

APPENDIX O
FREDERICK COUNTY
STREAM SURVEY MONITORING RESULTS

Table O-1 BIBI scores for the years 2008 and 2009 of the FCSS			
2008		2009	
Site ID	BIBI	Site ID	BIBI
BALL-102-R-2008	2.75	BALL-123-R-2009	2.25
BALL-105-R-2008	3.00	BALL-126-R-2009	3.75
BENN-101-R-2008	2.75	BALL-127-R-2009	3.75
BENN-105-R-2008	1.75	BENN-130-R-2009	4.00
BENN-204-R-2008	3.75	BENN-427-R-2009	3.50
BUSL-107-R-2008	3.50	BUSL-322-R-2009	2.25
BUSL-109-R-2008	1.75	BUSL-324-R-2009	2.25
BUSL-301-R-2008	2.75	BUSL-330-R-2009	2.50
BUSU-104-R-2008	3.00	BUSU-126-R-2009	3.00
BUSU-206-R-2008	3.25	BUSU-227-R-2009	3.25
CARR-106-R-2008	3.00	CARR-129-R-2009	3.75
CARR-111-R-2008	4.50	CARR-135-R-2009	2.25
CATO-102-R-2008	3.50	CARR-222-R-2009	2.25
CATO-204-R-2008	2.75	CATO-132-R-2009	3.50
CATO-405-R-2008	3.00	CATO-135-R-2009	3.50
FISH-201-R-2008	3.25	FISH-222-R-2009	3.50
FISH-203-R-2008	3.75	FISH-224-R-2009	3.25
GLAD-108-R-2008	2.25	FISH-226-R-2009	3.50
GLAD-109-R-2008	2.00	GLAD-126-R-2009	2.75
HUNT-105-R-2008	1.75	GLAD-128-R-2009	2.25
HUNT-302-R-2008	3.00	GLAD-129-R-2009	2.75
HUNT-303-R-2008	3.00	HUNT-133-R-2009	3.75
ISRA-107-R-2008	3.50	HUNT-225-R-2009	4.50
ISRA-109-R-2008	3.25	ISRA-129-R-2009	2.00
ISRA-301-R-2008	2.25	ISRA-226-R-2009	3.50
LCCS-101-R-2008	3.25	LCCS-125-R-2009	4.00
LCCS-103-R-2008	2.00	LCCS-226-R-2009	4.00
LCCS-202-R-2008	2.75	LINL-126-R-2009	1.50
LINL-103-R-2008	3.50	LINL-423-R-2009	2.00
LINL-104-R-2008	4.00	LINL-429-R-2009	3.50
LINU-111-R-2008	1.50	LINU-121-R-2009	2.00
LINU-405-R-2008	2.50	LINU-134-R-2009	2.00
LINU-407-R-2008	3.00	LIPI-128-R-2009	3.25
LIPI-102-R-2008	2.00	LIPI-234-R-2009	2.25
LIPI-201-R-2008	3.00	MIDD-124-R-2009	3.50
LIPI-307-R-2008	2.00	MIDD-126-R-2009	4.00
MIDD-101-R-2008	1.50	MIDD-135-R-2009	4.50
MIDD-109-R-2008	3.50	MODS-121-R-2009	2.25
MODS-108-R-2008	2.50	MODS-124-R-2009	1.75
MODS-110-R-2008	4.00	OWEN-122-R-2009	4.00
MODS-115-R-2008	1.75	OWEN-224-R-2009	3.25
OWEN-101-R-2008	1.75	POTD-132-R-2009	3.00
OWEN-302-R-2008	3.50	POTD-133-R-2009	3.50
OWEN-309-R-2008	3.00	POTD-328-R-2009	2.50
POTD-205-R-2008	2.00	TOMS-224-R-2009	3.25
POTD-301-R-2008	2.00	TOMS-234-R-2009	3.25
TOMS-202-R-2008	3.25	TOMS-325-R-2009	4.25
TOMS-401-R-2008	2.50	TUSC-121-R-2009	4.00
TUSC-107-R-2008	3.50	TUSC-231-R-2009	4.25
TUSC-406-R-2008	3.00	TUSC-432-R-2009	3.75

