

Figure 3-3a. FMR2 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	2
Isopoda	Asellidae	Caecidotea sp.	SPR	CG	8	1
Ephemeroptera	Baetidae	Baetis sp.	SWI	CG	2	7
Odonata/Anisoptera	Coenagrionidae	Argia sp.	CLM	PR	5	4
Odonata/Anisoptera	Coenagrionidae	Enallagma sp.	CLM	PR	8	3
Trichoptera	Hydropsychidae	Hydropsyche betteni	CLI	CF	5	5
Diptera	Culicidae	Aedes sp.	SWI	CF	8	1
Diptera	Tipulidae	Tipula sp.	BUR	SH	4	3
Diptera	Simuliidae	Simulium sp.	CLI	CF	3	2
Diptera	Empididae	Hemerodromia sp.	SPR	PR	6	1
Diptera	Chironomidae	-	BUR	CG	6	80
Total Organisms Collected						109

Virginia Stream Condition Index Metrics

Water Quality Metrics	Value	
Total Taxa Richness (Family)	10	
EPT Richness (Family)	2	
Percent Ephemeroptera	6.4	
Percent PT-H	0.0	
Percent Scrapers	0.0	
Percent Chironomidae	73.4	
Percent Top Two Dominant Families	79.8	(Chironomidae, Baetidae)
Family Biotic Index (DEQ)	6.06	FAIR
IBI Score	23.5	SEVERE STRESS

Fairfax Index of Macroinvertebrate Biotic Integrity (Piedmont)

Water Quality Metrics	Value	
Total Taxa Richness	11	
EPT Richness	2	
Percent EPT	11.0	
Percent T - H	0.0	
Percent Coleoptera	0.0	
Family Biotic Index (VERSAR)	6.38	FAIR
Percent Dominance	73.4	(Chironomidae)
Percent Clingers and Plecoptera	6.4	
Percent Shredders	2.8	
Percent Predators	7.3	
IBI Score	37.1	POOR

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	5	1	
Percent Ephemeroptera	6.4	3	
Percent Tanytarsini	0	1	
Intolerant Taxa Richness	2	1	
Percent Tolerant Taxa	6.4	5	
Percent Collectors	82.6	5	
IBI Score		2.1	POOR

Additional Metric Computations

Water Quality Metrics	Value	
Hilsenhoff Biotic Index (HBI)	5.68	FAIR
Simpson's Index of Diversity (SID)	0.45	
Effective Number of Taxa	1.82	

Feeding Group Community Distribution

Feeding Group	Quantity	Rel. Abundance (%)
Shredders (SH)	3	3
Scrapers (SC)	0	0
Predators (PR)	8	7
Collector Gatherers (CG)	90	83
Collector Filterers (CF)	8	7

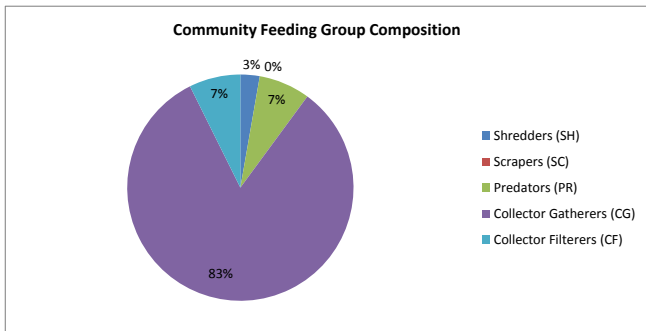


Figure 3-3b. FMR2 Taxa List/Metric Summary Sheet (Spring 2012)

Taxa List

Order/Major Group	Family	Genus species	Habit	Feeding Group	Tolerance Value	Quantity
Oligochaeta	Lumbriculidae	-	BUR	CG	8	6
Platyhelminthes	Planariidae	-	BUR	CG	8	1
Gastropoda	Planorbidae	-	CLI	SC	7	1
Isopoda	Asellidae	Caecidotea sp.	SPR	CG	8	16
Ephemeroptera	Baetidae	Baetis sp.	SWI	CG	2	13
Diptera	Tipulidae	Antocha sp.	BUR	CG	4	6
Diptera	Simuliidae	Simulium sp.	CLI	CF	3	11
Diptera	Chironomidae	-	BUR	CG	6	51
Total Organisms Collected						105

Virginia Stream Condition Index Metrics

Water Quality Metrics	Value	
Total Taxa Richness (Family)	8	
EPT Richness (Family)	1	
Percent Ephemeroptera	12.4	
Percent PT-H	0.0	
Percent Scrapers	1.0	
Percent Chironomidae	48.6	
Percent Top Two Dominant Families	63.8	(Chironomidae, Asellidae)
Family Biotic Index (DEQ)	6.03	FAIR
IBI Score	28.7	SEVERE STRESS

Fairfax Index of Macroinvertebrate Biotic Integrity (Piedmont)

Water Quality Metrics	Value	
Total Taxa Richness	8	
EPT Richness	1	
Percent EPT	12.4	
Percent T - H	0.0	
Percent Coleoptera	0.0	
Family Biotic Index (VERSAR)	5.32	GOOD
Percent Dominance	48.6	(Chironomidae)
Percent Clingers and Plecoptera	11.4	
Percent Shredders	0.0	
Percent Predators	0.0	
IBI Score	29.3	POOR

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

Water Quality Metrics	Value	Adjusted Score	
Total Taxa Richness	8	1	
EPT Richness	1	1	
Ephemeroptera Richness	1	1	
Diptera Richness	3	1	
Percent Ephemeroptera	12.4	3	
Percent Tanytarsini	0	1	
Intolerant Taxa Richness	2	1	
Percent Tolerant Taxa	22.9	3	
Percent Collectors	88.6	5	
IBI Score		1.9	POOR

Additional Metric Computations

Water Quality Metrics	Value	
Hilsenhoff Biotic Index (HBI)	5.52	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)	0	0
Scrapers (SC)	1	1
Predators (PR)	0	0
Collector Gatherers (CG)	93	89
Collector Filterers (CF)	11	10

