

Photograph Direction West

STREAM ID S-G52	STREAM NAME UNT to Wind Creek				
LAT 37.627527 LONG -80.695528	DATE 04/11/2015				
CLIENT MVP	PROJECT NAME MVP				
INVESTIGATORS G. Stevens, A. Rodrian, S. Kell	y				
FLOW REGIME	WATER TYPE				
Perennial Intermittent Ephemeral	TNW RPW NRPW				

Perennial	_ Intermitte	nt — Ephem	eral TNW	RPW	NRPW	
			Measurements k Width: 2.0 ft		Stream ErosionNone✓ Moderate	Heavy
		Top of Ban	k Height:		Artificial, Modified or Char	nelized
		LB 4.0	in RB <u>4.0</u>	<u>in</u>	Yes ✓ No	
CHANNEL FE	ATURES	Water Dep	th: 0.00 in			
OHAMILLIL	ATOREO	Water Widt	th: 0.0 in		Dam PresentYes _	<u>∕</u> No
		High Water	Mark: 4.0 in		Sinuosity 🔽 Low	Medium High
		Flow Direct	tion: NW		Gradient	
					Flat Moderate _	Severe (10 ft/100 ft)
		Water Pres			Proportion of Reach Repre	esented by Stream
			r, stream bed dry		Morphology Types Riffle % Run	%
		Stream Standing	bed moist		Pool %	70
FLOW CHARACTER	ISTICS	Flowing	•		,,,	
CHARACTER	131103	_ `			Turbidity	turbid Turbid
		Velocity Fast	Moderate		Clear Slightly Opaque Stained	
		Slow	Woderate		✓ Other_Dry chnnel	
INOR	GANIC SUB	STRATE CO	STRATE COMPONENTS		RGANIC SUBSTRATE COM	MPONENTS
		add up to 10			does not necessarily add up to 100%)	
Substrate Type	Diame	ter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock				Detritus	sticks, wood, coarse	75
Boulder		mm (10")	10	Detritus	plant materials (CPOM)	75
Cobble		m (2.5"-10")	10	Muck-Mud	black, very fine organic	
Gravel		(0.1"-2.5")	30		(FPOM)	_
Sand		nm (gritty)	10			
Silt		0.06 mm	30	Marl	grey, shell fragments	
Clay	< 0.004 1	mm (slick)	उ∪ ant Surrounding Lar	duco	Indicate the dominant type	(Chash ana)
		✓ Forest			Indicate the dominant type ✓ Trees Shrub	
		Field/P			Grasses Herba	ceous
WATERSHED		Agricultural Residential Other: Canopy Cover		tial	Floodplain Width Wide > 30ft Moderate 15-30ft	
FEATURES	'					
					✓ Narrow <16ft	
		Partly open Partly shaded Open		Wetland PresentYes Wetland ID	<u>✓</u> No	
		Indicate th	e dominant type and	d record the c	lominant species present	
AQUATIC VE	GETATION	Rooted emergentRooted submergentRooted floatingFree floating				
Floa		Floating	g algae	Attached alga	e	
		1				
			s from S-G51 into S-Gime of survey.	G48.		
MACROINVER	OTERPATES		unie di survey.			
OR OTHER	DIVA153					
WILDLIFE OBSERVED/C						
OBSERVATION NOTES	NS AND					



Photograph Direction West

STREAM NAME UNT to Wind Creek				
DATE 04/11/2015				
ROJECT NAME MVP				
WATER TYPE TNW RPWNRPW				
R				

i cicililai=	_ 11116111111116	nt — Epnem	erai INVV —	RPW —	NRPW	
_						
		Estimate Measurements Top of Bank Width: _20.0 ft		Stream ErosionNone ✓ Moderate	Цооли	
		·			NoneModerate	пеачу
		Top of Ban	ŭ		Artificial, Modified or Char	nnelized
		LB <u>4.0</u>		<u>ft</u>	Yes _ <u>✔</u> No	
CHANNEL FE	ATURES	Water Dep	th: 15.00 in		Dam PresentYes _	∠ No
		Water Widt	th: 4.0 ft		Dani Flesent 165 _	<u>/</u> NO
		High Water	Mark: <u>2.0 ft</u>		Sinuosity <u>v</u> Low	Medium High
		Flow Direct	tion: NW		Gradient	
					✓ FlatModerate _	Severe
					, ,	(10 ft/100 ft)
		Water Pres	sent r, stream bed dry		Proportion of Reach Repre Morphology Types	esented by Stream
			bed moist		Riffle 65 % Run 20	%
EL OW		Standing	g water		Pool 15 %	
FLOW CHARACTER	ISTICS	<u>✓</u> Flowing	water		T	
		Velocity			Turbidity <u>✓</u> ClearSlightly	turbidTurbid
		<u>✓</u> Fast	Moderate		OpaqueStained	
		Slow			Other	
INOR		-	MPONENTS	0	RGANIC SUBSTRATE CON	// IPONENTS
	(should a	add up to 10	,		does not necessarily add u	1
Substrate Type	Diame	ter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			30	Detritus	sticks, wood, coarse	
Boulder	> 256	mm (10")	20	Detritus	plant materials (CPOM)	40
Cobble	64-256 m	m (2.5"-10")	20	Muck-Mud	black, very fine organic	
Gravel	2-64 mm	(0.1"-2.5")	20	Widok Wida	(FPOM)	
Sand	0.06-2n	nm (gritty)				
Silt	0.004-0	0.06 mm		Marl	grey, shell fragments	
Clay	< 0.004	mm (slick)	10			
			ant Surrounding Lan Commer	nduse	Indicate the dominant type ✓ Trees Shrub	
		Forest Field/P				iceous
		Agricult		tial	_	
WATERSHED FEATURES		Other:			Floodplain Width Wide > 30ft Mode	rate 15-30ft
					✓ Narrow <16ft	1410 10 0011
		Partly of		aded		
		Shaded			Wetland PresentYes Wetland ID	<u>✓</u> No
		Indicate th	e dominant type and		Iominant species present	
AQUATIC VE	GETATION			Rooted subme		tingFree floating
		Floating	g algae	Attached algae	е	
		S-G49 flow	s into S-G48.	<u> </u>		
MACROINVER OR OTHER	RTEBRATES	;				
WILDLIFE	THE					
OBSERVED/C						
NOTES						



Photograph Direction East

STREAM ID S-G48	STREAM NAME Wind Creek
LAT 37.627256 LONG -80.695613	DATE 04/11/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS G. Stevens, A. Rodrian, S. Kell	y
FLOW REGIME Perennial ✓ Intermittent — Ephemeral —	WATER TYPE TNW RPW_✓ NRPW

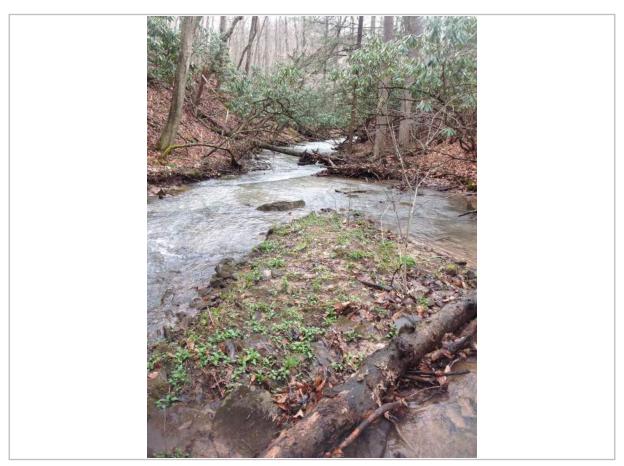
Perenniai -	_ intermitte	nt <u> </u>	erai INVV	RPW —	NRPW	
		F-4'4- N			Ot	
		Estimate Measurements Top of Bank Width: _20.0 ft		Stream Erosion None ✓ Moderate	Heavy	
		•			Woderate	
		Top of Ban	ŭ		Artificial, Modified or Char	nnelized
		LB <u>4.0</u>		<u>ft</u>	Yes No	
CHANNEL FE	ATURES	Water Dep	th: 15.00 in		Dam PresentYes _	∠ No
		Water Widt	th: 15.0 ft			<u>/ </u>
		High Water	Mark: <u>24.0 in</u>		Sinuosity <u>v</u> Low	Medium High
		Flow Direct	tion: NW		Gradient	
					✓ FlatModerate _	Severe
					` , ,	(10 ft/100 ft)
		Water Pres			Proportion of Reach Repre Morphology Types	esented by Stream
			r, stream bed dry bed moist		Riffle 65 % Run 20	%
		Standing			Pool 15 %	
FLOW CHARACTER	ISTICS	<u>✓</u> Flowing	-			
					Turbidity <u>✓</u> ClearSlightly	turbidTurbid
		Velocity <u>✓</u> Fast	Moderate		OpaqueStained	
		Slow			Other	
INOR	GANIC SUB	STRATE CO	MPONENTS	0	RGANIC SUBSTRATE COM	MPONENTS
	(should	add up to 10	0%)	(0	does not necessarily add u	p to 100%)
Substrate Type	Diame	eter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock				Detritus	sticks, wood, coarse	
Boulder	> 256	mm (10")	65	Delilius	plant materials (CPOM)	10
Cobble	64-256 m	m (2.5"-10")	10") 20 M	Muck-Mud	black, very fine organic	
Gravel	2-64 mm	า (0.1"-2.5")	10	WIGGK-WIGG	(FPOM)	
Sand	0.06-2r	nm (gritty)	5			
Silt	0.004-0	0.06 mm		Marl	grey, shell fragments	
Clay	< 0.004	mm (slick)				
			ant Surrounding Lan		Indicate the dominant type	
		Forest Field/Pa	Commer asture Industrial		Trees Shrub ✓ Grasses Herba	is iceous
		Agricult			Ulasseslielba	iceous
WATERSHED		Other:		iidi	Floodplain Width	45.000
FEATURES					Wide > 30ft Mode ✓ Narrow <16ft Mode	rate 15-30ft
		Canopy Co		adad	V INAITOW > TOIL	
		Partly open Shaded Open			Wetland PresentYes	<u>✓</u> No
					Wetland ID	
A CULATION (F	OFTATION.			d record the d Rooted subme	dominant species present	ting Free floating
AQUATIC VE	SETATION	— Floating	· —	Attached algae	_	ingriee iloating
					-	
MACROINVER	RTEBRATES					
OR OTHER						
WILDLIFE OBSERVED/C						
OBSERVATION NOTES	NS AND					



Photograph Direction South

STREAM ID S-H61	STREAM NAME UNT to Stoney Creek
LAT 37.618424 LONG -80.699134	DATE 04/10/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS A. Stott, H. Heist, A. Grech	
FLOW REGIME	WATER TYPE
Perennial / Intermittent _ Ephemeral _	TNW RPW NRPW

Perennial -	Intermitte	nt Ephem	eral TNW_	RPW <u>→</u>	NRPW		
	1						
		Estimate Measurements			Stream Erosion	Hoove	
		Top of Bank Width: 25.0 ft			NoneModerate	Heavy	
		Top of Ban	· ·		Artificial, Modified or Char	nnelized	
		LB <u>3.0</u>	ft RB <u>3.0</u>	<u>ft</u>	Yes _ <u>✔</u> No		
CHANNEL FE	ATURES	Water Dept	th: 10.00 in		Dom Brocent Voc	4 No	
		Water Widt	h: 22.0 ft		Dam PresentYes _	Z NO	
		High Water	Mark: <u>2.0 ft</u>		Sinuosity 🔽 Low	Medium High	
		Flow Direct	tion: NW		Gradient		
					<u>✓</u> FlatModerate _		
					(0.5/100 ft (2 ft/100 ft)	(10 ft/100 ft)	
		Water Pres			Proportion of Reach Repre Morphology Types	esented by Stream	
		Stream I	r, stream bed dry ped moist		Riffle 80 % Run 10	%	
		Standing			Pool 10 %		
FLOW CHARACTER	STICS	<u>✓</u> Flowing	water		T		
		Valasitu			Turbidity <u>✓</u> ClearSlightly	turbidTurbid	
		Velocity <u>✓</u> Fast	Moderate		OpaqueStained		
		Slow			Other		
INOR	GANIC SUB	STRATE CO	MPONENTS	0	RGANIC SUBSTRATE CON	/IPONENTS	
		add up to 10		(0	loes not necessarily add u	p to 100%)	
Substrate Type	Diame	ter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock				Detritus	sticks, wood, coarse		
Boulder	> 256 ı	mm (10")	50	Delilius	plant materials (CPOM)		
Cobble	64-256 m	m (2.5"-10")	20	Muck-Mud	black, very fine organic		
Gravel	2-64 mm	(0.1"-2.5")	10	WIGOK WIGG	(FPOM)		
Sand	0.06-2n	nm (gritty)	20				
Silt	0.004-0	0.06 mm		Marl	grey, shell fragments		
Clay	< 0.004 r	mm (slick)					
			ant Surrounding Lan Commer		Indicate the dominant type		
		Forest Field/Pa			✓ Trees Shrub Grasses Herba	iceous	
		Agricult		ial	_		
WATERSHED FEATURES		Other:			Floodplain Width Wide > 30ft Mode	rate 15-30ft	
ILATORES					Narrow <16ft	rate 15-301t	
		Canopy Co	over open Partly sh	aded	_		
		Shaded Open			Wetland PresentYes Wetland ID	<u>✓</u> No	
			a deminant tune on				
AQUATIC VE	GETATION		Indicate the dominant type and record the dominant species present Rooted emergent Rooted submergent Rooted floating Free floating				
710071110 721	21,,,,,,	Floating	_	Attached algae	_		
							
		Heavy rains	s previous day				
		Troavy rains	s provious day				
MACROINVER	RTEBRATES	Braided wa	terfalls				
OR OTHER WILDLIFE							
OBSERVED/C							
NOTES	אלא אווט						



