

Appendix B. Background Water Chemistry--Big Run Subwatershed

Big Run (old #1)--in Stream Sample 40 33' 1.2 N, 79 24' 53.5 W

Date	pH	SO4	Conduct.	Alkalinity	T. Fe	Fe +2	T.Acidity	Lab Acidity	Al	Mn	Water Flow
		mg/L	uS	mg/L	mg/L	mg/L			mg/L	mg/L	gpm
5/25/1999	6.7	1230		40	1.01			0	0.84	0.69	
6/28/1999	5.9		1790	48	0.4		0				
7/28/1999	6.6	>200	1972	21	0.8		55				
7/29/1999	7			94	1.1			0	1.45	1.91	
9/21/1999	7.7		1207	34.2	0.8		41				
10/28/1999	5.7		1562								
11/11/1999	6.4		1217	61.6	0.7		48				
3/22/2000	6.6	148		28	0.92			0	1.23	0.38	
4/19/2000	6.3		740	102.6	0.6		86				
7/6/2000	7.1	839		70	0.57			0	0.87	2.96	
10/13/2000	7		1054	51.3	0.9		34				
11/8/2001	7.1	>200	1402	102.6	0.85		41		1	0.4	
4/21/2002	6.2	410	995	74	0.52	0.05		0	0.44	1.2	normal

Big Run #4 (old #2) 40 32' 59.7" N, 79 24' 53.5"W

Date	pH	S04	Conduct.	Alkalinity	T. Fe	Fe+2	T. Acidity	Lab Acidity	Al	Mn	Water Flow
		mg/L	uS	mg/L	mg/L		mg/L	mg/L	mg/L	mg/L	gpm
5/25/1999	5.2	523		14	0.44			0	3.32	1.72	
6/18/1999	5.4		752	34.2	0		103				
6/28/1999	5.3		766	7	0.4		89				
7/15/1999	5.2		1020	12			57				897
7/28/1999	4.5	>200	757	14	0.06		89				1889
7/29/1999	5.2			11.2	0.33			3	2.89	1.5	
9/21/1999	5.5		973	21	0.4		89				830
10/28/1999	5.3		1010								1360
11/11/1999	5.4		1059	13.7	0.4		109				
3/22/2000	5.2	449		10.2	1.01			1	3.67	1.14	
4/11/2000	5.4										4741
4/19/2000	5.2			17.1	1.2		103				
7/6/2000	5.4	552		12.2	0.42			0	3.33	1.54	
8/8/2000											3410
10/13/2000	6.1		976	34.2	1.1		109				normal
7/12/2001	5.6	603	840	14.4	0.36	0.09		22	2.67	1.45	normal

Big Run #4 (Old #2) Continued

Date	pH	S04	Conduct.	Alkalinity	T. Fe	Fe+2	T. Acidity	Lab Acidity	Al	Mn	Water Flow
		mg/L	uS	mg/L	mg/L		mg/L	mg/L	mg/L	mg/L	gpm
10/30/2001	5.5	540	1020	34.2	1.2		90		2.64	1.7	normal
2/9/2002	4.8	460	996	2.6	0.5	0.1		49	2.83	0.9	normal
4/21/2002	5.5	490	1102	10	0.45	0.11		0	2.9	1.1	normal
7/14/2002	5.1	521	1020	9.2	1.49	0.36		39	3.69	1.79	normal
10/27/2002	4.8	500	1088	4	0.27	0.13		68	3	1.29	normal
11/24/2003											4688
1/13/2004	4.1	548	1270	2	6		115		17	2	v.high
2/18/2004	4.7	487	1230	8	1.16		32		7.76	2.4	high

