

WV SAVE OUR STREAMS ADVANCED SURVEY SUMMARY

Stream Monitor(s) Warm Springs Run Level 3 Date(s) 5/7/19  
 Direction Lehman, Dean, Hook, Wuster, Iliff, Macleod, Swaim  
Route 522 and Route 13 Start time 9:00 AM  
 County Morgan  
 RR Miles \_\_\_\_\_ Station Double T  
 Latitude 

39	35	49
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 Longitude 

78	10	14
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 Watershed Database code Warm Springs Run

**WATER CHEMISTRY**

	Result	Units		Result	Units		Result	Units
Temp. (°F or °C)	12	c	Alkalinity	115		Fecal coliform/E-coli		
pH	7.5		Nitrate/Nitrite	1		Iron		
Conductivity			Phosphates			Aluminum		
Dissolved O <sub>2</sub>	112		Total Dissolved Solids			Manganese		
Acidity			Turbidity	0	jtu	Other (describe below)		

Describe other conditions analyzed: \_\_\_\_\_

**PHYSICAL CONDITIONS**

Water clarity Clear Algae color Light Green  
 Water color None Algae abundance Scattered  
 Water/Sediment odor 

None	None
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 Algae texture Hairy  
 Streambed color brown Surface foam None  
 Comments \_\_\_\_\_

Riffle width \_\_\_\_\_ Run width 5.5 Pool width 

x	
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 Riffle depth \_\_\_\_\_ Run depth .55 Pool depth \_\_\_\_\_  
 Feet Meters  
 Indicate units

Estimate 

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 Count 

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 Silt/clay Sand Fine gravel Coarse gravel Cobble Entire reach 

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 Riffles only 

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 Boulder Bedrock Woody debris

Index	Woody debris adjustment	% Riffles	% Runs	% Pools

**HABITAT CONDITIONS**

Attachment sites	18	Channel flow status	20	Embeddedness	20
Riffle frequency	15	Channel alterations	20	Bank veg. protection	2 2
Velocity/depth	8	Sediment deposition	20	Bank stability	2 2

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**Total Score**

123

Channel shade

<40%

Riparian buffer width

2

2

Integrity Rating

Marginal

Comments

**BIOLOGICAL CONDITIONS**

**Richness**

Total Taxa  
EPT Taxa

13  
7

**Composition**

% EPT Abundance  
% Dominance

75.5  
38.2

**Tolerance**

Biotic Index  
% Tolerant

3.42  
10.2

**Stream Score**  
Integrity Rating

suboptimal

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

Discharge (cfs)

3.5

Water level

Low	Normal	High	No flow
		x	

Current/past weather conditions:

Sunny past rain

**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	2	s
Sub-urban developments		
Urban areas		
Industrial areas		
Parking lots, malls etc.	s	2
Bridges		
Paved roads	s	2
Unpaved roads		
Active construction		
Parks, trails etc	w	
Other recreation		
Landfills		

	Impact	Location
Trash dumps		
Intensive feedlots		
Pastureland	2	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)	
Ephemereleidae (Spiny-crawler mayfly)		Beatiscidae (Armored mayfly)		Lestidae (Spread-wing damselfly)	
Heptageniidae (Flatheaded mayfly)	39	Caenidae (Square-gilled mayfly)		Libellulidae (Skimmer dragonfly)	1
Isonychiidae (Brush-legged mayfly)		Ephemeraeidae (Burrowing mayfly)		Chrysomelidae (Reed beetle)	
Leptophlebiidae (Prong-gilled mayfly)	2	Potamanthidae (Hackle-gilled mayfly)		Dytiscidae (Predacious diving beetle)	
Siphonuridae (Primitive minnow mayfly)		Tricorythidae (Stout-crawler mayfly)		Halipilidae (Crawling water beetle)	
Capniidae (Small winter stonefly)		Hydropsychidae (Common netspinner)	4	Hydrophilidae (Water scavenger beetle)	
Chloroperlidae (Green stonefly)		Hydroptilidae (Purse-case caddisfly)		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)	4	Polycentropodidae (Tube-net caddisfly)		Hydrometridae (Water measurer)	

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Perlodidae (Patterned stonefly)	17	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)	9
Brachycentridae (Humpless-case caddisfly)		Dryopidae (Long-toed beetle)		Culicidae (Mosquito)	
Glossosomatidae (Saddle-case caddisfly)		Elmidae (Riffle beetle)	1	Muscidae (Muscid fly)	
Goeridae (Goerid-case caddisfly)		Gyrinidae (Whirligig beetle)		Psychodidae (Moth fly)	
Helicopsychidae (Snail-case caddisfly)		Sialidae (Alderfly)		Ptychopteridae (Phantom cranefly)	
Lepidostomatidae (Case-maker caddisfly)		Entomobryidae (Springtail)		Stratiomyidae (Soldier fly)	
Leptoceridae (Longhorn-case caddisfly)		Dixidae (Dixid midge)		Syrphidae (Rat-tailed maggot)	
Limnephilidae (Northern-case caddisfly)	1	Empididae (Dance fly)		Tabanidae (Horse fly)	1
Philopotamidae (Finger-net caddisfly)	10	Simuliidae (Black fly)		Asellidae (Aquatic sowbug)	
Rhyacophilidae (Free-living caddisfly)		Tipulidae (Crane fly)		Ancylidae (Limpet snail)	
Uenoidae (Uenoid-case caddisfly)		Hydrachnidae (Water mites)		Physidae (Left-handed snail)	
Aeshnidae (Damner dragonfly)		Cambaridae (Crayfish)		Planorbidae (Orb snail)	
Cordulegastridae (Spiketail dragonfly)		Gammaridae (Sideswimmer)		Hirudinea (Leech)	
Psephenidae (Water penny)	12	Palaemonidae (Freshwater shrimp)		Nematoda (Round worm)	
Corydalidae (Hellgrammite/Fishfly)		Bithyniidae (Bithynid snail)		Nematomorpha (Horsehair worm)	
Athericidae (Watersnipe fly)		Pleuroceridae (Rock snail)	1	Oligochaeta (Aquatic worm)	
Blephariceridae (Net-wing midge)		Viviparidae (Viviparid snail)		Turbellaria (Flatworms)	
Hydrobiidae (Pebble snail)		Corbiculidae (Asian clam)		<b>Tolerance unknown</b>	
Unionidae (Mussel)		Sphaeriidae (Pea clam)		Hydrozoa (Freshwater jellyfish)	
				Neuroptera (Spongilliflies)	
				Spongilla (Freshwater sponge)	