Photograph Direction SE

	STREAM NA	ME Stony	Creek		
ONG -80.700359	DATE 04/19/	2016	COUNTY Monroe		
wnsend, C. Stoliker, I	<. Lew				
WATER TYPE TNW RPW NRPW INTERPRETATION INTERPRETATI					
Estimata Massura	monto		Sinuacity (Law Madium High		
Top of Bank Width: Top of Bank Height LB4.0ft Water Depth:2.0 Water Width:1.0 Ordinary High Wate		<u>3.0</u> ft	Sinuosity Low Medium High Gradient Flat Moderate Sever (0.5/100 ft) (2 ft/100 ft) (10 ft/100 ft) Stream Erosion Moderate Heavy Artificial, Modified or Channelized No Within Roadside Ditch No Culvert Present Yes No Culvert Material: Corrugated Plastic		
FLOW CHARACTERISTICS Water Present No water, stream bed dryStream bed moistStanding waterFlowing water VelocityFastModerate Culvert Size:24in Proportion of Reach Represented by Stream Morphology Types (Only enter if water present) Riffle					
	-		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
		Substra Type	te Characteristic % Composition Sampling Area		
		Detritus	sticks, wood, coarse		
` '			plant materials (CPOM) 30		
` '		Muck-Mu	d black, very fine organic (FPOM) 0		
,			(ITOM)		
	1.5	Marl	grey, shell fragments 0		
		man	grof, chair raginatio		
Clay < 0.004 mm (slick) 65 Predominant Surrounding Landuse					
TEBRATES/OTHER	WILDLIFE OBS	ERVED OF	R OTHER NOTES AND OBSERVATIONS		
ILDICATED/OTHER	THE OBS	LIVED OF	COMERCIAL AND OBSERVATIONS		
	Estimate Measure Top of Bank Width: Top of Bank Height LB4.0ft Water Depth:2.0 Water Width:1.0 Ordinary High Wate Ordinary High Wate Flow Direction: _No Water PresentNo water, streamStream bed moisStanding waterVFlowing water VelocityFastMooVSlow JBSTRATE COMPOI d add up to 100%) meter	DNG -80.700359 wnsend, C. Stoliker, K. Lew FLOW REG Perennial	NRPW Perennial Interm Interm		



Photograph Direction SE

STREAM ID S-IJ64			STREAM NA	ME UNT to	o Little Ston	y Creek	
CLIENT MVI							
LAT 37.591822 LONG -80.70587 DATE 09/10/2016					col	JNTY Monroe	
INVESTIGATO	ORS E. Fo	ster, K. Pulver, M.	Whitten				
WATER TYPE	RPW	NRPW 🗸	FLOW REG Perennial	IME Intermi	ittent	Ephemeral 🔽	
		Setimate Measu	uromonts		Sinunsity	Low 4	Modium High
CHANNEL FE	ATURES	Water Depth: Water Width: Ordinary High W	dth:6.0 ft ight: RB2.0t 0.00 in 0.0 ft Vater Mark (Width): Vater Mark (Height)	ft	Gradient (Stream Ei Non Artificial, Yes Within Ro Yes Culvert P	Flat Moo.5/100 ft) (2 ft) rosion ne Moderate Modified or Chani Noo padside Ditch	nelized <u>✓</u> No
						ze:in	
FLOW CHARACTERISTICS Water Present No water, stream be Stream bed moist Standing water Flowing water Velocity Fast Moder Slow			noist ter		Proportio Morpholo Riffle Pool Turbidity Clear	n of Reach Repres gy Types (Only ente % Run %	er if water present) %
INOR	-	JBSTRATE COMP	PONENTS		ORGANIC	SUBSTRATE COM	IPONENTS
	(choul	+~ 1000/	' \		/dean not		
Substrate		d add up to 100%	•	Substrat	to I	necessarily add u	p to 100%)
Substrate Type		· · · · · · · · · · · · · · · · · · ·	% Composition in Sampling Reach	Substrat Type	to I		p to 100%)
_	Diar	meter	% Composition in	Туре	te Cha	racteristic ks, wood, coarse	y to 100%) % Composition in
Type Bedrock Boulder	Diar > 25	meter 56 mm (10")	% Composition in		te Cha	necessarily add u	y to 100%) % Composition in
Type Bedrock Boulder Cobble	Diar > 25	meter 56 mm (10") mmm (2.5"-10")	% Composition in	Туре	te Cha	racteristic ks, wood, coarse materials (CPOM) , very fine organic	y to 100%) % Composition in Sampling Area
Type Bedrock Boulder Cobble Gravel	> 25 64-256 2-64 n	meter 56 mm (10") mm (2.5"-10") nm (0.1"-2.5")	% Composition in Sampling Reach	Type Detritus	te Cha	racteristic ks, wood, coarse materials (CPOM)	y to 100%) % Composition in Sampling Area
Type Bedrock Boulder Cobble Gravel Sand	> 25 64-256 2-64 n	meter 56 mm (10") mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty)	% Composition in Sampling Reach 50 30	Type Detritus Muck-Muck	sticl plant black	racteristic ks, wood, coarse materials (CPOM) , very fine organic (FPOM)	y to 100%) % Composition in Sampling Area
Type Bedrock Boulder Cobble Gravel Sand Silt	> 25 64-256 2-64 n 0.06- 0.00	meter 56 mm (10") mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm	% Composition in Sampling Reach	Type Detritus	sticl plant black	racteristic ks, wood, coarse materials (CPOM) , very fine organic	y to 100%) % Composition in Sampling Area
Type Bedrock Boulder Cobble Gravel Sand	> 25 64-256 2-64 n 0.06- 0.00	meter (10") mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 04 mm (slick)	% Composition in Sampling Reach 50 30 20	Type Detritus Muck-Muck Marl	ele Cha sticl plant d black	racteristic ks, wood, coarse materials (CPOM) very fine organic (FPOM) v, shell fragments	y to 100%) % Composition in Sampling Area
Type Bedrock Boulder Cobble Gravel Sand Silt	> 25 64-256 2-64 n 0.06- 0.00 < 0.00	meter (10") mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 04 mm (slick)	% Composition in Sampling Reach 50 30 20 urrounding Landu Commercia	Type Detritus Muck-Muc Marl	sticl plant black	racteristic ks, wood, coarse materials (CPOM) very fine organic (FPOM) r, shell fragments n Width 30ft Modera	y to 100%) % Composition in Sampling Area
Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	> 25 64-256 2-64 n 0.06- 0.00 < 0.00	meter 56 mm (10") 5 mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 14 mm (slick) Predominant Si Forest Field/Pasture Agricultural ROW Canopy Cover Open Shaded	% Composition in Sampling Reach 50 30 20 urrounding Landu	Type Detritus Muck-Muc Marl	sticl plant black grey Floodplain Wide >	racteristic ks, wood, coarse materials (CPOM) v, very fine organic (FPOM) v, shell fragments n Width > 30ft Modera v <15ft	y to 100%) % Composition in Sampling Area 5



Photograph Direction East

STREAM ID S-A63	STREAM NAME Slate Run
LAT 37.560504 LONG -80.71002	DATE 04/10/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS Yarbrough, Stoliker, Heule	
FLOW REGIME	WATER TYPE
Perennial / Intermittent _ Ephemeral _	TNW RPW NRPW

Perennial -	_ Intermitte	nt <u> </u>	eral TNW	RPW <u>→</u>	NRPW	
			_			
			Measurements		Stream Erosion None ✓ Moderate	Незуу
		Top of Bank Width: 10.0 ft			None _v woderate	Tleavy
		Top of Ban	ŭ		Artificial, Modified or Char	nnelized
		LB <u>31.0</u>	<u>in</u> RB <u>17.0</u>	<u>in</u>	Yes _ <u>✓</u> No	
CHANNEL FE	ATURES	Water Dep	th: 4.00 in		Dam Procent Vos	No
		Water Widt	h: <u>68.0 in</u>		Dam PresentYes _	<u> N</u> O
		High Water	Mark: <u>16.0 in</u>		Sinuosity <u>v</u> Low	Medium High
		Flow Direc	tion: SW		Gradient	
					Flat Moderate _	
					(0.5/100 ft (2 ft/100 ft)	
		Water Pres	sent r, stream bed dry		Proportion of Reach Representation Morphology Types	esented by Stream
		Stream			Riffle 60 % Run 15	%
FLOW		Standin			Pool 25 %	
CHARACTER	ISTICS	<u></u> Flowing	water		Turbidity	
		Velocity			ClearSlightly	turbidTurbid
			Moderate		Opaque Stained	
		Slow			Other	
INOR			MPONENTS	_	RGANIC SUBSTRATE COM	
	(should a	add up to 10		,	does not necessarily add u	<u>'</u>
Substrate Type	Diame	ter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock				Detritus	sticks, wood, coarse	
Boulder		mm (10")	20	2011.100	plant materials (CPOM)	
Cobble		m (2.5"-10")	30	Muck-Mud	black, very fine organic	
Gravel		(0.1"-2.5")	30		(FPOM)	
Sand		nm (gritty)	20			
Silt		0.06 mm		Marl	grey, shell fragments	
Clay	< 0.004 i	mm (slick)			In all a set of the order of the section of the sec	(2)
		✓ Forest	ant Surrounding Lar Commer		Indicate the dominant type ✓ Trees ✓ Shrub	(Check one)
		_	astureIndustria		✓ Grasses Herba	
		Agricultural Residential			Floodulain Width	
WATERSHED FEATURES		Other:			Floodplain Width Wide > 30ft ✓ Mode	rate 15-30ft
		Canopy Co	over		Narrow <16ft	
		Partly o	penPartly sh	aded Watland Brazant Vac (No.		4 No
		<u></u> ✓ Shaded	Open		Wetland PresentYes Wetland ID	<u>✓</u> No
		Indicate th	e dominant type and	d record the d	lominant species present	
AQUATIC VE	GETATION	Rooted emergentRooted submergentRooted floatingFree floating				
		Floatin	g algae	Attached algae	e	
		_				
		Perennial s	tream in forest, but no	ear a rural resi	dence.	
MACDOWN /=	TEDD 4 TEA	1				
MACROINVER OR OTHER	KIEBKAIES					
WILDLIFE OBSERVED/C	THER					
OBSERVATIO						
NOTES						
I		1				



Photograph Direction $\underline{\text{NE}}$

STREAM ID S-A61	STREAM NAME UNT to Slate Run
LAT 37.559328 LONG -80.710071	DATE 04/10/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS Yarbrough, Stoliker, Heule	
FLOW REGIME Perennial Intermittent Ephemeral	WATER TYPE TNW RPW NRPW_✓

Perennial	_ Intermitte	nt — Ephem	eral TNW	RPW	NRPW		
			_				
			/leasurements k Width: <u>7.0 ft</u>		Stream ErosionNone✓ Moderate	Heavy	
		Top of Ban	k Height:		Artificial, Modified or Char	nelized	
		LB <u>6.0</u>	in RB <u>6.0</u>	<u>in</u>	Yes _ V No	monzou	
CHANNEL FE	ATURES	Water Dep	th: 2.00 in			. N.	
0134442212	, o	Water Widt	th: 41.0 in		Dam PresentYes _	<u>∠</u> No	
		High Water	Mark: <u>4.0 in</u>		Sinuosity <u>v</u> Low	Medium High	
		Flow Direc	tion: W		Gradient		
					Flat Moderate _	Severe (10 ft/100 ft)	
		Water Pres			Proportion of Reach Repre	esented by Stream	
			r, stream bed dry		Morphology Types Riffle 20 % Run 60	%	
		Stream	bed moist		Pool 20 % Rull 60	70	
FLOW CHARACTER	ISTICS	Flowing	•		20 /		
OHARAGIER	101100	_			Turbidity Clear ✓ Slightly	turbidTurbid	
		Velocity Fast	✓ Moderate		OpaqueStained		
		Slow			Other		
INOR	INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate	Diame		% Composition in	Substrate	Characteristic	% Composition in	
Туре	Diame		Sampling Reach	Туре		Sampling Area	
Bedrock	> 256	mm (10")		Detritus	sticks, wood, coarse plant materials (CPOM)		
Boulder Cobble		mm (10") m (2.5"-10")			, , ,		
Gravel		(0.1"-2.5")	40	Muck-Mud	black, very fine organic (FPOM)		
Sand		nm (gritty)	40		, ,		
Silt).06 mm	10	Marl	grey, shell fragments		
Clay	< 0.004 r	mm (slick)	20				
			ant Surrounding Lan	duse	Indicate the dominant type	(Check one)	
		Forest Commer			Trees Shrub ✓ Grasses Herba		
		Field/PastureIndustrial Agricultural Residenti			<u>v</u> Grassesnerba	iceous	
WATERSHED FEATURES		Other:			Floodplain Width Wide > 30ft Mode	rate 15-30ft	
FEATURES					Narrow <16ft	rate 15-301t	
		Canopy CoverPartly openPartly shaded		aded	_		
		ShadedOpen			Wetland Present <u>✓</u> Yes Wetland ID _{W-A13}	—No	
		Indicate th	ne dominant type and		Iominant species present		
AQUATIC VE	GETATION	Rooted emergentRooted submergentRooted floatingFree floating					
		Floatin	Floating algaeAttached algae				
		1					
		This feature	e is only flowing now I	pecause of the	rainfall over the last couple	of days.	
MACROINVE	RTEBRATES						
OR OTHER WILDLIFE							
OBSERVED/C							
OBSERVATIO NOTES	ONS AND						



Photograph Direction East

STREAM ID S-A60	STREAM NAME Slate Run
LAT 37.557852 LONG -80.709832	DATE 04/10/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS Yarbrough, Stoliker, Heule	
FLOW REGIME Perennial ✓ Intermittent — Ephemeral —	WATER TYPE TNW RPW_✓ NRPW

Perennial _	<u> </u>	nt <u> </u>	eral TNW	RPW <u> </u>	NRPW	
	1		_			
		Estimate Measurements Top of Bank Width: 18.0 ft			Stream ErosionNone ✓ Moderate	Незуу
		•			NoneNoderate	Tleavy
		Top of Ban	· ·		Artificial, Modified or Char	nnelized
			ft RB <u>2.0 f</u>	<u>π</u>	<u>✓</u> YesNo	
CHANNEL FE	ATURES		th: 0.50 in		Dam PresentYes _	✓ No
		Water Widt	h: 111.(in		_ _	
		High Water	Mark: <u>21.0 in</u>		Sinuosity <u>v</u> Low	Medium High
		Flow Direct	tion: <u>SW</u>		Gradient	
					Flat	
		Water Pres	- ont		(0.5/100 ft (2 ft/100 ft) Proportion of Reach Repre	(10 ft/100 ft)
			r, stream bed dry		Morphology Types	ssented by Stream
		Stream I			Riffle 30 % Run 40	%
FLOW		Standing	•		Pool 30 %	
CHARACTER	STICS	<u>✓</u> Flowing	water		Turbidity	
		Velocity			ClearSlightly	
		· 	Moderate		OpaqueStained	
		Slow		T	Other	
INOR	INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)		_	RGANIC SUBSTRATE CON does not necessarily add u		
Substrate Type	Diame	ter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock				Detritus	sticks, wood, coarse	
Boulder		mm (10")	15	Delilius	plant materials (CPOM)	5
Cobble	64-256 m	m (2.5"-10")	35	Muck-Mud	black, very fine organic	
Gravel	2-64 mm	(0.1"-2.5")	20	Widok Wida	(FPOM)	
Sand	0.06-2n	nm (gritty)	25			
Silt).06 mm	5	Marl	grey, shell fragments	
Clay	< 0.004 r	mm (slick)				
		Predomina Forest	ant Surrounding Lan Commer		Indicate the dominant type ✓ Trees ✓ Shrub	(Check one)
			astureIndustrial		Grasses Herba	
		Agricultural Residential Other: Canopy Cover Partly open Partly sha		tial	<u> </u>	
WATERSHED FEATURES					Floodplain Width Wide > 30ft ✓ Mode	rate 15-30ft
					Narrow <16ft	
				aded	W (1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	. N
		Shaded	Open		Wetland PresentYes Wetland ID	<u>✓</u> No
		Indicate th	e dominant type and	d record the d	Iominant species present	
AQUATIC VEC	SETATION		· —	Rooted subme	<u> </u>	tingFree floating
		Floatin	g algae	Attached algae	e	
		<u> </u>				
		Perennial s	tream. Swollen with re	ecent precipita	ation events.	
MACRONIVE	TEDDATES					
MACROINVER OR OTHER	KIEBKATES					
WILDLIFE OBSERVED/C	THER					
OBSERVATIO NOTES						
.10123						



