STREAM ID S-G24	STREAM NAME UNT to Poplar Camp Creek
LAT 37.126422 LONG -80.121401	DATE 04/03/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS G. Stevens, A. Rodrian, S. H	Kelly
FLOW REGIME Perennial Intermittent Ephemeral	WATER TYPE TNW RPW ✓ NRPW

Perenniai _	<u> </u>	nt <u></u> Ephem	eral TNW	RPW –	NRPW	
					<u> </u>	
				Stream ErosionNone ✓ Moderate	Heavy	
		·	Top of Bank Height:			-
		LB _2.0	· ·	r.	Artificial, Modified or Char	nnelized
				<u></u>	Yes _ <u>✔</u> No	
CHANNEL FE	ATURES	·	th: 2.00 in		Dam PresentYes _	∠ No
			th: 3.0 ft			
		Ū	Mark: <u>4.0 in</u>		Sinuosity <u>v</u> Low	. Medium High
		Flow Direct	tion: North		Gradient	_
					Flat Moderate (0.5/100 ft (2 ft/100 ft)	
		Water Pres	sent		Proportion of Reach Repre	
		No wate	r, stream bed dry		Morphology Types	-
		Stream I			Riffle 60 % Run 30 Pool 10 %	%
FLOW		Standing	•		Pool 10 %	
CHARACTER	ISTICS	<u>v</u> riowing	Water		Turbidity	
		Velocity			✓ Clear — Slightly — Opaque — Stained	
		<u>✔</u> Fast Slow	Moderate		Other	
INOR	CANIC CUR	_	MPONENTS	0	RGANIC SUBSTRATE CON	ADONENTS
INOR		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				Dotritus	sticks, wood, coarse	
Boulder	> 256	mm (10")	20	Detritus	plant materials (CPOM)	25
Cobble	64-256 m	m (2.5"-10")	40	Muck-Mud	black, very fine organic	
Gravel	2-64 mm	(0.1"-2.5")	20	WIGON-WIGG	(FPOM)	
Sand	0.06-2n	nm (gritty)	m (gritty) 10			
Silt	0.004-0	0.06 mm		Marl	grey, shell fragments	
Clay	< 0.004 i	mm (slick) 10				
	Predominant Surrounding Lan		iduse	Indicate the dominant type ✓ Trees Shrub		
		Forest Field/Page 5	t Commercial Pasture Industrial			aceous
		AgriculturalResidentia		tial	_	
WATERSHED FEATURES		Other:			Floodplain Width Wide > 30ft Moderate 15-30ft	
		Canopy Co	over		✓ Narrow <16ft	
		Partly openPartly shade		aded		
		Shadod Onen			Wetland Present <u>✓</u> Yes Wetland ID VV-B11	No
		Indicate th	e dominant type and	d record the d	lominant species present	
AQUATIC VEGETATION Rooted emergent			Rooted subme	_	tingFree floating	
		Floatin	g algae	Attached algae	e	
		1				
WG1 eme		WG1 emer	gent of SG24			
MACROINVE	DTEDDATES					
MACROINVEI OR OTHER	VIEDKA IES	1				
WILDLIFE OBSERVED/C						
OBSERVATION NOTES	NS AND					



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

STREAM ID S-G25	STREAM NAME UNT to Green Creek			
LAT 37.126208 LONG -80.120723	DATE 04/03/2015			
CLIENT MVP	PROJECT NAME MVP			
INVESTIGATORS G. Stevens, A. Rodrian, S. Kelly				
FLOW REGIME Perennial Intermittent Ephemeral	WATER TYPE TNW — RPW ✓ NRPW —			

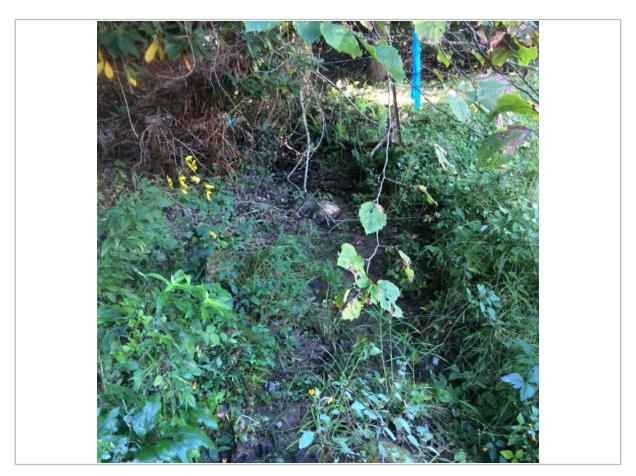
Perenniai –		nt <u> — Epnem</u>	erai INVV —	RPW —	NRPW —	
Т				Stream Erosion	I I a a s a s	
		Top of Bank Width: 7 ft			None Moderate	Heavy
		Top of Ban	k Height:		Artificial, Modified or Char	nnelized
		LB <u>3.0</u>	ft RB <u>3.0</u>	<u>ft</u> .	Yes _ <u>✔</u> No	
CHANNEL FE	ATURES	Water Dep	th: 2.00 in			
CHARRELLE	ATORES	Water Widt	h: 2.0 ft		Dam PresentYes _	<u>∕</u> No
			Mark: 3.0 in		Sinuosity 🗸 Low	Medium High
		ŭ	tion: Southwest		· - -	_ •
		Flow Direct	IIII. Codiiwesi		Gradient <u>✓</u> Flat Moderate _	Sovoro
					(0.5/100 ft (2 ft/100 ft)	
		Water Pres	sent		Proportion of Reach Repre	esented by Stream
			r, stream bed dry		Morphology Types	-
			ped moist		Riffle 10 % Run 80	%
FLOW		Standing	•		Pool 10 %	
CHARACTER	ISTICS	Flowing	water		Turbidity	
		Velocity			✓ Clear — Slightly	
			Moderate		OpaqueStained	
		<u>✓</u> Slow			Other	
INOR		STRATE CO		_	RGANIC SUBSTRATE COM	
0.4.4.4.4.	(snoula a	add up to 10		`	loes not necessarily add u	· · · · · · · · · · · · · · · · · · ·
Substrate Type	Diame	ter	% Composition in Sampling Reach		Characteristic	% Composition in Sampling Area
Bedrock				Detritus	sticks, wood, coarse	
Boulder	> 256 ı	mm (10")	10	Detritus	plant materials (CPOM)	95
Cobble	64-256 m	m (2.5"-10")		Muck-Mud	black, very fine organic	
Gravel	2-64 mm	1 (0.1"-2.5")		Widek-Widd	(FPOM)	
Sand	0.06-2n	nm (gritty)	80			
Silt	0.004-0	0.06 mm		Marl	grey, shell fragments	
Clay	< 0.004 r	mm (slick)	10			
			ant Surrounding Lan	duse	Indicate the dominant type	
		— Forest	Commer		Trees Shrub	
		— Field/Pa Agricult			✓ Grasses Herba	iceous
WATERSHED		— •			Floodplain Width	
FEATURES		<u> </u>	✓ Other: Cut forest			rate 15-30ft
			Canopy Cover		✓ Narrow <16ft	
		Partly o	· —	aded	Wetland PresentYes	✓ No
		Shaded	<u>✓</u> Open		Wetland ID	_
					lominant species present	
AQUATIC VEGETATION Rooted emergent Floating algae		· —	Rooted subme	_	tingFree floating	
_		Floating	g algae	Attached algae	<u> </u>	
Clear cut forest						
MACROINVER OR OTHER	RTEBRATES					
WILDLIFE	TUED					
OBSERVED/C OBSERVATION						
NOTES						
		1				



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

STREAM ID S-RR18	STREAM NAME UNT to Green Creek
LAT 37.12515 LONG -80.113572	DATE 09/18/2015
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 <u> </u>	eral TNW —	RPW –	NRPW	
				Stream Erosion	Hoove	
		Top of Bank Width: 2 ft			None Moderate	<u> —</u> пеаvy
		Top of Ban	· ·		Artificial, Modified or Char	nnelized
		LB <u>6.0</u>	in RB <u>2.0</u>	<u>ft</u>	Yes No	
CHANNEL FE	ATURES	Water Dep	th: 1.00 in		Dam PresentYes _	∠ No
		Water Widt	h: <u>1.0 ft</u>		Dani Flesent 165 _	<u>/</u> NO
		High Water	Mark: <u>3.0 in</u>		Sinuosity <u>v</u> Low	Medium <u></u> High
		Flow Direct	tion: South		Gradient	
					Flat Moderate _	
					` , ,	· ,
		Water Pres	sent r, stream bed dry		Proportion of Reach Repre Morphology Types	esented by Stream
		Stream I			Riffle % Run 10	0 %
		Standing			Pool %	
FLOW CHARACTER	STICS	<u>✓</u> Flowing	water			
		Valaaitu.			Turbidity <u>✓</u> ClearSlightly	turbidTurbid
		Velocity Fast	Moderate		OpaqueStained	
		✓ Slow			Other	
INOR	GANIC SUB	STRATE CO	MPONENTS	0	RGANIC SUBSTRATE CON	/IPONENTS
		add up to 10		(0	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")		Delilius	plant materials (CPOM)	15
Cobble	64-256 m	m (2.5"-10")		Muck-Mud	black, very fine organic	
Gravel	2-64 mm	(0.1"-2.5")		Widok Wida	(FPOM)	
Sand	0.06-2n	nm (gritty)	m (gritty) 10			
Silt	0.004-0	0.06 mm	50	Marl	grey, shell fragments	
Clay	< 0.004 ı	mm (slick)	40			
		Predomina	ant Surrounding Lan		Indicate the dominant type	
		Forest Field/P	Commer asture Industrial		Trees Shrub Grasses Herba	
		Agricult			al —	
WATERSHED FEATURES		Other:	_		Floodplain Width	roto 15 20ft
FEATURES					Wide > 30ft Moderate 15-30ft Narrow <16ft	
		Canopy Co	over	adod	<u>v</u> Nanow Toll	
		Partly open Shaded Open			Wetland Present ✓ Yes Wetland ID VV-KKU4	No
		Indicate th	as dominant type and	d record the c		
AQUATIC VE	GETATION			Rooted subme	lominant species present ergent Rooted float	ting Free floating
AGOATIO VEGETATION				Attached algae		
		original S-F	RR18			
MACROINVERTEBRATES						
OR OTHER WILDLIFE						
OBSERVED/C						
NOTES	IAO WIND					

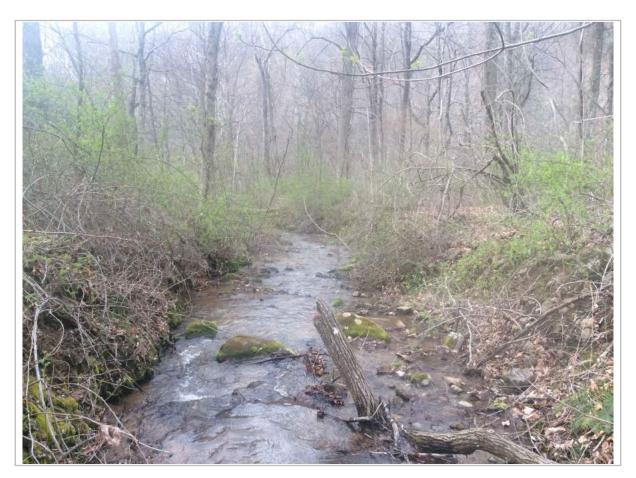


Photograph Direction South

STREAM ID S-D11	STREAM NAME UNT to North Fork Blackwater River			
LAT 37.121964 LONG -80.084049	DATE 04/06/2015			
CLIENT MVP	PROJECT NAME MVP			
INVESTIGATORS A. Bensted, A. Larson, J. Kraus				
FLOW REGIME Perennial Intermittent Ephemeral	WATER TYPE TNW RPW ✓ NRPW			

			lleasurements k Width: 10 ft		Stream ErosionNoneModerate	Heavy
		Top of Bank Height: LB <u>2.0 ft</u> RB <u>0.6 ft</u>		<u>ft</u>	Artificial, Modified or Chan	nelized
CHANNEL FE	ATURES	Water Dept Water Widt	th: <u>4.00 in</u> h: <u>6.0 ft</u>		Dam PresentYes	<u>/_</u> No
		High Water	Mark: <u>6.0 in</u>		Sinuosity Low	Medium High
		Flow Direct	tion: South		Gradient	
					Flat	Severe (10 ft/100 ft)
FLOW CHARACTERISTICS Water Present No water, stream bed dry Stream bed moist Standing water Flowing water Velocity Fast Slow Moderate				Proportion of Reach Representations of Reach R	%	
INORGANIC SUBSTRATE COMPONENTS ORGANIC SUBSTRATE COMPONENTS			IPONENTS			
	(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")			plant materials (CPOM)	5
Cobble Gravel		m (2.5"-10")	30	Muck-Mud	black, very fine organic (FPOM)	
Sand		n (0.1"-2.5") nm (gritty)	10 30		(i i owi)	
Silt		0.06 mm		Marl	grey, shell fragments	
Clay		mm (slick)	15 15	Widii	grey, shell hagilients	
WATERSHED FEATURES		Predominant Surrounding Lan Forest Commen Field/Pasture Industrial Agricultural Resident Other: Canopy Cover Partly open Partly shall Open		cial l tial	Indicate the dominant type Indicate the dominant type Indicate the dominant type Shrub Herba Floodplain Width Wide > 30ft Narrow <16ft Wetland Present Wetland ID	ceous
AQUATIC VE	AQUATIC VEGETATION Indicate the dominant type and record the dominant species present Rooted emergent Floating algae Attached algae Indicate the dominant type and record the dominant species present Actached submergent Attached algae			ingFree floating		
					data collected in 2015.	10/7/2016 At this

