

Figure 3-9a. GUB 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	9
Gastropoda	Physidae	-	CLI	SC	8	1
Gastropoda	Planorbidae	-	CLI	SC	7	1
Amphipoda	Crangonyctidae	Crangonyx sp.	SWI	CG	6	1
Isopoda	Caecidotea	-	SPR	CG	8	2
Ephemeroptera	Baetidae	Baetis sp.	SWI	CG	2	41
Trichoptera	Hydropsychidae	Hydropsyche betteni	CLI	CF	5	8
Trichoptera	Hydropsychidae	Cheumatopsyche sp.	CLI	CF	6	15
Diptera	Tipulidae	-	BUR	SH	3	12
Diptera	Chironomidae	-	BUR	CG	6	13
Total Organisms Collected						103

Virginia Stream Condition Index Metrics

Water Quality Metrics	Value	
Total Taxa Richness (Family)	9	
EPT Richness (Family)	2	
Percent Ephemeroptera	39.8	
Percent PT-H	0.0	
Percent Scrapers	1.9	
Percent Chironomidae	12.6	
Percent Top Two Dominant Families	62.1	(Baetidae, Hydropsychidae)
Family Biotic Index (DEQ)	5.10	GOOD
IBI Score	42.7	STRESS

Fairfax Index of Macroinvertebrate Biotic Integrity (Piedmont)

Water Quality Metrics	Value	
Total Taxa Richness	10	
EPT Richness	3	
Percent EPT	62.1	
Percent T - H	0.0	
Percent Coleoptera	0.0	
Family Biotic Index (VERSAR)	4.72	GOOD
Percent Dominance	7.8	(Cheumatopsyche sp.)
Percent Clingers and Plecoptera	24.3	
Percent Shredders	11.7	
Percent Predators	0.0	
IBI Score	53.3	FAIR

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

Water Quality Metrics	Value	Adjusted Score	
Total Taxa Richness	10	1	
EPT Richness	3	1	
Ephemeroptera Richness	1	1	
Diptera Richness	2	1	
Percent Ephemeroptera	39.8	5	
Percent Tanytarsini	0	1	
Intolerant Taxa Richness	2	1	
Percent Tolerant Taxa	12.6	3	
Percent Collectors	64.1	5	
IBI Score		2.1	POOR

Additional Metric Computations

Water Quality Metrics	Value	
Hilsenhoff Biotic Index (HBI)	4.22	VERY GOOD
Simpson's Index of Diversity (SID)	0.78	
Effective Number of Taxa	4.47	

Feeding Group Community Distribution

Feeding Group	Quantity	Rel. Abundance (%)
Shredders (SH)	12	12
Scrapers (SC)	2	2
Predators (PR)	0	0
Collector Gatherers (CG)	66	64
Collector Filterers (CF)	23	22

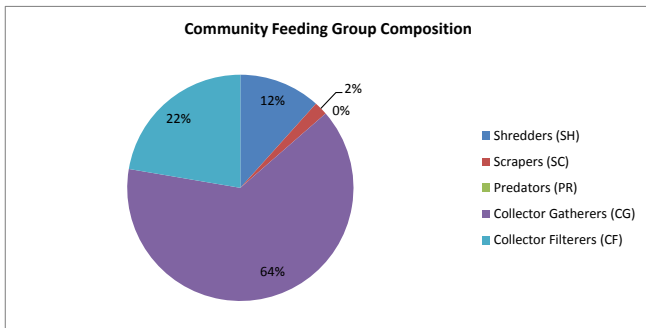


Figure 3-9b. GUB Taxa List/Metric Summary Sheet (Spring 2012)

Taxa List						
Order/Major Group	Family	Genus species	Habit	Feeding Group	Tolerance Value	Quantity
Oligochaeta	Lumbriculidae	-	BUR	CG	8	1
Gastropoda	Physidae	-	CLI	SC	8	37
Gastropoda	Planorbidae	-	CLI	SC	7	7
Decapoda	Cambaridae	Cambarus carinirostris	SPR	SH	6	1
Amphipoda	Crangonyctidae	Crangonyx sp.	SWI	CG	6	7
Ephemeroptera	Baetidae	Baetis sp.	SWI	CG	2	5
Trichoptera	Hydropsychidae	Cheumatopsyche sp.	CLI	CF	6	1
Diptera	Sciomyzidae	-	CLI	PR	10	1
Diptera	Tipulidae	Tipula sp.	BUR	SH	4	1
Diptera	Simuliidae	Simulium sp.	CLI	CF	3	4
Diptera	Chironomidae	-	BUR	CG	6	45
Total Organisms Collected						110

Virginia Stream Condition Index Metrics

Water Quality Metrics	Value	
Total Taxa Richness (Family)	11	
EPT Richness (Family)	2	
Percent Ephemeroptera	4.5	
Percent PT-H	0.0	
Percent Scrapers	40.0	
Percent Chironomidae	40.9	
Percent Top Two Dominant Families	74.5	(Chironomidae, Physidae)
Family Biotic Index (DEQ)	6.66	FAIRLY POOR
IBI Score	37.3	SEVERE STRESS

Fairfax Index of Macroinvertebrate Biotic Integrity (Piedmont)

Water Quality Metrics	Value	
Total Taxa Richness	11	
EPT Richness	2	
Percent EPT	5.5	
Percent T - H	0.0	
Percent Coleoptera	0.0	
Family Biotic Index (VERSAR)	6.48	FAIR
Percent Dominance	40.9	(Chironomidae)
Percent Clingers and Plecoptera	45.5	
Percent Shredders	1.8	
Percent Predators	0.9	
IBI Score	53.3	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	1	1	
Diptera Richness	4	1	
Percent Ephemeroptera	4.5	1	
Percent Tanytarsini	0	1	
Intolerant Taxa Richness	2	1	
Percent Tolerant Taxa	41.8	3	
Percent Collectors	52.7	5	
IBI Score		1.7	POOR

Additional Metric Computations

Water Quality Metrics	Value	
Hilsenhoff Biotic Index (HBI)	6.48	FAIR
Simpson's Index of Diversity (SID)	0.71	
Effective Number of Taxa	3.42	

Feeding Group Community Distribution

Feeding Group	Quantity	Rel. Abundance (%)
Shredders (SH)	2	2
Scrapers (SC)	44	40
Predators (PR)	1	1
Collector Gatherers (CG)	58	53
Collector Filterers (CF)	5	5

