Mineral content

Table 2. Descriptions of sediments sampled along Broadway Creek and other tributaries to the Rocky River, Anderson County, S.C.

Block	Station number	Sample number	Material sampled	Depth of sample below surface of flood plain (feet)	Screening characteristics: Plus 1/4 inch: Volume ratio	Plus 1/4 inch: Composition (percent)	Plus 1/4 inch: Maximum intermediate dimension (inches)	Minus 1/4 – plus 1/8 inch: Volume ratio	Minus 1/4 – plus 1/8 inch: Composition (percent)	Minus 1/8 inch: Sand: Volume ratio	Minus 1/8 inch: Silt and clay: Abundance	Weight of concentrate (grams)	Minerals in concentrate: Sieve fraction: Mesh	Sieve fraction: Percent of concentrate	Monazite: Percent of concentrate	Monazite: Pounds per cubic yard	Ilmenite: Percent of concentrate	Ilmenite: Pounds per cubic yard	Rutile: Percent of concentrate	Rutile: Pounds per cubic yard	Zircon: Percent of concentrate	Zircon: Pounds per cubic yard	Garnet: Percent of concentrate	Garnet: Pounds per cubic yard	Kyanite: Percent of concentrate	Kyanite: Pounds per cubic yard	Sillimanite: Percent of concentrate	Sillimanite: Pounds per cubic yard	Magnetite	Hematite	Staurolite	Tourmaline	Amphibole, pyroxene, biotite	Epidote	Quartz	Others
															Percent of concentrate																						
A	1	52-DC-283	Riffle gravel		16	60 gtz, 20 sill sch, 10 gn, 10 fels	—	3	60 gtz, 20 fels, 10 sill sch, 10 gn	16		182.8	45	62	5		38		—		—		12		—		—		—	—	—	—	—	—	7	
													100	35	8		20		—		2		1		—		—	—	—	—	—	—	1	3	
													170	3	1		2		—		tr		—		—		—	—	—	—	—	—	tr	—	
													Total		14	5.1	60	21.9	—	—	2	.7	13	4.7	—	—	—	—	tr	—	—	—	—	1	10	
	2	52-DC-284	Riffle gravel		19	50 gtz, 30 sill sch, 10 fels, 10 gn	2	4	60 gtz, 30 sill sch, 10 fels & gn	10		45.1	45	65	3		39		—		—		11		—		—		—	—	—	—	—	—	—	12	
													100	25	6		13		—		1		2		—		1		—	—	—	—	—	—	2	
													170	2	1		1		—		—		—		—		tr		—	—	—	—	—	—	—	
													Total		10	.9	53	4.8	—	—	1	.09	13	1.2	—	—	1	.09	8	—	—	—	—	—	14	
	3	52-DC-285	Riffle gravel		19	40 gtz, 30 sill sch, 20 gn, 10 fels	5	1	60 gtz, 20 sill sch, 10 fels, 10 gn, hbr sch, micas, & magnetite	13		99.0	45	62	9		44		—		—		6		—		—		—	—	—	—	—	—	—	3	
													100	33	9		18		—		—		—		—		2		—	—	—	—	tr	4	
													170	3	1		2		—		tr		—		—		tr		—	—	—	—	—	tr	
													Total		19	3.1	64	12.6	—	—	tr	—	6	1.2	—	—	2	.4	2	—	—	—	—	tr	7	
	4	52-DC-286	Riffle sand		5	50 gtz, 20 sill sch, 20 fels, 10 gn & hbr sch.	ft	7	60 gtz, 20 sill sch, 10 fels, 10 mag, gn, mica & hbr sch	22		27.8	45	55	—		32		—		—		13		—		—		1		—	—	1	—	—	8	
													100	40	4		28		—		—		3		—		3		—	—	—	—	—	2	
													170	4	1		3		—		tr		—		—		—		—	—	—	—	tr	—	
