Appendix F: Model Used to Calculate the Post Remediation Conditions in the Raccoon Creek and its Tributaries

SAMPLE-DATE	NEWID	ALK VALUES	ACID VALUES	DISCHARGE	REFERENCE SITE Q	MODEL Q	SITE Q ADJUSTED TO MODEL Q	NET ALK CONCENTRATION	ADJUSTED SITE Q W/ MULTIPLE QS AVERAGED	ADJUSTED SITE CONC. W/ MULTIPLE CONCS. AVERAGED	NET ALK LOAD	CUMULATIVE LOAD	CUMULATIVE Q	CUMULATIVE CONCENTRATION
8/31/2000	EB300	37.7	6.5	0.0532	24	**36**	0.0798	31	0.0798	31	2.49	2.49	0.0798	31.2
2/6/2001	EB280	0.0	225.0	0.0025	264	**36**	0.0003	-225			0.00	2.49	0.0798	31.2
8/31/2000	EB280	0.0	270.0	0.0045	24	**36**	0.0067	-270	0.0035	0	0.00	2.49	0.0833	29.9
2/6/2001	EB260	0.0	91.8	0.0710	264	**36**	0.0097	-92	0.0097	0	0.00	2.49	0.0930	26.7
10/2/2000	EB240	0.0	157.0	0.0224	38	**36**	0.0212	-157			0.00	2.49	0.0930	26.7
2/6/2001	EB240	0.0	110.0	0.2230	264	**36**	0.0304	-110	0.0258	0	0.00	2.49	0.1188	20.9
8/30/2000	EB220	0.0	336.0	0.0418	26	**36**	0.0579	-336			0.00	2.49	0.1188	20.9
2/6/2001	EB220	0.0	309.0	0.1347	264	**36**	0.0184	-309	0.0381	0	0.00	2.49	0.1570	15.9
8/30/2000	EB200	0.0	111.0	0.0252	26	**36**	0.0349	-111			0.00	2.49	0.1570	15.9
2/6/2001	EB200	0.0	143.0	0.0964	264	**36**	0.0131	-143	0.0240	0	0.00	2.49	0.1810	13.7
	unknown reach end													
10/2/2000	EB197	25.8	4.6	0.0069	38	**36**	0.0065	21						
10/2/2000	EB196	0.0	47.9	0.0276	38	**36**	0.0261	-48						
10/2/2000	EB195	0.0	42.2	0.0107	38	**36**	0.0102	-42						
6/18/1996	EB194	0.0	152.0	0.4440	299	**36**	0.0535	-152						
10/2/2000	EB193	0.0	115.0	0.0568	38	**36**	0.0538	-115						
6/18/1996	EB193	0.0	199.0	0.5300	299	**36**	0.0638	-199	EB192 not suggested for remed. but EB190 would neutralize it's effects.					
6/18/1996	EB192	0.0	158.0	1.4800	299	**36**	0.1782	-158	0.1782	0	0.00	0.00	0.1782	0.0
6/18/1996	EB191	0.0	132.0	0.5160	299	**36**	0.0621	-132			0.00	0.00	0.1782	0.0
10/2/2000	EB191	0.0	56.4	0.0182	38	**36**	0.0173	-56	0.0397	0	0.00	0.00	0.2179	0.0
	unknown reach end								0.0208	300	6.24	6.24	0.2387	26.1
8/30/2000	EB190	0.0	84.0	0.1870	26	**36**	0.2589	-84						
6/18/1996	EB190	0.0	131.0	1.8140	299	**36**	0.2184	-131	0.2387	0	0.00	6.24	0.2387	26.1