Photograph Direction $\underline{\mathsf{NW}}$

STREAM ID	S-CV26		STREAM NA	STREAM NAME UNT to Slate Run			
CLIENT MV	P		PROJECT N	PROJECT NAME MVP			
LAT 37.5564	45 <u>L</u> (ONG -80.70888	DATE 01/09/	2018	COUNTY Monroe		
INVESTIGATO	INVESTIGATORS CV, KP						
WATER TYPE		NRPW [FLOW REG Perennial	IME Intermi	ttent Ephemeral		
		Estimate Mea	asurements		Sinuosity Low V	Medium High	
			Width: 6.0 ft Height:	ft	Gradient <u>✓</u> FlatMo (0.5/100 ft) (2 ft/	derate Severe (100 ft) (10 ft/100 ft)	
		Water Depth:			Stream Erosion ✓ None Moderate	Heavy	
		•			Artificial, Modified or Chann	_ ′	
CHANNEL FE	ATURES	Water Width:		0.0 4	Yes V No		
		, ,	Water Mark (Width):		Within Roadside Ditch		
		, ,	Nater Mark (Height)	: <u>8.0</u> in	Yes _✓No		
		Flow Direction	n: Southwest	-	Culvert Present ✓ Yes		
							
					Culvert Material: Corrugated	ivietai	
					Culvert Size: 36 in		
		Water Preser No water, sStream bed Standing v	stream bed dry d moist		Proportion of Reach Represented by Stream Morphology Types (Only enter if water present) Riffle 50 % Run 30 % Pool 20 %		
FLOW CHARACTER	ISTICS	Flowing wa	iter		Turbidity <u>✓</u> ClearSlightly turbidTurbid		
		Velocity Fast	_ Moderate		Other		
		✓ Slow			_		
INOR	_	JBSTRATE CO d add up to 10			ORGANIC SUBSTRATE COM (does not necessarily add up		
Substrate Type	Dia	meter	% Composition in Sampling Reach	Substrate Type	e Characteristic	% Composition in Sampling Area	
Bedrock				Detritus	sticks, wood, coarse		
Boulder	> 25	6 mm (10")		Detintae	plant materials (CPOM)		
Cobble	64-256	mm (2.5"-10")	30	Muck-Mud	black, very fine organic		
Gravel		nm (0.1"-2.5")	20		(FPOM)		
Sand		-2mm (gritty)	10				
Silt		4-0.06 mm		Marl	grey, shell fragments		
Clay	< 0.00	04 mm (slick)	40		F1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
Predominant Surre — Forest <u>✓</u> Field/Pasture — Agricultural — ROW		Commercia	ıl	Floodplain Width Wide > 30ft Modera Narrow <15ft	te 15-30ft		
Canopy CoverOpenShaded			er <u>✔</u> Partly shad	ed			
		MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS					
MAC	ROINVER	TEBRATES/OT	HER WILDLIFE OBS	ERVED OR	OTHER NOTES AND OBSER	RVATIONS	



Photograph Direction South

STREAM ID S-D31	STREAM NAME Indian Creek
LAT 37.554164 LONG -80.710854	DATE 04/11/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS A. Bensted, J. Kraus, A. Larson	1
FLOW REGIME Perennial ✓ Intermittent — Ephemeral —	WATER TYPE TNW RPW_✓ NRPW

Perennial Y	_ Intermitte	ent <u> </u>	eral TNW	RPW <u>▼</u>	NRPW	
		F-timete N			01 F	
			fleasurements k Width: 65.0 ft		Stream ErosionNone _✓ Moderate _	Heavy
		Top of Bank	k Height:		Artificial, Modified or Chan	nelized
	!	LB 10.0 1	ft RB <u>10.0</u> f		Yes ✓ No	Henzeu
CHANNEL FE	ATURES	Water Dept	th: <u>6.00 in</u>			. A1_
011111111111	1101125	Water Widtl	h: 65.0 ft		Dam PresentYes _✓	<u>_</u> No
	!	High Water	Mark: <u>6.0</u> ft		Sinuosity Low	Medium High
		Flow Direct	ion: NW		Gradient	
					✓ Flat Moderate _	
		Water Pres	cont		(0.5/100 ft (2 ft/100 ft) (Proportion of Reach Repre	(10 ft/100 ft)
	!		r, stream bed dry		Morphology Types	-
		Stream b	oed moist		Riffle 100 % Run	%
FLOW		Standing V	-		Pool %	
CHARACTER	ISTICS	Flowing v	watei		Turbidity	
		Velocity			ClearSlightly t OpaqueStained	urbid <u>√</u> Turbid
		✓ Fast _ Slow	Moderate		Other	
INOR	POANIC SUP	I — SIGW BSTRATE COI	MDONENTS	0	RGANIC SUBSTRATE COM	IDONENTS
11101		add up to 100		_	does not necessarily add up	
Substrate Type	Diame	eter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock				Detritus	sticks, wood, coarse	
Boulder		mm (10")		Dellilus	plant materials (CPOM)	10
Cobble	1	nm (2.5"-10")	30	Muck-Mud	black, very fine organic	
Gravel		n (0.1"-2.5")	30		(FPOM)	
Sand		mm (gritty)	30	N4==1	seem shall frommente	
Silt	+	0.06 mm	10	Marl	grey, shell fragments	
Clay	< 0.004	mm (slick)	ant Surrounding Lan	duca	Indicate the dominant type	(Chaok ana)
		✓ Forest	Commer	rcial	✓ Trees Shrubs	
	!	Field/Pasture Industrial			Grasses Herbac	ceous
WATERSHED	ļ)	Agricultural Residential Other:			Floodplain Width	
FEATURES		Other.			✓ Wide > 30ft Moderate 15-30ft	
i		Canopy Cover		11	Narrow <16ft	
	!	Partly open ✓ Partly shaded Shaded Open		aded		<u>√</u> No
					Wetland ID	
AQUATIC VE	GETATION			d record the d Rooted subme	dominant species present ergent Rooted floati	ina Free floating
Agonio II.	JEIAIIGI.	Floating	• —	Attached algae	_	
		Indian Cree	ek - at high water mark	k at time of su	rvey (2015).	
		Information	listed on this form ro	======tho d	lata collected in 2015. The etr	room was revisited
MACROINVER OR OTHER	RTEBRATES				lata collected in 2015. The str nnel and OHWM was confirme	
WILDLIFE OBSERVED/O	THFR		·			
OBSERVATIO NOTES						

V5 2015



Photograph Direction SE

Date: 04/11/2015

Comments: 2015 stream identification.



Photograph Direction NW

Date: 10/25/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-D25	STREAM NAME UNT to Hans Creek
LAT 37.538803 LONG -80.718796	DATE 04/10/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS A. Bensted, J. Kraus, A. Larsor	1
FLOW REGIME Perennial Intermittent ✓ Ephemeral	WATER TYPE TNW RPW_✓ NRPW

			leasurements		Stream Erosion		
		'	k Width: 4.0 ft		None Moderate .	Heavy	
		Top of Ban	J		Artificial, Modified or Chan	nelized	
		LB 2.0		<u>ft</u>	Yes No		
CHANNEL FEATURES		·	h: 4.00 in		Dam PresentYes	✓ No	
		Water Widt				_	
		Ū	Mark: <u>4.0 in</u>		Sinuosity Low	Medium High	
		Flow Direct	ion: <u>W</u>		Gradient	_	
					Flat Moderate (2 ft/100 ft)		
		Water Pres			Proportion of Reach Repre	sented by Stream	
		Stream b	r, stream bed dry bed moist		Morphology Types Riffle 75 % Run 10	%	
EL OW		Standing			Pool 15 %		
FLOW CHARACTERISTICS		<u>✓</u> Flowing	water		Turbidity		
		Velocity			Clear ✓ Slightly turbid — Turbid		
		Fast <u>v</u> Moderate			OpaqueStained		
	Slow			T	Other		
INOR		STRATE CO		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Cubatrata	(Siloulu	add up to 100	% Composition in				
Substrate Type	Diame	ter	Sampling Reach	Substrate Type	Characteristic	Sampling Area	
Bedrock			25	Detritus	sticks, wood, coarse	10	
Boulder		mm (10")	15		plant materials (CPOM)	10	
Cobble		m (2.5"-10")	25	Muck-Mud	black, very fine organic (FPOM)		
Gravel Sand		n (0.1"-2.5") nm (gritty)	25 10		(I I OWI)		
Silt		0.06 mm	10	Marl	grey, shell fragments		
Clay		mm (slick)		Man	groy, enon magmente		
,			ant Surrounding Lan	duse	Indicate the dominant type	(Check one)	
		✓ Forest Commercial			<u>✓</u> Trees Shrub	s	
		Field/Pa	astureIndustrial ural Resident		<u>✓</u> Grasses Herba	ceous	
WATERSHED		Other:	itesidem	liai	Floodplain Width		
FEATURES		_			✓ Wide > 30ft Moder Narrow <16ft	rate 15-30ft	
		Canopy Co		aded			
· · · · · · · · · · · · · · · · · · ·		Shaded			Wetland PresentYes Wetland ID	<u>✓</u> No	
					dominant species present		
AQUATIC VE	GETATION	_				ingFree floating	
		Floating	g algae	Attached alga	e		

MACROINVERTEBRATES
OR OTHER
WILDLIFE
OBSERVED/OTHER
OBSERVATIONS AND
NOTES

Portions of stream may have been excavated down to bedrock. Old floodplain of stream contains hydric soils, and has hydrology at some locations, but lacks hydrophytic vegetation so is not currently a wetland. Upland plot taken for verification. Recent rains have brought stream to bankfull stage.



Photograph Direction SW

STREAM ID S-F18	STREAM NAME UNT to Hans Creek
LAT 37.537587 LONG -80.717815	DATE 04/10/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS E. Stromhaier, A. Flake, D. McC	Cullough
FLOW REGIME	WATER TYPE
Perennial / Intermittent _ Ephemeral _	TNW RPW NRPW

Perenniai -	_	nt <u> — Epnem</u>	erai INVV	RPW —	NRPW	
		F-4'4- B			Ota	
		Estimate Measurements Top of Bank Width: 18.0 ft			Stream Erosion None ✓ Moderate — Heavy	
					Woderate	
		Top of Ban	ŭ		Artificial, Modified or Char	nnelized
		LB <u>3.0</u>	ft RB <u>3.0</u>	<u>ft</u>	<u>✓</u> YesNo	
CHANNEL FE	ATURES	Water Dep	th: <u>1.00 in</u>		Dam PresentYes _	∠ No
		Water Widt	th: 6.0 ft		Daili Fleseill 165 _	<u>/ </u>
		High Water	Mark: <u>2.0 ft</u>		Sinuosity Low	Medium High
		Flow Direct	tion: NW		Gradient	
						Severe
					(0.5/100 ft (2 ft/100 ft)	(10 ft/100 ft)
		Water Pres			Proportion of Reach Repre	esented by Stream
			r, stream bed dry bed moist		Morphology Types Riffle 75 % Run 25	%
		— Standin			Pool %	70
FLOW CHARACTER	ISTICS	Flowing	-			
OHARAGIER	101100				Turbidity	turbidTurbid
		Velocity	✓ Madarata		Clear Slightly Stained	
		Fast Slow	<u>✓</u> Moderate		Other	
INOR	CANIC SUB	STRATE CO	MDONENTS	0	RGANIC SUBSTRATE CON	ADONENTS
INOR		add up to 10			does not necessarily add u	
Substrate	Diame	tor	% Composition in	Substrate		% Composition in
Type	Diame	eter	Sampling Reach	Type	Characteristic	Sampling Area
Bedrock			55	Detritus	sticks, wood, coarse	
Boulder	> 256	mm (10")	15	Detritus	plant materials (CPOM)	10
Cobble	64-256 m	m (2.5"-10")	10	Muck-Mud	black, very fine organic	
Gravel	2-64 mm	า (0.1"-2.5")	5	Widok Wida	(FPOM)	
Sand	0.06-2n	nm (gritty)	5			
Silt	0.004-0	0.06 mm	5	Marl	grey, shell fragments	
Clay	< 0.004	mm (slick)	5			
			ant Surrounding Lan		Indicate the dominant type	
		Forest	Commer		Trees Shrub Grasses Herba	
		✓ Field/PastureIndustrial Residential Other: Canopy Cover Partly open Partly shaded Open			<u>✓</u> Grasses Herba	iceous
WATERSHED				iidi	Floodplain Width	
FEATURES					Wide > 30ftMode	rate 15-30ft
					Narrow < roll	
				aded	Wetland PresentYes	<u>✓</u> No
			<u>✓</u> Open		Wetland ID	
					dominant species present	
AQUATIC VE	GETATION		_	Rooted subme Attached algae	_	tingFree floating
		1 10atii1	y algae <u>v</u>	Allacried alga-	<u> </u>	
		1				
MACROINVER	TERDATES					
OR OTHER	VIEDNATES	'				
WILDLIFE OBSERVED/C	THER					
OBSERVATIO						
NOTES						



Photograph Direction SW

STREAM ID S-Z5	STREAM NAME UNT to Hans Creek
LAT 37.524342 LONG -80.711383	DATE 07/10/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS S. Townsend, S. Therkildson, D.	D. McCullough
FLOW REGIME	WATER TYPE
Perennial Intermittent Ephemeral	TNW RPW NRPW