Big Run #5 (Old #3)
40 32' 58.7N, 79 24' 54.5"W

Date	pH	SO4	Conduct.	Alkalinity	T. Fe	F3+2	T.Acidity	Lab Acidity	Al	Mn	Water Flow
		mg/L	uS	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	gpm
6/18/1999	3.1		1400	0	2.4		239				
6/28/1999	3.6		1388	0	3		226				
7/15/1999	3.1		1870	0			280				66.4
7/28/1999	3.3	>200	1550	0	3.4		257				379
7/29/1999	3.1			0	3.57			282	34.3	5.23	
9/21/1999	3.3		1999+	0	4.2		239				128
10/28/1999	3.2		1999+								
11/11/1999	3.2		1999+	0	5.4		342				
3/22/2000	3.1	823		0	2.52			173	20.4	4.47	
4/11/2000	3.2										334
4/19/2000	3.3		1501	0	2.5		205				691
7/6/2000	3.1			0	3.02			232	32	4.2	
8/8/2000											350
10/13/2000	3.2		1900	0	3.6		291				
7/12/2001	3.1	866	1426	0	3.2	0.15		262	29.3	4.27	normal
11/7/2001	3	880	1940	0	3.9		352		28.7	4.3	usual
2/9/2002	3.1	1109	1950	0	3.54	0.33	101	298	34.3	6.04	usual
4/21/2002	3.1	910	1920	0	3.62	0.2	100	262	29.2	5.51	usual
7/14/2002	3.2	813	1720	0	3.4	0.21		254	31	3.8	usual
5/27/2003	3	936	1770	0	2.99		264		30	3.52	usual
8/28/2003	3.3	850	1620	0	2.79		178		24.1	3.75	usual
10/7/2003	3.4	871	1680	0	2.71		188		26.4	3.89	usual

Big Run (Old #4)--in Stream
40 32' 54.8"N, 79 24' 54.2"W

Date	pH	SO4	Conduct.	Alkalinity	T. Fe	Fe+3	T.Acidity	Lab Acidity	Al	Mn	Water Flow
		mg/L	uS	mg/L	mg/L	Fe+2			mg/L	mg/L	gpm
7/28/1999	4.1	>200	1064	0	1.2		103				
7/29/1999	6.4			54	1.34			0	3.69	2.27	
9/21/1999	5.7		1612	0	0.8		75				
10/28/1999	5.6		1360				82				
11/11/1999	5.3		1310	0	0.8		342				
3/22/2000	6.3	164		24	1.04			0	1.8	0.54	
4/11/2000	5.6										17765
4/19/2000	5.3		899	0	0.7		68				
7/6/2000	4.7	564		2.8	0.99			36	8.1	2.34	
8/8/2000											12247
10/13/2000	5.7		1049	0	0.6		120				normal
11/7/2001		>200	1330	0	1.2		240		7	2.2	low
4/12/2002	5.6	>200	1003	5	1.35	0.12	60		2.32	3.1	normal
4/21/2002	5.8	503	996	22	1	0.12			4.16	1.71	normal
5/11/2002	6	>200	654	30	0.2	0.06	20		0.29	1.4	16965
6/8/2002	6.7	330	660	20	0.58	0.11	80		1	2.3	high
7/14/2002	4.5	>200	1280	5	1.13	0.34	100		7.49	3	low
7/14/2002	4.6	739	1280	2.8	1.09	0.3		69	7.43	2.47	low
10/14/2002	5.9	>200	1420	10	0.58	0.16	40		0.28	3	low
10/27/2002	6.1	640	1231	40	0.72	0.27		3	3.35	2	low
3/25/2003	5.9	>200	949	5	0.63	0.12	40		0.72	2.3	high

Big Run (Old #5)--in Stream
40 32' 50.3"N, 79 25' 8.9"W

Date	pH	SO4	Conduct.	Alkalinity	T. Fe	Fe+2	T. Acidity	Lab Acidity	Al	Mn	Water Flow
		mg/L	uS	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	gpm
6/28/1999	4.4		897	0	2		188				
7/28/1999	3.5	>200	946	0	2		188				trickle
7/29/1999	4.4			0	1.28			110	17	3	
9/21/1999	4.6		972	0	1.2		171				v. low
10/28/1999	4.9		789								v. low
11/11/1999	5		796	0	0.8		82				v. low
3/22/2000	6.5	34		19	0.32			0	0.53	0.04	
4/11/2000	6.2										389
4/19/2000	6.5		218	17.1	0		34				high

