STREAM ID S-H24	**STREAM NAME** UNT to Little Jacks Creek
LAT 36.978041 **LONG** -79.681803	**DATE** 04/03/2015
CLIENT MVP	**PROJECT NAME** MVP
INVESTIGATORS A.Stott, A.Grech, H.Heist	
FLOW REGIME Perennial ___ Intermittent ✔ Ephemeral ___	**WATER TYPE** TNW ___ RPW ✔ NRPW ___

CHANNEL FEATURES

Estimate Measurements
Top of Bank Width: 6 ft
Top of Bank Height:
LB 3.0 ft RB 4.0 ft
Water Depth: 3.00 in
Water Width: 4.0 ft
High Water Mark: 2.0 ft
Flow Direction: Northwest

Stream Erosion
___ None ✔ Moderate ___ Heavy

Artificial, Modified or Channelized
✔ Yes ___ No

Dam Present ___ Yes ✔ No

Sinuosity ___ Low ✔ Medium ___ High

Gradient
___ Flat (0.5/100 ft) ✔ Moderate (2 ft/100 ft) ___ Severe (10 ft/100 ft)

FLOW CHARACTERISTICS

Water Present
___ No water, stream bed dry
___ Stream bed moist
___ Standing water
✔ Flowing water

Velocity
___ Fast ✔ Moderate
___ Slow

Proportion of Reach Represented by Stream Morphology Types
Riffle 50 % Run 10 %
Pool 40 %

Turbidity
___ Clear ✔ Slightly turbid ___ Turbid
___ Opaque ___ Stained
___ Other_____

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")	10			
Cobble	64-256 mm (2.5"-10")	5	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	5			
Sand	0.06-2mm (gritty)	70	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	10			
Clay	< 0.004 mm (slick)				

WATERSHED FEATURES

Predominant Surrounding Landuse
___ Forest ___ Commercial
___ Field/Pasture ___ Industrial
___ Agricultural ___ Residential
✔ Other:

Canopy Cover
___ Partly open ___ Partly shaded
___ Shaded ___ Open

Indicate the dominant type (Check one)
___ Trees ___ Shrubs
✔ Grasses ✔ Herbaceous

Floodplain Width
___ Wide > 30ft ___ Moderate 15-30ft
✔ Narrow <16ft

Wetland Present ___ Yes ✔ No
Wetland ID

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
___ Rooted emergent ___ Rooted submergent ___ Rooted floating ___ Free floating
___ Floating algae ___ Attached algae

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

Perennial

Other: power line corridor

Information listed on this form represents the data collected in 2015. The stream was revisited on 11/13/2019. The presence of a stream channel and OHWM was confirmed

Stream Photograph Page

Stream ID S-H24

Photograph Direction East

Date: 04/03/2015

Comments: 2015 stream identification.

Photograph Direction West

Date: 11/13/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-H23	**STREAM NAME** UNT to Little Jacks Creek
LAT 36.976388 **LONG** -79.677544	**DATE** 04/02/2015
CLIENT MVP	**PROJECT NAME** MVP
INVESTIGATORS A.Stott, A.Grech, H.Heist	
FLOW REGIME Perennial ___ Intermittent___ Ephemeral ✔	**WATER TYPE** TNW ___ RPW ___ NRPW ✔

CHANNEL FEATURES

Estimate Measurements
Top of Bank Width: 5 ft
Top of Bank Height:
LB 3.0 in RB 3.0 ft
Water Depth: 0.00 in
Water Width: 0.0 ft
High Water Mark: 3.0 in
Flow Direction: Southwest

Stream Erosion
___None ___Moderate ✔ Heavy

Artificial, Modified or Channelized
___ Yes ✔ No

Dam Present ✔ Yes ___No

Sinuosity ✔ Low ___ Medium ___ High

Gradient
___ Flat (0.5/100 ft) ✔ Moderate (2 ft/100 ft) ___Severe (10 ft/100 ft)

FLOW CHARACTERISTICS

Water Present
✔ No water, stream bed dry
___ Stream bed moist
___ Standing water
___ Flowing water

Velocity
___ Fast ___ Moderate
___ Slow

Proportion of Reach Represented by Stream Morphology Types
Riffle % Run %
Pool %

Turbidity
___ Clear ___Slightly turbid ___Turbid
___ Opaque ___Stained
___Other_____

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)	20
Boulder	> 256 mm (10")				
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")				
Sand	0.06-2mm (gritty)	45	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	10			
Clay	< 0.004 mm (slick)	45			

WATERSHED FEATURES

Predominant Surrounding Landuse
___ Forest ___ Commercial
___ Field/Pasture ___Industrial
___ Agricultural ___ Residential
✔ Other:

Canopy Cover
___Partly open ___Partly shaded
___Shaded ___ Open

Indicate the dominant type (Check one)
___ Trees ___ Shrubs
✔ Grasses ✔ Herbaceous

Floodplain Width
___ Wide > 30ft ___ Moderate 15-30ft
✔ Narrow <16ft

Wetland Present ___Yes ✔ No
Wetland ID

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
___ Rooted emergent ___Rooted submergent ___Rooted floating ___Free floating
___ Floating algae ___Attached algae

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

In power line corridor

Information listed on this form represents the data collected in 2015. The stream was revisited on 11/14/2019. The presence of a stream channel and OHWM was confirmed

Stream Photograph Page

Stream ID S-H23

Photograph Direction NE

Date: 04/02/2015

Comments: 2015 stream identification.

Photograph Direction SW

Date: 11/14/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-HH1	**STREAM NAME** UNT to Turkey Creek
LAT 36.973967 **LONG** -79.674604	**DATE** 08/06/2015
CLIENT MVP	**PROJECT NAME** MVP
INVESTIGATORS S Ryan, D McCullough, S Therkildson	
FLOW REGIME Perennial ___ Intermittent___ Ephemeral ✔	**WATER TYPE** TNW ___ RPW ___ NRPW ✔

CHANNEL FEATURES

Estimate Measurements
Top of Bank Width: 5 ft
Top of Bank Height:
LB 4.0 ft RB 3.0 ft
Water Depth: 0.00 ft
Water Width: 0.0 ft
High Water Mark: 0.0 ft
Flow Direction: Southwest

Stream Erosion
___None ✔ Moderate ___Heavy

Artificial, Modified or Channelized
___ Yes ✔ No

Dam Present ___Yes ✔ No

Sinuosity ___ Low ✔ Medium ___ High

Gradient
___ Flat (0.5/100 ft) ✔ Moderate (2 ft/100 ft) ___Severe (10 ft/100 ft)

FLOW CHARACTERISTICS

Water Present
✔ No water, stream bed dry
___ Stream bed moist
___ Standing water
___ Flowing water

Velocity
___ Fast ___ Moderate
___ Slow

Proportion of Reach Represented by Stream Morphology Types
Riffle % Run %
Pool %

Turbidity
___ Clear ___Slightly turbid ___Turbid
___ Opaque ___Stained
___Other_____

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)	
Boulder	> 256 mm (10")				
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")				
Sand	0.06-2mm (gritty)	30	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	30			
Clay	< 0.004 mm (slick)	40			

WATERSHED FEATURES

Predominant Surrounding Landuse
✔ Forest ___ Commercial
___ Field/Pasture ___Industrial
___ Agricultural ___ Residential
___ Other:

Canopy Cover
✔ Partly open ___Partly shaded
___ Shaded ___ Open

Indicate the dominant type (Check one)
✔ Trees ___ Shrubs
___ Grasses ___ Herbaceous

Floodplain Width
___ Wide > 30ft ✔ Moderate 15-30ft
___ Narrow <16ft

Wetland Present ___Yes ✔ No
Wetland ID

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
___ Rooted emergent ___Rooted submergent ___Rooted floating ___Free floating
___ Floating algae ___Attached algae

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

Shifted centerline

Information listed on this form represents the data collected in 2015. The stream was revisited on 11/14/2019. The presence of a stream channel and OHWM was confirmed.