Perennial —	_ Intermitte	nt Ephem	eral TNW	RPW	NRPW		
			Measurements		Stream Erosion ✓ None Moderate	Hoave	
		·	k Width: 2.0 ft		Nonewoderate	<u> —</u> пеаvy	
		Top of Ban	· ·		Artificial, Modified or Char	nnelized	
		LB <u>0.5</u>	ft RB <u>3.0</u>	<u>ft</u>	<u>✓</u> YesNo		
CHANNEL FE	ATURES	Water Dept	th: 0.30 in		Dam Present Yes	∠ No	
		Water Widt	h: <u>1.5 ft</u>			<u></u>	
		High Water	Mark: <u>2.0 ft</u>		Sinuosity <u>v</u> Low	Medium High	
		Flow Direct	tion: SW		Gradient		
					✓ FlatModerateSevere		
		Motor Duce			(0.5/100 ft (2 ft/100 ft)	(10 ft/100 ft)	
		Water Pres No wate	senτ r, stream bed dry		Proportion of Reach Repre Morphology Types	esented by Stream	
		Stream I			Riffle % Run 100 %		
FLOW		Standing	•		Pool %		
CHARACTER	ISTICS	<u>✓</u> Flowing	water		Turbidity		
		Velocity			✓ ClearSlightly		
		Fast	Moderate		OpaqueStained		
		✓ Slow			Other		
INOR		STRATE CO			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate	`	•	% Composition in	Substrate		% Composition in	
Type	Diame	rter	Sampling Reach		Characteristic	Sampling Area	
Bedrock			10	Detritus	sticks, wood, coarse	_	
Boulder		mm (10")		Dountdo	plant materials (CPOM)	5	
Cobble		m (2.5"-10")	30	Muck-Mud	black, very fine organic		
Gravel		1 (0.1"-2.5")	50		(FPOM)		
Sand		nm (gritty)					
Silt		0.06 mm	10	Marl	grey, shell fragments		
Clay	< 0.004	mm (slick)	10 "				
		Forest	ant Surrounding Lan Commer		Indicate the dominant type Trees Shrub		
		Field/Pa	_		✓ Grasses Herba		
MATEROLIER		Agricult		tial	al Floodplain Width		
WATERSHED FEATURES		✓ Other:	Gravel road	•		rate 15-30ft	
		Canopy Co	over		✓ Narrow <16ft		
		Partly open Partly shaded			Wetland Present Yes	√ No	
		Shaded	Open		Wetland ID	<u>✓</u> No	
		Indicate th	e dominant type and	d record the d	lominant species present		
AQUATIC VEGETATION		Rooted emergentRooted submergentRooted floatingFree floating					
		Floating	g algae	Attached algae	e 		
MACROINVE	TEDD 4 TEC						
MACROINVERTEBRATES OR OTHER		`[
WILDLIFE OBSERVED/C	THER						
OBSERVATIO NOTES							
110120							



Photograph Direction West

STREAM ID S-Z4	STREAM NAME UNT to Hans Creek
LAT 37.524178 LONG -80.710954	DATE 07/10/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS S. Townsend, S. Therkildson, D.	D. McCullough
FLOW REGIME Perennial Intermittent Ephemeral	WATER TYPE TNW RPW NRPW_

Perennial	Intermitte	nt — Ephem	eral 🖍	TNW	RPW	NRPW <u>~</u>		
		Estimate Measurements				Stream Erosion		
		Top of Bank Width: 2.5 ft				<u>✓ None</u> Moderate	Heavy	
		Top of Ban	k Height	:		Artificial, Modified or Char	nnolizod	
		LB 4.0	ft	RB 4.0	ft	Yes ✓ No	menzeu	
		Water Dep	_		_			
CHANNEL FE	ATURES	·				Dam PresentYes _	<u>√</u> No	
		Water Width: 1.0 ft				Cinus situ	Madium Link	
		High Water	_			Sinuosity <u>v</u> Low	iviedium High	
		Flow Direc	tion: <u>SV</u>	V		Gradient		
						Flat		
		M-4 D	4			, , ,	` '	
		Water Pres ✓ No wate		hed dry		Proportion of Reach Repre Morphology Types	esented by Stream	
		Stream		-		Riffle % Run 10	0 %	
		Standin				Pool %		
FLOW CHARACTER	STICS	✓ Flowing	water					
						Turbidity ClearSlightly	turbidTurbid	
		Velocity Fast	Mod	lerate		✓ Opaque — Stained		
		✓ Slow	10100	iciaic		Other		
INOR	GANIC SUB	STRATE CO	MPONE	NTS	0	PGANIC SUBSTRATE CON	ADONENTS	
INOIN		add up to 10			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate		-		mposition in	Substrate	01	% Composition in	
Type	Diame	ter		pling Reach	Type	Characteristic	Sampling Area	
Bedrock					Detritus	sticks, wood, coarse		
Boulder	> 256	mm (10")	10)	Detritus	plant materials (CPOM)		
Cobble	64-256 m	m (2.5"-10")	10)	Muck-Mud	black, very fine organic		
Gravel	2-64 mm	(0.1"-2.5")	25	5	IVIUCK-IVIUU	(FPOM)		
Sand	0.06-2n	nm (gritty)	20)	Marl			
Silt	0.004-0	0.06 mm	30)		grey, shell fragments		
Clay	< 0.004 ı	mm (slick)	5					
			ant Surr	ounding Lan		Indicate the dominant type		
		Forest		Commer		Trees Shrub		
		<u>✓</u> Field/P Agricul		Industrial Resident		✓ Grasses — Herba	aceous	
WATERSHED		Other:	lurai	Resident	liai	Floodplain Width		
FEATURES		_ 0					rate 15-30ft	
		Canopy Cover				✓ Narrow <16ft		
	Partly open Partly shaded			aded	d Wetland PresentYes _✓ No Wetland ID			
Shac		Snaded	ShadedOpen					
	Indicate the dominant type and record the dominant species present							
AQUATIC VEGETATION			l emerge	_	Rooted subme	<u> </u>	tingFree floating	
		Floating algaeAttached algae						
MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND								
NOTES								



Photograph Direction NW

STREAM ID S-MN2			STREAM NA	STREAM NAME UNT to Hans Creek				
CLIENT MVP			PROJECT N	PROJECT NAME MVP				
LAT 37.520099 LONG -80.706868				DATE 04/20/2016 COUNTY Mon				
INVESTIGATORS S Ryan, A Flake, N Katsiaficas								
WATER TYPE	RPW	NRPW	FLOW REG Perennial	FLOW REGIME Perennial Intermittent Ephemeral		Ephemeral		
CHANNEL FE		Estimate Mea Top of Bank V Top of Bank I LB1.5ft Water Depth: Water Width: Ordinary High	asurements Vidth: 9.0 ft Height: RB 2.0 2.00 in 3.0 ft Water Mark (Width): Water Mark (Height)	ftft	Sinuosi Gradier Stream N Artificia Y Within	ityLowv ItFlatv_Mo (0.5/100 ft) (2 ft) Erosion oneModerate al, Modified or Chan esv No Roadside Ditch /esv No PresentYes Material:	nelized	
FLOW CHARACTERI	ISTICS	Stream bed Standing w Flowing war	tream bed dry I moist vater	Proportion of Reach Represented by Morphology Types (Only enter if water p Riffle 10 % Run 70 % Pool 20 % Turbidity ClearSlightly turbid			er if water present)) %	
INOR	-	UBSTRATE COI				C SUBSTRATE CON ot necessarily add u		
Substrate Type	Dia	meter	% Composition in Sampling Reach	Substrat Type	te C	haracteristic	% Composition in Sampling Area	
Bedrock		(400)	70	Detritus		ticks, wood, coarse		
Boulder		56 mm (10")				nt materials (CPOM)	0	
Cobble Gravel		mm (2.5"-10") mm (0.1"-2.5")		Muck-Muc	d bla	ck, very fine organic (FPOM)	0	
Sand		-2mm (gritty)	<u>20</u> 5			(1.1.5,		
Silt		94-0.06 mm	5	Marl	ar	ey, shell fragments	0	
Clay		04 mm (slick)	ວ	11101.]	cy, onon nago		
Predominant Surrounding Landuse								
MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS								
Stream only partially surveyed due to access constraints downstream. Channel crossed by farm roads in two locations - both crossings lack culverts and consist of bare bedrock.								



Photograph Direction East

STREAM ID S-CV19		STREAM NA	STREAM NAME Hans Creek						
CLIENT MVP			PROJECT N	PROJECT NAME MVP					
LAT 37.501162 LONG -80.690668				DATE 01/04/2018 COUNTY Monroe					
INVESTIGATORS CV, KP									
WATER TYPE TNW RPW NRPW NRPW			FLOW REG Perennial	FLOW REGIME Perennial Intermittent Ephemeral					
Estimate Measurements Sinuosity Low ✓ Medium High									
		Top of Bank W Top of Bank H LB <u>5.0</u> ft	/idth: <u>35.0</u> ft eight: RB <u>5.0</u>	ft	Gradient V Flat Mo (2 fb) Stream Erosion	derate Severe /100 ft) (10 ft/100 ft)			
		Water Depth: _	12.00_ in		NoneModerate	_ _			
CHANNEL FE	ATURES	Water Width:_	20.0 ft		Artificial, Modified or Chan				
OHAMILE I E	ATORLO	Ordinary High	Water Mark (Width):	<u>25.0</u> ft	Yes _ <u>✓</u> No)			
		Ordinary High	Water Mark (Height)	: <u>24.0</u> in	Within Roadside Ditch				
		Flow Direction:	Southeast		Yes <u>✓</u> No)			
					Culvert PresentYes	<u>✓</u> No			
					Culvert Material:				
					Culvert Size:in				
El OW		Water Present No water, st Stream bed Standing wa	ream bed dry moist		Proportion of Reach Represented by Stream Morphology Types (Only enter if water present) Riffle 40 % Run 30 % Pool 30 %				
FLOW CHARACTER	ISTICS	✓ Flowing wate	er		Touchtelle				
					Turbidity <u>✓</u> ClearSlightly turbidTurbid Other				
		Velocity Fast <u>✓</u>	Moderate						
		Slow	Moderate		_				
INORGANIC SUBSTRATE COMPONENTS (should add up to 100%) 100 ORGANIC SUBSTRATE COMPONENT (does not necessarily add up to 100%)						IPONENTS			
	(shoul	d add up to 100	%) 100		(does not necessarily add u	p to 100%)			
Substrate Type		d add up to 100	%) 100 % Composition in Sampling Reach	Substrate Type	· _ ·				
	Dia	meter	% Composition in	Substrate Type	Characteristic sticks, wood, coarse	% Composition in			
Туре	Dia:	meter 56 mm (10")	% Composition in	Substrate	Characteristic	% Composition in			
Type Bedrock Boulder Cobble	Dia: > 25 64-256	meter 56 mm (10") mm (2.5"-10")	% Composition in Sampling Reach	Substrate Type Detritus	Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic	% Composition in			
Type Bedrock Boulder Cobble Gravel	> 25 64-256 2-64 r	meter 56 mm (10") mm (2.5"-10") mm (0.1"-2.5")	% Composition in Sampling Reach	Substrate Type	Characteristic sticks, wood, coarse plant materials (CPOM)	% Composition in			
Type Bedrock Boulder Cobble Gravel Sand	> 25 64-256 2-64 r	meter 56 mm (10") mm (2.5"-10")	% Composition in Sampling Reach 30 40	Substrate Type Detritus Muck-Mud	Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM)	% Composition in			
Type Bedrock Boulder Cobble Gravel Sand Silt	> 25 64-256 2-64 r 0.06	meter 56 mm (10") 56 mm (2.5"-10") 7 mm (0.1"-2.5") 7-2mm (gritty) 74-0.06 mm	% Composition in Sampling Reach 30 40 20	Substrate Type Detritus	Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic	% Composition in			
Type Bedrock Boulder Cobble Gravel Sand	> 25 64-256 2-64 r 0.06	meter 56 mm (10") mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 04 mm (slick)	% Composition in Sampling Reach 30 40 20 10	Substrate Type Detritus Muck-Mud Marl	Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments	% Composition in			
Type Bedrock Boulder Cobble Gravel Sand Silt	> 25 64-256 2-64 r 0.06 0.00 < 0.00	meter 56 mm (10") mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 04 mm (slick)	% Composition in Sampling Reach 30 40 20 10 Surrounding Landu — Commercial ure — Industrial I — Residential — Other:	Substrate Type Detritus Muck-Mud Marl	Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM)	% Composition in Sampling Area			
Type Bedrock Boulder Cobble Gravel Sand Silt Clay	> 25 64-256 2-64 r 0.06 0.00 < 0.00	meter 56 mm (10") 5 mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 4 mm (slick) Predominant Forest Field/Pastu Agricultura ROW Canopy Covel Open	% Composition in Sampling Reach 30 40 20 10 Surrounding Landu — Commercia ure — Industrial I — Residential — Other:	Substrate Type Detritus Muck-Mud Marl	Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera	% Composition in Sampling Area			
Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	> 25 64-256 2-64 r 0.06 0.00 < 0.00	meter 56 mm (10") 5 mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 4 mm (slick) Predominant Forest Field/Pastu Agricultura ROW Canopy Cove Open Shaded	% Composition in Sampling Reach 30 40 20 10 Surrounding Landu — Commercia Industrial — Residential — Other: r — Partly shade	Substrate Type Detritus Muck-Mud Marl Ise Il	Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera	% Composition in Sampling Area			
Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	> 25 64-256 2-64 r 0.06 0.00 < 0.00	meter 56 mm (10") 5 mm (2.5"-10") 5 mm (2.5"-10") 5 mm (2.5"-10") 6 mm (9.1"-2.5") 6 mm (slicty) 6 4-0.06 mm 7 4 mm (slick) Predominant Forest Field/Pastu Agricultura ROW Canopy Cove Open Shaded	% Composition in Sampling Reach 30 40 20 10 Surrounding Landu — Commercia Industrial I	Substrate Type Detritus Muck-Mud Marl see	Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Narrow <15ft Modera	% Composition in Sampling Area			



Photograph Direction $\underline{\text{NE}}$

STREAM ID S-MN38			STPEAM NA	STREAM NAME UNT to Blue Lick Creek				
CLIENT MVP				PROJECT NAME MVP				
LAT 37.487679 LONG -80.68206				DATE 01/08/2018 COUNTY Monroe				
INVESTIGATORS S. Ryan, J. Potrikus								
WATER TYPE TNW RPW NRPW INTERNITED INTERNITE								
		Estimata Mar	nauvamanta		Cinuacity Law (A	Andium Lligh		
Water Depth: 2.00 CHANNEL FEATURES Water Width: 1.0			Vidth: <u>6.0</u> ft Height: t RB <u>2.5</u> t <u>2.00</u> in		SinuosityLowMediumHigh GradientFlatModerateSevere (0.5/100 ft) (2 ft/100 ft) (10 ft/100 ft) Stream ErosionNoneModerateHeavy Artificial, Modified or ChannelizedYesNo			
		_	Water Mark (Height)		Within Roadside DitchYesNo			
					Culvert PresentYes _ Culvert Material:in			
FLOW CHARACTER	ISTICS	Stream bed Standing w Flowing wa	stream bed dry d moist vater		Proportion of Reach Repres Morphology Types (Only enter Riffle 75 % Run Pool 25 % Turbidity	of Reach Represented by Stream Types (Only enter if water present) Run % Slightly turbidTurbid		
INOR	-	UBSTRATE CO			ORGANIC SUBSTRATE COM (does not necessarily add up			
Substrate Type	,	meter	% Composition in Sampling Reach	Substrate Type	` 	% Composition in Sampling Area		
Bedrock				Detritus	sticks, wood, coarse			
Boulder		56 mm (10")		20111100	plant materials (CPOM)	20		
Cobble		5 mm (2.5"-10")	15	Muck-Mud	black, very fine organic	0		
Gravel		nm (0.1"-2.5")	20		(FPOM)	0		
Sand Silt		-2mm (gritty) 04-0.06 mm	40	Marl		0		
Clay)4 mm (slick)	25	iviaii	grey, snell fragilierits	-		
WATERSHED FEATURES Predominant Surrounding Landuse ✓ Forest Commercial — Field/Pasture Industrial — Agricultural Residential — ROW Other: Canopy Cover — Open Partly shaded ✓ Shaded Predominant Surrounding Landuse — Wide > 30ft Moderate 15-30ft — Narrow <15ft — Narrow <15ft — Narrow <15ft — Shaded								
MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS								
Drains to main stem.								