	EB190+EB200S											8.73	0.420	20.8
	unknown								1.0633	-69	-73.72	-65.00	1.4830	-43.8
	reach end													
6/20/1996	EB170	0.0	70.0	12.9600	254	**36**	1.8369	-70						
7/9/1996	EB170	0.0	123.0	1.3800	44	**36**	1.1291	-123	1.4830	-96.5	-143.11			
6/19/1996	EB163	0.0	87.0	1.9900	204	**36**	0.3512	-87						
7/3/1996	EB162	0.0	1476.0	0.0870	207	**36**	0.0151	-1476						
6/19/1996	EB161	0.0	50.0	0.9050	204	**36**	0.1597	-50						
6/19/1996	EB160	0.0	85.0	4.6600	204	**36**	0.8224	-85						
7/9/1996	EB160	0.0	345.0	0.8900	85	**36**	0.3769	-345						
9/25/2000	EB160	0.0	83.8	0.7294	44	**36**	0.5968	-84	0.5987	0	0.00	-65.00	2.0817	-31.2
10/3/2000	EB140	0.0	74.3	0.0084	36	**36**	0.0084	-74	0.0084	-74	-0.62	-65.62	2.0901	-31.4
6/20/1996	EB130	0.0	82.0	0.0000	254	**36**	0.0000	-82	no Q	-82	(no Q to calc. load but conc. consistent)			
10/2/2000	EB122	0.0	130.0	0.0476	38	**36**	0.0451	-130	0.0451	-130				
10/2/2000	EB121	38.8	15.0	0.0352	38	**36**	0.0333	24	0.0333	24				
10/2/2000	EB120	0.0	49.3	0.0832	38	**36**	0.0788	-49	0.0788	-49	-3.89	-69.51	2.1689	-32.0
	unknown								0.4886	61	29.58	-39.93	2.6575	-15.0
	reach end													
6/20/1996	EB110	0.0	83.0	18.7500	254	**36**	2.6575	-83	2.6575	-83	-220.57			
6/19/1996	EB092	25.0	0.0	7.3000	204	**36**	1.2882	25						
6/20/1996	EB091	8.0	0.0	5.0900	254	**36**	0.7214	8						
6/20/1996	EB090	13.0	0.0	7.7100	254	**36**	1.0928	13	1.0928	13	14.21	-25.72	3.7502	-6.9
	unknown								0.6094	-119	-72.65	-98.38	4.3597	-22.6
	reach end													
6/20/1996	EB080	0.0	64.0	30.7600	254	**36**	4.3597	-64	4.3597	-64	-279.02			
10/3/2000	EB070	47.3	3.3	0.0343	36	**36**	0.0343	44	0.0343	44	1.51	-96.87	4.3940	-22.0
9/25/2000	EB040	13.5	5.1	0.6255	90	**36**	0.2502	8	0.2502	8	2.10	-94.77	4.6442	-20.4
9/25/2000	EB030	14.9	2.9	0.0532	90	**36**	0.0213	12	0.0213	12	0.26	-94.51	4.6655	-20.3
9/25/2000	EB320	57.0	7.0	0.0008	90	**36**	0.0003	50	0.0003	50	0.02	-94.50	4.6658	-20.3
	unknown													
	reach end													
	EBR. Mouth											-94.50	4.6658	-20.3
								Because of their differences I will use the sum of the tribs. Rather than the EB010.						
11/15/2000	EB010	19.1	7.3	3.3640	44	**36**	2.7524	12	2.7524	11.8				