Stream Photograph Page

Stream ID S-HH1

Photograph Direction SW

Date: 08/06/2015

Comments: 2015 stream identification.

Photograph Direction SW

Date: 11/14/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-A13	**STREAM NAME** Turkey Creek
LAT 36.9735 **LONG** -79.672933	**DATE** 04/02/2015
CLIENT MVP	**PROJECT NAME** MVP
INVESTIGATORS A.Stott, A.Grech, H.Heist	
FLOW REGIME Perennial ___ Intermittent ✔ Ephemeral ___	**WATER TYPE** TNW ___ RPW ✔ NRPW ___

CHANNEL FEATURES

Estimate Measurements
Top of Bank Width: 8 ft
Top of Bank Height:
LB 1.0 ft RB 1.5 ft
Water Depth: 4.00 in
Water Width: 6.0 ft
High Water Mark: 1.0 ft
Flow Direction: Southwest

Stream Erosion
✔ None ___ Moderate ___ Heavy

Artificial, Modified or Channelized
___ Yes ✔ No

Dam Present ___ Yes ✔ No

Sinuosity ___ Low ___ Medium ✔ High

Gradient
___ Flat (0.5/100 ft) ✔ Moderate (2 ft/100 ft) ___ Severe (10 ft/100 ft)

FLOW CHARACTERISTICS

Water Present
___ No water, stream bed dry
___ Stream bed moist
___ Standing water
✔ Flowing water

Velocity
___ Fast ✔ Moderate
___ Slow

Proportion of Reach Represented by Stream Morphology Types
Riffle 30 % Run 40 %
Pool 30 %

Turbidity
✔ Clear ___ Slightly turbid ___ Turbid
___ Opaque ___ Stained
___ Other_____

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)	35
Boulder	> 256 mm (10")	5			
Cobble	64-256 mm (2.5"-10")	40	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	30			
Sand	0.06-2mm (gritty)		Marl	grey, shell fragments	
Silt	0.004-0.06 mm	20			
Clay	< 0.004 mm (slick)	5			

WATERSHED FEATURES

Predominant Surrounding Landuse
✔ Forest ___ Commercial
___ Field/Pasture ___ Industrial
___ Agricultural ___ Residential
___ Other:

Canopy Cover
✔ Partly open ___ Partly shaded
___ Shaded ___ Open

Indicate the dominant type (Check one)
✔ Trees ___ Shrubs
___ Grasses ___ Herbaceous

Floodplain Width
___ Wide > 30ft ___ Moderate 15-30ft
✔ Narrow <16ft

Wetland Present ___ Yes ✔ No
Wetland ID

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
___ Rooted emergent ___ Rooted submergent ___ Rooted floating ___ Free floating
___ Floating algae ___ Attached algae

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

Perennial

Information listed on this form represents the data collected in 2015. The stream was revisited on 11/14/2019. The presence of a stream channel and OHWM was confirmed

Stream Photograph Page

Stream ID S-A13

Photograph Direction SW

Date: 04/02/2015

Comments: 2015 stream identification.

Photograph Direction NE

Date: 11/14/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-A11	**STREAM NAME** UNT to Turkey Creek
LAT 36.973541 **LONG** -79.670164	**DATE** 04/02/2015
CLIENT MVP	**PROJECT NAME** MVP
INVESTIGATORS A.Stott, A.Grech, H.Heist	
FLOW REGIME Perennial ___ Intermittent___ Ephemeral ✔	**WATER TYPE** TNW ___ RPW ___ NRPW ✔

CHANNEL FEATURES

Estimate Measurements
Top of Bank Width: 3 ft
Top of Bank Height:
LB 18.0 in RB 18.0 in
Water Depth: 0.00 in
Water Width: 0.0 ft
High Water Mark: 6.0 in
Flow Direction: North

Stream Erosion
___None ✔ Moderate ___Heavy

Artificial, Modified or Channelized
✔ Yes ___ No

Dam Present ___Yes ✔ No

Sinuosity ___ Low ✔ Medium ___ High

Gradient
___ Flat (0.5/100 ft) ___Moderate (2 ft/100 ft) ✔ Severe (10 ft/100 ft)

FLOW CHARACTERISTICS

Water Present
✔ No water, stream bed dry
___ Stream bed moist
___ Standing water
___ Flowing water

Velocity
___ Fast ___ Moderate
___ Slow

Proportion of Reach Represented by Stream Morphology Types
Riffle % Run %
Pool %

Turbidity
___ Clear ___Slightly turbid ___Turbid
___ Opaque ___Stained
___Other_____

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")				
Cobble	64-256 mm (2.5"-10")	5	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	10			
Sand	0.06-2mm (gritty)	25	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	20			
Clay	< 0.004 mm (slick)	40			

WATERSHED FEATURES

Predominant Surrounding Landuse
___ Forest ___ Commercial
✔ Field/Pasture ___Industrial
___ Agricultural ___ Residential
___ Other:

Canopy Cover
✔ Partly open ___Partly shaded
___ Shaded ___ Open

Indicate the dominant type (Check one)
✔ Trees ___ Shrubs
✔ Grasses ___ Herbaceous

Floodplain Width
___ Wide > 30ft ___ Moderate 15-30ft
✔ Narrow <16ft

Wetland Present ___Yes ✔ No
Wetland ID

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
___ Rooted emergent ___Rooted submergent ___Rooted floating ___Free floating
___ Floating algae ___Attached algae

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

None

Information listed on this form represents the data collected in 2015. The stream was revisited on 11/14/2019. The presence of a stream channel and OHWM was confirmed

Stream Photograph Page

Stream ID S-A11

Photograph Direction NW

Date: 04/02/2015

Comments: 2015 stream identification.

