
3534	WV1018051	44	44	4.60	0
3535	WV1013823	272	201	3.58	26
3535	WV1013858	272	201	3.58	26
3536	WV1013858	480	451	4.55	6

Table 4b. 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
3519	WV0098710	257	257	3.20	0
3532	WV1013670	16	16	3.20	0
3532	WV1013734	105	105	3.20	0
3534	WV1013611	53	53	3.20	0
3534	WV1013637	37	37	3.20	0
3534	WV1013670	109	109	3.20	0
3534	WV1013823	91	91	3.20	0
3534	WV1013858	672	672	3.20	0
3534	WV1018051	30	30	3.20	0
3535	WV1013823	188	188	3.20	0
3535	WV1013858	188	188	3.20	0
3536	WV1013858	331	331	3.20	0

Table 4c. 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
3519	WV0098710	166	166	2.00	0
3532	WV1013670	10	10	2.00	0
3532	WV1013734	67	67	2.00	0
3534	WV1013611	34	34	2.00	0
3534	WV1013637	24	24	2.00	0
3534	WV1013670	70	70	2.00	0
3534	WV1013823	58	58	2.00	0
3534	WV1013858	432	432	2.00	0
3534	WV1018051	19	19	2.00	0
3535	WV1013823	121	121	2.00	0
3535	WV1013858	121	121	2.00	0
3536	WV1013858	213	213	2.00	0

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
3501	0	0	0	0	193	193	
3502	476	143	0	0	213	213	x
3503	0	0	0	0	22	22	
3504	464	186	0	0	203	203	x
3505	0	0	0	0	279	279	
3506	533	320	0	0	782	782	x
3507	0	0	0	0	163	163	
3508	17	17	0	0	252	252	
3509	980	490	29	14	490	490	x
3510	114	114	0	0	148	148	
3511	160	160	0	0	284	284	
3512	0	0	0	0	263	263	
3513	307	123	0	0	176	176	x
3514	51	51	0	0	250	250	
3515	19	19	0	0	100	100	
3516	0	0	0	0	259	259	
3517	362	362	0	0	135	135	
3518	743	149	0	0	246	246	x
3519	1,394	279	0	0	935	935	x
3520	504	252	0	0	196	196	x
3521	1,335	481	33	12	724	724	x
3522	512	195	0	0	234	234	x
3523	1,147	1,009	0	0	456	456	x
3524	678	305	0	0	386	386	x
3525	0	0	0	0	97	97	
3526	0	0	0	0	70	70	
3527	868	208	0	0	266	266	x
3528	462	277	0	0	242	242	x
3529	658	658	0	0	1,091	1,091	
3530	1,695	848	0	0	1,044	1,044	x
3531	161	161	0	0	197	197	
3532	2,803	561	0	0	661	661	x
3533	564	406	0	0	573	573	x
3534	1,967	98	0	0	677	677	x
3535	914	9	0	0	142	142	x
3536	598	6	0	0	182	182	x
3537	2,468	296	0	0	380	380	x
3538	1,803	306	0	0	353	353	x

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
3501	0	0	0	0	388	388	
3502	1,706	341	0	0	439	439	x
3503	0	0	0	0	45	45	
3504	1,664	333	0	0	416	416	x
3505	0	0	0	0	524	524	
3506	1,911	573	0	0	1,544	1,544	x
3507	0	0	0	0	309	309	
3508	63	63	0	0	408	408	
3509	3,511	351	20	2	966	966	x
3510	409	409	0	0	290	290	
3511	572	572	0	0	531	531	
3512	0	0	0	0	526	526	
3513	1,100	220	0	0	341	341	x
3514	184	184	0	0	481	481	
3515	68	68	0	0	201	201	
3516	0	0	0	0	518	518	
3517	1,298	1,298	0	0	273	273	
3518	2,664	266	0	0	507	507	x
3519	4,997	500	0	0	1,899	1,899	x
3520	1,808	271	0	0	389	389	x
3521	4,784	1,148	23	5	1,380	1,380	x
3522	1,834	367	0	0	466	466	x
3523	4,109	1,233	0	0	898	898	x
3524	2,429	632	0	0	762	762	x
3525	0	0	0	0	189	189	
3526	0	0	0	0	134	134	
3527	3,110	404	0	0	518	518	x
3528	1,656	861	0	0	472	472	x
3529	2,359	1,746	0	0	2,165	2,165	x
3530	6,075	1,823	0	0	2,099	2,099	x
3531	577	346	0	0	393	393	x
3532	10,046	1,105	0	0	1,335	1,335	x
3533	2,022	890	0	0	1,077	1,077	x
3534	7,048	916	0	0	1,342	1,342	x
3535	3,277	131	0	0	279	279	x
3536	2,144	214	0	0	352	352	x
3537	8,846	619	0	0	747	747	x
3538	6,461	582	0	0	713	713	x

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
3501	0	0	0	0	167	167	
3502	302	302	0	0	182	182	
3503	0	0	0	0	18	18	
3504	295	295	0	0	173	173	
3505	0	0	0	0	252	252	
3506	339	339	0	0	683	683	
3507	0	0	0	0	145	145	
3508	11	11	0	0	246	246	
3509	622	622	13	13	429	429	
3510	73	73	0	0	130	130	
3511	101	101	0	0	257	257	
3512	0	0	0	0	228	228	
3513	195	195	0	0	156	156	
3514	33	33	0	0	222	222	
3515	12	12	0	0	86	86	
3516	0	0	0	0	225	225	
3517	230	230	0	0	116	116	
3518	472	472	0	0	209	209	
3519	886	886	0	0	804	804	
3520	320	320	0	0	171	171	
3521	848	848	15	15	648	648	
3522	325	325	0	0	204	204	
3523	728	728	0	0	400	400	
3524	431	431	0	0	337	337	
3525	0	0	0	0	86	86	
3526	0	0	0	0	62	62	
3527	551	441	0	0	235	235	x
3528	294	294	0	0	214	214	
3529	418	418	0	0	951	951	
3530	1,077	1,077	0	0	903	903	
3531	102	102	0	0	171	171	
3532	1,781	1,781	0	0	569	569	
3533	359	359	0	0	517	517	
3534	1,249	1,187	0	0	593	593	x
3535	581	232	0	0	125	125	x
3536	380	304	0	0	162	162	x
3537	1,568	737	0	0	335	335	x
3538	1,145	802	0	0	304	304	x

Appendix A-10

Region 10

West Fork Region 10

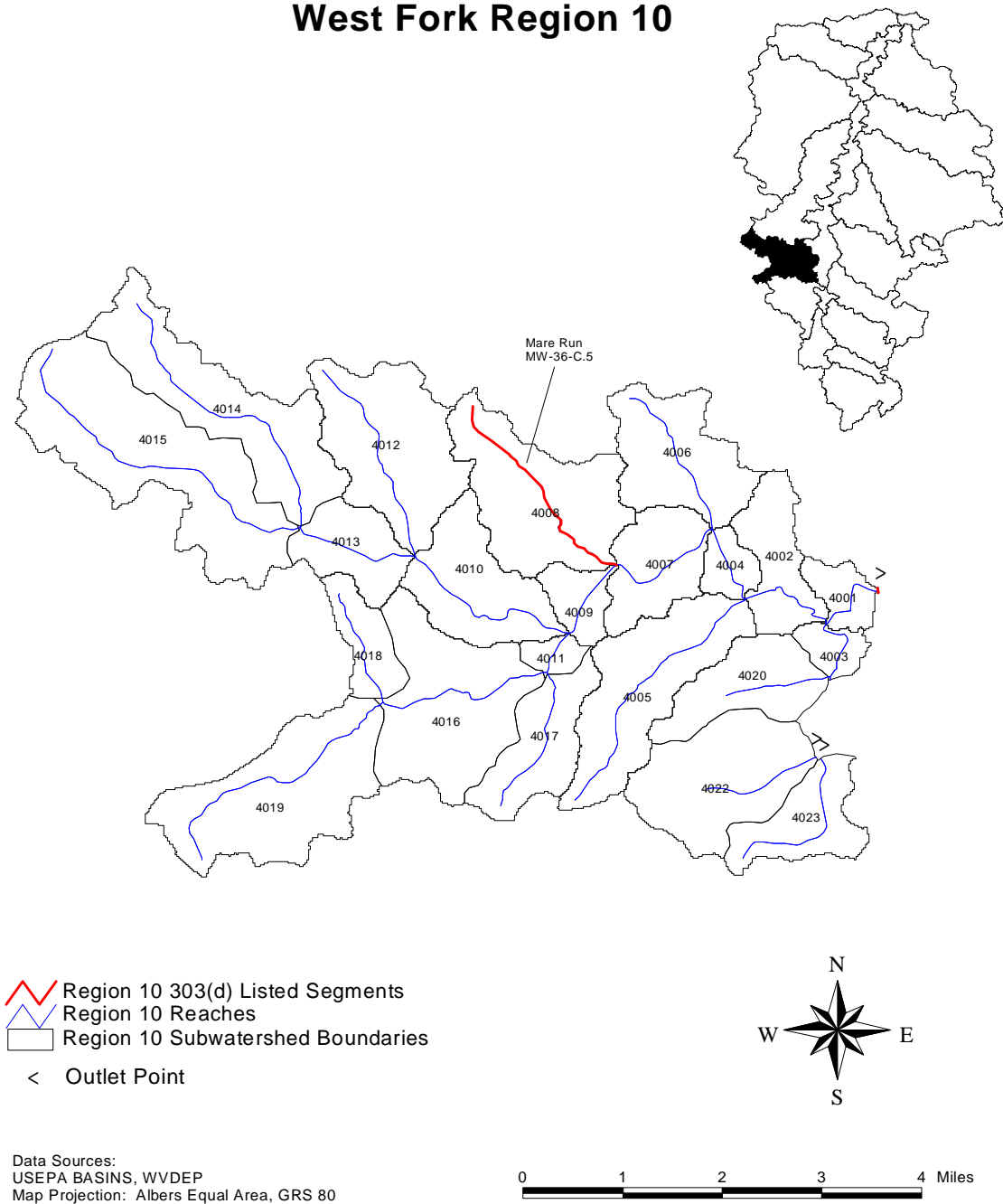


Figure 1. Region 10 - West Fork watershed

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 10

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
Mare Run	MW-36-C.5	Metals	4008		Aquatic Life

T = Aquatic Life Trout Waters

W = Warm Water Fishery

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

SWS
4005
4006
4007
4008
4009
4010
4011
4016
4017
4019
4020
4022
4023

Metals and pH TMDLs for the West Fork Watershed

Table 3a. Water quality data for aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4001	11COEHUN_4WFS13063	340.00	340	340	1	07/15/81	07/15/81
4002	WVMW-36_STA1	11600.00	11600	11600	1	03/21/01	03/21/01
4003	MW-036-0002	70.00	70	70	1	08/16/00	08/16/00
4008	MW-036-0003	70.00	70	70	1	08/15/00	08/15/00
4010	MW-036-0004	260.00	260	260	1	08/15/00	08/15/00
4011	WVMW-36-F_STA9	300.00	300	300	1	07/25/00	07/25/00

Table 3b. Water quality data for iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4001	11COEHUN_4WFS13063	700	700	700	1	7/15/1981	7/15/1981
4002	WVMW-36_STA1	14400	14400	14400	1	3/21/2001	3/21/2001
4003	MW-036-0002	470	470	470	1	8/16/2000	8/16/2000
4004	112WRD_390627080294039	1746	600	4200	5	9/11/1979	8/19/1980
4008	MW-036-0003	210	210	210	1	8/15/2000	8/15/2000
4010	MW-036-0004	910	910	910	1	8/15/2000	8/15/2000
4011	WVMW-36-F_STA9	330	330	330	1	7/25/2000	7/25/2000

Table 3c. Water quality data for manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4001	11COEHUN_4WFS13063	480.00	480	480	1	07/15/81	07/15/81
4002	WVMW-36_STA1	739.00	739	739	1	03/21/01	03/21/01
4003	MW-036-0002	90.00	90	90	1	08/16/00	08/16/00
4004	112WRD_390627080294039	138.00	110	200	5	05/04/79	07/21/81
4008	MW-036-0003	110.00	110	110	1	08/15/00	08/15/00
4010	MW-036-0004	120.00	120	120	1	08/15/00	08/15/00
4011	WVMW-36-F_STA9	60.00	60	60	1	07/25/00	07/25/00

Table 3d. Water quality data for Total Nonfilterable Residue

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4001	11COEHUN_4WFS13063	12.00	12	12	1	07/15/81	07/15/81
4002	WVMW-36_STA1	434.00	434	434	1	03/21/01	03/21/01
4003	MW-036-0002	2.00	2	2	1	08/16/00	08/16/00
4008	MW-036-0003	3.00	3	3	1	08/15/00	08/15/00
4010	MW-036-0004	1.00	1	1	1	08/15/00	08/15/00
4011	WVMW-36-F_STA9	1.00	1	1	1	07/25/00	07/25/00

Metals and pH TMDLs for the West Fork Watershed

Table 3e. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4001	11COEHUN_4WFS13063	6.5	6.5	6.5	1	7/15/1981	7/15/1981
4002	WVMW-36_STA1	7.19	7.19	7.19	1	3/21/2001	3/21/2001
4003	MW-036-0002	7.45	7.4	7.5	2	8/16/2000	8/16/2000
4004	112WRD_390627080294039	7.24	6	8	5	7/21/1981	3/25/1980
4008	MW-036-0003	7.84	7.78	7.9	2	8/15/2000	8/15/2000
4010	MW-036-0004	7.08	6.9	7.26	2	8/15/2000	8/15/2000
4011	WVMW-36-F_STA9	7.66	7.66	7.66	1	7/25/2000	7/25/2000

Table 3f. Water quality data for dissolved zinc

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4004	112WRD_390627080294039	4	4	4	1	8/19/1980	8/19/1980

Metals and pH TMDLs for the West Fork Watershed

Table 4a. 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
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(not applicable to this region)

Table 4b. 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
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(not applicable to this region)

Table 4c. 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
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(not applicable to this region)

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
4001	0	0	0	0	95	95	
4002	0	0	0	0	224	224	
4003	0	0	0	0	82	82	
4004	0	0	0	0	83	83	
4005	356	356	0	0	499	499	
4006	1,106	299	0	0	349	349	x
4007	66	66	0	0	260	260	
4008	2,612	418	0	0	485	485	x
4009	267	240	0	0	112	112	x
4010	2,292	1,948	0	0	338	338	x
4011	6	6	0	0	53	53	
4012	0	0	0	0	507	507	
4013	0	0	0	0	208	208	
4014	0	0	0	0	542	542	
4015	0	0	0	0	788	788	
4016	2,928	527	0	0	532	532	x
4017	295	221	0	0	266	266	x
4018	0	0	0	0	145	145	
4019	658	493	0	0	595	595	x
4020	395	217	0	0	278	278	x
4022	283	283	0	0	470	470	
4023	464	185	0	0	228	228	x

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
4001	0	0	0	0	174	174	
4002	0	0	0	0	433	433	
4003	0	0	0	0	139	139	
4004	0	0	0	0	159	159	
4005	1,274	765	0	0	950	950	x
4006	3,964	595	0	0	704	704	x
4007	237	237	0	0	498	498	
4008	9,360	842	0	0	969	969	x
4009	955	669	0	0	215	215	x
4010	8,213	3,860	0	0	662	662	x
4011	21	21	0	0	106	106	
4012	0	0	0	0	1,032	1,032	
4013	0	0	0	0	417	417	
4014	0	0	0	0	1,111	1,111	
4015	0	0	0	0	1,624	1,624	
4016	10,493	1,154	0	0	1,017	1,017	x
4017	1,056	422	0	0	512	512	x
4018	0	0	0	0	285	285	
4019	2,358	943	0	0	1,155	1,155	x
4020	1,415	425	0	0	534	534	x
4022	1,013	658	0	0	918	918	x
4023	1,662	366	0	0	445	445	x

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
4001	0	0	0	0	87	87	
4002	0	0	0	0	198	198	
4003	0	0	0	0	79	79	
4004	0	0	0	0	74	74	
4005	226	226	0	0	447	447	
4006	703	703	0	0	301	301	
4007	42	42	0	0	232	232	
4008	1,659	1,078	0	0	422	422	x
4009	169	169	0	0	101	101	
4010	1,456	1,456	0	0	298	298	
4011	4	4	0	0	45	45	
4012	0	0	0	0	436	436	
4013	0	0	0	0	181	181	
4014	0	0	0	0	463	463	
4015	0	0	0	0	672	672	
4016	1,860	1,860	0	0	474	474	
4017	187	187	0	0	236	236	
4018	0	0	0	0	126	126	
4019	418	418	0	0	526	526	
4020	251	251	0	0	248	248	
4022	179	179	0	0	415	415	
4023	295	295	0	0	201	201	

Appendix A-11

Region 11

West Fork Region 11

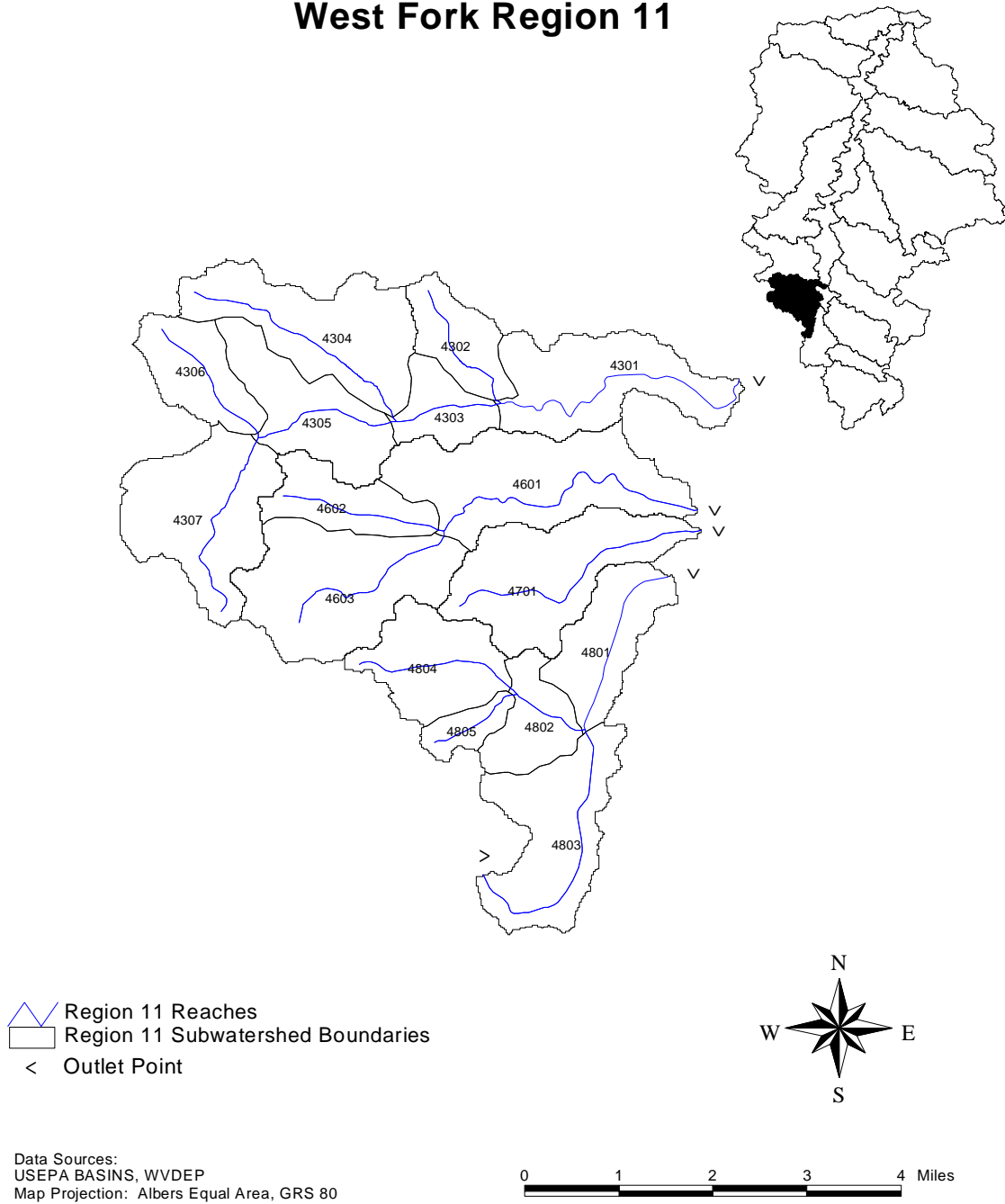


Figure 1. Region 11 - West Fork watershed

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 11

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
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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
4301
4302
4304
4305
4306
4307
4601
4602
4603

Metals and pH TMDLs for the West Fork Watershed

Table 3a. Water quality data for aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4301	MW-039-0001	60.00	60	60	2	08/15/00	08/15/00
4304	MW-039-0003	70.00	70	70	1	08/14/00	08/14/00
4305	MW-039-0002	50.00	50	50	1	08/14/00	08/14/00
4601	WVMW-41_STA4	167.00	167	167	1	03/20/01	03/20/01
4603	WVMW-41_STA2	219.00	219	219	1	03/20/01	03/20/01
4701	WVMW-42_STA7	145.00	145	145	1	03/20/01	03/20/01
4801	WVMW-43_STA8	60.00	60	60	1	08/15/00	08/15/00

Table 3b. Water quality data for iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4301	MW-039-0001	315.00	260	370	2	08/15/00	08/15/00
4304	MW-039-0003	220.00	220	220	1	08/14/00	08/14/00
4305	MW-039-0002	380.00	380	380	1	08/14/00	08/14/00
4601	WVMW-41_STA4	295.00	295	295	1	03/20/01	03/20/01
4603	WVMW-41_STA2	337.00	337	337	1	03/20/01	03/20/01
4701	WVMW-42_STA7	212.00	212	212	1	03/20/01	03/20/01
4801	WVMW-43_STA8	130.00	130	130	1	08/15/00	08/15/00

Table 3c. Water quality data for manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4301	MW-039-0001	100.00	100	100	2	08/15/00	08/15/00
4304	MW-039-0003	80.00	80	80	1	08/14/00	08/14/00
4305	MW-039-0002	70.00	70	70	1	08/14/00	08/14/00
4601	WVMW-41_STA4	100.00	100	100	1	03/20/01	03/20/01
4603	WVMW-41_STA2	102.00	102	102	1	03/20/01	03/20/01
4701	WVMW-42_STA7	40.00	40	40	1	03/20/01	03/20/01
4801	WVMW-43_STA8	60.00	60	60	1	08/15/00	08/15/00

Table 3d. Water quality data for Total Nonfilterable Residue

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4301	MW-039-0001	2.50	1	4	2	08/15/00	08/15/00
4304	MW-039-0003	2.00	2	2	1	08/14/00	08/14/00
4305	MW-039-0002	1.00	1	1	1	08/14/00	08/14/00
4601	WVMW-41_STA4	3.40	3.4	3.4	1	03/20/01	03/20/01
4603	WVMW-41_STA2	4.20	4.2	4.2	1	03/20/01	03/20/01
4701	WVMW-42_STA7	1.60	1.6	1.6	1	03/20/01	03/20/01
4801	WVMW-43_STA8	1.00	1	1	1	08/15/00	08/15/00

Metals and pH TMDLs for the West Fork Watershed

Table 3e. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4301	MW-039-0001	7.86	7.86	7.9	2	08/15/00	08/15/00
4304	MW-039-0003	7.24	7.24	7.2	1	08/14/00	08/14/00
4305	MW-039-0002	8.15	8.15	8.2	1	08/14/00	08/14/00
4601	WVMW-41_STA4	7.45	7.45	7.5	1	03/20/01	03/20/01
4603	WVMW-41_STA2	7.48	7.48	7.5	1	03/20/01	03/20/01
4701	WVMW-42_STA7	7.58	7.58	7.6	1	03/20/01	03/20/01
4801	WVMW-43_STA8	8.03	8.03	8.0	1	08/15/00	08/15/00

Table 3f. Water quality data for dissolved zinc

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
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(not applicable to this region)

Metals and pH TMDLs for the West Fork Watershed

Table 4a. 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
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(not applicable to this region)

Table 4b. 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
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(not applicable to this region)

Table 4c. 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
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(not applicable to this region)

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
4301	550	385	0	0	515	515	x
4302	148	148	0	0	219	219	
4303	0	0	0	0	178	178	
4304	1,137	455	0	0	533	533	x
4305	1,936	290	0	0	370	370	x
4306	390	215	0	0	255	255	x
4307	1,829	439	713	171	530	530	x
4601	1,242	994	0	0	674	674	x
4602	788	205	0	0	244	244	x
4603	87	87	0	0	629	629	
4701	0	0	0	0	585	585	
4801	0	0	0	0	322	322	
4802	0	0	0	0	222	222	
4803	0	0	0	0	516	516	
4804	0	0	0	0	367	367	
4805	0	0	0	0	97	97	

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
4301	1,969	1,083	0	0	871	871	x
4302	532	346	0	0	428	428	x
4303	0	0	0	0	349	349	
4304	4,074	896	0	0	1,070	1,070	x
4305	6,939	694	0	0	739	739	x
4306	1,398	420	0	0	506	506	x
4307	6,556	983	492	74	1,058	1,058	x
4601	4,451	1,959	0	0	1,339	1,339	x
4602	2,825	395	0	0	497	497	x
4603	311	311	0	0	1,282	1,282	
4701	0	0	0	0	1,168	1,168	
4801	0	0	0	0	614	614	
4802	0	0	0	0	442	442	
4803	0	0	0	0	964	964	
4804	0	0	0	0	741	741	
4805	0	0	0	0	192	192	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
4301	349	349	0	0	493	493	
4302	94	94	0	0	192	192	
4303	0	0	0	0	157	157	
4304	722	722	0	0	461	461	
4305	1,230	1,169	0	0	321	321	x
4306	248	248	0	0	221	221	
4307	1,162	1,081	316	294	461	461	x
4601	789	789	0	0	589	589	
4602	501	501	0	0	209	209	
4603	55	55	0	0	540	540	
4701	0	0	0	0	508	508	
4801	0	0	0	0	289	289	
4802	0	0	0	0	194	194	
4803	0	0	0	0	468	468	
4804	0	0	0	0	318	318	
4805	0	0	0	0	85	85	

Appendix A-12

Region 12

West Fork Region 12

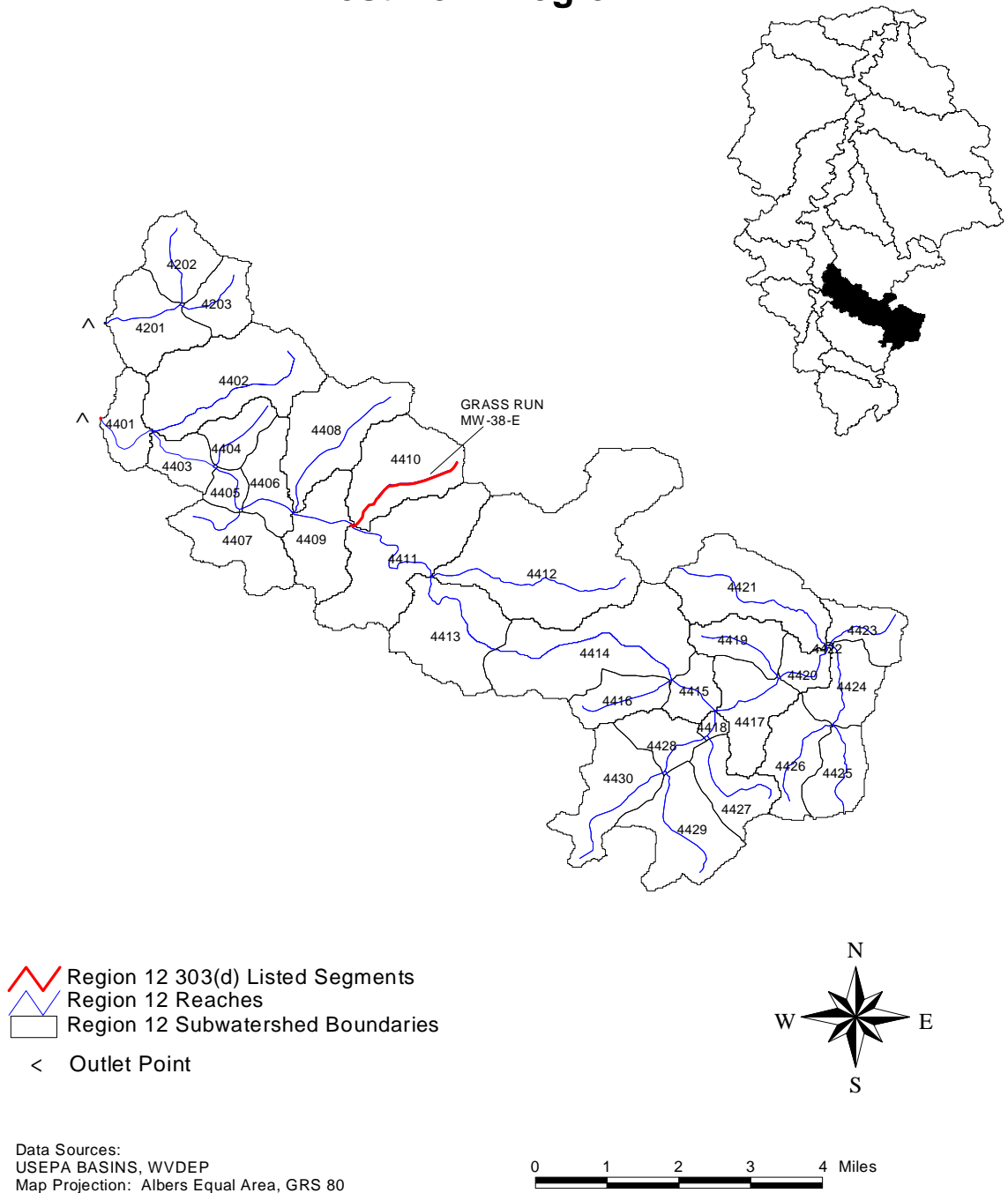


Figure 1. Region 12 - West Fork watershed

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 12

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
GRASS RUN	MW-38-E	Metals	4410		Aquatic Life

