APPENDIX A

Results of water quality sampling conducted by TVA in the Fountain Creek watershed from August through November 1998

Table A-1. Results of water quality sampling conducted by TVA in the Fountain Creek watershed in August through November 1998

Stream	Sample (Stream Mile)	Date	Time Central	Discharge (cfs)	Depth (meters)	Temp. (°C)	Dissolved Oxygen (mg/1)	pH
Fountain Creek	FC-1 (17.1)	08/26	8:00	2.74	0.2	21.0	7.1	8.0
		09/29	9:25	1.25	0.2	21.5	7.1	7.9
		10/20	9:22	1.76	0.2	13.9	8.7	8.0
		11/17	14:00	1.35	0.2	13.6	10.4	8.1
Fountain Creek	FC-2 (14.5)	08/26	9:15	5.94	0.2	21.6	6.9	7.8
		09/29	10:15	3.70	0.2	21.6	6.2	7.7
		10/20	9:50	2.74	0.2	14.6	8	7.8
		11/17	14:40	2.29	0.1	13.3	9	7.9
Fountain Creek	FC-3 (8.95)	08/26	9:06	15.90	0.2	22.8	6.8	7.9
		09/30	10:30	4.56	0.1	22.3	6.1	7.9
		10/21	12:10	1.26	0.1	15.1	9.1	8.0
		11/17	12:45	7.81	0.1	10.9	10.1	8.2
Fountain Creek	FC-4 (0.5)	08/27	12:30	13.50				
		09/30	9:15	4.21	0.1	22.4	7.2	8.1
		10/20	10:36	8.71	0.2	14.7	9.4	8.1
		11/17	11:40	7.53	0.1	11.1	10.2	7.9
South Fork	SF-1	08/26	8:40	3.71	0.1	22.5	6.5	7.8
		09/30	10:45	3.90	0.1	23.0	6.8	7.8
		10/20	10:15	2.12	0.1	15.7	8.1	7.8
		11/17	11:10	2.08	0.1	11.3	9.2	7.9
East Fork	EF-1	08/27	10:50	1.64	0.1	25.0	9.1	8.2
		09/30	12:15	0.35	0.1	23.8	6.1	7.9
		10/21	11;09	0.68	0.1	14.0	8.8	8.0
		11/17	10:00	0.63	0.2	8.1	9.6	8.1
Globe Creek	GC-1	08/26	10:00	4.98	0.2	23.1	6.8	8.1
		09/30	11:35	0.87	0.3	22.4	5.7	7.8
		10/20	10:40	2.04	0.2	13.7	8.1	8.0
		11/17	10:40	2.42	0.2	8.2	9.6	8.0
Brush Creek	BC-1	08/26	10:05	0.22	0.1	21.4	6.6	7.4
		09/30	11:40	0.00	0.1	22.0	5.6	7.6
		10/20	12:40	0.05	0.1	15.2	6.7	7.2
		11/17	12:10	<0.02	0.1	10.2	9	7.8
Hurricane Creek	HC-1	08/26	11:36	3.15	0.1	24.5	11.3	8.5
		09/30	9:55	0.75	0.1	22.2	9.2	8.4
		10/20	11:30	0.47	0.1	16.0	10.6	8.4
		11/17	12:45	0.87	0.1	16.0	10	8.2
Silver Creek	SC-1	08/26	10:40	0.14	0.1	23.9	5.1	7.7
		9/90		0.00				Dry
		10/20	9:40	0.03	0.1	14.3	4.25	7.6
		11/17	13:15	0.27	0.1	14.0	7.8	8.0

Table A-1. (Continued)