Photograph Direction NW

Date: 11/14/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-H17	**STREAM NAME** Dinner Creek
LAT 36.971983 **LONG** -79.662988	**DATE** 04/02/2015
CLIENT MVP	**PROJECT NAME** MVP
INVESTIGATORS A.Stott, A.Grech, H.Heist	
FLOW REGIME Perennial ___ Intermittent ✔ Ephemeral ___	**WATER TYPE** TNW ___ RPW ✔ NRPW ___

CHANNEL FEATURES	**Estimate Measurements** Top of Bank Width: 8 ft Top of Bank Height: LB 6.0 in RB 6.0 in Water Depth: 3.00 in Water Width: 1.5 ft High Water Mark: ___ ft Flow Direction: South	**Stream Erosion** ___ None ✔ Moderate ___ Heavy **Artificial, Modified or Channelized** ✔ Yes ___ No **Dam Present** ___ Yes ✔ No **Sinuosity** ✔ Low ___ Medium ___ High **Gradient** ___ Flat (0.5/100 ft) ✔ Moderate (2 ft/100 ft) ___ Severe (10 ft/100 ft)
FLOW CHARACTERISTICS	**Water Present** ___ No water, stream bed dry ___ Stream bed moist ✔ Standing water ✔ Flowing water **Velocity** ___ Fast ___ Moderate ✔ Slow	**Proportion of Reach Represented by Stream Morphology Types** Riffle % Run % Pool % **Turbidity** ___ Clear ___ Slightly turbid ✔ Turbid ___ Opaque ___ Stained ___ Other_____

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")	10			
Cobble	64-256 mm (2.5"-10")	5	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")				
Sand	0.06-2mm (gritty)	40	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	45			
Clay	< 0.004 mm (slick)				

WATERSHED FEATURES	**Predominant Surrounding Landuse** ___ Forest ___ Commercial ✔ Field/Pasture ___ Industrial ___ Agricultural ___ Residential ___ Other: **Canopy Cover** ___ Partly open ___ Partly shaded ___ Shaded ___ Open	**Indicate the dominant type (Check one)** ___ Trees ___ Shrubs ✔ Grasses ___ Herbaceous **Floodplain Width** ___ Wide > 30ft ___ Moderate 15-30ft ✔ Narrow <16ft **Wetland Present** ___ Yes ✔ No **Wetland ID**
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** ___ Rooted emergent ___ Rooted submergent ___ Rooted floating ___ Free floating ___ Floating algae ___ Attached algae	

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES	In cow pasture Seep starts in pasture Information listed on this form represents the data collected in 2015. The stream was revisited on 11/13/2019. The presence of a stream channel and OHWM was confirmed

Stream Photograph Page

Stream ID S-H17

Photograph Direction North

Date: 04/02/2015

Comments: 2015 stream identification.

Photograph Direction SW

Date: 11/13/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-A7	**STREAM NAME** UNT to Dinner Creek
LAT 36.97205 **LONG** -79.66246	**DATE** 04/02/2015
CLIENT MVP	**PROJECT NAME** MVP
INVESTIGATORS S.Yarbrough, J. Heule, C.Stoliker	
FLOW REGIME Perennial ✔ Intermittent___ Ephemeral___	**WATER TYPE** TNW ___ RPW ✔ NRPW___

CHANNEL FEATURES

Estimate Measurements
Top of Bank Width: 6 ft
Top of Bank Height:
LB 18.0 in RB 18.0 in
Water Depth: 3.00 in
Water Width: 3.0 ft
High Water Mark: 6.0 ft
Flow Direction: Northwest

Stream Erosion
___None ✔ Moderate ___Heavy

Artificial, Modified or Channelized
✔ Yes ___ No

Dam Present ___Yes ✔ No

Sinuosity ___ Low ✔ Medium ___ High

Gradient
___ Flat (0.5/100 ft) ✔ Moderate (2 ft/100 ft) ___Severe (10 ft/100 ft)

FLOW CHARACTERISTICS

Water Present
___ No water, stream bed dry
___ Stream bed moist
___ Standing water
✔ Flowing water

Velocity
___ Fast ___ Moderate
✔ Slow

Proportion of Reach Represented by Stream Morphology Types
Riffle 60 % Run 30 %
Pool 10 %

Turbidity
___ Clear ✔ Slightly turbid ___Turbid
___ Opaque ___Stained
___Other_____

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)	25
Boulder	> 256 mm (10")	5			
Cobble	64-256 mm (2.5"-10")	40	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	25			
Clay	< 0.004 mm (slick)				

WATERSHED FEATURES

Predominant Surrounding Landuse
___ Forest ___ Commercial
✔ Field/Pasture ___Industrial
___ Agricultural ___ Residential
___ Other:

Canopy Cover
✔ Partly open ___Partly shaded
___ Shaded ___ Open

Indicate the dominant type (Check one)
✔ Trees ___ Shrubs
___ Grasses ___ Herbaceous

Floodplain Width
___ Wide > 30ft ___ Moderate 15-30ft
✔ Narrow <16ft

Wetland Present ___Yes ✔ No
Wetland ID

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
___ Rooted emergent ___Rooted submergent ___Rooted floating ___Free floating
___ Floating algae ___Attached algae

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

None Observed.

Information listed on this form represents the data collected in 2015. The stream was revisited on 11/13/2019. The presence of a stream channel and OHWM was confirmed

Stream Photograph Page

Stream ID S-A7

Photograph Direction SSW

Date: 04/02/2015

Comments: 2015 stream identification.

Photograph Direction SW

Date: 11/13/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-SS8	**STREAM NAME** Polecat Creek
LAT 36.970842 **LONG** -79.657364	**DATE** 09/16/2015
CLIENT MVP	**PROJECT NAME** MVP
INVESTIGATORS L. Canty, E. Foster, A. Carrano	
FLOW REGIME Perennial ✔ Intermittent___ Ephemeral___	**WATER TYPE** TNW ___ RPW ✔ NRPW___

CHANNEL FEATURES

Estimate Measurements
Top of Bank Width: 8 ft
Top of Bank Height:
LB 2.0 ft RB 1.0 ft
Water Depth: 3.00 in
Water Width: 4.0 ft
High Water Mark: 1.0 ft
Flow Direction: South

Stream Erosion
___None ✔ Moderate ___Heavy

Artificial, Modified or Channelized
___ Yes ✔ No

Dam Present ___Yes ✔ No

Sinuosity ___ Low ✔ Medium ✔ High

Gradient
✔ Flat (0.5/100 ft) ___Moderate (2 ft/100 ft) ___Severe (10 ft/100 ft)

FLOW CHARACTERISTICS

Water Present
___ No water, stream bed dry
___ Stream bed moist
___ Standing water
✔ Flowing water

Velocity
___ Fast ___ Moderate
✔ Slow

Proportion of Reach Represented by Stream Morphology Types
Riffle 10 % Run 25 %
Pool 65 %

Turbidity
___ Clear ___Slightly turbid ___Turbid
___ Opaque ✔ Stained
___Other_____

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")				
Cobble	64-256 mm (2.5"-10")	50	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	25			
Sand	0.06-2mm (gritty)	10	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	10			
Clay	< 0.004 mm (slick)	5			

WATERSHED FEATURES

Predominant Surrounding Landuse
___ Forest ___ Commercial
___ Field/Pasture ___Industrial
___ Agricultural ___ Residential
✔ Other: Powerline easement

Canopy Cover
___Partly open ✔ Partly shaded
___ Shaded ___ Open

Indicate the dominant type (Check one)
___ Trees ___ Shrubs
___ Grasses ✔ Herbaceous

Floodplain Width
___ Wide > 30ft ___ Moderate 15-30ft
✔ Narrow <16ft

Wetland Present ___Yes ✔ No
Wetland ID

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
___ Rooted emergent ___Rooted submergent ___Rooted floating ___Free floating
___ Floating algae ___Attached algae

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

Herbs and sedges in stream, weedy and disturbed. Scirpus a, cattail

Information listed on this form represents the data collected in 2015. The stream was revisited on 11/13/2019. The presence of a stream channel and OHWM was confirmed

Stream Photograph Page

Stream ID S-SS8

Photograph Direction _____

Date: 09/16/2015

Comments: 2015 stream identification.