T = Aquatic Life Trout Waters

W = Warm Water Fishery

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

SWS
4201
4202
4203
4401
4402
4403
4404
4405
4406
4407
4408
4409
4410
4411
4412
4413
4414
4421

Metals and pH TMDLs for the West Fork Watershed

Table 3a. Water quality data for aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4201	WVMW-37_STA1	3890.00	3890	3890	1	03/21/01	03/21/01
4401	WVMW-38_STA3	200.00	200	200	1	08/15/00	08/15/00
4410	WVMW-38-E_STA6	123.00	123	123	1	03/20/01	03/20/01
4412	WV1014200_UTSCUP	1.02	0.18	3.7	7	05/26/98	10/23/98
4413	WVMW-38-G_STA8	207.00	207	207	1	03/20/01	03/20/01
4417	WVMW-38-G-4_STA14	143.00	143	143	1	03/20/01	03/20/01
4421	WVMW-38-G_STA7	70.00	70	70	1	07/24/00	07/24/00
4428	WVMW-38-G-3_STA13	118.00	118	118	1	03/20/01	03/20/01
4429	WVMW-38-G-3_STA11	60.00	60	60	1	07/24/00	07/24/00

Table 3b. Water quality data for iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4201	WVMW-37_STA1	3280.00	3280	3280	1	03/21/01	03/21/01
4401	WVMW-38_STA3	900.00	900	900	1	08/15/00	08/15/00
4403	112WRD_390210080265639	2280.00	1000	3000	5	09/11/79	08/20/80
4410	WVMW-38-E_STA6	302.00	302	302	1	03/20/01	03/20/01
4412	WV1014200_UTSCUP	462.86	200	1100	7	06/02/99	10/23/98
4413	WVMW-38-G_STA8	237.00	237	237	1	03/20/01	03/20/01
4417	WVMW-38-G-4_STA14	128.00	128	128	1	03/20/01	03/20/01
4421	WVMW-38-G_STA7	120.00	120	120	1	07/24/00	07/24/00
4428	WVMW-38-G-3_STA13	125.00	125	125	1	03/20/01	03/20/01
4429	WVMW-38-G-3_STA11	50.00	50	50	1	07/24/00	07/24/00

Table 3c. Water quality data for manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4201	WVMW-37_STA1	156.00	156	156	1	03/21/01	03/21/01
4401	WVMW-38_STA3	180.00	180	180	1	08/15/00	08/15/00
4403	112WRD_390210080265639	366.00	180	550	5	03/25/80	07/22/81
4410	WVMW-38-E_STA6	701.00	701	701	1	03/20/01	03/20/01
4412	WV1014200_UTSCUP	102.86	20	300	7	10/23/98	09/15/98
4413	WVMW-38-G_STA8	267.00	267	267	1	03/20/01	03/20/01
4417	WVMW-38-G-4_STA14	7.00	7	7	1	03/20/01	03/20/01
4421	WVMW-38-G_STA7	10.00	10	10	1	07/24/00	07/24/00
4428	WVMW-38-G-3_STA13	6.00	6	6	1	03/20/01	03/20/01
4429	WVMW-38-G-3_STA11	10.00	10	10	1	07/24/00	07/24/00

Metals and pH TMDLs for the West Fork Watershed

Table 3d. Water quality data for Total Nonfilterable Residue

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4201	WVMW-37_STA1	91.00	91	91	1	03/21/01	03/21/01
4401	WVMW-38_STA3	2.00	2	2	1	08/15/00	08/15/00
4410	WVMW-38-E_STA6	1.40	1.4	1.4	1	03/20/01	03/20/01
4413	WVMW-38-G_STA8	2.00	2	2	1	03/20/01	03/20/01
4417	WVMW-38-G-4_STA14	1.60	1.6	1.6	1	03/20/01	03/20/01
4421	WVMW-38-G_STA7	1.00	1	1	1	07/24/00	07/24/00
4428	WVMW-38-G-3_STA13	1.60	1.6	1.6	1	03/20/01	03/20/01
4429	WVMW-38-G-3_STA11	1.00	1	1	1	07/24/00	07/24/00

Table 3e. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4201	WVMW-37_STA1	7.09	7.09	7.1	1	03/21/01	03/21/01
4401	WVMW-38_STA3	7.52	7.52	7.5	1	08/15/00	08/15/00
4403	112WRD_390210080265639	6.96	6.4	8.0	5	08/20/80	09/11/79
4410	WVMW-38-E_STA6	7.54	7.54	7.5	1	03/20/01	03/20/01
4412	WV1014200_UTSCUP	7.97	7.4	8.2	7	11/19/98	05/26/99
4413	WVMW-38-G_STA8	7.50	7.5	7.5	1	03/20/01	03/20/01
4417	WVMW-38-G-4_STA14	7.10	7.1	7.1	1	03/20/01	03/20/01
4421	WVMW-38-G_STA7	7.74	7.74	7.7	1	07/24/00	07/24/00
4428	WVMW-38-G-3_STA13	8.09	8.09	8.1	1	03/20/01	03/20/01
4429	WVMW-38-G-3_STA11	7.01	7.01	7.0	1	07/24/00	07/24/00

Table 3f. Water quality data for dissolved zinc

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4403	112WRD_390210080265639	4	4	4	1	8/20/1980	8/20/1980

Metals and pH TMDLs for the West Fork Watershed

Table 4a. 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
4412	WV1014200	181	181	4.60	0
4417	WV0027031	939	939	4.60	0

Table 4b. 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
4412	WV1014200	125	125	3.20	0
4417	WV0027031	647	647	3.20	0

Table 4c. 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
4412	WV1014200	80	80	2.00	0
4417	WV0027031	418	418	2.00	0

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
4201	589	236	0	0	316	316	x
4202	291	189	0	0	233	233	x
4203	154	138	12	11	184	184	x
4401	365	95	0	0	175	175	x
4402	2,757	496	21	4	656	656	x
4403	386	100	152	39	141	141	x
4404	333	86	0	0	154	154	x
4405	287	287	0	0	71	71	
4406	676	676	0	0	193	193	
4407	1,359	204	0	0	316	316	x
4408	97	97	0	0	469	469	
4409	60	54	0	0	305	305	x
4410	6,401	320	60	3	372	372	x
4411	2,569	2,338	0	0	610	610	x
4412	1,981	832	0	0	1,153	1,153	x
4413	554	554	0	0	401	401	
4414	466	466	0	0	569	569	
4415	0	0	0	0	110	110	
4416	0	0	0	0	185	185	
4417	0	0	0	0	255	255	
4418	0	0	0	0	15	15	
4419	0	0	143	143	190	190	
4420	0	0	0	0	115	115	
4421	468	285	574	350	485	485	x
4422	0	0	0	0	1	1	
4423	0	0	0	0	170	170	
4424	0	0	0	0	226	226	
4425	0	0	0	0	236	236	
4426	0	0	0	0	249	249	
4427	0	0	0	0	237	237	
4428	0	0	0	0	167	167	
4429	0	0	0	0	426	426	
4430	0	0	0	0	387	387	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
4201	2,111	422	0	0	611	611	x
4202	1,042	365	0	0	464	464	x
4203	550	275	9	4	360	360	x
4401	1,309	262	0	0	306	306	x
4402	9,879	1,087	14	2	1,246	1,246	x
4403	1,382	276	104	21	250	250	x
4404	1,192	238	0	0	293	293	x
4405	1,029	309	0	0	136	136	x
4406	2,423	1,696	0	0	338	338	x
4407	4,869	487	0	0	617	617	x
4408	348	348	0	0	910	910	
4409	214	99	0	0	610	610	x
4410	22,939	688	42	1	723	723	x
4411	9,206	3,959	0	0	1,214	1,214	x
4412	7,099	1,775	0	0	2,292	2,292	x
4413	1,985	1,985	0	0	810	810	
4414	1,670	1,670	0	0	1,157	1,157	
4415	0	0	0	0	216	216	
4416	0	0	0	0	368	368	
4417	0	0	0	0	504	504	
4418	0	0	0	0	31	31	
4419	0	0	99	99	378	378	
4420	0	0	0	0	217	217	
4421	1,676	788	396	186	952	952	x
4422	0	0	0	0	3	3	
4423	0	0	0	0	330	330	
4424	0	0	0	0	437	437	
4425	0	0	0	0	424	424	
4426	0	0	0	0	482	482	
4427	0	0	0	0	471	471	
4428	0	0	0	0	338	338	
4429	0	0	0	0	833	833	
4430	0	0	0	0	769	769	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
4201	374	374	0	0	281	281	
4202	185	185	0	0	202	202	
4203	98	98	5	5	161	161	
4401	232	232	0	0	164	164	
4402	1,751	1,226	9	6	589	589	x
4403	245	245	67	67	132	132	
4404	211	211	0	0	138	138	
4405	182	182	0	0	63	63	
4406	430	430	0	0	181	181	
4407	863	535	0	0	279	279	x
4408	62	62	0	0	416	416	
4409	38	38	0	0	265	265	
4410	4,067	813	27	5	329	329	x
4411	1,632	1,632	0	0	532	532	
4412	1,258	1,258	0	0	1,007	1,007	
4413	352	352	0	0	346	346	
4414	296	296	0	0	490	490	
4415	0	0	0	0	97	97	
4416	0	0	0	0	162	162	
4417	0	0	0	0	224	224	
4418	0	0	0	0	13	13	
4419	0	0	64	64	165	165	
4420	0	0	0	0	104	104	
4421	297	297	254	254	426	426	
4422	0	0	0	0	1	1	
4423	0	0	0	0	150	150	
4424	0	0	0	0	200	200	
4425	0	0	0	0	218	218	
4426	0	0	0	0	220	220	
4427	0	0	0	0	207	207	
4428	0	0	0	0	144	144	
4429	0	0	0	0	376	376	
4430	0	0	0	0	339	339	

Appendix A-13

Region 13

West Fork Region 13

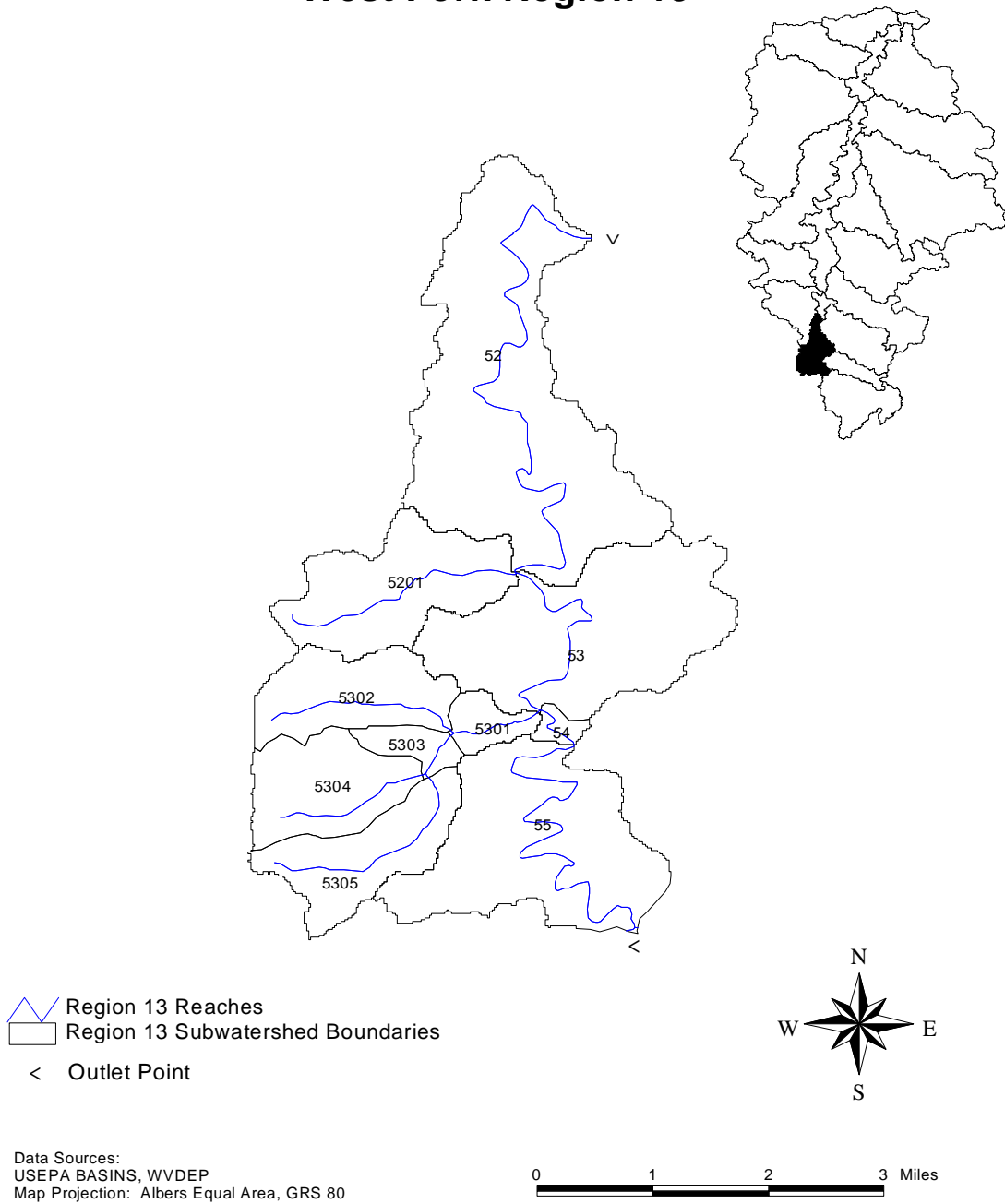


Figure 1. Region 13 - West Fork watershed

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 13

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
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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 in this region)

Metals and pH TMDLs for the West Fork Watershed

Table 3a. Water quality data for aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
5305	MW-049-0001	250	250	250	1	8/23/2000	8/23/2000

Table 3b. Water quality data for iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
52	11COEHUN_4WFS11003	1438.33	240	9600	42	07/12/72	05/07/80
54	112WRD_385603080294039	1012.50	630	1800	4	05/03/79	08/21/80
55	11COEHUN_4WFS12016	1357.08	400	8900	24	09/05/72	03/15/72
5305	MW-049-0001	570.00	570	570	1	08/23/00	08/23/00

Table 3c. Water quality data for manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
52	11COEHUN_4WFS11003	342.25	70	1700	40	8/23/1973	11/9/1971
54	112WRD_385603080294039	147.5	100	210	4	9/11/1979	5/3/1979
55	11COEHUN_4WFS12016	1093.409	350	2600	22	9/5/1972	7/12/1972
5305	MW-049-0001	110	110	110	1	8/23/2000	8/23/2000

Table 3d. Water quality data for Total Nonfilterable Residue

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
52	11COEHUN_4WFS11003	17.45455	2	100	33	4/17/1972	10/9/1973
55	11COEHUN_4WFS12016	17.005	0.3	147	20	8/8/1972	10/3/1972
5305	MW-049-0001	2	2	2	1	8/23/2000	8/23/2000

Table 3e. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
52	11COEHUN_4WFS11003	6.87	6	7.7	28	09/10/73	05/16/73
54	112WRD_385603080294039	7.01	6.6	7.5	8	09/29/83	03/25/80
55	11COEHUN_4WFS12016	7.02	6.1	8.0	15	05/17/73	10/07/71
5305	MW-049-0001	7.15	7.15	7.2	1	08/23/00	08/23/00

Table 3f. Water quality data for dissolved zinc

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
54	112WRD_385603080294039	4	4	4	1	8/21/1980	8/21/1980

Metals and pH TMDLs for the West Fork Watershed

Table 4a. 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
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(not applicable to this region)

Table 4b. 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
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(not applicable to this region)

Table 4c. 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
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(not applicable to this region)

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
52	0	0	0	0	931	931	
53	0	0	0	0	600	600	
54	0	0	0	0	14	14	
55	0	0	0	0	513	513	
5201	0	0	0	0	420	420	
5301	0	0	0	0	51	51	
5302	0	0	0	0	289	289	
5303	0	0	0	0	60	60	
5304	0	0	0	0	295	295	
5305	0	0	0	0	293	293	

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
52	0	0	0	0	1,878	1,878	
53	0	0	0	0	1,208	1,208	
54	0	0	0	0	26	26	
55	0	0	0	0	1,034	1,034	
5201	0	0	0	0	763	763	
5301	0	0	0	0	100	100	
5302	0	0	0	0	540	540	
5303	0	0	0	0	116	116	
5304	0	0	0	0	562	562	
5305	0	0	0	0	574	574	

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
52	0	0	0	0	806	806	
53	0	0	0	0	520	520	
54	0	0	0	0	13	13	
55	0	0	0	0	443	443	
5201	0	0	0	0	388	388	
5301	0	0	0	0	45	45	
5302	0	0	0	0	262	262	
5303	0	0	0	0	53	53	
5304	0	0	0	0	265	265	
5305	0	0	0	0	259	259	

Appendix A-14

Region 14

West Fork Region 14

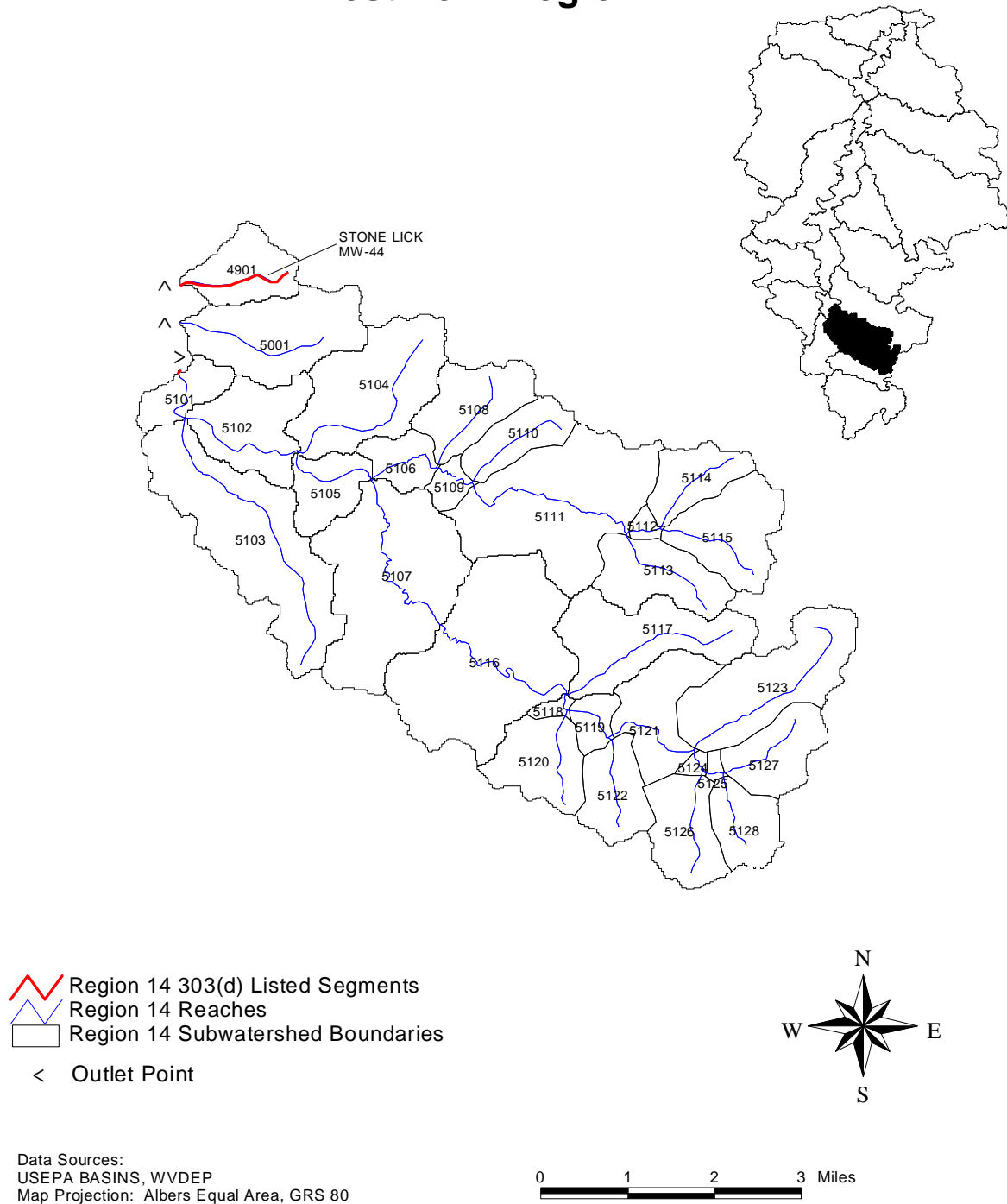


Figure 1. Region 14 - West Fork watershed

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 14

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
Stone Lick	MW-44	Metals	4901		Aquatic Life

T = Aquatic Life Trout Waters

W = Warm Water Fishery

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

SWS
5001
5104
5106
5107
5108
5109
5110
5111
5116
5120

Metals and pH TMDLs for the West Fork Watershed

Table 3a. Water quality data for aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4901	WVMW-44_STA10	58.00	58	58	1	03/20/01	03/20/01
5001	WVMW-45_STA13	152.00	152	152	1	03/20/01	03/20/01
5111	11COEHUN_4WFS12115	974.00	110	6360	10	08/12/86	10/22/86
5113	MW-046-0007	50.00	50	50	1	08/16/00	08/16/00
5116	WVMW-46-E_STA13	795.00	795	795	1	03/19/01	03/19/01
5117	WVMW-46-G_STA15	270.00	270	270	1	08/23/00	08/23/00
5118	11COEHUN_4WFS12013	1374.62	120	4370	13	09/09/86	04/22/86
5121	WVMW-46_STA4	149.00	149	149	1	03/19/01	03/19/01
5124	WVMW-46_STA1	144.00	144	144	1	03/19/01	03/19/01

Table 3b. Water quality data for iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4901	WVMW-44_STA10	426.00	426	426	1	03/20/01	03/20/01
5001	WVMW-45_STA13	273.00	273	273	1	03/20/01	03/20/01
5102	11COEHUN_4WFS12009	1716.00	320	3600	5	10/03/72	09/13/71
5106	11COEHUN_4WFS12014	1006.25	700	1500	4	08/20/74	10/08/71
5107	11COEHUN_4WFS12011	797.5	620	1100	4	5/3/1972	9/2/1970
5111	11COEHUN_4WFS12115	1366.306	500	4710	49	8/22/1973	7/12/1973
5113	MW-046-0007	1140	1140	1140	1	8/16/2000	8/16/2000
5116	WVMW-46-E_STA13	876	876	876	1	3/19/2001	3/19/2001
5117	WVMW-46-G_STA15	940	940	940	1	8/23/2000	8/23/2000
5118	11COEHUN_4WFS12013	1191.371	190	3800	35	7/17/1986	4/10/1979
5121	WVMW-46_STA4	246	246	246	1	3/19/2001	3/19/2001
5124	WVMW-46_STA1	213	213	213	1	3/19/2001	3/19/2001

Table 3c. Water quality data for manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4901	WVMW-44_STA10	140.00	140	140	1	03/20/01	03/20/01
5001	WVMW-45_STA13	748.00	748	748	1	03/20/01	03/20/01
5102	11COEHUN_4WFS12009	1752.00	930	2700	5	09/15/70	10/03/72
5106	11COEHUN_4WFS12014	610.00	180	1000	4	10/08/71	08/20/74
5107	11COEHUN_4WFS12011	440.00	150	800	4	05/03/72	10/03/72
5111	11COEHUN_4WFS12115	268.52	21	1080	48	10/10/79	10/29/80
5113	MW-046-0007	610.00	610	610	1	08/16/00	08/16/00
5116	WVMW-46-E_STA13	70.00	70	70	1	03/19/01	03/19/01
5117	WVMW-46-G_STA15	360.00	360	360	1	08/23/00	08/23/00
5118	11COEHUN_4WFS12013	130.49	30	450	35	07/22/80	10/16/78
5121	WVMW-46_STA4	39.00	39	39	1	03/19/01	03/19/01
5124	WVMW-46_STA1	29	29	29	1	3/19/2001	3/19/2001

Metals and pH TMDLs for the West Fork Watershed

Table 3d. Water quality data for Total Nonfilterable Residue

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4901	WVMW-44_STA10	1.00	1	1	1	03/20/01	03/20/01
5001	WVMW-45_STA13	1.00	1	1	1	03/20/01	03/20/01
5101	11COEHUN_4WFS12008	4.00	4	4	1	06/20/72	06/20/72
5102	11COEHUN_4WFS12009	4.00	4	4	1	06/20/72	06/20/72
5105	11COEHUN_4WFS12010	4.00	4	4	1	05/14/87	05/14/87
5106	11COEHUN_4WFS12014	6.00	4	8	2	06/20/72	08/20/74
5107	11COEHUN_4WFS12011	5.00	5	5	1	06/20/72	06/20/72
5111	11COEHUN_4WFS12115	17.06	0.9	138	52	08/12/86	10/16/78
5113	MW-046-0007	4.00	4	4	1	08/16/00	08/16/00
5116	WVMW-46-E_STA13	15.00	15	15	1	03/19/01	03/19/01
5117	WVMW-46-G_STA15	1.00	1	1	1	08/23/00	08/23/00
5118	11COEHUN_4WFS12013	17.08333	1	79	36	4/10/1979	10/22/1986
5121	WVMW-46_STA4	3.4	3.4	3.4	1	3/19/2001	3/19/2001
5124	WVMW-46_STA1	4.8	4.8	4.8	1	3/19/2001	3/19/2001

Table 3e. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
4901	WVMW-44_STA10	7.35	7.35	7.4	1	03/20/01	03/20/01
5001	WVMW-45_STA13	7.20	7.2	7.2	1	03/20/01	03/20/01
5101	11COEHUN_4WFS12008	7.00	6.6	7.5	10	09/05/72	04/24/73
5102	11COEHUN_4WFS12009	6.80	6.45	7.1	12	07/11/72	10/22/70
5105	11COEHUN_4WFS12010	6.60	6.6	6.6	1	05/14/87	05/14/87
5106	11COEHUN_4WFS12014	6.64	2.8	7.5	13	06/13/73	07/11/73
5107	11COEHUN_4WFS12011	6.85	6.4	7.4	10	10/03/72	05/16/73
5111	11COEHUN_4WFS12115	7.06	6.15	7.7	47	04/22/86	07/17/74
5113	MW-046-0007	7.06	7.06	7.1	1	08/16/00	08/16/00
5116	WVMW-46-E_STA13	6.94	6.94	6.9	1	03/19/01	03/19/01
5117	WVMW-46-G_STA15	6.62	6.62	6.6	1	08/23/00	08/23/00
5118	11COEHUN_4WFS12013	7.04	6.01	7.7	44	10/10/79	10/16/78
5121	WVMW-46_STA4	7.06	7.06	7.1	1	03/19/01	03/19/01
5124	WVMW-46_STA1	6.96	6.96	7.0	1	03/19/01	03/19/01

Table 3f. Water quality data for dissolved zinc

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
5105	11COEHUN_4WFS12010	50	50	50	1	5/14/1987	5/14/1987

Metals and pH TMDLs for the West Fork Watershed

Table 4a. 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
5001	WV0094765	76	76	4.60	0

Table 4b. 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
5001	WV0094765	52	52	3.20	0

Table 4c. 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
5001	WV0094765	34	34	2.00	0