Photograph Direction $\underline{\text{NE}}$

STREAM ID S-MN37			STREAM NAME UNT to Blue Lick Creek					
CLIENT MVP			PROJECT NAME MVP					
LAT 37.487584 LONG -80.681992			DATE 01/08/2018 COUNTY Monroe					
INVESTIGATORS S. Ryan, J. Potrikus								
TNW	RPW [NRPW		FLOW REG Perennial	IME Interm	nittent 🔽	Ephemeral	
CHANNEL FE	Top of Bank Width Top of Bank Heigh LB1.5ft Water Depth:3.0 Water Width:2.0 Ordinary High Wate Ordinary High Wate Flow Direction:No			4.0 ft RB 1.5 ft Mark (Width): Mark (Height)	ft	SinuosityLowMediumV_High GradientFlatV_ModerateSevere (0.5/100 ft) (2 ft/100 ft) Stream ErosionNoneV_ModerateHeavy Artificial, Modified or ChannelizedYesV_No Within Roadside DitchYesV_No Culvert PresentYesV_No Culvert Material:		
FLOW CHARACTER	ISTICS	Water Preser No water, s Stream bec Standing v ✓ Flowing wa Velocity Fast Slow	stream t d moist vater	ŕ		Proportion of Reach Represented by Stream Morphology Types (Only enter if water present) Riffle 40 % Run 40 % Pool 20 % Turbidity Clear Slightly turbid Turbid Otherlce		
INOR		UBSTRATE CO				ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Dia	meter		Composition in mpling Reach	Substra Type	i (:nar	acteristic	% Composition in Sampling Area
Bedrock		EO (40ll)			Detritus		s, wood, coarse materials (CPOM)	. –
Boulder Cobble		56 mm (10") 6 mm (2.5"-10")	_			 -		15
Gravel		mm (2.5"-10") mm (0.1"-2.5")	5		Muck-Mu	id black,	very fine organic (FPOM)	0
Sand		-2mm (gritty)	40 3!				/	-
Silt		04-0.06 mm	20		Marl	arev	shell fragments	0
Clay		04 mm (slick)				g. 5),		
Predominant Surro ✓ Forest — Field/Pasture — Agricultural — ROW Canopy Cover — Open ✓ Shaded			ure _ al _	unding Landu Commercia Industrial Residential Other: Partly shade	ıl	Floodplain Wide > Narrow	30ft Modera	te 15-30ft
MAC	ROINVER	TEBRATES/OT	HER W	VILDLIFE OBS	ERVED OI	R OTHER NO	TES AND OBSER	RVATIONS
MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS Stream frozen completely.								



Photograph Direction $\underline{\text{NE}}$

STREAM ID S-MN40			STREAM NA	STREAM NAME UNT to Blue Lick Creek			
CLIENT MVP				PROJECT NAME MVP			
LAT 48.905784 LONG -80.681996			06 DATE 01/08/	/2018	COUNTY Monroe		
INVESTIGATO	ORS S. Ry	/an, J. Potrikus					
WATER TYPE	RPW	NRPW	FLOW REG Perennial	IME Intermit	tent Ephemeral		
		Estimate Mea	asurements		Sinuosity Low 🗸	Medium High	
			Vidth: <u>6.0</u> ft		- - -	_	
		Top of Bank H	Height:			oderate Severe /100 ft) (10 ft/100 ft)	
		LB <u>3.0</u> f	t RB <u>3.0</u>	ft	Stream Erosion	(10.0.00.0)	
		Water Depth:	0.00 in		NoneModerate	Heavy	
OLIANNEL EE	ATUREO	Water Width:	0.0 ft		Artificial, Modified or Chan	nelized	
CHANNEL FE	ATURES	Ordinary High	· Water Mark (Width):	1.5ft	Yes _ <u>✓</u> No)	
			Water Mark (Height)		Within Roadside Ditch		
		Flow Direction	· ·		Yes _ <u> _ No</u>)	
					Culvert PresentYes	<u>✓</u> No	
					Culvert Material:		
					Culvert Size:in		
		Water Preser			Proportion of Reach Repre		
		✓ No water, s Stream bed	stream bed dry		Morphology Types (Only enter Riffle % Run	er if water present) %	
		Standing v			Pool %	70	
FLOW CHARACTER	ISTICS	Flowing wa	iter		Turbidity		
					Clear Slightly turbid Turbid		
		Velocity Fast	_ Moderate		Other	_	
		Slow	_				
INOR	_	UBSTRATE CO			ORGANIC SUBSTRATE COM		
	_	UBSTRATE CO	0%) 100	((does not necessarily add u	p to 100%)	
Substrate Type	(shoul				(does not necessarily add u	p to 100%)	
Substrate	(shoul	ld add up to 10	0%) 100 % Composition in	Substrate Type	does not necessarily add u	p to 100%) % Composition in	
Substrate Type	(shoul	ld add up to 10	0%) 100 % Composition in	Substrate	Characteristic	p to 100%) % Composition in Sampling Area	
Substrate Type Bedrock	(shoul	ld add up to 100	0%) 100 % Composition in	Substrate Type Detritus	Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic	p to 100%) % Composition in Sampling Area	
Substrate Type Bedrock Boulder	Shoul Dial > 25 64-256 2-64 r	meter 56 mm (10") mm (2.5"-10") mm (0.1"-2.5")	0%) 100 % Composition in Sampling Reach	Substrate Type	characteristic sticks, wood, coarse plant materials (CPOM)	p to 100%) % Composition in Sampling Area	
Substrate Type Bedrock Boulder Cobble Gravel Sand	> 25 64-256 2-64 r	meter 56 mm (10") mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty)	% Composition in Sampling Reach	Substrate Type Detritus Muck-Mud	characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM)	p to 100%) % Composition in Sampling Area 20 0	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt	Shoul Dial	meter 56 mm (10") mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty) 14-0.06 mm	% Composition in Sampling Reach	Substrate Type Detritus	Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic	p to 100%) % Composition in Sampling Area	
Substrate Type Bedrock Boulder Cobble Gravel Sand	Shoul Dial	d add up to 100 meter 56 mm (10") mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty) 14-0.06 mm 14 mm (slick)	% Composition in Sampling Reach 10 20 40 30	Substrate Type Detritus Muck-Mud Marl	characteristic Sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments	p to 100%) % Composition in Sampling Area 20 0	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt	Shoul Dial	meter 56 mm (10") mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty) 14-0.06 mm 14 mm (slick) Predominant	% Composition in Sampling Reach 10 20 40 30	Substrate Type Detritus Muck-Mud Marl	characteristic Sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width	p to 100%) % Composition in Sampling Area 20 0	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt	Shoul Dial	meter 56 mm (10") mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty) 14-0.06 mm 14 mm (slick) Predominant Forest Field/Past	% Composition in Sampling Reach 10 20 40 30 Surrounding Landu Commercia	Substrate Type Detritus Muck-Mud Marl	characteristic Sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments	p to 100%) % Composition in Sampling Area 20 0	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay	Shoul Dial	meter 56 mm (10") 5 mm (2.5"-10") 7 mm (0.1"-2.5") 7 mm (gritty) 7 mm (slick) Predominant Forest Field/Past Agricultura	% Composition in Sampling Reach 10 20 40 30 Surrounding Landu Commercial Industrial Residential	Substrate Type Detritus Muck-Mud Marl	characteristic Sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera	p to 100%) % Composition in Sampling Area 20 0	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt	Shoul Dial	meter 56 mm (10") mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty) 14-0.06 mm 14 mm (slick) Predominant Forest Field/Past	% Composition in Sampling Reach 10 20 40 30 Surrounding Landu Commercia	Substrate Type Detritus Muck-Mud Marl	characteristic Sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera	p to 100%) % Composition in Sampling Area 20 0	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay	Shoul Dial	meter 56 mm (10") 5 mm (2.5"-10") 7 mm (0.1"-2.5") 7 mm (gritty) 7 mm (slick) Predominant Forest Field/Past Agricultura	% Composition in Sampling Reach 10 20 40 30 Surrounding Landu Commercial Industrial Residential Other:	Substrate Type Detritus Muck-Mud Marl	characteristic Sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera	p to 100%) % Composition in Sampling Area 20 0	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay	Shoul Dial	meter 56 mm (10") mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 4 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove Open	% Composition in Sampling Reach 10 20 40 30 Surrounding Landu Commercial Industrial Residential Other:	Substrate Type Detritus Muck-Mud Marl	characteristic Sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera	p to 100%) % Composition in Sampling Area 20 0	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay	Shoul Dial	meter 56 mm (10") mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty) 14-0.06 mm 14 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove	% Composition in Sampling Reach 10 20 40 30 Surrounding Landu Commercia Industrial Residential Other:	Substrate Type Detritus Muck-Mud Marl	characteristic Sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera	p to 100%) % Composition in Sampling Area 20 0	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	Shoul Diar	meter 56 mm (10") mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 4 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove Open Shaded	% Composition in Sampling Reach 10 20 40 30 Surrounding Landu Commercia Industrial al Residential Other: Partly shade	Substrate Type Detritus Muck-Mud Marl	characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera	p to 100%) % Composition in Sampling Area 20 0 0 ate 15-30ft	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	Shoul Diar	meter 56 mm (10") mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 4 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove Open Shaded	% Composition in Sampling Reach 10 20 40 30 Surrounding Landu Commercia Industrial al Residential Other: Partly shade	Substrate Type Detritus Muck-Mud Marl	characteristic Sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera	p to 100%) % Composition in Sampling Area 20 0 0 ate 15-30ft	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	Shoul Diar	meter 56 mm (10") mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 4 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove Open Shaded	% Composition in Sampling Reach 10 20 40 30 Surrounding Landu Commercia Industrial al Residential Other: Partly shade	Substrate Type Detritus Muck-Mud Marl	characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera	p to 100%) % Composition in Sampling Area 20 0 0 ate 15-30ft	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	Shoul Diar	meter 56 mm (10") mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 4 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove Open Shaded	% Composition in Sampling Reach 10 20 40 30 Surrounding Landu Commercia Industrial al Residential Other: Partly shade	Substrate Type Detritus Muck-Mud Marl	characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera	p to 100%) % Composition in Sampling Area 20 0 0 ate 15-30ft	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	Shoul Diar	meter 56 mm (10") mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 4 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove Open Shaded	% Composition in Sampling Reach 10 20 40 30 Surrounding Landu Commercia Industrial al Residential Other: Partly shade	Substrate Type Detritus Muck-Mud Marl	characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera	p to 100%) % Composition in Sampling Area 20 0 0 ate 15-30ft	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	Shoul Diar	meter 56 mm (10") mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 4 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove Open Shaded	% Composition in Sampling Reach 10 20 40 30 Surrounding Landu Commercia Industrial al Residential Other: Partly shade	Substrate Type Detritus Muck-Mud Marl	characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera	p to 100%) % Composition in Sampling Area 20 0 0 ate 15-30ft	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	Shoul Diar	meter 56 mm (10") mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 4 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove Open Shaded	% Composition in Sampling Reach 10 20 40 30 Surrounding Landu Commercia Industrial al Residential Other: Partly shade	Substrate Type Detritus Muck-Mud Marl	characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera	p to 100%) % Composition in Sampling Area 20 0 0 ate 15-30ft	



Photograph Direction South

STREAM ID S-G44				STREAM NAME UNI to Hans Creek			
CLIENT MVP				PROJECT NAME MVP			
LAT 37.474795 LONG -80.676416			6 DATE 04/20/	DATE 04/20/2016 COUNTY Monroe			
INVESTIGATO	an, A Flake, N K	atsiaficas					
WATER TYPE	RPW [NRPW	FLOW REG Perennial	IME Interm	ittent Epheme	eral 🗸	
_ 		Estimate Mea			Sinuosity <u>v</u> Low	MediumHigh	
		'	Vidth: <u>4.0</u> ft		Gradient Flat	<u>✓</u> ModerateSevere	
		Top of Bank H	· ·		(0.5/100 ft)	(2 ft/100 ft) (10 ft/100 ft)	
		LB <u>2.0</u> f		ft	Stream Erosion		
		Water Depth:	in			oderateHeavy	
CHANNEL FE	ATURES	Water Width:_	0.0 ft		Artificial, Modified o		
uvivil FE	511.63	Ordinary High	Water Mark (Width):	4.0 ft	<u>✓</u> Yes	No	
		Ordinary High	Water Mark (Height)	: <u>10.0</u> in	Within Roadside Dit		
		Flow Direction	: Southwest	_	Yes	<u>✓</u> No	
					Culvert Present	_Yes <u>✔</u> No	
					Culvert Material:		
					Culvert Size:	<u>in</u>	
		Water Preser				n Represented by Stream	
			tream bed dry			Only enter if water present) Run %	
		Stream bed Standing w			Riffle % F	Run %	
FLOW	STICS	Flowing wa					
CHARACTERI	อแบร				Turbidity	Olimbilis is sufficient.	
		Velocity	NA- 1		ClearSlightly turbidTurbidOther		
		Fast Slow	_ Moderate				
INOD	GANIC S	_	MDONENTS		OPGANIC SUBSTRA	TE COMPONENTO	
INOR	-	UBSTRATE CO ld add up to 10			ORGANIC SUBSTRA (does not necessaril		
Substrate			% Composition in	Substra	te	% Composition in	
Туре	Diai	meter	Sampling Reach	Туре	Characteristic	Sampling Area	
Bedrock	_	_	5	Detritus	sticks, wood, c		
Boulder		56 mm (10")	5		plant materials (7 40	
Cobble		mm (2.5"-10")		Muck-Mu	d black, very fine		
Gravel		nm (0.1"-2.5")	25		(FPOM)	U	
Sand		-2mm (gritty)	30	N 4 =1	- 1 V.5	ments 0	
Silt		14-0.06 mm	35	Marl	grey, shell frag	ments	
Clay	< 0.00	04 mm (slick)	Surrounding ! - '	180	Floodplain Width		
		Predominant <u>✓</u> Forest	Surrounding Landu		Wide > 30ft	Moderate 15-30ft	
		Field/Past	ureIndustrial		✓ Narrow <15ft	_	
WATERSHED		Agricultura	al Residential				
FEATURES		ROW	Other:				
		Canopy Cove	er				
	Open		Partly shade	ed			
		<u>✓</u> Shaded					
							
