STREAM ID S-GH4			STREAM NA	STREAM NAME UNT to Teels Creek				
CLIENT MVF				PROJECT NAME MVP				
LAT 37.08994		ONG -79.95625			COUNTY Franklin			
	rsen, S. Therkild		20.0	TOOLITI				
WATER TYPE	<b>.</b>		FLOW REGI	IME				
TNW	RPW	NRPW	Perennial 🗸		ttent Ephemeral			
					<del>_</del>	_		
			Vidth: 8.0 ft		Gradient Flat <u>✓</u> Mo			
	ľ	Top of Bank H	o .	<u>.</u>	, , ,	(100 ft) (10 ft/100 ft)		
	ļ		t RB <u>2.0</u> f	rt	Stream Erosion None ✓ Moderate	Незуу		
	ľ	Water Depth:			Artificial, Modified or Chann	<del></del> ·		
CHANNEL FE	ATURES	Water Width:		50 ft	Yes V No			
	ľ	, ,	Water Mark (Width):		Within Roadside Ditch			
	ľ	, ,	Water Mark (Height):	: <u>10.0</u> in	Yes VNo			
	l	Flow Direction	1: Southeast	-	Culvert PresentYes			
	ľ				Culvert Material:			
	ļ				Culvert Size: in			
		Water Preser			Proportion of Reach Repres	sented by Stream		
	ľ	No water, s	stream bed dry		Morphology Types (Only ente	er if water present)		
	l	Stream bed			Riffle 60 % Run 40 Pool 0 %	40 %		
FLOW		Standing w  ✓ Flowing wa			P00I () %			
CHARACTERI	STICS	<u>*</u> 1 10 mily			Turbidity	Transial		
	ļ	Velocity			✓ ClearSlightly to Other	urbidTurbid		
	ľ	Fast <u>✓</u> Slow	_ Moderate					
INOR		JBSTRATE CO			ORGANIC SUBSTRATE COM (does not necessarily add up			
Substrate	1	meter	% Composition in	Substrate	rate Characteristic % Comp			
Туре		IICICI	Sampling Reach	Туре	Offdiaotoffstio	Sampling Area		
Bedrock	> 21	-0 (10")	0	Detritus	sticks, wood, coarse plant materials (CPOM)			
Boulder Cobble		56 mm (10") mm (2.5"-10")	15		. , ,	10		
Gravel		nm (0.1"-2.5")	25 25	Muck-Mud	black, very fine organic (FPOM)			
Sand		-2mm (gritty)	25		, ,			
Silt		- (5 ),			i			
OIIL	0.00	4-0.06 mm		Marl	grey, shell fragments			
Clay		4-0.06 mm 04 mm (slick)	10 0	Marl	grey, shell fragments			
		Predominant  Forest Field/Past	10 0 Surrounding Landu — Commercia ture — Industrial	ise al	Floodplain Width	nte 15-30ft		
	< 0.00	04 mm (slick)  Predominant  Forest	10 0 Surrounding Landu — Commercia ture — Industrial	ise al	Floodplain WidthWide > 30ftModera	ate 15-30ft		
Clay	< 0.00	Predominant Forest Field/Past Agricultura ROW  Canopy Cove Open	10 0 t Surrounding Landu Commercia ture Industrial al Residential Other:	use al	Floodplain WidthWide > 30ftModera	nte 15-30ft		
Clay	< 0.00	Predominant Forest Field/Past Agricultura ROW  Canopy Cove	10 0 c Surrounding Landu — Commercia ture — Industrial al — Residential — Other:	use al	Floodplain WidthWide > 30ftModera	nte 15-30ft		
Clay  WATERSHED FEATURES	< 0.00	Predominant Forest Field/Past Agricultura ROW  Canopy Cove Open Shaded	10 0 surrounding Landu Commercia ture Industrial al Residential Other:  Partly shade	use al	Floodplain Width Wide > 30ft Narrow <15ft			
WATERSHED FEATURES MACI	< 0.00	Predominant Forest Field/Past Agricultura ROW  Canopy Cove Open Shaded	10 0 t Surrounding Landu Commercia ture Industrial Residential Other:  Partly shade	use al	Floodplain WidthWide > 30ftModera			
Clay  WATERSHED FEATURES	< 0.00	Predominant Forest Field/Past Agricultura ROW  Canopy Cove Open Shaded	10 0 t Surrounding Landu Commercia ture Industrial Residential Other:  Partly shade	use al	Floodplain Width Wide > 30ft Narrow <15ft			
WATERSHED FEATURES MACI	< 0.00	Predominant Forest Field/Past Agricultura ROW  Canopy Cove Open Shaded	10 0 t Surrounding Landu Commercia ture Industrial Residential Other:  Partly shade	use al	Floodplain Width Wide > 30ft Narrow <15ft			
WATERSHED FEATURES MACI	< 0.00	Predominant Forest Field/Past Agricultura ROW  Canopy Cove Open Shaded	10 0 t Surrounding Landu Commercia ture Industrial Residential Other:  Partly shade	use al	Floodplain Width Wide > 30ft Narrow <15ft			
Clay  WATERSHED FEATURES	< 0.00	Predominant Forest Field/Past Agricultura ROW  Canopy Cove Open Shaded	10 0 t Surrounding Landu Commercia ture Industrial Residential Other:  Partly shade	use al	Floodplain Width Wide > 30ft Narrow <15ft			



Photograph Direction NW

STREAM ID S-GH3			STREAM NAME UNT to Teel Creek					
CLIENT MVP			PROJECT NAME MVP					
LAT 37.08977		ONG -79.95656	69	DATE 04/05/2016 COUNTY Franklin				
INVESTIGATORS K. Larsen, S. Therkildson, J				. Bittner				
WATER TYPE TNW RPW NRPW NRPW			FLOW REG Perennial	IME ] Interm	nittent	Ephemeral		
		I						
Estimate Measuren Top of Bank Width: Top of Bank Height: LB 3.0 ft Water Depth: 3.00 Water Width: 4.0				10.0 ft  RB <u>5.0</u> in	ft	Gradie Stream ^ Artificia	nt Flat Moderate    Moderate   Flat Flat Flat Flat Flat Flat Flat Flat	nelized
		Ordinary High	Water	Mark (Width):	<u>6.0</u> ft	'	es <u>✓</u> No	,
		Ordinary High	Water	Mark (Height)	: <u>12.0</u> in		Roadside Ditch	
		Flow Direction	n: Sout	theast	_	_ `	<del></del>	
							PresentYes	
							Material:	<del></del>
							Size:in	
Water PresentNo water, stream  Stream bed moistStanding waterFlowing waterFlowing water			stream b d moist vater	oed dry		Morpho Riffle Pool Turbidi	0 % ty	er if water present) ) %
		Velocity				✓ ClearSlightly turbidTurbid Other		urbidTurbid
		Fast _ <u>v</u>	_ Mode	rate		_ Ott	ier	
INOR	GANIC S	UBSTRATE CO	MPONI	ENTS		ORGANI	C SUBSTRATE COM	MPONENTS
	(shou	ld add up to 100		, , ,			· · · · · · · · · · · · · · · · · · ·	
Substrate Type	Dia	meter		composition in npling Reach	Substra Type		haracteristic	% Composition in Sampling Area
Bedrock			5		Detritus		ticks, wood, coarse	
Boulder		56 mm (10")	5				nt materials (CPOM)	15
Cobble		6 mm (2.5"-10")	20		Muck-Mu	ıd bla	ick, very fine organic	
Gravel		nm (0.1"-2.5")	20				(FPOM)	
Sand		-2mm (gritty)	40		Mad		and all for the second	
Silt		04-0.06 mm	10	)	Marl	g	rey, shell fragments	
WATERSHED FEATURES — Field/Pasture — Agricultural — ROW — Canopy Cover			ture _ al _	unding Landu Commercia Industrial Residential Other:  Partly shade	ıl	Wid	ain Width e > 30ft Modera row <15ft	I ate 15-30ft
MAC	ROINVER	TEBRATES/OT	HER W	/ILDLIFE OBS	ERVED OF	R OTHER	NOTES AND OBSER	RVATIONS
MACROINVERTEBRATES/OTHER V			ertebrat	es.				



Photograph Direction South

STREAM ID			STREAM NA	STREAM NAME Little Creek				
CLIENT MVP				PROJECT NAME MVP				
LAT 37.08909	96 <u>L</u> (	ONG -80.004939	9 <b>DATE</b> 04/06/	2016	COUNTY Franklin			
INVESTIGATO	DRS E. Fo	ster, S. Zabowsł	ki-Lieb, J. Niergarth					
TNW		NRPW	FLOW REG Perennial	IME Intermitte	ent Ephemeral			
CHANNEL FEATURES  Water Depth:7.00 Water Width:3.0 Ordinary High Water			Vidth:9.0ft leight:	ft s s s s s s s s s s s s s s s s s s s	Gradient <u>v</u> FlatMo	nelized <u>✓</u> No		
FLOW CHARACTERISTICS  Water Present No water, streamStream bed moisStanding water  ✓ Flowing water  Velocity ✓ Fast ModSlow			tream bed dry moist rater	M F F	Proportion of Reach Repres Morphology Types (Only ente Riffle 40 % Run 40 Pool 20 %  Furbidity Clear Slightly to Other	er if water present) %		
INORGANIC SUBSTRATE COMPON								
INOR				_	RGANIC SUBSTRATE COM			
Substrate Type	(shoul	JBSTRATE COM d add up to 100 meter		_	RGANIC SUBSTRATE COM loes not necessarily add u	p to 100%)		
Substrate	(shoul	d add up to 100	% Composition in	Substrate Type	loes not necessarily add u	p to 100%) % Composition in		
Substrate Type	(shoul	d add up to 100 meter 56 mm (10")	% Composition in Sampling Reach	Substrate	Characteristic	p to 100%) % Composition in		
Substrate Type Bedrock	Diar	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	y to 100%)  % Composition in Sampling Area		
Substrate Type Bedrock Boulder Cobble Gravel	Shoul   Diar	meter  66 mm (10")  mm (2.5"-10")  nm (0.1"-2.5")	% Composition in Sampling Reach	Substrate Type	Characteristic  sticks, wood, coarse plant materials (CPOM)	y to 100%)  % Composition in Sampling Area		
Substrate Type Bedrock Boulder Cobble Gravel Sand	Shoul   Diar	d add up to 100 meter  56 mm (10") mm (2.5"-10") nm (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)	y to 100%)  % Composition in Sampling Area		
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt	Shoul   Diar	d add up to 100 meter  56 mm (10") mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm	% Composition in Sampling Reach	Substrate Type Detritus	Characteristic  sticks, wood, coarse plant materials (CPOM)  black, very fine organic	y to 100%)  % Composition in Sampling Area		
Substrate Type Bedrock Boulder Cobble Gravel Sand	Shoul   Diar	d add up to 100 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 75  15 10  Surrounding Landu — Commercia ure — Industrial al — Residential — Other:	Substrate Type  Detritus  Muck-Mud  Marl	Characteristic  sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)  grey, shell fragments	y to 100%)  % Composition in Sampling Area		
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  4-0.06 mm  Forest Field/Paste Agricultura ROW  Canopy Cove Open Shaded	% Composition in Sampling Reach 75  15 10  Surrounding Landu — Commercia — Industrial — Residential — Other:  Partly shade	Substrate Type  Detritus  Muck-Mud  Marl  Ise F	Characteristic  sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)  grey, shell fragments  loodplain Width  Wide > 30ftModera	y to 100%)  % Composition in Sampling Area  5		



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

STREAM ID S-E29	STREAM NAME UNT to Teels Creek
<b>LAT</b> 37.088482 <b>LONG</b> -79.950277	DATE 04/07/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS S Ryan, A Mengel, L Sextor	i e
FLOW REGIME Perennial Intermittent Ephemeral	WATER TYPE TNW — RPW ✓ NRPW —

Perenniai <b>-</b>	Intermitte	nı— Epnem	eral TNW —	RPW –	NRPW —	
		Fatimata N			Otro or Francisco	
			Measurements  k Width: 8 ft		Stream Erosion  ✓ None Moderate	Heavv
		Top of Ban				•
		LB 3.0	· ·		Artificial, Modified or Char	nnelized
				<u></u>	Yes <u></u> ✓ No	
CHANNEL FE	ATURES	·	th: 3.00 in		Dam PresentYes _	✓ No
			th: 4.0 ft			
		Ŭ	r Mark: <u>5.0 in</u>		Sinuosity <u>v</u> Low	Medium High
		Flow Direc	tion: Southwest		Gradient	_
					Flat	Severe (10 ft/100 ft)
		Water Pres	sent		Proportion of Reach Repre	,
		No wate	r, stream bed dry		Morphology Types	-
		Stream			Riffle 60 % Run 40	%
FLOW		Standing			Pool %	
CHARACTER	ISTICS	<u>v</u> riowing	water		Turbidity	
		Velocity				turbidTurbid
		Fast Slow	<u>✓</u> Moderate		OpaqueStainedOther	
luo B		_	MOONENTO			4DONENTO
INOR		add up to 10	MPONENTS 0%)	_	RGANIC SUBSTRATE COM does not necessarily add u	
Substrate Type	Diame	eter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock				Dotrituo	sticks, wood, coarse	
Boulder	> 256	mm (10")	10	Detritus	plant materials (CPOM)	
Cobble	64-256 m	m (2.5"-10")	50	Muck-Mud	black, very fine organic	
Gravel	2-64 mm	n (0.1"-2.5")		WIGON-WIGG	(FPOM)	
Sand	0.06-2n	nm (gritty)				
Silt	0.004-0	0.06 mm	30	Marl	grey, shell fragments	
Clay	< 0.004	mm (slick)	10			
		Predomina Forest	ant Surrounding Lar Commer	iduse	Indicate the dominant type  Trees Shrub	
		_	asture Industria		✓ Grasses ✓ Herba	
		Agricul		tial		
WATERSHED FEATURES		Other:			Floodplain Width  ✓ Wide > 30ft Mode	rate 15-30ft
		Canopy Co	over		Narrow <16ft	
		Partly of	open <u></u> Partly sh	aded	Madaud Durand Van	d NI-
		Shaded	Open		Wetland PresentYes Wetland ID	<u>✓</u> No
		Indicate th	ne dominant type and	d record the d	Iominant species present	
AQUATIC VE	GETATION	Rooted	d emergent	Rooted subme	ergentRooted float	tingFree floating
		Floatin	g algae 🔽	Attached algae	e	
MACDOINIVE						
MACROINVER OR OTHER	KIEBKAIES	)				
WILDLIFE OBSERVED/C	THER					
OBSERVATION NOTES						



