

WV SAVE OUR STREAMS ADVANCED SURVEY SUMMARY

Stream Monitor(s) Warm Springs Run Level 3 Date(s) 6/25/19
Swaim, Lehman, Macleod, Brooks, Wuster, Hook, Sage, Dean

Directions Near Widmyer School Start time 9:00

County Morgan

RR Miles _____ Station _____

Latitude

39	36	44
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 Longitude

78	14	15
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 Watershed Database code Warm Springs Run Widmyer20

WATER CHEMISTRY

	Result	Units		Result	Units		Result	Units
Temp. (°F or °C)	20	c	Alkalinity			Fecal coliform/E-coli		
pH	7.5		Nitrate/Nitrite	2		Iron	0	
Conductivity			Phosphates			Aluminum		
Dissolved O ₂			Total Dissolved Solids			Manganese		
Acidity			Turbidity	2	Jt;u	Other (describe below)		

Describe other conditions analyzed: _____

PHYSICAL CONDITIONS

Water clarity	<u>murky</u>	Algae color	<u>brown</u>
Water color	<u>none</u>	Algae abundance	<u>Scattered</u>
Water/Sediment odor	<u>none</u> <u>none</u>	Algae texture	<u>Even coating</u>
Streambed color	<u>brown</u>	Surface foam	<u>none</u>
Comments	_____		

Riffle width _____ Run width 9 Pool width _____

x	
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 Riffle depth _____ Run depth .43 Pool depth _____ Feet Meter
s
 Indicate units

Estimate	<table border="1"><tr><td></td></tr></table>		Count	<table border="1"><tr><td>x</td></tr></table>	x	Entire reach	<table border="1"><tr><td></td></tr></table>		Riffles only	<table border="1"><tr><td></td></tr></table>	
x											
Silt/clay	Sand	Fine gravel	Coarse gravel	Cobble	Boulder	Bedrock	Woody debris				
<u>2</u>			<u>19</u>								
Index			Woody debris adjustment		% Riffles	% Runs	% Pools				
						<u>x</u>					

HABITAT CONDITIONS

Attachment sites	<u>20</u>	Channel flow status	<u>19</u>	Embeddedness	<u>15</u>		
Riffle frequency	<u>20</u>	Channel alterations	<u>20</u>	Bank veg. protection	<table border="1"><tr><td>2</td><td>2</td></tr></table>	2	2
2	2						
Velocity/depth	<u>19</u>	Sediment deposition	<u>4</u>	Bank stability	<table border="1"><tr><td>2</td><td>2</td></tr></table>	2	2
2	2						

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Total Score

145

Channel shade

>80%

Riparian buffer width

10

10

Integrity Rating

good

Comments

BIOLOGICAL CONDITIONS

Richness

Total Taxa
EPT Taxa

17
7

Composition

% EPT Abundance
% Dominance

55.4
46.2

Tolerance

Biotic Index
% Tolerant
Stream Score
Integrity Rating

4.49
3.1
72.9
suboptimal

Other aquatic organisms observed or collected (e.g. fish, salamanders etc.), or additional comments:

Discharge (cfs)

3.31

Water level

Low	Normal	High	No flow
		x	

Current/past weather conditions:

Sunny 75degrees past rain showers

LAND USE IMPACTS: Indicate the types of land uses that affect your stream reach and their approximate location using the code: (S) streamside, (M) within ¼ mile, and (W) within the watershed. Also estimate the level of impact with the numeric codes (1) slight, (2) moderate, or (3) for high impacts.

	Impact	Location
Single family residences	1	w
Sub-urban developments		
Urban areas		
Industrial areas		
Parking lots, malls etc.	1	w
Bridges		
Paved roads	1	w
Unpaved roads		
Active construction		
Parks, trails etc		
Other recreation		
Landfills		

	Impact	Location
Trash dumps		
Intensive feedlots		
Pastureland	1	w
Cropland		
Oil & gas wells		
Logging		
Mountaintop mining		
Abandoned mining		
Deep mining		
Quarries		
Other (describe)		

Comments:

Pipes? Yes No

BENTHIC MACROINVERTEBRATES: Record the total number of each macroinvertebrate collected. Note: In the VAD the macroinvertebrates are recorded in three columns based upon their tolerance rating.

