

Appendix 4F. Diversity indices for benthic macroinvertebrate samples collected at the study sites in Surry County, North Carolina, 2004-2007. [no., number; SR, secondary road]

Transect	S (no. of taxa)	Number of organisms	d (Margalef ^a)	J' (Pielou ^b)	Brillouin ^c	Fisher ^d	H' (log e) (Shannon ^e)	1-1' (Simpson ^f)
Hogan Creek at SR 2038 near Siloam, North Carolina (control site)								
Sample collection date March 24, 2004								
A	28	204	5.08	0.74	2.27	8.79	2.46	0.87
B	30	278	5.15	0.73	2.33	8.54	2.49	0.86
C	25	279	4.26	0.72	2.17	6.65	2.31	0.84
D	37	274	6.41	0.68	2.27	11.53	2.45	0.82
E	34	293	5.81	0.74	2.44	9.95	2.61	0.87
Sample collection date February 16, 2005								
A	28	332	4.65	0.43	1.34	7.29	1.45	0.54
B	31	313	5.22	0.55	1.76	8.55	1.89	0.66
C	39	326	6.57	0.58	1.98	11.56	2.14	0.73
D	36	331	6.03	0.57	1.88	10.28	2.03	0.70
E	30	321	5.03	0.56	1.77	8.10	1.90	0.67
Sample collection date March 8, 2006								
A	23	359	3.74	0.65	1.93	5.48	2.04	0.78
B	33	669	4.92	0.64	2.16	7.28	2.22	0.81
C	26	564	3.95	0.65	2.03	5.63	2.12	0.81
D	28	454	4.41	0.66	2.10	6.60	2.20	0.82
E	31	817	4.47	0.58	1.93	6.38	1.99	0.71
Sample collection date March 20, 2007								
A	34	338	5.67	0.65	2.16	9.43	2.29	0.77
B	26	333	4.30	0.61	1.86	6.60	1.97	0.73
C	20	219	3.53	0.70	1.95	5.35	2.09	0.77
D	30	434	4.78	0.58	1.87	7.32	1.98	0.68
E	28	1085	3.86	0.52	1.70	5.25	1.74	0.68
Bull Creek at Ash Hill, North Carolina (BMP site)								
Sample collection date March 24, 2004								
A	34	274	5.88	0.76	2.50	10.23	2.68	0.89
B	27	283	4.61	0.65	2.01	7.34	2.14	0.80
C	28	260	4.86	0.79	2.46	7.96	2.62	0.89
D	23	282	3.90	0.76	2.26	5.92	2.39	0.87
E	24	257	4.15	0.81	2.44	6.48	2.59	0.90
Sample collection date February 16, 2005								
A	45	378	7.41	0.78	2.78	13.31	2.96	0.92
B	37	344	6.16	0.76	2.59	10.52	2.75	0.90
C	36	341	6.00	0.79	2.68	10.16	2.84	0.92
D	40	384	6.55	0.81	2.81	11.23	2.97	0.93
E	37	316	6.26	0.80	2.72	10.87	2.89	0.92
Sample collection date March 8, 2006								
A	31	840	4.46	0.77	2.58	6.33	2.65	0.89
B	34	847	4.90	0.76	2.60	7.10	2.69	0.90
C	26	342	4.29	0.75	2.32	6.54	2.44	0.88
D	26	665	3.85	0.72	2.27	5.39	2.33	0.86
E	31	1118	4.27	0.76	2.57	5.91	2.63	0.88
Sample collection date March 21, 2007								
A	40	762	5.88	0.75	2.68	8.98	2.77	0.90
B	37	752	5.44	0.77	2.70	8.16	2.79	0.92
C	36	1340	4.86	0.76	2.67	6.81	2.73	0.89
D	36	700	5.34	0.72	2.49	8.04	2.58	0.88
E	32	712	4.72	0.76	2.54	6.88	2.62	0.88

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Transect	S (no. of taxa)	Number of organisms	d (Margalef ^a)	J' (Pielou ^b)	Brillouin ^c	Fisher ^d	H' (log e) (Shannon ^e)	1-1' (Simpson ^f)
Pauls Creek above SR 1625 near Pine Ridge, North Carolina (In-stream restoration and BMP site)								
Sample collection date March 23, 2004								
A	34	275	5.88	0.73	2.39	10.21	2.57	0.87
B	25	229	4.42	0.68	2.04	7.15	2.19	0.82
C	33	280	5.68	0.67	2.19	9.72	2.36	0.83
D	29	289	4.94	0.63	1.99	8.03	2.13	0.80
E	31	283	5.31	0.64	2.06	8.88	2.22	0.80
Sample collection date February 17, 2005								
A	19	188	3.44	0.55	1.49	5.28	1.62	0.67
B	31	327	5.18	0.47	1.49	8.41	1.60	0.62
C	28	282	4.79	0.57	1.77	7.73	1.90	0.72
D	28	358	4.59	0.51	1.58	7.11	1.69	0.63
E	37	310	6.28	0.56	1.86	10.95	2.03	0.68
Sample collection date March 9, 2006								
A	33	680	4.91	0.60	2.01	7.25	2.09	0.75
B	30	717	4.41	0.59	1.93	6.33	2.00	0.77
C	28	658	4.16	0.53	1.70	5.94	1.77	0.70
D	30	603	4.53	0.59	1.89	6.64	1.99	0.72
E	28	2078	3.53	0.52	1.71	4.57	1.74	0.64
Sample collection date March 21, 2007								
A	17	99	3.48	0.70	1.77	5.91	1.98	0.77
B	27	195	4.93	0.70	2.10	8.50	2.29	0.80
C	26	167	4.89	0.72	2.14	8.63	2.35	0.82
D	31	309	5.23	0.56	1.77	8.59	1.91	0.65
E	22	144	4.23	0.57	1.58	7.24	1.77	0.62

^aMargalef (1958)

^bPielou (1959)

^cBrillouin (1962)

^dFisher (1943)

^eShannon (1948)

^fSimpson (1949)