

<b>STREAM ID</b> S-IJ18-INT		<b>STREAM NAME</b> UNT to Sinking Creek	
<b>CLIENT</b> MVP		<b>PROJECT NAME</b> MVP	
<b>LAT</b> 37.322078	<b>LONG</b> -80.552834	<b>DATE</b> 04/14/2016	<b>COUNTY</b> Giles
<b>INVESTIGATORS</b> E. Foster, S. Lieb, J. Niergarth			
<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input checked="" type="checkbox"/> NRPW <input type="checkbox"/>		<b>FLOW REGIME</b> Perennial <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/>	

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: <u>4.0</u> ft Top of Bank Height: LB <u>2.0</u> ft RB <u>2.0</u> ft Water Depth: <u>2.00</u> in Water Width: <u>2.0</u> ft Ordinary High Water Mark (Width): <u>3.0</u> ft Ordinary High Water Mark (Height): <u>6.0</u> in Flow Direction: <u>Southwest</u>	<b>Sinuosity</b> <input checked="" type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High <b>Gradient</b> <input type="checkbox"/> Flat <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe (0.5/100 ft) (2 ft/100 ft) (10 ft/100 ft) <b>Stream Erosion</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy <b>Artificial, Modified or Channelized</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Within Roadside Ditch</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Culvert Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Culvert Material: _____ Culvert Size: _____ in
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input type="checkbox"/> No water, stream bed dry <input type="checkbox"/> Stream bed moist <input type="checkbox"/> Standing water <input checked="" type="checkbox"/> Flowing water <b>Velocity</b> <input type="checkbox"/> Fast <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> (Only enter if water present) Riffle 50 % Run 25 % Pool 25 % <b>Turbidity</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Slightly turbid <input type="checkbox"/> Turbid <input type="checkbox"/> Other _____
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%) <sup>100</sup>			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	
Boulder	> 256 mm (10")	40			
Cobble	64-256 mm (2.5"-10")	10	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	10			
Sand	0.06-2mm (gritty)	20	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	20			
Clay	< 0.004 mm (slick)				

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input type="checkbox"/> Forest <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input type="checkbox"/> ROW <input type="checkbox"/> Other:	<b>Floodplain Width</b> <input type="checkbox"/> Wide > 30ft <input checked="" type="checkbox"/> Moderate 15-30ft <input type="checkbox"/> Narrow <15ft
	<b>Canopy Cover</b> <input type="checkbox"/> Open <input checked="" type="checkbox"/> Partly shaded <input type="checkbox"/> Shaded	

<b>MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS</b>

# Stream Photograph Page

Stream ID S-IJ18-INT

Date: 04/14/2016



Photograph Direction NE

Comments:

<b>STREAM ID</b> S-PP22		<b>STREAM NAME</b> UNT to Craig Creek	
<b>CLIENT</b> MVP		<b>PROJECT NAME</b> MVP	
<b>LAT</b> 37.321203	<b>LONG</b> -80.412889	<b>STATE</b> Virginia	<b>COUNTY</b> Craig
<b>INVESTIGATORS</b> KP JC		<b>DATE</b> 10/29/2019	
<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input checked="" type="checkbox"/> NRPW <input type="checkbox"/>		<b>FLOW REGIME</b> Perennial <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/>	

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: <u>4.0</u> ft Top of Bank Height: LB <u>1.0</u> ft RB <u>1.0</u> ft Water Depth: <u>0.25</u> in Water Width: <u>1.0</u> ft Ordinary High Water Mark (Width): <u>2.0</u> ft Ordinary High Water Mark (Height): <u>2.0</u> in Flow Direction: <u>Southwest</u>	<b>Sinuosity</b> <input checked="" type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High <b>Gradient</b> <input type="checkbox"/> Flat <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Severe (0.5/100 ft) (2 ft/100 ft) (10 ft/100 ft) <b>Stream Erosion</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy <b>Artificial, Modified or Channelized</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Within Roadside Ditch</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Culvert Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Culvert Material: _____ Culvert Size: _____ in
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input type="checkbox"/> No water, stream bed dry <input type="checkbox"/> Stream bed moist <input type="checkbox"/> Standing water <input checked="" type="checkbox"/> Flowing water <b>Velocity</b> <input type="checkbox"/> Fast <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> (Only enter if water present) Riffle 100 % Run % Pool % <b>Turbidity</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Slightly turbid <input type="checkbox"/> Turbid <input type="checkbox"/> Other _____
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%) <sup>100</sup>			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	
Boulder	> 256 mm (10")	5			
Cobble	64-256 mm (2.5"-10")	30	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	40			
Sand	0.06-2mm (gritty)	5	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	15			
Clay	< 0.004 mm (slick)	5			

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Commercial <input type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input checked="" type="checkbox"/> ROW <input type="checkbox"/> Other:	<b>Floodplain Width</b> <input type="checkbox"/> Wide > 30ft <input type="checkbox"/> Moderate 15-30ft <input checked="" type="checkbox"/> Narrow <15ft
	<b>Canopy Cover</b> <input checked="" type="checkbox"/> Open <input type="checkbox"/> Partly shaded <input type="checkbox"/> Shaded	

**MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS**

S-PP22 was originally delineated in 2015 and then revisited in 2019. The stream was extended during the 2019 revisit. Channel flow as well as bed and bank characteristic through the ROW/LOD were observed at the time of survey. In 2015, the stream flow went subsurface and lost evidence of bed, bank, and OHWM characteristics within the ROW. After ROW clearing for pipeline construction, it appears the stream has expressed water flow on the surface and bed and bank characteristics have become more established downslope.

# Stream Photograph Page

Stream ID S-PP22 Date 10/29/2019



Photograph Number 1

Photograph Direction NE

Comments: Upstream



Photograph Number 2

Photograph Direction South

Comments: Downstream

<b>STREAM ID</b> W-0012	<b>STREAM NAME</b> UNT to Sinking Creek
<b>LAT</b> 37.318759 <b>LONG</b> -80.440048	<b>DATE</b> 08/27/2015
<b>CLIENT</b> MAM	<b>PROJECT NAME</b> MVP
<b>INVESTIGATORS</b> A. rodrian, L. sexton, C. Wharton	
<b>FLOW REGIME</b> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/>	<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input type="checkbox"/> NRPW <input checked="" type="checkbox"/>

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: 2.0 ft Top of Bank Height: LB 4.0 in      RB 4.0 in Water Depth: 0.00 in Water Width: 0.0 ft High Water Mark: 4.0 in Flow Direction: West	<b>Stream Erosion</b> <input type="checkbox"/> None <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Heavy  <b>Artificial, Modified or Channelized</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <b>Dam Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <b>Sinuosity</b> <input type="checkbox"/> Low <input checked="" type="checkbox"/> Medium <input type="checkbox"/> High  <b>Gradient</b> <input type="checkbox"/> Flat (0.5/100 ft) <input checked="" type="checkbox"/> Moderate (2 ft/100 ft) <input type="checkbox"/> Severe (10 ft/100 ft)
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input checked="" type="checkbox"/> No water, stream bed dry <input type="checkbox"/> Stream bed moist <input type="checkbox"/> Standing water <input type="checkbox"/> Flowing water  <b>Velocity</b> <input type="checkbox"/> Fast <input type="checkbox"/> Moderate <input type="checkbox"/> Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> Riffle 0 %    Run 0 % Pool 0 %  <b>Turbidity</b> <input type="checkbox"/> Clear <input type="checkbox"/> Slightly turbid <input type="checkbox"/> Turbid <input type="checkbox"/> Opaque <input type="checkbox"/> Stained <input type="checkbox"/> Other _____
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	20
Boulder	> 256 mm (10")	25			
Cobble	64-256 mm (2.5"-10")	25	Muck-Mud	black, very fine organic (FPOM)	0
Gravel	2-64 mm (0.1"-2.5")	35			
Sand	0.06-2mm (gritty)	15	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	0			
Clay	< 0.004 mm (slick)	0			