SAMPLE-DATE	NEWID	ALK VALUES	ACID VALUES	DISCHARGE	REFERENCE SITE Q	MODEL Q	SITE Q ADJUSTED TO MODEL Q	NET ALK CONCENTRATION	ADJUSTED SITE Q W/ MULTIPLE QS AVERAGED	ADJUSTED SITE CONC. W/ MULTIPLE CONCS. AVERAGED	NET ALK LOAD	CUMULATIVE LOAD	CUMULATIVE Q	CUMULATIVE CONCENTRATION
10/16/2000	WB170	7.3	18.0	0.0350	16	**36**	0.0787	-11	0.0787	-11	-0.85			
6/5/2000	WB160	20.8	2.2	0.2230	54	**36**	0.1487	19	0.1487	19	2.76	2.76	0.1487	18.6
5/22/2000	WB150	7.4	1.5	0.0608	67	**36**	0.0327	6	0.0327	6	0.19	2.96	0.1813	16.3
5/22/2000	WB140	25.2	0.0	0.0511	67	**36**	0.0275	25	0.0275	25	0.69	3.65	0.2088	17.5
6/5/2000	WB130	0.0	23.3	0.0342	54	**36**	0.0228	-23	0.0228	-23	-0.53	3.12	0.2316	13.5
5/22/2000	WB120	32.8	0.0	0.2850	67	**36**	0.1531	33	0.1531	33	5.02	8.14	0.3847	21.2
7/15/1996	WB110	0.0	50.0	0.1700	82	**36**	0.0746	-50			0.00	8.14	0.3847	21.2
5/22/2000	WB110	0.0	54.2	0.0371	67	**36**	0.0199	-54			0.00	8.14	0.3847	21.2
10/3/2000	WB110	0.0	40.7	0.0060	36	**36**	0.0060	-41	0.0335	-48	-1.62	6.52	0.4182	15.6
7/15/1996	WB100	0.0	153.0	0.0830	82	**36**	0.0364	-153			0.00	6.52	0.4182	15.6
5/17/2000	WB100	0.0	185.0	0.0383	45	**36**	0.0306	-185			0.00	6.52	0.4182	15.6
10/3/2000	WB100	0.0	319.0	0.0144	36	**36**	0.0144	-319	0.0272	0	0.00	6.52	0.4454	14.6
5/22/2000	WB090	8.0	0.0	0.1080	67	**36**	0.0580	8	0.0580	8	0.47	6.99	0.5034	13.9
5/16/2000	WB080	3.4	19.3	0.0106	48	**36**	0.0079	-16			0.00	6.99	0.5034	13.9
10/3/2000	WB080	26.4	9.8	0.0046	36	**36**	0.0046	17	0.0063	0	0.00	6.99	0.5097	13.7
5/16/2000	WB070	0.0	62.9	0.0089	48	**36**	0.0067	-63			0.00	6.99	0.5097	13.7
10/16/2000	WB070	0.0	236.0	0.0520	16	**36**	0.1170	-236	0.0618	0	0.00	6.99	0.5716	12.2
5/17/2000	WB060	0.0	168.0	0.0950	45	**36**	0.0760	-168			0.00	6.99	0.5716	12.2
10/3/2000	WB060	0.0	116.0	0.0088	36	**36**	0.0088	-116	0.0424	0	0.00	6.99	0.6140	11.4
5/16/2000	WB050	106.0	0.0	0.0064	48	**36**	0.0048	106			0.00	6.99	0.6140	11.4
10/3/2000	WB050	0.0	201.0	0.0200	36	**36**	0.0200	-201	0.0124	0	0.00	6.99	0.6264	11.2
5/16/2000	WB040	38.1	0.0	0.7964	48	**36**	0.5973	38	0.5973	38	22.76	29.75	1.2237	24.3
5/16/2000	WB030	24.3	0.0	0.0639	48	**36**	0.0479	24	0.0479	24	1.16	30.91	1.2716	24.3
5/16/2000	WB020	106.0	0.0	0.0064	48	**36**	0.0048	106	0.0048	106	0.51	31.42	1.2764	24.6
	unknowns reach end								0.5883	-81	-47.36	-15.94	1.8646	-8.5
11/15/2000	WB010	2.3	22.5	2.2790	44	**36**	1.8646	-20	1.8646	-20	-37.74			