MACI	ROINVER	TEBRATES/OT	HER WILDLIFE OBS	ERVED OF	ROTHER NOTES AND	OBSERVATIONS	



Photograph Direction SW

STREAM ID S-G43	STREAM NAME UNT to Hans Creek
LAT 37.473383 LONG -80.676563	DATE 04/09/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS G. Stevens, A. Rodrian, S. Kell	y
FLOW REGIME	WATER TYPE
Perennial Intermittent Ephemeral	TNW RPW NRPW

Perenniai _	_ Intermitte	nt Ephem	eral TNW	RPW	NRPW <u> </u>			
		F-414- 1			O4			
			/leasurements k Width: <u>5.0 ft</u>		Stream ErosionNone ✓ Moderate	Heavv		
		Top of Ban						
		LB _6.0	=	•	Artificial, Modified or Cha	nnelized		
				'''	Yes <u></u> ✓ No			
CHANNEL FE	ATURES	·	th: 7.00 in		Dam PresentYes _	<u>∠</u> No		
			th: 2.0 ft		Sinuosity Low _	Modium High		
		Ū	Mark: <u>6.0 in</u>		Siliuosity Low	Mediairi riigir		
		Flow Direct	tion: SE		Gradient	0		
					<u>✓</u> Flat Moderate (2 ft/100 ft)	Severe (10 ft/100 ft)		
		Water Pres	sent		Proportion of Reach Repre	esented by Stream		
			r, stream bed dry		Morphology Types	0/		
		Stream I Standing			Riffle 70 % Run 25 Pool 5 %	%		
FLOW CHARACTER	ISTICS	✓ Flowing	•		70			
CHARACTER	131103				Turbidity <u>✓</u> ClearSlightly	turbidTurbid		
		Velocity ✓ Fast	Moderate		✓ Clear — Slightly — Opaque — Stained			
		Slow	Woderate		Other			
INOR	GANIC SUB	STRATE CO	MPONENTS	0	RGANIC SUBSTRATE COM	//PONENTS		
	(should a	add up to 10	0%)	(c	loes not necessarily add u	p to 100%)		
Substrate Type	Diame	ter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area		
Bedrock				Detritus	sticks, wood, coarse	0.0		
Boulder		mm (10")		Dounted	plant materials (CPOM)	30		
Cobble		m (2.5"-10")	10	Muck-Mud	black, very fine organic			
Gravel		(0.1"-2.5")	10		(FPOM)			
Sand		nm (gritty)	70	Marl				
Silt		0.06 mm			grey, shell fragments			
Clay	< 0.004 1	mm (slick)	10 ant Surrounding Lar	duco	Indicate the dominant type	(Chaok ana)		
		Forest	Commer		Trees Shrub			
		Field/Pasture Industrial			✓ Grasses Herba	iceous		
WATERSHED		Agricultural Residential			Floodplain Width			
FEATURES		Other:			Wide > 30ft Mode	rate 15-30ft		
		Canopy Cover			✓ Narrow <16ft			
		Partly o	. 	aded	Wetland Present Yes	✓ No		
Shade		Snaded	<u>✓</u> Open		Wetland ID			
					lominant species present			
AQUATIC VEGETATION			Rooted emergentRooted submergentRooted floatingFree floating Floating algae Attached algae					
				/ titaeriea aigat				
		A (()	and the factor of the first of the first	- 1 1				
	Area of flood Flow SE MACROINVERTEBRATES		odplain that failed soils	s test				
MACROINVE								
OR OTHER WILDLIFE								
OBSERVED/C								
NOTES	NIO AND							



Photograph Direction NE

STREAM ID S-G42	STREAM NAME UNT to Hans Creek
LAT 37.472339 LONG -80.676095	DATE 04/09/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS G. Stevens, A. Rodrian, S. Kelly	y
FLOW REGIME Perennial Intermittent ✓ Ephemeral	WATER TYPE TNW RPWNRPW

Perenniai —	_ !!!!!!!!!!!!!!!!!!!	nt <u> — Epnem</u>	erai INVV —	RPW —	NRPW		
			Measurements		Stream Erosion	Haava	
		•	k Width: 3.0 ft		NoneModerate	пеачу	
		Top of Ban	· ·		Artificial, Modified or Char	nnelized	
		LB <u>8.0</u>	in RB <u>8.0</u>	<u>in</u>	Yes _ <u>✔</u> No		
CHANNEL FE	ATURES	Water Dep	th: 2.00 in		Dom Brosent Voc	4 No	
		Water Widt	h: <u>1.0 ft</u>		Dam PresentYes _	<u>∕</u> NO	
		High Water	Mark: <u>2.0 in</u>		Sinuosity 🔽 Low	Medium High	
		Flow Direct	tion: E		Gradient		
					Flat Moderate _	Severe	
					(0.5/100 ft (2 ft/100 ft)		
		Water Pres			Proportion of Reach Repre	esented by Stream	
			r, stream bed dry bed moist		Morphology Types Riffle 85 % Run 15	%	
		Standing			Pool %	,,	
FLOW CHARACTER	ISTICS	✓ Flowing	•				
01340101214					Turbidity <u>✓</u> ClearSlightly	turbidTurbid	
		Velocity Fast	✓ Moderate		OpaqueStained		
		Slow	Moderate		Other		
INOR	GANIC SUB	STRATE CO	MPONENTS	0	RGANIC SUBSTRATE CON	/PONENTS	
		add up to 10		(0	loes not necessarily add u	p to 100%)	
Substrate Type	Diame	ter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock			15	Detritue	sticks, wood, coarse		
Boulder	> 256 ı	mm (10")	20	Detritus	plant materials (CPOM)	10	
Cobble	64-256 m	m (2.5"-10")	25	Muck-Mud	black, very fine organic		
Gravel	2-64 mm	(0.1"-2.5")	15	WIGCK-WIGG	(FPOM)		
Sand	0.06-2m	nm (gritty)					
Silt	0.004-0).06 mm		Marl	grey, shell fragments		
Clay	< 0.004 r	mm (slick)	25				
			ant Surrounding Lan	iduse	Indicate the dominant type		
		Forest Commercia ✓ Field/Pasture Industrial			Trees Shrub Grasses Herba		
			Agricultural Residential			locous	
WATERSHED FEATURES		Other:			Floodplain Width Wide > 30ft Moderate 15-30ft		
PEATURES					Wide > 30ft Mode	rate 15-301t	
		Canopy Co		aded			
		Shaded	<u> </u>		Wetland Present <u>✓</u> Yes	No	
			· · · · · · · · · · · · · · · · · · ·		Wetland ID WG6		
AQUATIC VEGETATION Roote				a recora the a Rooted subme	lominant species present ergent Rooted float	ting Free floating	
		Floating	· —	Attached algae	<u> </u>		
	<u> </u>						
		Flows NW	into W-G6				
		I IOVVO INVV	** 00.				
MACROINVER	RTEBRATES						
OR OTHER WILDLIFE							
OBSERVED/C							
OBSERVATIO NOTES	UNA GEN						



Photograph Direction South

STREAM ID S-MN45			STREAM NA	STREAM NAME UNT to Hans Creek			
CLIENT MVP			PROJECT N	PROJECT NAME MVP			
	LAT 37.462878 LONG -80.670284			DATE 01/09/2018 COUNTY Monroe			
INVESTIGATO	ORS S. Ry	/an, J. Potrikus					
WATER TYPE		NRPW [FLOW REG Perennial	PLOW REGIME Perennial Intermittent Ephemeral			
		Cationata Mag			Cinconite I am	Madiona Histo	
		Top of Bank H LB <u>0.5</u> ft	Vidth:2.0 ft Height: t	ft	Gradient Flat <u>✓</u> Mo	/100 ft) (10 ft/100 ft)	
		Water Depth:			- -	 ,	
CHANNEL FE	ATURES	Water Width:_	<u>0.0</u> ft		Artificial, Modified or Chan Yes ✓ No		
		Ordinary High	Water Mark (Width):	ft	Yes _ <u>✓</u> No)	
		Ordinary High	Water Mark (Height)	: <u>6.0</u> in	Within Roadside Ditch		
		Flow Direction	n: South		Yes _ <u>✓</u> No		
				_	Culvert PresentYes	<u>✓</u> No	
					Culvert Material:	· · · · · · · · · · · · · · · · · · ·	
					Culvert Size:in		
FLOW		Stream bed	tream bed dry I moist vater		Proportion of Reach Representations (Only enter Riffle % Run Pool %		
CHARACTER	ISTICS	Flowing wa	ter		Turbidity ClearSlightly turbidTurbid Other		
		Velocity					
		•	_ Moderate				
		Slow	_				
INORGANIC SUBSTRATE COMPOI (should add up to 100%)					ORGANIC SUBSTRATE CON		
	(snou	d add up to 100	0%) 100		(does not necessarily add u	p to 100%)	
Substrate Type		meter	% Composition in Sampling Reach	ł	·	· ·	
_		-	% Composition in	Substrat Type	Characteristic sticks, wood, coarse	% Composition in	
Туре	Dia	-	% Composition in	Substrat	e Characteristic	% Composition in	
Type Bedrock	Dia:	meter	% Composition in Sampling Reach	Substrat Type Detritus	Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic	% Composition in Sampling Area	
Type Bedrock Boulder	Diar > 25 64-256	meter 56 mm (10")	% Composition in Sampling Reach	Substrat Type	c Characteristic sticks, wood, coarse plant materials (CPOM)	% Composition in Sampling Area	
Type Bedrock Boulder Cobble	> 25 64-256 2-64 r	meter 56 mm (10") 5 mm (2.5"-10")	% Composition in Sampling Reach 10 10	Substrat Type Detritus	Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic	% Composition in Sampling Area 10	
Type Bedrock Boulder Cobble Gravel	> 25 64-256 2-64 r	meter 56 mm (10") mm (2.5"-10") nm (0.1"-2.5")	% Composition in Sampling Reach 10 10 30	Substrat Type Detritus	Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic	% Composition in Sampling Area	
Type Bedrock Boulder Cobble Gravel Sand	> 25 64-256 2-64 r 0.06	meter 56 mm (10") 5 mm (2.5"-10") 5 mm (0.1"-2.5") 5 mm (gritty)	% Composition in Sampling Reach 10 10 30 15	Substrat Type Detritus Muck-Muck	c Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM)	% Composition in Sampling Area 10	
Type Bedrock Boulder Cobble Gravel Sand Silt	> 25 64-256 2-64 r 0.06 0.00 < 0.00	meter 56 mm (10") 5 mm (2.5"-10") 5 mm (0.1"-2.5") 5 mm (gritty) 6 mm	% Composition in Sampling Reach 10 10 30 15 20 15 Surrounding Landoure Industrial Residential Other:	Substrat Type Detritus Muck-Muc Marl	c Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM)	% Composition in Sampling Area 10 0	
Type Bedrock Boulder Cobble Gravel Sand Silt Clay	> 25 64-256 2-64 r 0.06 0.00 < 0.00	meter 56 mm (10") 5 mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 14 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove Open	% Composition in Sampling Reach 10 10 30 15 20 15 Surrounding Landu — Commercia — Industrial — Residential — Other:	Substrat Type Detritus Muck-Muc Marl	characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera	% Composition in Sampling Area 10 0	
Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	> 25 64-256 2-64 r 0.06 0.00 < 0.00	meter 56 mm (10") 5 mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 14 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove Open Shaded	% Composition in Sampling Reach 10 10 30 15 20 15 Surrounding Landu — Commercia — Industrial — Residential — Other: Partly shad	Substrat Type Detritus Muck-Muc Marl use al	characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera	% Composition in Sampling Area 10 0 0 ate 15-30ft	
Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	> 25 64-256 2-64 r 0.06 0.00 < 0.00	meter 56 mm (10") 5 mm (2.5"-10") 7 mm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 64 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove Open Shaded	% Composition in Sampling Reach 10 10 30 15 20 15 Surrounding Landu — Commercia — Industrial — Residential — Other: Partly shad	Substrat Type Detritus Muck-Muc Marl use al	Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera Narrow <15ft	% Composition in Sampling Area 10 0 0 ate 15-30ft	
Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	> 25 64-256 2-64 r 0.06 0.00 < 0.00	meter 56 mm (10") 5 mm (2.5"-10") 7 mm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 64 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove Open Shaded	% Composition in Sampling Reach 10 10 30 15 20 15 Surrounding Landu — Commercia — Industrial — Residential — Other: Partly shad	Substrat Type Detritus Muck-Muc Marl use al	Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera Narrow <15ft	% Composition in Sampling Area 10 0 0 ate 15-30ft	
Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	> 25 64-256 2-64 r 0.06 0.00 < 0.00	meter 56 mm (10") 5 mm (2.5"-10") 7 mm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 64 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove Open Shaded	% Composition in Sampling Reach 10 10 30 15 20 15 Surrounding Landu — Commercia — Industrial — Residential — Other: Partly shad	Substrat Type Detritus Muck-Muc Marl use al	Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera Narrow <15ft	% Composition in Sampling Area 10 0 0 ate 15-30ft	
Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	> 25 64-256 2-64 r 0.06 0.00 < 0.00	meter 56 mm (10") 5 mm (2.5"-10") 7 mm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 64 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove Open Shaded	% Composition in Sampling Reach 10 10 30 15 20 15 Surrounding Landu — Commercia — Industrial — Residential — Other: Partly shad	Substrat Type Detritus Muck-Muc Marl use al	Characteristic sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments Floodplain Width Wide > 30ft Modera Narrow <15ft	% Composition in Sampling Area 10 0 0 ate 15-30ft	



Photograph Direction South

STREAM ID S-CV27			STREAM NAME UNT to Blue Lick Creek					
CLIENT MVP			PROJECT NAME MVP					
LAT 37.46308 LONG -80.669552			DATE 01/09/2018 COUNTY Monroe					
INVESTIGATORS CV, KP								
WATER TYPE TNW RPW NRPW NRPW				FLOW REG Perennial	IME Interm	nittent 🔽	Ephemeral	
		1				ı		
CHANNEL FE	ATURES	Estimate Mea Top of Bank V Top of Bank F LB1.0ft Water Depth: Water Width: Ordinary High Ordinary High Flow Direction	Vidth: Height: t 0.00 Water I Water I	2.0 ft RB 1.0 in ft Mark (Width): Mark (Height)	: <u>1.5</u> ft	Sinuosity Low Medium High Gradient (0.5/100 ft) (2 ft/100 ft) Stream Erosion None Moderate Heavy Artificial, Modified or Channelized Yes No Within Roadside Ditch Yes No Culvert Present Yes No Culvert Material: Culvert Size:in		
FLOW CHARACTER	ISTICS	Water Presen ✓ No water, s Stream bed Standing w Flowing water Velocity Fast Slow	tream be I moist vater			Proportion of Reach Represented by Stream Morphology Types (Only enter if water present) Riffle % Run % Pool % Turbidity ClearSlightly turbidTurbid Other		
INOR	_	UBSTRATE COI	_	-			SUBSTRATE COM t necessarily add u	-
Substrate Type		meter	% Co	mposition in pling Reach	Substra Type	ate C	naracteristic	% Composition in Sampling Area
Bedrock					Detritus		cks, wood, coarse	
Boulder		56 mm (10")			Dountas	plar	nt materials (CPOM)	
Cobble		6 mm (2.5"-10")			Muck-Mu	ıd bla	ck, very fine organic	
Gravel		mm (0.1"-2.5")	10				(FPOM)	
Sand	0.06	-2mm (gritty)						
Silt		04-0.06 mm	15		Marl	gr	ey, shell fragments	
Clay	< 0.00	04 mm (slick)	75					
Forest Field/Pasture Agricultural			ure	unding LanduseCommercialIndustrialResidentialOther: wetland Partly shaded Floodplain WidthWide > 30ft✓ Moderate 15-30ftNarrow <15ft			ate 15-30ft	
MAC	ROINVER	TEBRATES/OTI	HER WI	LDLIFE OBS	SERVED O	R OTHER I	NOTES AND OBSER	RVATIONS
MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS Goes to sheet flow within Wetland CV25 PSS portion.								