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Commercial <input type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input type="checkbox"/> Other: _____	<b>Indicate the dominant type (Check one)</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Shrubs <input type="checkbox"/> Grasses <input type="checkbox"/> Herbaceous  <b>Floodplain Width</b> <input type="checkbox"/> Wide > 30ft <input type="checkbox"/> Moderate 15-30ft <input checked="" type="checkbox"/> Narrow <16ft
	<b>Canopy Cover</b> <input checked="" type="checkbox"/> Partly open <input type="checkbox"/> Partly shaded <input type="checkbox"/> Shaded <input type="checkbox"/> Open	<b>Wetland Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Wetland ID</b>

<b>AQUATIC VEGETATION</b>	<b>Indicate the dominant type and record the dominant species present</b> <input type="checkbox"/> Rooted emergent <input type="checkbox"/> Rooted submergent <input type="checkbox"/> Rooted floating <input type="checkbox"/> Free floating <input type="checkbox"/> Floating algae <input type="checkbox"/> Attached algae
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<b>MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES</b>	Large culvert under railroad tracks, confluence with S-C-21 off corridor
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## Stream Photograph Page

Stream ID W-0012



Photograph Direction East

Date: 08/27/2015

Comments: 2015 stream identification.



Photograph Direction ESE

Date: 10/29/2019

Comments: 2019 stream identification confirmation.

<b>STREAM ID</b> W-0013	<b>STREAM NAME</b> UNT to Sinking Creek
<b>LAT</b> 37.318873 <b>LONG</b> -80.441638	<b>DATE</b> 08/27/2015
<b>CLIENT</b> MVP	<b>PROJECT NAME</b> MVP
<b>INVESTIGATORS</b> A. rodrian, L. sexton, C. Wharton	
<b>FLOW REGIME</b> Perennial <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/>	<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input checked="" type="checkbox"/> NRPW <input type="checkbox"/>

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: <u>20.0</u> ft Top of Bank Height: LB <u>4.0</u> in      RB <u>4.0</u> in Water Depth: <u>3.00</u> in Water Width: <u>18.0</u> ft High Water Mark: <u>4.0</u> in Flow Direction: <u>North</u>	<b>Stream Erosion</b> <input type="checkbox"/> None <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Heavy <b>Artificial, Modified or Channelized</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Dam Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Sinuosity</b> <input type="checkbox"/> Low <input checked="" type="checkbox"/> Medium <input type="checkbox"/> High <b>Gradient</b> <input type="checkbox"/> Flat (0.5/100 ft) <input checked="" type="checkbox"/> Moderate (2 ft/100 ft) <input type="checkbox"/> Severe (10 ft/100 ft)
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input type="checkbox"/> No water, stream bed dry <input type="checkbox"/> Stream bed moist <input type="checkbox"/> Standing water <input checked="" type="checkbox"/> Flowing water <b>Velocity</b> <input type="checkbox"/> Fast <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> Riffle 90 %    Run 0 % Pool 10 % <b>Turbidity</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Slightly turbid <input type="checkbox"/> Turbid <input type="checkbox"/> Opaque <input type="checkbox"/> Stained <input type="checkbox"/> Other _____
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	30
Boulder	> 256 mm (10")	40			
Cobble	64-256 mm (2.5"-10")	25	Muck-Mud	black, very fine organic (FPOM)	0
Gravel	2-64 mm (0.1"-2.5")	35			
Sand	0.06-2mm (gritty)	0	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	0			
Clay	< 0.004 mm (slick)	0			

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Commercial <input type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input type="checkbox"/> Other:	<b>Indicate the dominant type (Check one)</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Shrubs <input type="checkbox"/> Grasses <input type="checkbox"/> Herbaceous <b>Floodplain Width</b> <input type="checkbox"/> Wide > 30ft <input type="checkbox"/> Moderate 15-30ft <input checked="" type="checkbox"/> Narrow <16ft <b>Wetland Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Wetland ID</b>
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<b>AQUATIC VEGETATION</b>	<b>Indicate the dominant type and record the dominant species present</b> <input type="checkbox"/> Rooted emergent <input type="checkbox"/> Rooted submergent <input type="checkbox"/> Rooted floating <input type="checkbox"/> Free floating <input type="checkbox"/> Floating algae <input type="checkbox"/> Attached algae
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<b>MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES</b>	
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## Stream Photograph Page

Stream ID W-0013



Photograph Direction West

Date: 08/27/2015

Comments: 2015 stream identification.



Photograph Direction SSE

Date: 10/29/2019

Comments: 2019 stream identification confirmation.



<b>STREAM ID</b> S-0014	<b>STREAM NAME</b> UNT to Sinking Creek
<b>LAT</b> 37.318549 <b>LONG</b> -80.441615	<b>DATE</b> 08/27/2015
<b>CLIENT</b> MVP	<b>PROJECT NAME</b> MVP
<b>INVESTIGATORS</b> A. rodrian, L. sexton, C. Wharton	
<b>FLOW REGIME</b> Perennial <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input type="checkbox"/>	<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input checked="" type="checkbox"/> NRPW <input type="checkbox"/>

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: 4.0 ft Top of Bank Height: LB 1.0 ft      RB 1.0 ft Water Depth: 2.00 in Water Width: 4.0 ft High Water Mark: 4.0 in Flow Direction: S	<b>Stream Erosion</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy  <b>Artificial, Modified or Channelized</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <b>Dam Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <b>Sinuosity</b> <input checked="" type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High  <b>Gradient</b> <input checked="" type="checkbox"/> Flat (0.5/100 ft) <input type="checkbox"/> Moderate (2 ft/100 ft) <input type="checkbox"/> Severe (10 ft/100 ft)
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input type="checkbox"/> No water, stream bed dry <input type="checkbox"/> Stream bed moist <input type="checkbox"/> Standing water <input checked="" type="checkbox"/> Flowing water  <b>Velocity</b> <input checked="" type="checkbox"/> Fast <input type="checkbox"/> Moderate <input type="checkbox"/> Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> Riffle 65 %    Run 30 % Pool 5 %  <b>Turbidity</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Slightly turbid <input type="checkbox"/> Turbid <input type="checkbox"/> Opaque <input type="checkbox"/> Stained <input type="checkbox"/> Other
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		10	Detritus	sticks, wood, coarse plant materials (CPOM)	30
Boulder	> 256 mm (10")	40			
Cobble	64-256 mm (2.5"-10")	25	Muck-Mud	black, very fine organic (FPOM)	0
Gravel	2-64 mm (0.1"-2.5")	25			
Sand	0.06-2mm (gritty)	0	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	0			
Clay	< 0.004 mm (slick)	0			

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Commercial <input type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input type="checkbox"/> Other:	<b>Indicate the dominant type (Check one)</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Shrubs <input type="checkbox"/> Grasses <input type="checkbox"/> Herbaceous  <b>Floodplain Width</b> <input type="checkbox"/> Wide > 30ft <input type="checkbox"/> Moderate 15-30ft <input checked="" type="checkbox"/> Narrow <16ft
	<b>Canopy Cover</b> <input type="checkbox"/> Partly open <input type="checkbox"/> Partly shaded <input checked="" type="checkbox"/> Shaded <input type="checkbox"/> Open	<b>Wetland Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Wetland ID</b>

<b>AQUATIC VEGETATION</b>	<b>Indicate the dominant type and record the dominant species present</b> <input type="checkbox"/> Rooted emergent <input type="checkbox"/> Rooted submergent <input type="checkbox"/> Rooted floating <input type="checkbox"/> Free floating <input type="checkbox"/> Floating algae <input type="checkbox"/> Attached algae
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<b>MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES</b>	
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# Stream Photograph Page

Stream ID S-0014

Date: 08/27/2015



Photograph Direction South

Comments:

<b>STREAM ID</b> S-IJ17		<b>STREAM NAME</b> UNT to Sinking Creek	
<b>CLIENT</b> MVP		<b>PROJECT NAME</b> MVP	
<b>LAT</b> 37.318485	<b>LONG</b> -80.547827	<b>DATE</b> 04/14/2016	<b>COUNTY</b> Giles
<b>INVESTIGATORS</b> E. Foster, S. Lieb, J. Niergarth			
<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input type="checkbox"/> NRPW <input checked="" type="checkbox"/>		<b>FLOW REGIME</b> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/>	

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: <u>8.0</u> ft Top of Bank Height: LB <u>4.0</u> ft RB <u>4.0</u> ft Water Depth: <u>0.00</u> in Water Width: <u>0.0</u> ft Ordinary High Water Mark (Width): <u>3.0</u> ft Ordinary High Water Mark (Height): <u>6.0</u> in Flow Direction: <u>Southeast</u>	<b>Sinuosity</b> <input checked="" type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High <b>Gradient</b> <input type="checkbox"/> Flat (0.5/100 ft) <input checked="" type="checkbox"/> Moderate (2 ft/100 ft) <input type="checkbox"/> Severe (10 ft/100 ft) <b>Stream Erosion</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy <b>Artificial, Modified or Channelized</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Within Roadside Ditch</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Culvert Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Culvert Material: _____ Culvert Size: _____ in
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input checked="" type="checkbox"/> No water, stream bed dry <input type="checkbox"/> Stream bed moist <input type="checkbox"/> Standing water <input type="checkbox"/> Flowing water <b>Velocity</b> <input type="checkbox"/> Fast <input type="checkbox"/> Moderate <input type="checkbox"/> Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> (Only enter if water present) Riffle % Run % Pool % <b>Turbidity</b> <input type="checkbox"/> Clear <input type="checkbox"/> Slightly turbid <input type="checkbox"/> Turbid <input type="checkbox"/> Other _____
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%) <sup>100</sup>			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	40
Boulder	> 256 mm (10")	30			
Cobble	64-256 mm (2.5"-10")	30	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	30			
Sand	0.06-2mm (gritty)	10	Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input type="checkbox"/> ROW <input type="checkbox"/> Other:	<b>Floodplain Width</b> <input type="checkbox"/> Wide > 30ft <input type="checkbox"/> Moderate 15-30ft <input checked="" type="checkbox"/> Narrow <15ft
	<b>Canopy Cover</b> <input type="checkbox"/> Open <input checked="" type="checkbox"/> Partly shaded <input type="checkbox"/> Shaded	

<b>MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS</b>

# Stream Photograph Page

Stream ID S-IJ17

Date: 04/14/2016



Photograph Direction East

Comments:

<b>STREAM ID</b> S-IJ16-b		<b>STREAM NAME</b> UNT to Sinking Creek	
<b>CLIENT</b> MVP		<b>PROJECT NAME</b> MVP	
<b>LAT</b> 37.318336	<b>LONG</b> -80.547623	<b>DATE</b> 04/14/2016	<b>COUNTY</b> Giles
<b>INVESTIGATORS</b> E. Foster, S. Lieb, J. Niergarth			
<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input type="checkbox"/> NRPW <input checked="" type="checkbox"/>		<b>FLOW REGIME</b> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/>	

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: <u>10.0</u> ft Top of Bank Height: LB <u>6.0</u> ft RB <u>6.0</u> ft Water Depth: <u>0.00</u> in Water Width: <u>0.0</u> ft Ordinary High Water Mark (Width): <u>5.0</u> ft Ordinary High Water Mark (Height): <u>24.0</u> in Flow Direction: <u>Southeast</u>	<b>Sinuosity</b> ___ Low <input checked="" type="checkbox"/> Medium ___ High <b>Gradient</b> <input checked="" type="checkbox"/> Flat (0.5/100 ft) ___ Moderate (2 ft/100 ft) ___ Severe (10 ft/100 ft) <b>Stream Erosion</b> <input checked="" type="checkbox"/> None ___ Moderate ___ Heavy <b>Artificial, Modified or Channelized</b> ___ Yes <input checked="" type="checkbox"/> No <b>Within Roadside Ditch</b> ___ Yes <input checked="" type="checkbox"/> No <b>Culvert Present</b> ___ Yes <input checked="" type="checkbox"/> No Culvert Material: _____ Culvert Size: _____ in
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input checked="" type="checkbox"/> No water, stream bed dry ___ Stream bed moist ___ Standing water ___ Flowing water <b>Velocity</b> ___ Fast ___ Moderate ___ Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> (Only enter if water present) Riffle % Run % Pool % <b>Turbidity</b> ___ Clear ___ Slightly turbid ___ Turbid ___ Other _____
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%) <sup>100</sup>			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	50
Boulder	> 256 mm (10")	50			
Cobble	64-256 mm (2.5"-10")	25	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	15			
Sand	0.06-2mm (gritty)	10	Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input checked="" type="checkbox"/> Forest ___ Commercial ___ Field/Pasture ___ Industrial ___ Agricultural ___ Residential ___ ROW ___ Other:	<b>Floodplain Width</b> <input checked="" type="checkbox"/> Wide > 30ft ___ Moderate 15-30ft ___ Narrow <15ft
	<b>Canopy Cover</b> ___ Open ___ Partly shaded <input checked="" type="checkbox"/> Shaded	

<b>MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS</b>

# Stream Photograph Page

Stream ID S-IJ16-b

Date: 04/14/2016



Photograph Direction SE

Comments:

<b>STREAM ID</b> S-PP21	<b>STREAM NAME</b> UNT to Craig Creek
<b>LAT</b> 37.31716709 <b>LONG</b> -80.40925493	<b>DATE</b> 10/17/2015
<b>CLIENT</b> MVP	<b>PROJECT NAME</b> MVP
<b>INVESTIGATORS</b> D. Hadersbeck, T. Woods, D. McCollough	
<b>FLOW REGIME</b> Perennial <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input type="checkbox"/>	<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input checked="" type="checkbox"/> NRPW <input type="checkbox"/>

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: 4 ft Top of Bank Height: LB 0.5 ft RB 0.5 ft Water Depth: 3.00 in Water Width: 2.5 ft High Water Mark: 10.0 in Flow Direction: Southwest	<b>Stream Erosion</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Heavy <b>Artificial, Modified or Channelized</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Dam Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Sinuosity</b> <input type="checkbox"/> Low <input checked="" type="checkbox"/> Medium <input checked="" type="checkbox"/> High <b>Gradient</b> <input type="checkbox"/> Flat (0.5/100 ft) <input checked="" type="checkbox"/> Moderate (2 ft/100 ft) <input type="checkbox"/> Severe (10 ft/100 ft)
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input type="checkbox"/> No water, stream bed dry <input type="checkbox"/> Stream bed moist <input type="checkbox"/> Standing water <input checked="" type="checkbox"/> Flowing water <b>Velocity</b> <input type="checkbox"/> Fast <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> Riffle 10 % Run 70 % Pool 20 % <b>Turbidity</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Slightly turbid <input type="checkbox"/> Turbid <input type="checkbox"/> Opaque <input type="checkbox"/> Stained <input type="checkbox"/> Other
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	70
Boulder	> 256 mm (10")	10			
Cobble	64-256 mm (2.5"-10")	20	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	30			
Sand	0.06-2mm (gritty)	20	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	20			
Clay	< 0.004 mm (slick)				

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Commercial <input type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input type="checkbox"/> Other:	<b>Indicate the dominant type (Check one)</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Shrubs <input type="checkbox"/> Grasses <input type="checkbox"/> Herbaceous <b>Floodplain Width</b> <input type="checkbox"/> Wide > 30ft <input checked="" type="checkbox"/> Moderate 15-30ft <input type="checkbox"/> Narrow <16ft <b>Wetland Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Wetland ID</b>
	<b>Canopy Cover</b> <input checked="" type="checkbox"/> Partly open <input type="checkbox"/> Partly shaded <input type="checkbox"/> Shaded <input type="checkbox"/> Open	