													Total		5	.3	63	3.5	—	—	tr	—	16	.9	—	—	4	.2	1	—	1	—	—	tr	10	
		52-DC-287	Riffle sand		11	50 gtz, 20 sill sch, 10 gn, 10 fels, 10 hbr sch & micas	2	3	60 gtz, 20 sill sch, 10 fels, 10 gn, hbr sch, & mag	19		53.3	45	36	2		23		—		—		7		—		—		—		—	—	—	—	—	4	
													100	53	3		39		—		—		5		—		1		—	—	—	—	2	3	
													170	6	2		4		—		tr		—		—		—		—	—	—	—	—	tr	
													Total		7	.7	66	7.0	—	—	tr	—	12	.7	—	—	1	.1	5	—	—	—	2	7	
	5	52-DC-288	Riffle sand		10	40 gn, 30 gtz, 20 sill sch, 10 fels	2	5	60 gtz, 20 sill sch, 10 gn, 10 fels, micas, & hbr sch	19		102.1	45	23	1		15		—		—		4		—		—		—		—	—	—	—	—	3	
													100	55	9		41		—		2		1		—		1		—	—	—	—	—	1	
													170	6	3		3		—		tr		tr		—		—		—	—	—	—	—	—	
													Total		13	2.6	58	11.8	—	—	2	.4	5	1.0	—	—	1	.2	16	—	—	—	—	4	
	6	52-DC-289	Terrace gravel	4	11	45 gtz, 5 fels, 5 gn	5	1	90 gtz, 5 fels, 5 gn	7	10	31.6	45	58	5		36		—		—		—		—		—		—		—	—	—	—	—	17	
													100	36	5		22		—		2		tr		—		2		—	—	—	—	—	5	
													170	6	2		4		—		tr		—		—		—		—	—	—	—	—	—	
													Total		12	.9	62	4.6	—	—	2	.1	tr	—	—	—	2	1	tr	—	—	—	—	—	22	
	7	52-DC-290	Riffle sand		7	50 gtz, 20 sill sch, 10 gn, 10 fels, 10 hbr sch	1	10	60 gtz, 20 sill sch, 10 fels, 10 gn, mag, & micas	19		29.7	45	44	2		29		—		tr		9		—		—		1		—	—	—	—	—	3	
													100	37	6		36		—		1		2		—		—		—	—	—	—	tr	2	
													170	tr	tr		tr		—		tr		—		—		—		—	—	—	—	—	—	
													Total		8	.5	55	3.3	—	—	1	.1	11	6	—	—	1	1	19	—	—	—	tr	5	
B	8	52-DC-281	Riffle gravel		17	60 gtz, 20 fels, 10 gn, 10 hbr sch	3	4	70 gtz, 10 fels, 10 sill sch, 10 gn, hbr sch, & micas	12		192.8	45	53	7		17		—		—		19		—		—		—		—	—	—	—	—	10	
													100	31	5		13		—		1		1		—		—		—	—	—	—	1	10	
													170	4	1		3		—		tr		—		—		—		—	—	—	—	—	tr	
													Total		13	5.0	33	12.7	—	—	1	.4	20	1.7	—	—	—	—	12	—	—	—	—	1	20	
		52-DC-282	Bank gravel	3½	8	90 gtz, 10 fels	3	1	80 gtz, 10 fels, 10 hbr sch	10	10	141.2	45	60	1		4		—		—		47		—		—		—		—	—	—	—	tr	8	
													100	36	1		5		—		—		4		—		—		—	—	—	—	—	1	25	
													170	4	tr		3		—		tr		tr		—		tr		—	—	—	—	tr	1	
													Total		2	.7	12	4.0	—	—	tr	—	51	17.0	—	—	tr	—	tr	—	—	—	—	1	34	
	9	52-DC-292	Riffle gravel		19	60 gtz, 20 fels, 10 gn, 10 sill sch, micas, & hbr sch	4	4	70 gtz, 10 fels, 10 sill sch, 10 gn, micas & hbr sch	11		250	45	55	6		34		—		—		6		—		—		—		—	—	—	—	—	4	5
													100	32	2		31		—		3		1		—		—		—	—	—	—	—	1	1
													170	1	tr		1		—		tr		—		—		—		—	—	—	—	tr	—	
													Total		8	.4	56	2.8	—	—	3	.2	7	4	—	—	—		12	—	—	—	—	8	6	
		52-DC-293	Bank silt	1½	0.5	70 gtz, 20 fels, 10 gn	¾	0.5	70 gtz, 20 fels, 10 gn & sill sch	.8	20	40	45	21	1		15		—		—		1		—		—		2		—	—	—	—	1	1	