Site	DOC	Turbidity	Total Phosphorus	Total Nitrogen	Ortho-phosphate (mg/l)	Ammonia-N	Nitrite-N	Nitrite-N + Nitrate-N	Nitrate-N (mg/l) [calculated]	TKN (mg/l) [calculated]
	(mg/l)	(NTU)	(mg/l)	(mg/l)		(mg/l)	(mg/l)	(mg/l)		
BALL-102-R-2008	0.9164	1.14	0.012	2.9827	0.0109	0.0072	0.0021	2.7314	2.7293	0.2513
BALL-105-R-2008	3.591	12	0.0526	5.4367	0.0112	0.0129	0.0158	4.9199	4.9041	0.5168
BENN-101-R-2008	2.3728	1.1	0.0054	0.468	0.0032	0.0071	0.0019	0.31	0.3081	0.158
BENN-105-R-2008	1.4009	0.96	0.0143	13.3967	0.0011	0.0077	0.0109	10.3688	10.3579	3.0279
BENN-204-R-2008	0.6532	0.99	0.0054	1.7555	0.0011	0.0043	0.002	1.5417	1.5397	0.2138
BUSL-107-R-2008	1.359	3.9	0.013	4.3356	0.0039	0.0134	0.0074	3.8374	3.83	0.4982
BUSL-301-R-2008	1.5772	1.18	0.0302	2.8111	0.0101	0.0106	0.0162	2.4078	2.3916	0.4033
BUSU-104-R-2008	0.6812	3.33	0.004	3.0764	0.0011	0.0317	0.0041	2.8115	2.8074	0.2649
BUSU-109-R-2008	0.4796	7.75	0.0047	7.1249	0.0011	0.0118	0.0026	5.4099	5.4073	1.715
BUSU-206-R-2008	0.8736	0.87	0.0145	3.7632	0.0034	0.0103	0.0406	3.2713	3.2307	0.4919
CARR-106-R-2008	0.4532	3.45	0.0037	1.0071	0.0011	0.0062	0.0019	0.8533	0.8514	0.1538
CARR-111-R-2008	1.039	2.64	0.0096	0.3279	0.0062	0.006	0.0019	0.2043	0.2024	0.1236
CATO-102-R-2008	1.7424	3.09	0.0055	0.5111	0.0033	0.0044	0.0019	0.3677	0.3658	0.1434
CATO-204-R-2008	1.7582	4.55	0.0349	3.668	0.0224	0.0134	0.0105	3.1774	3.1669	0.4906
CATO-405-R-2008	1.4703	2.17	0.0341	1.4057	0.0425	0.0193	0.015	0.7665	0.7515	0.6392
FISH-201-R-2008	1.4411	2.94	0.0078	0.4156	0.0011	0.0028	0.0019	0.1604	0.1585	0.2552
FISH-203-R-2008	1.3062	0.83	0.0037	0.2235	0.0011	0.0048	0.0019	0.1193	0.1174	0.1042
GLAD-108-R-2008	5.7597	18.4	0.2932	10.0402	0.238	0.0207	0.0171	7.2176	7.2005	2.8226
GLAD-109-R-2008	0.9196	0.65	0.0623	11.5109	0.0095	0.0118	0.067	9.7343	9.6673	1.7766
HUNT-105-R-2008	1.6961	1.11	0.0037	0.7233	0.0011	0.0043	0.0019	0.6189	0.617	0.1044
HUNT-302-R-2008	1.7722	2.08	0.0309	1.2137	0.0273	0.0065	0.0048	0.9422	0.9374	0.2715
HUNT-303-R-2008	1.5012	1.08	0.052	0.8885	0.0546	0.0439	0.0048	0.6644	0.6596	0.2241
ISRA-107-R-2008	1.3891	4.09	0.0155	3.7072	0.0031	0.0065	0.011	3.3189	3.3079	0.3883
ISRA-109-R-2008	1.9728	11.5	0.0143	0.6329	0.0011	0.01	0.0019	0.4142	0.4123	0.2187
ISRA-301-R-2008	1.4308	7.78	0.0303	3.404	0.0209	0.0124	0.0079	3.1075	3.0996	0.2965
LCCS-101-R-2008	1.2993	23.1	0.0393	5.5175	0.014	0.0106	0.0025	5.0468	5.0443	0.4707