<b>AQUATIC VEGETATION</b>	<b>Indicate the dominant type and record the dominant species present</b> <input type="checkbox"/> Rooted emergent <input type="checkbox"/> Rooted submergent <input type="checkbox"/> Rooted floating <input type="checkbox"/> Free floating <input type="checkbox"/> Floating algae <input type="checkbox"/> Attached algae
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<b>MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES</b>	The stream was visited by the USACE in 2017. The presence of a stream channel and an OHWM was confirmed.
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# Stream Photograph Page

Stream ID S-PP21

Date: 10/17/2015



Photograph Direction South

Comments:



<b>STREAM ID</b> S-PP20	<b>STREAM NAME</b> UNT to Craig Creek
<b>LAT</b> 37.3165383 <b>LONG</b> -80.4086392	<b>DATE</b> 10/17/2015
<b>CLIENT</b> MVP	<b>PROJECT NAME</b> MVP
<b>INVESTIGATORS</b> D. Hadersbeck, T. Woods, D. McCollough	
<b>FLOW REGIME</b> Perennial <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input type="checkbox"/>	<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input checked="" type="checkbox"/> NRPW <input type="checkbox"/>

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: 6 ft Top of Bank Height: LB 1.0 ft      RB 1.0 ft Water Depth: 4.00 in Water Width: 3.0 ft High Water Mark: 10.0 in Flow Direction: Southwest	<b>Stream Erosion</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy <b>Artificial, Modified or Channelized</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Dam Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Sinuosity</b> <input type="checkbox"/> Low <input checked="" type="checkbox"/> Medium <input checked="" type="checkbox"/> High <b>Gradient</b> <input type="checkbox"/> Flat (0.5/100 ft) <input checked="" type="checkbox"/> Moderate (2 ft/100 ft) <input type="checkbox"/> Severe (10 ft/100 ft)
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input type="checkbox"/> No water, stream bed dry <input type="checkbox"/> Stream bed moist <input type="checkbox"/> Standing water <input checked="" type="checkbox"/> Flowing water <b>Velocity</b> <input type="checkbox"/> Fast <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> Riffle 10 %    Run 70 % Pool 20 % <b>Turbidity</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Slightly turbid <input type="checkbox"/> Turbid <input type="checkbox"/> Opaque <input type="checkbox"/> Stained <input type="checkbox"/> Other
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	70
Boulder	> 256 mm (10")	10			
Cobble	64-256 mm (2.5"-10")	20	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	30			
Sand	0.06-2mm (gritty)	20	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	20			
Clay	< 0.004 mm (slick)				

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Commercial <input type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input type="checkbox"/> Other:	<b>Indicate the dominant type (Check one)</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Shrubs <input type="checkbox"/> Grasses <input type="checkbox"/> Herbaceous
	<b>Canopy Cover</b> <input checked="" type="checkbox"/> Partly open <input type="checkbox"/> Partly shaded <input type="checkbox"/> Shaded <input type="checkbox"/> Open	<b>Floodplain Width</b> <input type="checkbox"/> Wide > 30ft <input checked="" type="checkbox"/> Moderate 15-30ft <input type="checkbox"/> Narrow <16ft <b>Wetland Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Wetland ID</b>

<b>AQUATIC VEGETATION</b>	<b>Indicate the dominant type and record the dominant species present</b> <input type="checkbox"/> Rooted emergent <input type="checkbox"/> Rooted submergent <input type="checkbox"/> Rooted floating <input type="checkbox"/> Free floating <input type="checkbox"/> Floating algae <input type="checkbox"/> Attached algae
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<b>MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES</b>	The stream was revisited by the USACE in 2017. The presence of a stream channel and OHWM was confirmed.
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# Stream Photograph Page

Stream ID S-PP20

Date: 10/17/2015



Photograph Direction SW

Comments:

<b>STREAM ID</b> S-RR13	<b>STREAM NAME</b> Craig Creek
<b>LAT</b> 37.314425 <b>LONG</b> -80.40287336	<b>DATE</b> 09/14/2015
<b>CLIENT</b> MVP	<b>PROJECT NAME</b> MVP
<b>INVESTIGATORS</b> J. Cook, R. Keyser, D. McCullough	
<b>FLOW REGIME</b> Perennial <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input type="checkbox"/>	<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input checked="" type="checkbox"/> NRPW <input type="checkbox"/>

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: <u>35</u> ft Top of Bank Height: LB <u>48.0</u> in      RB <u>40.0</u> in Water Depth: <u>3.00</u> in Water Width: <u>15.0</u> ft High Water Mark: <u>9.0</u> in Flow Direction: <u>Northeast</u>	<b>Stream Erosion</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy <b>Artificial, Modified or Channelized</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Dam Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Sinuosity</b> <input type="checkbox"/> Low <input checked="" type="checkbox"/> Medium <input checked="" type="checkbox"/> High <b>Gradient</b> <input checked="" type="checkbox"/> Flat (0.5/100 ft) <input type="checkbox"/> Moderate (2 ft/100 ft) <input type="checkbox"/> Severe (10 ft/100 ft)
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input type="checkbox"/> No water, stream bed dry <input type="checkbox"/> Stream bed moist <input type="checkbox"/> Standing water <input checked="" type="checkbox"/> Flowing water <b>Velocity</b> <input type="checkbox"/> Fast <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> Riffle 35 %    Run 30 % Pool 40 % <b>Turbidity</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Slightly turbid <input type="checkbox"/> Turbid <input type="checkbox"/> Opaque <input type="checkbox"/> Stained <input type="checkbox"/> Other _____
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	40
Boulder	> 256 mm (10")	15			
Cobble	64-256 mm (2.5"-10")	35	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	30			
Sand	0.06-2mm (gritty)	20	Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input type="checkbox"/> Forest <input type="checkbox"/> Commercial <input type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input checked="" type="checkbox"/> Other:	<b>Indicate the dominant type (Check one)</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Shrubs <input type="checkbox"/> Grasses <input type="checkbox"/> Herbaceous <b>Floodplain Width</b> <input checked="" type="checkbox"/> Wide > 30ft <input type="checkbox"/> Moderate 15-30ft <input type="checkbox"/> Narrow <16ft <b>Wetland Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Wetland ID</b>
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<b>AQUATIC VEGETATION</b>	<b>Indicate the dominant type and record the dominant species present</b> <input type="checkbox"/> Rooted emergent <input type="checkbox"/> Rooted submergent <input type="checkbox"/> Rooted floating <input type="checkbox"/> Free floating <input type="checkbox"/> Floating algae <input type="checkbox"/> Attached algae
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<b>MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES</b>	
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# Stream Photograph Page

Stream ID S-RR13

Date: 09/14/2015



Photograph Direction NE

Comments:

<b>STREAM ID</b> S-HH18	<b>STREAM NAME</b> UNT to Craig Creek
<b>LAT</b> 37.31421359 <b>LONG</b> -80.39862398	<b>DATE</b> 10/17/2015
<b>CLIENT</b> MVP	<b>PROJECT NAME</b> MVP
<b>INVESTIGATORS</b> S Ryan, A Larson, M Whitten, A Carrano	
<b>FLOW REGIME</b> Perennial <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input type="checkbox"/>	<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input checked="" type="checkbox"/> NRPW <input type="checkbox"/>