Photograph Direction South

Date: 11/13/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-CD8	**STREAM NAME** UNT to Owens Creek
CLIENT MVP	**PROJECT NAME** MVP
LAT 36.970473 **LONG** -79.653714	**DATE** 04/08/2016 **COUNTY** Franklin
INVESTIGATORS HS,CW,AC	
WATER TYPE TNW ☐ RPW ☑ NRPW ☐	**FLOW REGIME** Perennial ☐ Intermittent ☑ Ephemeral ☐

CHANNEL FEATURES	**Estimate Measurements** Top of Bank Width: 6.5 ft Top of Bank Height: LB 5.0 ft RB 3.0 ft Water Depth: 1.00 in Water Width: 2.5 ft Ordinary High Water Mark (Width): 4.5 ft Ordinary High Water Mark (Height): 9.0 in Flow Direction: South	**Sinuosity** ___ Low ✔ Medium ___ High **Gradient** ___ Flat (0.5/100 ft) ✔ Moderate (2 ft/100 ft) ___ Severe (10 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: Corrugated Metal Culvert Size: 24 in
FLOW CHARACTERISTICS	**Water Present** ___ No water, stream bed dry ___ Stream bed moist ___ Standing water ✔ Flowing water **Velocity** ___ Fast ✔ Moderate ___ Slow	**Proportion of Reach Represented by Stream Morphology Types** (Only enter if water present) Riffle 80 % Run 20 % Pool % **Turbidity** ✔ Clear ___ Slightly turbid ___ Turbid ___ Other_____

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%) 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)	
Boulder	> 256 mm (10")				
Cobble	64-256 mm (2.5"-10")	10	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	25			
Sand	0.06-2mm (gritty)	65	Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

WATERSHED FEATURES	**Predominant Surrounding Landuse** ✔ Forest ___ Commercial ___ Field/Pasture ___ Industrial ___ Agricultural ___ Residential ___ ROW ✔ Other: Electric Line ROW **Canopy Cover** ___ Open ___ Partly shaded ✔ Shaded	**Floodplain Width** ___ Wide > 30ft ___ Moderate 15-30ft ✔ Narrow <15ft

MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS

Starts from seeps on north side of electric transmission line access road at W-CD7

Stream Photograph Page

Stream ID S-CD8 Date: 04/08/2016

Photograph Direction North

Comments:

STREAM ID S-AB8	**STREAM NAME** UNT to Owens Creek
CLIENT MVP	**PROJECT NAME** MVP
LAT 36.970101 **LONG** -79.651305	**DATE** 04/06/2016 **COUNTY** Franklin
INVESTIGATORS J. Hart, A. Larson, T. Woods	
WATER TYPE TNW ☐ RPW ☑ NRPW ☐	**FLOW REGIME** Perennial ☐ Intermittent ☑ Ephemeral ☐

CHANNEL FEATURES

Estimate Measurements
Top of Bank Width: 7.0 ft
Top of Bank Height:
LB 1.5 ft RB 1.5 ft
Water Depth: 3.00 in
Water Width: 2.5 ft
Ordinary High Water Mark (Width): 4.0 ft
Ordinary High Water Mark (Height): 6.0 in
Flow Direction: South

Sinuosity ___ Low ✔ Medium ___ High

Gradient ___ Flat (0.5/100 ft) ✔ Moderate (2 ft/100 ft) ___ Severe (10 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: Corrugated Metal
Culvert Size: 24 in

FLOW CHARACTERISTICS

Water Present
___ No water, stream bed dry
___ Stream bed moist
___ Standing water
✔ Flowing water

Velocity
___ Fast ✔ Moderate
___ Slow

Proportion of Reach Represented by Stream Morphology Types (Only enter if water present)
Riffle 15 % Run 75 %
Pool 10 %

Turbidity
✔ Clear ___ Slightly turbid ___ Turbid
___ Other_____

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%) 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)	35
Boulder	> 256 mm (10")	10			
Cobble	64-256 mm (2.5"-10")	25	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	20			
Sand	0.06-2mm (gritty)	20	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	10			
Clay	< 0.004 mm (slick)	15			

WATERSHED FEATURES

Predominant Surrounding Landuse
✔ Forest ___ Commercial
___ Field/Pasture ___ Industrial
___ Agricultural ___ Residential
___ ROW ___ Other:

Canopy Cover
___ Open ✔ Partly shaded
___ Shaded

Floodplain Width
___ Wide > 30ft ___ Moderate 15-30ft
✔ Narrow <15ft

MACROINVERTEBRATES/OTHER WILDLIFE OBSERVED OR OTHER NOTES AND OBSERVATIONS

Intermittent stream flows into and out of survey corridor. Wetlands W-AB2a-c occur at northern portion. Flowing at time of sampling but likely dries up later in season. Receives hydrologic contributions from S-AB9-11 and also likely from groundwater. Becomes NHD feature just off of corridor to south.

Stream Photograph Page

Stream ID S-AB8 Date: 04/06/2016

Photograph Direction South

Comments:

STREAM ID S-DD3	**STREAM NAME** Owens Creek
LAT 36.968931 **LONG** -79.644923	**DATE** 07/27/2015
CLIENT MVP	**PROJECT NAME** MVP
INVESTIGATORS A Lands, S Kite, L Sexton	
FLOW REGIME Perennial ___ Intermittent ✔ Ephemeral ___	**WATER TYPE** TNW ___ RPW ✔ NRPW ___

CHANNEL FEATURES

Estimate Measurements
Top of Bank Width: 15 ft
Top of Bank Height:
LB 3.0 ft RB 4.0 ft
Water Depth: 7.00 in
Water Width: 8.0 in
High Water Mark: 2.0 ft
Flow Direction: Southwest

Stream Erosion
___ None ✔ Moderate ___ Heavy

Artificial, Modified or Channelized
___ Yes ✔ No

Dam Present ___ Yes ✔ No

Sinuosity ___ Low ✔ Medium ___ High

Gradient
✔ Flat (0.5/100 ft) ___ Moderate (2 ft/100 ft) ___ Severe (10 ft/100 ft)

FLOW CHARACTERISTICS

Water Present
___ No water, stream bed dry
___ Stream bed moist
___ Standing water
✔ Flowing water

Velocity
___ Fast ✔ Moderate
___ Slow

Proportion of Reach Represented by Stream Morphology Types
Riffle 70 % Run 20 %
Pool 10 %

Turbidity
✔ Clear ___ Slightly turbid ___ Turbid
___ Opaque ___ Stained
___ Other_____

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)

Substrate Type	Diameter	% Composition in Sampling Reach
Bedrock		
Boulder	> 256 mm (10")	
Cobble	64-256 mm (2.5"-10")	40
Gravel	2-64 mm (0.1"-2.5")	20
Sand	0.06-2mm (gritty)	10
Silt	0.004-0.06 mm	20
Clay	< 0.004 mm (slick)	10

ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)

Substrate Type	Characteristic	% Composition in Sampling Area
Detritus	sticks, wood, coarse plant materials (CPOM)	20
Muck-Mud	black, very fine organic (FPOM)	
Marl	grey, shell fragments	

WATERSHED FEATURES

Predominant Surrounding Landuse
✔ Forest ___ Commercial
___ Field/Pasture ___ Industrial
___ Agricultural ___ Residential
___ Other:

Canopy Cover
___ Partly open ___ Partly shaded
✔ Shaded ___ Open

Indicate the dominant type (Check one)
✔ Trees ___ Shrubs
___ Grasses ___ Herbaceous

Floodplain Width
___ Wide > 30ft ✔ Moderate 15-30ft
___ Narrow <16ft

Wetland Present ___ Yes ✔ No
Wetland ID

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
___ Rooted emergent ___ Rooted submergent ___ Rooted floating ___ Free floating
___ Floating algae ___ Attached algae

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

Fish, macroinvertebrates, crawfish

Information listed on this form represents the data collected in 2015. The stream was revisited on 11/13/2019. The presence of a stream channel and OHWM was confirmed

Stream Photograph Page

Stream ID S-DD3

Photograph Direction SE

Date: 07/27/2015

Comments: 2015 stream identification.