SAMPLE-DATE	NEWID	ALK VALUES	ACID VALUES	DISCHARGE	REFERENCE SITE Q	MODEL Q	SITE Q ADJUSTED TO MODEL Q	NET ALK CONCENTRATION	ADJUSTED SITE Q W/ MULTIPLE QS AVERAGED	ADJUSTED SITE CONC. W/ MULTIPLE CONCS. AVERAGED	NET ALK LOAD	CUMULATIVE LOAD	CUMULATIVE Q	CUMULATIVE CONCENTRATION
	EBR. Mouth											-94.498	4.6658	-20.3
	WBR. Mouth											-15.94	1.8646	-8.5
	EBR+WBR											-110.44	6.5304	-16.9
	unknown reach end								0.3952	776	306.65	196.21	6.9257	28.3
11/16/2000	MSBC010	9.1	10.0	7.5028	39	36	6.9257	-1	6.9257	-1	-6.23			
6/28/1996	MSBC025	29.0	0.0	2.0300	152	36	0.4808	29	0.4808	29	13.94	210.15	7.4065	28.4
6/26/2000	MSBC030	32.8	39.6	0.0667	35	36	0.0686	-7			0.00	210.15	7.4065	28.4
10/26/2000	MSBC030	27.2	9.0	0.0601	23	36	0.0941	18	0.0813	6	0.46	210.62	7.4878	28.1
6/26/2000	MSBC040	7.9	14.8	0.0168	35	36	0.0173	-7			0.00	210.62	7.4878	28.1
10/26/2000	MSBC040	12.5	15.7	0.0109	23	36	0.0171	-3	0.0172	-5	-0.09	210.53	7.5050	28.1
6/26/2000	MSBC050	17.6	6.5	0.0055	35	36	0.0057	11			0.00	210.53	7.5050	28.1
10/26/2000	MSBC050	40.4	9.7	0.0030	23	36	0.0047	31	0.0052	21	0.11	210.64	7.5101	28.0
10/26/2000	MSBC060	59.0	19.4	0.0024	23	36	0.0038	40	0.0038	40	0.15	210.79	7.5139	28.1
10/26/2000	MSBC070	24.3	7.8	0.0066	23	36	0.0103	16	0.0103	16	0.17	210.96	7.5242	28.0
6/26/2000	MSBC080	109.0	9.3	0.0021	35	36	0.0022	100			0.00	210.96	7.5242	28.0
10/26/2000	MSBC080	106.0	10.9	0.0099	23	36	0.0155	95	0.0088	97	0.86	211.82	7.5331	28.1
10/25/2000	MSBC092	0.0	64.2	0.0917	26	36	0.1270	-64			0.00	211.82	7.5331	28.1
10/25/2000	MSBC091	1.6	94.7	0.0601	26	36	0.0832	-93			0.00	211.82	7.5331	28.1
6/26/2000	MSBC090	2.3	29.6	0.0310	35	36	0.0319	-27			0.00	211.82	7.5331	28.1
10/25/2000	MSBC090	0.0	86.0	0.1630	26	36	0.2257	-86			0.00	211.82	7.5331	28.1
6/28/1996	MSBC090	0.0	17.0	0.4240	152	36	0.1004	-17	0.1193	0	0.00	211.82	7.6524	27.7
7/22/1996	MSBC100	0.0	19.0	10.2200	137	36	2.6855	-19						
	When the flows are corrected for the model Q (36) they do not balance with msbc100. I feel the MSBC 7/22/96 Q is low and is not accurate considering the ref. Site Q was 137 cfs, therefore I will ignore it.													
6/28/2000	MSBC110	0.0	85.7	0.0468	25	36	0.0674	-86			0.00	211.82	7.6524	27.7
10/25/2000	MSBC110	0.0	180.0	0.0468	26	36	0.0648	-180	0.0661	0	0.00	211.82	7.7185	27.4
6/28/2000	MSBC120	0.0	268.0	0.1100	25	36	0.1584	-268			0.00	211.82	7.7185	27.4
10/25/2000	MSBC120	0.0	347.0	0.0900	26	36	0.1246	-347	0.1415	0	0.00	211.82	7.8600	26.9