Photograph Direction NNE

STREAM ID S-E43	STREAM NAME UNT to Dry Creek
LAT 37.453960 LONG -80.664156	DATE 04/10/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS S Ryan, A Mengel, L Sexton	
FLOW REGIME Perennial Intermittent Ephemeral	WATER TYPE TNW RPW NRPW_✓

Perennial	Intermitte	nt Epheme	eral 🖊 TNW	RPW —	NRPW 💆		
		Estimate N	leasurements		Stream Erosion		
		Top of Ban	k Width: 7.0 ft		None Moderate	Heavy	
		Top of Ban					
			· ·		Artificial, Modified or Char	nnelized	
		LB <u>2.0</u>	ft RB <u>3.0</u>	<u>tt</u>	<u>✓</u> Yes No		
CHANNEL FE	ATUBES	Water Dept	th: 0.50 in				
CHANNEL FE.	ATURES	Water Widt			Dam PresentYes _	<u>∕</u> No	
					Sinuosity Low	Modium High	
			Mark: 2.0 in		Jiliuosity Low	wedidiii riigii	
		Flow Direct	tion: <u>SW</u>		Gradient		
						Severe	
					(0.5/100 ft (2 ft/100 ft)	(10 ft/100 ft)	
		Water Pres	sent		Proportion of Reach Repre	sented by Stream	
		No wate	r, stream bed dry		Morphology Types	-	
		Stream b	oed moist		Riffle % Run 25	%	
EL 014/		Standing	g water		Pool 75 %		
FLOW CHARACTERI	ISTICS	✓ Flowing	water				
					Turbidity (Clickthy)	turbid Turbid	
		Velocity			Clear Slightly Opaque Stained		
			Moderate				
		<u></u> ✓ Slow			Other		
INOR	GANIC SUB	STRATE CO	MPONENTS	ORGANIC SUBSTRATE COMPONENTS			
	(should	add up to 100	0%)	(0	does not necessarily add u	p to 100%)	
Substrate	Diame	ator	% Composition in	Substrate	Characteristic	% Composition in	
Type	Diairie	ilei	Sampling Reach	Type	Characteristic	Sampling Area	
Bedrock				Dotrituo	sticks, wood, coarse		
Boulder	> 256	mm (10")		Detritus	plant materials (CPOM)	95	
Cobble	64-256 m	ım (2.5"-10")			black, very fine organic		
Gravel	2-64 mm	າ (0.1"-2.5")	10	Muck-Mud	(FPOM)		
Sand	0.06-2r	nm (gritty)	nm (gritty)				
Silt		0.06 mm	25	Marl	grey, shell fragments		
Clay		mm (slick)	65		g. oy, one agom		
Clay	٠ ٥.٥٥٠	` ′		d	Indicate the deminent tune	(0)	
		Forest	Iominant Surrounding Landuse Forest Commercial		Indicate the dominant type (Check one) ✓ Trees Shrubs		
		Field/Pa			Grasses Herba		
		Agricult			Orassesrierba	ceous	
WATERSHED		Other:		liai	Floodplain Width		
FEATURES		_ 0.1161.			Wide > 30ft Mode	rate 15-30ft	
		Canopy Co	over		✓ Narrow <16ft		
		Partly o		aded			
Shade				Wetland PresentYes _✓ No			
_				Wetland ID			
				dominant species present	. –		
AQUATIC VEC	UATIC VEGETATION Rooted emergent Floating algae		Rooted subm		ingFree floating		
		Floating	g algae	Attached alga	e		
I							
		Stream flow	v is impounded within	ROW.			
			ent creates P-E1.				
MACROINVER	RTEBRATES	Flow for S-I	E43 results from rainv	vater associat	ed overflow.		
OR OTHER		1					
WILDLIFE OBSERVED/C	THER	1					

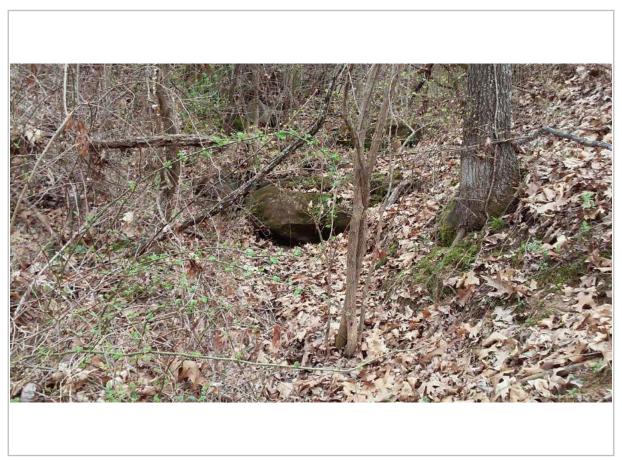
	Stream flow is impounded within ROW. Impoundment creates P-E1. Flow for S-E43 results from rainwater associated overflow.
MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER	
OBSERVATIONS AND NOTES	



Photograph Direction SW

STREAM ID S-E45	STREAM NAME UNT to Dry Creek
LAT 37.453747 LONG -80.664165	DATE 04/10/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS S Ryan, A Mengel, L Sexton	
FLOW REGIME Perennial Intermittent Ephemeral	WATER TYPE TNW RPW NRPW_✓

Perennial	_ Intermitte	nt — Ephem	eral TNW	RPW	NRPW	
Тор			Measurements k Width: 3.0 ft		Stream Erosion ✓ None Moderate	Heavy
		Top of Ban	k Height:		Artificial, Modified or Cha	nnelized
		LB <u>2.0</u>	ft RB <u>1.5</u>		Yes <u>✓</u> No	
CHANNEL FE	ATURES	•	th: 0.00 in		Dam Present Yes	∨ No
			th: <u>0.0 ft</u>		_ _	
			Mark: <u>1.0 in</u>		Sinuosity <u>v</u> Low	. Medium High
		Flow Direct	tion: <u>NW</u>		Gradient	1.0
					Flat Moderate (2 ft/100 ft)	
		Water Pres			Proportion of Reach Repr	esented by Stream
			r, stream bed dry		Morphology Types Riffle % Run	%
		✓ Stream I Standin			Pool %	70
FLOW CHARACTER	ISTICS	Flowing				
		Volocity			Turbidity ClearSlightly	turbidTurbid
		Velocity Fast	Moderate		OpaqueStained	
		Slow			Other	
INOR		STRATE CO add up to 10	MPONENTS 0%)		RGANIC SUBSTRATE COM does not necessarily add u	
Substrate Type	Diame	ter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock				Detritus	sticks, wood, coarse	
Boulder	> 256	mm (10")	15	Delilius	plant materials (CPOM)	100
Cobble	64-256 mm (2.5"-10")			Muck-Mud	black, very fine organic	
Gravel		(0.1"-2.5")	25		(FPOM)	
Sand		nm (gritty)				
Silt		0.06 mm	60	Marl	grey, shell fragments	
Clay	< 0.004 1	4 mm (slick) 60 Predominant Surrounding Lar		duso	Indicate the dominant type	(Check one)
	redominant Surrounding Lan ✓ Forest Commer			✓ Trees Shrub		
			astureIndustria		Grasses Herba	aceous
WATERSHED	ı	Agricult Other:	tural Residen	tial	Floodplain Width	
FEATURES		01101.				erate 15-30ft
		Canopy Co		adad	<u>✓</u> Narrow <16ft	
Partly open v Partly Shaded Open				Wetland PresentYes Wetland ID	<u>✓</u> No	
					lominant species present	
AQUATIC VEGETATION Rooted emergent Rooted submergent			_	tingFree floating		
			<u></u>	Attacrica algat		
		Connecte t	o C F42			
	Connects to S-E43. Portions of stream choked by Ro			sa multiflora.		
MACROINVER	RTEBRATES		-			
OR OTHER WILDLIFE						
OBSERVED/C	OTHER ONS AND					
NOTES						



Photograph Direction NW

STREAM ID S-E40	STREAM NAME Dry Creek
LAT 37.450738 LONG -80.667711	DATE 04/09/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS S Ryan, A Mengel, L Sexton	
FLOW REGIME Perennial ✓ Intermittent — Ephemeral —	WATER TYPE TNW RPW_✓ NRPW

1 Cicilliai	_ III.CIIIII.	nt <u> </u>	erai INVV	RPW -	NRPW	
<u> </u>		Entimets *	logguromento		Stroom Erocian	
	Estimate Measurements Top of Bank Width: 12.0 ft			Stream Erosion None ✓ Moderate	Heavy	
Top of Bar						
			· ·	ET	Artificial, Modified or Char	nnelized
		LB <u>3.0</u>		<u>ft</u>	Yes _ <u>√</u> No	
CHANNEL FE	ATURES		th: 10.00 in		Dam Present Yes	/ No
		Water Widt	h: <u>8.0 ft</u>			
		High Water	Mark: <u>3.0 ft</u>		Sinuosity _ Low	Medium High
		Flow Direct	tion: <u>NW</u>		Gradient	
						Severe
		Water Pres			(0.5/100 ft (2 ft/100 ft) Proportion of Reach Repre	(10 ft/100 ft)
			r, stream bed dry		Morphology Types	sented by Stream
			ped moist		Riffle 15 % Run 80	%
FLOW		Standing	-		Pool 5 %	
CHARACTER	ISTICS	<u>√</u> Flowing	water		Turbidity	
		Velocity			Clear _✓_Slightly	turbidTurbid
			Moderate		OpaqueStained	
		Slow			Other	
INOR		STRATE CO			RGANIC SUBSTRATE CON does not necessarily add u	-
Substrate	(Siloulu a	add up to 10	% Composition in	Substrate	loes not necessarily add u	% Composition in
Туре	Diame	eter	Sampling Reach	Type	Characteristic	Sampling Area
Bedrock Boulder	> 256	mm (10")		Detritus	sticks, wood, coarse plant materials (CPOM)	5
Cobble		m (2.5"-10")	55			-
Gravel		n (0.1"-2.5")	25	Muck-Mud	black, very fine organic (FPOM)	
Sand		nm (gritty) 5			,	
Silt		-0.06 mm 15		l Marl	grey, shell fragments	
Clay		mm (slick)				
			ant Surrounding Lan	duse	Indicate the dominant type	(Check one)
		Forest	Commer		Trees Shrub	
		✓ Field/Pa		l tial	✓ Grasses Herba	ceous
WATERSHED		Agricult Other:	.urai Resideir	liai	Floodplain Width	
FEATURES					<u> </u>	rate 15-30ft
		Canopy Co			Narrow <16ft	
			Partly open Partly shaded		Wetland Present <u>√</u> Yes	No
			Wetland ID W-E12			
AOUATIO VE	Indicate the dominant type and record the dominant species present				ing Froo flooting	
AQUATIC VEGETATION Ploating algae Attached algae Action Algae Action Algae Action Algae Action Algae			ingriee iloating			
				a. aigat	-	
		land "	Batad an Orb. 5		ata sallastad in 0045 Till 1	
Information listed on this form represents the data collected in 2015. The stream was revon 10/23/2019. The presence of a stream channel and OHWM was confirmed.						
MACROINVER	RTEBRATES					
OR OTHER WILDLIFE						
OBSERVED/C						
OBSERVATION NOTES	INS AND					

Stream ID S-E40



Photograph Direction SE

Date: 04/09/2015

Comments: 2015 stream identification.



Photograph Direction SE

Date: 10/23/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-E41	STREAM NAME UNT to Dry Creek
LAT 37.450611 LONG -80.667367	DATE 04/09/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS S Ryan, A Mengel, L Sexton	
FLOW REGIME Perennial Intermittent ✓ Ephemeral	WATER TYPE TNW RPW_✓ NRPW

			leasurements		Stream Erosion	
		· ·	k Width: 2.0 ft		✓ NoneModerate	Heavy
		Top of Banl	k Height:		Artificial, Modified or Char	nnelized
		LB <u>6.0</u>	<u>in</u> RB <u>6.0</u>	<u>in</u>	Yes _ <u>✓</u> No	
CHANNEL FE	ATURES	Water Dept	h: <u>2.00 in</u>		Dam PresentYes	/ No
		Water Width: 2.0 ft				
		High Water	Mark: <u>3.0 in</u>		Sinuosity Low _✓	Medium High
		Flow Direct	ion: _W		Gradient	
						Severe
		Water Pres	4		, ,	(10 ft/100 ft)
			r, stream bed dry		Proportion of Reach Representation Morphology Types	esented by Stream
		Stream b	•		Riffle 5 % Run 95	%
FLOW		Standing	•		Pool %	
CHARACTER	ISTICS	✓ Flowing	water		Turbidity	
		Velocity			✓ ClearSlightly	turbidTurbid
		,	,		OpaqueStained	
✓ Slow		✓ Slow	Slow		Other	
INORGANIC SUBSTRATE COMPONENTS			0	RGANIC SUBSTRATE CON	IPONENTS	
	(should add up to 100%)			(0	does not necessarily add u	p to 100%)
Substrate	Diame	eter	% Composition in	Substrate	Characteristic	% Composition in Sampling Area
Type Bedrock		Sampling Reach		Туре	- tioles are all as a second	Sampling Area
Boulder	> 256	mm (10")		Detritus	sticks, wood, coarse plant materials (CPOM)	15
Cobble		m (2.5"-10")	5		black, very fine organic	
Gravel	2-64 mm	n (0.1"-2.5")	5	Muck-Mud	(FPOM)	
Sand	0.06-2r	nm (gritty)				
Silt	0.004-	0.06 mm	90	Marl	grey, shell fragments	
Clay	< 0.004	mm (slick)				
		Predomina	nt Surrounding Lan	duse	Indicate the dominant type	,
		Forest _✓ Field/Pa	Commer	cial	Trees Shrub Grasses Herba	
		Agricult	ural Resident		V Glassesllelba	ceous
WATERSHED FEATURES C		Other:		iidi	Floodplain Width	
					✓ Wide > 30ft Model	rate 15-301t
		Canopy Co Partly o		adad	Narrow Toll	
		Shaded		aucu	Wetland PresentYes	<u>✓</u> No
			<u></u> opo		Wetland ID	
AQUATIC VE	GETATION	Indicate th ✓ Rooted	• • • • • • • • • • • • • • • • • • • •	d record the o	dominant species present ergent Rooted float	ing Free floating
AGOATIO VE	CLIATION	Floating	_	Attached alga		

	American Toad eggs present in stream. Connects to S-E42 before both converge with S-E40.
MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES	Information listed on this form represents the data collected in 2015. The stream was revisited on 10/23/2019, no stream channel or OHWM were observed.