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
4901	0	0	0	0	208	208	
5001	1,459	306	0	0	416	416	x
5101	0	0	0	0	101	101	
5102	0	0	0	0	251	251	
5103	0	0	0	0	698	698	
5104	1,036	311	0	0	464	464	x
5105	0	0	0	0	139	139	
5106	41	41	0	0	91	91	
5107	2,647	397	0	0	603	603	x
5108	1,060	212	0	0	239	239	x
5109	283	57	0	0	35	35	x
5110	536	80	0	0	155	155	x
5111	192	192	0	0	646	646	x
5112	0	0	0	0	25	25	
5113	0	0	0	0	269	269	
5114	0	0	0	0	180	180	
5115	0	0	0	0	302	302	
5116	431	431	0	0	746	746	x
5117	0	0	0	0	417	417	
5118	0	0	0	0	17	17	
5119	0	0	0	0	61	61	
5120	400	400	0	0	236	236	
5121	0	0	0	0	252	252	
5122	0	0	0	0	200	200	
5123	0	0	0	0	462	462	
5124	0	0	0	0	19	19	
5125	0	0	0	0	17	17	
5126	0	0	0	0	239	239	
5127	0	0	0	0	213	213	
5128	0	0	0	0	175	175	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
4901	0	0	0	0	396	396	
5001	5,229	627	0	0	821	821	x
5101	0	0	0	0	208	208	
5102	0	0	0	0	504	504	
5103	0	0	0	0	1,420	1,420	
5104	3,713	743	0	0	914	914	x
5105	0	0	0	0	274	274	
5106	148	148	0	0	172	172	
5107	9,486	854	0	0	1,216	1,216	x
5108	3,798	380	0	0	479	479	x
5109	1,015	71	0	0	72	72	x
5110	1,921	250	0	0	312	312	x
5111	687	687	0	0	1,279	1,279	
5112	0	0	0	0	50	50	
5113	0	0	0	0	540	540	
5114	0	0	0	0	355	355	
5115	0	0	0	0	611	611	
5116	1,543	1,543	0	0	1,482	1,482	
5117	0	0	0	0	832	832	
5118	0	0	0	0	32	32	
5119	0	0	0	0	121	121	
5120	1,433	1,433	0	0	469	469	
5121	0	0	0	0	508	508	
5122	0	0	0	0	397	397	
5123	0	0	0	0	918	918	
5124	0	0	0	0	37	37	
5125	0	0	0	0	32	32	
5126	0	0	0	0	481	481	
5127	0	0	0	0	431	431	
5128	0	0	0	0	347	347	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
4901	0	0	0	0	187	187	
5001	927	834	0	0	366	366	x
5101	0	0	0	0	86	86	
5102	0	0	0	0	218	218	
5103	0	0	0	0	601	601	
5104	658	658	0	0	407	407	
5105	0	0	0	0	122	122	
5106	26	26	0	0	82	82	
5107	1,682	673	0	0	522	522	x
5108	673	404	0	0	208	208	x
5109	180	90	0	0	30	30	x
5110	340	272	0	0	134	134	x
5111	122	122	0	0	566	566	
5112	0	0	0	0	22	22	
5113	0	0	0	0	233	233	
5114	0	0	0	0	158	158	
5115	0	0	0	0	261	261	
5116	274	274	0	0	651	651	
5117	0	0	0	0	363	363	
5118	0	0	0	0	15	15	
5119	0	0	0	0	52	52	
5120	254	254	0	0	205	205	
5121	0	0	0	0	217	217	
5122	0	0	0	0	174	174	
5123	0	0	0	0	403	403	
5124	0	0	0	0	17	17	
5125	0	0	0	0	15	15	
5126	0	0	0	0	207	207	
5127	0	0	0	0	183	183	
5128	0	0	0	0	152	152	

Appendix A-15

Region 15

West Fork Region 15

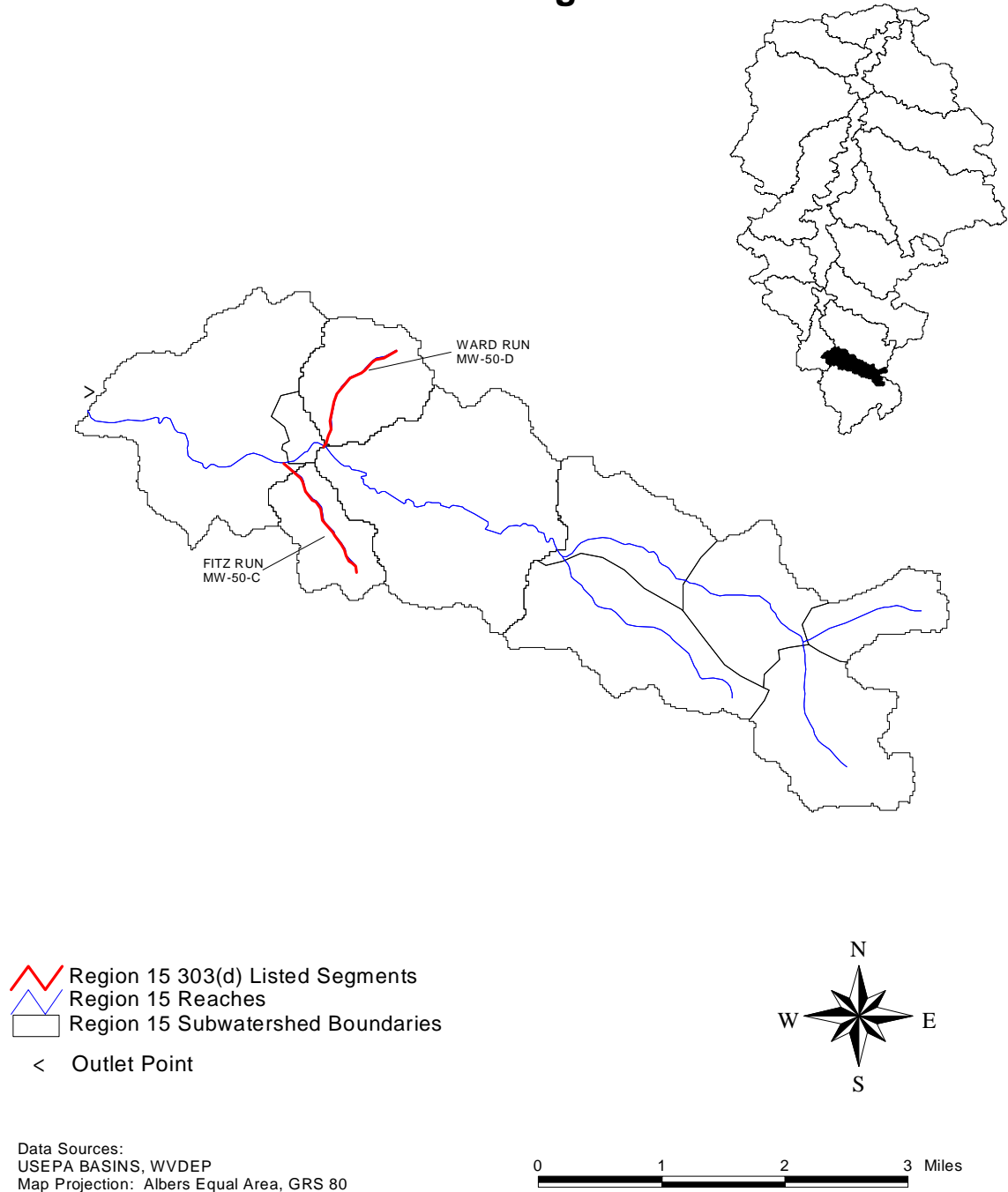


Figure 1. Region 15 - West Fork watershed

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 15

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
FITZ RUN	MW-50-C	pH, Metals	5403		Aquatic Life
WARD RUN	MW-50-D	Metals	5404		Aquatic Life

T = Aquatic Life Trout Waters

W = Warm Water Fishery

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

SWS
5401
5402
5403
5404
5405
5406
5407

Metals and pH TMDLs for the West Fork Watershed

Table 3a. Water quality data for aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
5403	MW-050-0003	840.00	840	840	1	08/15/00	08/15/00
5404	MW-050-0004	1770.00	1770	1770	1	08/15/00	08/15/00
5405	MW-050-0001	180.00	180	180	1	08/23/00	08/23/00
5406	11COEHUN_4WFS12119	905.00	120	6900	12	04/16/84	08/13/85
5410	MW-050-0002	105.00	70	140	2	08/14/00	08/14/00

Table 3b. Water quality data for iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
5402	11COEHUN_4WFS12017	5488.89	860	55000	18	06/01/72	07/12/72
5403	MW-050-0003	1200.00	1200	1200	1	08/15/00	08/15/00
5405	MW-050-0001	680.00	680	680	1	08/23/00	08/23/00
5406	11COEHUN_4WFS12119	1749.90	200	27000	52	10/10/79	09/15/81
5410	MW-050-0002	115.00	80	150	2	08/14/00	08/14/00

Table 3c. Water quality data for manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
5402	11COEHUN_4WFS12017	6495.00	1555	12400	17	10/03/72	09/05/72
5403	MW-050-0003	200.00	200	200	1	08/15/00	08/15/00
5404	MW-050-0004	1450.00	1450	1450	1	08/15/00	08/15/00
5405	MW-050-0001	200.00	200	200	1	08/23/00	08/23/00
5406	11COEHUN_4WFS12119	413.10	40	3100	52	10/09/73	10/22/86
5410	MW-050-0002	10.00	10	10	2	08/14/00	08/14/00

Table 3d. Water quality data for Total Nonfilterable Residue

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
5402	11COEHUN_4WFS12017	9.121429	0.2	41	14	7/11/1973	9/10/1973
5403	MW-050-0003	1	1	1	1	8/15/2000	8/15/2000
5404	MW-050-0004	2	2	2	1	8/15/2000	8/15/2000
5405	MW-050-0001	1	1	1	1	8/23/2000	8/23/2000
5406	11COEHUN_4WFS12119	16.91154	0.4	286	52	10/10/1979	6/18/1974
5410	MW-050-0002	1.50	1	2	2	08/14/00	08/14/00

Metals and pH TMDLs for the West Fork Watershed

Table 3e. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
5402	11COEHUN_4WFS12017	4.129375	3.4	6.6	16	3/20/1979	4/23/1973
5403	MW-050-0003	7.37	7.37	7.37	1	8/15/2000	8/15/2000
5404	MW-050-0004	6.99	6.99	6.99	1	8/15/2000	8/15/2000
5405	MW-050-0001	6.99	6.99	6.99	1	8/23/2000	8/23/2000
5406	11COEHUN_4WFS12119	6.882857	5.65	7.6	49	8/13/1985	7/17/1974
5410	MW-050-0002	7.49	7.49	7.49	2	8/14/2000	8/14/2000

Table 3f. Water quality data for dissolved zinc

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
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(not applicable to this region)

Metals and pH TMDLs for the West Fork Watershed

Table 4a. 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
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(not applicable to this region)

Table 4b. 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
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(not applicable to this region)

Table 4c. 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
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(not applicable to this region)

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
5401	168	168	0	0	538	538	
5402	31	31	0	0	29	29	
5403	1,033	124	0	0	148	148	x
5404	1,829	183	0	0	199	199	x
5405	2,712	1,031	0	0	614	614	x
5406	347	347	0	0	228	228	
5407	112	112	0	0	372	372	
5408	0	0	0	0	235	235	
5409	0	0	0	0	135	135	
5410	0	0	0	0	318	318	

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
5401	600	600	0	0	1,081	1,081	
5402	113	113	0	0	59	59	
5403	3,703	222	0	0	297	297	x
5404	6,556	393	0	0	405	405	x
5405	9,719	1,555	0	0	1,207	1,207	x
5406	1,244	1,244	0	0	451	451	
5407	400	400	0	0	729	729	
5408	0	0	0	0	474	474	
5409	0	0	0	0	272	272	
5410	0	0	0	0	645	645	

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
5401	106	106	0	0	466	466	
5402	20	20	0	0	25	25	
5403	657	322	0	0	128	128	x
5404	1,162	453	0	0	171	171	x
5405	1,723	1,723	0	0	540	540	
5406	220	220	0	0	199	199	x
5407	71	71	0	0	327	327	
5408	0	0	0	0	204	204	
5409	0	0	0	0	118	118	
5410	0	0	0	0	275	275	

Appendix A-16

Region 16

West Fork Region 16

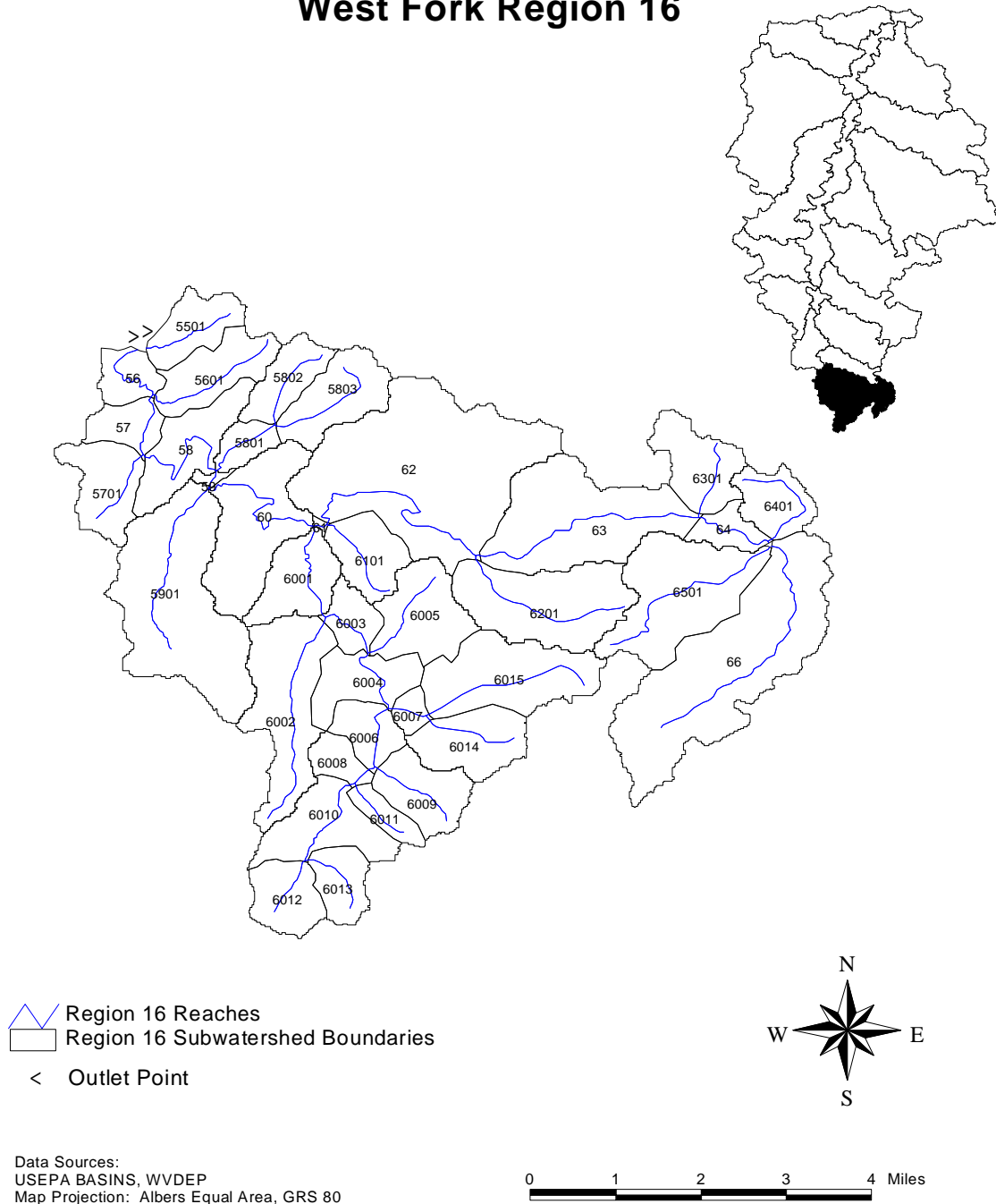


Figure 1. Region 16 - West Fork watershed

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 16

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
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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
5601
5802
5803

Metals and pH TMDLs for the West Fork Watershed

Table 3a. Water quality data for aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
62	11COEHUN_4WFS11106	549.1923	50	3210	26	10-Sep-79	22-Oct-86
6001	11COEHUN_4WFS12120	289.2857	50	2040	14	12-Aug-86	22-Oct-86

Table 3b. Water quality data for iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
62	11COEHUN_4WFS11106	1053.44	200	10000	64	09/10/79	07/11/73
6001	11COEHUN_4WFS12120	896.65	300	4000	54	04/17/72	09/15/81

Table 3c. Water quality data for manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
62	11COEHUN_4WFS11106	228.9516	10	5020	62	12/17/1979	10/22/1986
6001	11COEHUN_4WFS12120	184.6923	40	850	52	5/13/1987	7/22/1980

Table 3d. Water quality data for Total Nonfilterable Residue

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
60	11COEHUN_4WFS11405	11.32813	0.1	61	32	6/18/1979	5/20/1986
62	11COEHUN_4WFS11106	10.70645	0.4	152	62	12/18/1978	8/20/1974
6001	11COEHUN_4WFS12120	8.547273	0.5	60	55	7/17/1986	5/6/1980

Table 3e. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
60	11COEHUN_4WFS11405	6.741613	5.9	7.5	31	10/16/1978	7/17/1979
62	11COEHUN_4WFS11106	6.933276	6.1	7.7	58	3/12/1980	3/20/1979
6001	11COEHUN_4WFS12120	6.808125	6	7.41	48	7/17/1986	4/17/1972

Table 3f. Water quality data for dissolved zinc

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date

(not applicable to this region)

Metals and pH TMDLs for the West Fork Watershed

Table 4a. 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
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(not applicable to this region)

Table 4b. 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
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(not applicable to this region)

Table 4c. 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
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(not applicable to this region)

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
56	0	0	0	0	73	73	
57	0	0	0	0	85	85	
58	0	0	0	0	184	184	
59	0	0	0	0	8	8	
60	0	0	0	0	340	340	
61	0	0	0	0	1	1	
62	0	0	0	0	1,003	1,003	
63	0	0	0	0	540	540	
64	0	0	0	0	82	82	
65	0	0	0	0	1	1	
66	0	0	0	0	889	889	
5501	0	0	0	0	160	160	
5601	25	25	0	0	203	203	
5701	0	0	0	0	198	198	
5801	0	0	0	0	68	68	
5802	189	113	0	0	151	151	x
5803	86	86	0	0	231	231	
5901	0	0	0	0	693	693	
6001	0	0	0	0	182	182	
6002	0	0	0	0	404	404	
6003	0	0	0	0	102	102	
6004	0	0	0	0	187	187	
6005	0	0	0	0	258	258	
6006	0	0	0	0	119	119	
6007	0	0	0	0	43	43	
6008	0	0	0	0	76	76	
6009	0	0	0	0	189	189	
6010	0	0	0	0	240	240	
6011	0	0	0	0	73	73	
6012	0	0	0	0	159	159	
6013	0	0	0	0	128	128	
6014	0	0	0	0	228	228	
6015	0	0	0	0	389	389	
6101	0	0	0	0	174	174	
6201	0	0	0	0	440	440	
6301	0	0	0	0	210	210	
6401	0	0	0	0	150	150	
6501	0	0	0	0	486	486	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
56	0	0	0	0	151	151	
57	0	0	0	0	166	166	
58	0	0	0	0	376	376	
59	0	0	0	0	16	16	
60	0	0	0	0	701	701	
61	0	0	0	0	2	2	
62	0	0	0	0	2,014	2,014	
63	0	0	0	0	1,103	1,103	
64	0	0	0	0	161	161	
65	0	0	0	0	1	1	
66	0	0	0	0	1,731	1,731	
5501	0	0	0	0	330	330	
5601	91	91	0	0	411	411	
5701	0	0	0	0	408	408	
5801	0	0	0	0	139	139	
5802	677	230	0	0	297	297	x
5803	306	306	0	0	465	465	
5901	0	0	0	0	1,428	1,428	
6001	0	0	0	0	375	375	
6002	0	0	0	0	832	832	
6003	0	0	0	0	208	208	
6004	0	0	0	0	387	387	
6005	0	0	0	0	529	529	
6006	0	0	0	0	245	245	
6007	0	0	0	0	89	89	
6008	0	0	0	0	157	157	
6009	0	0	0	0	389	389	
6010	0	0	0	0	489	489	
6011	0	0	0	0	151	151	
6012	0	0	0	0	323	323	
6013	0	0	0	0	265	265	
6014	0	0	0	0	463	463	
6015	0	0	0	0	784	784	
6101	0	0	0	0	360	360	
6201	0	0	0	0	893	893	
6301	0	0	0	0	421	421	
6401	0	0	0	0	297	297	
6501	0	0	0	0	952	952	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
56	0	0	0	0	63	63	
57	0	0	0	0	75	75	
58	0	0	0	0	157	157	
59	0	0	0	0	7	7	
60	0	0	0	0	290	290	
61	0	0	0	0	1	1	
62	0	0	0	0	870	870	
63	0	0	0	0	464	464	
64	0	0	0	0	72	72	
65	0	0	0	0	1	1	
66	0	0	0	0	787	787	
5501	0	0	0	0	136	136	
5601	16	16	0	0	175	175	
5701	0	0	0	0	168	168	
5801	0	0	0	0	58	58	
5802	120	120	0	0	133	133	
5803	54	54	0	0	200	200	
5901	0	0	0	0	590	590	
6001	0	0	0	0	155	155	
6002	0	0	0	0	343	343	
6003	0	0	0	0	88	88	
6004	0	0	0	0	159	159	
6005	0	0	0	0	220	220	
6006	0	0	0	0	101	101	
6007	0	0	0	0	36	36	
6008	0	0	0	0	65	65	
6009	0	0	0	0	160	160	
6010	0	0	0	0	206	206	
6011	0	0	0	0	62	62	
6012	0	0	0	0	136	136	
6013	0	0	0	0	109	109	
6014	0	0	0	0	196	196	
6015	0	0	0	0	337	337	
6101	0	0	0	0	149	149	
6201	0	0	0	0	380	380	
6301	0	0	0	0	182	182	
6401	0	0	0	0	131	131	
6501	0	0	0	0	429	429	

Appendix A-17

Region 17

West Fork Region 17

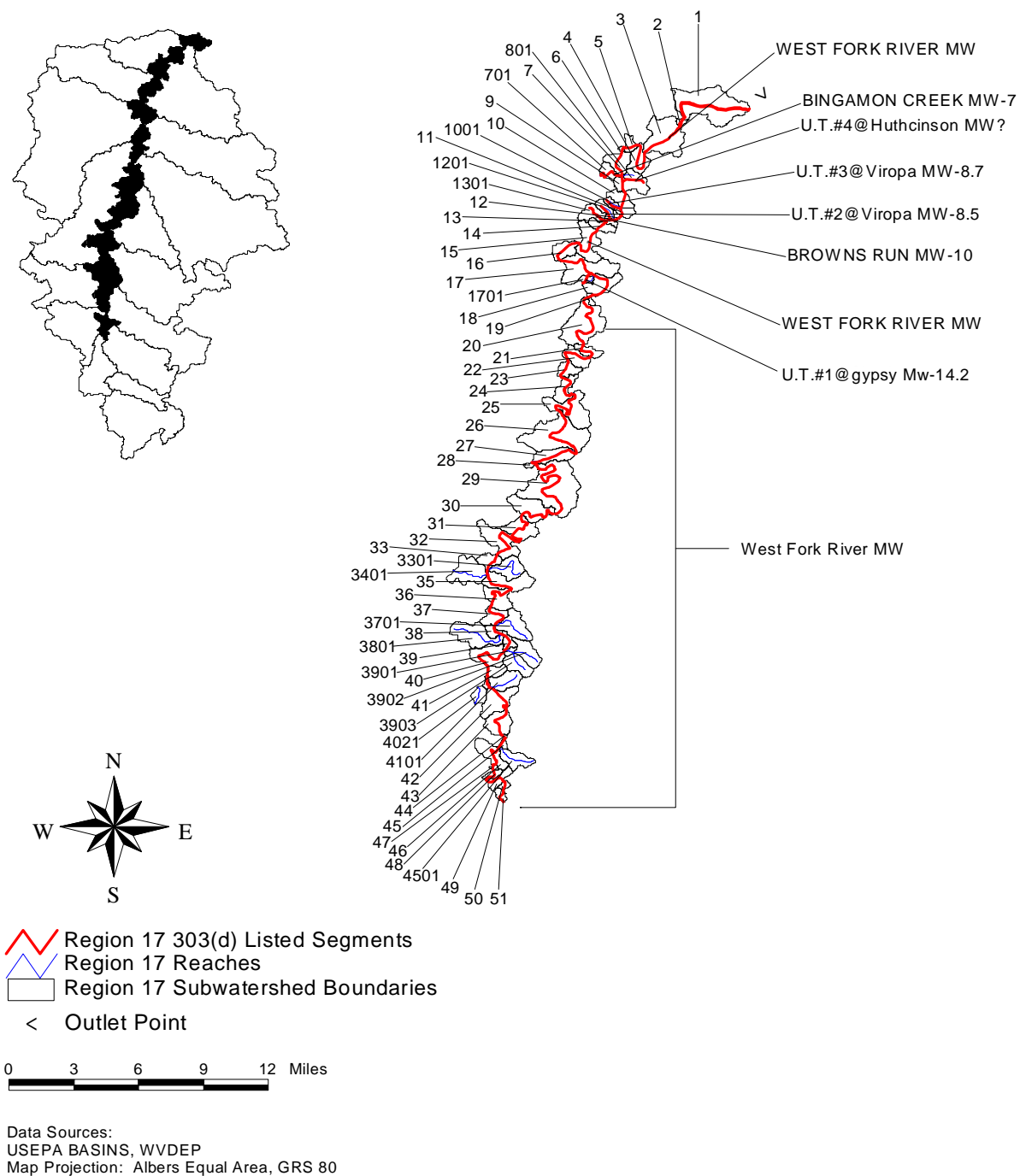


Figure 1a. Region 17 - Upper West Fork Mainstem

Metals and pH TMDLs for the West Fork Watershed

Table 1. Impaired waterbodies in Region 17

Stream Name	Stream Code	Pollutant	Contributing SWS	Contributing Regions	Aquatic Life
West Fork	MW	Aluminum, Iron, Zinc	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 701, 801, 1001, 1201, 1301, 1701, 3301, 3401, 3701, 3801, 3901, 3902, 3903, 4021, 4101, 4501	3, 2, 5, 4, 6, 7, 8, 9, 10, 12, 11, 14	Aquatic Life, Human Health
Bingamon Creek	MW-7	Aluminum, Iron	701	2	Aquatic Life
West Fork: UT#4@Hutchinson	MW?	Metals	801		Aquatic Life
West Fork: UT#3@Viropa	MW-8.5	pH, Metals	1001		Aquatic Life
West Fork: UT#2@Viropa	MW-8.7	pH, Metals	1201		Aquatic Life
Browns Run	MW-10	Metals	1301		Aquatic Life
West Fork: UT#1@Gypsy	MW-14.2	pH, Metals	1701		Aquatic Life

T = Aquatic Life Trout Waters

W = Warm Water Fishery

Metals and pH TMDLs for the West Fork Watershed

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

SWS
1
2
4
6
7
9
10
11
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
32
33
43
46
701
801
1001
1201
1701
3401
3801

Metals and pH TMDLs for the West Fork Watershed

Table 3a. Water quality data for aluminum

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
9	21WV7IWQ_550487	931.314433	20	15520	194	01/31/90	03/11/80
10	MW-000-013.0	1240	1240	1240	1	07/18/00	07/18/00
15	WVMW-11_STA19	180	180	180	1	08/01/00	08/01/00
20	WVM-26_STA15	310	310	310	1	08/15/00	08/15/00
21	MW-018-0001	330	330	330	1	08/16/00	08/16/00
22	WVMW-18_STA1	2000	2000	2000	1	03/21/01	03/21/01
26	WVMW-22.8_STA3	50	50	50	1	07/27/00	07/27/00
27	21WV7IWQ_550597	4300	4300	4300	1	06/24/74	06/24/74
29	MW-000-046.5	140	140	140	1	07/27/00	07/27/00
30	11COEHUN_4WFS13048	550	550	550	1	04/17/84	04/17/84
35	WVM-26_STA9	170	170	170	1	07/25/00	07/25/00
41	WVM-26_STA7	783	783	783	1	03/21/01	03/21/01
42	MW-000-066.0	290	290	290	1	07/24/00	07/24/00
44	11COEHUN_4WFS12323	625.7142857	100	2870	14	04/13/82	04/17/85
701	WVMW-7_STA6	1630	1630	1630	1	03/22/01	03/22/01
801	WVMW-7.1_STA10	3280	3280	3280	1	08/02/00	08/02/00
1001	WVMW-8.5_STA4	1620	1620	1620	1	03/22/01	03/22/01
1201	WVMW-9.5_STA4	5120	5120	5120	1	08/01/00	08/01/00
1301	WVMW-10_STA1	1590	1590	1590	1	08/01/00	08/01/00
1701	WVMW-14.2_STA1	154	154	154	1	03/20/01	03/20/01
3401	MW-030-0001	80	80	80	1	08/16/00	08/16/00
3801	WVMW-34_STA1	200	200	200	1	08/16/00	08/16/00