SAMPLE-DATE	NEWID	ALK VALUES	ACID VALUES	DISCHARGE	REFERENCE SITE Q	MODEL Q	SITE Q ADJUSTED TO MODEL Q	NET ALK CONCENTRATION	ADJUSTED SITE Q W/ MULTIPLE QS AVERAGED	ADJUSTED SITE CONC. W/ MULTIPLE CONCS. AVERAGED	NET ALK LOAD	CUMULATIVE LOAD	CUMULATIVE Q	CUMULATIVE CONCENTRATION
10/16/2000	BC180	7.3	15.1	0.0233	16	**36**	0.0524	-8						
10/18/2000	BC160	30.2	10.3	0.1055	12	**36**	0.3165	20	0.3165	20	6.30	6.30	0.3165	19.9
6/7/2000	BC151	0.0	620.0	0.0172	41	**36**	0.0151	-620			0.00	6.30	0.3165	19.9
10/25/2000	BC151	0.0	636.0	0.0113	26	**36**	0.0156	-636			0.00	6.30	0.3165	19.9
7/16/1996	BC150	0.0	1019.0	0.0310	191	**36**	0.0058	-1019			0.00	6.30	0.3165	19.9
6/7/2000	BC150	0.0	249.0	0.0422	41	**36**	0.0371	-249			0.00	6.30	0.3165	19.9
10/25/2000	BC150	0.0	324.0	0.0266	26	**36**	0.0368	-324	0.0266	0	0.00	6.30	0.3431	18.4
6/21/2000	BC140	63.2	5.0	0.0078	107	**36**	0.0026	58			0.00	6.30	0.3431	18.4
10/18/2000	BC140	72.9	9.4	0.0021	12	**36**	0.0063	64	0.0045	61	0.27	6.57	0.3475	18.9
	unknown reach end								0.0422	125	5.26	11.83	0.3897	30.4
6/7/2000	BC130	8.7	14.3	0.3699	41	**36**	0.3248	-6						
2/28/2001	BC130	3.0	9.0	1.9830	157	**36**	0.4547	-6	0.3897	-6	-2.27			
6/7/2000	BC120	38.2	0.0	0.1220	41	**36**	0.1071	380	0.1071	38	4.09	4.09	0.1071	38.2
	110 trib below													
10/24/2000	BC114	0.0	74.5	0.0169	30	**36**	0.0203	-75	0.0203	0	0.00	0.00	0.0203	0.0
	unknown reach end								0.0086	-383	-3.28	-3.28	0.0288	-113.6
7/16/1996	BC112	0.0	166.0	0.1530	191	**36**	0.0288	-166	0.0288	-166	-4.79			
7/16/1996	BC113	0.0	394.0	0.0600	191	**36**	0.0113	-394			0.00	-3.28	0.0288	-113.6
10/24/2000	BC113	0.0	238.0	0.0240	30	**36**	0.0288	-238	0.0201	0	0.00	-3.28	0.0489	-67.0
7/16/1996	BC111	0.0	20.0	0.0920	191	**36**	0.0173	-20			0.00	-3.28	0.0489	-67.0
10/24/2000	BC111	2.8	31.6	0.0065	30	**36**	0.0078	-29	0.0126	0	0.00	-3.28	0.0615	-53.3
	unknown trib reach end								0.2570	-25	-6.52	-9.80	0.3185	-30.8
7/1/1996	BC110	0.0	42.0	1.0300	127	**36**	0.2920	-42						
6/7/2000	BC110	0.0	51.4	0.5780	41	**36**	0.5075	-51						
10/24/2000	BC110	0.0	75.7	0.1300	30	**36**	0.1560	-76	0.3185	-56	-17.95			
6/7/2000	BC100	25.1	0.8	0.0168	41	**36**	0.0148	24	0.0148	24	0.36	2.39	0.7230	3.3

