

WV SAVE OUR STREAMS ADVANCED SURVEY SUMMARY

Stream Monitor(s) Warm Springs Run Level 3 Date(s) 6/20/17  
 Direction Oaks, Dean, Trump, Lehman, Brooks and Swaim  
Next to Widmyer School Start time 0830  
 County Morgan  
 RR Miles \_\_\_\_\_ Station Widmyer  
 Latitude 

39	36	44
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 Longitude 

78	14	14
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 Watershed Warm Springs Run  
 Database code \_\_\_\_\_

**WATER CHEMISTRY**

	Result	Units		Result	Units		Result	Units
Temp. (°F or °C)	19	C	Alkalinity	21		Fecal coliform/E-coli		
pH	7		Nitrate/Nitrite	0		Iron		
Conductivity			Phosphates			Aluminum		
Dissolved O <sub>2</sub>	6	ppm	Total Dissolved Solids			Manganese		
Acidity			Turbidity	0	JTU	Other (describe below)		

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

**PHYSICAL CONDITIONS**

Water clarity murky Algae color Dark green  
 Water color none Algae abundance moderate  
 Water/Sediment odor 

None	None
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 Algae texture Even coating  
 Streambed color Brown Surface foam none  
 Comments \_\_\_\_\_

Riffle width \_\_\_\_\_ Run width 9 Pool width 

x	
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 Riffle depth \_\_\_\_\_ Run depth 0.40 Pool depth \_\_\_\_\_ Feet Meter  
 Indicate units  
 Estimate 

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 Count 

x
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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  

4	5	16	41	47	% Riffles	% Runs	% Pools
<b>Index</b>	<b>3.30</b>	good	Woody debris adjustment				

**HABITAT CONDITIONS**

Attachment sites	20	Channel flow status	15	Embeddedness	19
Riffle frequency	20	Channel alterations	20	Bank veg. protection	5   5
Velocity/depth	20	Sediment deposition	15	Bank stability	3   3
<b>Total Score</b>	<b>165</b>	Channel shade	>80%	Riparian buffer	10   10

Integrity Rating 

suboptimal
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 width 

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Comments \_\_\_\_\_

**BIOLOGICAL CONDITIONS**

<b>Richness</b>	<b>Composition</b>	<b>Tolerance</b>			
Total Taxa <table border="1" style="display: inline-table;"><tr><td style="text-align: center;">9</td></tr></table>	9	% EPT Abundance <table border="1" style="display: inline-table;"><tr><td style="text-align: center;">84.2</td></tr></table>	84.2	Biotic Index <table border="1" style="display: inline-table;"><tr><td style="text-align: center;">4.59</td></tr></table>	4.59
9					
84.2					
4.59					
EPT Taxa <table border="1" style="display: inline-table;"><tr><td style="text-align: center;">4</td></tr></table>	4	% Dominance <table border="1" style="display: inline-table;"><tr><td style="text-align: center;">45.6</td></tr></table>	45.6	% Tolerant <table border="1" style="display: inline-table;"><tr><td style="text-align: center;">2.6</td></tr></table>	2.6
4					
45.6					
2.6					
Other aquatic organisms observed or collected (e.g. fish, salamanders etc.), or additional comments: _____					
<b>Stream Score</b> <table border="1" style="display: inline-table;"><tr><td style="text-align: center;">68.3</td></tr></table>			68.3		
68.3					
Integrity Rating <table border="1" style="display: inline-table;"><tr><td style="text-align: center;">suboptimal</td></tr></table>			suboptimal		
suboptimal					

Discharge (cfs) <table border="1" style="display: inline-table;"><tr><td style="text-align: center;">1.8</td></tr></table>	1.8	Water level	Low	Normal	High	No flow
1.8						
			x			

Current/past weather conditions: Sunny Past - one inch of rain on 6/19

**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		Impact	Location
Single family residences	1	w	Trash dumps		
Sub-urban developments			Intensive feedlots		
Urban areas			Pastureland	1	2
Industrial areas			Cropland		
Parking lots, malls etc.	1	s	Oil & gas wells		
Bridges	1	s	Logging		
Paved roads	1	s	Mountaintop mining		
Unpaved roads			Abandoned mining		
Active construction			Deep mining		
Parks, trails etc			Quarries		
Other recreation			Other (describe)		
Landfills					

Comments: \_\_\_\_\_ Pipes? 

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 Yes 

x
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 No 

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**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)	8	Caenidae (Square-gilled mayfly)		Libellulidae (Skimmer dragonfly)	
Isonychiidae (Brush-legged mayfly)		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)		Hydropsychidae (Common netspinner)	193	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)	2	Polycentropodidae (Tube-net caddisfly)		Hydrometridae (Water measurer)	
Perlodidae (Patterned stonefly)		Psychomyiidae (Trumpet-net caddisfly)		Nepidae (Water scorpion)	

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Peltoperlidae (Roach-like stonefly)		Pyrilidae (Aquatic moth)		Notonectidae (Backswimmer)	
Pteronarcyidae (Giant stonefly)		Calopterygidae (Broad-wing damselfly)		Ceratopogonidae (Biting midge)	
Taeniopterygidae (Large winter stonefly)		Gomphidae (Clubtail dragonfly)	9	Chironomidae (Non-biting midge)	
Brachycentridae (Humpless-case caddisfly)		Dryopidae (Long-toed beetle)		Culicidae (Mosquito)	
Glossosomatidae (Saddle-case caddisfly)		Elmidae (Riffle beetle)	28	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)		Empididae (Dance fly)		Tabanidae (Horse fly)	
Philopotamidae (Finger-net caddisfly)	154	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)	7	Planorbidae (Orb snail)	
Cordulegastridae (Spiketail dragonfly)		Gammaridae (Sideswimmer)		Hirudinea (Leech)	11
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)		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)	