Big Run (Old # 5)--in Stream Continued

Date	pH	SO4	Conduct.	Alkalinity	T. Fe	Fe+2	T. Acidity	Lab Acidity	Al	Mn	Water Flow
7/6/2000	3.9	384		0	1.46			146	25.4	2.72	gpm
8/8/2000											816
10/13/2000	5.3		436	34.2	0.4		34				normal
7/12/2001	4	419	694	0	1.27	0.54		149	18.3	2.53	low
2/9/2002	5.5	167	708	5	1.48	1.48		27	3.19	1.44	low
4/21/2002	5.5	>200	310	0	0.9		60		6.5	1.3	high

Big Run #6

40 32' 51.1"N, 79 25' 7.8"W

Date	pH	SO4	Conduct.	Alkalinity	T. Fe	Fe	T. Acidity	Lab Acidity	Al	Mn	Water Flow
		mg/L	uS	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	gpm
6/28/1999	5.5		545	41	0.8		17				
7/28/1999	5.1	>200	510	55	1.4		41				v. slow
7/29/1999	6.7			36	4.29			0	6.22	0.27	
9/21/1999	6.4		638	21	0.6		41				v. low
10/28/1999	5.7		601								v. slow
11/11/1999	5.5		613	2	0.8		48				trickle
3/22/2000	6.6	39		28	0.53			0	0.54	0.03	high
4/11/2000	5.8										545
4/19/2000	6.1		245	51.3	0		34				
7/6/2000	6.9	65		56	0.09			0	0.41	0.1	
8/8/2000											1082
10/13/2000	6.7		340	17.1	1.2		68				normal
7/12/2001	6.8	126	404	50	1.75	0.05		0	<.2	0.21	low
2/9/2002	6.9	63	510	34	0.06	<.02		0	<.2	0.04	low
4/21/2002	6.1	54	317	48	0.34	0.32		0	0.34	0.08	high

Big Run #7

40 32' 50.7"N, 79 25' 3.5"W

Date	pH	SO4	Conduct.	Alkalinity	T. Fe	Fe+2	T. Acidity	Lab Acidity	Al	Mn	Water Flow
		mg/L	uS	mg/L					mg/L	mg/L	gpm
6/28/1999	3.6			0	1.2		137				
7/28/1999	3.6	>200	876	0	1.8		120				473
7/29/1999	3.4			0	1.79			132	14.6	2.4	
9/21/1999	2.7		1148	0	2.8		188				50
10/28/1999	3.5		1080								7

Big Run #7 Continued

Date	pH	SO4	Conduct.	Alkalinity	T. Fe	Fe+2	T.Acidity	Lab Acidity	Al	Mn	Water Flow
11/11/1999	3.3		1317	0	1.8		222				2
3/22/2000	3.3	396		0	1.01			108	12.6	2.26	
4/11/2000	3.3										1240
4/19/2000	3.5		1045	0	0.8		171				1392
7/6/2000	3.4	441		0	1.63			124	16.5	2.34	
8/8/2000											1026
10/13/2000	3.4		1118	0	4		188				v. high
7/12/2001	3.4	426	918	0	2.39	0.17		132	14.5	2.53	low
10/30/2001	3.3	>200	1260	0	3		220		13	2.1	v low
2/9/2002	4.2	531	1190	0	2.12	1.93		99	8.22	3.68	low
4/21/2002	3.6	439	1019	0	0.59	0.53	31	147	16.3	2.48	1826
7/14/2002	3.4	484	890	0	1.01	0.6		165	16.2	2.43	
7/15/2002	-	-	-	-	-	-	-	-	-	-	1103
10/27/2002	3.2	539	1374	0	2.81	0.24		225	25.9	3.45	low
1/31/2003	3.3	488	1150	0	1.45	0.13		179	17.8	2.81	703
4/27/2003	3.3		1047	0	1.15	0.24		109	12	1.96	1595
5/27/2003	3.3	533	1060	0	1.42		138		15.1	2.23	
6/25/2003	3.4	531	1020	0	1.77		120		15.1	2.04	
8/3/2003	3.3	481	1088	0	2.84	0.31		134	15.5	2.53	1603
8/28/2003	3.3	507	1170	0	3.83		135		17.6	2.86	
10/1/2003	3.3	521	1220	0	4.71		152		20.2	3.02	940
10/25/2003	3.5	539	1130	0	4.61	0.46	169		17.4	2.71	1283
1/7/2004											5827
1/13/2004	3.6	474	965	0	0.67		98		9.91	1.94	3907
1/25/2004	3.8	629	1190	0	0.54	0.11		162	19	3.15	3482
2/18/2004	3.6	545	1430	0	2.28		178		25.3	3.38	2310

