

Figure 3-7a. TRB Taxa List/Metric Summary Sheet (Fall 2011)

Taxa List						
Order/Major Group	Family	Genus species	Habit	Feeding Group	Tolerance Value	Quantity
Oligochaeta	Lumbriculidae	-	BUR	CG	8	34
Gastropoda	Physidae	-	CLI	SC	8	4
Isopoda	Asellidae	Caecidotea sp.	SPR	CG	8	2
Decapoda	Cambaridae	Cambarus carinirostris	SPR	CG	6	4
Coleoptera	Hydrophilidae	Hydrobius sp.	CLI	PR	4	1
Trichoptera	Hydropsychidae	Hydropsyche betteni	CLI	CF	5	14
Trichoptera	Hydropsychidae	Cheumatopsyche sp.	CLI	CF	6	2
Diptera	Tipulidae	-	BUR	SH	3	4
Diptera	Syrphidae	-	BUR	CG	10	7
Diptera	Culicidae	Aedes sp.	SWI	CF	8	2
Diptera	Chironomidae	-	BUR	CG	6	18
Total Organisms Collected						92

Virginia Stream Condition Index Metrics

Water Quality Metrics	Value	
Total Taxa Richness (Family)	10	
EPT Richness (Family)	1	
Percent Ephemeroptera	0.0	
Percent PT-H	0.0	
Percent Scrapers	4.3	
Percent Chironomidae	19.6	
Percent Top Two Dominant Families	56.5	(Lumbriculidae, Chironomidae)
Family Biotic Index (DEQ)	7.03	FAIRLY POOR
IBI Score	31.2	SEVERE STRESS

Fairfax Index of Macroinvertebrate Biotic Integrity (Piedmont)

Water Quality Metrics	Value	
Total Taxa Richness	11	
EPT Richness	2	
Percent EPT	17.4	
Percent T - H	0.0	
Percent Coleoptera	1.1	
Family Biotic Index (VERSAR)	7.66	POOR
Percent Dominance	37.0	(Lumbriculidae)
Percent Clingers and Plecoptera	22.8	
Percent Shredders	4.3	
Percent Predators	1.1	
IBI Score	46.0	FAIR

Benthic Index of Biotic Integrity for Maryland Streams (non-coastal)

Water Quality Metrics	Value	Adjusted Score	
Total Taxa Richness	11	1	
EPT Richness	2	1	
Ephemeroptera Richness	0	1	
Diptera Richness	4	1	
Percent Ephemeroptera	0.0	1	
Percent Tanytarsini	0.0	1	
Intolerant Taxa Richness	1	1	
Percent Tolerant Taxa	53.3	1	
Percent Collectors	70.7	5	
IBI Score		1.4	POOR

Additional Metric Computations

Water Quality Metrics	Value	
Hilsenhoff Biotic Index (HBI)	6.91	FAIRLY POOR
Simpson's Index of Diversity (SID)	0.79	
Effective Number of Taxa	4.74	

Feeding Group Community Distribution

Feeding Group	Quantity	Rel. Abundance (%)
Shredders (SH)	4	4
Scrapers (SC)	4	4
Predators (PR)	1	1
Collector Gatherers (CG)	65	71
Collector Filterers (CF)	18	20

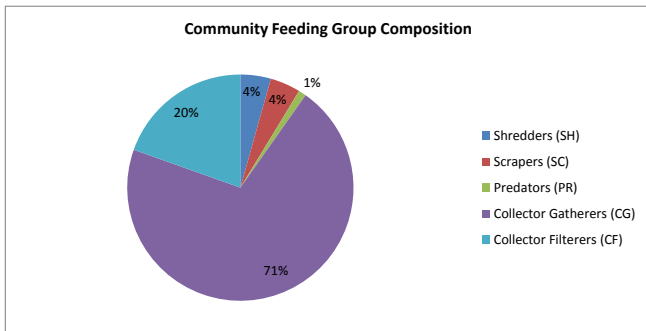


Figure 3-7b. TRB Taxa List/Metric Summary Sheet (Spring 2012)

Taxa List

Order/Major Group	Family	Genus species	Habit	Feeding Group	Tolerance Value	Quantity
Oligochaeta	Lumbriculidae	-	BUR	CG	8	1
Platyhelminthes	Planariidae	-	BUR	CG	8	1
Gastropoda	Physidae	-	CLI	SC	8	11
Odonata/Anisoptera	Calopterygidae	Calopteryx sp.	CLM	PR	5	2
Diptera	Tipulidae	Tipula sp.	BUR	SH	4	6
Diptera	Simuliidae	Simulium sp.	CLI	CF	3	33
Diptera	Chironomidae	-	BUR	CG	6	52
Total Organisms Collected						106

Virginia Stream Condition Index Metrics

Water Quality Metrics	Value	
Total Taxa Richness (Family)	7	
EPT Richness (Family)	0	
Percent Ephemeroptera	0.0	
Percent PT-H	0.0	
Percent Scrapers	10.4	
Percent Chironomidae	49.1	
Percent Top Two Dominant Families	80.2	(Chironomidae, Simuliidae)
Family Biotic Index (DEQ)	6.06	FAIR
IBI Score	23.7	SEVERE STRESS

Fairfax Index of Macroinvertebrate Biotic Integrity (Piedmont)

Water Quality Metrics	Value	
Total Taxa Richness	7	
EPT Richness	0	
Percent EPT	0.0	
Percent T - H	0.0	
Percent Coleoptera	0.0	
Family Biotic Index (VERSAR)	5.56	FAIR
Percent Dominance	49.1	(Chironomidae)
Percent Clingers and Plecoptera	41.5	
Percent Shredders	5.7	
Percent Predators	1.9	
IBI Score	41.2	FAIR

Benthic Index of Biotic Integrity for Maryland Streams (non-coastal)

Water Quality Metrics	Value	Adjusted Score	
Total Taxa Richness	7	1	
EPT Richness	0	1	
Ephemeroptera Richness	0	1	
Diptera Richness	3	1	
Percent Ephemeroptera	0.0	1	
Percent Tanytarsini	0.0	1	
Intolerant Taxa Richness	1	1	
Percent Tolerant Taxa	12.3	3	
Percent Collectors	50.9	5	
IBI Score		1.7	POOR

Additional Metric Computations

Water Quality Metrics	Value	
Hilsenhoff Biotic Index (HBI)	5.18	GOOD
Simpson's Index of Diversity (SID)	0.65	
Effective Number of Taxa	2.84	

Feeding Group Community Distribution

Feeding Group	Quantity	Rel. Abundance (%)
Shredders (SH)	6	6
Scrapers (SC)	11	10
Predators (PR)	2	2
Collector Gatherers (CG)	54	51
Collector Filterers (CF)	33	31