Photograph Direction SE

Date: 11/13/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-G16	**STREAM NAME** Strawfield Creek
LAT 36.968696 **LONG** -79.64216	**DATE** 04/02/2015
CLIENT MVP	**PROJECT NAME** MVP
INVESTIGATORS G. Stevens, A. Rodrian, S. Kelly	
FLOW REGIME Perennial ___ Intermittent ✔ Ephemeral ___	**WATER TYPE** TNW ___ RPW ✔ NRPW ___

CHANNEL FEATURES

Estimate Measurements
Top of Bank Width: 30 ft
Top of Bank Height:
LB 4.0 ft RB 3.5 ft
Water Depth: 8.00 in
Water Width: 10.0 ft
High Water Mark: 11.0 ft
Flow Direction: South

Stream Erosion
___ None ✔ Moderate ___ Heavy

Artificial, Modified or Channelized
___ Yes ___ No

Dam Present ___ Yes ✔ No

Sinuosity ✔ Low ___ Medium ✔ High

Gradient
✔ Flat (0.5/100 ft) ___ Moderate (2 ft/100 ft) ___ Severe (10 ft/100 ft)

FLOW CHARACTERISTICS

Water Present
___ No water, stream bed dry
___ Stream bed moist
___ Standing water
✔ Flowing water

Velocity
✔ Fast ___ Moderate
___ Slow

Proportion of Reach Represented by Stream Morphology Types
Riffle 40 % Run 30 %
Pool 30 %

Turbidity
✔ Clear ___ Slightly turbid ___ Turbid
___ Opaque ___ Stained
___ Other_____

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)	20
Boulder	> 256 mm (10")	15			
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)	5	Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

WATERSHED FEATURES

Predominant Surrounding Landuse
✔ Forest ___ Commercial
___ Field/Pasture ___ Industrial
___ Agricultural ___ Residential
___ Other:

Canopy Cover
___ Partly open ✔ Partly shaded
___ Shaded ___ Open

Indicate the dominant type (Check one)
✔ Trees ___ Shrubs
___ Grasses ___ Herbaceous

Floodplain Width
___ Wide > 30ft ___ Moderate 15-30ft
✔ Narrow <16ft

Wetland Present ___ Yes ✔ No
Wetland ID None

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
___ Rooted emergent ___ Rooted submergent ___ Rooted floating ___ Free floating
___ Floating algae ___ Attached algae

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

Fish

Information listed on this form represents the data collected in 2015. The stream was revisited on 11/13/2019. The presence of a stream channel and OHWM was confirmed

Stream Photograph Page

Stream ID S-G16

Photograph Direction South

Date: 04/02/2015

Comments: 2015 stream identification.

Photograph Direction South

Date: 11/13/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-G15	**STREAM NAME** UNT to Parrot Branch
LAT 36.967525 **LONG** -79.636469	**DATE** 04/02/2015
CLIENT MVP	**PROJECT NAME** MVP
INVESTIGATORS G. Stevens, A. Rodrian, S. Kelly	
FLOW REGIME Perennial ___ Intermittent ✔ Ephemeral ___	**WATER TYPE** TNW ___ RPW ✔ NRPW ___

CHANNEL FEATURES

Estimate Measurements
Top of Bank Width: 9 ft
Top of Bank Height:
LB 2.0 ft RB 2.0 ft
Water Depth: 3.00 in
Water Width: 2.0 ft
High Water Mark: 2.0 ft
Flow Direction: South

Stream Erosion
___ None ✔ Moderate ___ Heavy

Artificial, Modified or Channelized
___ Yes ___ No

Dam Present ___ Yes ✔ No

Sinuosity ✔ Low ___ Medium ___ High

Gradient
✔ Flat (0.5/100 ft) ___ Moderate (2 ft/100 ft) ___ Severe (10 ft/100 ft)

FLOW CHARACTERISTICS

Water Present
___ No water, stream bed dry
___ Stream bed moist
___ Standing water
✔ Flowing water

Velocity
___ Fast ✔ Moderate
___ Slow

Proportion of Reach Represented by Stream Morphology Types
Riffle 10 % Run 65 %
Pool 25 %

Turbidity
✔ Clear ___ Slightly turbid ___ Turbid
___ Opaque ___ Stained
___ Other_____

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)

Substrate Type	Diameter	% Composition in Sampling Reach
Bedrock		
Boulder	> 256 mm (10")	
Cobble	64-256 mm (2.5"-10")	15
Gravel	2-64 mm (0.1"-2.5")	30
Sand	0.06-2mm (gritty)	30
Silt	0.004-0.06 mm	
Clay	< 0.004 mm (slick)	25

ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)

Substrate Type	Characteristic	% Composition in Sampling Area
Detritus	sticks, wood, coarse plant materials (CPOM)	50
Muck-Mud	black, very fine organic (FPOM)	
Marl	grey, shell fragments	

WATERSHED FEATURES

Predominant Surrounding Landuse
___ Forest ___ Commercial
___ Field/Pasture ___ Industrial
✔ Agricultural ___ Residential
___ Other:

Canopy Cover
___ Partly open ✔ Partly shaded
___ Shaded ___ Open

Indicate the dominant type (Check one)
✔ Trees ___ Shrubs
___ Grasses ___ Herbaceous

Floodplain Width
___ Wide > 30ft ___ Moderate 15-30ft
✔ Narrow <16ft

Wetland Present ✔ Yes ___ No
Wetland ID WB5

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
___ Rooted emergent ___ Rooted submergent ___ Rooted floating ___ Free floating
___ Floating algae ___ Attached algae

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

Information listed on this form represents the data collected in 2015. The stream was revisited on 11/13/2019. The presence of a stream channel and OHWM was confirmed

Stream Photograph Page

Stream ID S-G15

Photograph Direction SSE

Date: 04/02/2015

Comments: 2015 stream identification.