Big Run (Old #8) -- in Stream
40 32' 47.8"N, 79 24' 51.4"W

Date	pH	SO4	Conduct.	Alkalinity	T. Fe	Fe+2	T.Acidity	Lab Acidity	Al	Mn	Water Flow
		mg/L	uS	mg/L	mg/L	mg/L			mg/L	mg/L	gpm
7/28/1999	4	>200	1012	0	0.9		85				mod
7/29/1999	6			17.8	3.76			1	5.89	3.54	
9/21/1999	5.2		1350	7	0.6		55				mod
10/28/1999	5.4		1340								med
11/11/1999	5.3		1258	20.6	0.8		62				
3/22/2000	6.3	224		22	1.09			0	1.92	0.53	
4/11/2000	5.4										20397
4/19/2000	5.4		875	34.2	0.6		51				

Big Run old #8 -- in Stream Continued

7/6/2000	4.7	614		2.2	0.8			42	7.85	2.16	
8/8/2000											13956
10/13/2000	5.6		985	17.1	1.2		120				normal
11/7/2001	5.4	>200	1278	21	0.9		90		6.7	3	low
4/12/2002	5.3	>200	920	5	1.19	0.14	60		2.93	2	normal
4/21/2002	5.6	483	979	9.6	0.92	0.81		21	5.22	1.79	normal
5/11/2002	5.9	>200	701	20	0.3	0.07	40		0.3	2.1	17887
6/8/2002	6.4	450	792	10	0.44	0.04	60		2.1	2.3	high
7/14/2002	4.2	>200	1220	<5	0.76	0.11	80		10.02	2.8	low
7/14/2002	4.5	669	1220	0	0.8	0.16		105	8.85	2.45	low
7/15/2002	-	-	-	-	-	-	-	-	-	-	3686
10/14/2002	5.6	>200	1342	15	0.66	0.12	40		0.4	3.3	normal
10/27/2002	5.1	642	1425	38	0.65	0.25		0	3.01	2.02	slow
3/25/2003	5.7	>200	929	10	0.34	0.07	40		0.88	1.9	high