Metals and pH TMDLs for the West Fork Watershed

Table 3b. Water quality data for iron

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
9	21WV7IWQ_550487	4915.311953	10	60000	343	01/14/86	08/18/69
10	MW-000-013.0	1530	1530	1530	1	07/18/00	07/18/00
15	WVMW-11_STA19	830	830	830	1	08/01/00	08/01/00
20	WVM-26_STA15	660	660	660	1	08/15/00	08/15/00
21	MW-018-0001	9650	9650	9650	1	08/16/00	08/16/00
22	WVMW-18_STA1	1910	1910	1910	1	03/21/01	03/21/01
26	WVMW-22.8_STA3	210	210	210	1	07/27/00	07/27/00
27	21WV7IWQ_550597	1257.692308	200	8400	26	06/24/74	08/10/50
29	MW-000-046.5	330	330	330	1	07/27/00	07/27/00
30	11COEHUN_4WFS13048	1168	560	2920	5	05/03/78	08/24/70
35	WVM-26_STA9	380	380	380	1	07/25/00	07/25/00
41	WVM-26_STA7	1000	1000	1000	1	03/21/01	03/21/01
42	MW-000-066.0	640	640	640	1	07/24/00	07/24/00
44	11COEHUN_4WFS12323	2620.571429	380	14280	35	11/07/85	09/13/70
46	11COEHUN_4WFS13071	1080	1080	1080	1	10/07/71	10/07/71
51	112WRD_390010080283539	975	300	3400	18	09/11/79	03/25/80
701	WVMW-7_STA6	1940	1940	1940	1	03/22/01	03/22/01
801	WVMW-7.1_STA10	2200	2200	2200	1	08/02/00	08/02/00
1001	WVMW-8.5_STA4	2220	2220	2220	1	03/22/01	03/22/01
1201	WVMW-9.5_STA4	17500	17500	17500	1	08/01/00	08/01/00
1301	WVMW-10_STA1	19000	19000	19000	1	08/01/00	08/01/00
1701	WVMW-14.2_STA1	537	537	537	1	03/20/01	03/20/01
3401	MW-030-0001	110	110	110	1	08/16/00	08/16/00
3801	WVMW-34_STA1	560	560	560	1	08/16/00	08/16/00

Metals and pH TMDLs for the West Fork Watershed

Table 3c. Water quality data for manganese

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
9	21WV7IWQ_550487	924.1142857	8	5500	280	05/12/87	01/15/75
10	MW-000-013.0	180	180	180	1	07/18/00	07/18/00
15	WVMW-11_STA19	640	640	640	1	08/01/00	08/01/00
20	WVM-26_STA15	140	140	140	1	08/15/00	08/15/00
21	MW-018-0001	2230	2230	2230	1	08/16/00	08/16/00
22	WVMW-18_STA1	128	128	128	1	03/21/01	03/21/01
26	WVMW-22.8_STA3	240	240	240	1	07/27/00	07/27/00
27	21WV7IWQ_550597	200	10	400	4	08/11/50	06/24/74
29	MW-000-046.5	130	130	130	1	07/27/00	07/27/00
30	11COEHUN_4WFS13048	312.5	120	550	4	05/03/78	08/24/70
35	WVM-26_STA9	90	90	90	1	07/25/00	07/25/00
41	WVM-26_STA7	289	289	289	1	03/21/01	03/21/01
42	MW-000-066.0	230	230	230	1	07/24/00	07/24/00
44	11COEHUN_4WFS12323	586.6969697	190	1260	33	10/29/80	04/10/79
46	11COEHUN_4WFS13071	1000	800	1200	2	06/20/72	10/07/71
51	112WRD_390010080283539	112.2222222	30	190	18	03/25/80	03/06/80
701	WVMW-7_STA6	97	97	97	1	03/22/01	03/22/01
801	WVMW-7.1_STA10	1390	1390	1390	1	08/02/00	08/02/00
1001	WVMW-8.5_STA4	308	308	308	1	03/22/01	03/22/01
1201	WVMW-9.5_STA4	5770	5770	5770	1	08/01/00	08/01/00
1301	WVMW-10_STA1	520	520	520	1	08/01/00	08/01/00
1701	WVMW-14.2_STA1	69	69	69	1	03/20/01	03/20/01
3401	MW-030-0001	50	50	50	1	08/16/00	08/16/00
3801	WVMW-34_STA1	580	580	580	1	08/16/00	08/16/00

Metals and pH TMDLs for the West Fork Watershed

Table 3d. Water quality data for Total Nonfilterable Residue

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
9	21WV7IWQ_550487	97.45923913	1	1691	368	01/11/77	08/12/87
10	MW-000-013.0	2	2	2	1	07/18/00	07/18/00
15	WVMW-11_STA19	5	5	5	1	08/01/00	08/01/00
20	WVM-26_STA15	2	2	2	1	08/15/00	08/15/00
21	MW-018-0001	4	4	4	1	08/16/00	08/16/00
22	WVMW-18_STA1	44.5	44.5	44.5	1	03/21/01	03/21/01
26	WVMW-22.8_STA3	1	1	1	1	07/27/00	07/27/00
27	21WV7IWQ_550597	66.25	39	91	12	08/09/55	08/10/55
29	MW-000-046.5	1	1	1	1	07/27/00	07/27/00
30	11COEHUN_4WFS13048	28.02941176	2	212	34	06/19/79	04/13/82
35	WVM-26_STA9	5	5	5	1	07/25/00	07/25/00
41	WVM-26_STA7	19	19	19	1	03/21/01	03/21/01
42	MW-000-066.0	2	2	2	1	07/24/00	07/24/00
44	11COEHUN_4WFS12323	29.72222222	2	484	36	04/17/85	07/17/79
46	11COEHUN_4WFS13071	36.35714286	2	183	14	07/12/73	10/10/73
51	112WRD_390010080283539	29.09090909	1	105	11	03/06/80	05/27/80
701	WVMW-7_STA6	31.5	31.5	31.5	1	03/22/01	03/22/01
801	WVMW-7.1_STA10	8	8	8	1	08/02/00	08/02/00
1001	WVMW-8.5_STA4	41	41	41	1	03/22/01	03/22/01
1201	WVMW-9.5_STA4	27	27	27	1	08/01/00	08/01/00
1301	WVMW-10_STA1	34	34	34	1	08/01/00	08/01/00
1701	WVMW-14.2_STA1	7	7	7	1	03/20/01	03/20/01
3401	MW-030-0001	1	1	1	1	08/16/00	08/16/00
3801	WVMW-34_STA1	2	2	2	1	08/16/00	08/16/00

Metals and pH TMDLs for the West Fork Watershed

Table 3e. Water quality data for pH

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
1	MW-000-000.2	7.46	7.4	7.6	5	10/04/99	10/04/99
9	21WV7IWQ_550487	6.096368159	2.8	11.1	402	04/12/83	06/17/59
10	MW-000-013.0	7.89	7.89	7.89	1	07/18/00	07/18/00
15	WVMW-11_STA19	7.06	7.06	7.06	1	08/01/00	08/01/00
17	1114ENF1_550608	3.54	3.1	4.3	5	08/26/63	08/30/63
19	112WRD_03059700	2.95	2.95	2.95	1	05/09/63	05/09/63
20	WVM-26_STA15	7.91	7.91	7.91	1	08/15/00	08/15/00
21	MW-018-0001	6.88	6.88	6.88	1	08/16/00	08/16/00
22	WVMW-18_STA1	7.88	7.88	7.88	1	03/21/01	03/21/01
25	1114ENF1_550609	7.05	6.4	7.5	6	08/28/63	08/27/63
26	WVMW-22.8_STA3	7.9	7.9	7.9	1	07/27/00	07/27/00
27	21WV7IWQ_550597	6.957142857	3.2	7.9	84	08/09/55	08/31/49
29	MW-000-046.5	8.02	8.02	8.02	1	07/27/00	07/27/00
30	11COEHUN_4WFS13048	7.220909091	6.1	7.85	33	06/18/86	07/18/86
35	WVM-26_STA9	7.6	7.6	7.6	1	07/25/00	07/25/00
41	WVM-26_STA7	7.04	7.04	7.04	1	03/21/01	03/21/01
42	MW-000-066.0	7.32	7.32	7.32	1	07/24/00	07/24/00
44	11COEHUN_4WFS12323	6.908571429	6	8.08	42	05/21/86	05/03/78
46	11COEHUN_4WFS13071	7.316666667	6.4	8.65	12	05/17/73	04/23/73
51	112WRD_390010080283539	7.155172414	6	8.4	29	04/22/80	11/08/79
701	WVMW-7_STA6	7.49	7.49	7.49	1	03/22/01	03/22/01
801	WVMW-7.1_STA10	6.95	6.95	6.95	1	08/02/00	08/02/00
1001	WVMW-8.5_STA4	7.4	7.4	7.4	1	03/22/01	03/22/01
1201	WVMW-9.5_STA4	5.39	5.39	5.39	1	08/01/00	08/01/00
1301	WVMW-10_STA1	7.03	7.03	7.03	1	08/01/00	08/01/00
1701	WVMW-14.2_STA1	7.78	7.78	7.78	1	03/20/01	03/20/01
3401	MW-030-0001	7.89	7.89	7.89	1	08/16/00	08/16/00
3801	WVMW-34_STA1	7.5	7.5	7.5	1	08/16/00	08/16/00

Table 3f. Water quality data for dissolved zinc

SWS	WQ Station	Avg (ug/L)	Min (ug/L)	Max (ug/L)	Count	Start Date	End Date
9	21WV7IWQ_550487	1026.4	42	3600	5	05/06/68	11/16/70
51	112WRD_390010080283539	37	37	37	1	08/20/80	08/20/80

Metals and pH TMDLs for the West Fork Watershed

Table 4a. 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
1	WV1011634	42	42	4.60	0
3	WV1007017	258	258	4.60	0
13	WV1007831	100	100	4.60	0
17	WV0099147	98	98	4.60	0
29	WV1010441	795	795	4.60	0
31	WV0067571	142	142	4.60	0
1001	WV1011359	31	31	4.60	0
1201	WV1007831	100	100	4.60	0

Table 4b. 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
1	WV1011634	29	29	3.20	0
3	WV1007017	178	178	3.20	0
13	WV1007831	69	69	3.20	0
17	WV0099147	68	68	3.20	0
29	WV1010441	548	548	3.20	0
31	WV0067571	98	98	3.20	0
1001	WV1011359	21	21	3.20	0
1201	WV1007831	69	69	3.20	0

Table 4c. 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
1	WV1011634	19	19	2.00	0
3	WV1007017	114	114	2.00	0
13	WV1007831	44	44	2.00	0
17	WV0099147	44	44	2.00	0
29	WV1010441	352	352	2.00	0
31	WV0067571	63	63	2.00	0
1001	WV1011359	14	14	2.00	0
1201	WV1007831	44	44	2.00	0

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
1	13,503	8,102	0	0	750	750	x
2	166	100	0	0	23	23	x
3	0	0	0	0	657	657	
4	637	382	0	0	211	211	x
5	0	0	0	0	87	87	
6	692	415	0	0	7	7	x
7	1,363	818	0	0	213	213	x
8	0	0	0	0	1	1	
9	1,479	888	0	0	234	234	x
10	1,648	989	46	28	142	142	x
11	537	322	0	0	82	82	x
12	0	0	0	0	38	38	
13	1,752	1,051	0	0	14	14	x
14	1,734	1,040	0	0	112	112	x
15	1,833	1,100	0	0	344	344	x
16	3,083	1,850	0	0	171	171	x
17	1,820	1,092	0	0	573	573	x
18	259	156	0	0	332	332	x
19	167	100	0	0	34	34	x
20	10,361	6,216	0	0	623	623	x
21	2,461	1,477	0	0	104	104	x
22	2,154	1,293	0	0	188	188	x
23	630	378	0	0	151	151	x
24	2,368	1,421	0	0	177	177	x
25	2,026	1,216	0	0	463	463	x
26	2,817	1,690	0	0	890	890	x
27	362	217	0	0	253	253	x
28	36	21	0	0	27	27	x
29	3,268	1,961	0	0	1,114	1,114	x
30	839	839	0	0	387	387	
31	0	0	0	0	285	285	
32	704	704	0	0	387	387	
33	98	98	0	0	138	138	
34	0	0	0	0	4	4	
35	0	0	0	0	349	349	
36	0	0	0	0	244	244	
37	0	0	0	0	175	175	
38	0	0	0	0	72	72	
39	0	0	0	0	86	86	
40	0	0	0	0	319	319	
41	0	0	0	0	136	136	
42	0	0	0	0	371	371	
43	1,646	1,646	0	0	272	272	
44	0	0	0	0	8	8	
45	0	0	0	0	34	34	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
46	98	98	0	0	266	266	
47	0	0	0	0	18	18	
48	0	0	0	0	60	60	
49	0	0	0	0	124	124	
50	0	0	0	0	38	38	
51	0	0	0	0	44	44	
701	403	403	0	0	132	132	
801	1,057	53	0	0	72	72	x
1001	353	18	0	0	62	62	x
1201	220	4	0	0	104	104	x
1301	0	0	0	0	194	194	
1701	1,959	39	0	0	36	36	x
3301	0	0	0	0	278	278	
3401	471	471	0	0	396	396	
3701	0	0	0	0	340	340	
3801	2,122	382	0	0	440	440	x
3901	0	0	0	0	40	40	
3902	0	0	0	0	256	256	
3903	0	0	0	0	230	230	
4021	0	0	0	0	122	122	
4101	0	0	0	0	266	266	
4501	0	0	0	0	235	235	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
1	47,173	14,152	0	0	1,149	1,149	x
2	581	174	0	0	24	24	x
3	0	0	0	0	1,224	1,224	
4	2,201	660	0	0	426	426	x
5	0	0	0	0	172	172	
6	2,392	718	0	0	11	11	x
7	4,713	1,414	0	0	398	398	x
8	0	0	0	0	2	2	
9	5,115	1,534	0	0	457	457	x
10	5,697	1,709	32	10	278	278	x
11	1,855	556	0	0	164	164	x
12	0	0	0	0	43	43	
13	6,058	1,817	0	0	17	17	x
14	5,994	1,798	0	0	197	197	x
15	6,337	1,901	0	0	612	612	x
16	10,659	3,198	0	0	225	225	x
17	6,293	1,888	0	0	1,099	1,099	x
18	897	269	0	0	561	561	x
19	576	173	0	0	30	30	x
20	35,820	10,746	0	0	1,196	1,196	x
21	8,508	2,552	0	0	184	184	x
22	7,448	2,234	0	0	331	331	x
23	2,177	653	0	0	221	221	x
24	8,187	2,456	0	0	243	243	x
25	7,004	2,101	0	0	710	710	x
26	9,739	2,922	0	0	1,740	1,740	x
27	1,252	376	0	0	518	518	x
28	123	37	0	0	49	49	x
29	11,300	3,390	0	0	2,256	2,256	x
30	2,902	2,902	0	0	730	730	
31	0	0	0	0	539	539	
32	2,522	2,522	0	0	756	756	
33	352	352	0	0	277	277	
34	0	0	0	0	8	8	
35	0	0	0	0	697	697	
36	0	0	0	0	489	489	
37	0	0	0	0	333	333	
38	0	0	0	0	145	145	
39	0	0	0	0	161	161	
40	0	0	0	0	605	605	
41	0	0	0	0	257	257	
42	0	0	0	0	698	698	
43	5,897	5,897	0	0	426	426	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
44	0	0	0	0	8	8	
45	0	0	0	0	44	44	
46	351	351	0	0	465	465	
47	0	0	0	0	31	31	
48	0	0	0	0	104	104	
49	0	0	0	0	229	229	
50	0	0	0	0	71	71	
51	0	0	0	0	88	88	
701	1,393	1,393	0	0	265	265	
801	3,653	146	0	0	146	146	x
1001	1,219	85	0	0	127	127	x
1201	762	152	0	0	207	207	x
1701	6,772	68	0	0	69	69	x
3301	0	0	0	0	544	544	
3401	1,689	1,267	0	0	784	784	x
3701	0	0	0	0	682	682	
3801	7,605	760	0	0	880	880	x
3901	0	0	0	0	74	74	
3902	0	0	0	0	507	507	
3903	0	0	0	0	461	461	
4021	0	0	0	0	224	224	
4101	0	0	0	0	510	510	
4501	0	0	0	0	456	456	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
1	8,239	8,239	0	0	730	730	
2	102	102	0	0	25	25	
3	0	0	0	0	560	560	
4	382	382	0	0	169	169	
5	0	0	0	0	72	72	
6	415	415	0	0	6	6	
7	817	817	0	0	181	181	
8	0	0	0	0	1	1	
9	887	887	0	0	193	193	
10	988	988	21	21	117	117	
11	322	322	0	0	67	67	
12	0	0	0	0	41	41	
13	1,051	1,051	0	0	15	15	
14	1,040	1,040	0	0	100	100	
15	1,099	1,099	0	0	302	302	
16	1,849	1,849	0	0	175	175	x
17	1,092	1,092	0	0	480	480	x
18	156	156	0	0	302	302	
19	100	100	0	0	39	39	
20	6,213	6,213	0	0	521	521	
21	1,476	1,476	0	0	91	91	
22	1,292	1,292	0	0	167	167	
23	378	378	0	0	148	148	
24	1,420	1,420	0	0	178	178	x
25	1,215	1,215	0	0	443	443	
26	1,689	1,689	0	0	733	733	x
27	217	217	0	0	202	202	
28	21	21	0	0	23	23	
29	1,960	1,960	0	0	896	896	
30	503	503	0	0	327	327	x
31	0	0	0	0	255	255	
32	447	447	0	0	340	340	
33	62	62	0	0	119	119	
34	0	0	0	0	3	3	
35	0	0	0	0	302	302	
36	0	0	0	0	210	210	
37	0	0	0	0	156	156	
38	0	0	0	0	62	62	
39	0	0	0	0	78	78	
40	0	0	0	0	286	286	
41	0	0	0	0	123	123	

Metals and pH TMDLs for the West Fork Watershed

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

SWS	AML		Revoked Mines		Nonpoint Source		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)	
42	0	0	0	0	335	335	
43	1,045	1,045	0	0	270	270	
44	0	0	0	0	9	9	
45	0	0	0	0	35	35	
46	62	62	0	0	249	249	
47	0	0	0	0	16	16	
48	0	0	0	0	57	57	
49	0	0	0	0	113	113	
50	0	0	0	0	35	35	
51	0	0	0	0	39	39	
701	242	242	0	0	107	107	
801	634	32	0	0	58	58	x
1001	211	11	0	0	50	50	x
1301	0	0	0	0	156	156	
1701	1,175	23	0	0	30	30	x
3301	0	0	0	0	244	244	
3401	299	299	0	0	345	345	
3701	0	0	0	0	293	293	
3801	1,348	944	0	0	381	381	x
3901	0	0	0	0	36	36	
3902	0	0	0	0	223	223	x
3903	0	0	0	0	199	199	
4021	0	0	0	0	112	112	
4101	0	0	0	0	237	237	
4501	0	0	0	0	208	208	x

Appendix B

Dissolved Zinc Impairments in the West Fork Watershed

Problem Understanding and Conclusions

The mainstem of the West Fork River was listed as impaired for zinc on West Virginia's 1998 303(d) list. Dissolved zinc data collected from stations located on the mainstem of the West Fork are shown in Figures 1 and Figure 2. There were no exceedances of the hardness-based water quality criteria for zinc. These findings suggest that the mainstem of the West Fork is not impaired for zinc and TMDL development for this pollutant is not necessary. This impairment will be addressed in the development of the West Virginia 2002 303(d) List.

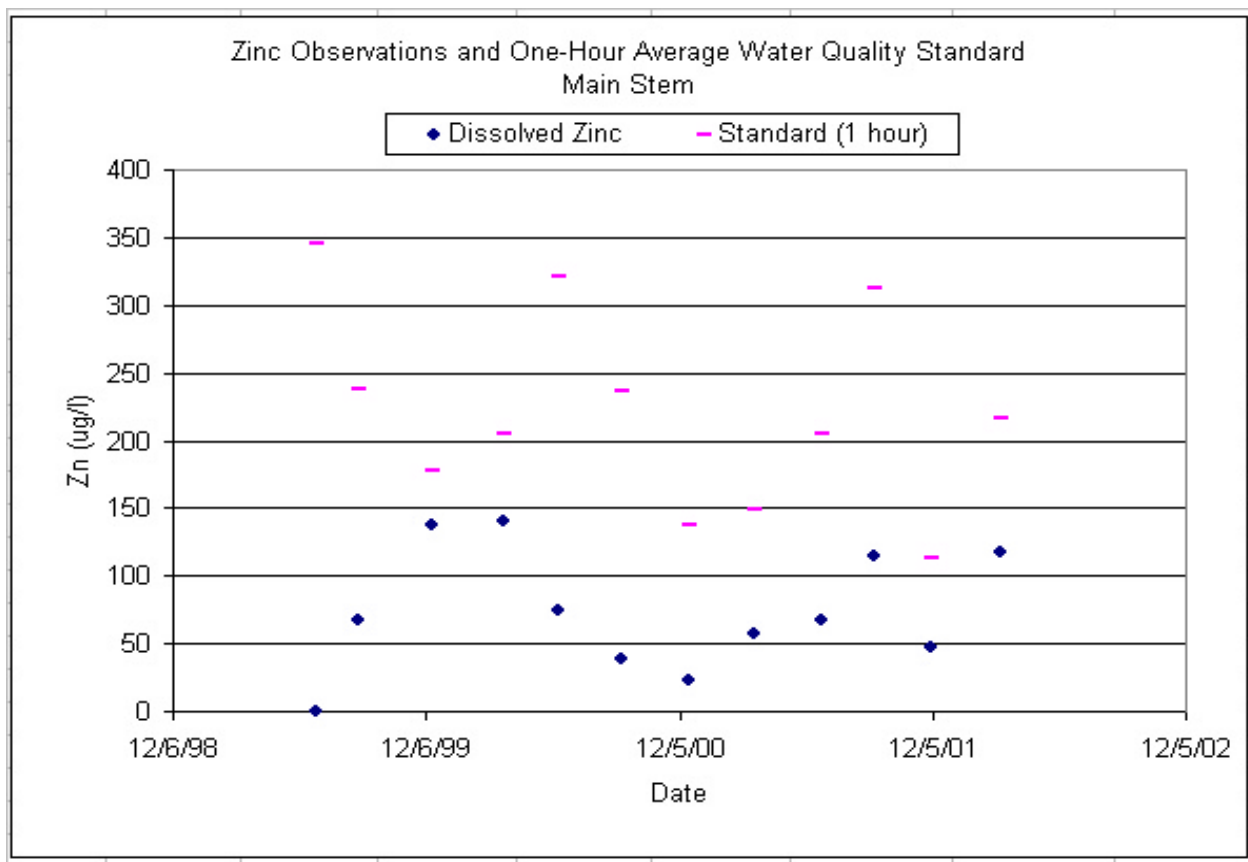


Figure 1. Dissolved Zinc Observations for the West Fork Watershed (with corresponding Criteria)

Metals and pH TMDLs for the West Fork Watershed

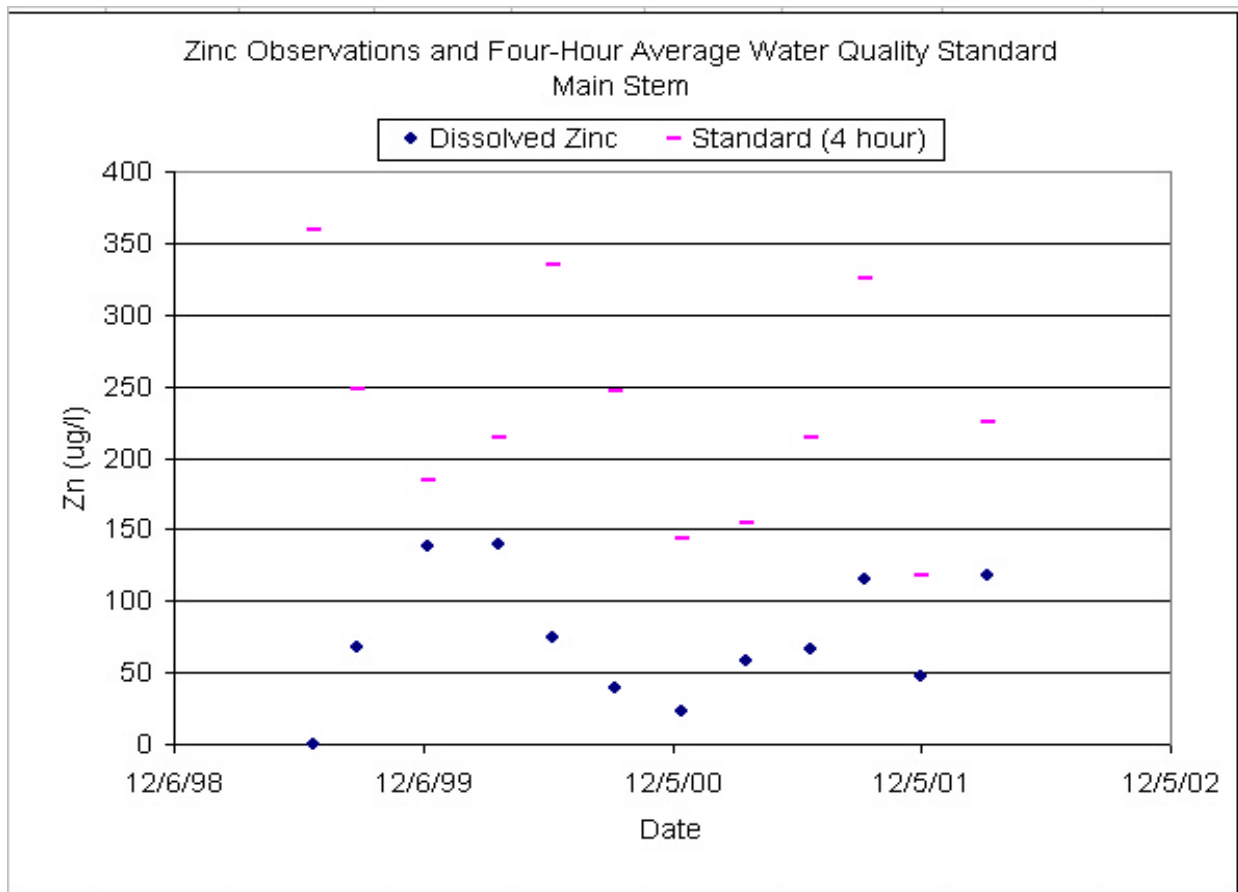


Figure 2. Dissolved Zinc Observations for the West Fork Watershed (with corresponding Criteria)

Appendix C

Water Quality Data Analysis

Metals and pH TMDLs for the West Fork Watershed

Location: West Fork nr. Laurel Creek 550487
 Pollutant: TSS (mg/l)
 Data from: 1/9/1979 to 6/14/1995 (181 Observations)

Flow Range	# Obs	Flow (cfs)			Concentration (mg/l)		
Percentile	Count	Mean	Min	Max	Mean	Min	Max
0-10	19	79.632	15.000	113.000	10.03	2.00	20.00
10-20	18	138.778	119.000	166.000	10.51	3.00	22.00
20-30	18	212.556	168.000	255.000	8.83	1.00	21.00
30-40	18	309.667	257.000	359.000	13.66	1.00	35.00
40-50	18	519.833	372.000	656.000	33.60	5.00	130.00
50-60	18	778.944	663.000	882.000	20.25	1.00	102.00
60-70	18	1010.222	888.000	1100.000	46.70	1.00	236.00
70-80	18	1365.556	1110.000	1600.000	32.09	1.00	93.00
80-90	17	2244.706	1760.000	3250.000	78.16	18.00	310.00
90-100	19	5598.947	3490.000	9870.000	340.31	53.00	1156.00