													100	65	7		44		—		3		—		—		4		—	—	—	—	2	5	
													170	13	3		1		—		3		—		—		—		—	—	—	—	—	—	
													Total		11	.09	66	.6	—	—	6	.05	1	.008	—	—	6	.05	1	—	—	—	—	3	6	
		52-DC-294	Bank clay	4	0.5	100 gtz	½	0.5	90 gtz, 10 fels	4	25	28	45	7	1		5		—		tr		1		—		—		—		—	—	—	—	tr	—	
													100	82	2		28		—		15		3		—		—		3	—	—	—	—	31	
													170	11	1		1		—		2		—		—		—		—	—	—	—	—	1	
													Total		4	.03	40	.3	—	—	17	.1	4	.03	—	—	—	—	tr	—	—	—	3	1	31	
	10	52-DC-291	Riffle sand	—	—	—	—	—	—	34		1.8	45	tr	—		—		—		—		—		—		—		—		—	—	—	—	—	—	
													100	82	2		19		—		—		2		—		—		—	—	—	—	2	12	45
													170	18	1		12		—		tr		—		—		1		—	—	—	—	—	4	2
													Total		3	.01	31	.1	—	—	tr	—	2	.01	—	—	1	.005	tr	—	—	—	2	14	41	
C	11	52-DC-297	Riffle gravel		17	40 gtz, 30 gn, 20 fels, 10 sill sch & micas	2	4	60 gtz, 20 fels, 10 gn, 10 sill sch, hbr sch, & micas	10		107.6	45	45	—		31		—		—		2		—		—		—		—	—	—	—	—	1	5
													100	42	1		28		—		2		1		—		—		—	—	—	—	—	2	1
													170	3	tr		3		—		tr		tr		—		—		—	—	—	—	—	—	tr
													Total		1	.2	69	14.8	—	—	2	.4	3	.6	—	—	—	—	10	—	—	—	—	3	12	
D	12	52-DC-298	Riffle sand		6	70 gtz, 10 gn, 10 fels, 10 sill sch, hbr sch, & micas	1	5	70 gtz, 10 sill sch, 10 fels, 10 gn & hbr sch	20		211.7	45	33	—		25		—		tr		1		—		—		—		—	—	—	—	tr	1	
													100	54	tr		49		—		2		—		—		—		—	—	—	—	—	3	
													170	8	1		6		—		1		—		—		—		—	—	—	—	—	—	
													Total		1	.4	80	33.8	—	—	3	1.3	1	.4	—	—	2	—	5	—	—	—	—	tr	10	
	13	52-DC-299	Riffle gravel		25	60 gn gtz, 20 gtz, 10 fels, 10 hbr sch & sill sch	5	1	40 gtz, 20 sill sch, 20 gn gtz, 10 fels, 10 micas & mag	4		54.3	45	63	—		32		—		—		13		—		—		1		—	—	—	2	—	15	
													100	25	3		15		—		tr		tr		—		—		—	—	—	1	tr	6	
													170	2	tr		2		—		tr		—		—		—		—	—	—	—	—	—	
													Total		3	.3	49	5.3	—	—	tr	—	13	1.4	—	—	1	.1	10	—	—	—	3	tr	21	
		52-DC-300	Riffle gravel		13	40 gtz, 30 gn, 20 sill sch, 10 fels & hbr sch	1	6	50 gtz, 30 sill sch, 10 fels, 10 gn, hbr sch, micas, & mag	14		20.5	45	60	tr		34		—		—		23		—		—		—		—	—	—	—	—	3	
													100	32	1		24		—		—		2		—		—		tr		—	—	—	2	3	
													170	1	tr		1		tr		—		—		—		—		—	—	—	—	—	—	tr
													Total		1	.04	59	2.4	tr	—	—	—	25	1.0	—	—	tr	—	1	—	—	—	—	2	6	
		52-DC-301	Riffle gravel		21	70 gtz, 10 gn, 10 fels, 10 sill sch & hbr sch	3	2	40 gtz, 30 sill sch, 20 gn, 10 fels & micas	8		105.5	45	75	4		33		—		—		23		—		—		—		—	—	—	—	—	15	
													100	22	4		10		—		—		2		—		—		—	—	—	—	tr	6	
													170	1	tr		1		—		tr		—		—		—		—	—	—	—	—	—	
													Total		8	1.7	44	9.3	—	—	tr	—	25	5.3	—	—	—	—	2	—	—	—	—	tr	21	