Stream ID S-E41



Photograph Direction SE

Date: 04/09/2015

Comments: 2015 stream identification.



Photograph Direction NW

Date: 10/23/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-C38	STREAM NAME UNT to Painter Run			
LAT 37.426928 LONG -80.694454	DATE 04/10/2015			
CLIENT MVP	PROJECT NAME MVP			
INVESTIGATORS L.Harloe, K.Lamontagne, L. Summers				
FLOW REGIME Perennial Intermittent ✓ Ephemeral	WATER TYPE TNW RPW NRPW NRPW			

Perennial —	Intermitte	nt <u> —</u> Ephem	eral TNW	RPW <u>→</u>	NRPW	
	1					
Estimate Measurements Top of Bank Width: 7.0 ft Top of Bank Height:			Stream Erosion	Носули		
		•			NoneModerate	<u> —</u> пеаvy
			· ·		Artificial, Modified or Char	nnelized
		LB <u>8.0</u>	<u>in</u> RB <u>10.0</u>	<u>n</u>	<u>✓</u> YesNo	
CHANNEL FE	ATURES	Water Dep	th: 1.00 in		Dam Present Yes	∠ No
		Water Widt	h: <u>4.0 ft</u>		Dani Flesent les _	<u>/</u> NO
		High Water	Mark: 8.0 ft		Sinuosity <u>v</u> Low	Medium High
		Flow Direct	tion: SW		Gradient	
					<u>✓</u> FlatModerate _	
					` , , ,	(10 ft/100 ft)
		Water Pres	sent r, stream bed dry		Proportion of Reach Repre Morphology Types	esented by Stream
		Stream I	·		Riffle % Run 10	0 %
51 OM		Standing			Pool %	
FLOW CHARACTER	STICS	✓ Flowing	water		T	
		Volocity			Turbidity <u>✓</u> ClearSlightly	turbidTurbid
		Velocity Fast	Moderate		OpaqueStained	
		✓ Slow			Other	
INOR	GANIC SUB	STRATE CO	MPONENTS	0	RGANIC SUBSTRATE CON	/IPONENTS
	(should a	add up to 10	0%)	(0	(does not necessarily add up to 100%)	
Substrate Type	Diame	ter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock				Detritus	sticks, wood, coarse	
Boulder		mm (10")		Detritus	plant materials (CPOM)	10
Cobble	64-256 m	m (2.5"-10")		Muck-Mud	black, very fine organic	
Gravel	2-64 mm	1 (0.1"-2.5")			(FPOM)	
Sand		nm (gritty)				
Silt	0.004-0	0.06 mm	50	Marl	grey, shell fragments	
Clay	< 0.004 ı	mm (slick) 50				
		Predominant Surrounding Lar			Indicate the dominant type Trees Shrub	
		Forest Field/Pa	Commer Commer asture		✓ Grasses ✓ Herba	
		Agricult		tial	_	
WATERSHED FEATURES		Other:			Floodplain Width ✓ Wide > 30ft Mode	rate 15-30ft
ILATORES					Narrow <16ft	rate 15-301t
		Canopy Co Partly o		aded		
			Shaded Open		Wetland Present <u>v</u> Yes Wetland ID	No
		Indicate th	e dominant type and	d record the d	lominant species present	
AQUATIC VE	SETATION		· —	Rooted subme	<u> </u>	tingFree floating
Floating algaeAttached algae						
		•				
		Culvert und	ler road, at upstream	end. Trib to S-	C39.	
MACROINVERTEBRATES OR OTHER		· [
WILDLIFE OBSERVED/C	THED					
OBSERVATIO						
NOTES						



Photograph Direction SW

STREAM ID S-C39	STREAM NAME Painter Run			
LAT 37.426601 LONG 80.693889	DATE 04/10/2015			
CLIENT MVP	PROJECT NAME MVP			
INVESTIGATORS L.Harloe, K.Lamontagne, L. Summers				
FLOW REGIME	WATER TYPE			
Perennial / Intermittent _ Ephemeral _	TNW RPW NRPW			

		Estimate Measurements			Stream Erosion	
		Top of Bank Width: 5.0 ft			None Moderate	Heavy
· ·		Top of Ban	Top of Bank Height:		Artificial Madified or Char	nolized
		LB 11.0	ft RB <u>11.0</u>		Artificial, Modified or Char Yes ✓ No	menzea
			th: 3.00 in	_		
CHANNEL FE	ATURES	Water Widt			Dam PresentYes _	<u>∠</u> No
					Sinuosity Low	Medium High
		Ū	Mark: <u>11.0 ft</u>			
		Flow Direct	tion: N		Gradient	Carrana
					✓ FlatModerate (0.5/100 ft (2 ft/100 ft)	Severe (10 ft/100 ft)
		Water Pres	sent		Proportion of Reach Repre	esented by Stream
			r, stream bed dry		Morphology Types	-
			bed moist		Riffle 40 % Run 60 Pool %	%
FLOW		Standing	•		PUUI 70	
CHARACTER	ISTICS	<u>v</u> i lowing	water		Turbidity	
		Velocity			Clear Slightly	
			Moderate		OpaqueStainedOther	
		Slow		l -		
INOR		GANIC SUBSTRATE COMPONENTS (should add up to 100%)			RGANIC SUBSTRATE CON loes not necessarily add u	
Substrate Type	Diame	ter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock				Detritus	sticks, wood, coarse	
Boulder	> 256	mm (10")		Detritus	plant materials (CPOM)	10
Cobble	64-256 m	m (2.5"-10")	10	Muck-Mud	black, very fine organic	
Gravel	2-64 mm	(0.1"-2.5")	80	Widok Wida	(FPOM)	
Sand	0.06-2n	nm (gritty)				
Silt	0.004-0	0.06 mm	10	Marl	grey, shell fragments	
Clay	< 0.004	mm (slick)				
		Predomina Forest	ant Surrounding Lar Commer		Indicate the dominant type Trees Shrub	
			astureIndustria		✓ Grasses ✓ Herba	
		Agricult		tial	_	
WATERSHED FEATURES		Other:			Floodplain Width Wide > 30ft Moderate 15-30ft	
		0			Narrow <16ft	rate to con
		Canopy Co		aded	_	
		Shaded			Wetland Present <u>✓</u> Yes Wetland ID _{W-C13, 15}	No
		Indicate th	e dominant type and			
AQUATIC VE	Indicate the dominant type and record the dominant species present AQUATIC VEGETATION Rooted emergent Rooted submergent Rooted floating Free floating Rooted submergent Rooted floating Rooted submergent Rooted floating Rooted floating Rooted floating Rooted submergent Rooted floating R			ting Free floating		
Floating algae Attached algae			- <u>—</u>	_		
	Recent rain, high flow. Braided se			ection.		
, roosik rain, nig			. 3			
MACROINVER OR OTHER	RTEBRATES					
WILDLIFE						
OBSERVED/C						
NOTES	· -					



Photograph Direction $\underline{\text{NW}}$

STREAM ID S-C41	STREAM NAME UNT to Painter Run			
LAT 37.426230 LONG -80.694471	DATE 04/10/2015			
CLIENT MVP	PROJECT NAME MVP			
INVESTIGATORS L.Harloe, K.Lamontagne, L. Summers				
FLOW REGIME Perennial Intermittent ✓ Ephemeral	WATER TYPE TNW RPW_✓ NRPW			

Perennial _	_ Intermitte	nt <u> – Ephem</u>	eral TNW	RPW <u> </u>	NRPW				
			_						
			Measurements	Stream ErosionNone _✓ Moderate Heavy					
		Top of Bank Width: 3.0 ft			NoneNoderate	rieavy			
		Top of Bank Height:		, ,	Artificial, Modified or Channelized				
			ft RB <u>1.0</u>	<u>rt</u>	Yes No				
CHANNEL FE	ATURES	Water Depth: 3.00 in			Dam PresentYes <u>✔</u> No				
		Water Width: 1.0 ft							
		High Water Mark: 1.0 ft			Sinuosity <u>v</u> Low	Medium High			
		Flow Direction: NE			Gradient				
					FlatModerateSevere 0.5/100 ft (2 ft/100 ft) (10 ft/100 ft)				
		Water Present		Proportion of Reach Represented by Stream					
			r, stream bed dry		Morphology Types				
		Stream bed moist			Riffle % Run 100 %				
FLOW		Standing water			Pool %				
CHARACTER	ISTICS	<u>✓</u> Flowing water			Turbidity				
		Velocity			Clear _∠Slightly turbid				
		Fast Moderate			OpaqueStained				
		✓ Slow			Other				
INOR		STRATE COMPONENTS add up to 100%)		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)					
Substrate Type	Diame	-	% Composition in Sampling Reach	Substrate Type	1	% Composition in Sampling Area			
Bedrock			10	Турс	- Halan 1	Sampling Area			
Boulder	> 256	mm (10")	10	Detritus	sticks, wood, coarse plant materials (CPOM)	80			
Cobble	64-256 mm (2.5"-10")		10		black, very fine organic				
Gravel	2-64 mm (0.1"-2.5")		60	Muck-Mud	(FPOM)				
Sand		0.06-2mm (gritty)							
Silt	0.004-0	0.06 mm	10 Marl		grey, shell fragments				
Clay	< 0.004 r	1 mm (slick)							
			ant Surrounding Lan		Indicate the dominant type				
		Forest	Commer		✓ TreesShrub				
		Fleid/Pi	astureIndustrial tural Resident		Grasses Herba	iceous			
WATERSHED		Other:		liai	Floodplain Width				
FEATURES					Wide > 30ft Moderate 15-30ft ✓ Narrow <16ft				
		Canopy Co	over open Partly sh	adad	V Narrow Croft				
		Shaded		aucu	Wetland PresentYes	<u>✓</u> No			
— — Wetland ID									
AQUATIC VE	SETATION	Indicate the dominant type and record the dominant species present Rooted emergent Rooted submergent Rooted floating Free floating							
AQUATIC VE	SEIATION		Floating algae Attached algae Attached algae						
			_						
Llandout propert of upstroom and of reach									
MACROINVERTEBRATES		l leadcut pi	Headcut present at upstream end of reach.						
OR OTHER WILDLIFE									
OBSERVED/OTHER OBSERVATIONS AND NOTES									



Photograph Direction $\underline{\text{NE}}$

STREAM ID S-C40	STREAM NAME UNT to Painter Run						
LAT 37.425636 LONG -80.693884	DATE 04/10/2015						
CLIENT MVP	PROJECT NAME MVP						
INVESTIGATORS L.Harloe, K.Lamontagne, L. Summers							
FLOW REGIME Perennial ✓ Intermittent — Ephemeral —	WATER TYPE TNW RPW ✓ NRPW						

Perenniai <u>-</u>		nt <u> — Epnem</u>	erai INVV —	RPW —	NRPW —				
1									
		Estimate Measurements			Stream Erosion				
		•	k Width: 3.0 ft		NoneModerateHeavy				
		Top of Ban	ŭ		Artificial, Modified or Channelized				
		LB <u>4.0</u>	in RB <u>4.0</u>	<u>in</u> .	Yes _ <u>✔</u> No				
CHANNEL FE	ATURES	Water Dep	th: 4.00 in		Dam Present Yes <u>✔</u> No				
01,511,111,122,12		Water Widt	h: 3.0 ft						
		High Water	Mark: 4.0 ft		Sinuosity Low Medium				
		Flow Direct	tion: NW		Gradient ✓ FlatModerateSevere				
		2							
					(0.5/100 ft (2 ft/100 ft) (10 ft/100 ft)				
		Water Present			Proportion of Reach Repre	esented by Stream			
		No water, stream bed dry Stream bed moist			Morphology Types Riffle 25 % Run 75 %				
		Standing			Pool %				
FLOW CHARACTER	ISTICS	Flowing	•						
OHARAGIER	01100				Turbidity Clear _ _∕ Slightly turbidTur				
		Velocity Fast	✓ Moderate		Opaque Stained				
		Slow	<u> </u>	— Other					
INOR	GANIC SUB	STRATE CO	TRATE COMPONENTS		RGANIC SUBSTRATE COM	/PONENTS			
		add up to 100%)		_	(does not necessarily add up to 100%)				
Substrate Type	Diame	ter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area			
Bedrock				Detritue	sticks, wood, coarse				
Boulder	> 256 mm (10")			Detritus	plant materials (CPOM)	15			
Cobble	64-256 mm (2.5"-10")		20	Muck-Mud	black, very fine organic				
Gravel	2-64 mm (0.1"-2.5")		50	WIUCK-WIUU	(FPOM)				
Sand	0.06-2mm (gritty)		20						
Silt	0.004-0).06 mm	10 Marl		grey, shell fragments				
Clay	< 0.004 r	nm (slick)							
					Indicate the dominant type				
		Forest ✓ Field/P:	Commer asture Industria		Trees Shrub Grasses Herba				
		Agricult			V Grasses V Herba	iceous			
WATERSHED		Other:			Floodplain Width				
FEATURES		_ = = = = = = = = = = = = = = = = = = =			✓ Wide > 30ft Mode Narrow <16ft	rate 15-30ft			
		Canopy Cover			Narrow < roll				
		Partly openPartly shaded Shaded			Wetland Present <u>✓</u> Yes	No			
					Wetland ID _{W-C17, 16, 18, 19}	9			
AQUATIC VEGETATION		Indicate the dominant type and record the dominant species present							
		Rooted emergentRooted submergentRooted floatingFree floating Floating algae Attached algae							
				,auu. u.gu.	-				
MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES		T							
		Trib to S-C39.							



Photograph Direction NE