LCCS-103-R-2008	0.3454	12.6	0.0234	4.8617	0.0183	0.0104	0.0047	4.4615	4.4568	0.4002
LCCS-202-R-2008	1.8492	1.85	0.0152	3.9935	0.0075	0.0059	0.008	3.4993	3.4913	0.4942
LINL-103-R-2008	1.1072	2.86	0.1548	13.4543	0.1347	0.0153	0.0134	11.743	11.7296	1.7113
LINL-104-R-2008	0.7995	3.7	0.0157	2.6912	0.0114	0.0055	0.0019	2.4162	2.4143	0.275

Table O-2. (Continued)										
Site	DOC	Turbidity	Total Phosphorus	Total Nitrogen	Ortho-phosphate (mg/l)	Ammonia-N	Nitrite-N	Nitrite-N + Nitrate-N	Nitrate-N (mg/l)	TKN (mg/l)
	(mg/l)	(NTU)	(mg/l)	(mg/l)		(mg/l)	(mg/l)	(mg/l)	[calculated]	[calculated]
LINU-111-R-2008	1.1971	2.14	0.0169	3.673	0.0054	0.0107	0.006	3.3375	3.3315	0.3355
LINU-405-R-2008	1.2552	3.85	0.0187	3.5906	0.0066	0.009	0.007	3.2661	3.2591	0.3245
LINU-407-R-2008	1.272	4.78	0.0192	3.6738	0.0052	0.0079	0.0075	3.2834	3.2759	0.3904
LIPI-102-R-2008	1.2754	17.4	0.0961	7.8896	0.0323	0.0157	0.0175	6.5143	6.4968	1.3753
LIPI-201-R-2008	1.2801	5.39	0.0465	5.3248	0.0306	0.0099	0.0085	4.8059	4.7974	0.5189
LIPI-307-R-2008	0.8463	4.67	0.0201	6.0589	0.0096	0.0158	0.015	4.9802	4.9652	1.0787
MIDD-101-R-2008	1.3005	3.32	0.0317	1.4042	0.0248	0.0111	0.0051	1.1335	1.1284	0.2707
MIDD-109-R-2008	1.3247	2.61	0.004	1.3122	0.0035	0.0053	0.0019	1.1562	1.1543	0.156
MODS-108-R-2008	0.3343	19.3	0.0269	11.9598	0.0011	0.0117	0.0064	8.8812	8.8748	3.0786
MODS-110-R-2008	1.1695	3.68	0.0129	5.1143	0.0035	0.0128	0.0154	4.4657	4.4503	0.6486
MODS-115-R-2008	1.1784	8.97	0.0284	6.6875	0.0063	0.0176	0.0131	5.3016	5.2885	1.3859
OWEN-101-R-2008	2.4298	2.45	0.0414	2.2093	0.0271	0.0147	0.0058	1.7691	1.7633	0.4402
OWEN-302-R-2008	1.1892	1.35	0.0078	1.1253	0.004	0.0061	0.0035	0.8996	0.8961	0.2257
OWEN-309-R-2008	1.1939	1.32	0.0075	1.1192	0.0036	0.0071	0.0029	0.9063	0.9034	0.2129
POTD-205-R-2008	1.7949	3.39	0.0334	3.1632	0.0178	0.0077	0.0111	2.8909	2.8798	0.2723
POTD-301-R-2008	1.5474	3.11	0.0306	5.19	0.0132	0.0101	0.0181	4.6254	4.6073	0.5646
TOMS-202-R-2008	0.9113	1.44	0.0037	1.084	0.0011	0.004	0.0019	0.8716	0.8697	0.2124
TOMS-401-R-2008	2.0276	3.05	0.0202	1.4954	0.0167	0.0113	0.004	1.2065	1.2025	0.2889
TUSC-107-R-2008	3.5914	3.87	0.0132	2.0422	0.0029	0.007	0.002	1.6102	1.6082	0.432
TUSC-406-R-2008	5.3211	48.9	0.0687	1.7101	0.0168	0.0115	0.0048	1.0857	1.0809	0.6244
BALL-123-R-2009	2.0157	4.84	0.0726	2.2776	0.0486	0.4074	0.0408	1.7846	1.7438	0.4930