Photograph Direction NW

Date: 11/13/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-G13	**STREAM NAME** Parrot Branch
LAT 36.966989 **LONG** -79.630774	**DATE** 04/02/2015
CLIENT MVP	**PROJECT NAME** MVP
INVESTIGATORS G. Stevens, A. Rodrian, S. Kelly	
FLOW REGIME Perennial ✔ Intermittent___ Ephemeral___	**WATER TYPE** TNW ___ RPW ✔ NRPW___

CHANNEL FEATURES

Estimate Measurements
Top of Bank Width: 8 ft
Top of Bank Height:
LB 6.0 ft RB 4.0 ft
Water Depth: 9.00 in
Water Width: 5.0 ft
High Water Mark: 6.0 ft
Flow Direction: Southeast

Stream Erosion
___None ✔ Moderate ___Heavy

Artificial, Modified or Channelized
___ Yes ___ No

Dam Present ___Yes ___No

Sinuosity ___ Low ✔ Medium ___ High

Gradient
✔ Flat (0.5/100 ft) ___Moderate (2 ft/100 ft) ___Severe (10 ft/100 ft)

FLOW CHARACTERISTICS

Water Present
___ No water, stream bed dry
___ Stream bed moist
___ Standing water
✔ Flowing water

Velocity
___ Fast ✔ Moderate
___ Slow

Proportion of Reach Represented by Stream Morphology Types
Riffle 30 % Run 40 %
Pool 30 %

Turbidity
✔ Clear ___Slightly turbid ___Turbid
___ Opaque ___Stained
___Other_____

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)

Substrate Type	Diameter	% Composition in Sampling Reach
Bedrock		5
Boulder	> 256 mm (10")	20
Cobble	64-256 mm (2.5"-10")	30
Gravel	2-64 mm (0.1"-2.5")	25
Sand	0.06-2mm (gritty)	15
Silt	0.004-0.06 mm	
Clay	< 0.004 mm (slick)	5

ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)

Substrate Type	Characteristic	% Composition in Sampling Area
Detritus	sticks, wood, coarse plant materials (CPOM)	15
Muck-Mud	black, very fine organic (FPOM)	
Marl	grey, shell fragments	

WATERSHED FEATURES

Predominant Surrounding Landuse
✔ Forest ___ Commercial
___ Field/Pasture ___Industrial
___ Agricultural ___ Residential
___ Other:

Canopy Cover
✔ Partly open ___Partly shaded
___ Shaded ___ Open

Indicate the dominant type (Check one)
✔ Trees ___ Shrubs
___ Grasses ___ Herbaceous

Floodplain Width
___ Wide > 30ft ___ Moderate 15-30ft
✔ Narrow <16ft

Wetland Present ___Yes ___No
Wetland ID None

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
___ Rooted emergent ___Rooted submergent ___Rooted floating ___Free floating
___ Floating algae ___Attached algae

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

Fish observed

Information listed on this form represents the data collected in 2015. The stream was revisited on 11/13/2019. The presence of a stream channel and OHWM was confirmed

Stream Photograph Page

Stream ID S-G13

Photograph Direction SSW

Date: 04/02/2015

Comments: 2015 stream identification.

Photograph Direction SW

Date: 11/13/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-D3	**STREAM NAME** Jonnikin Creek
LAT 36.965587 **LONG** -79.605521	**DATE** 04/02/2015
PROJECT NAME MVP	**CLIENT** MVP
INVESTIGATORS A. Bensted, J. Kraus, A. Larson	
FLOW REGIME ✔ Perennial Intermittent Ephemeral	**WATER TYPE** TNW ✔ RPW NRPW

CHANNEL FEATURES	**Estimate Measurements** Top of Bank Width: 10 ft Top of Bank Height: LB 1 ft RB 2 ft Water Depth: 1.50 ft Water Width: 9 ft High Water Mark: 24 in	**Stream Erosion** __ None ✔ Moderate __ Heavy **Artificial, Modified or Channelized** __ Yes ✔ No **Dam Present** __ Yes ✔ No **Sinuosity** __ Low __ Medium ✔ High **Gradient** ✔ Flat (0.5/100 ft) __ Moderate (2 ft/100 ft) __ Severe (10 ft/100 ft)
FLOW CHARACTERISTICS	**Water Present** __ No water, stream bed dry __ Stream bed moist __ Standing water ✔ Flowing water **Velocity** __ Fast ✔ Moderate __ Slow	**Proportion of Reach Represented by Stream Morphology Types** Riffle 25 % Run 50 % Pool 25 % **Turbidity** ✔ Clear __ Slightly turbid __ Turbid __ Opaque __ Stained __ Other_____

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)	20
Boulder	> 256 mm (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)	25	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	25			
Clay	< 0.004 mm (slick)				

WATERSHED FEATURES	**Predominant Surrounding Landuse** ✔ Forest __ Commercial __ Field/Pasture __ Industrial __ Agricultural __ Residential __ Other: **Canopy Cover** ✔ Partly open __ Partly shaded __ Open __ Shaded	**Indicate the dominant type** ✔ Trees __ Shrubs __ Grasses __ Herbaceous **Floodplain Width** ✔ Wide > 30ft __ Moderate 15-30ft __ Narrow <16ft **Wetland Present** __ Yes ✔ No **Wetland ID**
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** __ Rooted emergent __ Rooted submergent __ Rooted floating __ Free floating __ Floating algae ✔ Attached algae	

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES	Perennial, fish observed. Green algae in stream. Information listed on this form represents the data collected in 2015. The stream was revisited on 11/15/2019. The presence of a stream channel and OHWM was confirmed

Stream Photograph Page

Stream ID S-D3

Photograph Direction SSE

Date: 04/02/2015

Comments: 2015 stream identification.

Photograph Direction North

Date: 11/15/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-D4	**STREAM NAME** UNT to Jonnikin Creek
LAT 36.965589 **LONG** -79.604917	**DATE** 04/02/2015
PROJECT NAME MVP	**CLIENT** MVP
INVESTIGATORS A. Bensted, J. Kraus, A. Larson	
FLOW REGIME Perennial Intermittent ✔ Ephemeral	**WATER TYPE** TNW ✔ RPW NRPW

CHANNEL FEATURES

Estimate Measurements
Top of Bank Width: 6 ft
Top of Bank Height:
LB 2 ft RB 2 ft
Water Depth: 1.00 in
Water Width: 2 ft
High Water Mark: 36 in

Stream Erosion
__ None __ Moderate ✔ Heavy

Artificial, Modified or Channelized
__ Yes ✔ No

Dam Present __ Yes ✔ No

Sinuosity __ Low ✔ Medium __ High

Gradient
__ Flat (0.5/100 ft) __ Moderate (2 ft/100 ft) ✔ Severe (10 ft/100 ft)

FLOW CHARACTERISTICS

Water Present
__ No water, stream bed dry
__ Stream bed moist
✔ Standing water
__ Flowing water

Velocity
__ Fast __ Moderate
✔ Slow

Proportion of Reach Represented by Stream Morphology Types
Riffle % Run %
Pool 5 %

Turbidity
__ Clear __ Slightly turbid __ Turbid
__ Opaque ✔ Stained
__ Other_____

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)	90
Boulder	> 256 mm (10")				
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	15			
Sand	0.06-2mm (gritty)	30	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	55			
Clay	< 0.004 mm (slick)				

WATERSHED FEATURES

Predominant Surrounding Landuse
✔ Forest __ Commercial
__ Field/Pasture __ Industrial
__ Agricultural __ Residential
__ Other:

Canopy Cover
__ Partly open ✔ Partly shaded
__ Open __ Shaded

Indicate the dominant type
✔ Trees __ Shrubs
__ Grasses __ Herbaceous

Floodplain Width
__ Wide > 30ft ✔ Moderate 15-30ft
__ Narrow <16ft

Wetland Present __ Yes ✔ No
Wetland ID

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
__ Rooted emergent __ Rooted submergent __ Rooted floating __ Free floating
__ Floating algae __ Attached algae

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

Stream starts as ephemeral and becomes intermittent before its confluence with S-D3. Stream flows out of recent clearcut.