	Information listed on this form represents the data collected in 2015. The stream was revisited and extended through the updated survey area on 10/7/2016. At this time the presence of an OHWM was confirmed.
MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES	



Photograph Direction South

STREAM ID S-D8	STREAM NAME North Fork Blackwater River
LAT 37.122592 LONG -80.074964	DATE 04/04/2015
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 Ephem	eral TNW —	RPW 💆	NRPW —	
	1		_			
		Estimate Measurements Top of Bank Width: 18 ft		Stream ErosionNone _✓ Moderate	Heavy	
		Top of Ban	k Height:		Artificial, Modified or Char	nelized
		LB 3.0	ft RB <u>3.0</u>	<u>ft</u>	Yes _✓ No	III CII ZCG
CHANNEL FE	ATUDES	Water Dep	th: 6.00 in	,		
CHANNEL FE	ATURES	Water Widt			Dam PresentYes	<u>∕</u> No
		High Water	Mark: 6.0 in		Sinuosity <u>v</u> Low	Medium High
		•	tion: Southeast		Gradient	
					✓ Flat Moderate _	Severe
					`	(10 ft/100 ft)
		Water Pres	sent r, stream bed dry		Proportion of Reach Repre Morphology Types	esented by Stream
			bed moist		Riffle 90 % Run 10	%
		Standing			Pool %	
FLOW CHARACTER	ISTICS	<u>✓</u> Flowing	water			
					Turbidity ✓ ClearSlightly	turbidTurbid
		Velocity Fast	✓ Moderate		OpaqueStained	
		Slow			Other	
INOR	GANIC SUB	STRATE CO	MPONENTS	0	RGANIC SUBSTRATE COM	IPONENTS
	(should add up to 10		,	(c	loes not necessarily add u	p to 100%)
Substrate Type	Diame	ter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock				Detritus	sticks, wood, coarse	
Boulder		mm (10")		Dounted	plant materials (CPOM)	
Cobble		m (2.5"-10")	35	Muck-Mud	black, very fine organic	
Gravel		(0.1"-2.5")	50		(FPOM)	
Sand		nm (gritty)	15	Mod	grov shall fragments	
Silt		0.06 mm mm (slick)		Marl	grey, shell fragments	
Clay	10.0041	` ′	l ant Surrounding Lan	nduse	Indicate the dominant type	(Check one)
		Forest	Commer		Trees Shrub	
		Field/Pasture Industrial			✓ Grasses Herba	ceous
WATERSHED		Agricult	tural Resident		Floodplain Width	
FEATURES		Other:			✓ Wide > 30ft Moderate 15-30ft	
		Canopy Cover			Narrow <16ft	
		Partly open Partly shaded			Wetland PresentYes	∠ No
		Shaded	<u>✓</u> Open		Wetland ID	
40114=:0::=					lominant species present	
AQUATIC VEGETATION Rooted emergent Floating algae		_	Rooted subme Attached algae	_	ingFree floating	
				aaaa aiga	-	
		Cowe press	ent in field. Two intern	nittent streams	and a wetland are in the sar	me valley: S-D0 and
			l W-D4 2015 comm		ana a wonana are in the sai	no vancy. O Do and
MACROINVE	RTEBRATES					
OR OTHER WILDLIFE			was revisited on 2/19	5/2017 and the	e presence of a stream chann	nel and OHWM was
OBSERVED/C		confirmed.				
OBSERVATIO NOTES	UND AND					

Stream ID S-D8



Photograph Direction SSE

Date: 04/04/2015

Comments: 2015 stream identification.



Photograph Direction SE

Date: 02/15/2017

Comments: 2017 stream extension

STREAM ID S-D12	STREAM NAME UNT to North Fork Blackwater River
LAT 37.121684 LONG -80.085818	DATE 04/06/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS A. Bensted, A. Larson, J. Kr	aus
FLOW REGIME Perennial Intermittent Ephemeral	WATER TYPE TNW RPW ⊻ NRPW

Perennial _	_ Intermitte	nt 🚣 Ephem	eral TNW	RPW 💆	NRPW	
			_			
			/leasurements k Width: 6 ft		Stream Erosion ✓ NoneModerate	Heavy
		Top of Ban	k Height:		Artificial, Modified or Char	nelized
		LB <u>6.0</u>	in RB <u>6.0</u>	<u>in</u>	Yes ✓ No	monzou
CHANNEL FE	ATURES	Water Dep	th: 2.00 in		— — — — — — — — — — — — — — — — — — —	. No
CHANNEL FEATURES		Water Widt	th: <u>1.0 ft</u>		Dam PresentYes _	<u>/</u> No
		High Water	Mark: <u>5.0 in</u>		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 90 % Run 10	%
		Standing			Pool %	70
FLOW CHARACTER	ISTICS	Flowing	•			
0131010121		V-114			Turbidity ClearSlightly	turbid <u></u> Turbid
		Velocity Fast	Moderate		OpaqueStained	
		✓ Slow			Other	
INOR		STRATE CO		_	RGANIC SUBSTRATE COM loes not necessarily add u	
Substrate Type	Diameter		% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock				Detritus	sticks, wood, coarse	
Boulder	> 256	mm (10")		Delillus	plant materials (CPOM)	15
Cobble	64-256 m	m (2.5"-10")		Muck-Mud	black, very fine organic	
Gravel		1 (0.1"-2.5")			(FPOM)	
Sand		nm (gritty)	50			
Silt		0.06 mm	25	Marl	grey, shell fragments	
Clay	< 0.004	mm (slick)	25 ant Surrounding Lan	duca	Indicate the dominant type	(Chash and)
		✓ Forest		cial	Indicate the dominant type ✓ Trees Shrub	
		Field/P			Grasses Herba	ceous
WATERSHED		Agricultural Residential			Floodplain Width	
FEATURES		Other:			✓ Wide > 30ft Mode	rate 15-30ft
		Canopy Cover			Narrow <16ft	
		Partly o		aded	Wetland Present <u>✓</u> Yes Wetland ID W-D/	No
					lominant species present	
AQUATIC VEGETATION			· —	Rooted subme	<u> </u>	tingFree floating
		Floating	g algae <u>v</u>	Attached algae	e	
MACROINVE	RTEBRATES	;				
OR OTHER WILDLIFE						
OBSERVED/C						
NOTES	AIL					



Photograph Direction North

STREAM ID S-D13	STREAM NAME UNT to North Fork Blackwater River
LAT 37.121534 LONG -80.085861	DATE 04/06/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS A. Bensted, A. Larson, J. Kr	aus
FLOW REGIME Perennial — Intermittent ✓ Ephemeral —	WATER TYPE TNW — RPW ✓ NRPW —

Estimate Measurements Top of Bank Width: 4 ft					Stream ErosionNone/ Moderate	Heavy	
		Top of Ban	k Height:		Artificial, Modified or Chan	nalizad	
		LB <u>3.0</u>	ft RB <u>6.0</u>	<u>ft</u>	Yes ✓ No	menzeu	
CHANNEL FE	ATURES	Water Dept Water Widt	h: <u>1.00 in</u> h: 1.5 ft		Dam PresentYes	<u>∕</u> No	
			Mark: 3.0 in		Sinuosity Low	Medium High	
		Flow Direct	ion: Southeast		Gradient		
					Flat Moderate _	Severe (10 ft/100 ft)	
FLOW CHARACTERISTICS		Water Present No water, stream bed dry Stream bed moist Standing water Flowing water			Proportion of Reach Representation of Reach Representation Riffle 100 % Run Pool % Turbidity	sented by Stream	
		Velocity Fast Moderate _✓ Slow			Clear Slightly turbid Turbid Opaque Stained Other		
INOR		STRATE CO		_	RGANIC SUBSTRATE COM		
(should add up to 100%)				(0	does not necessarily add up	p 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)	60	
Cobble		m (2.5"-10")		Muck-Mud	black, very fine organic		
Gravel		1 (0.1"-2.5")			(FPOM)		
Sand		nm (gritty)	70				
Silt		0.06 mm	30	Marl	grey, shell fragments		
Clay	< 0.004	mm (slick)					
WATERSHED FEATURES		Predominant Surrounding Landuse ✓ Forest Commercial Field/Pasture Industrial Agricultural Residential Other:			Indicate the dominant type ✓ Trees Shrub Grasses Herba Floodplain Width Moder ✓ Wide > 30ft Moder	ceous	
		Canopy CoverPartly openPartly shadedOpen			Metland Present ✓ Yes Wetland ID W-D/	No	
AQUATIC VEC	GETATION		emergent	d record the or Rooted submodules Attached alga		ingFree floating	
		T					

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

Steam runs through abandon yard/small farm. Stream source is a small pipe (from spring?) at the northern corridor boundary. PEM wetland stretches from the left bank of this stream, north beyond stream S-D12. S-D12 joins S-D 13 then passes through a culvert within the project boundary.



Photograph Direction SE

STREAM ID S-D14	STREAM NAME UNT to North Fork Blackwater River				
LAT 37.12088 LONG -80.087263	DATE 04/06/2015				
CLIENT MVP	PROJECT NAME MVP				
INVESTIGATORS A. Bensted, A. Larson, J. Kr	aus				
FLOW REGIME Perennial — Intermittent ✓ Ephemeral —	WATER TYPE TNW — RPW ✓ NRPW —				

		- · · · ·			0. 5 .		
			lleasurements k Width: 3 ft		Stream Erosion None ✓ Moderate	Heavv	
		Top of Ban				·	
		LB 1.0	•	in	Artificial, Modified or Char	nelized	
CHANNEL FEATURES				<u> </u>	Yes <u></u> ✓No		
		-	th: 0.10 in		Dam PresentYes _	✓ No	
		Water Widt	h: <u>6.0 in</u>			_	
		High Water	Mark: <u>6.0 in</u>		Sinuosity <u>v</u> Low	Medium High	
		Flow Direct	tion: East		Gradient		
					Flat Moderate (2 ft/100 ft)	✓ Severe (10 ft/100 ft)	
		Water Pres	cent		Proportion of Reach Repre		
			r, stream bed dry		Morphology Types	Sented by Stream	
		Stream l	oed moist		Riffle % Run	%	
FLOW		<u>✓</u> Standing			Pool %		
CHARACTERISTICS		Flowing	water		Turbidity		
		Velocity			ClearSlightly		
			Moderate		OpaqueStained		
Slow				Other			
INOR		STRATE CO			RGANIC SUBSTRATE COMPONENTS does not necessarily add up to 100%)		
0.1.1.1	(should a	add up to 10		`		,	
Substrate Type	Diame	eter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock				Detritus	sticks, wood, coarse		
Boulder		mm (10")			plant materials (CPOM)	10	
Cobble		m (2.5"-10")	20	Muck-Mud	black, very fine organic		
Gravel		n (0.1" - 2.5")	5		(FPOM)		
Sand		nm (gritty)	70				
Silt		0.06 mm		Marl	grey, shell fragments		
Clay	< 0.004	mm (slick)	5				
		Predomina ✓ Forest	ant Surrounding Lan Commer		Indicate the dominant type ✓ Trees Shrub		
WATERSHED FEATURES		Field/Pa			Grasses Herba		
		Agricult					
		Other:	_		Floodplain Width Wide > 30ft Model	rate 15-30ft	
					Narrow <16ft	ale 15-5011	
		Canopy Co		aded			
		Shaded	· — ·	uuuu	Wetland PresentYes	<u>✓</u> No	
		In all costs of		d usser d (1)	Wetland ID		
AQUATIC VE	GETATION				dominant species present ergent Rooted float	ing Free floating	
AGOAHO VE	- IAIION		· —	Attached alga	_		
			-				

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

2015 notes:

Drainage feature turns into intermittent stream at small seep. There is approx 20 feet of moist soil and standing water. Evidence of deposition. Downstream of project boundary, flow goes subsurface. Upslope of seep, a man-made trench directs flow off of road into drainage. Stream likely has flow for a limited period during the year, but was determined to be intermittent based in groundwater source.

2019 notes:
During a field visit on May 9th, 2019 the USACE Norfolk District confirmed that stream S-D17 likely had a historic connection to stream S-D14 and that diverting S-D17 into S-D14 would restore the natural hydrology of these features. It appears that historic disturbances, not associated with the Project, had diverted water flow from S-D14 into what was mapped as S-D17 in 2015.

Photograph Page

Stream ID S-D14 Date <u>04/06/2015</u>



Photograph Number __1___

Photograph Direction SE

Comments: 2015 survey of S-D14, facing downstream.



Photograph Number 2

Photograph Direction NW

Comments: 2015 survey of S-D17, facing upstream.



Photograph Number 3

Photograph Direction South

Comments: 2019 survey of S-D17, facing downstream, showing soil fill and downed woody debris separating S-D17 and S-D14.