BALL-126-R-2009	1.8405	2.16	0.0199	2.4781	0.0043	0.0117	0.0052	2.4041	2.3989	0.0740
BALL-127-R-2009	2.3418	13.30	0.0289	0.7582	0.0011	0.0080	0.0034	0.5154	0.5120	0.2428
BENN-130-R-2009	1.1442	4.23	0.0247	2.9529	0.0083	0.0116	0.0055	2.9401	2.9346	0.0128
BENN-427-R-2009	1.1820	5.77	0.0219	2.9282	0.0080	0.0121	0.0047	2.9213	2.9166	0.0069
BUSL-322-R-2009	1.4754	4.49	0.0554	2.1871	0.0255	0.0364	0.0280	2.0289	2.0009	0.1582
BUSL-324-R-2009	1.6288	3.91	0.0470	2.2782	0.0221	0.0244	0.0209	2.1567	2.1358	0.1215
BUSL-330-R-2009	1.5663	5.13	0.0683	2.2708	0.0344	0.0406	0.0288	2.0242	1.9954	0.2466
BUSU-126-R-2009	0.2358	11.00	0.0281	4.2265	0.0083	0.0125	0.0046	4.0797	4.0751	0.1468
BUSU-227-R-2009	1.0459	2.50	0.0340	2.2302	0.0095	0.0128	0.0140	2.1522	2.1382	0.0780

Table O-2. (Continued)										
Site	DOC	Turbidity	Total Phosphorus	Total Nitrogen	Ortho-phosphate (mg/l)	Ammonia-N	Nitrite-N	Nitrite-N + Nitrate-N	Nitrate-N (mg/l)	TKN (mg/l)
	(mg/l)	(NTU)	(mg/l)	(mg/l)		(mg/l)	(mg/l)	(mg/l)	[calculated]	[calculated]
CARR-129-R-2009	2.1718	10.10	0.0272	0.8144	0.0011	0.0146	0.0019	0.6781	0.6762	0.1363
CARR-135-R-2009	0.9061	23.00	0.0246	0.5661	0.0138	0.0057	0.0019	0.3761	0.3742	0.1900
CARR-222-R-2009	1.7765	12.50	0.0485	2.7932	0.0094	0.0334	0.0086	2.6524	2.6438	0.1408
CATO-132-R-2009	1.2210	6.98	0.0409	2.3324	0.0098	0.0082	0.0019	2.2538	2.2519	0.0786
CATO-135-R-2009	1.2935	3.75	0.0252	0.7543	0.0098	0.0143	0.0019	0.6330	0.6311	0.1213
FISH-222-R-2009	1.4644	4.11	0.0194	0.2519	0.0011	0.0093	0.0019	0.1083	0.1064	0.1436
FISH-224-R-2009	1.3772	4.52	0.0237	0.3899	0.0056	0.0099	0.0019	0.2166	0.2147	0.1733
FISH-226-R-2009	1.0406	3.83	0.0180	0.2372	0.0011	0.0061	0.0019	0.0919	0.0900	0.1453
GLAD-126-R-2009	4.0775	7.08	0.1291	9.2869	0.0826	0.1636	0.0510	8.7292	8.6782	0.5577
GLAD-128-R-2009	2.2252	13.90	0.0569	8.918	0.0011	0.0277	0.0560	6.8808	6.8248	2.0372
GLAD-129-R-2009	1.0961	0.65	0.0611	6.58	0.0066	0.0125	0.0290	6.2170	6.1880	0.3630
HUNT-133-R-2009	0.5734	2.97	0.0071	0.2384	0.0011	0.0039	0.0019	0.1853	0.1834	0.0531
HUNT-225-R-2009	0.8767	1.69	0.0080	0.1793	0.0011	0.0039	0.0019	0.1253	0.1234	0.0540
ISLA-226-R-2009	1.4164	11.30	0.0350	2.7446	0.0076	0.0255	0.0179	2.6988	2.6809	0.0458
ISRA-129-R-2009	0.5704	15.80	0.0200	5.9239	0.0011	0.0088	0.0231	5.5766	5.5535	0.3473