Photograph Direction South

STREAM ID S-E28	STREAM NAME Teels Creek
<b>LAT</b> 37.088195 <b>LONG</b> -79.9505	DATE 04/07/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS S Ryan, A Mengel, L Sextor	i e
FLOW REGIME Perennial ✓ Intermittent Ephemeral —	WATER TYPE TNW — RPW ✓ NRPW —

CHANNEL FE	ATURES	Top of Ban Top of Ban LB <u>6.0</u> Water Depi Water Widt High Water	-	<u>ft</u>	Stream Erosion None Moderate  Artificial, Modified or Char Yes No  Dam Present Yes Sinuosity Low Gradient Flat Moderate (0.5/100 ft (2 ft/100 ft)	nnelized  ✓ No  Medium High  Severe
FLOW CHARACTER	ISTICS	Stream I Standing Flowing  Velocity	r, stream bed dry bed moist g water		Proportion of Reach Representation  Morphology Types  Riffle % Run 75  Pool 25 %  Turbidity  Clear  Slightly  Opaque Stained  Other	% turbidTurbid
INOR		STRATE CO		_	RGANIC SUBSTRATE COM	
Substrate Type	Diame	· · · · · · · · · · · · · · · · · · ·	% Composition in Sampling Reach	Substrate Type	1	% Composition in Sampling Area
Bedrock			25	Detritus	sticks, wood, coarse	_
Boulder		mm (10")			plant materials (CPOM)	5
Cobble Gravel		m (2.5"-10")	10	Muck-Mud	black, very fine organic (FPOM)	
Sand		nm (gritty)	20 40		(:: 5)	
Silt		0.06 mm	5	Marl	grey, shell fragments	
Clay		mm (slick)	<u> </u>		3 37 2 23 23.5	
Predominant Surrounding Lar  Predominant Surrounding Lar  Forest Field/Pasture Nesiden Other:  Canopy Cover Partly open Shaded Open		cial tial aded	Indicate the dominant type Trees Shrub Grasses Herba  Floodplain Width Wide > 30ft Mode Narrow <16ft  Wetland Present Yes Wetland ID	rate 15-30ft		
			l emergent		dominant species present ergent Rooted floa e	tingFree floating

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

Moderate rain overnight and during survey. Stream meanders within ROW for several hundred feet. Stream contains a short (approx 175 feet) but distinct overflow channel (field ID'd as S-E28-OVERFLOW) that diverges and reconnects with main channel. Overflow has similar bed characteristics with bank of 5-ft width and left and right bank of 1-ft height. Overflow channel contained pooled water and appeared to only flow during flood events.



Photograph Direction East

STREAM ID S-EF4			STREAM N	STREAM NAME UNT to Teels Creek			
CLIENT MVP				PROJECT NAME MVP			
LAT 37.07909		ONG -79.94182			cou	NTY Franklin	
INVESTIGATO	<b>DRS</b> D Ha	dersbeck, J Swi	lik, J Potrikus				
WATER TYPE TNW RPW NRPW NRPW			FLOW REG Perennial	Intermi	ittent	Ephemeral	
Estimate Measurements Top of Bank Width: _20.0 _ ft Top of Bank Height: LB7.0 _ ft RB9.0 Water Depth: _12.00 _ in Water Width: _8.0 _ ft Ordinary High Water Mark (Widelength of Water Mark (Height of Water Width) Flow Direction: _Southwest  Water PresentNo water, stream bed dryStream bed moistStanding water _✓ Flowing water			Width:20.0ft Height:  t	: <u>11.0</u> ft	Gradient (0 Stream Era None Artificial, I Yes Within Roa Yes Culvert Pr Culvert Ma Culvert Siz Proportion Morpholog Riffle 25 Pool 15	Flat Mo	✓ No  sented by Stream or if water present)
	Velocity Fast Slow Slow				Other_	<del> </del>	urbidTurbid
INOR	-	UBSTRATE CO ld add up to 100	-				
Substrate Type	Dia	meter	% Composition in Sampling Reach		te Char	acteristic	% Composition in Sampling Area
Bedrock			5	Detritus		s, wood, coarse	
Boulder		56 mm (10")	20		plant r	naterials (CPOM)	10
Cobble		6 mm (2.5"-10")	20	Muck-Muc	d black,	very fine organic	
Gravel		nm (0.1"-2.5")	25	<u> </u>		(FPOM)	
Sand		-2mm (gritty)	5	4			
Silt		04-0.06 mm	25	Marl	grey,	shell fragments	
Clay < 0.004 mm (slick)  Predominant Surrou  Forest Field/Pasture Agricultural ROW  Canopy Cover Open Fhaded			Commercia ture Industrial Residentia Other:	al il	Floodplain Wide > Narrow	30ft <u>✓</u> Modera	te 15-30ft
MAC	ROINVER	TEBRATES/OT	HER WILDLIFE OBS	SERVED OR	OTHER NO	TES AND OBSER	RVATIONS
MACROINVERTEBRATES/OTHER V Feeds into Teels creek							



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

STREAM ID S-EF7			STREAM NA	STREAM NAME UNT to Teels Creek			
CLIENT MV	/P		PROJECT N	PROJECT NAME MVP			
LAT 37.07470	01 <b>L</b> (	ONG -79.940985	DATE 04/05/	2016	<b>COUNTY</b> Franklin		
INVESTIGATO	<b>ORS</b> D Ha	dersbeck, J Swili	ik, J Potrikus				
WATER TYPE TNW RPW NRPW			FLOW REG Perennial	IME Intermi	ttent Ephemeral		
		Estimate Mea	surements		Sinuosity Low V	Medium High	
CHANNEL FE	ATURES	Top of Bank W Top of Bank H LB <u>0.5</u> ft Water Depth: _ Water Width: _ Ordinary High	/idth:1.5 ft leight: RB0.5 ft 0.50 in ft Water Mark (Width): Water Mark (Height)	ft	Gradient Flat <u>✓</u> Mo	derate Severe 100 ft) (10 ft/100 ft) Heavy nelized	
					Culvert Material: Concrete		
					Culvert Size: 24_in		
Water Present No water, streamStream bed moisStanding waterStanding water			tream bed dry moist ater		Proportion of Reach Repres Morphology Types (Only ente Riffle 20 % Run 60 Pool 20 %	r if water present)	
CHARACTERISTICS   Velocity			. Moderate		Turbidity Clear Slightly tu Other	urbidTurbid	
INORGANIC SUBSTRATE COMPONE (should add up to 100%) 100					ORGANIC SUBSTRATE COM (does not necessarily add up		
<u> </u>	(Siloui	a add ap to 100	,			· · · · · · · · · · · · · · · · · · ·	
Substrate Type		meter	% Composition in Sampling Reach	Substrat Type	e Characteristic	% Composition in Sampling Area	
Type Bedrock	Dia	meter	% Composition in Sampling Reach		sticks, wood, coarse	Sampling Area	
Type Bedrock Boulder	Dia:	meter 56 mm (10")	% Composition in Sampling Reach	Туре	Characteristic		
Type Bedrock Boulder Cobble	Dia: > 25 64-256	meter 56 mm (10") mm (2.5"-10")	% Composition in Sampling Reach  5 20	Туре	sticks, wood, coarse plant materials (CPOM) black, very fine organic	Sampling Area	
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  5 20 50	Type Detritus	sticks, wood, coarse plant materials (CPOM)	Sampling Area	
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)	% Composition in Sampling Reach  5 20 50 20	Type Detritus Muck-Muck	sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM)	, ,	
Type Bedrock Boulder Cobble Gravel Sand Silt	> 25 64-256 2-64 r 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  5 20 50	Type Detritus	sticks, wood, coarse plant materials (CPOM) black, very fine organic	Sampling Area	
Type Bedrock Boulder Cobble Gravel Sand	> 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  5 20 50 20 5  Surrounding Landu — Commercia — Industrial — Residential — Other: Roac	Type Detritus Muck-Muc Marl see	sticks, wood, coarse plant materials (CPOM) black, very fine organic (FPOM) grey, shell fragments	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 Cove  Open	% Composition in Sampling Reach  5 20 50 20 5  Surrounding Landu — Commercia — Industrial — Residential — Vother: Roac	Type Detritus Muck-Muc Marl see	sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)  grey, shell fragments  Floodplain WidthModera	Sampling Area 25	
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  5 20 50 20 5  Surrounding Landu — Commercia — Industrial — Residential — Residential — Partly shade	Type Detritus Muck-Muc Marl see Il	sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)  grey, shell fragments  Floodplain WidthModera	Sampling Area 25  tte 15-30ft	



Photograph Direction SW

STREAM ID S-EF12			STREAM NAME Teels Creek					
CLIENT MVP			PROJECT NAME MVP					
LAT 37.073688 LONG -79.940876				<b>DATE</b> 04/05	/2016		COUNTY Franklin	
INVESTIGATO	ORS D Ha	lik, J P	otrikus					
WATER TYPE TNW RPW NRPW NRPW			FLOW REG Perennial	IME Interm	nittent	Ephemeral		
CHANNEL FEATURES    Estimate Measurements   Top of Bank Width:25.0   Top of Bank Height:					ft	Stream Artific Withir Culve	ent <u>v</u> FlatMo	nelized
FLOW CHARACTERISTICS  Water Present  No water, stream  Stream bed moist  Standing water  Flowing water  Velocity  Fast Slow			·		Propo Morph Riffle Pool Turbio	rtion of Reach Repre cology Types (Only entr 20 % Run 60 20 %	er if water present) ) %	
INOR	-	UBSTRATE CO	_	_			NIC SUBSTRATE COM	
Substrate Type	Dia	meter		Composition in mpling Reach	Substra Type		Characteristic	% Composition in Sampling Area
Bedrock			5		Detritus		sticks, wood, coarse	
Boulder		56 mm (10")	1:	5		р	ant materials (CPOM)	10
Cobble		6 mm (2.5"-10")	1:		Muck-Mu	ıd b	lack, very fine organic	
Gravel		mm (0.1"-2.5")	3			_	(FPOM)	
Sand		-2mm (gritty)	3	0				
Silt		04-0.06 mm	5		Marl		grey, shell fragments	
WATERSHED FEATURES  WATERSHED FEATURES  E Field/Pasture Pagricultural PROW PROW PROW PROW PROW PROW PROW PROW			unding Landu Commercia Industrial Residential Other:  Partly shad	al	Wi	olain Width de > 30ft <u>✓</u> Modera rrow <15ft	I ate 15-30ft	
		. —						
MAC	ROINVER	TEBRATES/OT	HER V	VILDLIFE OBS	SERVED OI	R OTHE	R NOTES AND OBSE	RVATIONS
MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS Continuation of S-EF5 (Teels creek)after it rejoined the corridor.								



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

STREAM ID S				ME UNT to	Teels Creek	
			131 <b>DATE</b> 12/09	9/2015		
CLIENT MVP			PROJECT N	AME MVP		
INVESTIGATORS A.Stott, A.Grech						
WATER TYPE TNW RPW NR			FLOW REG Perennial	IME Intermitt	ent Ephemeral 🗸	
	1					
			<b>/leasurements</b> k Width: <u>2.0 ft</u>		Stream Erosion  ✓ None Moderate	Heavy
		-			- None - Noderate	ricavy
		Top of Ban		_	Artificial, Modified or Char	nnelized
		LB <u>5.0</u>		<u>n</u>	Yes No	
CHANNEL FE	ATURES		th: <u>1.00 in</u>		Dam Present Yes	✓ No
		Water Widt			Sinuscity of law	— Modium ⊟igh
		•	igh Water Mark (Widt	,	Sinuosity <u>v</u> Low	iviedium riigii
		•	igh Water Mark (Heig	ht): <u>5.0 in</u>	Gradient	. 0
		Flow Direct	tion: Northeast			✓ Severe (10 ft/100 ft)
		Water Pres	sent		Proportion of Reach Repre	esented by Stream
			r, stream bed dry		Morphology Types	
			bed moist		Riffle 100 % Run Pool %	%
FLOW	CTICC	Standing Flowing	•		70	
CHARACTERI	31103	<u>•</u>			Turbidity	oudetal Todatal
		Velocity Fast	✓ Moderate		<ul><li>✓ ClearSlightly turbidTurbid</li><li>✓ OpaqueStained</li></ul>	
		Slow			Other	
INOR	GANIC SUB	STRATE CO	MPONENTS	C	RGANIC SUBSTRATE CON	IPONENTS
	(should a	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			Sampling Reach	Туре	sticks, wood, coarse	Sampling Area
Boulder	> 256	mm (10")		Detritus	plant materials (CPOM)	20
Cobble		m (2.5"-10")			black, very fine organic	
Gravel	2-64 mm	(0.1"-2.5")		Muck-Mud	(FPOM)	
Sand	0.06-2n	nm (gritty)	30			
Silt		0.06 mm	30	Marl	grey, shell fragments	
Clay	< 0.004 ı	mm (slick)	40			
			ant Surrounding Lan		Indicate the dominant type	
		<u>✓</u> Forest	Commer asture Industrial		<u>✓</u> Trees Shrub Herba	s ceous
		Field/Pasture Industrial Agricultural Residential				00003
WATERSHED FEATURES		Other:			Floodplain Width Wide > 30ft — Mode	rate 15-30ft
1 2711 01120		Canopy Co	over		— Narrow <16ft	iate 10 doit
		Open	Partly sh	aded		4.11
		<u></u> ✓ Shaded	d		Wetland PresentYes   ✓ No Wetland ID	
		Indicate th	e dominant type and	d record the	dominant species present	
AQUATIC VEC	SETATION	_	•		ergentRooted float	ingFree floating
		Floating	g algae	Attached alga	16	
		Τ				
		Poor chanr	nel in center of stream	n. Sheetflow o	r sub-surtace	
MACROINVER	TERDATES					
OR OTHER	TEBRATES					
WILDLIFE OBSERVED/O						
OBSERVATIO NOTES	NS AND					



Photograph Direction SW

STREAM ID S-D23	STREAM NAME Teels Creek
<b>LAT</b> 37.070419 <b>LONG</b> -79.931235	DATE 04/08/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS A. Bensted, J. Kraus, A. Lar	son
FLOW REGIME Perennial — Intermittent Ephemeral —	WATER TYPE TNW — RPW ✓ NRPW —