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: 6 ft Top of Bank Height: LB 3.0 ft RB 2.0 ft Water Depth: 2.00 in Water Width: 2.0 ft High Water Mark: 2.0 in Flow Direction: Northeast	<b>Stream Erosion</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy <b>Artificial, Modified or Channelized</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Dam Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Sinuosity</b> <input type="checkbox"/> Low <input checked="" type="checkbox"/> Medium <input checked="" type="checkbox"/> High <b>Gradient</b> <input type="checkbox"/> Flat (0.5/100 ft) <input checked="" type="checkbox"/> Moderate (2 ft/100 ft) <input type="checkbox"/> Severe (10 ft/100 ft)
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input type="checkbox"/> No water, stream bed dry <input type="checkbox"/> Stream bed moist <input type="checkbox"/> Standing water <input checked="" type="checkbox"/> Flowing water <b>Velocity</b> <input type="checkbox"/> Fast <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> Riffle 10 % Run 60 % Pool 30 % <b>Turbidity</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Slightly turbid <input type="checkbox"/> Turbid <input type="checkbox"/> Opaque <input type="checkbox"/> Stained <input type="checkbox"/> Other
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		60	Detritus	sticks, wood, coarse plant materials (CPOM)	10
Boulder	> 256 mm (10")	5			
Cobble	64-256 mm (2.5"-10")	20	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	15			
Sand	0.06-2mm (gritty)		Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Commercial <input type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input type="checkbox"/> Other:	<b>Indicate the dominant type (Check one)</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Shrubs <input type="checkbox"/> Grasses <input type="checkbox"/> Herbaceous <b>Floodplain Width</b> <input type="checkbox"/> Wide > 30ft <input type="checkbox"/> Moderate 15-30ft <input checked="" type="checkbox"/> Narrow <16ft <b>Wetland Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Wetland ID</b>
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<b>AQUATIC VEGETATION</b>	<b>Indicate the dominant type and record the dominant species present</b> <input type="checkbox"/> Rooted emergent <input type="checkbox"/> Rooted submergent <input type="checkbox"/> Rooted floating <input type="checkbox"/> Free floating <input type="checkbox"/> Floating algae <input type="checkbox"/> Attached algae
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<b>MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES</b>	Stream joins S-HH17. - 2015 comments Stream was revisited and extended in 2016. The presence of a stream channel and OHWM was confirmed.
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# Stream Photograph Page

Stream ID S-HH18

Date: 10/17/2015



Photograph Direction NE

Comments:

<b>STREAM ID</b> S-RR14	<b>STREAM NAME</b> UNT to Craig Creek
<b>LAT</b> 37.31398483 <b>LONG</b> -80.40243974	<b>DATE</b> 09/14/2015
<b>CLIENT</b> MVP	<b>PROJECT NAME</b> MVP
<b>INVESTIGATORS</b> J. Cook, R. Keyser, D. McCullough	
<b>FLOW REGIME</b> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/>	<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input type="checkbox"/> NRPW <input checked="" type="checkbox"/>

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: 7 ft Top of Bank Height: LB 2.0 ft    RB 18.0 in Water Depth: 0.00 in Water Width: 0.0 ft High Water Mark: 3.0 in Flow Direction: North	<b>Stream Erosion</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Heavy <b>Artificial, Modified or Channelized</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Dam Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Sinuosity</b> <input checked="" type="checkbox"/> Low <input type="checkbox"/> Medium <input checked="" type="checkbox"/> High <b>Gradient</b> <input checked="" type="checkbox"/> Flat (0.5/100 ft) <input type="checkbox"/> Moderate (2 ft/100 ft) <input type="checkbox"/> Severe (10 ft/100 ft)
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input checked="" type="checkbox"/> No water, stream bed dry <input type="checkbox"/> Stream bed moist <input type="checkbox"/> Standing water <input type="checkbox"/> Flowing water <b>Velocity</b> <input type="checkbox"/> Fast <input type="checkbox"/> Moderate <input type="checkbox"/> Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> Riffle    %    Run    % Pool    % <b>Turbidity</b> <input type="checkbox"/> Clear <input type="checkbox"/> Slightly turbid <input type="checkbox"/> Turbid <input type="checkbox"/> Opaque <input type="checkbox"/> Stained <input type="checkbox"/> Other
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	10
Boulder	> 256 mm (10")	10			
Cobble	64-256 mm (2.5"-10")	30	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	35			
Sand	0.06-2mm (gritty)	25	Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Commercial <input type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input type="checkbox"/> Other:	<b>Indicate the dominant type (Check one)</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Shrubs <input type="checkbox"/> Grasses <input type="checkbox"/> Herbaceous <b>Floodplain Width</b> <input type="checkbox"/> Wide > 30ft <input type="checkbox"/> Moderate 15-30ft <input checked="" type="checkbox"/> Narrow <16ft <b>Wetland Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Wetland ID</b>
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<b>AQUATIC VEGETATION</b>	<b>Indicate the dominant type and record the dominant species present</b> <input type="checkbox"/> Rooted emergent <input type="checkbox"/> Rooted submergent <input type="checkbox"/> Rooted floating <input type="checkbox"/> Free floating <input type="checkbox"/> Floating algae <input type="checkbox"/> Attached algae
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<b>MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES</b>	The stream was revisited and extended in 2016. The presence of a stream channel and OHWM was confirmed.
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# Stream Photograph Page

Stream ID S-RR14

Date: 09/14/2015



Photograph Direction North

Comments:



<b>STREAM ID</b> S-006	<b>STREAM NAME</b> Craig Creek
<b>LAT</b> 37.313034 <b>LONG</b> -80.405281	<b>DATE</b> 08/22/2015
<b>CLIENT</b> MVP	<b>PROJECT NAME</b> MVP
<b>INVESTIGATORS</b> A. rodrian, L. sexton, C. Wharton	
<b>FLOW REGIME</b> Perennial <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input type="checkbox"/>	<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input checked="" type="checkbox"/> NRPW <input type="checkbox"/>

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: <u>10.0</u> ft Top of Bank Height: LB <u>3.0</u> ft      RB <u>1.0</u> ft Water Depth: <u>4.00</u> in Water Width: <u>3.0</u> ft High Water Mark: <u>1.0</u> ft Flow Direction: <u>E</u>	<b>Stream Erosion</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy <b>Artificial, Modified or Channelized</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Dam Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Sinuosity</b> <input type="checkbox"/> Low <input checked="" type="checkbox"/> Medium <input type="checkbox"/> High <b>Gradient</b> <input checked="" type="checkbox"/> Flat <input type="checkbox"/> Moderate <input type="checkbox"/> Severe (0.5/100 ft)    (2 ft/100 ft)    (10 ft/100 ft)
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input type="checkbox"/> No water, stream bed dry <input type="checkbox"/> Stream bed moist <input type="checkbox"/> Standing water <input checked="" type="checkbox"/> Flowing water <b>Velocity</b> <input type="checkbox"/> Fast <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> Riffle 35 %    Run 50 % Pool 15 % <b>Turbidity</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Slightly turbid <input type="checkbox"/> Turbid <input type="checkbox"/> Opaque <input type="checkbox"/> Stained <input type="checkbox"/> Other _____
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		10	Detritus	sticks, wood, coarse plant materials (CPOM)	15
Boulder	> 256 mm (10")	30			
Cobble	64-256 mm (2.5"-10")	20	Muck-Mud	black, very fine organic (FPOM)	0
Gravel	2-64 mm (0.1"-2.5")	25			
Sand	0.06-2mm (gritty)	15	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	0			
Clay	< 0.004 mm (slick)	0			

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Commercial <input type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input type="checkbox"/> Other:	<b>Indicate the dominant type (Check one)</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Shrubs <input type="checkbox"/> Grasses <input type="checkbox"/> Herbaceous <b>Floodplain Width</b> <input type="checkbox"/> Wide > 30ft <input type="checkbox"/> Moderate 15-30ft <input checked="" type="checkbox"/> Narrow <16ft <b>Wetland Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Wetland ID</b>
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<b>AQUATIC VEGETATION</b>	<b>Indicate the dominant type and record the dominant species present</b> <input type="checkbox"/> Rooted emergent <input type="checkbox"/> Rooted submergent <input type="checkbox"/> Rooted floating <input type="checkbox"/> Free floating <input type="checkbox"/> Floating algae <input type="checkbox"/> Attached algae
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<b>MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES</b>	The stream was revisited and extended on 10/17/2016. The presence of a stream channel and OHWM was confirmed.
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## Stream Photograph Page

Stream ID S-006



Photograph Direction East

Date: 08/22/2015

Comments: 2015 stream identification.