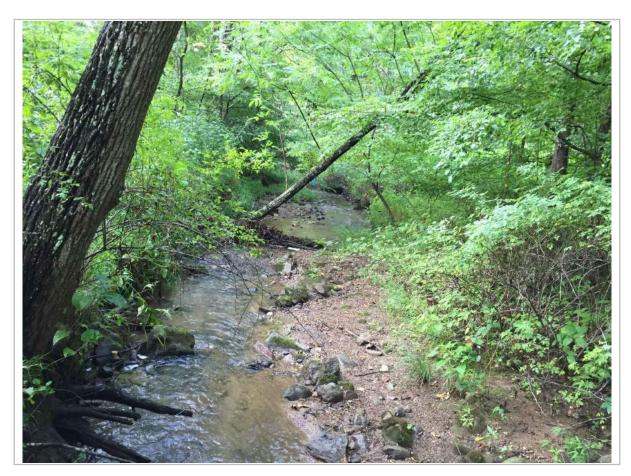
Photograph Number ___4_

Photograph Direction SE

Comments: 2019 survey of S-D14, facing downstream, just downslope of soil fill and downed woody debris separating S-D17 and S-D14.

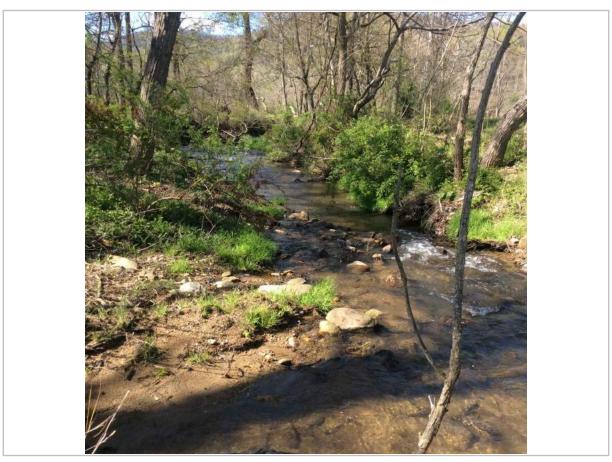
STREAM ID S-ii4	STREAM NAME UNT to North Fork Blackwater River
LAT 37.115811 LONG -80.060411	DATE 08/11/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS A. Lands, K. Larsen, L. Sex	ton
FLOW REGIME Perennial Intermittent Ephemeral	WATER TYPE TNW RPW ✓ NRPW

Perenniai -	<u> </u>	nt <u> — Epnem</u>	erai INVV —	RPW —	NRPW —	
					Stream Erosion	Hoove
		·	<u> </u>		NoneModerate	Heavy
		Top of Ban	k Height:		Artificial, Modified or Char	nnelized
		LB <u>3.0</u>	<u>in</u> RB <u>1.5</u>	<u>ft</u> .	Yes <u></u> ✓ No	
CHANNEL FEATURES		Water Dep	th: 4.00 in		5 5	
OHAMELIE	ATORLO	Water Widt	h: 5.0 ft		Dam PresentYes _	<u>∕</u> No
			Mark: 6.0 in		Sinuosity <u>v</u> Low	Medium High
		Flow Direct			- - -	
		Flow Direct	lion. <u> </u>		Gradient Flat✓ Moderate _	Severe
					(0.5/100 ft (2 ft/100 ft)	
		Water Pres			Proportion of Reach Repre	esented by Stream
			r, stream bed dry		Morphology Types	0/
			ped moist		Riffle 40 % Run 50 Pool 10 %	%
FLOW		Standing	•		F001 [[] /6	
CHARACTER	ISTICS	<u>v</u> i lowing	water		Turbidity	
		Velocity			✓ Clear —Slightly	
			<u>✓</u> Moderate		OpaqueStainedOther	
		Slow		1		
INOR		STRATE CO add up to 10	MPONENTS 0%)	_	RGANIC SUBSTRATE CON loes not necessarily add u	
Substrate	, Diama		% Composition in	Substrate	Charactaristic	% Composition in
Type	Diame	ter	Sampling Reach	Туре	Characteristic	Sampling Area
Bedrock				Detritus	sticks, wood, coarse	4.5
Boulder		mm (10")	5		plant materials (CPOM)	15
Cobble	64-256 m	m (2.5"-10")	25	Muck-Mud	black, very fine organic	0
Gravel		(0.1"-2.5")	40		(FPOM)	U
Sand	0.06-2n	nm (gritty)	30			0
Silt	0.004-0	0.06 mm	10	Marl	grey, shell fragments	
Clay	< 0.004 r	mm (slick)	0			
			ant Surrounding Lar		Indicate the dominant type	
		✓ Forest ✓ Field/P	Commer asture Industria		✓ Trees Shrub Grasses Herba	
		Agricult				ccous
WATERSHED		Other:			Floodplain Width	45 009
FEATURES					✓ Wide > 30ft Mode Narrow <16ft Mode	rate 15-30ft
		Canopy Co			Nanow \ Tolt	
		Partly openPartly shaded ✓ Shaded Open			Wetland PresentYes	<u>✓</u> No
					Wetland ID	
401147101/5	DETATION				Iominant species present	ina Froe flooting
AQUATIC VEGETATION			_	Rooted subme Attached algae	_	tingFree floating
				, titaonoa aigat		
		Con all field	fiala alaimana			
		Siliali listi,	crayfish chimneys			
MACROINVER	TERRATES					
OR OTHER	VILDIVATES					
WILDLIFE OBSERVED/C	THER					
OBSERVATIO						
NOTES						
		1				



Photograph Direction South

STREAM ID S-GH7			STREAM NAME UNT to North Fork Blackwater River					
CLIENT MVP				PROJECT NAME MVP				
LAT 37.10686		ONG -80.05377	'2	DATE 04/08/2016 COUNTY Franklin				
		rsen, S. Therkild						
	WATER TYPE				IME Interm	nittent	Ephemeral	
		ı						
CHANNEL FEATURES Estimate Measurement Top of Bank Width: _20. Top of Bank Height: LB _ 3.0 _ ft				20.0 ft RB 5.0 in ft Mark (Width): Mark (Height)	<u>9.0</u> ft	Stream N ArtificiaY Within IY Culvert	Flat Mo (0.5/100 ft) (2 ft/ Erosion one Moderate II, Modified or Channes Roadside Ditch	nelized <u>✓</u> No
Water PresentNo water, streamStream bed moisStanding waterVelocityFastV_ ModSlow				ŕ		Proport Morpho Riffle 2 Pool 0 Turbidit Cle	ion of Reach Repres logy Types (Only ente 20 % Run 80 0 %	er if water present) %
INOR	_	UBSTRATE CO	_	_			C SUBSTRATE COM ot necessarily add u	-
Substrate Type	Dia	meter		omposition in nipling Reach	Substrate Type	()	haracteristic	% Composition in Sampling Area
Bedrock			0		Detritus		icks, wood, coarse	
Boulder	> 2	56 mm (10")	10		Detilitus	pla	nt materials (CPOM)	5
Cobble	64-256	mm (2.5"-10")	35)	Muck-Mu	bla	ck, very fine organic	
Gravel	2-64 r	nm (0.1"-2.5")	20)	WIGGK-WIG	iu	(FPOM)	
Sand	0.06	-2mm (gritty)	30					
Silt	0.00	4-0.06 mm	5	· · · · · · · · · · · · · · · · · · ·	Marl	gr	ey, shell fragments	
Clay	< 0.00	04 mm (slick)	0		<u> </u>			
✓ Field/Pasture Agricultural		ture _ al _• er	unding Landu Commercia Industrial Residential Other: Partly shad	al	Wide	ain Width e > 30ft <u>✓</u> Modera ow <15ft	ate 15-30ft	
MAC	ROINVER	TEBRATES/OT	HER W	ILDLIFE OBS	SERVED OF	R OTHER	NOTES AND OBSER	RVATIONS
Damsel fly nym	nphs. Sma	ll braid within TC	DB.					



Photograph Direction SW

STREAM ID S-GH15			STREAM NA	STREAM NAME UNT to North Fork Blackwater River				
CLIENT MVP				PROJECT NAME MVP				
		ONG -80.05011		DATE 04/09/2016 COUNTY Franklin				
INVESTIGATO	ORS K. La	rsen, S. Therkild	dson, J. Bittner					
WATER TYPE			FLOW REG Perennial	IME Intermi	ttent			
		Estimate Mea			Cinconite a Loui	Mandiuma I limb		
		Top of Bank V Top of Bank H	Vidth: <u>5.0</u> ft leight: : RB <u>1.0</u>	ft	Gradient Flat ✓ Mo	MediumHigh oderateSevere (10 ft/100 ft) Heavy		
		Water Width:	1.0 ft		Artificial, Modified or Chan	nelized		
CHANNEL FE	ATURES	_	Water Mark (Width):	40 ft	Yes No)		
					Within Roadside Ditch			
		, ,	Water Mark (Height)	. <u>6.0</u> III	Yes _✓ No)		
		Flow Direction	: South	-	Culvert PresentYes	✓ No		
					Culvert Material:			
					Culvert Size:in			
FLOW		Stream bed Standing w	tream bed dry I moist vater		Proportion of Reach Repres Morphology Types (Only enter Riffle 10 % Run 90 Pool %	er if water present)		
CHARACTER	ISTICS	<u>✓</u> Flowing wa	ter		Turbidity			
		Velocity			✓ ClearSlightly t	urbidTurbid		
			_ Moderate		Other			
		<u></u> ✓ Slow						
INOR	INORGANIC SUBSTRATE COMPON (should add up to 100%)				ORGANIC SUBSTRATE COM (does not necessarily add u			
Substrate Type	Dia	meter	% Composition in Sampling Reach	Substrat Type	e Characteristic	% Composition in Sampling Area		
Bedrock				Detritus	sticks, wood, coarse			
Boulder	> 25	56 mm (10")		Dountas	plant materials (CPOM)	60		
Cobble		` '						
	64-256	mm (2.5"-10")		Muck-Muc	black, very fine organic			
Gravel	2-64 r	nm (0.1"-2.5")		Muck-Muc	black, very fine organic (FPOM)			
Gravel Sand	2-64 r	, ,	10	Muck-Muc				
	2-64 r 0.06	nm (0.1"-2.5")	10 80	Muck-Muc				
Sand	2-64 r 0.06 0.00	nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 04 mm (slick)	80 10	Marl	grey, shell fragments			
Sand Silt	2-64 r 0.06 0.00 < 0.00	nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 04 mm (slick)	80 10 Surrounding Landu Commercia ure Industrial al Residential Other:	Marl use	grey, shell fragments Floodplain Width	ate 15-30ft		
Sand Silt Clay WATERSHED	2-64 r 0.06 0.00 < 0.00	nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 4 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove	80 10 Surrounding Landu Commercia ure Industrial al Residential Other:	Marl use	grey, shell fragments Floodplain Width Wide > 30ftModera	ate 15-30ft		
Sand Silt Clay WATERSHED FEATURES	2-64 r 0.06 0.00 < 0.00	nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 14 mm (slick) Predominant Forest Field/Past Agricultura ROW Canopy Cove Open Shaded	80 10 Surrounding Landu Commercia ure Industrial Residential Other: Partly shade	Marl use al	grey, shell fragments Floodplain Width Wide > 30ftModera			
Sand Silt Clay WATERSHED FEATURES	2-64 r 0.06 0.00 < 0.00	nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 4 mm (slick) Predominant Field/Past Agricultura ROW Canopy Cove Open Shaded	80 10 Surrounding Landu Commercia ure Industrial Residential Other: Partly shade	Marl use al	grey, shell fragments Floodplain Width Wide > 30ft Modera Narrow <15ft			



Photograph Direction North

STREAM ID S-GH14			STREAM NA	STREAM NAME UNT to North Fork Blackwater River				
CLIENT MVP			PROJECT N	PROJECT NAME MVP				
LAT 37.10584	47 <u>L</u> .	ONG -80.0489	DATE 04/09	/2016	COUNTY Franklin			
INVESTIGATO	ORS K. La	arsen, S. Therkild	dson, J. Bittner					
WATER TYPE	RPW [NRPW	FLOW REG Perennial	IME Intermi	ttent Ephemeral			
CHANNEL FEATURES Estimate Measurements Top of Bank Width:20.0 Top of Bank Height: LB8.0 ft				ft	SinuosityLowV No GradientFlatV Mo(2 ft/ (0.5/100 ft)	derate Severe 100 ft) (10 ft/100 ft) Heavy nelizedNo		
FLOW CHARACTER	ISTICS	Stream bed Standing v Flowing wa	stream bed dry d moist vater		Proportion of Reach Repres Morphology Types (Only ente Riffle 10 % Run 90 Pool % Turbidity ClearSlightly to Other	er if water present) %		
INOR	-	UBSTRATE CO			ORGANIC SUBSTRATE COM (does not necessarily add uj			
Substrate Type	Dia	meter	% Composition in Sampling Reach	Substrate Type	e Characteristic	% Composition in Sampling Area		
Bedrock				Detritus	sticks, wood, coarse			
Boulder		56 mm (10")			plant materials (CPOM)	5		
Cobble		6 mm (2.5"-10")		Muck-Mud	black, very fine organic (FPOM)			
Gravel		nm (0.1"-2.5")	10		(FFOIVI)			
Sand		-2mm (gritty)	20	l	1, 11, 6			
Silt		04-0.06 mm	60	Marl	grey, shell fragments			
WATERSHED FEATURES Can		D4 mm (slick) Predominant ✓ Forest ✓ Field/Past — Agricultura — ROW Canopy Cove — Open — Shaded	al ResidentialOther:	al	Floodplain Width Wide > 30ft Narrow <15ft	te 15-30ft		
MAC	ROINVER	TEBRATES/OT	HER WILDLIFE OBS	SERVED OR	OTHER NOTES AND OBSER	RVATIONS		
Perennial strea	m on bour	ndary between p	asture and forest.					