Perenniai -	<u>Intermitte</u>	nt <u> </u>	eral TNW	RPW –	NRPW	
		F - 41 4 - 8			O4	
			<b>/leasurements</b> k Width: <u>20</u> ft		Stream Erosion None Moderate Heavy	
		Top of Bank Height:				-
					Artificial, Modified or Char	nnelized
				<u></u>	Yes <u></u> ✓ No	
CHANNEL FEATURES		·	th: 2.00 in		Dam PresentYes _	<u>∠</u> No
	Water Wid				Sinuosity Low _	Modium High
		J	Mark: <u>4.0 ft</u>		Siliuosity Low	Mediairi riigir
		Flow Direc	tion: Southeast		Gradient	0
					Flat Moderate (0.5/100 ft (2 ft/100 ft)	
		Water Pres	sent		Proportion of Reach Repre	esented by Stream
			r, stream bed dry		Morphology Types	0/
		Stream   Standin			Riffle 20 % Run 60 Pool 20 %	%
FLOW CHARACTER	ICTICS	Standing	•		70	
CHARACTER	131103				Turbidity	Accelerate Transfer
		Velocity Fast	✓ Moderate		Clear Slightly Stained	
		Slow	<u> </u>		Other	
INOR	GANIC SUB	 STRATE CO	MPONENTS	0	RGANIC SUBSTRATE CON	/PONENTS
		add up to 10		(c	does 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		mm (10")		Detritus	plant materials (CPOM)	10
Cobble		m (2.5"-10")	20	Muck-Mud	black, very fine organic	
Gravel		(0.1"-2.5")			(FPOM)	
Sand		nm (gritty)	40			
Silt		0.06 mm	20	Marl	grey, shell fragments	
Clay	< 0.004 i	mm (slick)	20	d	Indiante that devaluant tour	(0)
		✓ Forest	ant Surrounding Lar Commer		Indicate the dominant type Trees Shrub	e (Check one)
		Field/P	astureIndustria		Grasses Herba	
WATERSHED		Agricultural Residentia		ial Floodplain Width		
FEATURES		Other:				rate 15-30ft
		Canopy Co	over		✓ Narrow <16ft	
		Partly open Partly shaded		aded	Wetland Present Yes	<b>∨</b> No
		ShadedOpen Wetland ID				<u>- 110</u>
					lominant species present	
AQUATIC VE	GETATION		_	Rooted subme Attached algae	_	tingFree floating
				Allacried algae	<u> </u>	
		D	to a constant	21-1-	-III be also at an an III - 2012 - 2	Desired by 1
		Perennial s	stream, Teels Creek. (	Jontains a sma	all backwater eddy within the	Project boundary.
MACROINVE	RTEBRATES					
OR OTHER WILDLIFE						
OBSERVED/C						
NOTES	MO AND					



Photograph Direction SSE

Date: 04/08/2015

Comments: 2015 stream identification.



Photograph Direction SSE

Date: 11/07/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-D22	STREAM NAME UNT to Teels Creek
<b>LAT</b> 37.070433 <b>LONG</b> -79.929514	<b>DATE</b> 04/08/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS A. Bensted, J. Kraus, A. Lar	son
FLOW REGIME Perennial Intermittent Ephemeral	WATER TYPE TNW RPW ⊻ NRPW

refermal =	<u> </u>	nt <u> —</u> Epneme	erai INW	RPW —	NRPW	
		Estimate Measurements Top of Bank Width: 8 ft			Stream ErosionNone Moderate Heavy	
CHANNEL FEATURES		Top of Bank Height:  LB <u>6.0 ft</u> RB <u>6.0 ft</u> Water Depth: <u>3.00 in</u>			Artificial, Modified or Chan	nelized
		Water Widt			Dam PresentYesv	<u>No</u>
		High Water	Mark: <u>7.0 in</u>		Sinuosity 🔽 Low	Medium High
		Flow Direct	tion: Southwest		Gradient	
					Flat	Severe (10 ft/100 ft)
FLOW CHARACTERISTICS  Velo		Stream by Standing Flowing Velocity	r, stream bed dry bed moist g water		Proportion of Reach Repre Morphology Types Riffle 50 % Run 50 Pool %  Turbidity  ClearSlightly toStainedOther	%
INOR		STRATE CO		_	RGANIC SUBSTRATE COM	
Substrate Type	Diame	-	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			15	Detritus	sticks, wood, coarse	
Boulder		mm (10")		Detritus	plant materials (CPOM)	10
Cobble		m (2.5"-10")	20	Muck-Mud	black, very fine organic (FPOM)	
Gravel		1 (0.1"-2.5")	5		(FFOIVI)	
Sand Silt		nm (gritty) 0.06 mm	30	Marl	grey, shell fragments	
		mm (slick)	30	iviaii	grey, shell fragments	
Clay < 0.004  WATERSHED FEATURES		Predominant Surrounding LanduseForestCommercialField/PastureIndustrialAgriculturalResidentialOther:  Canopy Cover		cial	Indicate the dominant type Trees Shrub: Grasses Herbar  Floodplain Width Wide > 30ft Moder Narrow <16ft	s ceous
		Partly o	ppen	aded	Wetland PresentYes Wetland ID	<u>✓</u> No
AQUATIC VEGETATION		Indicate the dominant type and record the dominant species present   Rooted emergent			ingFree floating	
		Fish, crawfi	sh, and toads observ	ed. Stream is	entrenched, 6 feet below surr	ounding field
		I ion, orawn	L. L		the select floor fellows are already	

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES	Fish, crawfish, and toads observed. Stream is entrenched, 6 feet below surrounding field.  Determined to be intermittent based on modest level of flow follow precipitation during the rainy season, but stream may be perennial.
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Photograph Direction SW

STREAM ID S-D18	STREAM NAME UNT to Teels Creek
<b>LAT</b> 37.069967 <b>LONG</b> -79.925813	DATE 04/08/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS A. Bensted, J. Kraus, A. Lar	son
FLOW REGIME Perennial Intermittent Ephemeral	WATER TYPE TNW RPW NRPW

			leasurements		Stream Erosion	
		'	k Width: 2 ft		NoneModerate	Heavy
					Artificial, Modified or Char	nnelized
		· ·			Yes No	
CHANNEL FEATURES		Water Dept	th: 0.00 in		Dam PresentYes _	∠ No
		Water Widt	h: <u>0.0 ft</u>		<del>_</del>	
		High Water	Mark: <u>4.0 in</u>		Sinuosity Low	Medium High
		Flow Direct	tion: South		Gradient	
					Flat Moderate (2 ft/100 ft)	Severe (10 ft/100 ft)
		Water Pres			Proportion of Reach Repre	esented by Stream
		✓ No wate  Stream I	r, stream bed dry		Morphology Types Riffle % Run	%
		— Standing			Pool %	,-
FLOW CHARACTER	ISTICS	Flowing	water		T. ahidib.	
		Velocity			Turbidity ClearSlightly turbidTurbid	
			Moderate		OpaqueStained	
		Slow			Other	
INOR		STRATE CO add up to 10		_	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")		Delilius	plant materials (CPOM)	10
Cobble	64-256 m	m (2.5"-10")		Muck-Mud	black, very fine organic	
Gravel		1 (0.1"-2.5")			(FPOM)	
Sand		nm (gritty)				
Silt		0.06 mm	50	Marl	grey, shell fragments	
Clay	< 0.004	mm (slick)	50 ant Surrounding Lan	4	Indicate the deminent type	(Ob a alla a sa a)
		✓ Forest	Commer	cial	Indicate the dominant type  ✓ Trees Shrub	
		Field/Pa	astureIndustrial		Grasses Herba	iceous
WATERSHED		Agricult	ural Resident	ial	Floodplain Width	
FEATURES		Other:			Wide > 30ft   ✓ Mode	rate 15-30ft
		Canopy Co			Narrow <16ft	
		Partly of Shaded		aded	Wetland PresentYes	✓ No
		_			Wetland ID	_ <del>_</del>
AQUATIC VEGETATION			e dominant type and emergent	d record the o	dominant species present ergentRooted float	ting Free floating
AQUATIC VEC	JETATION			Attached alga		migFree iloating
				9		

	Stream is in a valley with other ephemeral stream, S-D19. The streambed dissipates and goes subsurface for small stretches, but forms again within the project corridor, and turns into S-D20 (intermittent) at location of hillside seep. Precipitation occurred previous night.
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 11/07/2019. The presence of a stream channel and OHWM was confirmed



Photograph Direction NNE

Date: 04/08/2015

Comments: 2015 stream identification.



Photograph Direction NNE

Date: 11/07/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-RR15	STREAM NAME UNT to Teels Creek
<b>LAT</b> 37.069193 <b>LONG</b> -79.933876	DATE 09/16/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS J. Cook, D. McCullough, R.	Keyser
FLOW REGIME Perennial Intermittent Ephemeral	WATER TYPE TNW RPW ✓ NRPW

Perennial _	Intermitte	nt Ephem	eral TNW —	RPW 💆	NRPW	
	1					
			<b>/leasurements</b> k Width: <u>14 ft</u>		Stream ErosionNoneModerate	Heavy
		Top of Ban	k Height:		Artificial, Modified or Char	nelized
		LB <u>55.0</u>	in RB <u>5.0</u>		Yes ✓ No	monzou
CHANNEL FE	ATURES	Water Dep	th: 2.00 in			. N.
	,	Water Widt	th: <u>52.0 in</u>		Dam PresentYes _	<u>∠</u> No
		High Water	Mark: <u>9.0 in</u>		Sinuosity <u>v</u> Low	Medium <u>v</u> High
		Flow Direc	tion: North		Gradient	
						Severe (10 ft/100 ft)
		Water Pres			Proportion of Reach Repre	esented by Stream
			r, stream bed dry		Morphology Types Riffle 50 % Run 50	%
		Standin	bed moist g water		Pool %	70
FLOW CHARACTER	ISTICS	Flowing	•			
0131010121		W-114			Turbidity <u>✓</u> ClearSlightly	turbidTurbid
		Velocity Fast	✓ Moderate		OpaqueStained	
		Slow			Other	
INOR		STRATE CO	MPONENTS 0%)	_	ORGANIC SUBSTRATE COMPONENTS (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	> 256	mm (10")		Detilitus	plant materials (CPOM)	30
Cobble	64-256 m	m (2.5"-10")	25	Muck-Mud	black, very fine organic	
Gravel		1 (0.1"-2.5")			(FPOM)	
Sand		nm (gritty)	35			
Silt		0.06 mm	40	Marl	grey, shell fragments	
Clay	< 0.004 1	mm (slick)	l ant Surrounding Lan	dusa	Indicate the dominant type	(Chack and)
		Forest	Commer		✓ Trees Shrub	
		Field/P			Grasses Herba	iceous
WATERSHED		✓ Agricultural Residential Other:		tial	Floodplain Width	
FEATURES				Wide > 30ft Moderate 15-30ft		rate 15-30ft
		Canopy Co	over		✓ Narrow <16ft	
		Shaded		aded	Wetland PresentYes Wetland ID	<u>✓</u> No
					lominant species present	
AQUATIC VE	GETATION		_	Rooted subme Attached algae	_	tingFree floating
			<u></u>	Allacried algae	<del></del>	
MACROINVE	RTEBRATES	3				
OR OTHER WILDLIFE						
OBSERVED/C						
NOTES						



Photograph Direction North

STREAM ID S-D20	STREAM NAME UNT to Teels Creek
<b>LAT</b> 37.069556 <b>LONG</b> -79.926258	DATE 04/08/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS A. Bensted, J. Kraus, A. Lar	son
FLOW REGIME Perennial — Intermittent ✓ Ephemeral —	WATER TYPE TNW — RPW  ✓ NRPW —

Perennial _	_ Intermitte	nt <u> Ephem</u>	eral TNW —	RPW 💆	NRPW —	
			<b>fleasurements</b> k Width: 8 ft		Stream ErosionNoneModerate	<u>✓</u> Heavy
		Top of Ban	k Height:		Artificial, Modified or Char	nnelized
		LB <u>6.0 ft</u> RB <u>6.0 ft</u>			Yes <u>✓</u> No	
CHANNEL FE	ATURES	Water Depth: 2.00 in			Dam Brasant Voc	4 No
		Water Width: 3.0 ft			Dam PresentYes _	Z NO
		High Water Mark: 4.0 in			Sinuosity Low	Medium High
		Flow Direct	tion: South		Gradient	
						Severe (10 ft/100 ft)
		Water Pres			Proportion of Reach Repre	esented by Stream
			r, stream bed dry bed moist		Morphology Types Riffle 100 % Run	%
		Standing			Pool %	70
FLOW CHARACTER	ISTICS	Flowing	•			
OHARAGIER	101100				Turbidity <u>✓</u> ClearSlightly	turbidTurbid
		Velocity Fast	Moderate		OpaqueStained	
		✓ Slow	Woderate		Other	
INOR	GANIC SUB	STRATE CO	MPONENTS	0	RGANIC SUBSTRATE CON	MPONENTS
	(should a	add up to 10			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")			plant materials (CPOM)	5
Cobble		m (2.5"-10")	15	Muck-Mud	black, very fine organic (FPOM)	
Gravel		(0.1"-2.5")	50		(I FOW)	
Sand Silt		nm (gritty) 0.06 mm		Marl	grey, shell fragments	
Clay		mm (slick)	20 15	Iviaii	grey, shell fragilierits	
Oldy	0.001	. ,	ant Surrounding Lar	nduse	Indicate the dominant type	(Check one)
		✓ Forest	Commer	cial	<u>✓</u> Trees Shrub	S
		— Field/Pa			Grasses Herba	iceous
WATERSHED		Agricultural Residential Other:  Canopy Cover		tiai	Floodplain Width	
FEATURES					✓ Wide > 30ft Mode	rate 15-30ft
				Narrow <16ft		
		✓ Partly open       Partly shaded         Shaded       Open         Wetland Present       Yes         Wetland ID				<u>✓</u> No
					dominant species present	
AQUATIC VE	GETATION			Rooted subme		tingFree floating
		Floating	g algae	Attached alga	<u> </u>	
		1				
			ns at hillside seep. Reeam is deeply entrend		kely supplements flow throug led	h infiltration into the
MACROINVER	RTEBRATES		ca io dooply official			
OR OTHER WILDLIFE						
OBSERVED/C						
OBSERVATION NOTES	INS AND					