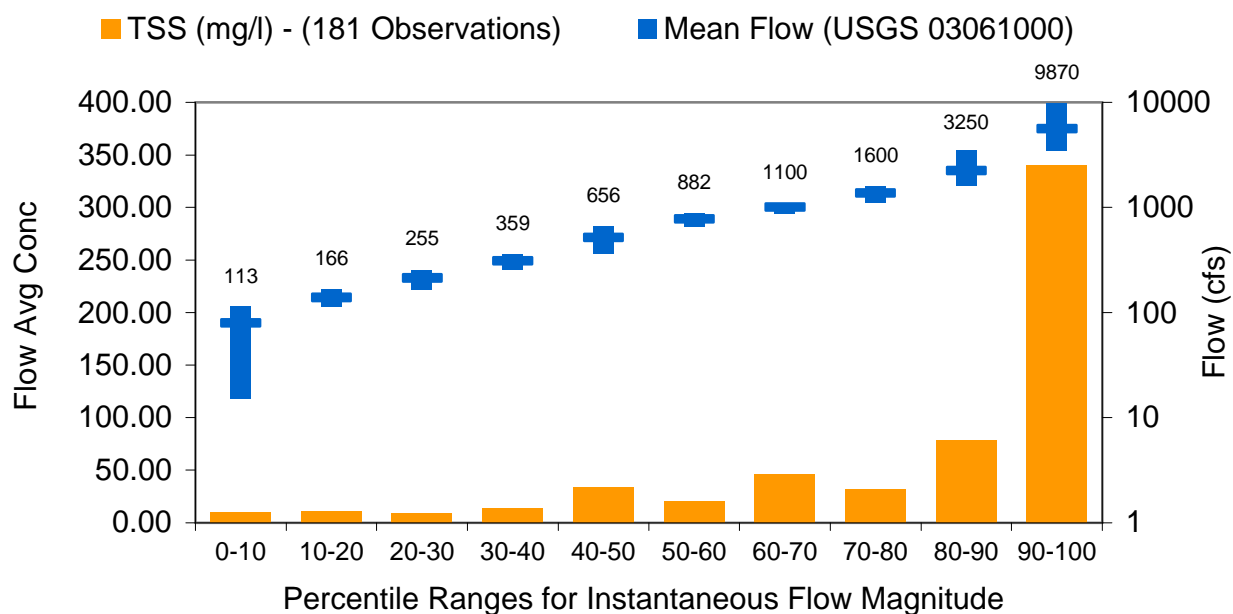


Figure 1 - West Fork River mainstem near Laurel Creek (550487) - Flow/TSS relationship

Metals and pH TMDLs for the West Fork Watershed

Location: Westfork nr. Weston 4wfs10201

Pollutant: TSS (mg/l)

Data from: 1/23/1979 to 12/6/1987 (36 Observations)

Flow Range	# Obs	Flow (cfs)			Concentration (mg/l)		
		Mean	Min	Max	Mean	Min	Max
0-10	4	83.000	60.000	120.000	12.45	7.00	20.00
10-20	4	152.250	123.000	172.000	9.50	3.00	15.00
20-30	3	197.333	190.000	204.000	7.44	3.00	12.00
30-40	4	266.750	231.000	296.000	31.58	12.00	78.00
40-50	3	319.000	305.000	330.000	5.29	0.10	9.00
50-60	4	675.000	445.000	808.000	39.28	3.00	121.00
60-70	3	907.333	888.000	918.000	2.33	1.00	3.00
70-80	4	1217.250	919.000	1580.000	16.81	4.00	38.00
80-90	3	2560.000	1610.000	3110.000	29.62	7.00	60.00
90-100	4	5555.000	4100.000	9300.000	91.95	11.00	271.00

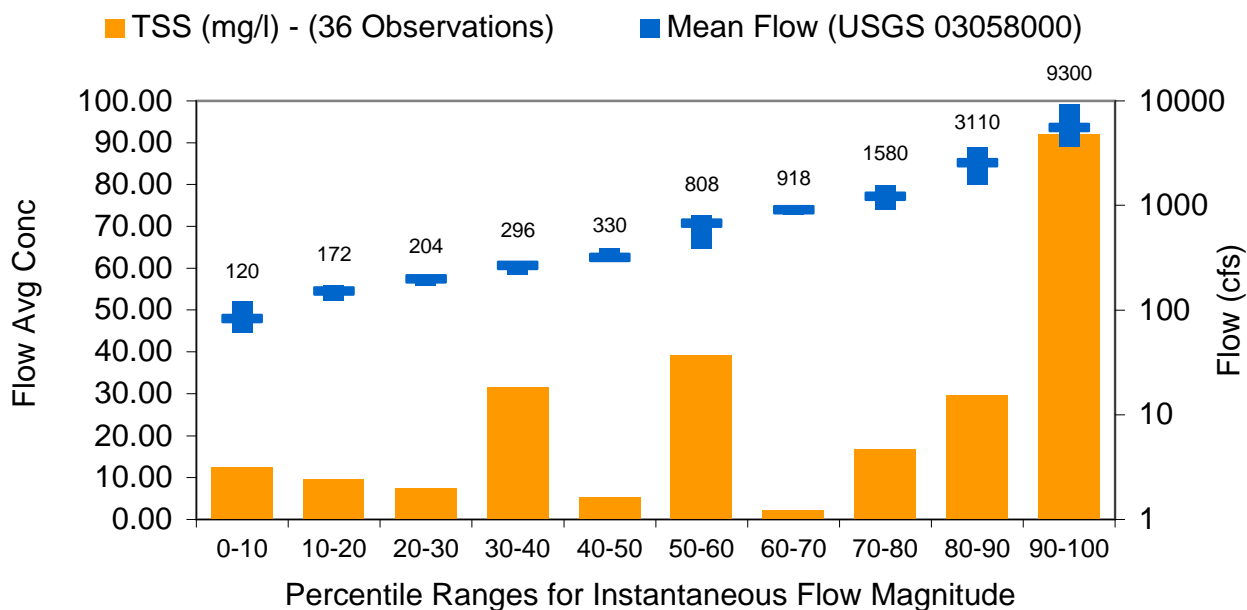


Figure 2 - West Fork mainstem near Weston (4wfs10201) - Flow/TSS relationship

Metals and pH TMDLs for the West Fork Watershed

Location: Westfork nr. Weston 4wfs13064

Pollutant: TSS (mg/l)

Data from: 4/10/1979 to 10/2/1987 (29 Observations)

Flow Range	# Obs	Flow (cfs)			Concentration (mg/l)		
<i>Percentile</i>	<i>Count</i>	<i>Mean</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>Min</i>	<i>Max</i>
0-10	3	15.533	9.600	19.000	11.45	3.00	19.00
10-20	3	33.000	25.000	38.000	12.59	10.00	15.00
20-30	3	47.667	45.000	52.000	17.64	11.00	26.00
30-40	3	58.333	55.000	61.000	34.61	17.00	53.00
40-50	3	90.667	66.000	129.000	45.64	12.00	71.00
50-60	2	173.500	158.000	189.000	29.53	17.00	40.00
60-70	3	212.667	197.000	240.000	22.00	9.00	45.00
70-80	3	490.667	316.000	610.000	57.94	21.00	120.00
80-90	3	916.000	778.000	1150.000	59.95	19.00	114.00
90-100	3	1920.000	1410.000	2610.000	82.46	57.00	134.00

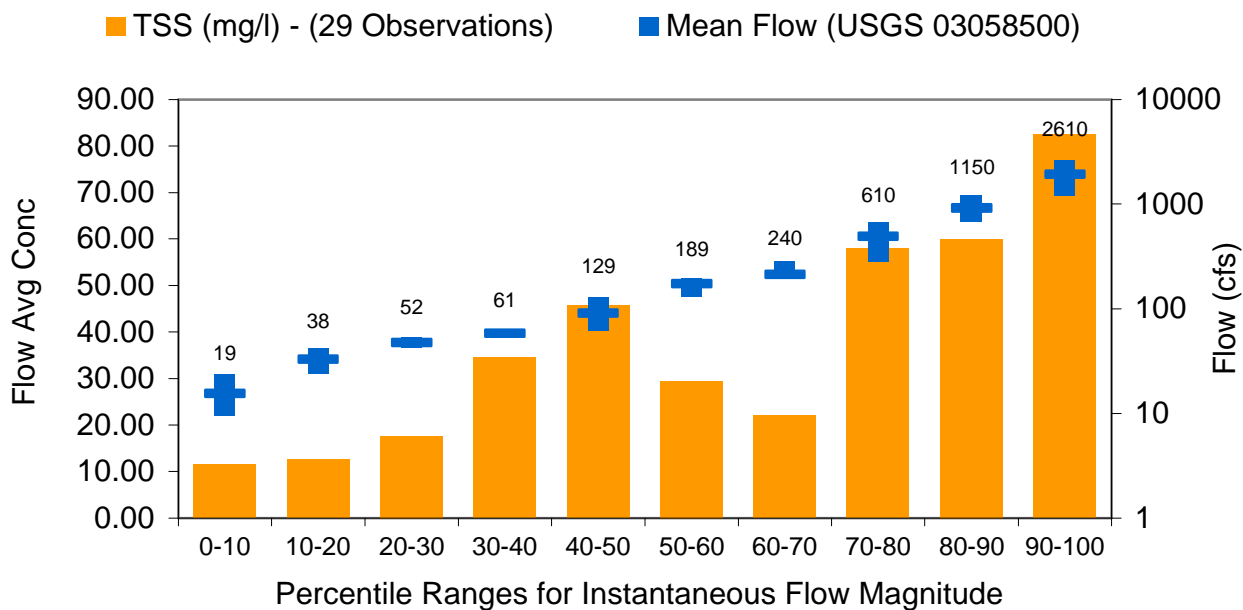


Figure 3 - West Fork mainstem near Weston (4wfs13064) - Flow/TSS relationship

Metals and pH TMDLs for the West Fork Watershed

Location: West Fork nr. Laurel Creek 550487

Pollutant: Tot Fe (ug/l)

Data from: 3/13/1979 to 6/14/1995 (145 Observations)

Flow Range	# Obs	Flow (cfs)			Concentration (ug/l)		
Percentile	Count	Mean	Min	Max	Mean	Min	Max
0-10	15	71.533	15.000	112.000	987.71	340.00	1400.00
10-20	14	134.714	112.000	166.000	942.47	38.00	1680.00
20-30	15	216.533	168.000	257.000	942.06	160.00	1400.00
30-40	14	313.786	260.000	359.000	1331.53	232.00	2520.00
40-50	15	524.800	372.000	663.000	2214.19	160.00	6120.00
50-60	14	788.714	728.000	821.000	1854.11	420.00	3080.00
60-70	14	1048.500	895.000	1170.000	1943.66	840.00	3400.00
70-80	15	1390.667	1180.000	1590.000	1992.00	44.00	4000.00
80-90	14	2055.714	1600.000	2830.000	2508.89	226.00	6800.00
90-100	15	5341.333	2880.000	9870.000	13518.85	336.00	42880.00

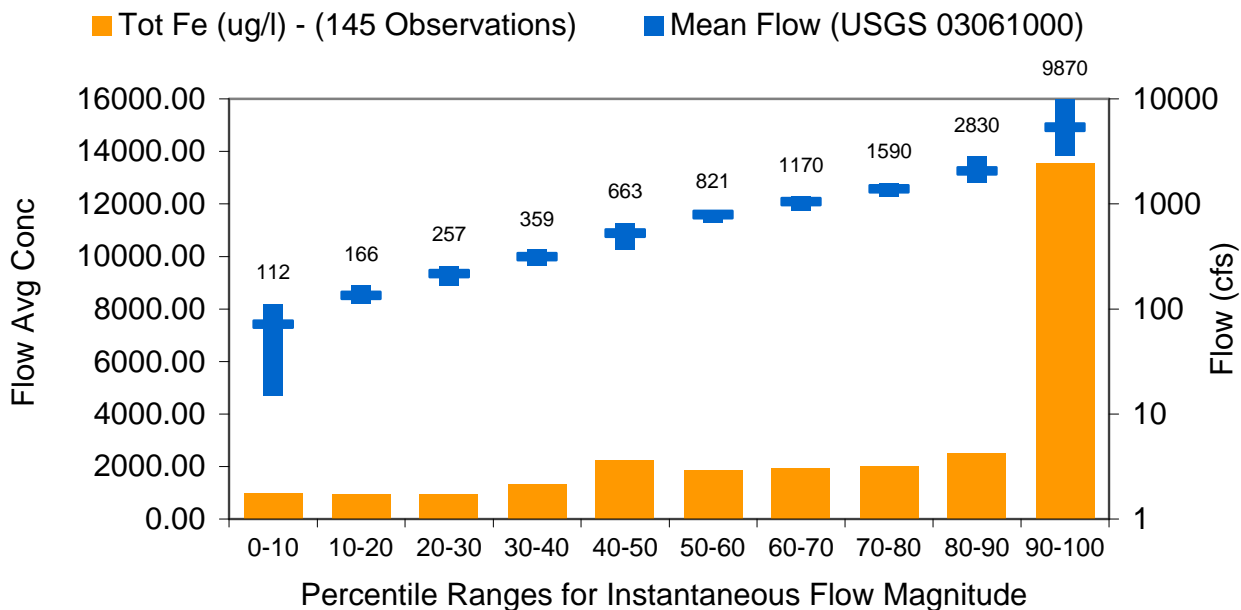


Figure 4 - West Fork mainstem near Laurel Creek (550487) - Flow/Total Iron relationship

Metals and pH TMDLs for the West Fork Watershed

Location: Westfork nr. Weston 4wfs10201

Pollutant: Tot Fe (ug/l)

Data from: 1/23/1979 to 4/16/1984 (24 Observations)

Flow Range	# Obs	Flow (cfs)			Concentration (ug/l)		
Percentile	Count	Mean	Min	Max	Mean	Min	Max
0-10	3	7.100	5.800	8.500	582.04	555.00	600.00
10-20	2	19.000	18.000	20.000	877.89	660.00	1120.00
20-30	2	40.000	38.000	42.000	805.00	700.00	900.00
30-40	3	70.333	52.000	98.000	6532.23	900.00	13000.00
40-50	2	101.500	101.000	102.000	472.86	400.00	545.00
50-60	2	131.000	121.000	141.000	604.94	500.00	695.00
60-70	3	217.667	150.000	277.000	1540.20	635.00	1900.00
70-80	2	353.000	331.000	375.000	5465.44	600.00	9760.00
80-90	2	470.000	436.000	504.000	856.30	800.00	905.00
90-100	3	1686.000	908.000	3130.000	3037.29	2700.00	3200.00

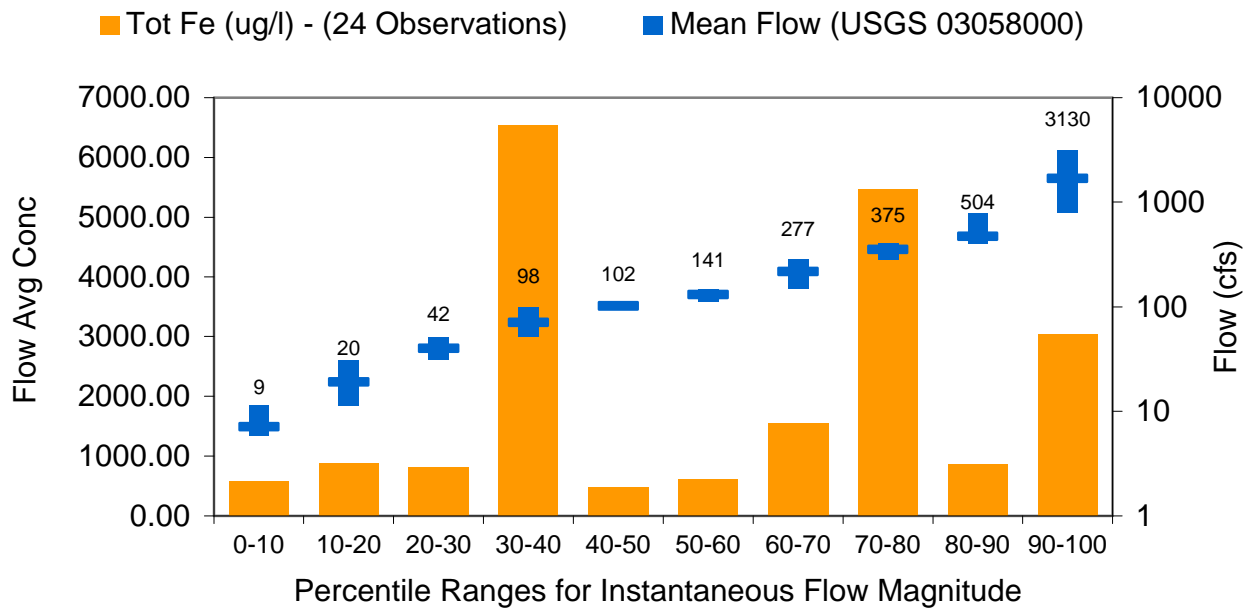


Figure 5 - West Fork mainstem near Laurel Creek (4wfs10201) - Flow/Total Iron relationship

Metals and pH TMDLs for the West Fork Watershed

Location: Westfork nr. Weston 4wfs13064

Pollutant: Tot Fe (ug/l)

Data from: 4/10/1979 to 10/2/1987 (27 Observations)

Flow Range	# Obs	Flow (cfs)			Concentration (ug/l)		
<i>Percentile</i>	<i>Count</i>	<i>Mean</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>Min</i>	<i>Max</i>
0-10	3	17.533	9.600	25.000	665.40	500.00	930.00
10-20	3	39.667	36.000	45.000	845.38	800.00	920.00
20-30	2	49.000	46.000	52.000	1376.12	1240.00	1530.00
30-40	3	58.333	55.000	61.000	2159.43	1420.00	2600.00
40-50	3	90.667	66.000	129.000	2559.19	900.00	4100.00
50-60	2	173.500	158.000	189.000	1735.73	1300.00	2100.00
60-70	3	212.667	197.000	240.000	976.25	250.00	1720.00
70-80	2	431.000	316.000	546.000	2950.51	1500.00	3790.00
80-90	3	916.000	778.000	1150.000	1095.05	600.00	1500.00
90-100	3	1920.000	1410.000	2610.000	3505.31	2900.00	4450.00

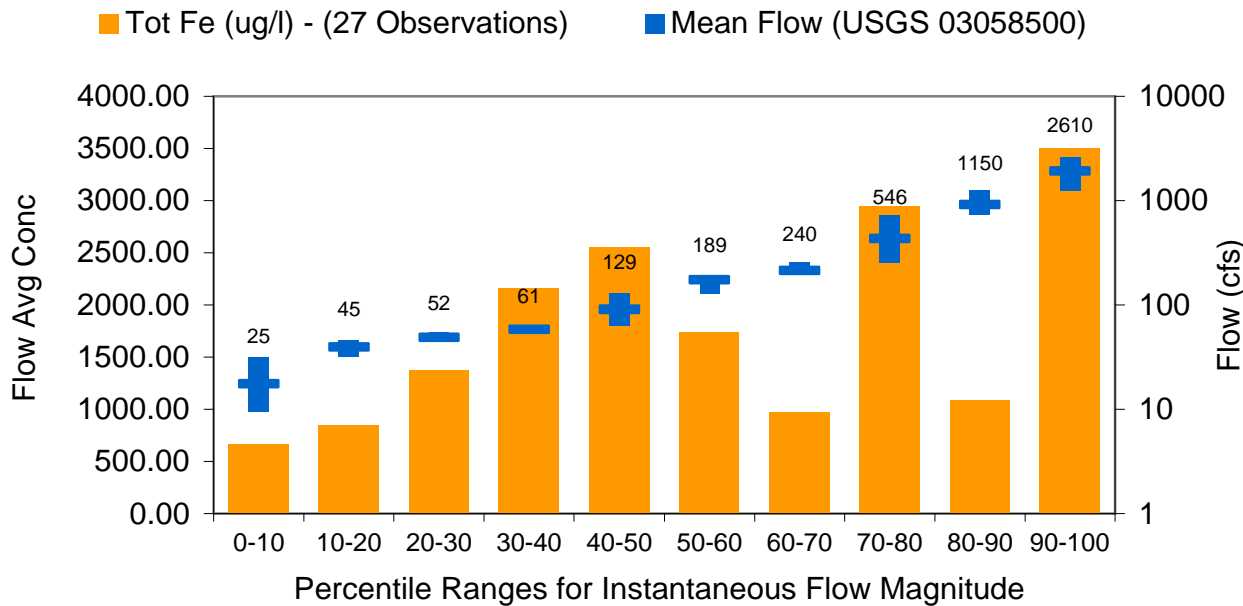


Figure 6 - West Fork mainstem near Laurel Creek (4wfs13064) - Flow/Total Iron relationship

Metals and pH TMDLs for the West Fork Watershed

Location: West Fork nr. Laurel Creek 550487

Pollutant: Tot Mn (ug/l)

Data from: 3/13/1979 to 6/14/1995 (145 Observations)

Flow Range	# Obs	Flow (cfs)			Concentration (ug/l)		
		Mean	Min	Max	Mean	Min	Max
Percentile	Count	Mean	Min	Max	Mean	Min	Max
0-10	15	71.533	15.000	112.000	894.61	505.00	2500.00
10-20	14	134.714	112.000	166.000	565.28	334.00	1024.00
20-30	15	216.533	168.000	257.000	488.29	96.00	880.00
30-40	14	313.786	260.000	359.000	481.67	8.00	870.00
40-50	15	524.800	372.000	663.000	454.70	252.00	900.00
50-60	14	788.714	728.000	821.000	407.57	214.00	720.00
60-70	14	1048.500	895.000	1170.000	378.75	236.00	564.00
70-80	15	1390.667	1180.000	1590.000	388.72	92.00	740.00
80-90	14	2055.714	1600.000	2830.000	464.38	180.00	1280.00
90-100	15	5341.333	2880.000	9870.000	729.04	230.00	2040.00

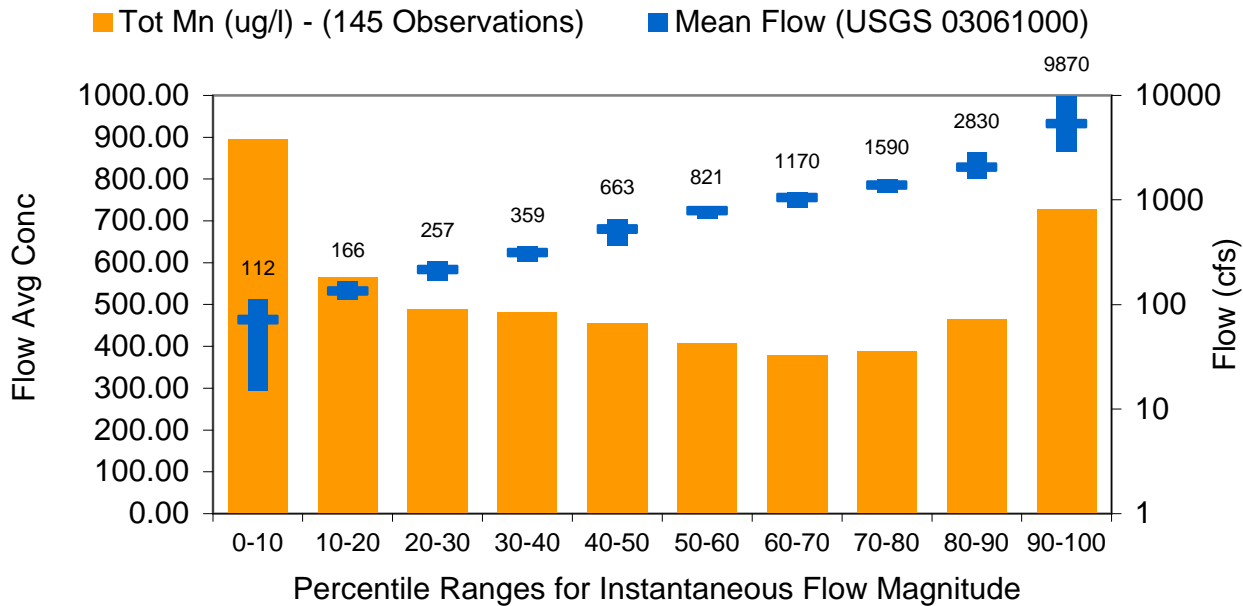


Figure 7 - West Fork mainstem near Laurel Creek (550487) - Flow/Total Manganese relationship

Metals and pH TMDLs for the West Fork Watershed

Location: Westfork nr. Weston 4wfs10201
 Pollutant: Tot Mn (ug/l)
 Data from: 1/23/1979 to 4/16/1984 (24 Observations)

Flow Range	# Obs	Flow (cfs)			Concentration (ug/l)		
		Mean	Min	Max	Mean	Min	Max
0-10	3	7.100	5.800	8.500	227.86	120.00	275.00
10-20	2	19.000	18.000	20.000	175.26	170.00	180.00
20-30	2	40.000	38.000	42.000	122.25	70.00	180.00
30-40	3	70.333	52.000	98.000	828.06	110.00	1600.00
40-50	2	101.500	101.000	102.000	107.39	85.00	130.00
50-60	2	131.000	121.000	141.000	72.69	70.00	75.00
60-70	3	217.667	150.000	277.000	92.30	90.00	100.00
70-80	2	353.000	331.000	375.000	362.14	70.00	620.00
80-90	2	470.000	436.000	504.000	75.36	70.00	80.00
90-100	3	1686.000	908.000	3130.000	165.21	120.00	180.00

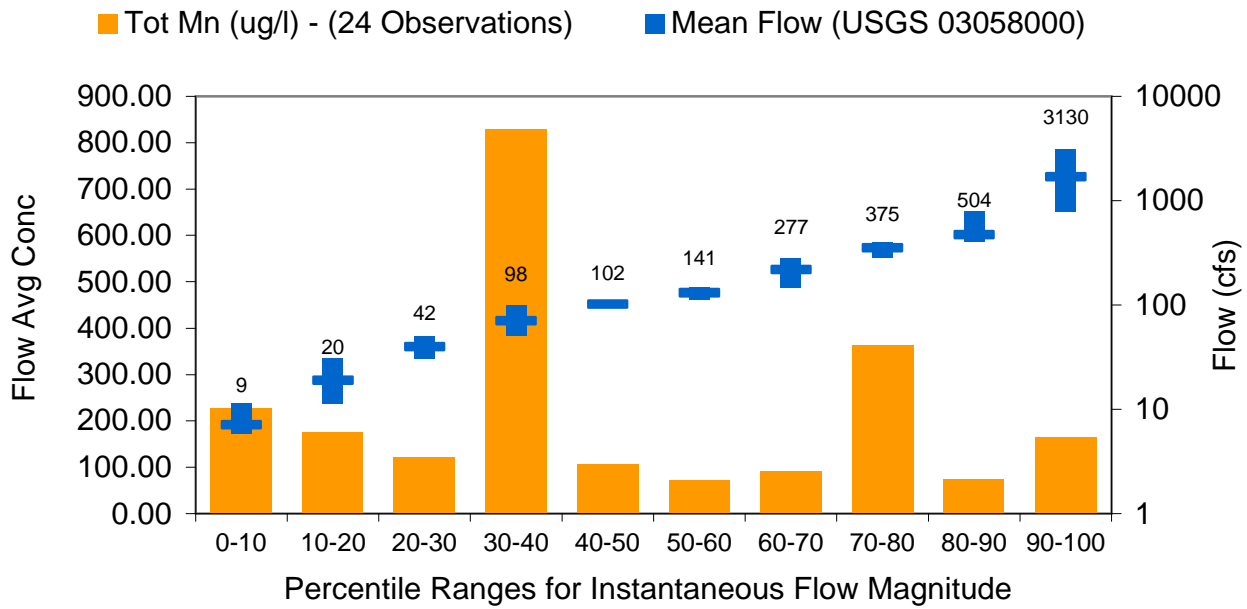


Figure 8 - West Fork mainstem near Weston (4wfs10201) - Flow/Total Manganese relationship

Metals and pH TMDLs for the West Fork Watershed

Location: Westfork nr. Weston 4wfs13064
 Pollutant: Tot Mn (ug/l)
 Data from: 4/10/1979 to 10/2/1987 (27 Observations)

Flow Range	# Obs	Flow (cfs)			Concentration (ug/l)		
		Mean	Min	Max	Mean	Min	Max
0-10	3	17.533	9.600	25.000	529.01	365.00	860.00
10-20	3	39.667	36.000	45.000	396.81	330.00	480.00
20-30	2	49.000	46.000	52.000	335.10	260.00	420.00
30-40	3	58.333	55.000	61.000	378.86	300.00	440.00
40-50	3	90.667	66.000	129.000	537.65	290.00	880.00
50-60	2	173.500	158.000	189.000	229.11	220.00	240.00
60-70	3	212.667	197.000	240.000	209.14	180.00	250.00
70-80	2	431.000	316.000	546.000	515.71	180.00	710.00
80-90	3	916.000	778.000	1150.000	286.91	160.00	410.00
90-100	3	1920.000	1410.000	2610.000	212.29	170.00	310.00