Photograph Direction North

STREAM ID S-GH11				STREAM NAME UNT to North Fork Blackwater River				
CLIENT MVP				PROJECT NAME MVP				
LAT 37.104798 LONG -80.046176				DATE 04/09/			DUNTY Franklin	
INVESTIGATO		rsen, S. Therkild		Bittner		-		
WATER TYPE		·		FLOW REG	IME			
TNW	RPW [NRPW		Perennial	Interm	nittent 🔽	Ephemeral	
		Г						
Estimate Measurements Top of Bank Width:10.0 Top of Bank Height: LB3.0 ft RB _ Water Depth:1.00 in Water Width:1.0 ft Ordinary High Water Mark Ordinary High Water Mark Flow Direction: _South				10.0 ft RB 3.0 in ft Mark (Width): Mark (Height)	<u>3.0</u> ft	Stream INo ArtificialYe Within RYe Culvert I	t Flat Moderate (0.5/100 ft) (2 ft) Erosion one Moderate Modified or Chant S No oadside Ditch	nelized
Water Present No water, stream Stream bed mois Standing water ✓ Flowing water Velocity — Fast ✓ Mod Slow				ŕ		Proporti	on of Reach Represogy Types (Only enter 0 % Run 10 %	er if water present) %
INOR		UBSTRATE CO					SUBSTRATE CON necessarily add u	
Substrate Type	Dia	meter		omposition in opling Reach		ı (:n	aracteristic	% Composition in Sampling Area
Bedrock					Detritus		cks, wood, coarse	
Boulder		56 mm (10")			Dountdo	plan	t materials (CPOM)	5
Cobble		mm (2.5"-10")			Muck-Mu	ıd blac	k, very fine organic	
Gravel		nm (0.1"-2.5")	20				(FPOM)	
Sand		-2mm (gritty)	60)				
Silt Clay		14-0.06 mm	20)	Marl	gre	ey, shell fragments	
Predominant Surre			ture _ al _ er	unding Landu Commercia Industrial Residential Other:	al		in Width > 30ft <u>✓</u> Modera w <15ft	I ate 15-30ft
MAC	ROINVER	TEBRATES/OT	HER W	ILDLIFE OBS	ERVED OF	R OTHER N	IOTES AND OBSER	RVATIONS
		culvert for equip			U	- CHERT	THE PART OF THE	



Photograph Direction South

STREAM ID	S-GH9		STREAM NA	STREAM NAME UNT to North Fork Blackwater River			
CLIENT MVP				PROJECT NAME MVP			
LAT 37.10441		ONG -80.04521			COUNTY Franklin		
INVESTIGATO	ORS K. La	arsen, S. Therkild	dson, J. Bittner				
WATER TYPE		NRPW	FLOW REG Perennial	IME Intermi	ittent Ephemeral		
CHANNEL FEATURES Estimate Measurements Top of Bank Width:18.0 ft Top of Bank Height: LB4.0 ftRB7.0 ft Water Depth:3.00 in Water Width:3.0 ft Ordinary High Water Mark (Width):4. Ordinary High Water Mark (Height):6. Flow Direction:Southwest Water PresentNo water, stream bed dry					Gradient Flat Mo (2.5/100 ft)	No Sented by Stream er if water present)	
FLOW CHARACTERI		Stream bed Standing w Flowing wa Velocity Fast Slow	d moist vater tter Moderate		Riffle 20 % Run 80 Pool % Turbidity Clear Other Other	% % which was a second with a	
INOR		UBSTRATE COI			ORGANIC SUBSTRATE COM (does not necessarily add up		
Substrate Type	Diar	meter	% Composition in Sampling Reach	Substrat Type	Characteristic	% Composition in Sampling Area	
Bedrock				Detritus	sticks, wood, coarse		
Boulder		56 mm (10")	10	Dounted	plant materials (CPOM)	10	
Cobble		6 mm (2.5"-10")	15	Muck-Muc	black, very fine organic		
Gravel		nm (0.1"-2.5")	25		(FPOM)		
Sand		-2mm (gritty)	40				
Silt		04-0.06 mm	10	Marl	grey, shell fragments		
Clay WATERSHED FEATURES		Predominant Forest Field/Past Agricultura ROW Canopy Cove Open Shaded	al Residential Other:	al I	Floodplain Width Wide > 30ft Narrow <15ft	lte 15-30ft	
MAC	ROINVER	TEBRATES/OT	HER WILDLIFE OBS	ERVED OR	OTHER NOTES AND OBSER	RVATIONS	
Caddisfly nymp		avfich hurrowe					



Photograph Direction North

STREAM ID S-RR08	STREAM NAME UNT to North Fork Blackwater River			
LAT 37.103275 LONG -80.041886	DATE 09/13/2015			
CLIENT MVP	PROJECT NAME MVP			
INVESTIGATORS J. Cook, D. McCullough, R.	Keyser			
FLOW REGIME Perennial — Intermittent— Ephemeral	WATER TYPE TNW RPW NRPW			

Perenniai _	<u> </u>	nt Ephem	eral TNW	RPW —	NRPW		
		Fatimata N			Otroom Francism		
		Estimate Measurements Top of Bank Width: 8 ft			Stream Erosion ✓ None Moderate — Heavy		
		Top of Bank Hoight:					
		LB 19.0	· ·		Artificial, Modified or Cha	nnelized	
				<u>""</u>	Yes _ <u>✔</u> No		
CHANNEL FE	ATURES	·	th: 0.00 in		Dam PresentYes	✓ No	
			th: <u>0.0 ft</u>			<u> </u>	
		Ü	Mark: <u>1.0 in</u>		Sinuosity Low	iviedium <u>v</u> High	
		Flow Direct	tion: Southwest		Gradient		
					Flat		
		Water Pres	sont			,	
			r, stream bed dry		Proportion of Reach Represented by Stream Morphology Types		
		Stream I			Riffle % Run	%	
FLOW		Standing	•		Pool %		
CHARACTER	ISTICS	Flowing	water		Turbidity		
		Velocity			ClearSlightly		
			Moderate		OpaqueStained		
		Slow		1	Other		
INOR		STRATE CO add up to 10	MPONENTS 0%)		RGANIC SUBSTRATE COM does not necessarily add u		
Substrate Type	Diame	ter	% Composition in Sampling Reach		Characteristic	% Composition in Sampling Area	
Bedrock			, J		sticks, wood, coarse	- F J - F	
Boulder	> 256	mm (10")	5	Detritus	plant materials (CPOM)	20	
Cobble	64-256 m	m (2.5"-10")	30	Muck-Mud	black, very fine organic		
Gravel	2-64 mm	(0.1"-2.5")	40	WIUCK-WIUU	(FPOM)		
Sand	0.06-2n	nm (gritty)	25				
Silt	0.004-0	0.06 mm		Marl	grey, shell fragments		
Clay	< 0.004 ı	mm (slick)					
			ant Surrounding Lar		Indicate the dominant type		
		<u>✓</u> Forest Field/P	Commer asture Industrial		✓ Trees Shrub Grasses — Herba	os Iceous	
		Agricult		tial	_	100000	
WATERSHED FEATURES		Other:			Floodplain Width Wide > 30ft Mode	rate 15-30ft	
LATOREO					Narrow <16ft	rate 10-00it	
		Canopy Cover ✓ Partly open Partly shaded			_		
		Shaded Open			Wetland PresentYes Wetland ID	<u>✓</u> No	
		Indicate th	e dominant type and	d record the d	Iominant species present		
AQUATIC VEGETATION		Rooted emergentRooted submergentRooted floatingFree floating					
		Floating algae Attached algae					
		Drains dow	n to road, crosses un	derneath with	culvert. Bankful width undula	ated.	
MACROINVEI OR OTHER	KIEBRATES	1					
WILDLIFE OBSERVED/C	THER						
OBSERVATION							
NOTES							
Ī		1					

Stream ID S-RR08



Photograph Direction NE

Date: 09/13/2015

Comments: 2015 stream identification.



Photograph Direction NE

Date: 11/06/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-RR09	STREAM NAME UNT to North Fork Blackwater River
LAT 37.102483 LONG -80.041053	DATE 09/13/2015
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 <u> </u>		
			_				
					Stream Erosion		
		Top of Bank Width: 9 ft			None Moderate Heavy		
		Top of Ban	•		Artificial, Modified or Char	nnelized	
		LB <u>2.0</u>	ft RB <u>1.0</u>	<u>ft</u>	Yes <u>✓</u> No		
CHANNEL FE	ATURES	Water Dep	th: 0.00 in		Dam Dragant Voc	4 No	
		Water Widt	h: <u>0.0 ft</u>		Dam Present Yes _	Dam PresentYes <u>✓</u> No	
		High Water	Mark: <u>2.0 in</u>		Sinuosity Low	Medium <u>v</u> High	
		Flow Direct	tion: Southwest		Gradient		
					Flat Moderate Severe		
					. , ,	(10 ft/100 ft)	
		Water Pres			Proportion of Reach Repre	esented by Stream	
			r, stream bed dry bed moist		Morphology Types Riffle % Run %		
		Standing			Pool %		
FLOW CHARACTER	ISTICS	Flowing	•				
		Valacity			Turbidity ClearSlightly	turbidTurbid	
		Velocity Fast	Moderate		OpaqueStained		
		Slow			Other		
INOR	GANIC SUB	STRATE CO	MPONENTS	0	RGANIC SUBSTRATE COM	//PONENTS	
	(should a	add up to 10	0%)	(0	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	> 256 ı	mm (10")		Detritus	plant materials (CPOM)	20	
Cobble	64-256 m	m (2.5"-10")	40	Muck-Mud	black, very fine organic		
Gravel	2-64 mm	(0.1"-2.5")	20	Widok Wida	(FPOM)		
Sand	0.06-2n	nm (gritty)	40				
Silt	0.004-0	0.06 mm		Marl	grey, shell fragments		
Clay	< 0.004 r	mm (slick)					
			ant Surrounding Lar		Indicate the dominant type		
		Field/P	Commer asture Industria		✓ Trees Shrub Grasses Herba		
		Agricult				iccous	
WATERSHED		Other:			Floodplain Width Wide > 30ft Moderate 15-30ft		
FEATURES					Wide > 30ft Mode ✓ Narrow <16ft	rate 15-301t	
		Canopy Cover <u>✓</u> Partly openPartly shaded			T Nanow Flore		
		Shaded Open				<u>✓</u> No	
				-1 1 41	Wetland ID		
				d record the d Rooted subme	dominant species present ergent Rooted floar	ting Free floating	
AGOATIO VE	SEIAHON	Floating algae Attached algae Attached algae					
		Flowe ew to	naved road. Not our	rently manned	on NHD		
Flows sw to paved road. Not currently mapped on NHD.							
MACROINVER	RTEBRATES						
OR OTHER WILDLIFE							
OBSERVED/C							
OBSERVATION NOTES	NS AND						

Stream Photograph Page

Stream ID S-RR09



Photograph Direction NE

Date: 09/13/2015

Comments: 2015 stream identification.



Photograph Direction West

Date: 05/20/2015

Comments: 2019 stream identification confirmation.

STREAM ID S-RR11	STREAM NAME UNT to North Fork Blackwater River			
LAT 37.101125 LONG -80.039656	DATE 09/13/2015			
CLIENT MVP	PROJECT NAME MVP			
INVESTIGATORS J. Cook, D. McCullough, R.	Keyser			
FLOW REGIME Perennial — Intermittent— Ephemeral	WATER TYPE TNW RPW NRPW			

Perennial _	Intermitter	nt Ephem	eral 🗹 🛮 TNW	RPW	NRPW 💆		
			Measurements		Stream Erosion	Harris	
		•	k Width: 7 ft	_	NoneModerate	Heavy	
		Top of Ban	· ·		Artificial, Modified or Cha	nnelized	
		LB <u>12.0</u>	<u>in</u> RB <u>30.</u>	<u>.0 in</u>	Yes No		
CHANNEL FE	ATURES	Water Dep	th: <u>0.00 in</u>		Dom Brosent Vos	4 No	
		Water Widt	th: <u>0.0 ft</u>		Dam PresentYes _	<u>v</u> No	
		High Water	r Mark: <u>4.0 in</u>		Sinuosity Low	Medium <u></u> High	
		Flow Direct	tion: Southwest		Gradient Flat O 5 (400 ft) O 5 (400 ft) O 5 (400 ft)		
		14/ 4 B			(0.5/100 ft (2 ft/100 ft)	(10 ft/100 ft)	
		Water Pres ✓ No wate	sent er, stream bed dry		Proportion of Reach Represented by Stream Morphology Types		
		Stream			Riffle % Run	%	
FLOW		Standing	g water		Pool %		
CHARACTER	ISTICS	Flowing	water		Turbidity		
		Velocity			ClearSlightly	turbidTurbid	
		•	Moderate		OpaqueStained		
		Slow			Other		
INOR	GANIC SUB	STRATE CO	RATE COMPONENTS O		PRGANIC SUBSTRATE COMPONENTS		
	(should a	add up to 10			does not necessarily add ι		
Substrate Type	Diame	ter	% Compositio Sampling Rea		Characteristic	% Composition in Sampling Area	
Bedrock				Detritus	sticks, wood, coarse		
Boulder		mm (10")	15		plant materials (CPOM)		
Cobble		m (2.5"-10")	30	Muck-Mud	black, very fine organic		
Gravel		(0.1"-2.5")	25		(FPOM)		
Sand		nm (gritty)	30				
Silt		0.06 mm		Marl	grey, shell fragments		
Clay	< 0.004 r	mm (slick)		1	In all a startle and a section and these	. (2)	
		Predominant Surrounding Landuse ✓ Forest Commercial			Indicate the dominant type (Check one) ✓ Trees Shrubs		
		Field/PastureIndustrial				aceous	
WATERCHER		Agricultural Residential			Floodplain Width		
WATERSHED FEATURES		Other:			Wide > 30ft Moderate 15-30ft		
		Canopy Cover			✓ Narrow <16ft		
		✓ Partly openPartly shaded			Wetland PresentYes <u>✓</u> No Wetland ID		
Shade		Shaded	d Open				
		Indicate th	ne dominant type	and record the	dominant species present		
AQUATIC VEGETATION _		Rooted emergentRooted submergentRooted floatingFree floating					
		Floating	g algae	Attached alga	<u> </u>		
Г							
		Likely juriso	dictional given pre	esence of OHWM			
MACDOINIVE							
MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES							
NOTES							

Stream ID S-RR11



Photograph Direction SSW

Date: 09/13/2015

Comments: 2015 stream identification.