Photograph Direction North

STREAM ID S-EF48			STREAM NA	STREAM NAME UNT to Blackwater River			
CLIENT MVF	Р		PROJECT N	PROJECT NAME MVP			
LAT 37.06482		ONG -79.87455			<b>COUNTY</b> Franklin		
INVESTIGATO	<b>DRS</b> D Ha	dersbeck, S The	erkildson, K Pulver				
WATER TYPE TNW RPW NRPW			FLOW REG Perennial		tent 🗾 Ephemeral 🔲		
		Estimate Mea	asurements		Sinuosity Low 🗸 !	Medium High	
		Top of Bank V Top of Bank H	Vidth: 5.0 ft leight:		Gradient Flat <u>✓</u> Mo	derate Severe (100 ft) (10 ft/100 ft)	
		RB <u>1.0</u>	ft	Stream ErosionNoneModerate	Незуу		
		Water Depth:			Artificial, Modified or Chan	<del>_</del>	
CHANNEL FE	ATURES	Water Width:_		00 #	Yes V No		
		, ,	Water Mark (Width):		Within Roadside Ditch		
		, ,	Water Mark (Height)	): _3.0_ in	Yes VNo		
		Flow Direction	: Southeast	-	Culvert PresentYes		
					Culvert Material:	<del></del>	
					Culvert Size:in	<del></del>	
		Water Preser  No water, s  Stream bed  Standing w	tream bed dry d moist		Proportion of Reach Repres Morphology Types (Only ente Riffle % Run 30 Pool 70 %	er if water present)	
FLOW CHARACTERI	ISTICS	✓ Flowing wa			F001 70 70		
CHARACIEN	151105	_			Turbidity Clear Slightly to	irbid Turbid	
		Velocity	Madarata		Clear Slightly to Other	urbidTurbid	
		Fast ✓ Slow	_ Moderate				
INOR	-	JBSTRATE COI d add up to 100			ORGANIC SUBSTRATE COM (does not necessarily add u	p to 100%)	
Substrate Type	(shoul	JBSTRATE COI		(	(does not necessarily add u		
Substrate	(shoul	JBSTRATE COI	0%) 100 % Composition in	Substrate Type	Characteristic sticks, wood, coarse	y to 100%) % Composition in	
Substrate Type	(shoul	JBSTRATE COI	0%) 100 % Composition in	Substrate	Characteristic	y to 100%) % Composition in	
Substrate Type Bedrock	(shoul	JBSTRATE COI d add up to 100 meter	% Composition in Sampling Reach	Substrate Type Detritus	Characteristic  sticks, wood, coarse plant materials (CPOM)  black, very fine organic	y to 100%)  % Composition in Sampling Area	
Substrate Type Bedrock Boulder Cobble Gravel	Shoul   Diar	JBSTRATE COI Id add up to 100 meter 56 mm (10") 5 mm (2.5"-10") nm (0.1"-2.5")	% Composition in Sampling Reach	Substrate Type	Characteristic  sticks, wood, coarse plant materials (CPOM)	y to 100%)  % Composition in Sampling Area	
Substrate Type Bedrock Boulder Cobble	Shoul   Diar	JBSTRATE COI Id add up to 100 meter 56 mm (10") 5 mm (2.5"-10")	% Composition in Sampling Reach	Substrate Type Detritus	characteristic  Sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)	y to 100%)  % Composition in Sampling Area	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt	Shoul   Diar	DBSTRATE COI d add up to 100 meter  56 mm (10") mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm	% Composition in Sampling Reach  10 20 20	Substrate Type Detritus	Characteristic  sticks, wood, coarse plant materials (CPOM)  black, very fine organic	y to 100%)  % Composition in Sampling Area	
Substrate Type Bedrock Boulder Cobble Gravel Sand	Shoul   Diar	DBSTRATE COI d add up to 100 meter  56 mm (10") 5 mm (2.5"-10") 5 mm (0.1"-2.5") 5 -2mm (gritty) 6 4-0.06 mm 6 4 mm (slick)	% Composition in Sampling Reach  10 20 20 30 20	Substrate Type  Detritus  Muck-Mud  Marl	Characteristic  sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)  grey, shell fragments	y to 100%)  % Composition in Sampling Area	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt	Shoul   Diar	DBSTRATE COI d add up to 100 meter  56 mm (10") 5 mm (2.5"-10") 5 mm (0.1"-2.5") 5 -2mm (gritty) 6 4-0.06 mm 6 4 mm (slick)	% Composition in Sampling Reach  10 20 20 30 20 Surrounding Landoure — Commerciaure — Industrial	Substrate Type  Detritus  Muck-Mud  Marl	characteristic  Sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)	y to 100%)  % Composition in Sampling Area	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay	Shoul   Diar	meter  56 mm (10")  mm (2.5"-10")  nm (0.1"-2.5")  -2mm (gritty)  4-0.06 mm  04 mm (slick)  Predominant  Forest  Field/Past  Agricultura	% Composition in Sampling Reach  10 20 20 30 20  Surrounding Landu — Commerciaure — 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	y to 100%)  % Composition in Sampling Area	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay	Shoul   Diar	meter  66 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	% Composition in Sampling Reach  10 20 20 30 20  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	y to 100%)  % Composition in Sampling Area	
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 20 30 20  Surrounding Landu — Commercia — Industrial — Residential — Other:  Partly shad	Substrate Type  Detritus  Muck-Mud  Marl  Juse al	Characteristic  Sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)  grey, shell fragments  Floodplain Width Wide > 30ft  Modera	y to 100%)  % Composition in Sampling Area  20  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 20 30 20  Surrounding Landu — Commercia — Industrial — Residential — Other:  Partly shad	Substrate Type  Detritus  Muck-Mud  Marl  Juse al	Characteristic  sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)  grey, shell fragments  Floodplain Width Wide > 30ft Narrow <15ft  Modera	y to 100%)  % Composition in Sampling Area  20  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 20 30 20  Surrounding Landu — Commercia — Industrial — Residential — Other:  Partly shad	Substrate Type  Detritus  Muck-Mud  Marl  Juse al	Characteristic  sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)  grey, shell fragments  Floodplain Width Wide > 30ft Narrow <15ft  Modera	y to 100%)  % Composition in Sampling Area  20  ate 15-30ft	



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

STREAM ID S-YZ4			STREAM NA	STREAM NAME UNT to Blackwater River			
CLIENT MVP			PROJECT N	PROJECT NAME MVP			
LAT 37.064651 LONG -79.878345			5 <b>DATE</b> 09/27/	DATE 09/27/2016 COUNTY Franklin			
INVESTIGATO	ORS S. Ya	rbrough, S. Pilc	her, S. Therkildson				
WATER TYPE TNW RPW NRPW			FLOW REG Perennial	FLOW REGIME			
		Estimate Mea	asurements		Sinuosity 🗸 Low	Medium High	
CHANNEL FEATURES		Top of Bank Width: 9.0 ft  Top of Bank Height:  LB _ 2.0 ft RB _ 3.0 ft		ft	Gradient Flat		
					Nonev Moderate	Heavy	
		Water Depth: 0.00 in  Water Width: 0.0 ft			Artificial, Modified or Channelized		
		_		2.0 ft	Yes ✓ N		
			Water Mark (Width):		Within Roadside Ditch		
		, ,	Water Mark (Height)	: <u>12.0</u> in	within Roadside Ditch Yes <u>✓</u> No		
		Flow Direction	n: Northwest	-	Culvert PresentYes _ No		
					<del>_</del> _		
					Culvert Material:		
		Market Durane	-4		Culvert Size:in		
		Water Preser	nt stream bed dry		Proportion of Reach Represented by Stream Morphology Types (Only enter if water present) Riffle % Run % Pool %		
		Stream bed					
		Standing v	vater				
FLOW CHARACTER	ISTICS	Flowing wa	iter		Turebielitus		
					Turbidity ClearSlightly turbidTurbid		
		VelocityFast Moderate Slow			Other — Other		
INOR	_	JBSTRATE CO			ORGANIC SUBSTRATE COI		
	_	JBSTRATE CO d add up to 10	<b>0%)</b> 100		(does not necessarily add ι	up to 100%)	
Substrate Type	(shoul				(does not necessarily add ι	up to 100%)	
Substrate	(shoul	d add up to 10	0%) 100 % Composition in	Substrate Type	(does not necessarily add ι	up to 100%)  % Composition in	
Substrate Type	(shoul	d add up to 10	% Composition in Sampling Reach	Substrate	Characteristic	% Composition in Sampling Area	
Substrate Type Bedrock	Diag	d add up to 100 meter	% Composition in Sampling Reach	Substrate Type Detritus	Characteristic  sticks, wood, coarse plant materials (CPOM)	% Composition in Sampling Area	
Substrate Type Bedrock Boulder	Shoul   Dian   > 25   64-256	d add up to 100 meter 66 mm (10")	0%) 100  % Composition in Sampling Reach  0 0	Substrate Type	Characteristic  sticks, wood, coarse plant materials (CPOM)	% Composition in Sampling Area	
Substrate Type Bedrock Boulder Cobble	> 25 64-256 2-64 r	d add up to 100 meter 56 mm (10") mm (2.5"-10")	% Composition in Sampling Reach 0 0 20 40	Substrate Type Detritus	Characteristic  sticks, wood, coarse plant materials (CPOM) black, very fine organic	% Composition in Sampling Area	
Substrate Type Bedrock Boulder Cobble Gravel	> 25 64-256 2-64 r 0.06	d add up to 100 meter 66 mm (10") mm (2.5"-10") nm (0.1"-2.5")	% Composition in Sampling Reach 0 0 20 40	Substrate Type Detritus	Characteristic  sticks, wood, coarse plant materials (CPOM) black, very fine organic	% Composition in Sampling Area	
Substrate Type Bedrock Boulder Cobble Gravel Sand	Shoul   Dial	d add up to 100 meter  66 mm (10") mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty)	% Composition in Sampling Reach 0 0 20 40	Substrate Type Detritus Muck-Mud	characteristic  Sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)	% Composition in Sampling Area	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt	Shoul   Dial	d add up to 100 meter  56 mm (10") mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 14 mm (slick)	% Composition in Sampling Reach 0 0 20 40 10 10 20 s Surrounding Landustrial	Substrate Type  Detritus  Muck-Mud  Marl	characteristic  Sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)  grey, shell fragments	% Composition in Sampling Area	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay	Shoul   Dial	d add up to 100 meter  56 mm (10") mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 14 mm (slick)  Predominant  Forest Field/Past Agricultura	% Composition in Sampling Reach 0 0 20 40 10 10 20 s 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 > 30ftModer	wp to 100%)  % Composition in Sampling Area	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay	Shoul   Dial	d add up to 100 meter  56 mm (10") 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	% Composition in Sampling Reach  0  0  20  40  10  20  20  40  10  10  20  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 > 30ftModer	wp to 100%)  % Composition in Sampling Area	
Substrate Type  Bedrock  Boulder  Cobble  Gravel  Sand  Silt  Clay  WATERSHED  FEATURES	Shoul   Diar	d add up to 100 meter  56 mm (10") 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 0 0 20 40 10 20 Surrounding Landu — Commercia Industrial — Residential — Other:  Partly shad	Substrate Type  Detritus  Muck-Mud  Marl  Jise al	characteristic  Sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)  grey, shell fragments  Floodplain Width Wide > 30ftModer	we to 100%)  % Composition in Sampling Area  20  rate 15-30ft	
Substrate Type  Bedrock  Boulder  Cobble  Gravel  Sand  Silt  Clay  WATERSHED FEATURES	Shoul   Diar	d add up to 100 meter  56 mm (10") 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 0 0 20 40 10 20 Surrounding Landu — Commercia Industrial — Residential — Other:  Partly shad	Substrate Type  Detritus  Muck-Mud  Marl  Jise al	Characteristic  sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)  grey, shell fragments  Floodplain Width Wide > 30ft Narrow <15ft	y to 100%)  % Composition in Sampling Area  20  rate 15-30ft	



Photograph Direction East

STREAM ID S-C14	STREAM NAME Teels Creek
<b>LAT</b> 37.062623 <b>LONG</b> -79.921118	DATE 04/04/2015
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 Ephem	eral TNW	RPW –	NRPW		
		F-414- 1			O4 F		
CHANNEL FEATURES		Estimate Measurements Top of Bank Width: 50 ft		Stream ErosionNone ModerateHeavy			
		Top of Bank Height:			Artificial, Modified or Channelized		
		LB <u>6.0 ft</u> RB <u>6.0 ft</u>		<u> </u>	YesNo		
			th: 2.00 in		Dam PresentYes	✓ No	
		Water Width: 20.0 ft			<del>_</del> _		
		High Water Mark: 6.0 in			Sinuosity Low _v Medium High		
		Flow Direct	tion: Southeast		Gradient		
					<u>✓</u> FlatModerateSevere (2 ft/100 ft)(10 ft/100 ft)		
		Water Pres	sent		Proportion of Reach Repre	·	
		No water, stream bed dry			Morphology Types		
		Stream I			Riffle 25 % Run 65 % Pool 10 %		
FLOW		Standing	•				
CHARACTER	ISTICS	<u>v</u> i lowing	Water		Turbidity		
		Velocity			✓ Clear — Slightly — Opaque — Stained		
		Fast Slow	✓ Moderate		OpaqueStainedOther		
INOR	CANIC CUR		MPONENTS			ADONENTO	
INOR		add up to 10		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diame	ter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock			5	Detritue	sticks, wood, coarse		
Boulder	> 256 ı	mm (10")	5	Detritus	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")	15	WIUCK-WIUU	(FPOM)		
Sand	0.06-2n	nm (gritty)	5				
Silt	0.004-0	).06 mm	35	Marl	grey, shell fragments		
Clay	< 0.004 r	mm (slick)					
			ant Surrounding Lar		Indicate the dominant type		
		Forest Commerci Field/Pasture Industrial		ial <u>v</u> Trees Shrubs Grasses Herbaceous			
		Agricultural Residential		tial	<del>-</del>		
WATERSHED FEATURES		Other:  Canopy Cover			Floodplain Width  Wide > 30ft Moderate 15-30ft		
				Narrow <16ft			
		Partly open Partly shaded		W (1 15 ( )			
		ShadedOpen		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					
			Floating algaeAttached algae				
Г		1					
		Continues out of ROW.					
MACROINVE	OTERDATES	Perennial stream.					
OR OTHER	DIVA1E3	Torring orders.					
OBSERVED/C	WILDLIFE OBSERVED/OTHER						
OBSERVATIONS AND NOTES							