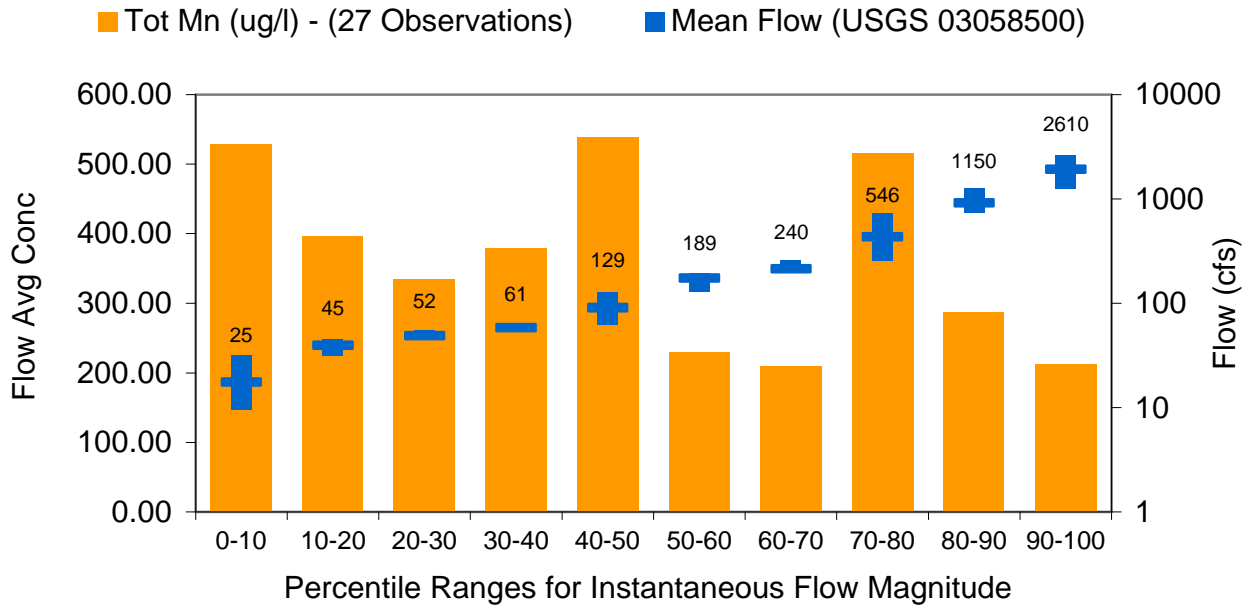


Figure 9 - West Fork mainstem near Weston (4wfs13064) - Flow/Total Manganese relationship

Metals and pH TMDLs for the West Fork Watershed

Location: West Fork nr. Laurel Creek 550487

Pollutant: Tot Al (ug/l)

Data from: 3/13/1979 to 6/14/1995 (134 Observations)

Flow Range	# Obs	Flow (cfs)			Concentration (ug/l)		
<i>Percentile</i>	<i>Count</i>	<i>Mean</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>Min</i>	<i>Max</i>
0-10	15	73.267	15.000	112.000	258.30	140.00	900.00
10-20	12	134.000	112.000	159.000	286.63	94.00	456.00
20-30	13	207.231	166.000	255.000	327.05	130.00	910.00
30-40	14	314.500	257.000	372.000	327.25	82.00	532.00
40-50	13	540.538	380.000	663.000	830.42	300.00	1600.00
50-60	13	786.231	728.000	816.000	952.88	188.00	5360.00
60-70	14	1030.714	821.000	1170.000	801.69	300.00	2000.00
70-80	14	1405.714	1190.000	1590.000	692.22	20.00	1400.00
80-90	12	1987.500	1600.000	2520.000	964.26	496.00	2060.00
90-100	14	5517.143	3250.000	9870.000	4921.01	184.00	15520.00

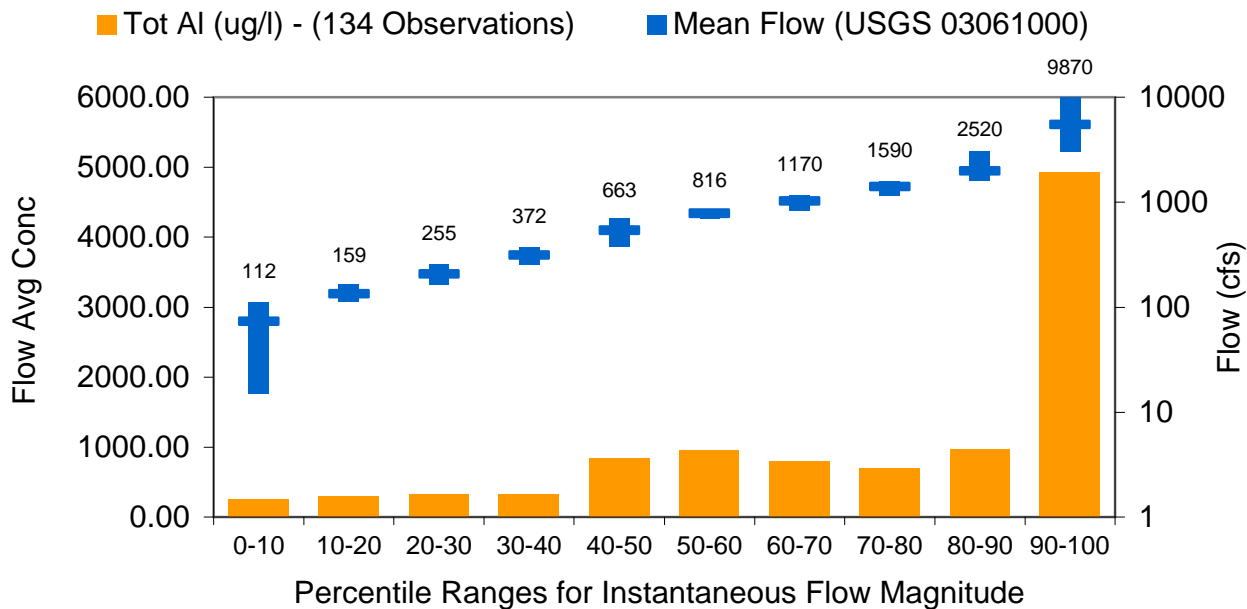


Figure 10 - West Fork mainstem near Laurel Creek (550487) - Flow/Total Aluminum relationship

Metals and pH TMDLs for the West Fork Watershed

Location: Westfork nr. Weston 4wfs10201

Pollutant: Tot Al (ug/l)

Data from: 1/23/1979 to 4/16/1984 (23 Observations)

Flow Range	# Obs	Flow (cfs)			Concentration (ug/l)		
Percentile	Count	Mean	Min	Max	Mean	Min	Max
0-10	3	10.267	5.800	18.000	336.69	150.00	800.00
10-20	2	29.000	20.000	38.000	717.59	181.00	1000.00
20-30	2	47.000	42.000	52.000	380.70	233.00	500.00
30-40	2	79.500	61.000	98.000	449.75	350.00	610.00
40-50	3	108.000	101.000	121.000	493.86	350.00	660.00
50-60	2	133.000	125.000	141.000	500.00	500.00	500.00
60-70	2	188.000	150.000	226.000	500.00	500.00	500.00
70-80	2	304.000	277.000	331.000	1128.83	450.00	1940.00
80-90	2	405.500	375.000	436.000	956.38	875.00	1051.00
90-100	3	1551.333	504.000	3130.000	2574.34	500.00	2900.00

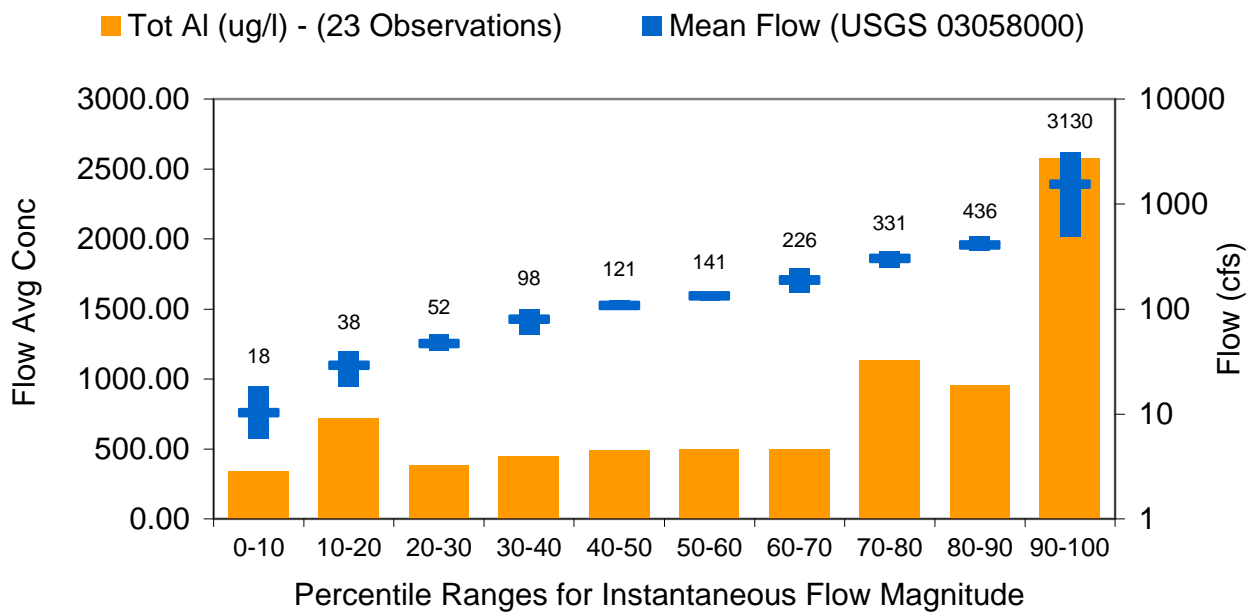


Figure 11 - West Fork mainstem near Weston (4wfs10201) - Flow/Total Aluminum relationship

Metals and pH TMDLs for the West Fork Watershed

Location: Westfork nr. Weston 4wfs13064

Pollutant: Tot Al (ug/l)

Data from: 4/10/1979 to 10/2/1987 (15 Observations)

Flow Range	# Obs	Flow (cfs)			Concentration (ug/l)		
Percentile	Count	Mean	Min	Max	Mean	Min	Max
0-10	2	17.300	9.600	25.000	236.07	200.00	330.00
10-20	1	36.000	36.000	36.000	220.00	220.00	220.00
20-30	2	48.500	38.000	59.000	2412.78	290.00	3780.00
30-40	1	61.000	61.000	61.000	2940.00	2940.00	2940.00
40-50	2	71.500	66.000	77.000	596.15	440.00	730.00
50-60	1	129.000	129.000	129.000	6150.00	6150.00	6150.00
60-70	1	189.000	189.000	189.000	1310.00	1310.00	1310.00
70-80	2	258.500	201.000	316.000	989.52	580.00	1250.00
80-90	1	778.000	778.000	778.000	1920.00	1920.00	1920.00
90-100	2	1115.000	820.000	1410.000	2383.43	730.00	3345.00

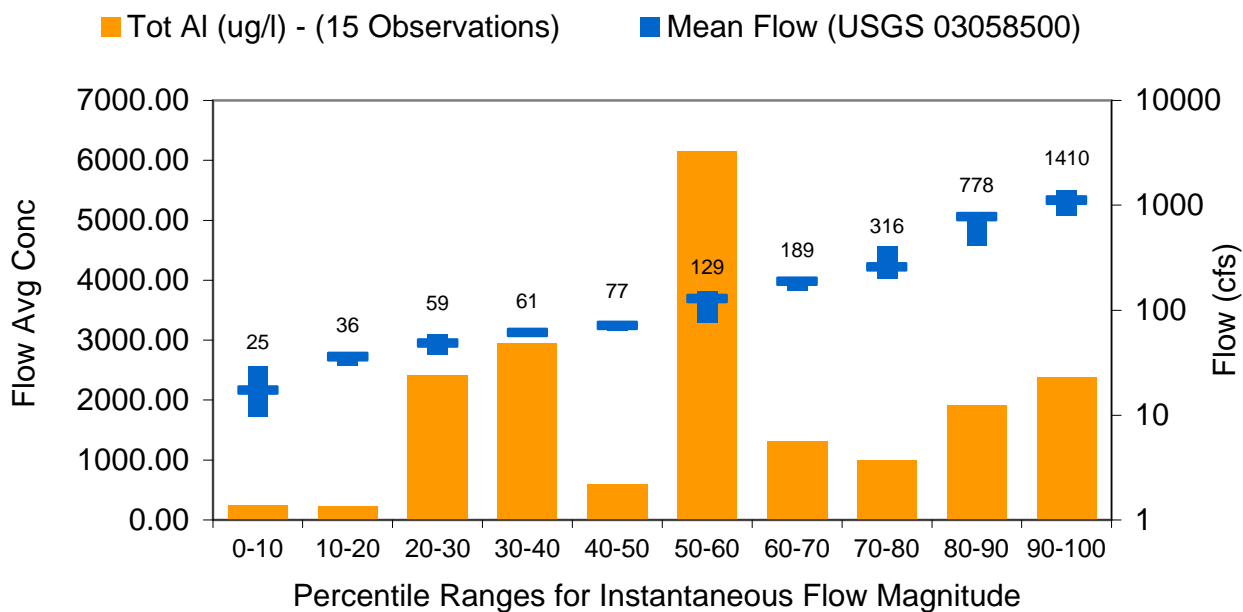


Figure 12 - West Fork mainstem near Weston (4wfs13064) - Flow/Total Aluminum

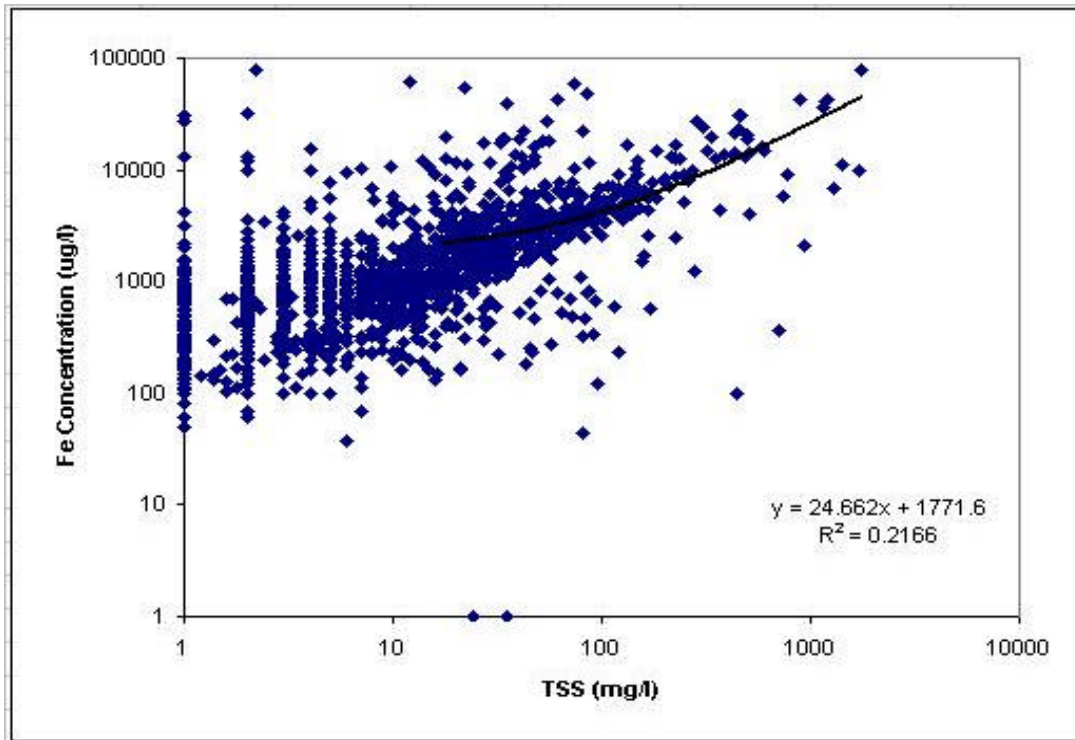


Figure 13 - Total Fe / TSS correlation

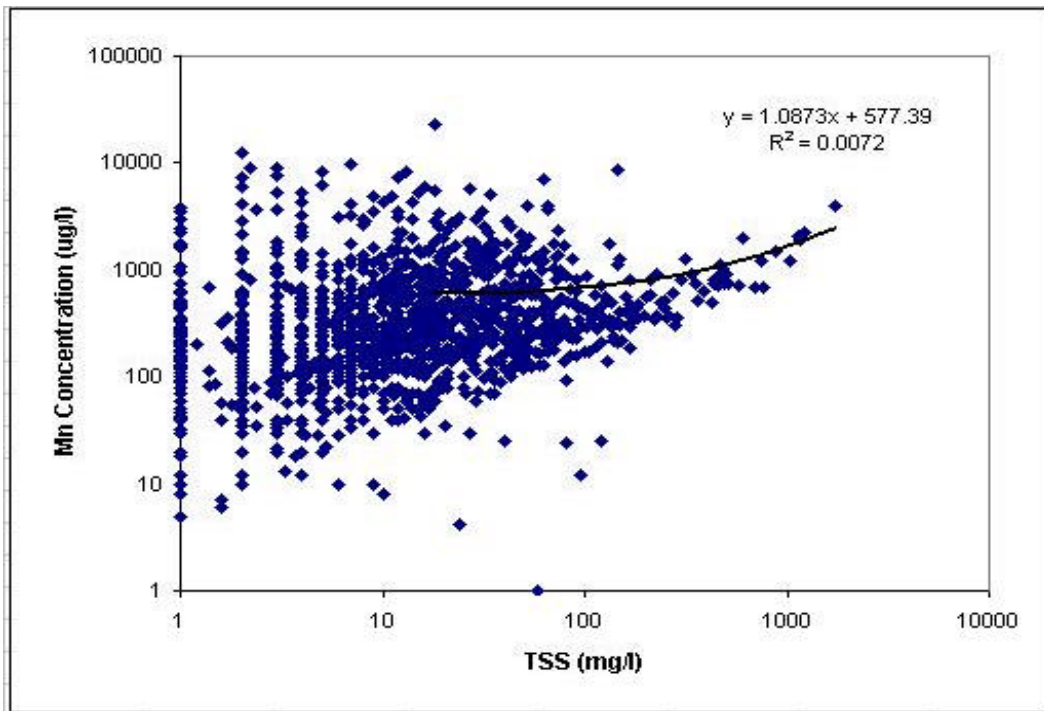


Figure 14 - Total Mn / TSS correlation

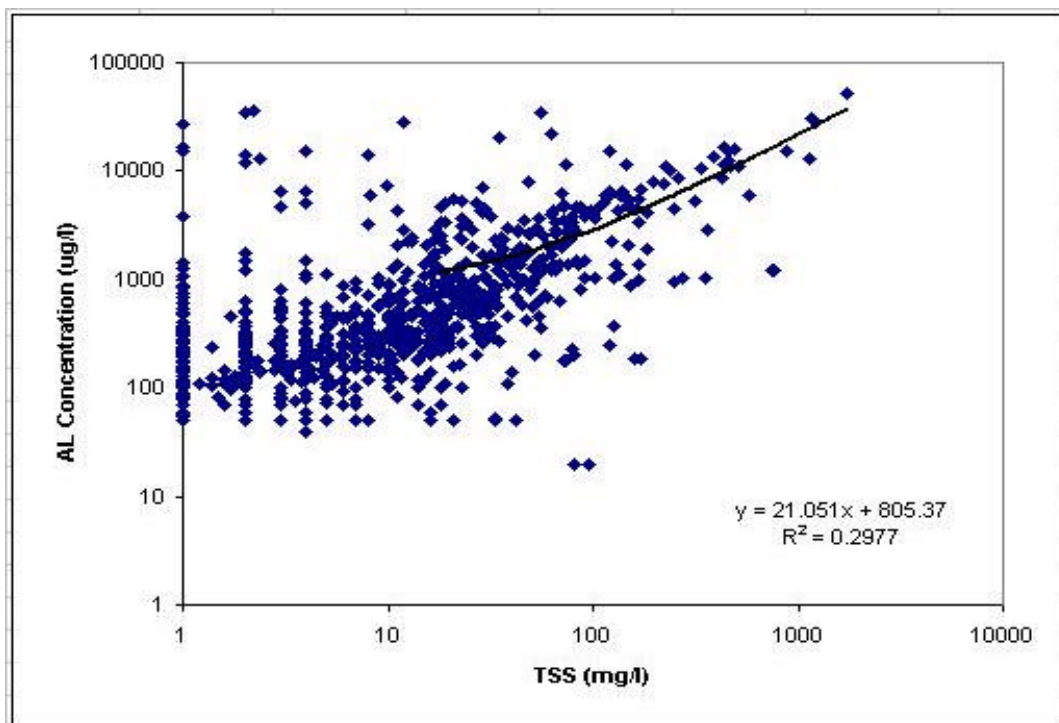


Figure 15 - West Fork mainstem -Flow/Total Manganese correlation

Appendix D - 1

Hydrology Calibration

Subwatershed 10

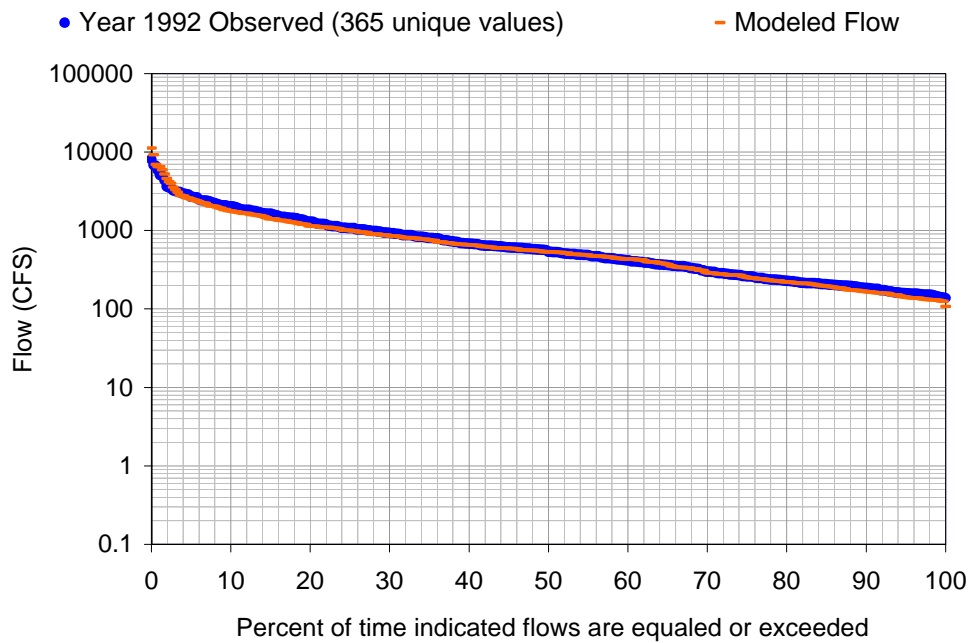
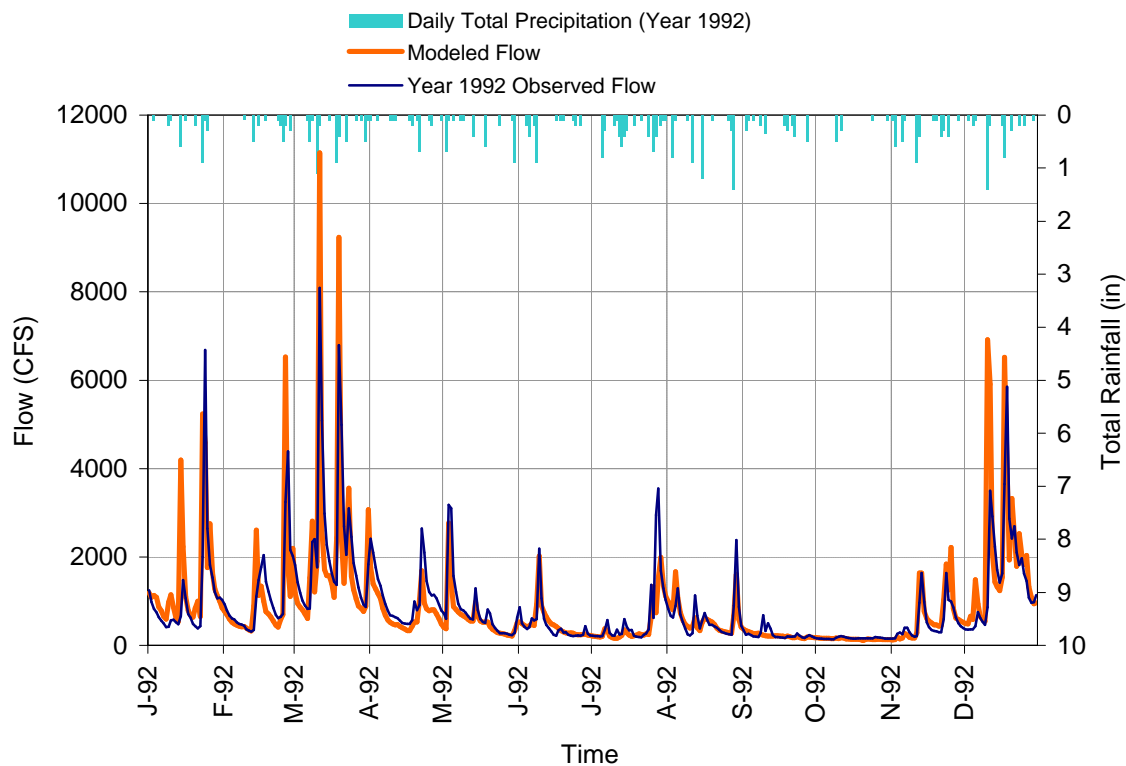


