

WV SAVE OUR STREAMS ADVANCED SURVEY SUMMARY

Stream Monitor(s) Warm Springs Run Level 3 Date(s) June 4, 2019
 Direction Hook, Wuster, Swaim, Lehman, Dean
Route 522 to Whisner Road Start time 9:00 AM
 County Morgan
 RR Miles _____ Station Whisner
 Latitude

39	37	25
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 Longitude

78	13	50
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 Watershed Warm Springs Run
 Database code _____

WATER CHEMISTRY

	Result	Units		Result	Units		Result	Units
Temp. (°F or °C)	15	c	Alkalinity	90		Fecal coliform/E-coli		
pH	7.5		Nitrate/Nitrite	0		Iron	.5	ppm
Conductivity			Phosphates			Aluminum		
Dissolved O ₂	150	%	Total Dissolved Solids			Manganese		
Acidity			Turbidity	0	Jtu	Other (describe below)		

Describe other conditions analyzed: _____

PHYSICAL CONDITIONS

Water clarity Clear Algae color Brown
 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 11 Pool width

x	
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 Riffle depth _____ Run depth .51 Pool depth _____ Feet Meter
 Indicate units
 Estimate

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 Count

x

 Silt/clay Sand Fine gravel Coarse gravel Cobble Entire reach

x

 Riffles only

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 Boulder Bedrock Woody debris

Index		<u>42</u>	<u>50</u>	<u>8</u>	% Riffles	% Runs	% Pools
			Woody debris adjustment				

HABITAT CONDITIONS

Attachment sites	15	Channel flow status	18	Embeddedness	15
Riffle frequency	15	Channel alterations	14	Bank veg. protection	1 10
Velocity/depth	15	Sediment deposition	20	Bank stability	2 8
Total Score	139	Channel shade	40 60 %	Riparian buffer	1 5

Integrity Rating

Good

 width

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Comments _____

BIOLOGICAL CONDITIONS

Richness	Composition	Tolerance			
Total Taxa <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">18</td></tr></table>	18	% EPT Abundance <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">36.1</td></tr></table>	36.1	Biotic Index <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">4.86</td></tr></table>	4.86
18					
36.1					
4.86					
EPT Taxa <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">6</td></tr></table>	6	% Dominance <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">36.1</td></tr></table>	36.1	% Tolerant <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">18.6</td></tr></table>	18.6
6					
36.1					
18.6					
Other aquatic organisms observed or collected (e.g. fish, salamanders etc.), or additional comments:					
3 salamanders					
Stream Score <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">67.3</td></tr></table>		67.3	Integrity Rating <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">suboptimal</td></tr></table>	suboptimal	
67.3					
suboptimal					

Discharge (cfs)

2.33

 Water level

Low	Normal	High	No flow
		x	

Current/past weather conditions: Sunny - Past weatherThunderstorms

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	s	Trash dumps		
Sub-urban developments	1	s	Intensive feedlots		
Urban areas			Pastureland		w
Industrial areas			Cropland		
Parking lots, malls etc.			Oil & gas wells		
Bridges	2	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

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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)	
Ephemerelellidae (Spiny-crawler mayfly)		Beatiscidae (Armored mayfly)		Lestidae (Spread-wing damselfly)	
Heptageniidae (Flatheaded mayfly)		Caenidae (Square-gilled mayfly)		Libellulidae (Skimmer dragonfly)	
Isonychiidae (Brush-legged mayfly)	73	Ephemeridae (Burrowing mayfly)		Chrysomelidae (Reed beetle)	
Leptophlebiidae (Prong-gilled mayfly)		Potamanthidae (Hackle-gilled mayfly)		Dytiscidae (Predacious diving beetle)	1
Siphonuridae (Primitive minnow mayfly)		Tricorythidae (Stout-crawler mayfly)		Haliplidae (Crawling water beetle)	
Capniidae (Small winter stonefly)		Hydropsychidae (Common netspinner)	36	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)	1	Polycentropodidae (Tube-net caddisfly)		Hydrometridae (Water measurer)	
Perlodidae (Patterned stonefly)	1	Psychomiidae (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)		Chironomidae (Non-biting midge)	53
Brachycentridae (Humpless-case caddisfly)		Dryopidae (Long-toed beetle)		Culicidae (Mosquito)	
Glossosomatidae (Saddle-case caddisfly)		Elmidae (Riffle beetle)	118	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)	1
Philopotamidae (Finger-net caddisfly)	6	Simuliidae (Black fly)	2	Asellidae (Aquatic sowbug)	
Rhyacophilidae (Free-living caddisfly)		Tipulidae (Crane fly)	1	Ancylidae (Limpet snail)	
Uenoidae (Uenoid-case caddisfly)		Hydrachnidae (Water mites)		Physidae (Left-handed snail)	
Aeshnidae (Damner dragonfly)	1	Cambaridae (Crayfish)	2	Planorbidae (Orb snail)	
Cordulegastridae (Spiketail dragonfly)		Gammaridae (Sideswimmer)	3	Hirudinea (Leech)	6
Psephenidae (Water penny)	17	Palaemonidae (Freshwater shrimp)		Nematoda (Round worm)	
Corydalidae (Hellgrammite/Fishfly)		Bithyniidae (Bithynid snail)		Nematomorpha (Horsehair worm)	
Athericidae (Watersnipe fly)		Pleuroceridae (Rock snail)		Oligochaeta (Aquatic worm)	4
Blephariceridae (Net-wing midge)		Viviparidae (Viviparid snail)		Turbellaria (Flatworms)	
Hydrobiidae (Pebble snail)		Corbiculidae (Asian clam)		Tolerance unknown	
Unionidae (Mussel)		Sphaeriidae (Pea clam)		Hydrozoa (Freshwater jellyfish)	
				Neuroptera (Spongilliflies)	
				Spongilla (Freshwater sponge)	