10/25/2000	BC095	0.0	219.0	0.0128	26	**36**	0.0177	-219			0.00	2.39	0.7230	3.3
7/1/1996	BC090	0.0	119.0	0.1300	127	**36**	0.0369	-119			0.00	2.39	0.7230	3.3
6/21/2000	BC090	0.0	171.0	0.1870	107	**36**	0.0629	-171			0.00	2.39	0.7230	3.3
10/18/2000	BC090	0.0	317.0	0.0532	12	**36**	0.1596	-317	0.0865	0	0.00	2.39	0.8094	3.0
6/7/2000	BC080	66.2	0.0	0.0751	41	**36**	0.0659	66	0.0659	66	4.37	6.76	0.8754	7.7
6/21/2000	BC070	0.0	191.0	0.0751	107	**36**	0.0253	-191			0.00	6.76	0.8754	7.7
10/18/2000	BC070	0.0	265.0	0.0674	12	**36**	0.2022	-265			0.00	6.76	0.8754	7.7
2/28/2001	BC070	0.0	242.0	0.7800	157	**36**	0.1789	-242	0.1354	0	0.00	6.76	1.0108	6.7
6/21/2000	BC060	0.0	1248.0	0.0300	107	**36**	0.0101	-1248			0.00	6.76	1.0108	6.7
10/18/2000	BC060	0.0	3088.0	0.0208	12	**36**	0.0624	-3088	0.0362	0	0.00	6.76	1.0471	6.5
	unknown								-0.1173	-823	96.60	103.36	0.9298	111.2
	trib reach end		.											
7/1/1996	BC050	0.0	50.0	3.2800	127	**36**	0.9298	-50	0.9298	-50	-46.49			
7/16/1996	BC040	35.0	0.0	0.5000	191	**36**	0.0942	35	0.0942	35	3.30	106.66	1.0240	104.2
6/21/2000	BC030	34.0	6.6	0.0105	107	**36**	0.0035	27	0.0035	27	0.10	106.75	1.0275	103.9
11/20/2000	BC020	44.7	6.6	0.1520	36	**36**	0.1520	38	0.1520	38	5.79	112.54	1.1795	95.4
	unknown								0.3425	-1	-0.44	112.10	1.5220	73.7
	trib reach end													
11/20/2000	BC013	2.4	27.2	1.5220	36	**36**	1.5220	-25	1.5220	-25	-37.75			
11/20/2000	BC012	108.0	8.3	0.0740	36	**36**	0.0740	100	0.0740	100	7.37	119.48	1.5960	74.9
	unknown								0.6037	2	1.38	120.85	2.1997	54.9
	trib reach end													
11/15/2000	BC010	0.6	37.0	0.0000	44	**36**	0.0000	-36						
7/1/1996	BC010	10.0	0.0	7.7600	127	**36**	2.1997	10	2.1997	-13	-28.99			

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10/25/2000	MSBC mouth	0.0	347.0	0.0900	26	**36**	0.1246	-347				211.82	7.8600	26.9
7/1/1996	BC mouth	10.0	0.0	7.7600	127	**36**	2.1997	10				120.85	2.1997	54.9
	MSBC+BC											332.67	10.0597	33.1
	unknown													
6/28/2000	MSLH010	23.0	20.4	0.0048	25	**36**	0.0069	3						
7/1/1996	MSLH010	31.0	0.0	0.0420	127	**36**	0.0119	31	0.0094	16.8	0.16	332.83	10.0691	33.1
	reach end													
7/17/1996	MSLH020	0.0	63.0	14.2000	237	**36**	2.1570	-63						
11/14/2000	MSLH020	3.5	17.6	12.9690	60	**36**	7.7814	-14	4.9692	-39	-191.46	This site ignored.		
7/1/1996	MSLH030	0.0	179.0	0.1900	127	**36**	0.0539	-179						
6/28/2000	MSLH030	0.0	219.0	0.0674	25	**36**	0.0971	-219	0.0755	-199	-15.02	317.81	10.1445	31.3
7/9/2000	MSLH151	75.9	8.0	0.0015	26	**36**	0.0021	68	0.0021	68	0.14	317.95	10.1466	31.3
6/28/2000	MSLH150	18.1	15.1	0.0113	25	**36**	0.0163	3	0.0163	3	0.05	318.00	10.1629	31.3
7/17/1996	MSLH140	23.0	0.0	0.7100	237	**36**	0.1078	23	0.1078	23	2.48	320.48	10.2707	31.2
	unknown													
	reach end													
7/1/1996	MSLH050	8.0	0.0	76.3000	127	**36**	21.6283	8				This site ignored.		
7/9/2000	MSLH040	12.3	18.3	0.0062	26	**36**	0.0086	-6						
10/30/2000	MSLH040	19.4	10.5	0.0230	20	**36**	0.0414	9	0.0250	1.45	0.04	320.52	10.2957	31.1
7/1/1996	MSLH060	0.0	110.0	0.2280	127	**36**	0.0646	-110				320.52	10.2957	31.1
7/5/2000	MSLH060	0.0	132.0	0.1410	32	**36**	0.1586	-132				320.52	10.2957	31.1
10/30/2000	MSLH060	0.0	114.0	0.0532	20	**36**	0.0958	-114	0.1063	-119	-12.62	307.90	10.4021	29.6
7/5/2000	MSLH070	13.7	11.0	0.0047	32	**36**	0.0053	3	0.0053	3	0.01	307.91	10.4074	29.6
7/2/1996	MSLH 080	0.0	40.0	0.1040	108	**36**	0.0347	-40	0.0347	-40	-1.39	306.53	10.4420	29.4
7/2/1996	MSLH091	0.0	10.0	0.1450	108	**36**	0.0483	-10	0.0483	-10	-0.48	306.04	10.4904	29.2
11/13/2000	MSLH090	86.4	27.1	0.0066	75	**36**	0.0032	59	0.0032	59	0.19	306.23	10.4935	29.2
7/9/2000	MSLH110	59.8	13.5	0.0017	26	**36**	0.0024	46				306.23	10.4935	29.2
11/13/2000	MSLH110	44.0	9.0	0.0832	75	**36**	0.0399	35	0.0211	41	0.86	307.09	10.5147	29.2
7/12/2000	MSLH100	56.8	13.3	0.0087	168	**36**	0.0019	44	0.0019	44	0.08	307.17	10.5165	29.2