Figure D-1. Hydrology calibration at USGS 03061000

Subwatershed 27

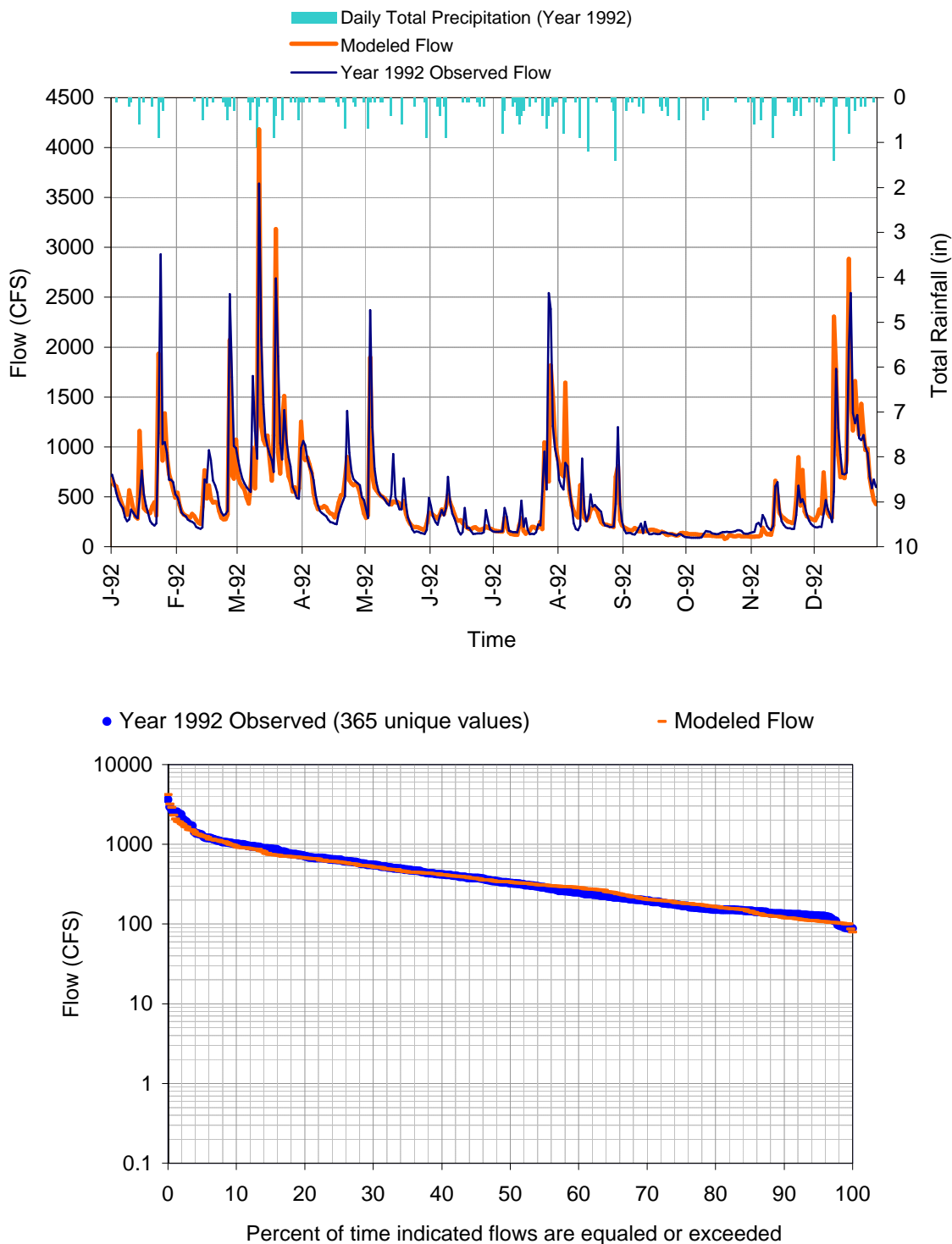


Figure D-2. Hydrology calibration at USGS 03058975

Subwatershed 41

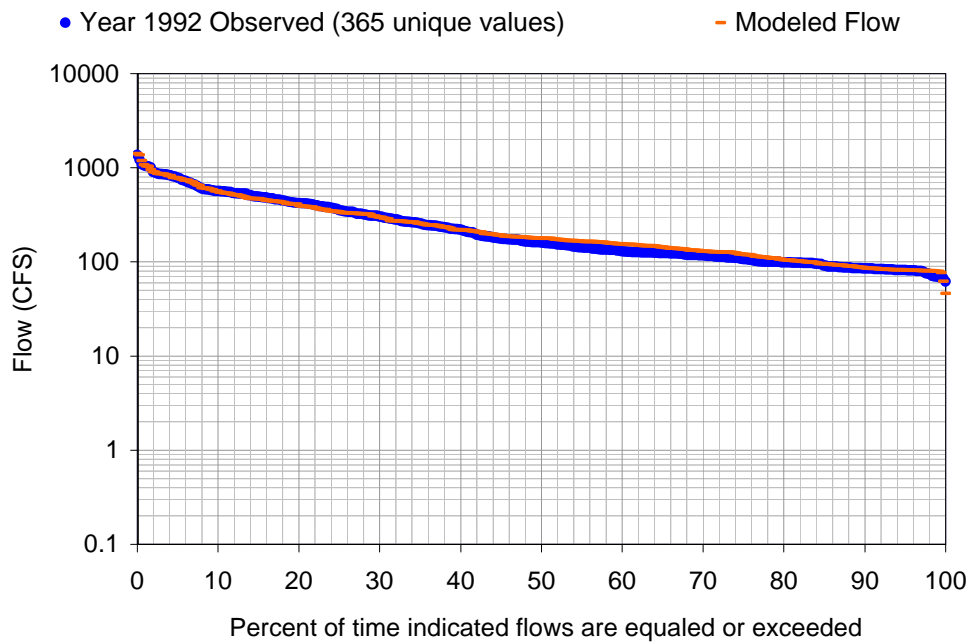
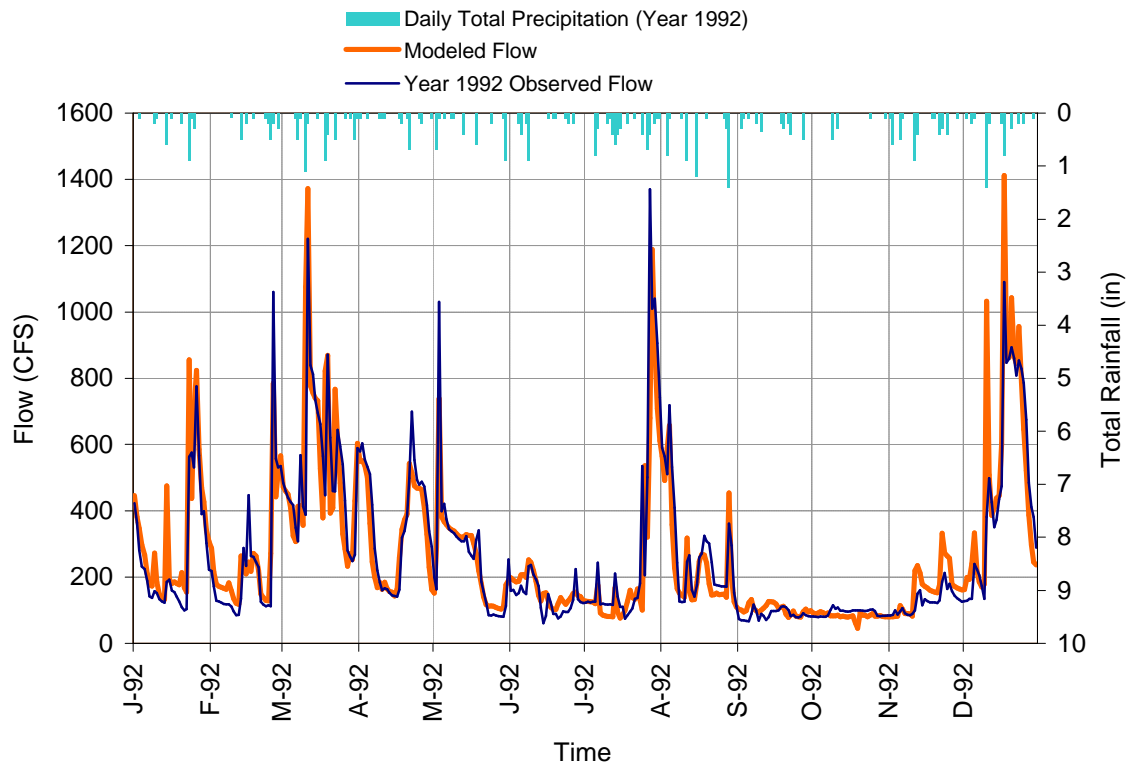


Figure D-3. Hydrology calibration at USGS 030585000

Subwatershed 61

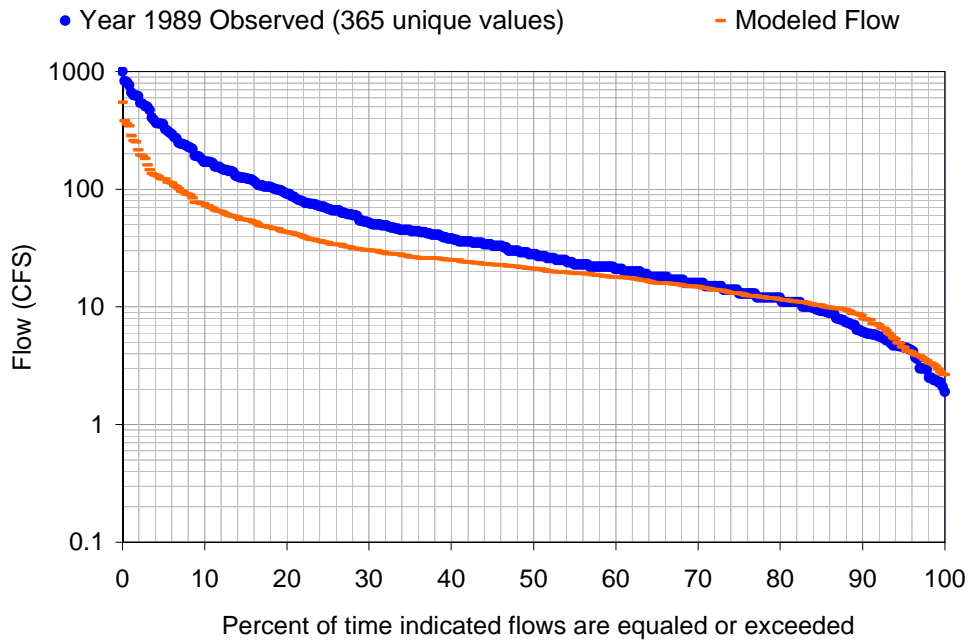
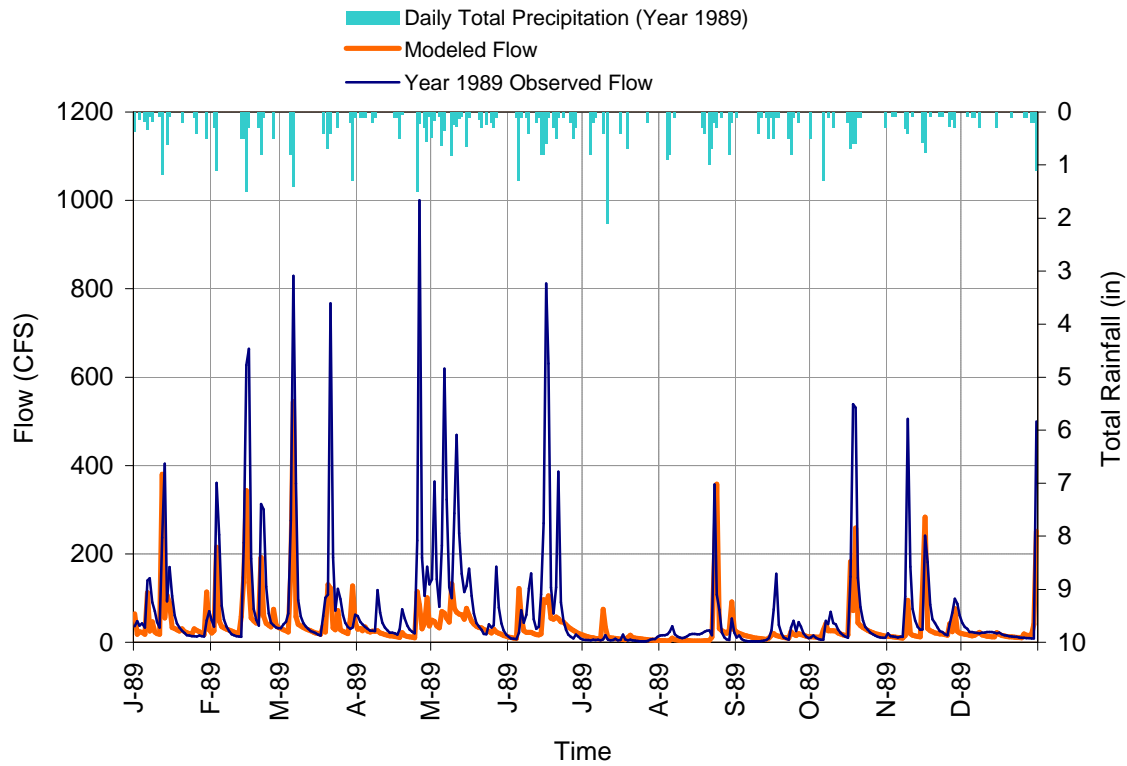
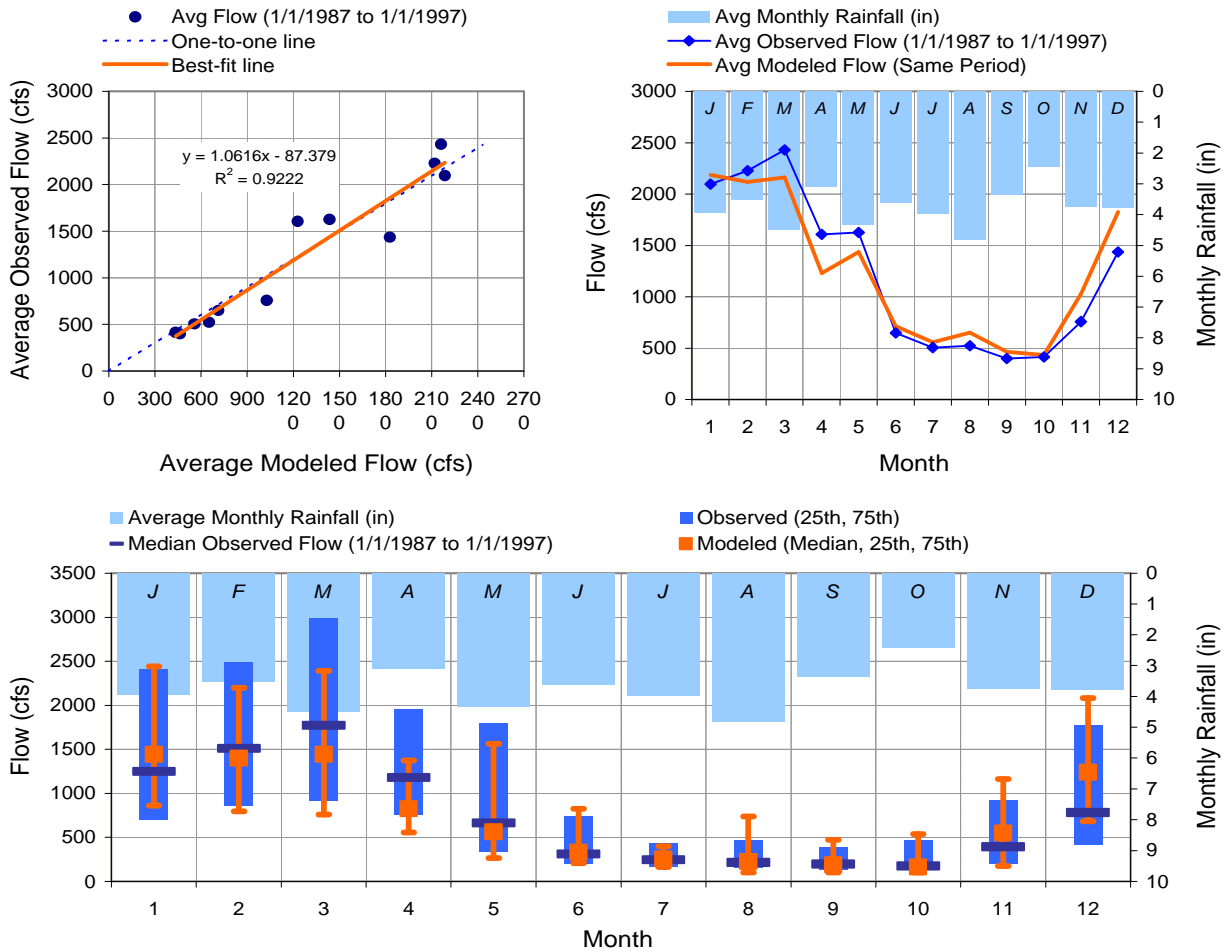


Figure D-4. Hydrology calibration at USGS 03057300

Metals and pH TMDLs for the West Fork Watershed

10-Year Flow Comparison for (1/1/1987 to 1/1/1997)



MONTH	OBSERVED FLOW (CFS)				MODELED FLOW (CFS)				VOLUME (IN)		COMPARISON	
	MEAN	MEDIAN	25TH	75TH	MEAN	MEDIAN	25TH	75TH	DATA	MODEL	DEV	CRITIQUE
JAN	2096.96	1250.00	702.50	2410.00	2187.68	1442.25	862.82	2441.11	32.31	33.70	1.40	OK
FEB	2228.56	1510.00	852.50	2485.00	2119.75	1399.18	794.33	2198.54	31.24	29.72	-1.53	OK
MAR	2431.25	1770.00	923.00	2990.00	2163.09	1444.21	761.09	2391.31	37.34	33.22	-4.12	OK
APR	1607.29	1180.00	757.00	1960.00	1230.06	825.58	556.12	1374.14	23.89	18.28	-5.61	OK
MAY	1627.19	663.50	340.00	1797.50	1436.71	563.77	264.27	1563.16	24.99	22.06	-2.93	OK
JUN	648.97	313.00	200.00	743.25	712.51	331.80	206.84	825.22	9.64	10.59	0.94	OK
JUL	506.62	245.50	174.00	441.25	557.60	254.53	163.06	399.61	7.78	8.56	0.78	OK
AUG	523.46	216.00	151.00	463.00	652.51	226.00	102.29	736.74	8.04	10.02	1.98	OK
SEP	399.19	197.00	138.75	392.50	462.95	188.82	102.38	473.26	5.93	6.88	0.95	OK
OCT	414.02	176.00	131.00	463.00	433.85	166.23	101.65	538.63	6.36	6.66	0.30	OK
NOV	757.76	392.50	201.50	919.25	1028.01	550.46	176.72	1163.20	11.26	15.28	4.02	OK
DEC	1435.93	782.00	421.25	1772.50	1828.32	1239.98	681.30	2080.65	22.05	28.08	6.03	OK

Figure D-5. Ten-year hydrology validation at UDGS 03213700

Appendix D - 2

Water Quality Calibration

Metals and pH TMDLs for the West Fork Watershed

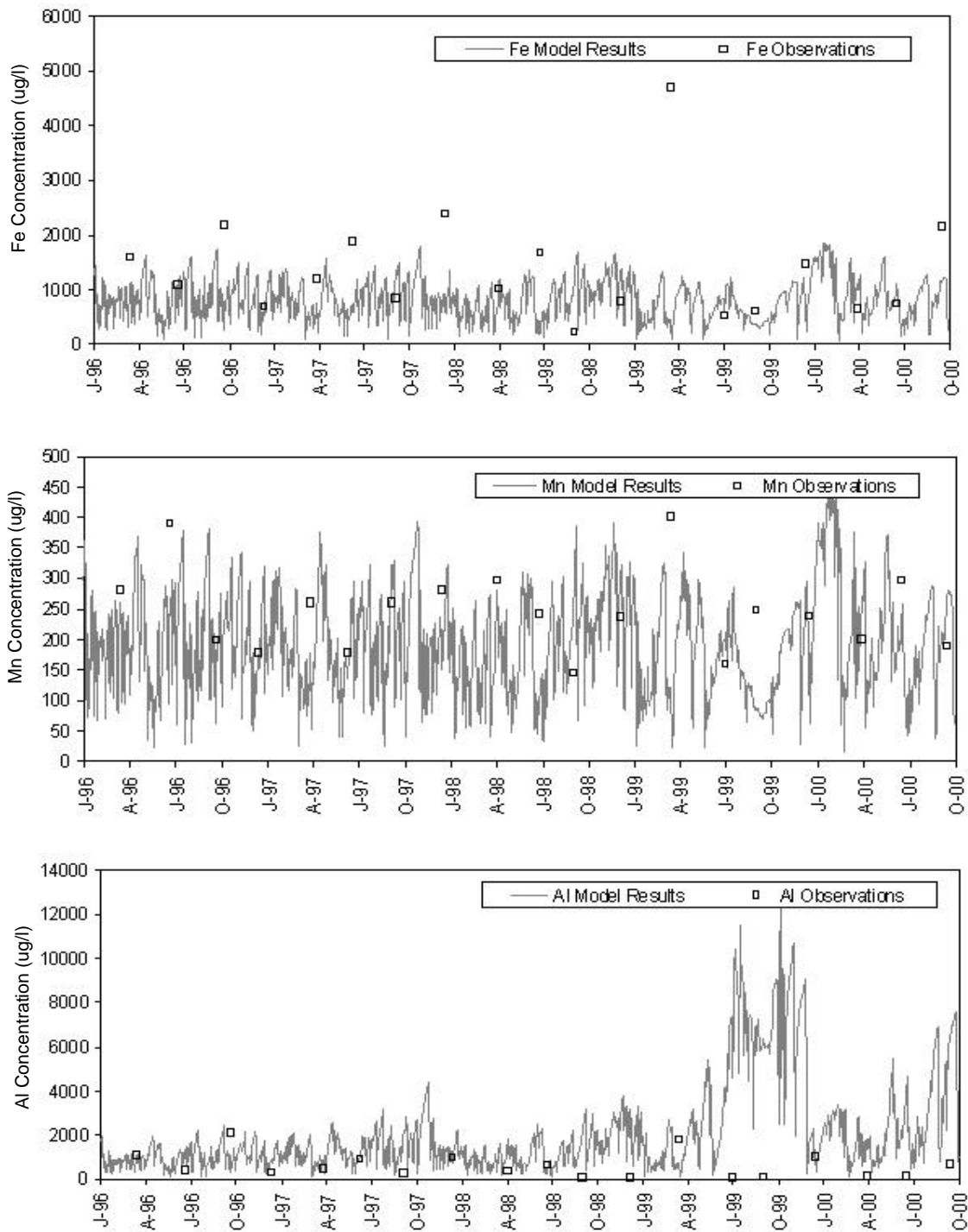


Figure D-6. Water Quality Calibration for Total Fe, Mn, and Al at Subwatershed 9 Stations

Metals and pH TMDLs for the West Fork Watershed

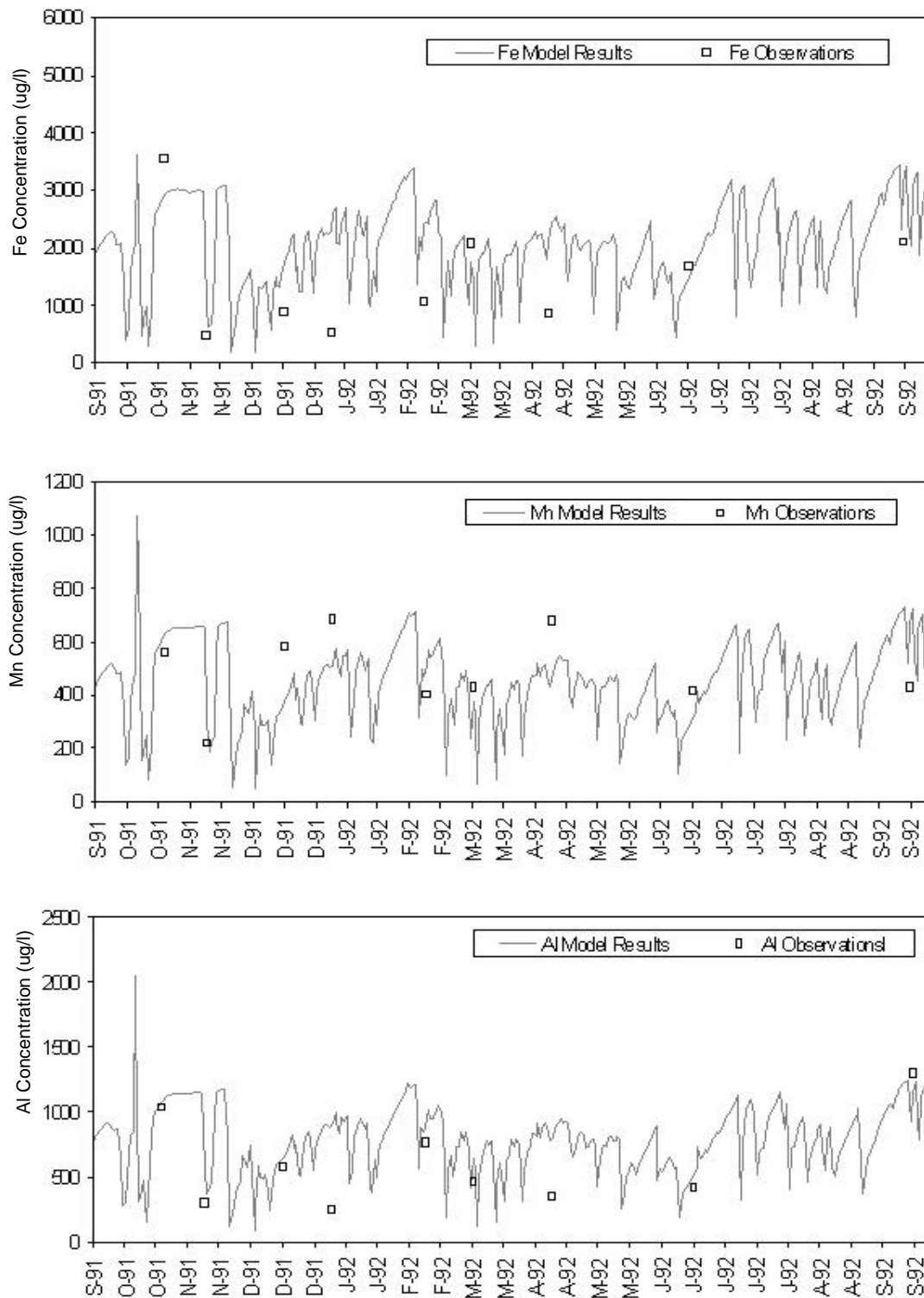


Figure D-7. Water Quality Calibration for Total Fe, Mn, and Al at Subwatershed 1805 Stations

Metals and pH TMDLs for the West Fork Watershed

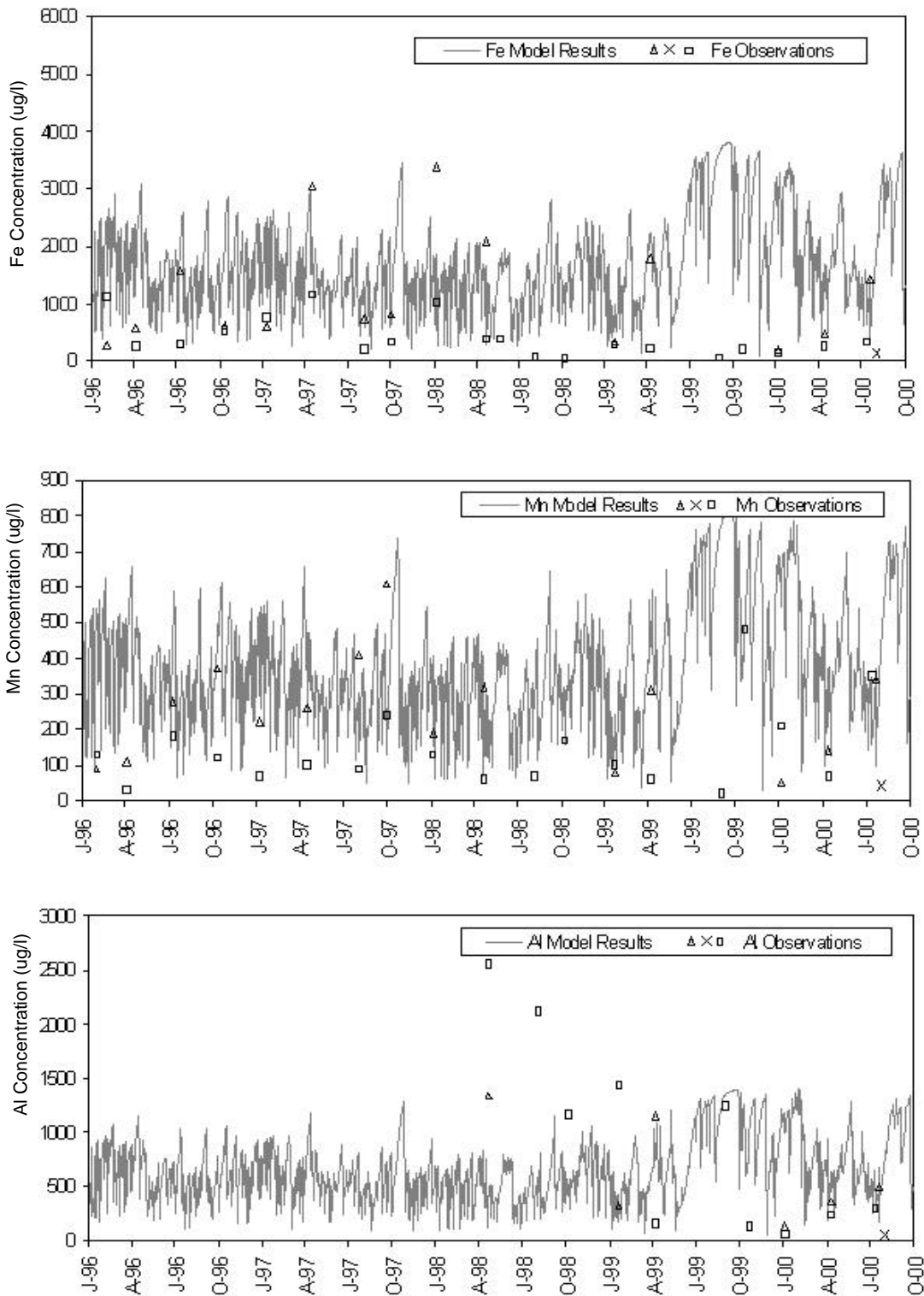


Figure D-8. Water Quality Calibration for Total Fe, Mn, and Al at Subwatershed 713 Stations