Photograph Direction SE

STREAM ID S-YZ5			STREAM NA	STREAM NAME S-YZ5			
CLIENT MVP				PROJECT NAME MVP			
LAT 37.063464 LONG -79.878281			DATE 09/27/	DATE 09/27/2016 COUNTY Franklin			
INVESTIGATO	ORS S. Ya	arbrough, S. Pilo	her, S. Therkildson				
WATER TYPE TNW RPW NRPW				FLOW REGIME Perennial Intermittent Ephemeral			
		Estimate Mea	asurements		Sinuosity 🗸 Low	Medium High	
CHANNEL FEATURES		Top of Bank Width: 12.0 ft  Top of Bank Height:  LB2.0ft			Gradient Flat <u>✓</u> Mo	oderate Severe (10 ft/100 ft)	
					NoneModerate	Heavy	
		Water Depth: 0.00 in  Water Width: 0.0 ft			Artificial, Modified or Channelized		
		_			Yes ✓ No		
			n Water Mark (Width):				
		, ,	n Water Mark (Height)	: <u>12.0</u> in	Within Roadside Ditch Yes <u>✓</u> No		
		Flow Direction	n: West	-	Culvert PresentYes		
					<u> </u>		
					Culvert Material:		
		M-4 D	-4	-	Culvert Size:in	4 - d b O4	
		Water Preser	nt stream bed dry		Proportion of Reach Represented by Stream Morphology Types (Only enter if water present) Riffle % Run %		
		Stream bed					
		Standing v	vater		Pool %		
FLOW CHARACTER	ISTICS	Flowing wa	iter		Tl. i alita .		
					Turbidity ClearSlightly turbidTurbid		
		Velocity			Other Other		
		Fast Slow	_ Moderate				
		_					
INOR	_	JBSTRATE CO		_	RGANIC SUBSTRATE CON		
	_	JBSTRATE CO d add up to 10	<b>0%)</b> 100	(	does not necessarily add u	p to 100%)	
Substrate Type	(shoul			_	does not necessarily add u	p to 100%)	
Substrate	(shoul	d add up to 10	0%) 100 % Composition in	Substrate Type	does not necessarily add u	p to 100%)  % Composition in	
Substrate Type	(shoul	d add up to 10	90%) 100  % Composition in Sampling Reach	Substrate	does not necessarily add u	p to 100%)  % Composition in	
Substrate Type Bedrock	Dian > 25	d add up to 100	0%) 100  % Composition in Sampling Reach  0 25	Substrate Type Detritus	Characteristic  sticks, wood, coarse plant materials (CPOM)	p to 100%)  % Composition in Sampling Area	
Substrate Type Bedrock Boulder	Shoul   Dias	d add up to 100 meter 56 mm (10")	90%) 100  % Composition in Sampling Reach	Substrate Type	Characteristic sticks, wood, coarse	p to 100%)  % Composition in Sampling Area	
Substrate Type Bedrock Boulder Cobble	Shoul   Dial	meter  66 mm (10")  mmm (2.5"-10")	% Composition in Sampling Reach 0 25 25 25	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	Shoul   Dial	meter  66 mm (10")  mmm (2.5"-10")  mm (0.1"-2.5")	% Composition in Sampling Reach 0 25 25 25 10	Substrate Type Detritus	characteristic  Sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)	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)	% Composition in Sampling Reach 0 25 25 25	Substrate Type Detritus Muck-Mud	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 Silt	Should   Dian	d add up to 100 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 0 25 25 25 10 5 10 commerciatureIndustrial	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	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay	Should   Dian	meter  56 mm (10")  mm (2.5"-10")  nm (0.1"-2.5")  -2mm (gritty)  4-0.06 mm  4 mm (slick)  Predominant  Forest  Field/Past  Agricultura	% Composition in Sampling Reach  0 25 25 25 10 5 10 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	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay	Should   Dian	meter  56 mm (10")  mm (2.5"-10")  nm (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  0 25 25 25 10 5 10 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	
Substrate Type  Bedrock  Boulder  Cobble  Gravel  Sand  Silt  Clay  WATERSHED  FEATURES	Shoul   Diar	meter  56 mm (10")  mm (2.5"-10")  nm (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 0 25 25 25 10 5 10 Surrounding Landu — Commercia Industrial — Residential — Other:  Partly shad	Substrate Type  Detritus  Muck-Mud  Marl  ISE  II	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  10  ate 15-30ft	
Substrate Type  Bedrock  Boulder  Cobble  Gravel  Sand  Silt  Clay  WATERSHED FEATURES	Shoul   Diar	meter  56 mm (10")  mm (2.5"-10")  nm (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 0 25 25 25 10 5 10 Surrounding Landu — Commercia Industrial — Residential — Other:  Partly shad	Substrate Type  Detritus  Muck-Mud  Marl  ISE  II	Characteristic  sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)  grey, shell fragments  Floodplain Width Wide > 30ft Narrow <15ft	p to 100%)  % Composition in Sampling Area  10  ate 15-30ft	



Photograph Direction West

STREAM ID S-KL41			STREAM NAME UNT to Blackwater River					
CLIENT MVP			PROJECT NAME MVP					
	LAT 37.062406 LONG -79.862726				DATE 08/31/2016 COUNTY Franklin			
INVESTIGATO		ook, S. Pilcher, A						
TNW	WATER TYPE TNW RPW NRPW NRPW				FLOW REGIME rerennial Intermittent Ephemeral			
		1						
						SinuosityLowMediumHigh  GradientFlatModerateSevere		
Water Present  No water, stream  Stream bed mois  Standing water  ✓ Flowing water  Velocity  — Fast ✓ Moo  Slow			stream b d moist vater ter	Í		Proportion of Reach Represented by Stream Morphology Types (Only enter if water present) Riffle 15 % Run 35 % Pool 50 %  Turbidity  Clear Slightly turbid Turbid Other		
INOR	_	UBSTRATE CO	_	_			C SUBSTRATE COM ot necessarily add u	
Substrate Type	<u> </u>	meter	% C	omposition in npling Reach	Substra Type	ate C	haracteristic	% Composition in Sampling Area
Bedrock		-	40	)	Detritus		ticks, wood, coarse	
Boulder		56 mm (10")	20	)	Dominas	pla	nt materials (CPOM)	
Cobble		6 mm (2.5"-10")	30	)	Muck-Mu	ıd bla	ick, very fine organic	
Gravel		nm (0.1"-2.5")	10	)		-	(FPOM)	
Sand	0.06	-2mm (gritty)						
Silt		04-0.06 mm			Marl	gı	rey, shell fragments	
Clay	< 0.00	04 mm (slick)						
WATERSHED FEATURES  WATERSHED FEATURES  WATERSHED Agricultural ROW  Canopy Cover Open ✓ Shaded			ure _ al _	counding Landuse Commercial Industrial Residential Other:		Wid	<b>ain Width</b> e > 30ft <u>✓</u> Modera row <15ft	ate 15-30ft
MAC	ROINVER	TEBRATES/OT	HER W	/ILDLIFE OBS	SERVED OI	R OTHER	NOTES AND OBSER	RVATIONS
MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS  Macro and fauna present. NHD confirmed.								



Photograph Direction South

STREAM ID S-KL39			STREAM NAME UNT to Blackwater River					
CLIENT MVP			PROJECT NAME MVP					
LAT 37.061528 LONG -79.880206					DATE 08/30/2016 COUNTY Franklin			
		ook, S. Pilcher, A						
	WATER TYPE TNW RPW NRPW NRPW				PER PROPERTY OF THE PROPERTY O			
		1				1		
CHANNEL FE	, ,						SinuosityLowMediumHigh  GradientFlatModerateSevere	
FLOW CHARACTERISTICS  Water Present  No water, stream Stream bed mois Standing water  Flowing water  Velocity Fast Moo Slow			tream to d moist vater ter	·		Proportion of Reach Represented by Stream Morphology Types (Only enter if water present) Riffle 30 % Run 35 % Pool 35 %  Turbidity  Clear Slightly turbid Turbid Other		
INOR		UBSTRATE CO					NIC SUBSTRATE COM	
Substrate Type	Dia	meter		Composition in mpling Reach	Substra Type		Characteristic	% Composition in Sampling Area
Bedrock					Detritus		sticks, wood, coarse	
Boulder		56 mm (10")	5		Domina	р	lant materials (CPOM)	
Cobble		6 mm (2.5"-10")	40	0	Muck-Mu	ıd b	lack, very fine organic	
Gravel		mm (0.1"-2.5")	25	5		(FPOM)		
Sand	0.06	-2mm (gritty)	30	0				
Silt		04-0.06 mm			Marl		grey, shell fragments	
Clay	< 0.00	04 mm (slick)						
			ure _ al _ -	counding Landuse Commercial Industrial Residential Other:		w	plain Width ide > 30ft Modera arrow <15ft	ate 15-30ft
MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS								
NHD stream confirmed. Macro present.								



Photograph Direction North

STREAM ID S-C16	STREAM NAME UNT to Teels Creek			
<b>LAT</b> 37.060628 <b>LONG</b> -79.920781	DATE 04/04/2015			
CLIENT MVP	PROJECT NAME MVP			
INVESTIGATORS L.Harloe, K.Lamontagne, L. Summers				
FLOW REGIME Perennial — Intermittent Ephemeral —	WATER TYPE TNW — RPW ✓ NRPW —			

			leasurements		Stream Erosion		
		'	k Width: 15 ft		None Moderate	Heavy	
			k Height:		Artificial, Modified or Char	nnelized	
		LB <u>3.0 ft</u> RB <u>4.0 ft</u>			<u>✓</u> YesNo		
CHANNEL FE	ATURES	· ·	h: 3.00 in		Dam PresentYes	✓ No	
		Water Widt				<del>_</del>	
			Mark: <u>6.0 in</u>		Sinuosity Low	Medium High	
		Flow Direct	ion: East		Gradient		
					<u>✓</u> FlatModerate (2 ft/100 ft)		
		Water Pres			Proportion of Reach Repre	esented by Stream	
		Stream b	r, stream bed dry ned moist		Morphology Types Riffle 70 % Run 25	%	
F1 014		Standing			Pool 5 %		
FLOW CHARACTER	ISTICS	Flowing	water		Toubidie.		
		Velocity			Turbidity Clear _✓ Slightly turbidTurbid		
			Moderate		OpaqueStained		
<u>✓</u> Slo					Other		
INORGANIC SUBSTRATE C				_	DRGANIC SUBSTRATE COMPONENTS		
	(should	add up to 100		(does not necessarily add up to 100%)			
Substrate Type	Diame	eter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock				Detritus	sticks, wood, coarse		
Boulder		mm (10")		2011.11.00	plant materials (CPOM)		
Cobble		m (2.5"-10")	40	Muck-Mud	black, very fine organic		
Gravel		1 (0.1"-2.5")	5		(FPOM)		
Sand		nm (gritty)	5	Man	away ah all fransınanta		
Silt		0.06 mm mm (slick)	40	Marl	grey, shell fragments		
Clay	<b>\ 0.004</b>		10 Int Surrounding Lan	dusa	Indicate the dominant type	(Chook one)	
		✓ Forest			✓ Trees Shrub		
		Field/Pa	<b>——</b>		GrassesHerba	ceous	
WATERSHED	WATERSHED		ural Resident	tial	Floodplain Width		
FEATURES		Other:			Wide > 30ft✓ Moder	rate 15-30ft	
		Canopy Co			Narrow <16ft		
		<u>✓</u> Partly o Shaded		aded	Wetland Present _v_Yes	No	
					Wetland ID W-C2	<del>-</del>	
AOUATIC VE	CETATION				dominant species present ergentRooted float	ing Free floating	
AQUATIC VEGETATION		Floating		Attached alga		i iee iloating	

	Modified with land bridge and culvert  Perennial stream.
MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES	

## Stream ID S-C16



Photograph Direction East

Date: 04/04/2015

Comments: 2015 stream identification.



Photograph Direction East

Date: 11/07/2019

STREAM ID S-KL54			STREAM NAME UNT to Maggodee Creek					
CLIENT MVP			PROJECT NAME MVP					
LAT 37.0596		ONG -79.84076	2		DATE 10/20/2016 COUNTY Franklin			
INVESTIGATO	ORS E. Fo	oster, J. Cook, S.	Pilche	er				
WATER TYPE	WATER TYPE TNW RPW NRPW NRPW				Perennial Intermittent Ephemeral			
		1						
						Sinuosity Low Medium High  Gradient Flat Moderate Severe		
## Water Present  No water, stream  Stream bed mois  Standing water  Flowing water  Velocity  Fast Slow  Slow			tream I I moist vater ter			Culvert Size:in  Proportion of Reach Represented by Stream Morphology Types (Only enter if water present) Riffle 20 % Run 60 % Pool 20 %  Turbidity Clear Slightly turbid Turbid Other		
INOR		UBSTRATE COI		ENTS			C SUBSTRATE COM ot necessarily add u	-
Substrate Type	Dia	meter		Composition in mpling Reach	Substra Type	( )	haracteristic	% Composition in Sampling Area
Bedrock					Detritus		sticks, wood, coarse	
Boulder		56 mm (10")	10	0	Donnus	pla	nt materials (CPOM)	5
Cobble		6 mm (2.5"-10")	3	0	Muck-Mu	ıd bla	ck, very fine organic	
Gravel		mm (0.1"-2.5")	2		doi: Wid	(FPOM)		
Sand	0.06	-2mm (gritty)	3	0				
Silt		04-0.06 mm	10	0	Marl	gr	ey, shell fragments	
Clay < 0.004 mm (slick)  Predominant Surre  — Forest  ✓ Field/Pasture  — Agricultural  — ROW  Canopy Cover  — Open — Shaded			ure _ al _ -	Commercial Wide			ain Width e > 30ft Modera ow <15ft	ate 15-30ft
MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS								
Schools of min	nows pres	ent. Erosion on t	oanks (	due to cattle us	se.			