Photograph Direction NNE

Date: 11/06/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-IJ1		STREAM NAME UNT to North Fork Blackwater River							
CLIENT MVP			PROJECT NAME MVP						
LAT 37.092897 LONG -80.027733			DATE 04/05/2016 COUNTY Franklin						
INVESTIGATO	Nierga	ırth							
WATER TYPE TNW RPW NRPW NRPW				FLOW REG	FLOW REGIME Perennial Intermittent Ephemeral				
		Estimate Mea	euron	nonte		Sinuosi	tyLow _	Medium High	
Top of Bank Width: Top of Bank Height LB1.5 ft Water Depth:3.0 Water Width:12.			Vidth: _ Height: t 3.00	RB <u>1.5</u> ft)in		Gradient ✓ Flat Moderate Severe (0.5/100 ft) (2 ft/100 ft) (10 ft/100 ft) Stream Erosion ✓ None Moderate Heavy Artificial, Modified or Channelized Yes No			
		Ordinary High	Water	r Mark (Width):	<u>12.0</u> _ft		_	,	
		Ordinary High	Water	r Mark (Height)	: <u>7.0</u> in	-	Roadside Ditch		
		Flow Direction	ı: Sou	theast	_	Y	-		
							Present <u>v</u> Yes		
						Culvert I	Material: Corrugated	Metal	
						Culvert S	Size: <u>60</u> in		
FLOW	Water Present No water, stream Stream bed mois Standing water Flowing water			,		Morphol Riffle 6 Pool 2	Proportion of Reach Represented by Stream Morphology Types (Only enter if water present) Riffle 60 % Run 20 % Pool 20 %		
CHARACTER	151105						Turbidity Olavarian Olivitativa turbid		
		Velocity		erate		Clear _v_Slightly turbidTurbid Turbid Other			
		Fast _ <u>v</u>	_ IVIOGE						
INORGANIC SUBSTRATE COMPON			_	_					
	(shou	ld add up to 10	_	100	0.1.		(does not necessarily add up to 100%)		
Substrate Type	Dia	meter		Composition in mpling Reach	Substra Type	ı (:r	naracteristic	% Composition in Sampling Area	
Bedrock					Detritus		cks, wood, coarse		
Boulder		56 mm (10")	10	0		plant materials (CPOM)		5	
Cobble		6 mm (2.5"-10")	3	0	Muck-Mu	ıd blad	lack, very fine organic		
Gravel		mm (0.1"-2.5")	1:			(FPOM)		1	
Sand	0.06	-2mm (gritty)	4	0					
Silt		04-0.06 mm	5		Marl	gre	ey, shell fragments		
Clay	< 0.00	04 mm (slick)							
		ure _ al _	unding Landuse Commercial Industrial Residential Other: Partly shaded		Wide	ain Width ⇒ > 30ft <u>✓</u> Modera ow <15ft	ate 15-30ft		
 									
MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS									



Photograph Direction SE

STREAM ID S-IJ2				STREAM NAME UNT to North Fork Blackwater River					
CLIENT MVP				PROJECT NAME MVP					
LAT 37.092862 LONG -80.027629				DATE 04/05/2016 COUNTY Franklin					
INVESTIGATO	ORS E. Fo	ster, S. Lieb, J.	Nierga	rth					
WATER TYPE	RPW [NRPW		FLOW REG Perennial		nitter	nt 🔽	Ephemeral	
			4.0 ft RB 1.0 ft in ft Mark (Width): 2.5 ft Mark (Height): 2.0 in		Gradient		derate Severe (100 ft) Heavy helized		
Water Present No water, streamStream bed moisStanding water VFlowing water VelocityFastModV Slow				·			Proportion of Reach Represented by Stream Morphology Types (Only enter if water present) Riffle 50 % Run 50 % Pool % Turbidity ClearSlightly turbidTurbid Other		
INOR		UBSTRATE CO		_				SUBSTRATE CON necessarily add u	
Substrate Type	Dia	meter		Composition in mpling Reach	Substra Type		Chai	racteristic	% Composition in Sampling Area
Bedrock					Detritus			s, wood, coarse	
Boulder		56 mm (10")			50		plant i	materials (CPOM)	5
Cobble		5 mm (2.5"-10")	60)	Muck-M	ud	black,	very fine organic	22
Gravel		nm (0.1"-2.5")	20					(FPOM)	20
Sand	0.06	-2mm (gritty)	20)					
Silt	0.00	4-0.06 mm			Marl		grey	, shell fragments	
Clay	< 0.00	04 mm (slick)							
WATERSHED FEATURES		Predominant ✓ Forest — Field/Past — Agricultura — ROW Canopy Cove — Open — Shaded	ure _ al _ -	unding Land Commerci Industrial Residentia Other:	al I	FI -	l oodplain ∕_ Wide > Narrow	30ft Modera	te 15-30ft
MAC	ROINVER	TEBRATES/OT	HER W	VILDLIFE OB	SERVED O	R O	THER NO	TES AND OBSER	RVATIONS
Vegetation grov	ving withir	n stream banks							



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

STREAM ID S-II6	STREAM NAME UNT to Little Creek
LAT 37.092636 LONG -79.978425	DATE 08/13/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS A. Lands, K. Larsen, L. Sext	ton
FLOW REGIME Perennial Intermittent Ephemeral	WATER TYPE TNW RPW <u>✓</u> NRPW

Perenniai =	- 11110111111110	nt <u> —</u> Epnem	erai INVV —	RPW —	NRPW —	
			_			
			/leasurements k Width: 3 ft		Stream ErosionNoneModerate	✓ Heavy
		·				<u> </u>
		Top of Ban	-	r.	Artificial, Modified or Char	nnelized
		LB 2.0		<u>m</u>	<u>✓</u> YesNo	
CHANNEL FE	ATURES	Water Dep	th: 0.50 in		Dam PresentYes _	∠ No
		Water Widt	h: 1.0 ft			_
		High Water	Mark: <u>6.0 in</u>		Sinuosity <u>v</u> Low	Medium High
		Flow Direct	tion: Southwest		Gradient	
					Flat Moderate _	
		14/-4 D			(0.5/100 ft (2 ft/100 ft)	,
		Water Pres	sent r, stream bed dry		Proportion of Reach Repre Morphology Types	esented by Stream
			ped moist		Riffle 90 % Run 10	%
FLOW		Standing	•		Pool %	
CHARACTER	ISTICS	<u>✓</u> Flowing	water		Turbidity	
		Velocity			✓ Clear —Slightly	turbidTurbid
		Fast	Moderate		OpaqueStained	
		✓ Slow			Other	
INOR		STRATE CO			RGANIC SUBSTRATE CON loes not necessarily add u	
Substrate Type	`	Diameter % Col			Characteristic	% Composition in Sampling Area
Bedrock			Sampling Reach	. , , , ,	sticks, wood, coarse	
Boulder	> 256	mm (10")	10	Detritus	plant materials (CPOM)	30
Cobble	64-256 m	m (2.5"-10")	10	Music Mud	black, very fine organic	
Gravel	2-64 mm	ı (0.1"-2.5")	10	Muck-Mud	(FPOM)	
Sand	0.06-2n	nm (gritty)				
Silt	0.004-0	0.06 mm	30	Marl	grey, shell fragments	
Clay	< 0.004	mm (slick)	40			
			ant Surrounding Lar	iduse	Indicate the dominant type	
		Forest ✓ Field/Pa	Commer asture Industrial	ciai i	Trees Shrub ✓ Grasses Herba	
		Agricult		tial	<u> </u>	locous
WATERSHED FEATURES		Other:	_		Floodplain Width	roto 15 20ft
PEATURES					✓ Wide > 30ft Mode Narrow <16ft Mode	rate 15-30ft
		Canopy Co		aded		
		Partly openPartly shadedOpen			Wetland Present <u>v</u> Yes Wetland ID VV-II/	No
					lominant species present	
AQUATIC VE	GETATION			Rooted subme	_	tingFree floating
		Floating	g algae	Attached algae		
		1				
		Small heav	ily eroded intermitten	t stream with w	vetlands where flat (W-ii7)	
MACROINVER	OTEDDATES					
OR OTHER	VIEDKA IES	Ί				
WILDLIFE OBSERVED/C	THER					
OBSERVATION NOTES	NS AND					



Photograph Direction SSW

Comments: 2015 stream identification.