6/27/1996	MSLH122	0.0	16.0	0.4230	223	**36**	0.0683	-16				307.17	10.5165	29.2
7/17/1996	MSLH122	0.0	23.0	0.1650	237	**36**	0.0251	-23				307.17	10.5165	29.2
6/27/1996	MSLH121	0.0	28.0	2.0100	223	**36**	0.3245	-28	0.3245	0	0.00	307.17	10.8410	28.3
	unknown								1.0406	244	254	561.43	11.8816	47.3
	reach end													
6/27/1996	MSLH130	12.0	0.0	73.6000	223	**36**	11.8816	12	11.8816	12	142.58	449.75		

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8/21/2000	HF180	0.0	135.0	0.2850	24	**36**	0.4275	-135	0.4275	-135	-57.71	-57.71	0.4275	-135.0
	unknown								0.4200	58	24.49	-33.22	0.8475	-39.2
	reach end													
8/30/2000	HF150	0.0	39.2	0.6121	26	**36**	0.8475	-39	0.8475	-39	-33.22			
8/21/2000	HF140	0.0	106.0	0.0352	24	**36**	0.0528	-106						
12/11/2000	HF140	0.0	70.2	0.0056	34	**36**	0.0059	-70	0.0294	0	0.00	-33.22	0.8769	-37.9
12/11/2000	HF131	0.0	354.0	0.4880	34	**36**	0.5167	-354	0.5167	0	0.00	-33.22	1.3936	-23.8
12/11/2000	HF130	0.0	25.3	0.0000	34	**36**	0.0000	-25	0.0000	-25	0.00	-33.22	1.3936	-23.8
12/11/2000	HF120	0.0	90.5	0.0285	34	**36**	0.0302	-91	0.0302	0	0.00	-33.22	1.4238	-23.3
	reach end													
12/5/2000	HF116	0.0	1074.0	0.0000	34	**36**	0.0000	-1074	0.0000	-1074	0.00	0.00	0.0000	
12/5/2000	HF115	0.0	221.0	0.1630	34	**36**	0.1726	-221	0.1726	-221	-38.14	-38.14	0.1726	-221.0
9/27/2000	HF114	0.0	1327.0	0.0276	132	**36**	0.0075	-1327				-38.14	0.1726	-221.0
12/5/2000	HF114	0.0	1380.0	0.0000	34	**36**	0.0000	-1380	0.0038	-1354	-5.09	-43.24	0.1764	-245.2
	unknown								-0.0287	620	-17.76	-61.00	0.1477	-413.0
	reach end									Above value is an acidity value since Q is neg.				
7/18/1996	HF113	0.0	413.0	0.8000	195	**36**	0.1477	-413	0.1477	-413	-61.00			
	unknown								0.1328	-94	-12.49	-73.49	0.2805	-262.0
	reach end													
8/21/2000	HF112	0.0	262.0	0.1870	24	**36**	0.2805	-262	0.2805	-262	-73.49			
	unknown								0.0726	1013	73.49	0.00	0.3531	0.0
	reach end													
8/30/2000	HF110	0.0	140.0	0.2550	26	**36**	0.3531	-140	0.3531	0	0.00			
4/30/2000	HF100	0.0	440.0	0.0366	203	**36**	0.0065	-440						
9/27/2000	HF100	0.0	336.0	0.0295	132	**36**	0.0080	-336	0.0073	-388	-2.82	-2.82	0.3603	-7.8
	HF120+HF100											-36.04	1.7841	-20.2
4/30/2000	HF080	49.1	0.0	1.2552	203	**36**	0.2226	49	0.2226	49	10.93	-25.11	2.0067	-12.5
	unknown								0.9385	3	3.00	-22.11	2.9453	-7.5
	reach end													