Photograph Direction South

Date: 10/17/2016

Comments: 2016 stream extension

<b>STREAM ID</b> S-QQ3	<b>STREAM NAME</b> UNT to Sinking Creek
<b>LAT</b> 37.311638 <b>LONG</b> -80.532287	<b>DATE</b> 09/25/2015
<b>CLIENT</b> MVP	<b>PROJECT NAME</b> MVP
<b>INVESTIGATORS</b> A lands, S. Kite	
<b>FLOW REGIME</b> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/>	<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input type="checkbox"/> NRPW <input checked="" type="checkbox"/>

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: <u>2.0</u> ft Top of Bank Height: LB <u>2.0</u> ft      RB <u>2.0</u> ft Water Depth: <u>0.00</u> ft Water Width: <u>0.0</u> ft High Water Mark: <u>1.0</u> ft Flow Direction: <u>South</u>	<b>Stream Erosion</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy <b>Artificial, Modified or Channelized</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Dam Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Sinuosity</b> <input checked="" type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High <b>Gradient</b> <input checked="" type="checkbox"/> Flat <input type="checkbox"/> Moderate <input type="checkbox"/> Severe (0.5/100 ft)    (2 ft/100 ft)    (10 ft/100 ft)
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input checked="" type="checkbox"/> No water, stream bed dry <input type="checkbox"/> Stream bed moist <input type="checkbox"/> Standing water <input type="checkbox"/> Flowing water <b>Velocity</b> <input type="checkbox"/> Fast <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> Riffle 50 %    Run 50 % Pool % <b>Turbidity</b> <input type="checkbox"/> Clear <input type="checkbox"/> Slightly turbid <input type="checkbox"/> Turbid <input type="checkbox"/> Opaque <input type="checkbox"/> Stained <input type="checkbox"/> Other _____
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	5
Boulder	> 256 mm (10")	15			
Cobble	64-256 mm (2.5"-10")	30	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	15			
Sand	0.06-2mm (gritty)	10	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	20			
Clay	< 0.004 mm (slick)	10			

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input type="checkbox"/> Forest <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input type="checkbox"/> Other:	<b>Indicate the dominant type (Check one)</b> <input type="checkbox"/> Trees <input type="checkbox"/> Shrubs <input checked="" type="checkbox"/> Grasses <input type="checkbox"/> Herbaceous
	<b>Canopy Cover</b> <input type="checkbox"/> Partly open <input type="checkbox"/> Partly shaded <input type="checkbox"/> Shaded <input checked="" type="checkbox"/> Open	<b>Floodplain Width</b> <input type="checkbox"/> Wide > 30ft <input checked="" type="checkbox"/> Moderate 15-30ft <input type="checkbox"/> Narrow <16ft <b>Wetland Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Wetland ID</b>

<b>AQUATIC VEGETATION</b>	<b>Indicate the dominant type and record the dominant species present</b> <input type="checkbox"/> Rooted emergent <input type="checkbox"/> Rooted submergent <input type="checkbox"/> Rooted floating <input type="checkbox"/> Free floating <input type="checkbox"/> Floating algae <input type="checkbox"/> Attached algae
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<b>MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES</b>	Information listed on this form represents the data collected in 2015. The stream was revisited on 10/28/2019. The presence of a stream channel and OHWM was confirmed.
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## Stream Photograph Page

Stream ID S-QQ3



Photograph Direction South

Date: 09/25/2015

Comments: 2015 stream identification.



Photograph Direction North

Date: 10/28/2019

Comments: 2019 stream identification confirmation.

<b>STREAM ID</b> S-IJ16-a		<b>STREAM NAME</b> UNT to Sinking Creek	
<b>CLIENT</b> MVP		<b>PROJECT NAME</b> MVP	
<b>LAT</b> 37.312727	<b>LONG</b> -80.545009	<b>DATE</b> 04/14/2016	<b>COUNTY</b> Giles
<b>INVESTIGATORS</b> E. Foster, S. Lieb, J. Niergarth			
<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input type="checkbox"/> NRPW <input checked="" type="checkbox"/>		<b>FLOW REGIME</b> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/>	

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: <u>7.0</u> ft Top of Bank Height: LB <u>2.0</u> ft RB <u>2.0</u> ft Water Depth: <u>0.00</u> in Water Width: <u>0.0</u> ft Ordinary High Water Mark (Width): <u>4.0</u> ft Ordinary High Water Mark (Height): <u>6.0</u> in Flow Direction: <u>South</u>	<b>Sinuosity</b> ___ Low <input checked="" type="checkbox"/> Medium ___ High <b>Gradient</b> <input checked="" type="checkbox"/> Flat (0.5/100 ft) ___ Moderate (2 ft/100 ft) ___ Severe (10 ft/100 ft) <b>Stream Erosion</b> ___ None <input checked="" type="checkbox"/> Moderate ___ Heavy <b>Artificial, Modified or Channelized</b> <input checked="" type="checkbox"/> Yes ___ No <b>Within Roadside Ditch</b> ___ Yes <input checked="" type="checkbox"/> No <b>Culvert Present</b> <input checked="" type="checkbox"/> Yes ___ No Culvert Material: <u>Corrugated Metal</u> Culvert Size: <u>24</u> in
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input checked="" type="checkbox"/> No water, stream bed dry ___ Stream bed moist ___ Standing water ___ Flowing water <b>Velocity</b> ___ Fast ___ Moderate ___ Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> (Only enter if water present) Riffle % Run % Pool % <b>Turbidity</b> ___ Clear ___ Slightly turbid ___ Turbid ___ Other _____
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%) <sup>100</sup>			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	15
Boulder	> 256 mm (10")	40			
Cobble	64-256 mm (2.5"-10")	20	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	20			
Sand	0.06-2mm (gritty)	10	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	10			
Clay	< 0.004 mm (slick)				

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input checked="" type="checkbox"/> Forest ___ Commercial ___ Field/Pasture ___ Industrial ___ Agricultural ___ Residential ___ ROW ___ Other:	<b>Floodplain Width</b> ___ Wide > 30ft ___ Moderate 15-30ft <input checked="" type="checkbox"/> Narrow <15ft
	<b>Canopy Cover</b> ___ Open <input checked="" type="checkbox"/> Partly shaded ___ Shaded	

<b>MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS</b>

# Stream Photograph Page

Stream ID S-IJ16-a

Date: 04/14/2016



Photograph Direction South

Comments:

<b>STREAM ID</b> S-NN17	<b>STREAM NAME</b> Sinking Creek
<b>LAT</b> 37.311354 <b>LONG</b> -80.516414	<b>DATE</b> 08/29/2015
<b>CLIENT</b> MVP	<b>PROJECT NAME</b> MVP
<b>INVESTIGATORS</b> D. McCullough, K. Larsen, R. Turner, C. Carver	
<b>FLOW REGIME</b> Perennial <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input type="checkbox"/>	<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input checked="" type="checkbox"/> NRPW <input type="checkbox"/>

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: <u>70.0</u> ft Top of Bank Height: LB <u>4.0</u> ft      RB <u>5.0</u> ft Water Depth: <u>1.00</u> ft Water Width: <u>30.0</u> ft High Water Mark: <u>2.0</u> ft Flow Direction: <u>Southwest</u>	<b>Stream Erosion</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy  <b>Artificial, Modified or Channelized</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <b>Dam Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <b>Sinuosity</b> <input checked="" type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High  <b>Gradient</b> <input type="checkbox"/> Flat (0.5/100 ft) <input checked="" type="checkbox"/> Moderate (2 ft/100 ft) <input type="checkbox"/> Severe (10 ft/100 ft)
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input type="checkbox"/> No water, stream bed dry <input type="checkbox"/> Stream bed moist <input type="checkbox"/> Standing water <input checked="" type="checkbox"/> Flowing water  <b>Velocity</b> <input type="checkbox"/> Fast <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> Riffle 60 %    Run 35 % Pool 5 %  <b>Turbidity</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Slightly turbid <input checked="" type="checkbox"/> Turbid <input type="checkbox"/> Opaque <input type="checkbox"/> Stained <input type="checkbox"/> Other _____
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	10
Boulder	> 256 mm (10")	15			
Cobble	64-256 mm (2.5"-10")	45			
Gravel	2-64 mm (0.1"-2.5")	25	Muck-Mud	black, very fine organic (FPOM)	0
Sand	0.06-2mm (gritty)	10			
Silt	0.004-0.06 mm	5	Marl	grey, shell fragments	0
Clay	< 0.004 mm (slick)	0			