Photograph Direction East

STREAM ID S-C8	STREAM NAME UNT to Blackwater River			
<b>LAT</b> 37.059239 <b>LONG</b> -79.853299	DATE 04/03/2015			
CLIENT MVP	PROJECT NAME MVP			
INVESTIGATORS L.Harloe, K.Lamontagne, A. Flake, E. Strohmaier, L. Summers, D. McCullough				
FLOW REGIME Perennial — Intermittent ✓ Ephemeral —	WATER TYPE TNW — RPW ✓ NRPW —			

			Measurements		Stream Erosion				
		'	k Width: 5 ft		NoneModerate	Heavy			
		Top of Ban	k Height:		Artificial, Modified or Channelized				
		LB <u>10.0</u>	in RB <u>10.0</u>	<u>in</u>	Yes _ <u>✓</u> No				
CHANNEL FE	ATURES	Water Dept	th: 2.00 in		Dam PresentYes _	∠ No			
		Water Widt	h: 2.0 ft						
		High Water	Mark: <u>4.0 in</u>		Sinuosity Low	Medium High			
		Flow Direct	tion: Southwest		Gradient				
					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 Riffle 15 % Run 40	%			
		Stream I	bed moist		Pool 45 % Run 40	70			
FLOW CHARACTER	ICTICC	✓ Flowing	•		7001 45				
CHARACTER	131103				Turbidity	turbidTurbid			
		Velocity Fast	Moderate		ClearSlightly turbid OpaqueStained				
		✓ Slow	ivioderate		Other				
INOR	CANIC SUB	STRATE CO	MPONENTS	0	RGANIC SUBSTRATE CON	IDONENTS			
		add up to 100		_	does not necessarily add u				
Substrate Type	Diame	eter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area			
Bedrock				Detritus	sticks, wood, coarse				
Boulder	> 256	mm (10")	25	Detilitus	plant materials (CPOM)	5			
Cobble	64-256 m	ım (2.5"-10")	10	Muck-Mud	black, very fine organic				
Gravel	2-64 mm	า (0.1"-2.5")	5	Wask Was	(FPOM)				
Sand	0.06-2r	nm (gritty)	25						
Silt		0.06 mm		Marl	grey, shell fragments				
Clay	< 0.004	mm (slick)	30						
			ant Surrounding Lan Commer		Indicate the dominant type  ✓ Trees Shrub				
		Forest Field/Pa			<u>✓</u> Trees Shrub Grasses Herba				
		Agricult				occus			
WATERSHED FEATURES		Other:	_		Floodplain Width Wide > 30ft Moderate 15-30ft				
FEATURES					Narrow <16ft	rate 15-501t			
		Canopy Co <u>✓</u> Partly o		aded					
		Shaded		Wetland PresentYes <u>✓</u> No Wetland ID		<u>✓</u> No			
_	_				dominant species present				
AQUATIC VE	GETATION			Rooted subm	<u> </u>	ringFree floating			
		Floating algaeAttached algae							

MACROINVERTEBRATES	This intermittent creek has no water above, but defined bed and bank. Many headcuts, roots and boulders provide some armor above. Meanders in and out of ROW, we mapped and flagged entire reach. Very minimal pockets of standing water in upper portion, but flattens out with many ground water seeps in lower portion with flowing water. Tadpoles observed.
OR OTHER WILDLIFE	Intermittent stream.
OBSERVED/OTHER OBSERVATIONS AND NOTES	Information listed on this form represents the data collected in 2015. The stream was revisited on 11/08/2019. The presence of a stream channel and OHWM was confirmed



Photograph Direction ENE

Date: 04/03/2015

Comments: 2015 stream identification.



Photograph Direction ENE

Date: 11/08/2019

STREAM ID S-F4	STREAM NAME UNT to Blackwater River			
<b>LAT</b> 37.059047 <b>LONG</b> -79.853315	DATE 04/03/2015			
CLIENT MVP	PROJECT NAME MVP			
INVESTIGATORS E. Strohmaier, L. Summers, D. McCullough				
FLOW REGIME Perennial — Intermittent— Ephemeral	WATER TYPE TNW — RPW — NRPW ✓			

		пі— Ерпепі					
			J		Stream ErosionNoneV ModerateHeavy  Artificial, Modified or Channelized		
		LB <u>5.0</u>	ft RB <u>3.0</u>	<u>'t</u>	Yes _ <u>✔</u> No		
CHANNEL FE	ATURES	Water Dept Water Widt	h: <u>0.00 in</u> h: <u>0.0 ft</u>		Dam PresentYes	<u>∕</u> No	
		High Water	Mark: 2.0 in		Sinuosity 🔽 Low	Medium High	
		Flow Direct	ion: Northwest		Gradient		
					Flat Moderate _	✓ Severe (10 ft/100 ft)	
FLOW		Stream b	r, stream bed dry bed moist g water		Proportion of Reach Representation of Reach Representa	sented by Stream	
CHARACTERISTICS — Floor  Veloci — Fas Slo			water Moderate		Turbidity Clear Slightly turbid Turbid Opaque Stained Other		
INOR		STRATE CO		ORGANIC SUBSTRATE COMPONENTS			
	(should	add up to 100	0%)	(does not necessarily add up to 100%)			
Substrate Type	Diame	eter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock				Detritus	sticks, wood, coarse		
Boulder		mm (10")		Dountdo	plant materials (CPOM)	100	
Cobble		ım (2.5"-10")		Muck-Mud	black, very fine organic		
Gravel		า (0.1"-2.5")	10		(FPOM)		
Sand		nm (gritty)	10				
Silt		0.06 mm	60	Marl	grey, shell fragments		
Clay	< 0.004	mm (slick)	20				
WATERSHED FEATURES -		Predominant Surrounding Landuse  ✓ Forest Commercial  — Field/Pasture Industrial  — Agricultural Residential  — Other:  Canopy Cover — Partly open Partly shaded			Indicate the dominant type (Check one)  Trees Shrubs Herbaceous  Floodplain Width Wide > 30ft Moderate 15-30ft Narrow <16ft		
		<u></u> ✓ Shaded	Open		Wetland PresentYes Wetland ID	<u>▼</u> NO	
AQUATIC VEGETATION Indicate the dominant type and record the dominant species present  Rooted emergent Rooted submergent Rooted floating Free floating Floating algae Attached algae							
SF-4 is confluent to SC-8							

	SF-4 is confluent to SC-8.
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 11/08/2019. The presence of a stream channel and OHWM was confirmed



Photograph Direction West

Date: 04/03/2015

Comments: 2015 stream identification.



Photograph Direction East

Date: 11/08/2019

STREAM ID S-C17	STREAM NAME Teels Creek				
<b>LAT</b> 37.058582 <b>LONG</b> -79.918133	DATE 04/04/2015				
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 Ephem	eral TNW	RPW –	NRPW —		
	1						
			Measurements		Stream ErosionNone ✓ Moderate	Ноэм	
CHANNEL FEATURES		Top of Bank Width: 30 ft			None _v woderate	i leavy	
		Top of Ban	· ·		Artificial, Modified or Char	nnelized	
		LB <u>7.0</u>	ft RB <u>6.0</u>	<u>ft</u>	Yes _ <u>✔</u> No		
		Water Dep	th: 2.00 in		Dom Brocent Voc	4 No	
		Water Widt	h: 15.0 ft		Dam PresentYes _	<u> </u>	
		High Water	Mark: <u>2.0 ft</u>		Sinuosity Low	Medium High	
		Flow Direct	tion: Southeast		Gradient		
					✓ Flat Moderate _	Severe	
					(0.5/100 ft (2 ft/100 ft)	(10 ft/100 ft)	
		Water Pres			Proportion of Reach Repre	esented by Stream	
		No wate Stream I	r, stream bed dry		Morphology Types Riffle 35 % Run 60	%	
		Standing			Pool 5 %	,~	
FLOW CHARACTER	ISTICS	✓ Flowing	•				
	.01100				Turbidity Clear   ∠ Slightly	turbidTurbid	
		Velocity Fast	✓ Moderate		OpaqueStained		
		Slow	Woderate		Other		
INOR	GANIC SUB	STRATE CO	MPONENTS	0	RGANIC SUBSTRATE COM	IPONENTS	
		add up to 10		_	loes not necessarily add u		
Substrate Type	Diame	ter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock			10	Detritue	sticks, wood, coarse		
Boulder	> 256 ı	mm (10")	5	Detritus	plant materials (CPOM)		
Cobble	64-256 m	m (2.5"-10")	40	Musik Mud	black, very fine organic		
Gravel	2-64 mm	(0.1"-2.5")		Muck-Mud	(FPOM)		
Sand	0.06-2m	nm (gritty)					
Silt	0.004-0	).06 mm	40	Marl	grey, shell fragments		
Clay	< 0.004 r	mm (slick)	5				
			ant Surrounding Lan		Indicate the dominant type		
		✓ Forest Field/Pa	Commer asture Industrial		✓ Trees Shrub Grasses Herba		
					al		
WATERSHED		Agricultural Residential Other:			Floodplain Width  ✓ Wide > 30ft Moderate 15-30ft		
FEATURES					✓ Wide > 30ft Mode Narrow <16ft Mode	rate 15-30ft	
		Canopy Co	over	adad	Narrow < roll		
		<u>✓</u> Partly of Shaded		Wetland PresentYes _ V No			
		_			Wetland ID		
AQUATIC VE	SETATION				lominant species present	ting Free floating	
AQUATIO VEGETATION		Rooted emergent Rooted submergent Rooted floating Free floating Floating algae Attached algae					
	l				-		
		Some brois	ling Dragonfly nymat	(indicator of a	rood water quality) and fish	phonyod	
		Some braid	ing. Diagonily nympr	i (iliulcator of g	good water quality) and fish o	ibaei veu.	
MACROINVER	RTEBRATES	Perennial s	tream.				
OR OTHER WILDLIFE							
OBSERVED/C							
OBSERVATION NOTES	NS AND						



Photograph Direction East

STREAM ID S-KL52		STREAM NA	STREAM NAME UNT to Maggodee Creek					
CLIENT MVP			PROJECT N	PROJECT NAME MVP				
LAT 37.05822	ONG -79.845162			COUNTY Franklin				
INVESTIGATO	ORS E. Fo	ster, J. Cook, S.	Pilcher					
WATER TYPE	RPW	NRPW	FLOW REG Perennial	IME Interm	ittent Ephemeral			
		Estimate Mea	surements	I	Sinuosity V Low	Medium High		
			Vidth: 5.0 ft leight:	ft	Gradient <u>✓</u> FlatMo	derateSevere /100 ft) (10 ft/100 ft)		
		Water Depth:			<u>✓</u> NoneModerate	Heavy		
		Water Width:			Artificial, Modified or Chani	nelized		
Ordinary High Wate			<del></del>	10 ft	Yes ✓ No			
					Within Roadside Ditch			
	Ordinary High Wate Flow Direction: <u>Sou</u>			:ININ	Yes _ <b>∠</b> No	1		
				-	Culvert PresentYes			
					Culvert Size:			
		W-4 D			Culvert Size:in	tl le Ot		
Water Present No water, stream Stream bed moist Standing water			tream bed dry moist rater		Proportion of Reach Repres Morphology Types (Only ente Riffle % Run Pool %			
CHARACTERISTICS —Flowing water  Velocity			ter	Turbidity				
					ClearSlightly turbidTurbid			
		Fast <u></u>	_ Moderate		Other			
		Slow						
INORGANIC SUBSTRATE COMPONEI (should add up to 100%) 100			<b>)%)</b> 100	ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)				
Substrate Type	Dia	meter	% Composition in Sampling Reach	Substrat Type	te Characteristic	% Composition in Sampling Area		
Bedrock	. 0			Detritus	sticks, wood, coarse			
Boulder		66 mm (10")			plant materials (CPOM)	5		
Cobble		mm (2.5"-10")	10	Muck-Muck	d black, very fine organic (FPOM)			
Gravel		nm (0.1"-2.5")	40		(1 1 OWI)			
Sand		-2mm (gritty)	40	NAI				
Silt		4-0.06 mm	10	Marl	grey, shell fragments			
Clay	< 0.00	04 mm (slick)			Floodplain Width			
WATERSHED FEATURES		redominant  Forest Field/Pastu Agricultura ROW	ureIndustrial alResidentialOther:	CommercialWide > 30ftMode IndustrialNarrow <15ft Residential				
		Canopy CoveOpen	e <b>r</b> Partly shade	ed				
		Canopy CoveOpenShaded	er Partly shade	ed				
	ROINVER	Open _v Shaded	Partly shade		OTHER NOTES AND OBSER	RVATIONS		
MAC		OpenShaded  TEBRATES/OTH	Partly shade	ERVED OR		RVATIONS		
MAC		OpenShaded  TEBRATES/OTH	Partly shade	ERVED OR	COTHER NOTES AND OBSER t flow. No macros observed.	RVATIONS		
MAC		OpenShaded  TEBRATES/OTH	Partly shade	ERVED OR		RVATIONS		
MAC		OpenShaded  TEBRATES/OTH	Partly shade	ERVED OR		RVATIONS		



Photograph Direction SE

STREAM ID S-S11	STREAM NAME UNT to Maggodee Creek				
<b>LAT</b> 37.057772 <b>LONG</b> -79.838571	<b>DATE</b> 06/19/2015				
CLIENT MVP	PROJECT NAME MVP				
INVESTIGATORS J.Cook, K.Lew, N.Sovner					
FLOW REGIME Perennial ✓ Intermittent— Ephemeral —	WATER TYPE TNW RPW ✓ NRPW				