Low	Total	Moderate	Total	High	Total
Ameletidae (Ameletid minnow mayfly)		Baetidae (Small minnow mayfly)		Coenagrionidae (Narrow-wing damselfly)	
Ephemerelellidae (Spiny-crawler mayfly)		Beatiscidae (Armored mayfly)		Lestidae (Spread-wing damselfly)	
Heptageniidae (Flatheaded mayfly)	6	Caenidae (Square-gilled mayfly)		Libellulidae (Skimmer dragonfly)	2
Isonychiidae (Brush-legged mayfly)	4	Ephemeraeidae (Burrowing mayfly)		Chrysomelidae (Reed beetle)	
Leptophlebiidae (Prong-gilled mayfly)		Potamanthidae (Hackle-gilled mayfly)		Dytiscidae (Predacious diving beetle)	
Siphonuridae (Primitive minnow mayfly)		Tricorythidae (Stout-crawler mayfly)		Haliplidae (Crawling water beetle)	
Capniidae (Small winter stonefly)	1	Hydropsychidae (Common netspinner)	90	Hydrophilidae (Water scavenger beetle)	
Chloroperlidae (Green stonefly)		Hydroptilidae (Purse-case caddisfly)	1	Belostomatidae (Giant water bug)	
Leuctridae (Rolled-wing stonefly)		Molannidae (Hooded-case caddisfly)		Corixidae (Water boatman)	
Nemouridae (Little brown stonefly)		Phryganeidae (Giant-case caddisfly)		Gerridae/Veliidae (Water striders)	
Perlidae (Common stonefly)		Polycentropodidae (Tube-net caddisfly)		Hydrometridae (Water measurer)	

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Perlodidae (Patterned stonefly)		Psychomiidae (Trumpet-net caddisfly)		Nepidae (Water scorpion)	
Peltoperlidae (Roach-like stonefly)		Pyralidae (Aquatic moth)		Notonectidae (Backswimmer)	
Pteronarcyidae (Giant stonefly)		Calopterygidae (Broad-wing damselfly)		Ceratopogonidae (Biting midge)	
Taeniopterygidae (Large winter stonefly)		Gomphidae (Clubtail dragonfly)		Chironomidae (Non-biting midge)	3
Brachycentridae (Humpless-case caddisfly)		Dryopidae (Long-toed beetle)		Culicidae (Mosquito)	
Glossosomatidae (Saddle-case caddisfly)	3	Elmidae (Riffle beetle)	39	Muscidae (Muscid fly)	
Goeridae (Goerid-case caddisfly)		Gyrinidae (Whirligig beetle)		Psychodidae (Moth fly)	
Helicopsychidae (Snail-case caddisfly)		Sialidae (Alderfly)		Ptychopteridae (Phantom crane fly)	
Lepidostomatidae (Case-maker caddisfly)		Entomobryidae (Springtail)		Stratiomyidae (Soldier fly)	
Leptoceridae (Longhorn-case caddisfly)		Dixidae (Dixid midge)		Syrphidae (Rat-tailed maggot)	
Limnephilidae (Northern-case caddisfly)		Empididae (Dance fly)		Tabanidae (Horse fly)	
Philopotamidae (Finger-net caddisfly)	3	Simuliidae (Black fly)	2	Asellidae (Aquatic sowbug)	
Rhyacophilidae (Free-living caddisfly)		Tipulidae (Crane fly)	11	Ancylidae (Limpet snail)	
Uenoidae (Uenoid-case caddisfly)		Hydrachnidae (Water mites)		Physidae (Left-handed snail)	
Aeshnidae (Damner dragonfly)	4	Cambaridae (Crayfish)	4	Planorbidae (Orb snail)	
Cordulegastridae (Spiketail dragonfly)		Gammaridae (Sideswimmer)		Hirudinea (Leech)	
Psephenidae (Water penny)	20	Palaemonidae (Freshwater shrimp)		Nematoda (Round worm)	
Corydalidae (Hellgrammite/Fishfly)		Bithyniidae (Bithynid snail)		Nematomorpha (Horsehair worm)	
Athericidae (Watersnipe fly)		Pleuroceridae (Rock snail)		Oligochaeta (Aquatic worm)	1
Blephariceridae (Net-wing midge)		Viviparidae (Viviparid snail)		Turbellaria (Flatworms)	
Hydrobiidae (Pebble snail)	1	Corbiculidae (Asian clam)		Tolerance unknown	
Unionidae (Mussel)		Sphaeriidae (Pea clam)		Hydrozoa (Freshwater jellyfish)	
				Neuroptera (Spongilliflies)	
				Spongilla (Freshwater sponge)	