

WV SAVE OUR STREAMS ADVANCED SURVEY SUMMARY

Stream Monitor(s) Warm Spring Run Level 3 Date(s) June 3, 2013
 Direction Lehman, O'Brien, Reece, Oaks and Dean
Quarter mile south of Widmeyer School Start time 9:00 AM
 County Morgan
 RR Miles _____ Station _____
 Latitude

39	36	44
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 Longitude

78	15	14
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 Watershed Database code Warm Spring Widmeyer

WATER CHEMISTRY

	Result	Units		Result	Units		Result	Units
Temp. (°F or °C)	19	C	Alkalinity	140		Fecal coliform/E-coli		
pH	8		Nitrate/Nitrite	1	Ppm	Iron	1	Ppm
Conductivity			Phosphates			Aluminum		
Dissolved O ₂	5	Ppm	Total Dissolved Solids			Manganese		
Acidity			Turbidity	0	JTU	Other (describe below)		

Describe other conditions analyzed: _____

PHYSICAL CONDITIONS

Water clarity Clear Algae color None
 Water color None Algae abundance None
 Water/Sediment odor

None	None
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 Algae texture None
 Streambed color Brown Surface foam none
 Comments _____

Riffle width _____ Run width 8 Pool width

x	
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 Riffle depth _____ Run depth 0.366 Pool depth _____
 Feet Meters
 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>x</td></tr></table>	x	Riffles only	<table border="1"><tr><td></td></tr></table>	
x											
x											
Silt/clay	Sand	Fine gravel	Coarse gravel	Cobble	Boulder	Bedrock	Woody debris				
<u>4</u>	<u>18</u>	<u>21</u>	<u>30</u>	<u>26</u>	<u>12</u>						
Index			Woody debris adjustment		% Riffles	% Runs	% Pools				

HABITAT CONDITIONS

Attachment sites	<u>14</u>	Channel flow status	<u>14</u>	Embeddedness	<u>14</u>		
Riffle frequency	<u>8</u>	Channel alterations	<u>19</u>	Bank veg. protection	<table border="1"><tr><td>9</td><td>9</td></tr></table>	9	9
9	9						
Velocity/depth	<u>15</u>	Sediment deposition	<u>5</u>	Bank stability	<table border="1"><tr><td>7</td><td>7</td></tr></table>	7	7
7	7						
Total Score	<u>141</u>	Channel shade	<u>80%</u>	Riparian buffer	<table border="1"><tr><td>10</td><td>10</td></tr></table>	10	10
10	10						

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;">16</td></tr></table>	16	% EPT Abundance <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">59.8</td></tr></table>	59.8	Biotic Index <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">4.56</td></tr></table>	4.56
16					
59.8					
4.56					
EPT Taxa <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">9</td></tr></table>	9	% Dominance <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">24</td></tr></table>	24	% Tolerant <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">25.2</td></tr></table>	25.2
9					
24					
25.2					
Other aquatic organisms observed or collected (e.g. fish, salamanders etc.), or additional comments:					
7 salamander, 12 fish and one box turtle					
		Stream Score <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">76.2</td></tr></table>	76.2		
76.2					
		Integrity Rating <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">suboptimal</td></tr></table>	suboptimal		
suboptimal					

Discharge (cfs) <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="text-align: center;">0.41</td></tr></table>	0.41	Water level	Low	Normal	High	No flow
0.41						
			x			

Current/past weather conditions: Current conditions Cloudy 74 degrees. Past temp high's in the 90's sunny

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	2	M	Intensive feedlots		
Urban areas			Pastureland	1	W
Industrial areas			Cropland		
Parking lots, malls etc.	1	M	Oil & gas wells		
Bridges	2	S	Logging	1	W
Paved roads	2	S	Mountaintop mining	1	W
Unpaved roads			Abandoned mining		
Active construction	1	W	Deep mining		
Parks, trails etc	1	W	Quarries		
Other recreation			Other (describe)		
Landfills					

Comments: _____ Pipes?

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 Yes

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 no

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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)	5	Coenagrionidae (Narrow-wing damselfly)	
Ephemerelellidae (Spiny-crawler mayfly)		Beatisidae (Armored mayfly)		Lestidae (Spread-wing damselfly)	
Heptageniidae (Flatheaded mayfly)	5	Caenidae (Square-gilled mayfly)	3	Libellulidae (Skimmer dragonfly)	
Isonychiidae (Brush-legged mayfly)		Ephemeraidae (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)	77	Hydrophilidae (Water scavenger beetle)	
Chloroperlidae (Green stonefly)		Hydroptilidae (Purse-case caddisfly)		Belostomatidae (Giant water bug)	
Leuctridae (Rolled-wing stonefly)	1	Molannidae (Hooded-case caddisfly)		Corixidae (Water boatman)	
Nemouridae (Little brown stonefly)		Phryganeidae (Giant-case caddisfly)		Gerridae/Veliidae (Water striders)	
Perlidae (Common stonefly)	73	Polycentropodidae (Tube-net caddisfly)		Hydrometridae (Water measurer)	
Perlodidae (Patterned stonefly)	5	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)	1	Chironomidae (Non-biting midge)	80
Brachycentridae (Humpless-case caddisfly)		Dryopidae (Long-toed beetle)		Culicidae (Mosquito)	
Glossosomatidae (Saddle-case caddisfly)	16	Elmidae (Riffle beetle)	11	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)	14	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)	1	Planorbidae (Orb snail)	
Cordulegastridae (Spiketail dragonfly)		Gammaridae (Sideswimmer)		Hirudinea (Leech)	2
Psephenidae (Water penny)	37	Palaemonidae (Freshwater shrimp)		Nematoda (Round worm)	
Corydalidae (Hellgrammite/Fishfly)		Bithyniidae (Bithynid snail)		Nematomorpha (Horsehair worm)	
Athericidae (Watersnipe fly)		Pleuroceridae (Rock snail)		Oligochaeta (Aquatic worm)	2
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)	