Photograph Direction SSW

Date: 11/07/2019

STREAM ID	S-IJ3		STREAM NA	STREAM NAME UNT to North Fork Blackwater River				
CLIENT MV				PROJECT NAME MVP				
LAT 37.09254		ONG -80.027335		DATE 04/06/2016 COUNTY Franklin				
INVESTIGATO	ORS E. Fo	ster, S. Zabowski-L	ieb, J. Niergarth					
WATER TYPE	RPW	NRPW	FLOW REG Perennial	IME Interm	ittent 🔽	Ephemeral		
		Estimate Measu	rements		Sinuosity	✓ Low N	Medium High	
		Top of Bank Widt Top of Bank Heig	th: 8.0 ft	ft	Gradient (0 Stream Erc	✓ FlatMo .5/100 ft) (2 ft/ osion	derate Severe (100 ft) (10 ft/100 ft)	
		Water Depth:2	2.00 in		<u> ✓</u> None	Moderate	Heavy	
CHANNEL FE	ATLIDES	Water Width: 5	5.0 ft			Modified or Chanr	nelized	
CHANNEL FE	AIUKES	Ordinary High Wa	ater Mark (Width):	5.0ft	✓ Yes	No		
		Ordinary High Wa	ater Mark (Height)	: 3.0 in	Within Roa	adside Ditch		
		Flow Direction: S			<u></u> ✓ Yes	No		
		r ion Birodioni.		-	Culvert Pre	esentYes _	<u>✓</u> No	
					Culvert Mat	terial:		
					Culvert Size	e:in		
FLOW		Water Present No water, strea Stream bed mo Standing water	oist		Proportion of Reach Represented by Stream Morphology Types (Only enter if water present) Riffle % Run 100 % Pool %			
CHARACTERI	ISTICS	✓ Flowing water			Turbidity Clear Slightly turbid Turbid Other			
		Velocity						
		•	loderate					
		✓ Slow						
INORGANIC SUBSTRATE COMPON (should add up to 100%)			-			UBSTRATE COM		
ļ							5 10 100 70)	
Substrate Type			% Composition in Sampling Reach	Substrat Type	te Char	acteristic	,	
_				Туре	sticks	acteristic s, wood, coarse	% Composition in	
Туре	Dia:	56 mm (10")			sticks	acteristic	% Composition in	
Type Bedrock	Dia: > 25 64-256	56 mm (10") mm (2.5"-10")		Type Detritus	sticks	acteristic s, wood, coarse naterials (CPOM) very fine organic	% Composition in Sampling Area	
Type Bedrock Boulder Cobble Gravel	> 25 64-256 2-64 r	56 mm (10") mm (2.5"-10") nm (0.1"-2.5")		Туре	sticks	acteristic s, wood, coarse naterials (CPOM)	% Composition in	
Type Bedrock Boulder Cobble Gravel Sand	> 25 64-256 2-64 r	56 mm (10") mm (2.5"-10")		Type Detritus Muck-Muck	sticks plant n black,	acteristic s, wood, coarse naterials (CPOM) very fine organic (FPOM)	% Composition in Sampling Area	
Type Bedrock Boulder Cobble Gravel Sand Silt	> 25 64-256 2-64 r	56 mm (10") mm (2.5"-10") nm (0.1"-2.5")	Sampling Reach	Type Detritus	sticks plant n black,	acteristic s, wood, coarse naterials (CPOM) very fine organic	% Composition in Sampling Area	
Type Bedrock Boulder Cobble Gravel Sand	> 25 64-256 2-64 r 0.06	mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 104 mm (slick)	Sampling Reach 20 80	Type Detritus Muck-Muck Marl	sticks plant n black, grey,	acteristic s, wood, coarse naterials (CPOM) very fine organic (FPOM) shell fragments	% Composition in Sampling Area	
Type Bedrock Boulder Cobble Gravel Sand Silt	> 25 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 104 mm (slick)	20 80 urrounding Landu	Type Detritus Muck-Muck Marl Ise	sticks plant n black,	acteristic s, wood, coarse naterials (CPOM) very fine organic (FPOM) shell fragments Width 30ft Modera	% Composition in Sampling Area	
Type Bedrock Boulder Cobble Gravel Sand Silt Clay	> 25 64-256 2-64 r 0.06 0.00 < 0.00	meter 56 mm (10") mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 14 mm (slick) Predominant Su Forest Field/Pasture Agricultural ROW Canopy Cover Open	20 80 Irrounding Landu Commercia Industrial Residential Vother: Roa	Type Detritus Muck-Muck Marl Ise	sticks plant n d black, grey, Floodplain Wide >	acteristic s, wood, coarse naterials (CPOM) very fine organic (FPOM) shell fragments Width 30ft Modera	% Composition in Sampling Area	
Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	> 25 64-256 2-64 r 0.06 0.00 < 0.00	meter 56 mm (10") mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 14 mm (slick) Predominant Su Forest Field/Pasture Agricultural ROW Canopy Cover Open	20 80 Irrounding Landu Commercia Industrial Residential Vother: Roa	Type Detritus Muck-Muck Marl Ise I	sticks plant n d black, grey, Floodplain Wide > Narrow	acteristic s, wood, coarse naterials (CPOM) very fine organic (FPOM) shell fragments Width 30ft Modera <15ft	% Composition in Sampling Area 30 ate 15-30ft	
Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	> 25 64-256 2-64 r 0.06 0.00 < 0.00	meter 56 mm (10") mm (2.5"-10") nm (0.1"-2.5") 2mm (gritty) 4-0.06 mm 14 mm (slick) Predominant Su Forest Field/Pasture Agricultural ROW Canopy Cover Open Shaded TEBRATES/OTHE	20 80 Irrounding Landu Commercia Industrial Residential Vother: Roa V Partly shade	Type Detritus Muck-Muck Marl Ise I	sticks plant n d black, grey, Floodplain Wide > Narrow	acteristic s, wood, coarse naterials (CPOM) very fine organic (FPOM) shell fragments Width 30ft Modera <15ft	% Composition in Sampling Area 30 ate 15-30ft	
Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	> 25 64-256 2-64 r 0.06 0.00 < 0.00	meter 56 mm (10") mm (2.5"-10") nm (0.1"-2.5") -2mm (gritty) 4-0.06 mm 14 mm (slick) Predominant Su Forest Field/Pasture Agricultural ROW Canopy Cover Open Shaded	20 80 Irrounding Landu Commercia Industrial Residential Vother: Roa V Partly shade	Type Detritus Muck-Muck Marl Ise I	sticks plant n d black, grey, Floodplain Wide > Narrow	acteristic s, wood, coarse naterials (CPOM) very fine organic (FPOM) shell fragments Width 30ft Modera <15ft	% Composition in Sampling Area 30 ate 15-30ft	
Type Bedrock Boulder Cobble Gravel Sand Silt Clay WATERSHED FEATURES	> 25 64-256 2-64 r 0.06 0.00 < 0.00	meter 56 mm (10") mm (2.5"-10") nm (0.1"-2.5") 2mm (gritty) 4-0.06 mm 14 mm (slick) Predominant Su Forest Field/Pasture Agricultural ROW Canopy Cover Open Shaded TEBRATES/OTHE	20 80 Irrounding Landu Commercia Industrial Residential Vother: Roa V Partly shade	Type Detritus Muck-Muck Marl Ise I	sticks plant n d black, grey, Floodplain Wide > Narrow	acteristic s, wood, coarse naterials (CPOM) very fine organic (FPOM) shell fragments Width 30ft Modera <15ft	% Composition in Sampling Area 30 ate 15-30ft	



Photograph Direction SW

STREAM ID S-GH6				STREAM NAME UNT to Little Creek				
CLIENT MVP				PROJECT NAME MVP				
LAT 37.092391 LONG -79.983225				DATE 04/06/2016 COUNTY Franklin				
INVESTIGATO	ORS K. La	rsen, S. Therkild	dson, J.					
WATER TYPE				FLOW REG	SIME			
TNW	RPW [NRPW [Perennial	Interm	nittent	Ephemeral	
CHANNEL FE	ATURES	Estimate Mea Top of Bank V Top of Bank I LB <u>2.0</u> f Water Depth: Water Width: Ordinary High Ordinary High Flow Direction	Width: _ Height: it 	RB 3.0 in ft Mark (Width) Mark (Height	: <u>3.0</u> ft	Stre Stre Arti Wit Cul	ndient <u>v</u> FlatMo	nelized <u>✓</u> No
## Water Present No water, stream Stream bed mois Standing water ✓ Flowing water Velocity Fast ✓ Slow Water Present No water, stream Stream bed mois Velocity Flowing water			stream b d moist vater ater	Í		Pro Moi Riffl Poo Tur	pportion of Reach Repres rphology Types (Only ente le 40 % Run 60 ol 0 %	er if water present)
INOR		JBSTRATE CO					SANIC SUBSTRATE COM es not necessarily add u	
Substrate Type	Dia	meter		omposition in opling Reach	Substra Type		Characteristic	% Composition in Sampling Area
Bedrock			0		Detritus		sticks, wood, coarse	
Boulder		56 mm (10")	0		Dountag		plant materials (CPOM)	20
Cobble		mm (2.5"-10")	10)	Muck-Mu	ıd	black, very fine organic	
Gravel		nm (0.1"-2.5")	20				(FPOM)	
Sand		-2mm (gritty)	60		<u> </u>			
Silt		4-0.06 mm	10)	Marl		grey, shell fragments	
Clay WATERSHED FEATURES		Predominant Forest Field/Past Agricultura ROW Canopy Cove Shaded	ture _ al _• er	unding Land _ Commerci _ Industrial _ Residentia _ Other: _ Partly shad	al I		odplain Width Wide > 30ft Modera Narrow <15ft	l nte 15-30ft
MAC	ROINVER	TEBRATES/OT	HER W	ILDLIFE OB	SERVED O	R OTH	IER NOTES AND OBSER	RVATIONS
Crayfish, drago			HER W	ILDEII'E OD	SERVED OI	<u> VOIR</u>	ILIX NOTES AND OBSER	VALIONS



Photograph Direction North

STREAM ID S-II12	STREAM NAME UNT to Little Creek
LAT 37.091577 LONG -79.987852	DATE 08/13/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS A. Lands, K. Larsen, L. Sext	ton
FLOW REGIME Perennial Intermittent Ephemeral	WATER TYPE TNW — RPW ✓ NRPW —

Restmate Measurements Top of Bank Width: 2 ft								
Top of Bank Height: LB 1.0 ft RB 1.0 ft RB 1.0 ft Yes No Water Depth: 1.00 in Water Wark: 2.0 in Sinuosity L Low Medium High High Water Mark: 2.0 in Sinuosity L Low Medium High Flow Direction: Southwest Gradient PFIRI (2/100 ft) (2								
CHANNEL FEATURES LB _1.0			Top of Ban	k Width: 2 ft		<u>✓</u> NoneModerate	Heavy	
Water Depth: 1.00 in Water Width: 1.0 ft High Water Mark: 2.0 in Sinuosity			Top of Ban	k Height:		Artificial, Modified or Char	nnelized	
Water Width: 1.0 ft High Water Mark: 2.0 in Flow Direction: Southwest Gradlent			LB <u>1.0</u>	ft RB <u>1.0</u>	<u>ft</u>	Yes No		
High Water Mark: 2.0 in Flow Direction: Southwest Flow Direction: Southwest Gradient	CHANNEL FEATURES		Water Dept	th: 1.00 in		Nam Prosent Yes	∠ No	
Flow Direction: Southwest Gradient Flat Flat (0.5/100 ft) (2.ft/100 ft) Flow Direction: Southwest Flat (0.5/100 ft) (0.5/100 ft) Water Present No water, stream bed dry Stream Morphology Types Stream bed moist Standing water Flowing water Flowing water Flowing water Flow CHARACTERISTICS Flowing water Velocity Fast Moderate Opaque Stained Foother Fast Moderate Opaque Stained Foother Flow Cherry Sampling Reach Type Diameter Sampling Reach Type Diameter Sampling Reach Type Bedrock Boulder > 256 mm (10") Sampling Reach Flow Diameter Sampling Reach Flow Diameter Sampling Reach Type Detritus Flowing Water Flowing water Flow Cherry Slightly turbid Turbid Flow Cherry Stained Flow Composition in Substrate Flow Composition in Sampling Area Bedrock Boulder > 256 mm (10") Sampling Reach Type Detritus Flow Flow Flow Flow Flow Flow Flow Flow			Water Widt	h: <u>1.0 ft</u>			<u> </u>	
Water Present			High Water	Mark: <u>2.0 in</u>		Sinuosity <u>v</u> Low	Medium High	
Water Present			Flow Direct	tion: Southwest				
FLOW CHARACTERISTICS								
FLOW CHARACTERISTICS Stream bed moist Standing water Standing wa							sented by Stream	
Standing water Flowing water Velocity Fast Flowing water Flowing water Flowing water Flowing water Furbidity Clear Opaque Stained Other Other Other Other Flowing water Flowing water Flowing water Flowing water Flowing water Flowing water Furbidity Clear Stlightly turbid Turbid Flowing water Flowing water Furbidity Clear Stlightly turbid Turbid Flowing water Flowing water Flowing water Furbidity Clear Slightly turbid Turbid Flowing water Flowing water Flowing water Furbidity Clear Stlightly turbid Turbid Flowing water Furbidity Clear Stlightly turbid Turbid Float Clear Stlightly turbid Turbid Float Clear Flowing water Flowing water Furbid Turbid Flowing water Furbid Turbid Float Flowing water Furbid Turbid Float Flowing Flowing water Free floating							0/	
Velocity							70	
Velocity		ISTICS		•				
Fast Moderate Opaque Stained Other	OHARAGIER	101100				Turbidity Clear Slightly	turbid Turbid	
INORGANIC SUBSTRATE COMPONENTS (should add up to 100%) Substrate Type Diameter Substrate Type Detritus Detritus Detritus Sticks, wood, coarse plant materials (CPOM) 90 Detritus Sticks, wood, coarse plant materials (CPOM) 90 Detritus Substrate Type Sticks, wood, coarse plant materials (CPOM) 90 Detritus Detritus Sticks, wood, coarse plant materials (CPOM) 90 Detritus Detritus Sticks, wood, coarse plant materials (CPOM) 90 Detritus Diack, very fine organic (FPOM) Black, very fine organic (FPOM) Black organic FPOM Substrate Type Charcteristic Moderate Substrate Type Louderate Sticks, wood, coarse plant materials (CPOM) 90 Black organic Sticks, wood, coarse plant materials (CPOM) Black organic Sticks, wood, coarse plant materials (CPOM) Black organic Sticks, wood, coarse plant materials (CPOM) Black organic Sticks, wood, coarse plant are in the coarse Sticks, wood, coarse plant are in the coarse Stocks, wood, coar				Moderate				
Substrate Type								
Substrate Type Bedrock Boulder > 256 mm (10") Cobble 64-256 mm (2.5"-10") Sand Gravel 2-64 mm (0.1"-2.5") Silt 0.004-0.06 mm Clay Predominant Surrounding Landuse Field/Pasture Field/Pasture Field/Pasture Field/Pasture Field/Pasture Field/Pasture Field/Pasture Shaded Canopy Cover Partly shaded Shaded Detritus Substrate Type Characteristic % Composition in Sampling Area % Composition in Sampling Area Sticks, wood, coarse plant materials (CPOM) 90 Muck-Mud Black, very fine organic (FPOM) Black, very fine organic (FPOM) Fine organic (FPOM) Black, very fine organic (FPOM) Fin	INORGANIC SUBSTRATE COMPONENTS			_				
Type Diameter Sampling Reach Type Characteristic Sampling Area Bedrock Detritus Sticks, wood, coarse plant materials (CPOM) 90 Cobble 64-256 mm (2.5"-10") 30 Muck-Mud (FPOM) Sand 0.06-2mm (gritty) 50 Silt 0.004-0.06 mm 20 Marl grey, shell fragments Clay < 0.004 mm (slick) Predominant Surrounding Landuse Industrial Grasses Herbaceous Field/Pasture Industrial Grey Shrubs Gravel 2-64 mm (0.1"-2.5")		(should	add up to 100	0%)	(does not necessarily add u	p to 100%)	
Boulder > 256 mm (10")		Diame	eter			Characteristic		
Boulder > 256 mm (10")	Bedrock				Detritus			
Gravel 2-64 mm (0.1"-2.5")	Boulder	> 256	mm (10")		Detritus	plant materials (CPOM)	90	
Sand 0.06-2mm (gritty) 50 Silt 0.004-0.06 mm 20			, ,	30	Muck-Mud			
Silt 0.004-0.06 mm 20			, ,			(FPOM)		
Clay < 0.004 mm (slick) Predominant Surrounding Landuse			(0),					
Predominant Surrounding Landuse				20	Marl	grey, shell fragments		
WATERSHED FEATURES WATERSHED FEATURES WATERSHED FEATURES WAGRICUltural Residential Residential Residential Residential Moderate 15-30ft Moderate 15-30ft Narrow <16ft Partly open Partly shaded Open	Clay	< 0.004		not Curreum dina I am	duca	Indicate the deminent type	(0) 1	
WATERSHED FEATURES Field/PastureIndustrial Grasses Herbaceous Agricultural Residential Nother: Partly open Partly open Shaded Open						Trees Shrub		
WATERSHED FEATURES Other: Canopy Cover Partly open Shaded Open Partly shaded Open Wetland Present Wetland ID Indicate the dominant type and record the dominant species present Rooted emergent Rooted submergent Rooted floating Free floating			Field/Pa	astureIndustrial				
TEATURES - Other: - Wide > 30ft Moderate 15-30ft Canopy Cover Partly open Partly shaded Shaded Open				ural Resident	tial	Floodplain Width		
Partly openPartly shadedOpen Wetland PresentYesV_No Wetland ID			Other:				rate 15-30ft	
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			Canopy Co	over		✓ Narrow <16ft		
AQUATIC VEGETATION			_ ,	· — ·	aded	Wetland Present Yes	∠ No	
AQUATIC VEGETATIONRooted emergentRooted submergentRooted floatingFree floating			Snaded	Open				
	AQUATIC VE	GETATION		_		_	ingFree floating	
					,aorioa aiga			

MACROINVERTEBRATES
OR OTHER
OBSERVED/OTHER
OBSERVATIONS AND
NOTES

Small unnamed intermittent stream feeding S-ii11. Begins within corridor at a spring with manmade rock cistern. Heavily filled with muck and CPOM during 2015 survey.

