WV Save Our Streams Advanced Survey Summary

Stream: Warm Springs Run | Level: 3 | Date(s): 8/26/18

Monitor(s): Warm Spring Water Shed Association

Directions: Behind Board of Education building | Start time: 8:30 AM

County: Morgan

R23R Miles: | Station: BOE

Latitude: 39 37 50 | Longitude: 78 13 23 | Watershed:

Database code:

Water Chemistry

	Result	Units		Result	Units		Result	Units
Temp. (°F or °C)	20	c	Alkalinity	210		Fecal coliform/E-coli		
pH	7.5		Nitrate/Nitrite	2	ppm	Iron	o	
Conductivity			Phosphates			Aluminum		
Dissolved O_2	80	%	Total Dissolved Solids			Manganese		
Acidity			Turbidity	0	JTU	Other (describe below)		

Describe other conditions analyzed:

Physical Conditions

Water clarity: Clear | Algae color: Dark green and brown

Water color: None | Algae abundance: Scattered

Water/Sediment odor: None | none

Streambed color: brown | Surface foam: none

Comments:

Riffle width: 18 | Run width: | Pool width:

Riffle depth: 0,75 | Run depth: | Pool depth:

x Feet | Meters — Indicate units

Estimate | Count: x | Entire reach | Riffles only

Silt/clay	Sand	Fine gravel	Coarse gravel	Cobble	Boulder	Bedrock	Woody debris
	17	21	37	16	11		

Index | Woody debris adjustment

% Riffles	% Runs	% Pools

Habitat Conditions

Attachment sites	5	Channel flow status	9	Embeddedness	8	
Riffle frequency	4	Channel alterations	0	Bank veg. protection	1	2
Velocity/depth	7	Sediment deposition	19	Bank stability	6	7
Total Score	85	Channel shade	<40	Riparian buffer	1	1

WV SAVE OUR STREAMS ADVANCED SURVEY SUMMARY

			width		
Integrity Rating	**Poor**				

Comments: Banks are concrete wall

BIOLOGICAL CONDITIONS

Richness		Composition		Tolerance	
Total Taxa	13	% EPT Abundance	69.5	Biotic Index	3.92
EPT Taxa	5	% Dominance	25.4	% Tolerant	3.4
				Stream Score	**75.6**
				Integrity Rating	Suboptimal

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

		Water level	Low	Normal	High	No flow
Discharge (cfs)	9				x	

Current/past weather conditions: Overcast warm No rain last 3 days. Heavy rain and flooding on 8/21/18

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

Comments:

Pipes?	x	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)	
Ephemerellidae (Spiny-crawler mayfly)		Beatiscidae (Armored mayfly)		Lestidae (Spread-wing damselfly)	
Heptageniidae (Flatheaded mayfly)	15	Caenidae (Square-gilled mayfly)		Libellulidae (Skimmer dragonfly)	
Isonychiidae (Brush-legged mayfly)	5	Ephemeridae (Burrowing mayfly)		Chrysomelidae (Reed beetle)	
Leptophlebiidae (Prong-gilled mayfly)		Potamanthidae (Hackle-gilled mayfly)		Dytiscidae (Predacious diving beetle)	
Siphlonuridae (Primitive minnow mayfly)		Tricorythidae (Stout-crawler mayfly)		Haliplidae (Crawling water beetle)	
Capniidae (Small winter stonefly)	1	Hydropsychidae (Common netspinner)	10	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)		Polycentropodidae (Tube-net caddisfly)		Hydrometridae (Water measurer)	
Perlodidae (Patterned stonefly)		Psychomiidae (Trumpet-net caddisfly)		Nepidae (Water scorpion)	

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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)	1
Brachycentridae (Humpless-case caddisfly)		Dryopidae (Long-toed beetle)		Culicidae (Mosquito)	
Glossosomatidae (Saddle-case caddisfly)		Elmidae (Riffle beetle)	3	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 (Solider 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)	10	Simuliidae (Black fly)	1	Asellidae (Aquatic sowbug)	1
Rhyacophilidae (Free-living caddisfly)		Tipulidae (Crane fly)	2	Ancylidae (Limpet snail)	
Uenoidae (Uenoid-case caddisfly)		Hydrachnidae (Water mites)		Physidae (Left-handed snail)	
Aeshnidae (Darner dragonfly)		Cambaridae (Crayfish)	2	Planorbidae (Orb snail)	
Cordulegastridae (Spiketail dragonfly)		Gammaridae (Sideswimmer)		Hirudinea (Leech)	
Psephenidae (Water penny)	6	Palaemonidae (Freshwater shrimp)		Nematoda (Round worm)	
Corydalidae (Hellgrammite/Fishfly)	2	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)		**Tolerance unknown**	
Unionidae (Mussel)		Sphaeriidae (Pea clam)		Hydrozoa (Freshwater jellyfish)	
				Neuroptera (Spongilliflies)	
				Spongilla (Freshwater sponge)	