8/21/2000	HF090	0.0	88.2	1.9635	24	**36**	2.9453	-88	2.9453	-88	-259.77			
11/20/2000	HF090	64.9	4.8	21.6320	36	**36**	21.6320	60	21.6320	60	1299.43	I skipped site HF090 due to Q and conc. conflict.		
5/1/2000	HF070	14.8	13.9	1.5462	177	**36**	0.3145	1	0.3145	1	0.28	-21.83	3.2597	-6.7
	unknown								-1.2659	-129	163.78	141.96	1.9938	71.2
	reach end													
7/18/1996	HF060	0.0	48.0	10.8000	195	**36**	1.9938	-48	1.9938	-48	-95.70	I skipped site HF090 due to Q and conc. conflict.		
4/30/2000	HF050	63.4	0.0	1.5271	203	**36**	0.2708	63	0.2708	63	17.17	-4.66	3.5305	-1.3
4/30/2000	HF040	44.5	0.0	2.4790	203	**36**	0.4396	45	0.4396	45	19.56	14.91	3.9702	3.8
5/1/2000	HF031	16.0	13.3	1.6151	177	**36**	0.3285	3	0.3285	3	0.89	15.79	4.2987	3.7
	unknown								-1.0776	48	-51.92	-36.13	3.2211	-11.2
	reach end													
6/28/1996	HF020	0.0	85.0	13.6000	152	**36**	3.2211	-85	3.2211	-85	-273.79	I skipped site HF120 due to Q conflict.		
	unknown								-0.7934	-134	106.19	121.99	3.5053	34.8
	reach end									Above value is an alkalinity value since Q is neg.				
6/28/1996	HF010	0.0	33.0	14.8000	152	**36**	3.5053	-33	3.5053	-33	-115.67			
8/21/2000	HF010	3.8	6.8	1.1831	24	**36**	1.7747	-3	1.7747	-3	-5.45	I skipped site HF090 due to Q and conc. conflict.		

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	MSLH mouth											561.43	11.8816	47.3
	HF mouth											121.99	3.5053	34.8
	MSLH+HF											683.42	15.39	44.4
	unknown								-0.9110	-10	8.85	692.27	14.4759	47.8
	reach end									Above value is an alkalinity value since Q is neg.				
11/14/2000	MSBM010	8.2	9.3	0.0000	60	**36**	0.0000	-1						
6/27/1996	MSBM010	6.0	0.0	89.6700	223	**36**	14.4759	6	14.4759	2	35.76	Conc's. were avg'd. but Q's were not.		
5/1/2000	MSBM020	32.9	0.0	0.2520	177	**36**	0.0513	33	0.0513	33	1.69	693.96	14.5271	47.8
4/30/2000	MSBM030	59.5	0.0	2.2549	203	**36**	0.3999	60						
7/17/1996	MSBM030	66.0	0.0	0.4400	237	**36**	0.0668	66	0.2334	63	14.64	708.60	14.7605	48.0
	unknown								10.6728	-28	-294.46	414.14	25.4333	16.3
	reach end													
7/2/1996	MSBM040	0.0	23.0	76.3000	108	**36**	25.4333	-23	25.4333	-10	-242.38	Conc's. were avg'd. but Q's were not.		
11/15/2000	MSBM040	8.3	4.4	0.0000	44	**36**		4						

An adjustment was made. Explanations exist on the original model but were removed in order to fit this to the WORD page.

The big line boxes mark a new segment.

Green bars are mainstem sites. An attempt was made to balance the upstream cumulated sites to these mainstem sites.

Blue bars mark the beginning of a mainstem Raccoon Cr. segment.