Stream	Sample (Stream Mile)	Date	Alkalinit ymg/l as CaCo3	Conduc-tivity umhos/cm	ORP (mv)	Fecal Coliform no/100ml	BOD-5 (mg/l)	BOD-10 (mg/l)
Fountain Creek	FC-1 (17.1)	08/26	200	387	264	1220	<2.0	NA
		09/29	180	366	340	1750	<2.0	NA
		10/20	160	365	348	5260	<2.0	<2.0
		11/17	190	283	351	<1	<2.0	<2.0
Fountain Creek	FC-2 (14.5)	08/26	200	419	256	1490		
		09/29	200	404	351	1690	<2.0	NA
		10/20	190	403	345	<1	<2.0	<2.0
		11/17	190	383	286	>3210	<2.0	2.1
Fountain Creek	FC-3 (8.95)	08/26	200	410	213	390	<2.0	NA
		09/30	200	396	349	240	<2.0	NA
		10/21	190	405	349	130	<2.0	<2.0
		11/17	190	383	324	120	<2.0	<2.0
Fountain Creek	FC-4 (0.5)	08/27						
		09/30	190	388	345	270	<2.0	NA
		10/20	180	401	346	270	<2.0	<2.0
		11/17	190	422	NA	120	<2.0	<2.0
South Fork	SF-1	08/26	160	362	261	1220	<2.0	NA
		09/30	170	359	340	1040	<2.0	NA
		10/20	170	357	342	200	<2.0	<2.0
		11/17	170	338	269	110	7	<2.0
East Fork	EF-1	08/27	210	442	247	740	<2.0	NA
		09/30	230	481	353	250	<2	NA
		10/21	200	478	354	140	<2.0	<2.0
		11/17	230	462	265	140	<2.0	<2.0
Globe Creek	GC-1	08/26	190	429	253	350	<2.0	NA
		09/30	190	402	347	590	<2.0	NA
		10/20	190	426	349	190	<2.0	<2.0
		11/17	220	401	260	160	<2.0	<2.0
Brush Creek	BC-1	08/26	200	429	236	110	<2.0	NA
		09/30	230	445	363	210	<2.0	NA
		10/20	220	458	361	30	<2.0	<2.0
		11/17	210	415	270	20	<2.0	<2.0
Hurricane Creek	HC-1	08/26	230	441	212	530	<2.0	NA
		09/30	220	464	344	180	<2.0	NA
		10/20	210	443	348	50	<2.0	<2.0
		11/17	230	505		70	<2.0	<2.0
Silver Creek	SC-1	08/26	220	446	228	280	<2.0	NA
		9/90	No	Flow				
		10/20	170	429	344	410	5	5.7
		11/17	230	444	384	410	<2.0	2.2

Table A-1. (Continued)

Stream	Sample (Stream Mile)	Date	BOD-20 (mg/l)	BOD-30 (mg/l)	BOD-50 (mg/l)	TOC (mg/l)	DOC (mg/l)	Suspended Solids (mg/l)
Fountain Creek	FC-1 (17.1)	08/26	NA	NA	NA	1.4	1.4	4
		09/29	NA	NA	NA	2.3	2.2	<1.0
		10/20	2.2	2.6	3.1	2.2	2.2	3
		11/17	<2.0	2.3	2.7	2.3	2.1	<1.0
Fountain Creek	FC-2 (14.5)	08/26				2	1.8	5
		09/29	NA	NA	NA	2.8	2.8	2
		10/20	2.5	2.9	3.6	2.6	2.6	3
		11/17	2.7	3.4	4	3.1	2.9	1
Fountain Creek	FC-3 (8.95)	08/26	NA	NA	NA	1.9	1.8	3
		09/30	NA	NA	NA	2.9	2.8	2
		10/21	<2.0	<2.0	<2.0	2.6	2.6	2
		11/17	2.1	2.6	3.2	3.2	3.2	<1.0
Fountain Creek	FC-4 (0.5)	08/27						
		09/30	NA	NA	NA	3	2.9	<1.0
		10/20	<2.0	<2.0	<2.0	2.5	2.5	<1.0
		11/17	<2.0	2.2	2.9	3.5	3.5	<1.0
South Fork	SF-1	08/26	NA	NA	NA	1.7	1.8	2
		09/30	NA	NA	NA	2.2	2.2	<1.0
		10/20	<2.0	<2.0	2.4	2.1	2.1	<1.0
		11/17	<2.0	<2.0	2.3	2.3	2.3	<1.0
East Fork	EF-1	08/27	NA	NA	NA	2.9	2.6	18
		09/30	NA	NA	NA	3.7	3.7	5
		10/21	2.3	2.9	3.6	3.3	3.3	3
		11/17	<2.0	2.3	2.8	2.9	2.9	2
Globe Creek	GC-1	08/26	NA	NA	NA	2.4	2.3	2
		09/30	NA	NA	NA	4	3.9	<1.0
		10/20	2.3	2.8	3.5	3.6	3.6	2
		11/17	<2.0	2.3	3.1	3.4	3.4	<1.0
Brush Creek	BC-1	08/26	NA	NA	NA	2.3	2.2	10
		09/30	NA	NA	NA	3.6	3.5	2
		10/20	2.4	2.8	3.6	3.7	3.7	1
		11/17	<2.0	<2.0	2.3	3.5	3.2	<1.0
Hurricane Creek	HC-1	08/26	NA	NA	NA	2	2	<1.0
		09/30	NA	NA	NA	3.7	3.6	<1.0
		10/20	<2.0	2.3	3	3.7	3.7	3
		11/17	2.2	2.8	3.4	3.3	3.3	3
Silver Creek	SC-1	08/26	NA	NA	NA	3.1	2.9	2
		9/90		Dry	No	Flow		
		10/20	8.5	9.8	11.7	9.4	9.4	3
		11/17	2.9	3.6	4.7	6	6	<1.0