Metals and pH TMDLs for the West Fork Watershed

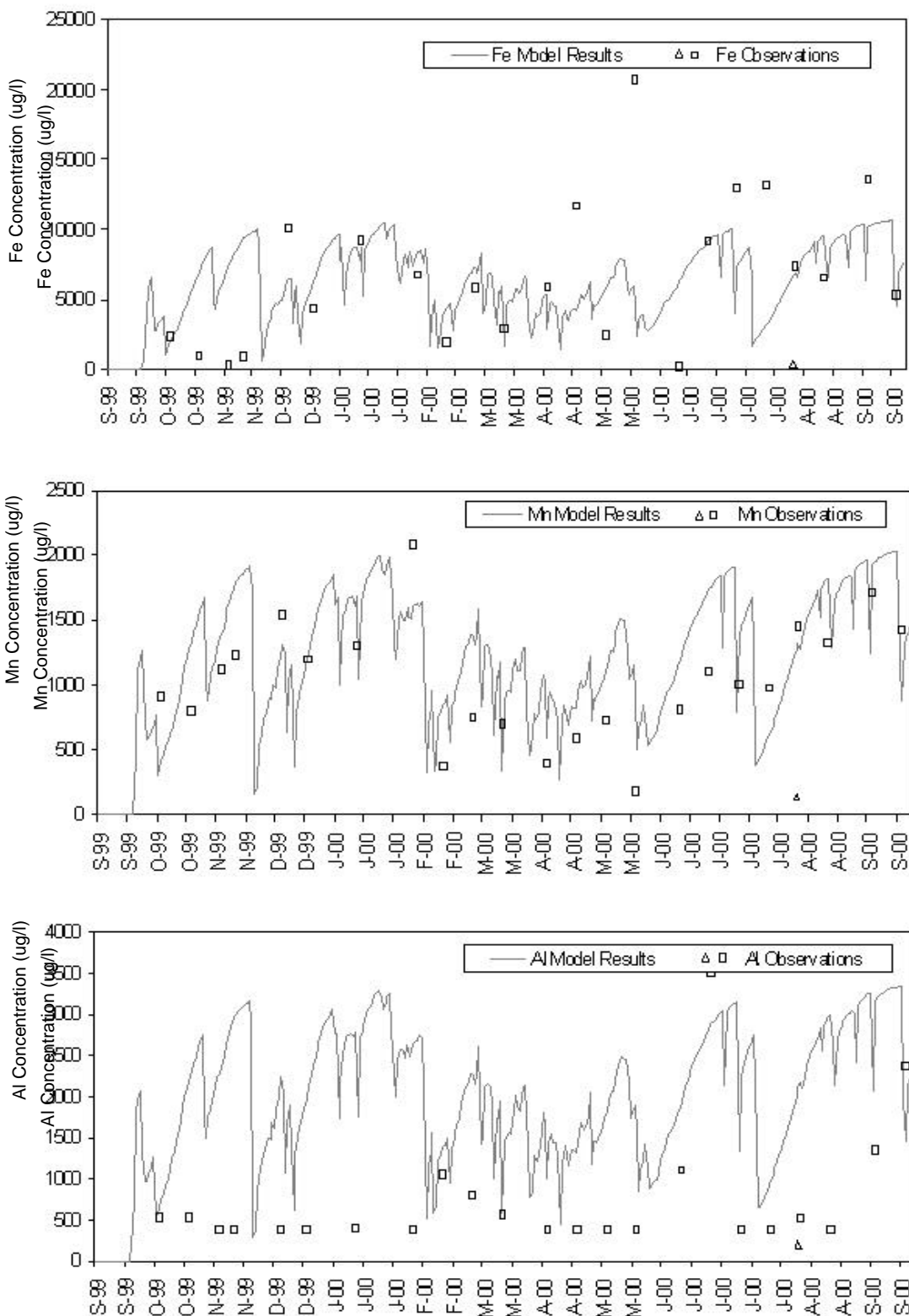


Figure D-9. Water Quality Calibration for Total Fe, Mn, and Al at Subwatershed 2449 Stations

Metals and pH TMDLs for the West Fork Watershed

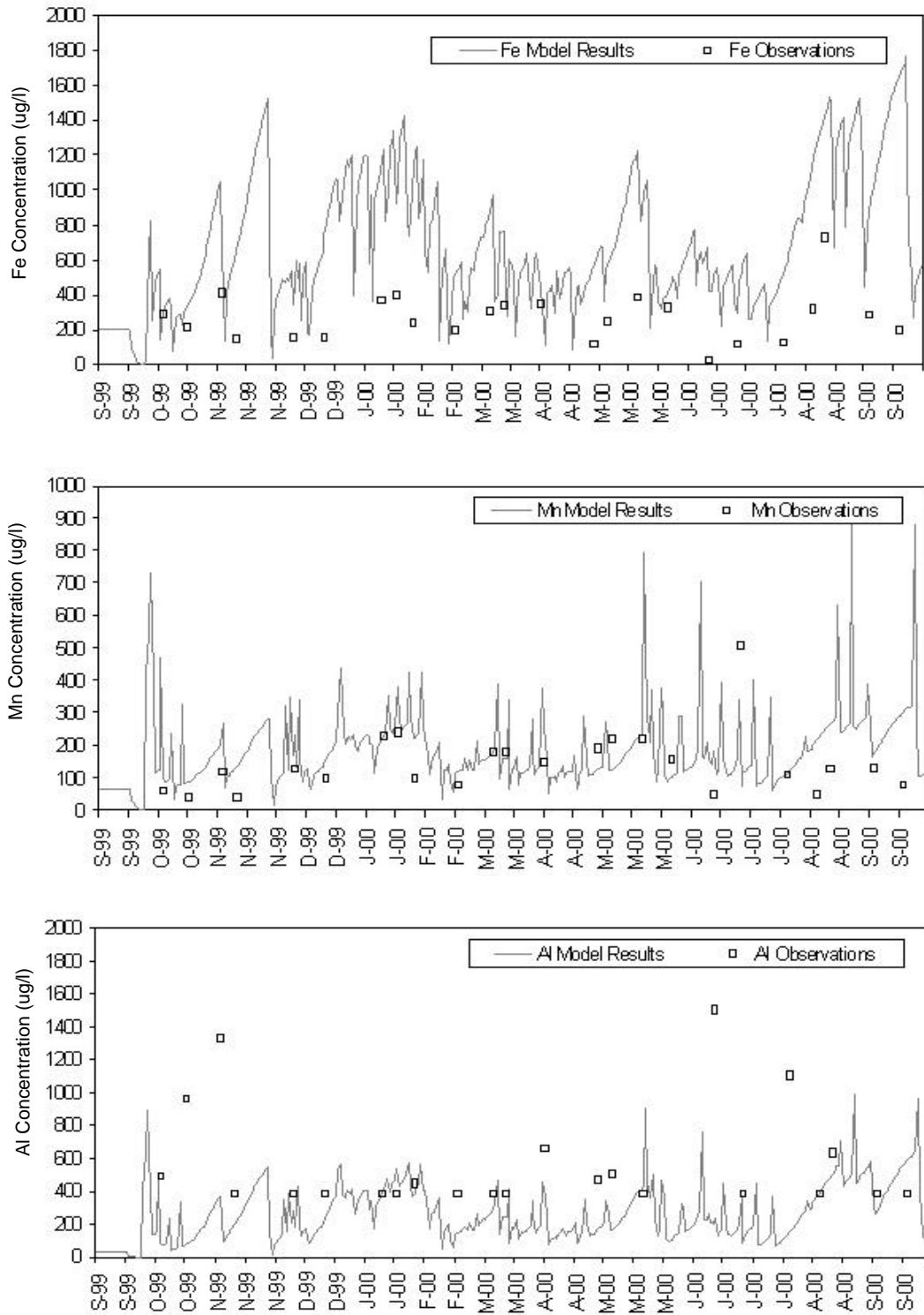


Figure D-10. Water Quality Calibration for Total Fe, Mn, and Al at Subwatershed 2802 Stations

Metals and pH TMDLs for the West Fork Watershed

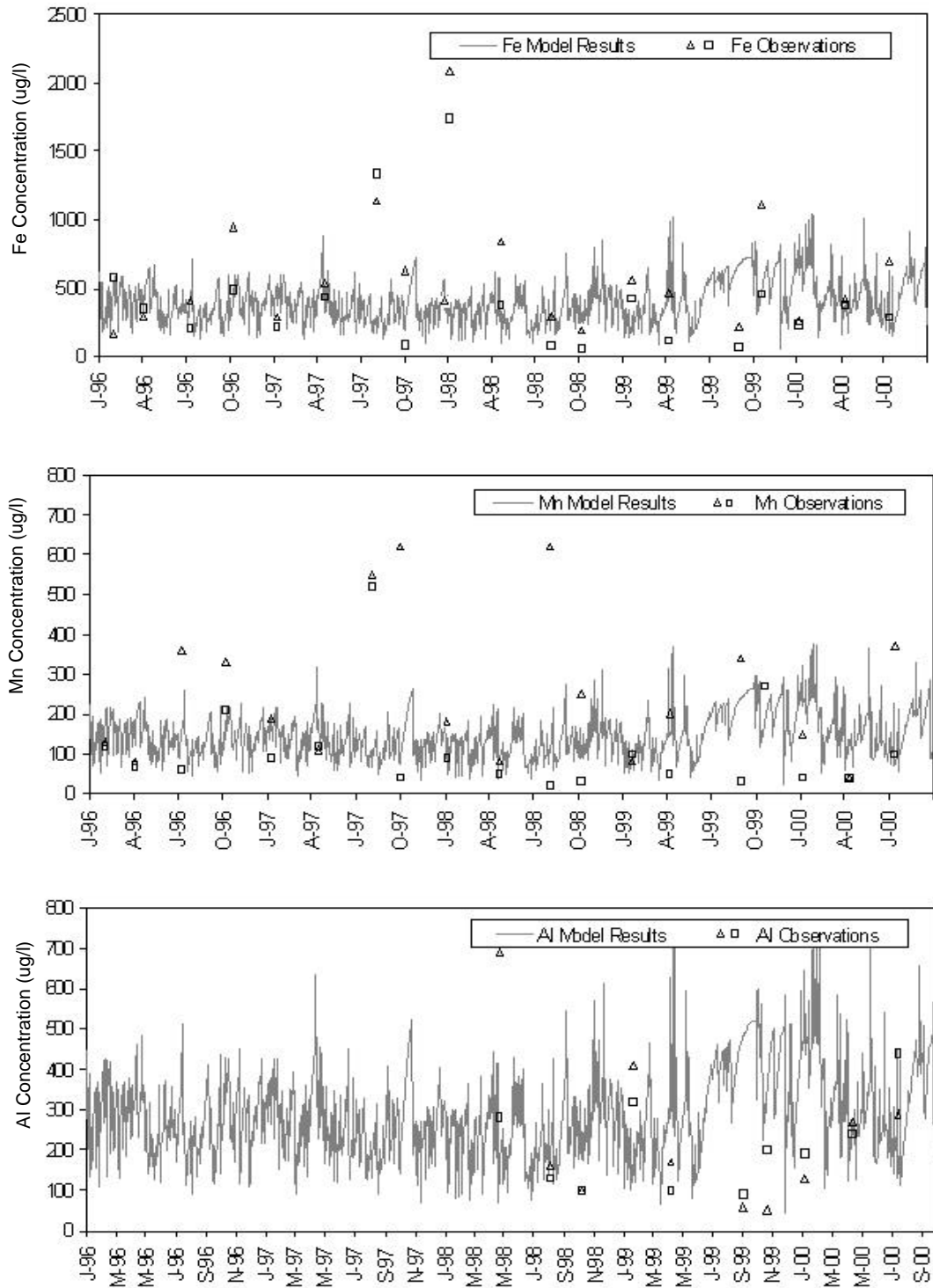


Figure D-12. Water Quality Calibration for Total Fe, Mn, and Al at Subwatershed 724 Stations

Appendix E

Mining Permits in the West Fork Watershed

Metals and pH TMDLs for the West Fork Watershed

Table E-1. Mining Permits in West Virginia

NPDES Permit ID	Responsible Party	Article 3 Permit ID	Status	Disturbed Acres
WV0020311	BARBOUR COAL CO	S018873	Completely Released	0.0
WV0024619	ENERGY MARKETING COMPANY, INC.	U007483	Renewed	22.0
WV0024627	ENERGY MARKETING COMPANY, INC.	U004183	Completely Released	0.0
WV0024627	ENERGY MARKETING COMPANY, INC.	U011783	Completely Released	41.5
WV0027031	BASS ENERGY, INC.	O000484	Renewed	82.3
WV0027031	BASS ENERGY, INC.	O004084	Renewed	23.0
WV0029459	CONTINENTAL COAL CORP INC	U043300	Revoked	0.0
WV0042102	C. & W. COAL COMPANY	S025576	Completely Released	116.4
WV0043273	ANKER WEST VIRGINIA MINING COMPAN	O011383	Renewed	196.0
WV0043273	ANKER WEST VIRGINIA MINING COMPAN	U001583	Renewed	108.0
WV0049255	BARBOUR COAL CO	S011779	Completely Released	0.0
WV0051250	C. & W. COAL COMPANY	U056800	Completely Released	0.0
WV0053961	ELK RIVER SEWELL COAL CO	O012783	Revoked	0.0
WV0053961	ELK RIVER SEWELL COAL CO	S001181	Completely Released	256.8
WV0053961	ELK RIVER SEWELL COAL CO	S004380	Completely Released	28.8
WV0053961	ELK RIVER SEWELL COAL CO	S201188	Completely Released	0.0
WV0053961	ELK RIVER SEWELL COAL CO	S204686	Completely Released	63.9
WV0053961	ELK RIVER SEWELL COAL CO	U052200	Revoked	0.0
WV0053961	ELK RIVER SEWELL COAL CO	U069000	Revoked	0.0
WV0056065	GRAFTON COAL COMPANY	S005081	Revoked	0.0
WV0056111	C. & W. COAL COMPANY	O008483	Renewed	20.5
WV0056430	C & W COAL COMPANY, INC.	U201587	Inactive	19.7
WV0057363	BRIDGEPORT MINING CO	S005182	Completely Released	77.3
WV0057410	NU-WAY MINING CO	P069700	Completely Released	0.0
WV0057436	GRAFTON COAL COMPANY	P060200	Completely Released	0.0
WV0059111	WESTON COAL PROCESSING CO	O004482	Revoked	17.0
WV0060461	UNITED COALS, INC.	O102586	Completely Released	0.8
WV0060674	C. & W. COAL COMPANY	O003885	Active	28.0
WV0061662	CONSOLIDATION COAL COMPANY	U010483	Renewed	177.5
WV0062952	JIM DANDY COALS INC	D012682	Completely Released	0.0
WV0062952	JIM DANDY COALS INC	D012882	Completely Released	0.0
WV0063568	UNITED COALS, INC.	O002484	Completely Released	14.0
WV0064211	E & S COAL CO INC	U015682	Completely Released	0.0
WV0066036	ENERGY MARKETING COMPANY, INC.	U007283	Renewed	18.6
WV0066796	BELL MINING COMPANY	S002583	Completely Released	0.0
WV0067008	C. & W. COAL COMPANY	S012882	Phase 1 Released	131.8
WV0067091	UNITED COALS, INC.	H015900	Completely Released	0.0
WV0067091	UNITED COALS, INC.	S008782	Completely Released	115.0
WV0067571	PATRIOT MINING COMPANY, INC.	S004284	Phase 1 Released	68.0
WV0067733	SALERNO, INC.	Q100597	Renewed	13.9
WV0067741	GRAFTON COAL COMPANY	S002282	Completely Released	0.0
WV0067865	BELL MINING COMPANY	S009583	Completely Released	25.6
WV0068314	PATRIOT MINING COMPANY, INC.	U101789	Completely Released	32.0
WV0068373	UNITED COALS, INC.	S003485	Completely Released	20.0
WV0068420	BELL MINING COMPANY	S000585	Completely Released	0.0
WV0068519	USE COAL, INC	S201686	Revoked	8.9
WV0068543	SALERNO BROTHERS, INC	S008384	Completely Released	3.3
WV0068586	GRAFTON MINING CO	S007884	Completely Released	0.0

Metals and pH TMDLs for the West Fork Watershed

NPDES Permit ID	Responsible Party	Article 3 Permit ID	Status	Disturbed Acres
WV0091006	CONSOLIDATION COAL COMPANY	U010083	Inactive	458.0
WV0092282	ANTCO, INC.	S102989	Phase 2 Released	8.6
WV0093483	C. & W. COAL COMPANY	U006485	Completely Released	50.3
WV0093505	CONSOLIDATION COAL COMPANY	U010483	Renewed	887.5
WV0094765	JCB MINING INC.	U200688	Renewed	10.0
WV0094803	BRECKENRIDGE CORP	S200888	Completely Released	19.8
WV0094897	STONE COAL CO., INC	U202488	Revoked	0.0
WV0094927	SUPERIOR MINING CO	S203088	Revoked	67.0
WV0095036	C. & W. COAL COMPANY	S205886	Completely Released	33.9
WV0095079	C. J. COAL CORPORATION	S103991	Phase 2 Released	62.6
WV0095087	UPCO COAL, INC.	S200989	Revoked	67.4
WV0095192	FRESA CONSTRUCTION CO INC	U102689	Completely Released	10.0
WV0095214	MYSTIC MINING CO, INC	U103689	Revoked	0.0
WV0095257	M & J COAL COMPANY	U063900	Completely Released	9.0
WV0095290	SCJL CO-LEASING, INC	S103989	Completely Released	26.9
WV0095303	AMBREC CORPORATION	U104289	Completely Released	6.0
WV0095346	BELL MINING COMPANY	U104489	Completely Released	3.1
WV0095419	SALERNO BROTHERS, INC	S100391	Completely Released	40.0
WV0095443	SHELL ENERGY CO	U100790	Revoked	9.3
WV0095508	C. & M. COAL CONTRACTING, INC	S002085	Completely Released	13.5
WV0095516	BRIDGEPORT MINING CO	S101290	Completely Released	40.0
WV0095524	UNITED PACIFIC INSURANCE CO.	S100292	Revoked	14.8
WV0095532	MARK A SOUTHERN GEN CONTRACTOR	S100692	Revoked	19.0
WV0095541	NESCO, INC.	S100592	Completely Released	0.0
WV0098086	FRUSH ENTERPRISES, INC	S105286	Revoked	0.0
WV0098141	E & S COAL CO INC	O102986	Completely Released	0.0
WV0098141	E & S COAL CO INC	S003185	Completely Released	0.0
WV0098256	AMERICOAL, INC	S009285	Revoked	0.0
WV0098272	BYRON CONST CO INC	S005685	Revoked	0.0
WV0098388	92 COAL CORP.	S201889	Phase 1 Released	87.6
WV0098604	B & B COAL CO, INC	S010985	Completely Released	0.0
WV0098680	MIAMI COAL CO	U100686	Completely Released	0.0
WV0098701	COALTRAIN CORPORATION	S100386	Completely Released	0.0
WV0098710	ROBLEE COAL COMPANY	O100993	Renewed	41.8
WV0098710	ROBLEE COAL COMPANY	S100990	Completely Released	34.8
WV0098752	ROBLEE COAL COMPANY	U200586	Completely Released	15.3
WV0098761	C. & M. COAL CONTRACTING, INC	S100586	Renewed	69.0
WV0098833	UNITED COALS, INC.	S103386	Completely Released	0.0
WV0098906	MARION FUELS, INC	U104386	Completely Released	0.0
WV0098973	JAMES ROBINSON EXCAVATING CO, INC	S100186	Completely Released	0.0
WV0099147	UNITED INTERNATIONAL, INC	O101096	New	11.8
WV0119059	C. & W. COAL COMPANY	Q200992	Revoked	133.6
WV1002406	TEN-A-COAL COMPANY	U037100	Renewed	7.9
WV1002473	MYERS COAL CO	S104587	Revoked	391.4
WV1002481	J & B COAL COMPANY	S104486	Completely Released	0.0
WV1002490	M & J COAL COMPANY	U103786	Completely Released	14.0
WV1002511	W. C. TONKERY COAL CO	S104886	Revoked	0.0
WV1002538	JO LEE COAL CO	U038000	Revoked	10.0
WV1002562	DODGE FUEL CORPORATION	U105686	Completely Released	0.0
WV1002635	J. & J. GUZZI ENTERPRISES, INC.	S106286	Completely Released	10.0
WV1002732	FRESA CONSTRUCTION CO INC	O104187	Completely Released	0.0
WV1002767	UNITED COALS, INC.	S102490	Completely Released	80.4
WV1002767	UNITED COALS, INC.	S107486	Completely Released	303.3

Metals and pH TMDLs for the West Fork Watershed

NPDES Permit ID	Responsible Party	Article 3 Permit ID	Status	Disturbed Acres
WV1002813	B.R.J. INC	I074000	Revoked	0.0
WV1002821	BYRON CONST CO INC	S108186	Completely Released	6.6
WV1002911	UNITED COALS, INC.	S100287	Completely Released	79.5
WV1002937	TEN-A-COAL COMPANY	S004082	Completely Released	33.0
WV1003178	MCCOY BROS, INC	S024874	Completely Released	0.0
WV1003283	KING KNOB COAL CO INC	S205186	Completely Released	0.0
WV1003313	BARBOUR COAL CO	S008382	Completely Released	0.0
WV1003330	C. & W. COAL COMPANY	S205886	Completely Released	25.4
WV1003381	APPALANTIC CORP	U062600	Revoked	5.7
WV1003461	TEN-A-COAL COMPANY	S201287	Renewed	64.7
WV1003496	ANKER ENERGY CORPORATION	O201487	Completely Released	21.0
WV1003551	CHIEFTAIN MINING CO INC	U202387	Revoked	0.0
WV1006835	MIAMI COAL CO	U102387	Completely Released	10.0
WV1006860	TEN-A-COAL COMPANY	S012379	Completely Released	0.0
WV1006916	FRESA CONSTRUCTION CO INC	S102787	Completely Released	10.0
WV1006967	BELL MINING COMPANY	S103087	Completely Released	0.0
WV1007017	TEN-A COAL CO., INC.	S103287	Active	26.5
WV1007084	BELL MINING COMPANY	S103787	Completely Released	26.7
WV1007122	LAROSA FUEL COMPANY, INC.	S104087	Phase 1 Released	67.9
WV1007165	AMERIKOHL MINING, INC.	S104887	Completely Released	0.0
WV1007203	CHIEFTAIN DEVELOPMENT CO	O004783	Revoked	0.0
WV1007262	BELL MINING COMPANY	S100388	Completely Released	8.2
WV1007271	COMMUNITY COAL CO	S100588	Completely Released	54.7
WV1007327	COMMUNITY COAL CO	S101589	Completely Released	10.0
WV1007491	TEN-A-COAL COMPANY	S102588	Completely Released	0.0
WV1007530	BELL MINING COMPANY	U103288	Completely Released	6.7
WV1007548	LAROSA FUEL COMPANY, INC.	S103388	Completely Released	17.9
WV1007556	MARION DOCKS, INC.	I074800	Renewed	5.0
WV1007581	FRESA CONSTRUCTION CO INC	S103688	Completely Released	14.0
WV1007581	FRESA CONSTRUCTION CO INC	S104389	Completely Released	49.7
WV1007611	LAROSA FUEL COMPANY, INC.	S100189	Completely Released	59.8
WV1007629	MARK A SOUTHERN GEN CONTRACTOR	S103988	Completely Released	9.8
WV1007670	FRUSH ENTERPRISES, INC	S100889	Revoked	454.4
WV1007718	THOMPSON COAL & CONST INC	S010378	Completely Released	0.0
WV1007785	UNITED COALS, INC.	S101989	Completely Released	0.0
WV1007807	PATRIOT MINING COMPANY, INC.	S103189	Completely Released	80.6
WV1007823	TEN-A-COAL COMPANY	S000783	Renewed	74.9
WV1007831	TEN-A-COAL COMPANY	Z006681	Renewed	24.0
WV1010026	ENERGY MARKETING COMPANY, INC.	U000885	Renewed	55.0
WV1010051	C. & W. COAL COMPANY	S202389	Renewed	44.2
WV1010069	ENERGY MARKETING COMPANY, INC.	U040100	Renewed	26.9
WV1010077	ENERGY MARKETING COMPANY, INC.	U052000	Active	12.8
WV1010115	TYGART VALLEY MINING, INC.	U200295	Renewed	9.5
WV1010166	MULETRAIN COAL, INC	S101690	Completely Released	95.7
WV1010191	C. & W. COAL COMPANY	S102390	Completely Released	30.8
WV1010247	LAROSA FUEL COMPANY, INC.	S102989	Phase 2 Released	34.4
WV1010263	UNITED COALS, INC.	S014475	Completely Released	20.0
WV1010328	TYGART VALLEY MINING, INC.	S103590	Completely Released	14.8
WV1010344	APPALANTIC CORP	U012200	Revoked	0.0
WV1010379	ENERGY MARKETING COMPANY, INC.	U001683	Active	8.0

Metals and pH TMDLs for the West Fork Watershed

NPDES Permit ID	Responsible Party	Article 3 Permit ID	Status	Disturbed Acres
WV1010425	HARRISON FUEL INCORPORATED	U100991	Revoked	7.4
WV1010433	UPCO COAL, INC.	S101491	Completely Released	10.0
WV1010441	FLEX DEVELOPMENT CORP	S101391	Phase 1 Released	83.0
WV1010522	C. & W. COAL COMPANY	S102891	Completely Released	64.5
WV1011227	COMMUNITY COAL CO	S102291	Completely Released	0.0
WV1011251	JANE LEW TRUCKING COMPANY	S104991	Phase 2 Released	53.5
WV1011278	UPCO COAL, INC.	S105991	Revoked	77.0
WV1011294	BELL MINING COMPANY	S106091	Completely Released	61.6
WV1011359	M & J COAL COMPANY	U102092	Phase 1 Released	6.4
WV1011367	ANGEL COAL COMPANY, INC.	U101292	Revoked	34.8
WV1011375	PATRIOT MINING COMPANY, INC.	R107686	Renewed	51.0
WV1011413	DODGE FUEL CORPORATION	U100593	Revoked	10.7
WV1011472	CLUB COAL INC	S100294	Renewed	51.0
WV1011537	TARA CORP	O100794	Revoked	0.0
WV1011570	UNITED COALS, INC.	S100393	Renewed	13.6
WV1011596	UNITED COALS, INC.	S100695	Renewed	89.7
WV1011600	TEN-A-COAL COMPANY	S100795	Renewed	58.0
WV1011634	DANA MINING COMPANY, INC.	U100995	Renewed	6.9
WV1011685	UNITED COALS, INC.	S100396	Completely Released	5.9
WV1011707	MARION LIMESTONE INC	S100596	Completely Released (ad	0.0
WV1011723	THE SYCAMORE GROUP, LLC	U100796	Renewed	29.5
WV1013611	THREE-C MINING, INC	U105691	Phase 1 Released	7.6
WV1013637	ENERGY MARKETING COMPANY, INC.	U200192	Phase 1 Released	5.3
WV1013670	STANLEY INDUSTRIES, INC.	U201093	Renewed	18.0
WV1013688	ROBLEE COAL COMPANY	D004982	Renewed	13.2
WV1013696	J & B COAL COMPANY	U201992	Renewed	10.0
WV1013734	ENERGY MARKETING COMPANY, INC.	U002284	Phase 1 Released	14.8
WV1013823	THREE-C MINING, INC	S200993	Phase 1 Released	39.2
WV1013858	THREE-C MINING, INC	S105591	Phase 2 Released	41.6
WV1013858	THREE-C MINING, INC	S200993	Phase 1 Released	26.1
WV1013858	THREE-C MINING, INC	S201593	Phase 1 Released	128.8
WV1013858	THREE-C MINING, INC	U105691	Phase 1 Released	5.7
WV1013858	THREE-C MINING, INC	U200192	Phase 1 Released	5.3
WV1013858	THREE-C MINING, INC	U200597	New	4.3
WV1014013	MARION DOCKS, INC.	S200892	Renewed	57.8
WV1014013	MARION DOCKS, INC.	U201197	New	14.8
WV1014170	STANLEY INDUSTRIES, INC.	S201396	Phase 2 Released	63.4
WV1014200	BARBOUR ENTERPRISES, INC.	S200397	New	17.0
WV1017268	M & J COAL COMPANY, INC.	U100697	New	7.5
WV1017284	GRACE ENTERPRISES, INC.	S100897	New	32.0
WV1017292	MARION DOCKS, INC.	S100997	New	14.9
WV1017306	MARION DOCKS, INC.	S101197	Completely Released	29.4
WV1017365	MARION DOCKS, INC.	S100498	Phase 1 Released	17.9
WV1017411	C. & M. COAL CONTRACTING, INC	S100199	New	37.6
WV1018051	BURN COAL, INC.	U200597	New	4.3
WVG011018	AMERIKOHL MINING, INC.	S104887	Completely Released	0.0
WVG012000	LAROSA FUEL COMPANY, INC.	S003984	Phase 2 Released	117.6
WVG021502	GEM STONE MINING, INC.	Q103789	Revoked	46.0
WVG021503	L & H COAL CO	Q103391	Renewed	77.0
WVG021504	J. & J. GUZZI ENTERPRISES, INC.	Q100591	Renewed	76.0
WVG021505	SALERNO BROTHERS, INC	Q100195	Revoked (added)	0.0
WVG021506	BYRON CONST CO INC	Q100992	Revoked	38.0
WVG021509	ANTCO, INC.	Q108286	Revoked	42.0