LCCS-125-R-2009	2.7901	9.35	0.0810	3.625	0.0515	0.0232	0.0091	3.5490	3.5399	0.0760
LCCS-226-R-2009	2.3956	7.16	0.0519	3.0731	0.0234	0.0097	0.0074	3.0023	2.9949	0.0708
LINL-126-R-2009	0.3464	19.40	0.0710	8.9928	0.0101	0.0180	0.0119	8.7549	8.7430	0.2379
LINL-423-R-2009	2.4160	11.10	0.0379	2.0257	0.0011	0.0193	0.0173	1.7055	1.6882	0.3202
LINL-424-R-2009	1.4994	36.60	0.0841	2.7936	0.0111	0.0305	0.0204	2.6379	2.6175	0.1557
LINU-121-R-2009	0.7861	19.70	0.0493	3.2412	0.0071	0.0566	0.0186	3.1490	3.1304	0.0922
LINU-134-R-2009	0.8504	3.10	0.0211	5.475	0.0040	0.0188	0.0103	5.3334	5.3231	0.1416
LIPI-128-R-2009	3.4151	9.00	0.0805	5.0531	0.0437	0.0179	0.0105	4.7472	4.7367	0.3059
LIPI-234-R-2009	0.9432	21.90	0.0726	4.1212	0.0166	0.0380	0.0194	4.1063	4.0869	0.0149
MIDD-124-R-2009	0.7534	7.63	0.0327	0.9113	0.0076	0.0165	0.0050	0.7798	0.7748	0.1315
MIDD-126-R-2009	1.3369	5.95	0.0101	0.682	0.0057	0.0081	0.0019	0.5917	0.5898	0.0903
MIDD-135-R-2009	2.0346	2.24	0.0083	0.3927	0.0022	0.0052	0.0019	0.2786	0.2767	0.1141
MODS-121-R-2009	0.7207	48.10	0.1412	15.5094	0.0083	0.0204	0.0091	15.0935	15.0844	0.4159
MODS-124-R-2009	0.5053	19.60	0.0201	12.5882	0.0011	0.0208	0.0146	11.6801	11.6655	0.9081
OWEN-122-R-2009	1.3504	3.39	0.0158	0.1907	0.0046	0.0077	0.0019	0.0862	0.0843	0.1045

Table O-2. (Continued)

Site	DOC	Turbidity	Total Phosphorus	Total Nitrogen	Ortho-phosphate (mg/l)	Ammonia-N	Nitrite-N	Nitrite-N + Nitrate-N	Nitrate-N	TKN
	(mg/l)	(NTU)	(mg/l)	(mg/l)		(mg/l)	(mg/l)	(mg/l)	(mg/l) [calculated]	(mg/l) [calculated]
OWEN-224-R-2009	2.3109	5.14	0.0242	0.8399	0.0066	0.0162	0.0082	0.6087	0.6005	0.2312
POTD-132-R-2009	6.4136	18.40	0.0903	4.3554	0.0465	0.0309	0.0197	3.7634	3.7437	0.5920
POTD-133-R-2009	2.3124	21.40	0.0499	0.9997	0.0070	0.0136	0.0046	0.7240	0.7194	0.2757
POTD-328-R-2009	2.0567	14.40	0.0643	5.3673	0.0183	0.0587	0.0329	4.9089	4.8760	0.4584
TOMS-224-R-2009	5.0975	4.28	0.0349	0.4499	0.0073	0.0118	0.0019	0.0119	0.0100	0.4380
TOMS-234-R-2009	5.7913	5.12	0.0894	3.3356	0.0516	0.0296	0.0314	2.8697	2.8383	0.4659
TOMS-325-R-2009	1.1092	5.28	0.0157	0.4176	0.0102	0.0059	0.0019	0.3296	0.3277	0.0880
TUSC-121-R-2009	0.7365	2.87	0.0096	0.084	0.0011	0.0047	0.0019	0.0181	0.0162	0.0659
TUSC-231-R-2009	1.5292	4.63	0.0203	1.6032	0.0062	0.0152	0.0048	1.4913	1.4865	0.1119
TUSC-432-R-2009	1.5315	4.57	0.0291	0.3514	0.0155	0.0178	0.0044	0.1859	0.1815	0.1655