Table A-1. (Continued)

Stream	Sample (Stream Mile)	Date	TKN (mg/l)	Nitrate + Nitrate (mg/l)	Total Phosphorus (mg/l)	Ortho Phosphorus (mg/l)	Total Iron (ug/l)	Dissolved Iron (ug/l)
Fountain Creek	FC-1 (17.1)	08/26	0.26	0.74	0.35	0.30	220	<10
		09/29	0.21	0.64	0.33	0.30	110	<10
		10/20	0.12	0.33	0.35	0.31	220	10
		11/17	0.11	0.32	0.34	0.29	140	10
Fountain Creek	FC-2 (14.5)	08/26	0.37	0.80	0.39	0.33	250	<10
		09/29	0.27	0.41	0.45	0.37	230	20
		10/20	0.14	0.35	0.39	0.35	260	10
		11/17	0.11	0.30	0.42	0.38	170	30
Fountain Creek	FC-3 (8.95)	08/26	0.29	0.50	0.38	0.33	180	<10
		09/30	0.19	0.12	0.38	0.37	120	410
		10/21	0.11	0.12	0.39	0.34	70	<10
		11/17	0.11	0.04	0.37	0.35	70	10
Fountain Creek	FC-4 (0.5)	08/27						
		09/30	0.19	0.08	0.37	0.34	70	<10
		10/20	0.12	0.04	0.34	0.32	50	<10
		11/17	0.13	0.01	0.39	0.37	60	10
South Fork	SF-1	08/26	0.30	0.77	0.32	0.28	120	<10
		09/30	0.16	0.48	0.35	0.32	60	<10
		10/20	0.30	0.43	0.31	0.30	70	10
		11/17	0.09	0.02	0.28	0.26	50	10
East Fork	EF-1	08/27	0.42	0.12	0.37	0.34	110	<10
		09/30	0.39	<0.01	0.47	0.43	170	<10
		10/21	0.21	<0.01	0.36	0.35	150	10
		11/17	0.13	<0.01	0.36	0.32	120	10
Globe Creek	GC-1	08/26	0.36	0.39	0.37	0.34	140	<10
		09/30	0.29	0.05	0.42	0.41	70	<10
		10/20	0.20	0.02	0.35	0.34	100	<10
		11/17	0.11	0.02	0.40	0.38	70	10
Brush Creek	BC-1	08/26	0.39	0.10	0.29	0.22	620	<10
		09/30	0.29	<0.01	0.27	0.19	150	<10
		10/20	0.14	<0.01	0.30	0.23	80	10
		11/17	0.11	<0.01	0.30	0.26	50	<10
Hurricane Creek	HC-1	08/26	0.29	0.58	0.32	0.30	80	<10
		09/30	0.27	0.02	0.37	0.36	40	<10
		10/20	0.33	<0.01	0.36	0.32	100	<10
		11/17	0.13	<0.01	0.40	0.37	190	<10
Silver Creek	SC-1	08/26	0.52	0.08	0.25	0.23	260	<10
		9/90						
		10/20	1.20	<0.01	0.33	0.31	150	40
		11/17	0.29	<0.01	0.40	0.36	100	10

Table A-1. (Continued)

Stream	Sample (Stream Mile)	Date	Total Manganese (ug/l)	Dissolved Manganese (ug/l)
Fountain Creek	FC-1 (17.1)	08/26	49	22
		09/29	30	20
		10/20	51	20
		11/17	63	23
Fountain Creek	FC-2 (14.5)	08/26	96	68
		09/29	90	80
		10/20	100	55
		11/17	92	48
Fountain Creek	FC-3 (8.95)	08/26	26	<5
		09/30	30	1500
		10/21	16	<5
		11/17	15	<5
Fountain Creek	FC-4 (0.5)	08/27		
		09/30	<5	<5
		10/20	10	<5
		11/17	11	<5
South Fork	SF-1	08/26	50	23
		09/30	30	20
		10/20	34	11
		11/17	28	<5
East Fork	EF-1	08/27	33	5
		09/30	60	20
		10/21	34	<5
		11/17	20	<5
Globe Creek	GC-1	08/26	27	5
		09/30	30	20
		10/20	23	<5
		11/17	13	<5
Brush Creek	BC-1	08/26	95	6
		09/30	140	100
		10/20	51	33
		11/17	12	<5
Hurricane Creek	HC-1	08/26	5	<5
		09/30	5	<5
		10/20	10	<5
		11/17	22	<5
Silver Creek	SC-1	08/26	62	20
		9/90		
		10/20	120	80
		11/17	28	<5