	_ III.CIIIIII.C	nt <u> — Epnem</u>	erai INVV —	RPW —	NRPW —		
			Measurements		Stream ErosionNoneModerate	₩ Hoove	
			k Width: 11 ft		NoneNoderate	<u>▼</u> ⊓eavy	
CHANNEL FEATURES		Top of Ban	· ·		Artificial, Modified or Cha	nnelized	
		LB <u>2.0</u>	ft RB <u>4.0</u>	<u>in</u> .	<u>✓</u> YesNo		
		Water Dept	th: 6.00 in		Dam PresentYes _	No	
		Water Widt	h: 11.0 ft		Dam Flesent 165 _	<u></u>	
		High Water	Mark: <u>6.0 in</u>		Sinuosity <u>v</u> Low	Medium High	
		Flow Direct	tion: Southeast		Gradient		
					Flat Moderate .	Severe	
					(0.5/100 ft (2 ft/100 ft)	,	
		Water Pres	sent r, stream bed dry		Proportion of Reach Repro Morphology Types	esented by Stream	
			ned moist		Riffle 10 % Run 40	%	
FLOW		Standing	g water		Pool 50 %		
CHARACTER	STICS	✓ Flowing	water		Turbidity		
		Velocity			✓ ClearSlightly	turbid <u></u> Turbid	
			Moderate		Opaque Stained		
		✓ Slow			Other		
INOR		STRATE CO	MPONENTS	_	RGANIC SUBSTRATE COM		
Substrate	(Siloulu a	add up to 10	% Composition in	Substrate	1	% Composition in	
Type	Diame	ter	Sampling Reach	Type	Characteristic	Sampling Area	
Bedrock				Detritus	sticks, wood, coarse	0.5	
Boulder		mm (10")	20		plant materials (CPOM)	25	
Cobble		m (2.5"-10")		Muck-Mud	black, very fine organic		
Gravel		(0.1"-2.5")			(FPOM)		
Sand		nm (gritty)		NAl			
Silt		0.06 mm	40	Marl	grey, shell fragments		
Clay	< 0.004 1	mm (slick)	40 ant Surrounding Lan	duco	Indicate the dominant type	(Charles and)	
		Forest	Commer	cial	Trees Shrub		
		Field/Pa	astureIndustrial		✓ Grasses Herba	aceous	
WATERCHER		Agricultural Residential			Floodplain Width		
WATERSHED FEATURES		Other:			Wide > 30ft Moderate 15-30ft		
		Canopy Cover			✓ Narrow <16ft		
			pen <u>v</u> Partly sh	aded	Wetland PresentYes ✓ No		
		Shaded	Open		Wetland ID	<u> </u>	
		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	<del></del>		
		1					
		Bankful is h	nighly varitable				
MACROINVER	TEDDATES						
OR OTHER	KIEDKAIES						
WILDLIFE OBSERVED/C	THER						
OBSERVATIO NOTES							
140123							



Photograph Direction SE

STREAM ID S-F8	STREAM NAME UNT to Maggodee Creek				
<b>LAT</b> 37.058098 <b>LONG</b> -79.83605	DATE 04/03/2015				
CLIENT MVP	PROJECT NAME MVP				
INVESTIGATORS E. Strohmaier, L. Summers,	D. McCullough				
FLOW REGIME Perennial — Intermittent ✓ Ephemeral —	WATER TYPE TNW — RPW ✓ NRPW —				

CHANNEL FEATURES	Top of Bank Width: 30 ft Top of Bank Height: LB 4.0 ft Water Perbt: 24.00 in Water Width: 10.0 ft High Water Mark: 3.0 ft Flow Direction: Standing water Welocity Flowing water Velocity Flowing water Slow  INDRGANIC SUBSTRATE COMPONENTS (should add up to 100%)  Substrate Type Bedrock Bedroc									
Top of Bank Height:	Top of Bank Height: LB 4.0 ft RB 4.0 ft Yes V No Water Depth; 24.00 in Water Width; 10.0 ft High Water Mark: 3.0 ft High Water Water Water Mark: 3.0 ft High Water Water Mark: 3.0 ft High Water									
LB 4.0 ft   RB 4.0 ft   RB 4.0 ft   Present   Yes	CHANNEL FEATURES    LB 4.0			Top of Ban	k Width: 30 ft		None Moderate	Heavy		
Water Depth: _24.00 in   Water Width: _10.0 ft	Water Depth: 24.00 in   Water Width: 10.0 ft   High Water Mark: 3.0 ft   Sinuosity				· ·		Artificial, Modified or Char	nelized		
Water Width: 10.0 ft	Water Width: 10.0 ft High Water Mark: 3.0 ft Flow Direction:    Water Present			LB <u>4.0</u>	ft RB <u>4.0</u>	<u>ft</u>	Yes No			
High Water Water: 3.0   ft   Sinuosity	Water Viridit: 3.0 ft   Sinuosity	CHANNEL FE	ATURES	Water Dept	th: 24.00 in		Dam Present Yes	✓ No		
FLOW Direction:    Cardient	FLOW CHARACTERISTICS  Water Present No water, stream bed dry Stream bed moist Stream bed dry Riffle 20 % Run 60 % Run 6			Water Widt	h: 10.0 ft		<del>_</del> _	<del>_</del>		
Water Present No water, stream bed dry Stream bed moist Standing water Flow CHARACTERISTICS  Welocity Fast Slow Substrate Slow Substrate Substrate Bedrock Boulder  Polameter  Boulder  Substrate Boulder  Substrate Gravel  Cobble  64-256 mm (2.5"-10") Sand  One Composition in Sampling Reach Substrate Gravel  Colay  And Composition  Marl Silt  One Composition  Marl Substrate S	Water Present			High Water	Mark: <u>3.0 ft</u>		Sinuosity <u>v</u> Low	Medium High		
Water Present	Water Present			Flow Direct	tion:					
FLOW CHARACTERISTICS    No water, stream bed dry	FLOW CHARACTERISTICS									
Stream bed moist Standing water Standing water Flowing wat	Stream bed moist   Riffle 20 % Run 60 %   Run 60 %							sented by Stream		
Standing water  Flow CHARACTERISTICS  Standing water  Flowing wate	Standing water							%		
Turbidity	Turbidity	51 OW								
Velocity       Fast Slow       ✓ Moderate       ✓ Clear Opaque — Stained — Other — Othe	Velocity		ISTICS	<u>✓</u> Flowing	water		Tumbidit.			
INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)  Substrate Type  Diameter  Bedrock  Boulder  > 25  Boulder  > 256  Boulder  > 256  Boulder    Composition in Sampling Reach   Detritus   Sticks, wood, coarse plant materials (CPOM)   20  Cobble   64-256 mm (0.1"-2.5")   15  Sand   0.06-2mm (gritty)   10  Silt   0.004-0.06 mm   Clay   Commercial   Commercial   Commercial   Commercial   Commercial   Characteristic   Character	Predominant Surrounding Landuse   Canopy Cover   Partly open   Canopy Cover   Partly open   Shaded   Open   Partly shaded   Canopy Cover   Partly open   Shaded   Open   Partly shaded   Other:   Proced in the part of			Valocity			Clear			
INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)  Substrate Type  Diameter  Sampling Reach  Detritus  Detritus  Characteristic  Sampling Area  Detritus  Diack, very fine organic (FPOM)  Sand  0.06-2mm (gritty)  10  Silt  0.004-0.06 mm  Clay  Composition in Substrate Type  Detritus  Detritus  Detritus  Detritus  Predominant Surrounding Landuse  Forest  Commercial  Indicate the dominant type (Check one)  Trees  Shrubs	INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)  Substrate Type  Diameter  Sampling Reach  Bedrock  Boulder  > 256  Boulder  > 256  Boulder  > 256  Boulder    256    256				✓ Moderate					
(should add up to 100%)       Substrate Type     Diameter     % Composition in Sampling Reach     Substrate Type     Characteristic     % Composition in Sampling Area       Bedrock     25     Detritus     sticks, wood, coarse plant materials (CPOM)     20       Cobble     64-256 mm (2.5"-10")     25     Muck-Mud     black, very fine organic (FPOM)       Gravel     2-64 mm (0.1"-2.5")     15     Muck-Mud     grey, shell fragments       Sand     0.06-2mm (gritty)     10     Marl     grey, shell fragments       Clay     < 0.004 mm (slick)	Substrate Type   Diameter   Sampling Reach   Substrate Type   Characteristic   % Composition in Sampling Reach   Type   Characteristic   % Composition in Sampling Area			Slow			Other			
Substrate Type       Diameter       % Composition in Sampling Reach       Substrate Type       Characteristic       % Composition in Sampling Area         Bedrock       25       Detritus       sticks, wood, coarse plant materials (CPOM)       20         Cobble       64-256 mm (2.5"-10")       25       Muck-Mud       black, very fine organic (FPOM)         Gravel       2-64 mm (0.1"-2.5")       15       Muck-Mud       grey, shell fragments         Sand       0.06-2mm (gritty)       10       Marl       grey, shell fragments         Clay       < 0.004 mm (slick)	Substrate Type       Diameter       % Composition in Sampling Reach       Substrate Type       Characteristic       % Composition in Sampling Area         Bedrock       25       Detritus       sticks, wood, coarse plant materials (CPOM)       20         Cobble       64-256 mm (2.5"-10")       25       Muck-Mud       black, very fine organic (FPOM)         Gravel       2-64 mm (0.1"-2.5")       15       Muck-Mud       black, very fine organic (FPOM)         Sand       0.06-2mm (gritty)       10       Marl       grey, shell fragments         Clay       < 0.004 mm (slick)	INOR								
Type Diameter Sampling Reach Type Characteristic Sampling Area  Bedrock 25  Boulder > 256 mm (10") 25  Cobble 64-256 mm (2.5"-10") 25  Gravel 2-64 mm (0.1"-2.5") 15  Sand 0.06-2mm (gritty) 10  Silt 0.004-0.06 mm	Type Diameter Sampling Reach Type Characteristic Sampling Area  Bedrock 25  Boulder > 256 mm (10") 25  Cobble 64-256 mm (2.5"-10") 25  Gravel 2-64 mm (0.1"-2.5") 15  Sand 0.06-2mm (gritty) 10  Silt 0.004-0.06 mm   Marl   grey, shell fragments  Clay < 0.004 mm (slick)   Indicate the dominant type (Check one)  ✓ Forest Commercial  ✓ Field/Pasture Industrial  — Agricultural Residential  — Other:  Canopy Cover ✓ Partly open Partly shaded  — Shaded Open   Methand ID  AQUATIC VEGETATION   Indicate the dominant species present  ✓ Rooted emergent Rooted submergent Rooted floating Free floating  Sticks, wood, coarse plant materials (CPOM)   20  black, very fine organic (FPOM)  Black, very fine organic (FPOM)  Indicate the dominant type (Check one)  ✓ Trees ✓ Shrubs  ✓ Trees ✓ Shrubs  ✓ Grasses Herbaceous  Floodplain Width  — Wetland Present Yes ✓ No  Wetland ID  AQUATIC VEGETATION Rooted emergent Rooted submergent Rooted floating Free floating	0.1.1.1	(snould	add up to 10	,	`	Substrate % Composition in			
Detritus	Boulder > 256 mm (10")		Diame	eter			Characteristic			
Sand	Boulder > 256 mm (10") 25 plant materials (CPOM) 20  Cobble 64-256 mm (2.5"-10") 25 Muck-Mud black, very fine organic (FPOM)  Sand 0.06-2mm (gritty) 10  Silt 0.004-0.06 mm Mislick) grey, shell fragments  Clay < 0.004 mm (slick) Industrial Preadment Preadme	Bedrock			25	Detritus				
Sand   2-64 mm (0.1"-2.5")   15	Sand   Q.06-2mm (gritty)   10   Silt   Q.004-0.06 mm   Marl   grey, shell fragments			` '	25	Detritus	plant materials (CPOM)	20		
Sand 0.06-2mm (gritty) 10  Silt 0.004-0.06 mm	Sand 0.06-2mm (gritty) 10  Silt 0.004-0.06 mm				_	Muck-Mud				
Silt 0.004-0.06 mm   Marl grey, shell fragments  Clay < 0.004 mm (slick)   Indicate the dominant type (Check one)  Fredominant Surrounding Landuse Forest Commercial Trees Shrubs	Silt 0.004-0.06 mm   Marl grey, shell fragments  Clay < 0.004 mm (slick)   Indicate the dominant type (Check one)  Forest Commercial Field/Pasture Industrial Agricultural Residential Other: Canopy Cover Partly open Partly shaded Shaded Open Partly shaded Field/Pasent Yes No Wetland ID  Indicate the dominant type and record the dominant species present Rooted floating Free floating			, ,	-		(FPOM)			
Clay < 0.004 mm (slick)  Predominant Surrounding Landuse  Forest Commercial Indicate the dominant type (Check one)  Trees Shrubs	Clay			(6 ),	10	Mand	grant aball fragresserts			
Predominant Surrounding Landuse Indicate the dominant type (Check one)  ✓ Forest Commercial✓ Trees✓ Shrubs	Predominant Surrounding Landuse					Mari	grey, snell tragments			
<u>✓</u> Forest <u> Commercial</u> <u>✓</u> Trees <u>✓</u> Shrubs	WATERSHED FEATURES  WATERSHED FEATURES  WATERSHED FEATURES  WATERSHED FEATURES  WATERSHED Cother:  Agricultural Pesidential  Canopy Cover Partly open Partly shaded Shaded Open  Metland Present Yes No Wetland ID  Indicate the dominant type and record the dominant species present Rooted floating Free floating	Clay	< 0.004	·	ent Surrounding Lan	duco	Indicate the dominant type	(Chaok ana)		
	WATERSHED FEATURES  WATERSHED FEATURES  WATERSHED FEATURES  Partly openPartly shadedOpen				•		✓ Trees ✓ Shrub	s (Check one) S		
<u>✓</u> Field/PastureIndustrial <u>✓</u> GrassesHerbaceous	WATERSHED FEATURES  Other:  Canopy Cover  Partly open Shaded Open  Vetland Present Wetland ID  Indicate the dominant type and record the dominant species present  Rooted floating Free floating			Field/Pa	astureIndustrial					
	FEATURES  - Other.  Canopy Cover Partly open Shaded Open  Partly shaded Wetland Present Wetland ID  Indicate the dominant type and record the dominant species present Rooted floating Free floating				tural Resident	tial				
	Canopy Cover Partly open Shaded Open Wetland Present Wetland ID  Indicate the dominant type and record the dominant species present Rooted floating Free floating			Other:						
Narrow <16ft	✓ Partly open       — Partly shaded         Shaded       — Open         Wetland Present       — Yes         Wetland ID     Indicate the dominant type and record the dominant species present  Proofed submergent         AQUATIC VEGETATION     Partly shaded  Wetland Present  Yes  No  No  Free floating  Free floating									
✓ Partly open Partly shaded	AQUATIC VEGETATION  Shaded Open Wetland Present Yes V No Wetland ID  Indicate the dominant type and record the dominant species present Rooted emergent Rooted submergent Rooted floating Free floating									
Shaded — Open Wetland Present — Yes V No Wetland ID	AQUATIC VEGETATION  Rooted emergent  Rooted submergent  Rooted floating Free floating				Open		Wetland PresentYes Wetland ID	<u>✓</u> No		
	AQUATIC VEGETATION  Rooted emergent  Rooted submergent  Rooted floating Free floating			Indicate th	e dominant type and	d record the d				
AQUATION Posted emergent Posted submergent Posted floating Free floating		AQUATIC VE	GETATION	<u></u> Rooted	l emergent	Rooted subme	ergentRooted float	ingFree floating		
	Floating algae Attached algae			Floating	g algae	Attached alga	е			
AQUATIC VEGETATION Proofed emergent Submergent Rooted submergent Rooted moating Free moating Attached algae				Teiburtam (	Maggadas Crest					
		Tributary to Maggodee Creek								

	Tributary to Maggodee Creek.
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 11/08/2019. The presence of a stream channel and OHWM was confirmed
NOTES	



Photograph Direction ENE

Date: 04/03/2015

Comments: 2015 stream identification.