Information listed on this form represents the data collected in 2015. The stream was revisited on 11/15/2019. The presence of a stream channel and OHWM was confirmed

Stream Photograph Page

Stream ID S-D4

Photograph Direction SSW

Date: 04/02/2015

Comments: 2015 stream identification.

Photograph Direction SW

Date: 11/15/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-D2	**STREAM NAME** UNT to Jonnikin Creek
LAT 36.965381 **LONG** -79.599135	**DATE** 04/02/2015
PROJECT NAME MVP	**CLIENT** MVP
INVESTIGATORS A. Bensted, J. Kraus, A. Larson	
FLOW REGIME ✔ Perennial Intermittent Ephemeral	**WATER TYPE** TNW ✔ RPW NRPW

CHANNEL FEATURES	**Estimate Measurements** Top of Bank Width: 18 ft Top of Bank Height: LB 4 ft RB 5 ft Water Depth: 5.00 in Water Width: 13 ft High Water Mark: 6 in	**Stream Erosion** __ None __ Moderate ✔ Heavy **Artificial, Modified or Channelized** __ Yes ✔ No **Dam Present** __ Yes ✔ No **Sinuosity** __ Low __ Medium ✔ High **Gradient** ✔ Flat (0.5/100 ft) __ Moderate (2 ft/100 ft) __ Severe (10 ft/100 ft)
FLOW CHARACTERISTICS	**Water Present** __ No water, stream bed dry __ Stream bed moist __ Standing water ✔ Flowing water **Velocity** __ Fast ✔ Moderate __ Slow	**Proportion of Reach Represented by Stream Morphology Types** Riffle 35 % Run 35 % Pool 35 % **Turbidity** ✔ Clear __ Slightly turbid __ Turbid __ Opaque __ Stained __ Other_____

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)	25
Boulder	> 256 mm (10")				
Cobble	64-256 mm (2.5"-10")	25	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")	25			
Sand	0.06-2mm (gritty)	50	Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

WATERSHED FEATURES	**Predominant Surrounding Landuse** ✔ Forest __ Commercial __ Field/Pasture __ Industrial __ Agricultural __ Residential __ Other: **Canopy Cover** ✔ Partly open __ Partly shaded __ Open __ Shaded	**Indicate the dominant type** ✔ Trees __ Shrubs __ Grasses __ Herbaceous **Floodplain Width** ✔ Wide > 30ft __ Moderate 15-30ft __ Narrow <16ft **Wetland Present** __ Yes ✔ No **Wetland ID**
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** __ Rooted emergent __ Rooted submergent __ Rooted floating __ Free floating __ Floating algae __ Attached algae	

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES	Perennial. Small fish, frog, and water strider observed. Slope wetland near but not directly abutting stream (W-D3). Information listed on this form represents the data collected in 2015. The stream was revisited on 11/15/2019. The presence of a stream channel and OHWM was confirmed

Stream Photograph Page

Stream ID S-D2

Photograph Direction South

Date: 04/02/2015

Comments: 2015 stream identification.

Photograph Direction North

Date: 11/15/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-D7	**STREAM NAME** UNT to Jonnikin Creek
LAT 36.964732 **LONG** -79.617036	**DATE** 04/02/2015
PROJECT NAME MVP	**CLIENT** MVP
INVESTIGATORS A. Bensted, J. Kraus, A. Larson	
FLOW REGIME Perennial Intermittent ✔ Ephemeral	**WATER TYPE** TNW ✔ RPW NRPW

CHANNEL FEATURES

Estimate Measurements
Top of Bank Width: 8 ft
Top of Bank Height:
LB 3 ft RB 3 ft
Water Depth: 1.00 in
Water Width: 1 ft
High Water Mark: 1 ft

Stream Erosion
__ None __ Moderate ✔ Heavy

Artificial, Modified or Channelized
__ Yes ✔ No

Dam Present __ Yes ✔ No

Sinuosity __ Low ✔ Medium __ High

Gradient
__ Flat (0.5/100 ft) ✔ Moderate (2 ft/100 ft) __ Severe (10 ft/100 ft)

FLOW CHARACTERISTICS

Water Present
__ No water, stream bed dry
__ Stream bed moist
__ Standing water
✔ Flowing water

Velocity
__ Fast __ Moderate
✔ Slow

Proportion of Reach Represented by Stream Morphology Types
Riffle 80 % Run %
Pool 20 %

Turbidity
✔ Clear __ Slightly turbid __ Turbid
__ Opaque __ Stained
__ Other_____

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)	15
Boulder	> 256 mm (10")				
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)	40			

WATERSHED FEATURES

Predominant Surrounding Landuse
__ Forest __ Commercial
✔ Field/Pasture __ Industrial
__ Agricultural __ Residential
__ Other:

Canopy Cover
__ Partly open ✔ Partly shaded
__ Open __ Shaded

Indicate the dominant type
__ Trees __ Shrubs
✔ Grasses __ Herbaceous

Floodplain Width
__ Wide > 30ft ✔ Moderate 15-30ft
__ Narrow <16ft

Wetland Present __ Yes ✔ No
Wetland ID

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
__ Rooted emergent __ Rooted submergent __ Rooted floating __ Free floating
__ Floating algae __ Attached algae

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

Intermittent flow. Small area with Lonicera japonica (FAC) and hydric soil near headwaters, but within ordinary high so not mapped. Stream heavily trampled by cattle.

Information listed on this form represents the data collected in 2015. The stream was revisited on 11/13/2019. The presence of a stream channel and OHWM was confirmed.

Stream Photograph Page

Stream ID S-D7

Photograph Direction North

Date: 04/02/2015

Comments: 2015 stream identification.

Photograph Direction North

Date: 11/13/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-D1 EPH	**STREAM NAME** UNT to Jonnikin Creek
LAT 36.964405 **LONG** -79.595782	**DATE** 04/02/2015
PROJECT NAME MVP	**CLIENT** MVP
INVESTIGATORS A. Bensted, J. Kraus, A. Larson	
FLOW REGIME Perennial Intermittent ✔ Ephemeral	**WATER TYPE** TNW RPW ✔ NRPW

CHANNEL FEATURES

Estimate Measurements
Top of Bank Width: 10 ft
Top of Bank Height:
LB 7 ft RB 7 ft
Water Depth: 1.00 in
Water Width: 1 ft
High Water Mark: 24 in

Stream Erosion
__ None __ Moderate ✔ Heavy

Artificial, Modified or Channelized
__ Yes ✔ No

Dam Present __ Yes ✔ No

Sinuosity __ Low ✔ Medium __ High

Gradient
__ Flat (0.5/100 ft) ✔ Moderate (2 ft/100 ft) __ Severe (10 ft/100 ft)

FLOW CHARACTERISTICS

Water Present
__ No water, stream bed dry
__ Stream bed moist
✔ Standing water
__ Flowing water

Velocity
__ Fast __ Moderate
__ Slow

Proportion of Reach Represented by Stream Morphology Types
Riffle 20 % Run %
Pool 20 %

Turbidity
__ Clear __ Slightly turbid __ Turbid
__ Opaque ✔ Stained
__ Other_____

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)	50
Boulder	> 256 mm (10")				
Cobble	64-256 mm (2.5"-10")	5	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")				
Sand	0.06-2mm (gritty)	45	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	40			
Clay	< 0.004 mm (slick)	10			

WATERSHED FEATURES

Predominant Surrounding Landuse
✔ Forest __ Commercial
✔ Field/Pasture __ Industrial
__ Agricultural __ Residential
__ Other:

Canopy Cover
✔ Partly open __ Partly shaded
__ Open __ Shaded

Indicate the dominant type
✔ Trees __ Shrubs
✔ Grasses __ Herbaceous

Floodplain Width
__ Wide > 30ft __ Moderate 15-30ft
✔ Narrow <16ft

Wetland Present __ Yes ✔ No
Wetland ID

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
__ Rooted emergent __ Rooted submergent __ Rooted floating __ Free floating
__ Floating algae __ Attached algae

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

Stream is ephemeral then turns intermittent at location of groundwater inout. A few small pools of standing water are in ephemeral reach, intermittent flow starts downstream of centerline.