Information listed on this form represents the data collected in 2015. The stream was revisited on 11/05/2019. The presence of a stream channel and OHWM was confirmed.



Photograph Direction NE

Comments: 2015 stream identification.



Photograph Direction North

Date: 11/05/2019

STREAM ID S-II11	STREAM NAME UNT to Little Creek			
LAT 37.091512 LONG -79.987994	DATE 08/13/2015			
CLIENT MVP	PROJECT NAME MVP			
INVESTIGATORS A. Lands, K. Larsen, L. Sext	ton			
FLOW REGIME Perennial ✓ Intermittent — Ephemeral —	WATER TYPE TNW — RPW ✓ NRPW —			

Perennial 🕹	_ Intermitte	nt Ephem	eral TNW —	RPW –	NRPW		
	1		_				
					Stream Erosion None - Moderate Heavy		
		Top of Bank Width: 4 ft			None _v Moderate Heavy		
		Top of Ban	· ·		Artificial, Modified or Char	nnelized	
		LB <u>2.0</u>		<u>ft</u>	Yes _ <u>✓</u> No		
CHANNEL FE	ATURES	Water Dept	th: 2.00 in		Dam PresentYes _	∠ No	
		Water Widt	h: <u>3.0 ft</u>			<u>/ </u>	
		High Water	Mark: <u>4.0 in</u>		Sinuosity Low	Medium High	
		Flow Direct	tion: South		Gradient		
						Severe	
					, ,	(10 ft/100 ft)	
		Water Pres	sent r, stream bed dry		Proportion of Reach Repre Morphology Types	esented by Stream	
		Stream	·		Riffle 50 % Run 50	%	
FLOW		Standing	g water		Pool %		
CHARACTER	STICS	<u></u> Flowing	water		Turbidity		
		Velocity			✓ ClearSlightly	turbidTurbid	
			Moderate		OpaqueStained		
		✓ Slow			Other		
INOR		STRATE CO			RGANIC SUBSTRATE CON		
	(should a	add up to 10		(0	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")	5	Dountdo	plant materials (CPOM)	90	
Cobble		m (2.5"-10")	30	Muck-Mud	black, very fine organic		
Gravel	2-64 mm	(0.1"-2.5")	10		(FPOM)		
Sand		nm (gritty)	50				
Silt		0.06 mm	5	Marl	grey, shell fragments		
Clay	< 0.004 ı	mm (slick)		_			
		Predomina ✓ Forest	ant Surrounding Lan Commer		Indicate the dominant type ✓ Trees Shrub		
		Field/Pa			Grasses Herba		
		✓ Agricult		tial	_		
WATERSHED FEATURES		Other:			Floodplain Width Wide > 30ft Mode	rate 15-30ft	
		Canopy Co	ovor		✓ Narrow <16ft		
		<u>✓</u> Partly o	ppen Partly sh	aded			
		ShadedOpen			Wetland PresentYes Wetland ID	<u>✓</u> No	
		Indicate th	e dominant type and	d record the d	Iominant species present		
AQUATIC VE	SETATION			Rooted subme		tingFree floating	
		Floating	g algae	Attached algae	е		
		Small perei	nnial stream. Crayfish	chimneys, sm	nall fish.		
MACROINVER OR OTHER	RTEBRATES						
WILDLIFE	TUED						
OBSERVED/C OBSERVATIO							
NOTES							



Photograph Direction SSW

Comments: 2015 stream identification.



Photograph Direction West

Date: 11/05/2019

STREAM ID S-II8	STREAM NAME UNT to Little Creek
LAT 37.091494 LONG -79.993899	DATE 08/13/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS A. Lands, K. Larsen, L. Sext	ton
FLOW REGIME Perennial — Intermittent ✓ Ephemeral —	WATER TYPE TNW RPW ✓ NRPW

		Estimate N	leasurements		Stream Erosion		
		Top of Bank Width: 2 ft			None <u>v</u> Moderate Heavy		
		Top of Ban	k Height:		Artificial, Modified or Channelized		
		LB 10.0	<u>in</u> RB <u>10.0</u>	<u>in</u>	Yes _∠ No		
CHANNEL FE	ATIIDES		h: 2.00 in				
CHANNEL FE	AIURES	Water Widt			Dam PresentYes _	<u>∠</u> No	
			Mark: 6.0 in		Sinuosity Low	Medium High	
		ŭ	ion: Southwest		<u> </u>		
		FIOW DITECT	IOII. OGGENWOOL		Gradient ✓ FlatModerate	Severe	
					<u> </u>	(10 ft/100 ft)	
		Water Pres			Proportion of Reach Repre	esented by Stream	
			r, stream bed dry		Morphology Types Riffle 40 % Run 60	%	
		Stream to Standing	ped moist n water		Pool % Rull 60	/0	
FLOW CHARACTER	ISTICS	✓ Flowing	•		,,		
CHARACIER	101100	9			Turbidity	tumbid Tumbid	
		Velocity Fast	Moderate		✓ Clear — Slightly — Opaque — Stained		
		rasi ✓ Slow	Woderate		Other		
INOD	GANIC SUB	_	MPONENTS	0	RGANIC SUBSTRATE CON	ADONENTS	
INUK		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	> 256 ı	mm (10")		Detritus	plant materials (CPOM)	10	
Cobble	64-256 m	m (2.5"-10")	30	Muck-Mud	black, very fine organic		
Gravel	2-64 mm	(0.1"-2.5")		IVIUUN-IVIUU	(FPOM)		
Sand	0.06-2n	nm (gritty)	70				
Silt	0.004-0).06 mm		Marl	grey, shell fragments		
Clay	< 0.004 r	mm (slick)					
			nnt Surrounding Lan		Indicate the dominant type		
		✓ Forest ✓ Field/Pa	Commer Commer asture		✓ Trees Shrub Grasses Herba		
		Agricult		tial	_		
WATERSHED FEATURES		Other:	_		Floodplain Width Wide > 30ft Moderate 15-30ft		
LATORES		Co			✓ Narrow <16ft	rate 10-001t	
		Canopy Co Partly o		aded	_		
		✓ Shaded Open			Wetland PresentYes Wetland ID	<u>✓</u> No	
		Indicate th	e dominant type and	d record the d	lominant species present		
AQUATIC VE	GETATION			Rooted subme		tingFree floating	
		Floating	g algae	Attached algae	e	<u> </u>	
		Small interr	mittent stream with we	ell defined cha	nnel. Flow begins within corr	idor.	
					-		
MACROINVER OR OTHER	RTEBRATES						
WILDLIFE							
OBSERVED/C OBSERVATIO							
NOTES							



Photograph Direction South

Comments:			

STREAM ID S-II9	STREAM NAME UNT to Little Creek					
LAT 37.091338 LONG -79.990635	DATE 08/13/2015					
CLIENT MVP	PROJECT NAME MVP					
INVESTIGATORS A. Lands, K. Larsen, L. Sext	ton					
FLOW REGIME Perennial ✓ Intermittent Ephemeral —	WATER TYPE TNW — RPW ✓ NRPW —					

Perennial -	<u> </u>	nt <u> Ephem</u>	eral TNW —	RPW –	NRPW		
		Fatimata B			Otunama Function		
		Estimate Measurements Top of Bank Width: 20 ft			Stream Erosion ✓ None Moderate	Heavv	
		Top of Ban				,	
		LB _2.0	· ·		Artificial, Modified or Char	nnelized	
				<u></u>	Yes No		
CHANNEL FE	ATURES	·	th: 3.00 in		Dam PresentYes _	<u>∕</u> No	
			th: <u>5.0 ft</u>		Sinuosity Low _	Medium High	
		Ü	r Mark: 6.0 in		onidosity Low	medidiri riigir	
		Flow Direc	tion: Southwest		Gradient ✓ FlatModerateSevere		
						(10 ft/100 ft)	
		Water Pres			Proportion of Reach Repre	esented by Stream	
			er, stream bed dry		Morphology Types Riffle 60 % Run 40	%	
		— Stream	bed moist g water		Pool %	70	
FLOW CHARACTER	ISTICS	Flowing	•				
OHARAGIER	101100				Turbidity <u>✓</u> ClearSlightly	turbidTurbid	
		Velocity Fast	Moderate		Opaque Stained		
		✓ Slow	Moderate		Other		
INOR	GANIC SUB			0	RGANIC SUBSTRATE CON	IPONENTS	
	(should a	add up to 10	1		(does not necessarily add up to 100%)		
Substrate Type	Diame	ter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock				Detritus	sticks, wood, coarse		
Boulder		mm (10")	5		plant materials (CPOM)	10	
Cobble		m (2.5"-10") 45		Muck-Mud	black, very fine organic (FPOM)		
Gravel 2-64 mm		, , ,			(1 1 0141)		
Sand Silt		nm (gritty) 35		Marl	grov shall fragments		
Clay		0.06 mm mm (slick)	5	IVIAII	grey, shell fragments		
Olay	10.0041	. ,	l ant Surrounding Lan	nduse	Indicate the dominant type	(Check one)	
		<u>✓</u> Forest	Commer		<u>✓</u> Trees Shrub		
			astureIndustria		GrassesHerba	ceous	
WATERSHED)	Agriculi Other:	tural Residen	tiai	Floodplain Width		
FEATURES		001161.				rate 15-30ft	
		Canopy Co	over		✓ Narrow <16ft		
		Partly openPartly shadedOpen			Wetland PresentYes Wetland ID	<u>✓</u> No	
					lominant species present		
AQUATIC VE	GETATION	Rooted emergentRooted submergentRooted floatingFree floating Floating algae Attached algae					
		Floatin	g aigae	Attached algae	e 		
		<u> </u>					
		Small perennial stream with well defined channel. Small fish, crayfish chimneys, raccoon tracks, water striders.					
MACROINVFI	MACROINVERTEBRATES						
OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES							



Photograph Direction SSE

Comments: 2015 stream identification.