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Other: _____	<b>Indicate the dominant type (Check one)</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Shrubs <input type="checkbox"/> Grasses <input type="checkbox"/> Herbaceous  <b>Floodplain Width</b> <input checked="" type="checkbox"/> Wide > 30ft <input type="checkbox"/> Moderate 15-30ft <input type="checkbox"/> Narrow <16ft
	<b>Canopy Cover</b> <input checked="" type="checkbox"/> Partly open <input type="checkbox"/> Partly shaded <input type="checkbox"/> Shaded <input type="checkbox"/> Open	<b>Wetland Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Wetland ID</b>

<b>AQUATIC VEGETATION</b>	<b>Indicate the dominant type and record the dominant species present</b> <input type="checkbox"/> Rooted emergent <input type="checkbox"/> Rooted submergent <input type="checkbox"/> Rooted floating <input type="checkbox"/> Free floating <input type="checkbox"/> Floating algae <input type="checkbox"/> Attached algae
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<b>MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES</b>	Macroinvertebrates include snails and worms. Small fish and raccoon tracks observed. - 2015 comments Stream was revisited and extended in 2016. The presence of a stream channel and OHWM was confirmed.
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# Stream Photograph Page

Stream ID S-NN17

Date: 08/29/2015



Photograph Direction SW

Comments:



<b>STREAM ID</b> S-KL43		<b>STREAM NAME</b> UNT to Sinking Creek	
<b>CLIENT</b> MVP		<b>PROJECT NAME</b> MVP	
<b>LAT</b> 37.307576	<b>LONG</b> -80.466823	<b>DATE</b> 09/07/2016	<b>COUNTY</b> Giles
<b>INVESTIGATORS</b> J. Cook, S. Pilcher, S. Therkildson			
<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input checked="" type="checkbox"/> NRPW <input type="checkbox"/>		<b>FLOW REGIME</b> Perennial <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input type="checkbox"/>	

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: <u>10.0</u> ft Top of Bank Height: LB <u>1.0</u> ft RB <u>1.0</u> ft Water Depth: <u>3.00</u> in Water Width: <u>8.0</u> ft Ordinary High Water Mark (Width): <u>8.0</u> ft Ordinary High Water Mark (Height): <u>3.0</u> in Flow Direction: <u>Northwest</u>	<b>Sinuosity</b> <input checked="" type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High <b>Gradient</b> <input checked="" type="checkbox"/> Flat (0.5/100 ft) <input type="checkbox"/> Moderate (2 ft/100 ft) <input type="checkbox"/> Severe (10 ft/100 ft) <b>Stream Erosion</b> <input type="checkbox"/> None <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Heavy <b>Artificial, Modified or Channelized</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Within Roadside Ditch</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Culvert Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Culvert Material: _____ Culvert Size: _____ in
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input type="checkbox"/> No water, stream bed dry <input type="checkbox"/> Stream bed moist <input type="checkbox"/> Standing water <input checked="" type="checkbox"/> Flowing water <b>Velocity</b> <input type="checkbox"/> Fast <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> (Only enter if water present) Riffle 50 % Run 50 % Pool % <b>Turbidity</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Slightly turbid <input type="checkbox"/> Turbid <input type="checkbox"/> Other _____
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%) <sup>100</sup>			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	
Boulder	> 256 mm (10")				
Cobble	64-256 mm (2.5"-10")	30	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	30			
Sand	0.06-2mm (gritty)	40	Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input type="checkbox"/> Forest <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input type="checkbox"/> ROW <input type="checkbox"/> Other:	<b>Floodplain Width</b> <input type="checkbox"/> Wide > 30ft <input type="checkbox"/> Moderate 15-30ft <input checked="" type="checkbox"/> Narrow <15ft
	<b>Canopy Cover</b> <input checked="" type="checkbox"/> Open <input type="checkbox"/> Partly shaded <input type="checkbox"/> Shaded	

<b>MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS</b>
Impacted by cows.

# Stream Photograph Page

Stream ID S-KL43

Date: 09/07/2016



Photograph Direction West

Comments:

<b>STREAM ID</b> S-NN11	<b>STREAM NAME</b> UNT to Sinking Creek
<b>LAT</b> 37.30593 <b>LONG</b> -80.467533	<b>DATE</b> 08/27/2015
<b>CLIENT</b> MVP	<b>PROJECT NAME</b> MVP
<b>INVESTIGATORS</b> D. McCullough, K. Larsen, R. Turner	
<b>FLOW REGIME</b> Perennial <input type="checkbox"/> Intermittent <input checked="" type="checkbox"/> Ephemeral <input type="checkbox"/>	<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input checked="" type="checkbox"/> NRPW <input type="checkbox"/>

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: 5.0 ft Top of Bank Height: LB 0.5 ft      RB 1.0 ft Water Depth: 0.50 in Water Width: 2.0 ft High Water Mark: 2.0 in Flow Direction: North	<b>Stream Erosion</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy  <b>Artificial, Modified or Channelized</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <b>Dam Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <b>Sinuosity</b> <input checked="" type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High  <b>Gradient</b> <input type="checkbox"/> Flat (0.5/100 ft) <input type="checkbox"/> Moderate (2 ft/100 ft) <input checked="" type="checkbox"/> Severe (10 ft/100 ft)
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input type="checkbox"/> No water, stream bed dry <input type="checkbox"/> Stream bed moist <input type="checkbox"/> Standing water <input checked="" type="checkbox"/> Flowing water  <b>Velocity</b> <input type="checkbox"/> Fast <input type="checkbox"/> Moderate <input checked="" type="checkbox"/> Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> Riffle 60 %    Run 10 % Pool 30 %  <b>Turbidity</b> <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Slightly turbid <input type="checkbox"/> Turbid <input type="checkbox"/> Opaque <input type="checkbox"/> Stained <input type="checkbox"/> Other _____
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		30	Detritus	sticks, wood, coarse plant materials (CPOM)	10
Boulder	> 256 mm (10")	15			
Cobble	64-256 mm (2.5"-10")	25	Muck-Mud	black, very fine organic (FPOM)	0
Gravel	2-64 mm (0.1"-2.5")	20			
Sand	0.06-2mm (gritty)	10	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	0			
Clay	< 0.004 mm (slick)	0			

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Commercial <input checked="" type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input checked="" type="checkbox"/> Residential <input type="checkbox"/> Other: _____	<b>Indicate the dominant type (Check one)</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Shrubs <input type="checkbox"/> Grasses <input type="checkbox"/> Herbaceous
	<b>Canopy Cover</b> <input type="checkbox"/> Partly open <input type="checkbox"/> Partly shaded <input checked="" type="checkbox"/> Shaded <input type="checkbox"/> Open	<b>Floodplain Width</b> <input checked="" type="checkbox"/> Wide > 30ft <input type="checkbox"/> Moderate 15-30ft <input type="checkbox"/> Narrow <16ft  <b>Wetland Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Wetland ID</b>

<b>AQUATIC VEGETATION</b>	<b>Indicate the dominant type and record the dominant species present</b> <input type="checkbox"/> Rooted emergent <input type="checkbox"/> Rooted submergent <input type="checkbox"/> Rooted floating <input type="checkbox"/> Free floating <input type="checkbox"/> Floating algae <input type="checkbox"/> Attached algae
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<b>MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES</b>	Unnamed tributary to Sinking Creek
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## Stream Photograph Page

Stream ID S-NN11



Photograph Direction SSE

Date: 08/27/2015

Comments: 2015 stream identification.