Big Run # 8 (Old # 9)
40 32' 44.2"N, 79 24' 51.9"W

Date	pH	SO4 mg/L	Conduct. uS	Alkalinity mg/L	T. Fe T. Fe	Fe+2 mg/L	T.Acidity	Lab Acidit	Al mg/L	Mn mg/L	Water Flow gpm
5/25/1999	3.2	693		0	2.61			212	24.5	0.42	
6/28/1999	3.6		1017	0	7.4		274				
7/15/1999	3.1		1280	0			280				129.7
7/28/1999	3.4	>200	1025	0	9		257				1051
7/29/1999	3.2			0	20.1			228	22.1	2.37	
9/21/1999	3.1		1130	0	7		308				1131
10/28/1999	3.5		1256								842
11/11/1999	3.4		1230	0	>10		308				
3/22/2000	3	533		0	26.8			270	28.6	2.67	
4/11/2000	3.1										1439
4/19/2000	3		1575	0	8		376				
7/6/2000	3.1	521		0	27.3			268	30.7	2.89	
8/8/2000											796
10/13/2000	3.1		1423	0	7		513				
7/12/2001	3.4	606	1202	0	24.5	16.7		278	26.3	3.01	
10/30/2001	3.1	720	1520	0	23.8		310		24.16	3.2	
2/9/2002	3.4	563	1602	0	32	19.9	110	245	23.4	3.11	usual
4/21/2002	3	718	1520	0	26	18	114	260	26	2.91	usual
7/14/2002	3	682	1560	0	30.3	18.6		357	32.8	3.42	usual
10/27/2002	3.2	508	1440	0	29.4	25		399	25.6	2.97	usual
4/27/2003	3.2	653	1530	0	24.7	12.8		303	30.3	3.4	usual

Big Run # 8 (Old # 9) Continued

5/27/2003	3	745	1590	0	21.7		310		29.2	3.17	usual
6/25/2003	3.1	716	1470	0	20.8		267		29	2.89	usual
8/3/2003	3.1	618	1378	0	24.5	8.77		258	25.6	3.25	usual
8/28/2003	3.1	618	1410	0	27		254		27.5	3.5	usual
10/1/2003	3.1	620	1460	0	27.5		249		29.3	3.49	usual
10/25/2003	3.2	647	1410	0	25.8	21.3		264	24.6	3.04	usual
1/13/2004	3.2	534	1430	0	16.4		226		24.7	3.07	usual

**Big Run # 10--in stream
40 32'34" N, 79 24' 39.8"W**

Date	pH	SO4	Conduct.	Alkalinity	T. Fe	Fe+2	T.Acidity	Lab Acidit	Al	Mn	Water Flow
		mg/L	uS	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	gpm
7/28/1999	3.7	>200	1038	0	3.7		116				
7/29/1999	4.5			0	11.4			48	7.95	3.86	
9/21/1999	3.2		1348	0	4.2		123				
10/28/1999	3.9		1260								2783
11/11/1999	4.1		1222	0	5.8		103				
3/22/2000	6.1	227		16	1.87			0	2.72	0.59	
4/11/2000	5										20568
4/19/2000	4.9		906	0	2.4		68				
7/6/2000	4	627		0	3.29			76	10.8	2.28	
8/8/2000											13875
10/13/2000	4.9		967	17.1	4		137				
11/7/2001	4.6	>200	1300	0	5.2		115		9.2	3.2	v low
4/21/2002	5.8	490	992	2.2	3.63	2.26		49	7.44	1.89	med
7/15/2002	-	-	-	-	-	-	-	-	-	-	5008
10/27/2002	4.8	618	1290	2.6	6.6	5.61		77	7.76	2.25	normal
1/31/2003	5.2	696	1140	2.2	4.56	2.17		69	8.7	2.27	normal
4/27/2003	4.6	564	1084	8.6	2.84	1.39		61	8.48	2.03	normal
5/27/2003	4.4	589	1060	6	3.12		66		9.59	2.08	normal
6/25/2003	4	603	1060	1	3.48		70		10.2	1.96	normal
8/3/2003	4.5	502	938	9.6	3.56	1.26		41	6.5	1.69	normal
8/28/2003	5	508	1090	7	4.56		21		7.72	1.94	normal
10/1/2003	4.8		1080	8	5.63		34		9.6	2.21	normal
10/25/2003	5.7	561	962	10.2	3.95	3.03		55	5.89	1.8	normal
1/13/2004	4.7	474	1130	9	3.5			70	11.5	2.05	high
1/25/2004	4.5	700	1173	9.4	3.36	1.28		98	14.7	2.93	high
2/18/2004	4.3	567	1250	8	5.08		178		14.8	2.73	high