Photograph Direction South

Date: 11/05/2019

STREAM ID S-II7	STREAM NAME UNT to Little Creek
LAT 37.091447 LONG -79.991994	DATE 08/13/2015
CLIENT MVP	PROJECT NAME MVP
INVESTIGATORS A. Lands, K. Larsen, L. Sext	ton
FLOW REGIME Perennial Intermittent Ephemeral	WATER TYPE TNW RPW ⊻ NRPW

Perennial _	Intermitte	nt <u> 🖍</u> Epheme	eral TNW	RPW 🖊	NRPW —		
			leasurements		Stream Erosion		
		Top of Bank	k Width: 4 ft		None Moderate	<u>✔</u> Heavy	
		Top of Bank	k Height:		Artificial, Modified or Char	nnelized	
		LB 2.0	ft RB <u>3.0</u>	<u>ft</u>	Yes _ <u>✔</u> No		
CHANNEL FE	ATURES	Water Dept	h: 2.00 in		Dam Bussant Vas	. Na	
		Water Widt	h: <u>1.5 ft</u>		Dam PresentYes _	Z NO	
		High Water	Mark: <u>6.0 in</u>		Sinuosity 🔽 Low	Medium High	
		Flow Direct	ion: South		Gradient		
					<u>✓</u> FlatModerateSevere		
					(0.5/100 ft (2 ft/100 ft)	(10 ft/100 ft)	
		Water Pres	sent r, stream bed dry		Proportion of Reach Repre Morphology Types	esented by Stream	
			ped moist		Riffle 10 % Run 90	%	
ou		Standing			Pool %		
FLOW CHARACTER	ISTICS	<u>✓</u> Flowing	water		Total Calle		
		Volocity			Turbidity <u>✓</u> ClearSlightly	turbidTurbid	
		Velocity Fast	Moderate		OpaqueStained		
		✓ Slow			Other		
INORGANIC SUBSTRATE COMPO			MPONENTS		RGANIC SUBSTRATE COM		
	(should a	add up to 100	•		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")			plant materials (CPOM)	10	
Cobble		m (2.5"-10") 15		Muck-Mud	black, very fine organic		
Gravel	+		1 (0.1"-2.5") 15		(FPOM)		
Sand		nm (gritty) 50					
Silt		0.06 mm	20	Marl	grey, shell fragments		
Clay	< 0.004 f	mm (slick)	C	- d		(0)	
		Predominant Surrounding Landuse Forest Commercial			Indicate the dominant type Trees Shrub		
		✓ Field/Pa				iceous	
WATERCHER		Agricult	ural Residen	tial	Floodplain Width		
WATERSHED FEATURES		Other:				rate 15-30ft	
		Canopy Co	over		Narrow <16ft		
		Partly open Partly shaded			Westland Duragest 4 Ves No.		
		Shaded	Open		Wetland Present <u>✓</u> Yes Wetland ID VV-IIO	No	
					dominant species present		
AQUATIC VE	GETATION		emergent	Rooted subme	<u> </u>	tingFree floating	
		Floating algaeAttached algae					
<u> </u>							
MACROINVERTEBRATES OR OTHER		Small intermittent stream starting to channelize from (and fed by) wetland (W-ii8). Stream starts					
		in open field, but flows into forested area.					
		5					
WILDLIFE OBSERVED/C	THER						
OBSERVATION NOTES							



Photograph Direction North

STREAM ID S-IJ4				STREAM NAME UNI to North Fork Blackwater River				
CLIENT MVP				PROJECT NAME MVP				
LAT 37.091189 LONG -80.024332			2 DATE 04/06/	2016	COUNTY Franklin			
INVESTIGATO	INVESTIGATORS E. Foster, S. Zabowski-Lieb, J. Niergarth							
	WATER TYPE FLOW REGIME							
TNW RPW NRPW Perennial Intermittent Ephemeral								
		Estimate Mea			Sinuosity Low	MediumHigh		
		'	Vidth: <u>10.0</u> ft		Gradient ✓ FlatMo	derate Severe		
		Top of Bank F	•			/100 ft) (10 ft/100 ft)		
			t RB <u>3.0</u>	ft	Stream Erosion			
		Water Depth:	4.00 in		✓ NoneModerateHeavy			
CHANNEL FE	ATURES	Water Width:_	4.0 ft		Artificial, Modified or Channelized			
		Ordinary High	Water Mark (Width):	<u>4.0</u> ft	YesNo	•		
		Ordinary High	Water Mark (Height)	: <u>6.0</u> in	Within Roadside Ditch			
		Flow Direction	: Southwest	_	YesNo			
					Culvert Present Yes			
					Culvert Material: Smooth Me	tal		
					Culvert Size: 48 in			
		Water Preser			Proportion of Reach Repres			
		Stream bed	tream bed dry		Morphology Types (Only enter if water present) Riffle 50 % Run 30 %			
		—Standing w			Pool 20 %			
FLOW CHARACTER	ISTICS	Flowing wa	ter		Touch Latter			
					Turbidity Clear <u>✓</u> Slightly turbid Turbid			
		Velocity <u>✓</u> Fast	_ Moderate		Other			
		Slow						
INOR	GANIC SI	JBSTRATE CO	MPONENTS		ORGANIC SUBSTRATE CON	IPONENTS		
	(shoul	d add up to 100	0%) 100		(does not necessarily add u	p to 100%)		
Substrate	Dia	meter	% Composition in Sampling Reach	Substrat	te Characteristic	% Composition in Sampling Area		
Type Bedrock			Sampling Reach	Туре	- Malan and a same	Sampling Area		
Boulder	> 25	56 mm (10")		Detritus	sticks, wood, coarse plant materials (CPOM)			
Cobble		mm (2.5"-10")	40		black, very fine organic			
Gravel		nm (0.1"-2.5")	20	Muck-Muck	d black, very line organic (FPOM)			
Sand		-2mm (gritty)	30		, ,			
Silt		4-0.06 mm	10	Marl	grey, shell fragments			
Clay	< 0.00	04 mm (slick)	10					
-			Surrounding Landu	ise	Floodplain Width			
		<u></u> Forest	Commercia		Wide > 30ft Modera	ate 15-30ft		
		Field/Past			Narrow <15ft			
WATERSHED -		Agricultural Residential Other:						
FEATURES								
Canopy Cover								
		Open ✓ Shaded	Partly shade	eu				
		<u>•</u> onacca						
MAC	KUINVER	IEBKATES/OT	HER WILDLIFE OBS	EKVED OR	OTHER NOTES AND OBSER	CVATIONS		



Photograph Direction South

STREAM ID S-KL2			STI	STREAM NAME UNT to Little Creek				
CLIENT MVP			PR	PROJECT NAME MVP				
LAT 37.090451 LONG -79.996417				DATE 04/06/2016 COUNTY Franklin				
INVESTIGATO	ORS J. Co	ook, D. McCullou	gh, L. Sexto	on				
WATER TYPE TNW RPW NRPW NRPW				OW REG		nittent	Ephemeral	
						(0.5/100 ft) (2 ft/100 ft) (10 ft/100 ft) Stream Erosion NoneModerateHeavy Artificial, Modified or Channelized YesNo		derate Severe /100 ft) (10 ft/100 ft) Heavy nelized
FLOW CHARACTERISTICS Water Present No water, stream Stream bed mois Standing water Flowing water Velocity Fast Mod Slow			tream bed d I moist /ater	ŕ		Proportion of Reach Represented by Stream Morphology Types (Only enter if water present) Riffle 5 % Run 95 % Pool % Turbidity ClearSlightly turbidTurbid Other		
INOR	INORGANIC SUBSTRATE COMPON (should add up to 100%)			S			SUBSTRATE COM necessarily add u	
Substrate Type	Dia	meter		osition in g Reach	Substra Type	ı (:n	aracteristic	% Composition in Sampling Area
Bedrock		-0 (10")			Detritus		cks, wood, coarse	
Boulder		56 mm (10")					t materials (CPOM)	5
Cobble		mm (2.5"-10")	10		Muck-Mu	d black, very fine organic (FPOM)		
Gravel Sand		nm (0.1"-2.5") -2mm (gritty)	10				(1.1.0141)	
Silt		14-0.06 mm	80		Marl	are	ey, shell fragments	
Clay)4 mm (slick)			1	gie	.,, onon naginoma	
Predominant Surr Forest Field/Pasture Agricultural ROW Canopy Cover Open Shaded		C ureIn al R Ot	ng Landu ommercia dustrial esidential ther:	al	Floodpla Wide Narro	> 30ft Modera	ate 15-30ft	
		<u></u> ✓ Open		artly shad	ed			
		<u></u> ✓ Open		artly shad	ed			
MAC	POINVER	✓ OpenShaded	Pa			D OTHER &	IOTES AND OBSE	PVATIONS



Photograph Direction North

Top of Bank Width: 8.0 ft Top of Bank Height: LB3.0 ft					,				
LAT 37.099999 LONG -79.954037 DATE 04/05/2016 COUNTY Franklin	STREAM ID S-GH2			STREAM NAME UNT to Teel Creek					
INVESTIGATORS K. Larsen, S. Therkildson, J. Bittner WATER TYPE TNW NRPW Perennial Intermittent Ephemeral	CLIENT MVP			PROJECT NAME MVP					
Stimate Measurements Top of Bank Height: LB 3.0	LAT 37.08990					2016	COUNTY Franklin		
Estimate Measurements Top of Bank Width: 8.0 ft Top of Bank Width: 8.0 ft Top of Bank Height: LB 3.0 ft Water Depth: 2.00 in Water Victorians Height: Water Depth: 2.00 in Water Width: 1.5 ft Ordinary High Water Mark (Width): 2.0 ft Ordinary High Water Mark (Height): 6.0 in Flow Direction: South Fl	INVESTIGATO	ORS K. La	arsen, S. Therkild	dson, J	. Bittner				
Top of Bank Width: 8.0 ft Top of Bank Height: LB 3.0 ft RB 3.0 ft Water Depth: 2.00 in Water Width: 1.5 ft Ordinary High Water Mark (Width): 2.0 ft Ordinary High Water Mark (Height): 6.0 in Flow Direction: South Water Present No water, stream bed dry Stream bed moist Stream bed pictured water present with stream of the with str		RPW [NRPW			IME Interm	nittent Ephemeral		
FLOW CHARACTERISTICS To Stream bed moist Stream and moist Stream Stream Stream and moist Stream	Top of Bank Width: Top of Bank Height LB3.0 ft Water Depth:2.0 Water Width:1.5 Ordinary High Wate Ordinary High Wate				RB 3.0 ft RB 3.0 ft In ft Mark (Width): Mark (Height)	ft	Gradient Flat Moderate Severe (0.5/100 ft) (2 ft/100 ft) Stream Erosion None Moderate Heavy Artificial, Modified or Channelized Yes No Within Roadside Ditch Yes No Culvert Present Yes No Culvert Material:		
(should add up to 100%) Substrate Type Diameter % Composition in Sampling Reach Substrate Type Characteristic % Composition Sampling Are Bedrock 0 Detritus sticks, wood, coarse plant materials (CPOM) 10 Cobble 64-256 mm (2.5"-10") 15 Muck-Mud black, very fine organic (FPOM) Gravel 2-64 mm (0.1"-2.5") 20 Marl grey, shell fragments Sand 0.06-2mm (gritty) 35 Silt 0.004-0.06 mm 20 Marl grey, shell fragments Clay < 0.004 mm (slick)	FLOW CHARACTERISTICS — No water, stream Stream bed mois Standing water Flowing water Velocity — Fast — Moo			stream I d moist vater ster	•	Morphology Types (Only enter Riffle 40 % Run 60 Pool 0 % Turbidity ClearSlightly to			
Type Diameter Sampling Reach Type Characteristic Sampling Are Bedrock 0 Detritus Sticks, wood, coarse plant materials (CPOM) 10 Cobble 64-256 mm (2.5"-10") 15 Muck-Mud Diack, very fine organic (FPOM) Sand 0.06-2mm (gritty) 35 Silt 0.004-0.06 mm 20 Marl grey, shell fragments Clay < 0.004 mm (slick) 10 Predominant Surrounding Landuse Floodplain Width Wide > 30ft Moderate 15-30ft Marrow <15ft WATERSHED FEATURES WATERSHED FEATURES MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS	INOR			_	_				
Boulder > 256 mm (10") 0 Detritus plant materials (CPOM) 10 Cobble 64-256 mm (2.5"-10") 15 Muck-Mud black, very fine organic (FPOM) Sand 0.06-2mm (gritty) 35 Silt 0.004-0.06 mm 20 Marl grey, shell fragments Clay < 0.004 mm (slick) 10 Predominant Surrounding Landuse Floodplain Width Wide > 30ft Wide > 30ft Marrow <15ft WATERSHED FEATURES WATERSHED FEATURES WATERSHED FEATURES MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS	_	Dia	meter				I Characteristic I '		
Cobble 64-256 mm (2.5"-10") 15		_				Detritus	mlant martanials (ODOM)		
Gravel 2-64 mm (0.1"-2.5") 20 Sand 0.06-2mm (gritty) 35 Silt 0.004-0.06 mm 20 Clay < 0.004 mm (slick) 10 Predominant Surrounding Landuse Forest Commercial Field/Pasture Industrial Agricultural Partly Residential ROW Other: Canopy Cover Open Partly shaded MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS			` '				, , , 10		
Sand 0.06-2mm (gritty) 35 Silt 0.004-0.06 mm 20 Marl grey, shell fragments Clay < 0.004 mm (slick) 10 Predominant Surrounding Landuse Forest						Muck-Mu			
Silt 0.004-0.06 mm 20 Marl grey, shell fragments Clay < 0.004 mm (slick) 10 Predominant Surrounding Landuse Forest Commercial Field/Pasture Industrial ROW Other: Canopy Cover Open V Partly shaded Shaded MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS			, ,				(11 OW)		
Clay < 0.004 mm (slick) 10 Predominant Surrounding Landuse Forest Commercial Field/Pasture Industrial Agricultural Residential ROW Other: Canopy Cover Open Partly shaded Shaded MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS						Marl	grey shell fragments		
Predominant Surrounding Landuse Forest Commercial Field/Pasture Industrial Agricultural Other: Canopy Cover Open Partly shaded Shaded MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS						IVIAII	grey, shell fragments		
	WATERSHED FEATURES — Forest ✓ Field/Pasture ✓ Agricultural — ROW Canopy Cover — Open		Surro cure _ al _	unding Landu Commercia Industrial v ResidentialOther:	ıl	Wide > 30ft Moderate 15-30ft			
	MAC	ROINVER	TEBRATES/OT	HER V	VILDLIFE OBS	ERVED OF	R OTHER NOTES AND OBSERVATIONS		
				nek V	MEDLIFE OBS	PENAED OI	NOTIEN NOTES AND ODSERVATIONS		



Photograph Direction South