Information listed on this form represents the data collected in 2015. The stream was revisited on 11/14/2019. The presence of a stream channel and OHWM was confirmed

Stream Photograph Page

Stream ID S-D1 EPH

Photograph Direction ENE

Date: 04/02/2015

Comments: 2015 stream identification.

Photograph Direction NW

Date: 11/14/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-D1 INT	**STREAM NAME** UNT to Jonnikin Creek
LAT 36.964405 **LONG** -79.595782	**DATE** 04/02/2015
PROJECT NAME MVP	**CLIENT** MVP
INVESTIGATORS A. Bensted, J. Kraus, A. Larson	
FLOW REGIME Perennial ✔ Intermittent Ephemeral	**WATER TYPE** TNW ✔ RPW NRPW

CHANNEL FEATURES	**Estimate Measurements** Top of Bank Width: 10 ft Top of Bank Height: LB 7 ft RB 7 ft Water Depth: 1.00 in Water Width: 1 ft High Water Mark: 24 in	**Stream Erosion** __ None __ Moderate ✔ Heavy **Artificial, Modified or Channelized** __ Yes ✔ No **Dam Present** __ Yes ✔ No **Sinuosity** __ Low ✔ Medium __ High **Gradient** __ Flat (0.5/100 ft) ✔ Moderate (2 ft/100 ft) __ Severe (10 ft/100 ft)
FLOW CHARACTERISTICS	**Water Present** __ No water, stream bed dry __ Stream bed moist ✔ Standing water __ Flowing water **Velocity** __ Fast __ Moderate __ Slow	**Proportion of Reach Represented by Stream Morphology Types** Riffle 20 % Run % Pool 20 % **Turbidity** __ Clear __ Slightly turbid __ Turbid __ Opaque ✔ Stained __ Other_____

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)	50
Boulder	> 256 mm (10")				
Cobble	64-256 mm (2.5"-10")	5	Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")				
Sand	0.06-2mm (gritty)	45	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	40			
Clay	< 0.004 mm (slick)	10			

WATERSHED FEATURES	**Predominant Surrounding Landuse** ✔ Forest __ Commercial ✔ Field/Pasture __ Industrial __ Agricultural __ Residential __ Other: **Canopy Cover** ✔ Partly open __ Partly shaded __ Open __ Shaded	**Indicate the dominant type** ✔ Trees __ Shrubs ✔ Grasses __ Herbaceous **Floodplain Width** __ Wide > 30ft __ Moderate 15-30ft ✔ Narrow <16ft **Wetland Present** __ Yes ✔ No **Wetland ID**
AQUATIC VEGETATION	**Indicate the dominant type and record the dominant species present** __ Rooted emergent __ Rooted submergent __ Rooted floating __ Free floating __ Floating algae __ Attached algae	

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES	Stream is ephemeral then turns intermittent at location of groundwater inout. A few small pools of standing water are in ephemeral reach, intermittent flow starts downstream of centerline. Information listed on this form represents the data collected in 2015. The stream was revisited on 11/14/2019. The presence of a stream channel and OHWM was confirmed

Stream Photograph Page

Stream ID S-D1 INT

Photograph Direction ENE

Date: 04/02/2015

Comments: 2015 stream identification.

Photograph Direction SW

Date: 11/14/2019

Comments: 2019 stream identification confirmation.

STREAM ID S-G11	**STREAM NAME** UNT to Jonnikin Creek
LAT 36.962589 **LONG** -79.590296	**DATE** 04/02/2015
PROJECT NAME MVP	**CLIENT** MVP
INVESTIGATORS G. Stevens, A. Rodrian, S. Kelly	
FLOW REGIME Perennial ✔ Intermittent Ephemeral	**WATER TYPE** TNW ✔ RPW NRPW

CHANNEL FEATURES

Estimate Measurements
Top of Bank Width: 6 ft
Top of Bank Height:
LB 6 ft RB 6 ft
Water Depth: 3.00 in
Water Width: 3 ft
High Water Mark: 48 in

Stream Erosion
___None ✔ Moderate ___Heavy

Artificial, Modified or Channelized
___ Yes ___ No

Dam Present ___Yes ___No

Sinuosity ✔ Low ___ Medium ___ High

Gradient
✔ Flat (0.5/100 ft) ___Moderate (2 ft/100 ft) ___Severe (10 ft/100 ft)

FLOW CHARACTERISTICS

Water Present
___ No water, stream bed dry
___ Stream bed moist
___ Standing water
✔ Flowing water

Velocity
___ Fast ___ Moderate
✔ Slow

Proportion of Reach Represented by Stream Morphology Types
Riffle 10 % Run 70 %
Pool 10 %

Turbidity
✔ Clear ___Slightly turbid ___Turbid
___ Opaque ___Stained
___Other_____

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)	70
Boulder	> 256 mm (10")	5			
Cobble	64-256 mm (2.5"-10")	20	Muck-Mud	black, very fine organic (FPOM)	0
Gravel	2-64 mm (0.1"-2.5")	50			
Sand	0.06-2mm (gritty)	15	Marl	grey, shell fragments	0
Silt	0.004-0.06 mm	0			
Clay	< 0.004 mm (slick)	10			

WATERSHED FEATURES

Predominant Surrounding Landuse
✔ Forest ___ Commercial
___ Field/Pasture ___Industrial
___ Agricultural ___ Residential
___ Other:

Canopy Cover
___Partly open ___Partly shaded
✔ Shaded

Indicate the dominant type
✔ Trees ___ Shrubs
___ Grasses ___ Herbaceous

Floodplain Width
___ Wide > 30ft ___ Moderate 15-30ft
✔ Narrow <16ft

Wetland Present ___Yes ___No
Wetland ID None

AQUATIC VEGETATION

Indicate the dominant type and record the dominant species present
___ Rooted emergent ___Rooted submergent ___Rooted floating ___Free floating
___ Floating algae ___Attached algae

MACROINVERTEBRATES OR OTHER WILDLIFE OBSERVED/OTHER OBSERVATIONS AND NOTES

None, has tributary SG12

Information listed on this form represents the data collected in 2015. The stream was revisited on 11/14/2019. The presence of a stream channel and OHWM was confirmed

Stream Photograph Page

Stream ID S-G11

Photograph Direction North

Date: 04/02/2015

Comments: 2015 stream identification.

Photograph Direction SW

Date: 11/14/2019

Comments: 2019 stream identification confirmation.