Photograph Direction WSW

Date: <u>11/08/2019</u>

	STREAM ID S-CD6 STREAM NAME				reek		
CLIENT MV			PROJECT N	AME MVP			
LAT 37.05707	77 LO	ONG -79.91435	5 <b>DATE</b> 04/06/	2016	<b>COUNTY</b> Franklin		
INVESTIGATO	ORS HS,C	W,AC					
TNW	RPW	NRPW	FLOW REG Perennial	IME Intermit	tent Ephemeral	]	
		Estimate Mea	asurements		Sinuosity  Low	Medium High	
CHANNEL FEATURES  Water Depth: 24. Water Width: 32. Ordinary High Water			Vidth:70.0ft Height:  t	<u>56.0</u> _ft	Gradient <u>✓</u> Flat M	loderate Severe (10 ft/100 ft)  - Heavy  - Heavy  - House Severe (10 ft/100 ft)	
				Culvert Material:in			
Water Present  No water, stream  Stream bed mois  Standing water  ✓ Flowing water  Velocity  — Fast — Mod  Slow			stream bed dry d moist vater		Proportion of Reach Representation  Morphology Types (Only en Riffle 20 % Run 7 Pool 10 %  Turbidity  ClearSlightly Other	ter if water present) 0 %	
INOR	GANIC SI	JBSTRATE CO	MPONENTS	(	ORGANIC SUBSTRATE CO	MPONENTS	
(should add up to 100%)			, ,	(	(does not necessarily add up to 100%)		
Substrate Type	Dia	meter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock							
Dogrook				Dotritue	sticks, wood, coarse		
Boulder	> 25	66 mm (10")	20	Detritus	sticks, wood, coarse plant materials (CPOM)	)	
		66 mm (10") mm (2.5"-10")	20 30		plant materials (CPOM) black, very fine organic		
Boulder	64-256 2-64 r	mm (2.5"-10") nm (0.1"-2.5")		Detritus Muck-Mud	plant materials (CPOM)		
Boulder Cobble Gravel Sand	64-256 2-64 r 0.06-	mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty)	30		plant materials (CPOM) black, very fine organic (FPOM)		
Boulder Cobble Gravel Sand Silt	64-256 2-64 r 0.06- 0.00	mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm	30 25		plant materials (CPOM) black, very fine organic		
Boulder Cobble Gravel Sand	64-256 2-64 r 0.06- 0.00 < 0.00	mm (2.5"-10") nm (0.1"-2.5") .2mm (gritty) 4-0.06 mm 14 mm (slick)	30 25 25 25  Surrounding Landu — Commercia cure — Industrial al — Residential — Other:	Muck-Mud Marl	plant materials (CPOM)  black, very fine organic (FPOM)  grey, shell fragments  Floodplain Width		
Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	64-256 2-64 r 0.06 0.00 < 0.00	mm (2.5"-10") nm (0.1"-2.5") 2mm (gritty) 4-0.06 mm 4 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove Open Shaded	30 25 25 25  Surrounding Landu Commercia ure Industrial al Residential Other:  Partly shade	Muck-Mud Marl Ise Il	plant materials (CPOM)  black, very fine organic (FPOM)  grey, shell fragments  Floodplain Width  Wide > 30ft Model	rate 15-30ft	



Photograph Direction <u>SW</u>

STREAM ID S-HH4	STREAM NAME UNT to Maggodee Creek
<b>LAT</b> 37.056153 <b>LONG</b> -79.835795	DATE 08/09/2015
PROJEC MVP	CLIENT MVP
INVESTIGATORS S.Ryan	
FLOW REGIME Perennial Intermittent ✓ Ephemeral	WATER TYPE TNW RPW ✓ NRPW

Estimate Measurements Top of Bank Width: 9.0 ft					Stream Erosion None ✓ Moderate	Heavy	
		Top of Bank	k Height:		Autificial Madified on Obser		
		LB_4.0	· ·	ft	Artificial, Modified or Chan Yes ✓ No	inelizea	
CHANNEL FE	ATURES		h: <u>1.00 in</u>	_			
OHANNELTE	ATOREO	Water Widt	h: 2.0 ft		Dam PresentYes	<u>∕</u> No	
		High Water	Mark: 2.5 ft		Sinuosity Low	Medium High	
		Flow Direct	ion: North		Gradient		
					Flat Moderate _	Severe (10 ft/100 ft)	
		Water Pres			Proportion of Reach Repre	sented by Stream	
			r, stream bed dry bed moist		Morphology Types Riffle 60 % Run 30	%	
		Standing			Pool 10 %	70	
FLOW CHARACTER	ISTICS	Flowing v	•				
		Velocity			Turbidity  ✓ ClearSlightly t	turbidTurbid	
			Moderate	OpaqueStained			
<u>✓</u> Slow					Other		
INORGANIC SUBSTRATE COMPONENTS			_	RGANIC SUBSTRATE COM	-		
0.1.1.1	(should	add up to 100%)			loes not necessarily add up	•	
Substrate Type	Diame	eter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock			15	Detritus	sticks, wood, coarse		
Boulder		mm (10")	15		plant materials (CPOM)	10	
Cobble		ım (2.5"-10")	40	Muck-Mud	black, very fine organic (FPOM)		
Gravel		n (0.1"-2.5")	15		(FPOWI)		
Sand Silt		nm (gritty) 0.06 mm	10	Marl	grov, shall fragments		
Clay		mm (slick)	<u>5</u> 0	iviaii	grey, shell fragments		
Olay	10.004	` ′ ′	int Surrounding Lan	duse	Indicate the dominant type	(Check one)	
		<u></u> Forest	Commer		<u>✓</u> Trees Shrub	S	
		Field/Pasture Industrial			Grasses Herbaceous		
WATERSHED FEATURES		Agricultural Residential Other:			Floodplain Width Wide > 30ft Moderate 15-30ft		
		Partly o  ✓ Shaded		aded	ded Wetland PresentYes ∠No		
					Wetland ID		
AQUATIC VE	GETATION			d record the d Rooted subme	lominant species present ergent Rooted float	ing Free floating	
		Floating		Attached algae		<u> </u>	
		·					
					uring bends in the stream (hi	gh banks) as well as	
stream runs that have low banks.							

STREAM PARTIALLY SURVEYED DUE TO ACCESS RESTRICTIONS. PROPERTY LINE

V5 2015

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

LOCATED AT FLAG 1.



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

STREAM ID S-KL51			STREAM NAME UNT to Blackwater River						
CLIENT MVP				PROJECT NAME MVP					
LAT 37.056126 LONG -79.850377				DATE 10/20/2016 COUNTY Franklin					
INVESTIGATORS E. Foster, J. Cook, S. Pilcher									
WATER TYPE TNW RPW NRPW NRPW				FLOW REC		nittent	t 🔲	Ephemeral	
CHANNEL FEATURES    Estimate Measuren			RB 2.0 In ft Mark (Width Mark (Heighthwest	): <u>5.5</u> ft	(0.5/100 ft) (2 ft/100 ft) (10 ft/100 ft)  Stream ErosionNoneModerateHeavy  Artificial, Modified or ChannelizedYesNo Within Roadside DitchYesNo Culvert PresentYesNo Culvert Material:Culvert Size:in  Proportion of Reach Represented by Stream Morphology Types (Only enter if water present)			Described by Stream er if water present)	
<del></del>			vater iter _ Mode	erate		Po Tu <u>⊬</u>	Other	% Slightly to	urbidTurbid
INORGANIC SUBSTRATE COMPONE (should add up to 100%) 100			_		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)				
Substrate Type		meter	% C	composition in mpling Reach			Cha	racteristic	% Composition in Sampling Area
Bedrock					Detritus			ks, wood, coarse	
Boulder		56 mm (10")	10	)	Dountas		plant	materials (CPOM)	5
Cobble		mm (2.5"-10")	40	0	Muck-M	ıd	black	, very fine organic	
Gravel		mm (0.1"-2.5")	30				(FPOM)		
Sand	0.06	-2mm (gritty)	20	)					
Silt		4-0.06 mm			Marl	grey, shell fragments			
Clay < 0.004 mm (slick)  Predominant Surro  Forest  Field/Pasture  Agricultural  ROW  Canopy Cover  Open  Shaded			ure _ al _	unding Land Commerce Industrial Residentia Other: Partly sha	ial al	Flo	odplair _Wide > _Narrow		ate 15-30ft
MAC	ROINVER	TEBRATES/OT	HER W	VILDLIFE OB	SERVED O	R OT	HER NO	OTES AND OBSER	RVATIONS
No macros obs	erved								



Photograph Direction SW

STREAM ID S-KL38			STREAM NA	STREAM NAME UNT to Blackwater River			
CLIENT MVP			PROJECT N	PROJECT NAME MVP			
LAT 37.05587 LONG -79.883129			9 <b>DATE</b> 08/29/	/2016	<b>COUNTY</b> Franklin		
INVESTIGATO	ORS J. Co	ook, S. Pilcher, A	. Flake				
WATER TYPE	RPW [	NRPW	FLOW REG Perennial	IME Intermitte	ent Ephemeral		
CHANNEL FEATURES		Estimate Measurements  Top of Bank Width:10.0 ft  Top of Bank Height:  LB1.0 ft		ft \$	SinuosityLowMediumHigh  GradientFlatModerateSevere (0.5/100 ft)(2 ft/100 ft)(10 ft/100 ft)  Stream ErosionNoneModerateHeavy  Artificial, Modified or ChannelizedYesNo  Within Roadside DitchYesNo  Culvert PresentYesNo  Culvert Material: Stone  Culvert Size:36in		
FLOW CHARACTERISTICS		Water Present No water, stream bed dryStream bed moistStanding water✓Flowing water  VelocityFast✓ ModerateSlow			Proportion of Reach Represented by Stream Morphology Types (Only enter if water present) Riffle 35 % Run 65 % Pool %  Turbidity Clear Slightly turbid Turbid Other		
INORGANIC SUBSTRATE COMPOI (should add up to 100%)				ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
INOR	-			_			
Substrate Type	(shou			_		p to 100%)	
Substrate	(shou	ld add up to 100	% Composition in	Substrate Type	Characteristic sticks, wood, coarse	p to 100%) % Composition in	
Substrate Type	Dia	meter 56 mm (10")	% Composition in	Substrate	Characteristic	p to 100%) % Composition in	
Substrate Type Bedrock	Shoul   Dia   > 28   64-256	meter  56 mm (10") 6 mm (2.5"-10")	% Composition in	Substrate Type Detritus	Characteristic  sticks, wood, coarse plant materials (CPOM) black, very fine organic	p to 100%) % Composition in	
Substrate Type Bedrock Boulder Cobble Gravel	Shoul   Dia   > 25   64-256   2-64 r	meter  56 mm (10")  5 mm (2.5"-10")  7 mm (0.1"-2.5")	% Composition in Sampling Reach  40 30	Substrate Type	Characteristic sticks, wood, coarse plant materials (CPOM)	p to 100%) % Composition in	
Substrate Type Bedrock Boulder Cobble Gravel Sand	Shoul   Dia	meter  56 mm (10") 5 mm (2.5"-10") 7 mm (0.1"-2.5") 7 -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	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt	> 29 64-256 2-64 r 0.06	meter  56 mm (10") 5 mm (2.5"-10") mm (0.1"-2.5") -2mm (gritty) 04-0.06 mm	% Composition in Sampling Reach  40 30	Substrate Type Detritus	Characteristic  sticks, wood, coarse plant materials (CPOM) black, very fine organic	p to 100%) % Composition in	
Substrate Type Bedrock Boulder Cobble Gravel Sand	Should   Dia	meter  56 mm (10")  mm (2.5"-10")  mm (0.1"-2.5")  -2mm (gritty)  04-0.06 mm  04 mm (slick)  Predominant  Forest  Field/Past  Agricultura  ROW  Canopy Cove  Open	% Composition in Sampling Reach  40 30 20 10  Surrounding Landu — Commercia — Industrial — Residential — Other:	Substrate Type  Detritus  Muck-Mud  Marl  Ise F	Characteristic  sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)	p to 100%)  % Composition in Sampling Area	
Substrate Type Bedrock Boulder Cobble Gravel Sand Silt Clay	Should   Dia	meter  56 mm (10")  mm (2.5"-10")  mm (0.1"-2.5")  -2mm (gritty)  04-0.06 mm  04 mm (slick)  Predominant  Forest Field/Past Agricultura ROW  Canopy Cove	% Composition in Sampling Reach  40 30 20 10  Surrounding Landu — Commercia ure — Industrial — Residential — Other:	Substrate Type  Detritus  Muck-Mud  Marl  Ise F	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	
Substrate Type  Bedrock  Boulder  Cobble  Gravel  Sand  Silt  Clay  WATERSHED FEATURES	Shoul   Dia	meter  56 mm (10")  mm (2.5"-10")  mm (0.1"-2.5")  -2mm (gritty)  04-0.06 mm  04 mm (slick)  Predominant  Forest  Field/Past  Agricultura  ROW  Canopy Cove  Open  Shaded	% Composition in Sampling Reach  40 30 20 10  Surrounding Landu — Commercia — Industrial — Residential — Other:  Partly shade	Substrate Type  Detritus  Muck-Mud  Marl  Ise Fal	Characteristic  sticks, wood, coarse plant materials (CPOM)  black, very fine organic (FPOM)  grey, shell fragments  Floodplain Width Wide > 30ft  Modera	y to 100%)  % Composition in Sampling Area	



Photograph Direction SE