Photograph Direction SE

Date: 10/29/2019

Comments: 2019 stream identification confirmation.

<b>STREAM ID</b> S-NN12	<b>STREAM NAME</b> UNT to Sinking Creek
<b>LAT</b> 37.300333 <b>LONG</b> -80.472927	<b>DATE</b> 08/27/2015
<b>CLIENT</b> MVP	<b>PROJECT NAME</b> MVP
<b>INVESTIGATORS</b> D. McCullough, K. Larsen, R. Turner	
<b>FLOW REGIME</b> Perennial <input type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input checked="" type="checkbox"/>	<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input type="checkbox"/> NRPW <input checked="" type="checkbox"/>

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: <u>2.0</u> ft Top of Bank Height: LB <u>0.5</u> ft      RB <u>0.5</u> ft Water Depth: <u>0.00</u> in Water Width: <u>0.0</u> ft High Water Mark: <u>2.0</u> in Flow Direction: <u>North</u>	<b>Stream Erosion</b> <input checked="" type="checkbox"/> None <input type="checkbox"/> Moderate <input type="checkbox"/> Heavy <b>Artificial, Modified or Channelized</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Dam Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Sinuosity</b> <input type="checkbox"/> Low <input checked="" type="checkbox"/> Medium <input type="checkbox"/> High <b>Gradient</b> <input type="checkbox"/> Flat (0.5/100 ft) <input checked="" type="checkbox"/> Moderate (2 ft/100 ft) <input type="checkbox"/> Severe (10 ft/100 ft)
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> <input type="checkbox"/> No water, stream bed dry <input checked="" type="checkbox"/> Stream bed moist <input type="checkbox"/> Standing water <input type="checkbox"/> Flowing water <b>Velocity</b> <input type="checkbox"/> Fast <input type="checkbox"/> Moderate <input type="checkbox"/> Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> Riffle      %    Run      % Pool      % <b>Turbidity</b> <input type="checkbox"/> Clear <input type="checkbox"/> Slightly turbid <input type="checkbox"/> Turbid <input type="checkbox"/> Opaque <input type="checkbox"/> Stained <input type="checkbox"/> Other _____
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	10
Boulder	> 256 mm (10")	10			
Cobble	64-256 mm (2.5"-10")	10	Muck-Mud	black, very fine organic (FPOM)	0
Gravel	2-64 mm (0.1"-2.5")	20			
Sand	0.06-2mm (gritty)	10	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	50			
Clay	< 0.004 mm (slick)	0			

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input checked="" type="checkbox"/> Forest <input type="checkbox"/> Commercial <input type="checkbox"/> Field/Pasture <input type="checkbox"/> Industrial <input type="checkbox"/> Agricultural <input type="checkbox"/> Residential <input type="checkbox"/> Other:	<b>Indicate the dominant type (Check one)</b> <input checked="" type="checkbox"/> Trees <input type="checkbox"/> Shrubs <input type="checkbox"/> Grasses <input type="checkbox"/> Herbaceous <b>Floodplain Width</b> <input type="checkbox"/> Wide > 30ft <input type="checkbox"/> Moderate 15-30ft <input checked="" type="checkbox"/> Narrow <16ft <b>Wetland Present</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Wetland ID</b>
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<b>AQUATIC VEGETATION</b>	<b>Indicate the dominant type and record the dominant species present</b> <input type="checkbox"/> Rooted emergent <input type="checkbox"/> Rooted submergent <input type="checkbox"/> Rooted floating <input type="checkbox"/> Free floating <input type="checkbox"/> Floating algae <input type="checkbox"/> Attached algae
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<b>MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES</b>	Unnamed ephemeral stream. Fed by seep near western edge of corridor, where stream turns intermittent.
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## Stream Photograph Page

Stream ID S-NN12



Photograph Direction North

Date: 08/27/2015

Comments: 2015 stream identification.



Photograph Direction NW

Date: \_\_\_\_\_

Comments: 2019 stream identification confirmation.

<b>STREAM ID</b> S-MN21		<b>STREAM NAME</b> UNT to Mill Creek	
<b>CLIENT</b> MVP		<b>PROJECT NAME</b> MVP	
<b>LAT</b> 37.299442	<b>LONG</b> -80.391223	<b>DATE</b> 05/11/2017	<b>COUNTY</b> Montgomery
<b>INVESTIGATORS</b> S Ryan, K Pulver, H Phelan			
<b>WATER TYPE</b> TNW <input type="checkbox"/> RPW <input checked="" type="checkbox"/> NRPW <input type="checkbox"/>		<b>FLOW REGIME</b> Perennial <input checked="" type="checkbox"/> Intermittent <input type="checkbox"/> Ephemeral <input type="checkbox"/>	

<b>CHANNEL FEATURES</b>	<b>Estimate Measurements</b> Top of Bank Width: <u>7.0</u> ft Top of Bank Height: LB <u>2.0</u> ft RB <u>2.0</u> ft Water Depth: <u>3.00</u> in Water Width: <u>3.0</u> ft Ordinary High Water Mark (Width): <u>5.0</u> ft Ordinary High Water Mark (Height): <u>7.0</u> in Flow Direction: <u>Southwest</u>	<b>Sinuosity</b> ___ Low <input checked="" type="checkbox"/> Medium ___ High <b>Gradient</b> ___ Flat (0.5/100 ft) <input checked="" type="checkbox"/> Moderate (2 ft/100 ft) ___ Severe (10 ft/100 ft) <b>Stream Erosion</b> <input checked="" type="checkbox"/> None ___ Moderate ___ Heavy <b>Artificial, Modified or Channelized</b> ___ Yes <input checked="" type="checkbox"/> No <b>Within Roadside Ditch</b> ___ Yes <input checked="" type="checkbox"/> No <b>Culvert Present</b> ___ Yes <input checked="" type="checkbox"/> No Culvert Material: _____ Culvert Size: _____ in
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<b>FLOW CHARACTERISTICS</b>	<b>Water Present</b> ___ No water, stream bed dry ___ Stream bed moist ___ Standing water <input checked="" type="checkbox"/> Flowing water <b>Velocity</b> ___ Fast <input checked="" type="checkbox"/> Moderate ___ Slow	<b>Proportion of Reach Represented by Stream Morphology Types</b> (Only enter if water present) Riffle 15 % Run 65 % Pool 20 % <b>Turbidity</b> <input checked="" type="checkbox"/> Clear ___ Slightly turbid ___ Turbid ___ Other _____
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INORGANIC SUBSTRATE COMPONENTS (should add up to 100%) <sup>100</sup>			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		10	Detritus	sticks, wood, coarse plant materials (CPOM)	25
Boulder	> 256 mm (10")	10			
Cobble	64-256 mm (2.5"-10")	40	Muck-Mud	black, very fine organic (FPOM)	0
Gravel	2-64 mm (0.1"-2.5")	30			
Sand	0.06-2mm (gritty)	10	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

<b>WATERSHED FEATURES</b>	<b>Predominant Surrounding Landuse</b> <input checked="" type="checkbox"/> Forest ___ Commercial ___ Field/Pasture ___ Industrial ___ Agricultural ___ Residential ___ ROW ___ Other:	<b>Floodplain Width</b> <input checked="" type="checkbox"/> Wide > 30ft ___ Moderate 15-30ft ___ Narrow <15ft
	<b>Canopy Cover</b> ___ Open ___ Partly shaded <input checked="" type="checkbox"/> Shaded	

<b>MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS</b>
Source (seep) observed approx 50 ft outside ROW. Salamanders observed in stream.

# Stream Photograph Page

Stream ID S-MN21

Date: 05/11/2017



Photograph Direction NE

Comments: