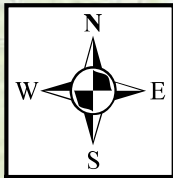


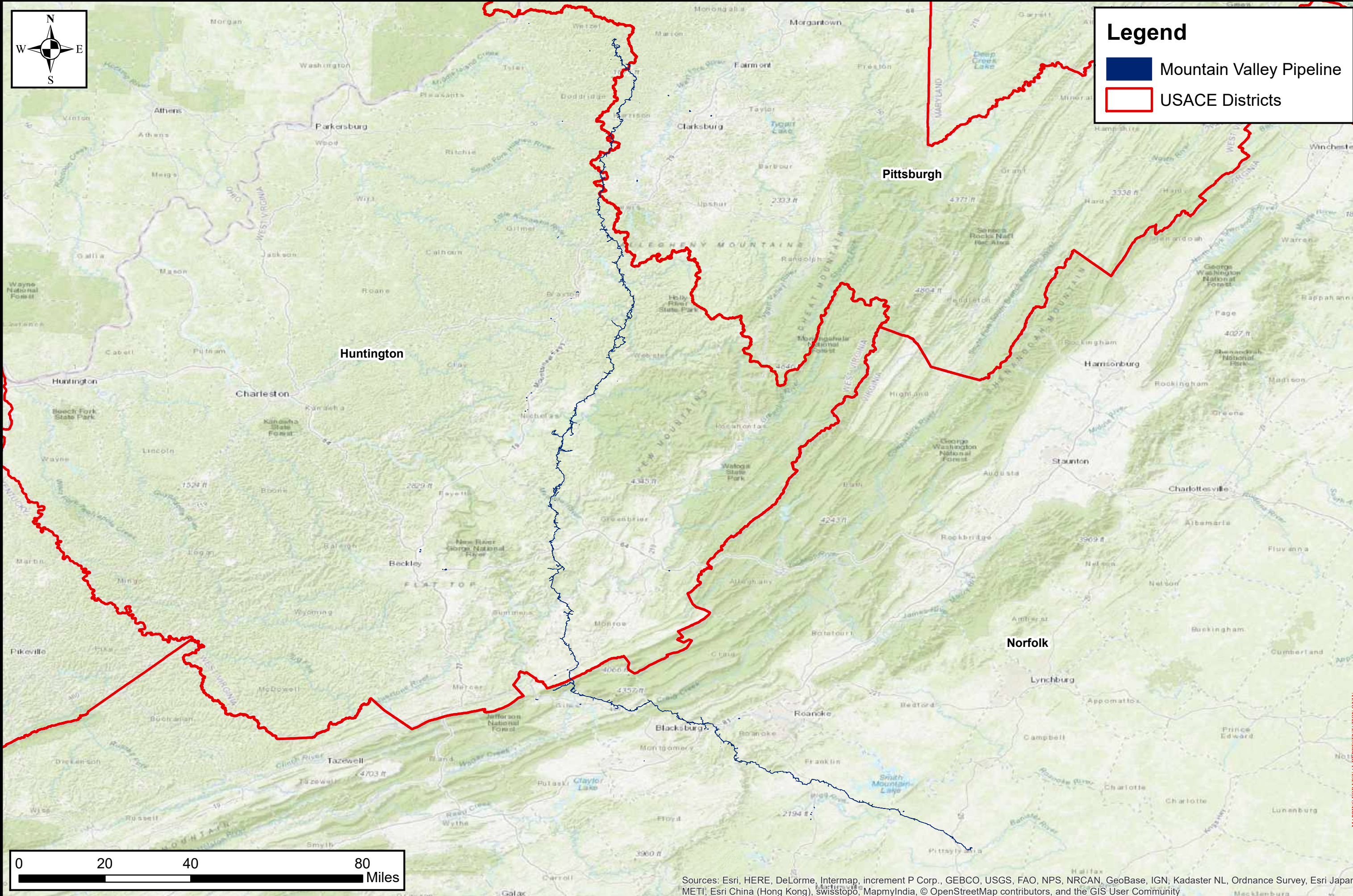
APPENDIX A



Legend

Mountain Valley Pipeline

USACE Districts



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

DRAWN: KBW

CHECKED: JLY

APPROVED: JLY

SCALE: 1" = 1 Mile

DATE: September 2021

PN: 000-17-0451.016

Potesta & Associates, Inc.

ENGINEERS AND ENVIRONMENTAL CONSULTANTS

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POTESTA

MOUNTAIN VALLEY PIPELINE, LLC

2200 Energy Drive, 2nd Floor

Canonsburg, PA 15317

Cumulative Impact Assessment Report

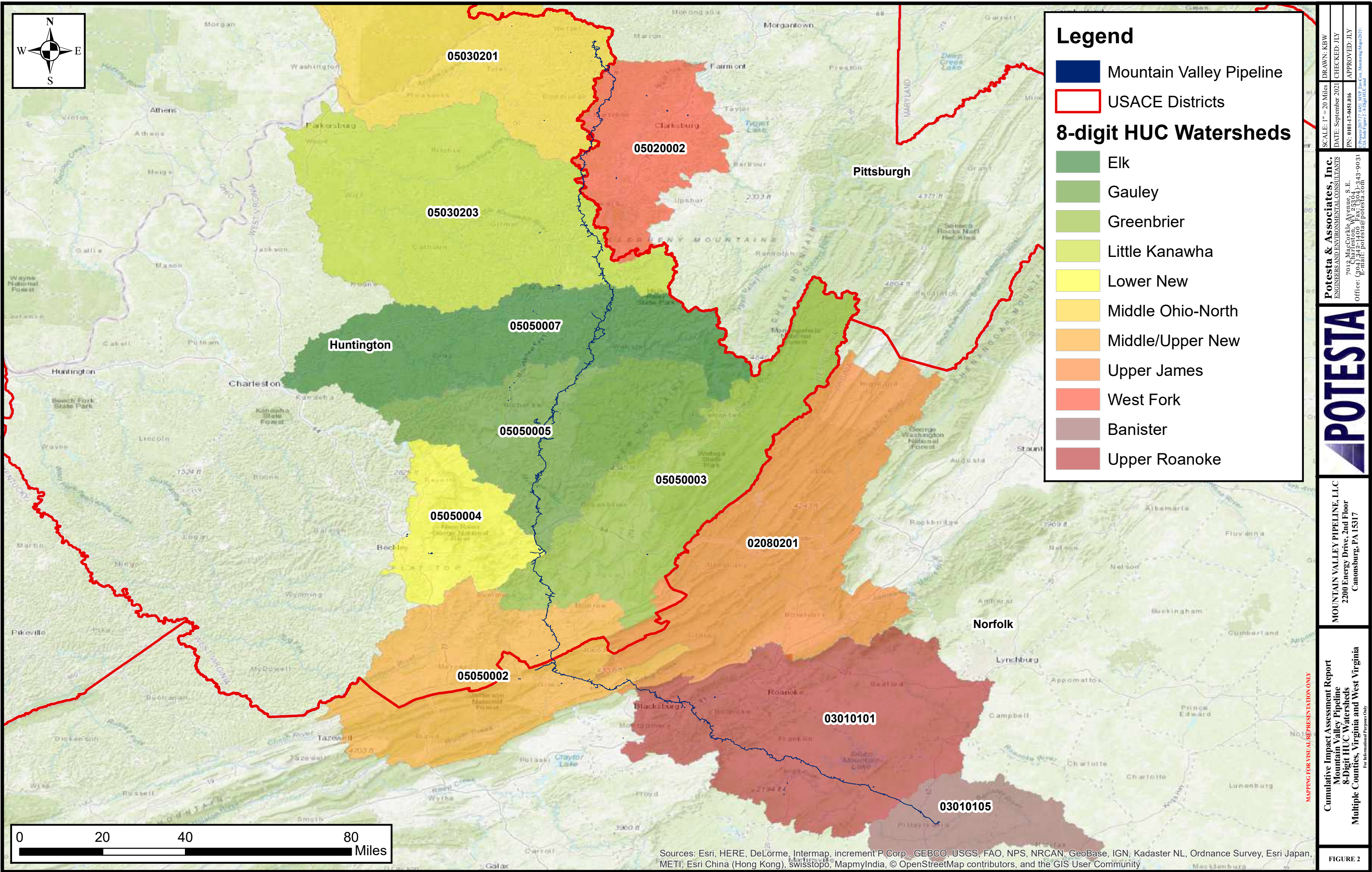
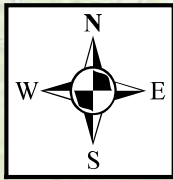
Mountain Valley Pipeline

Location Map

Multiple Counties, Virginia and West Virginia

For Informational Purposes Only

FIGURE 1



Legend

Mountain Valley Pipeline

USACE Districts

8-digit HUC Watersheds

Elk

Gauley

Greenbrier

Little Kanawha

Lower New

Middle Ohio-North

Middle/Upper New

Upper James

West Fork

Banister

Upper Roanoke

DRAWN: KBW

CHECKED: JLY

APPROVED: JLY

SCALE: 1" = 20 Miles

DATE: September 2021

PN: 001-17-0451.016

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Canonsburg, PA 15317

Cumulative Impact Assessment Report
Mountain Valley Pipeline
8-Digit HUC Watersheds
Multiple Counties, Virginia and West Virginia

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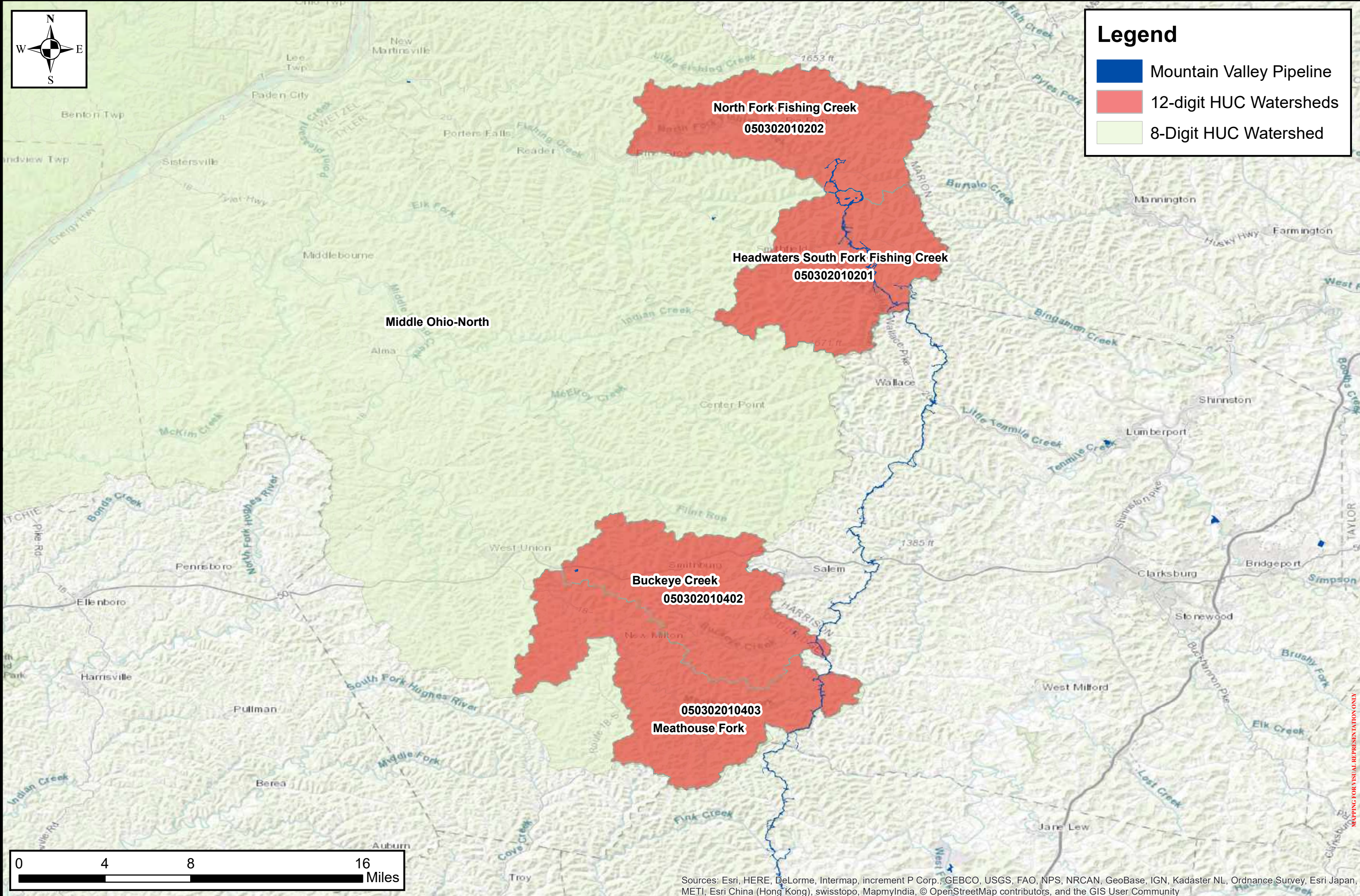
FIGURE 2

Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community



Legend

- Mountain Valley Pipeline
- 12-digit HUC Watersheds
- 8-Digit HUC Watershed



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

DRAWN: JLY
CHECKED: JLY
DATE: September 2021
PN: 000-17-0451.016
APPROVED: JLY
APPROVED: JLY

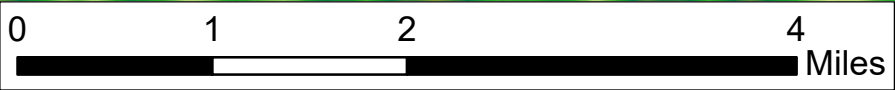
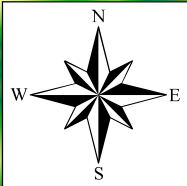
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, West Virginia 25304
Office: (304) 253-0304
E-mail: potesta@potesta.com



MOUNTAIN VALLEY PIPELINE, LLC
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Canonsburg, PA 15317

Cumulative Impact Assessment Report
Middle Ohio-North Watershed
12-Digit HUC Watersheds
Multiple Counties, West Virginia

FIGURE 3



Legend

050302010202 North Fork Fishing Creek Watershed

North Fork Fishing Creek Total Stream - 1,586,148 Linear Feet

Mountain Valley Pipeline North Fork Fishing Creek

DEM

Value

High : 4479 ft

Low : 285 ft

Total Impacts - 937 Linear Feet (0.0591%)

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Charleston, WV 25304
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E-mail: potesta@potesta.com

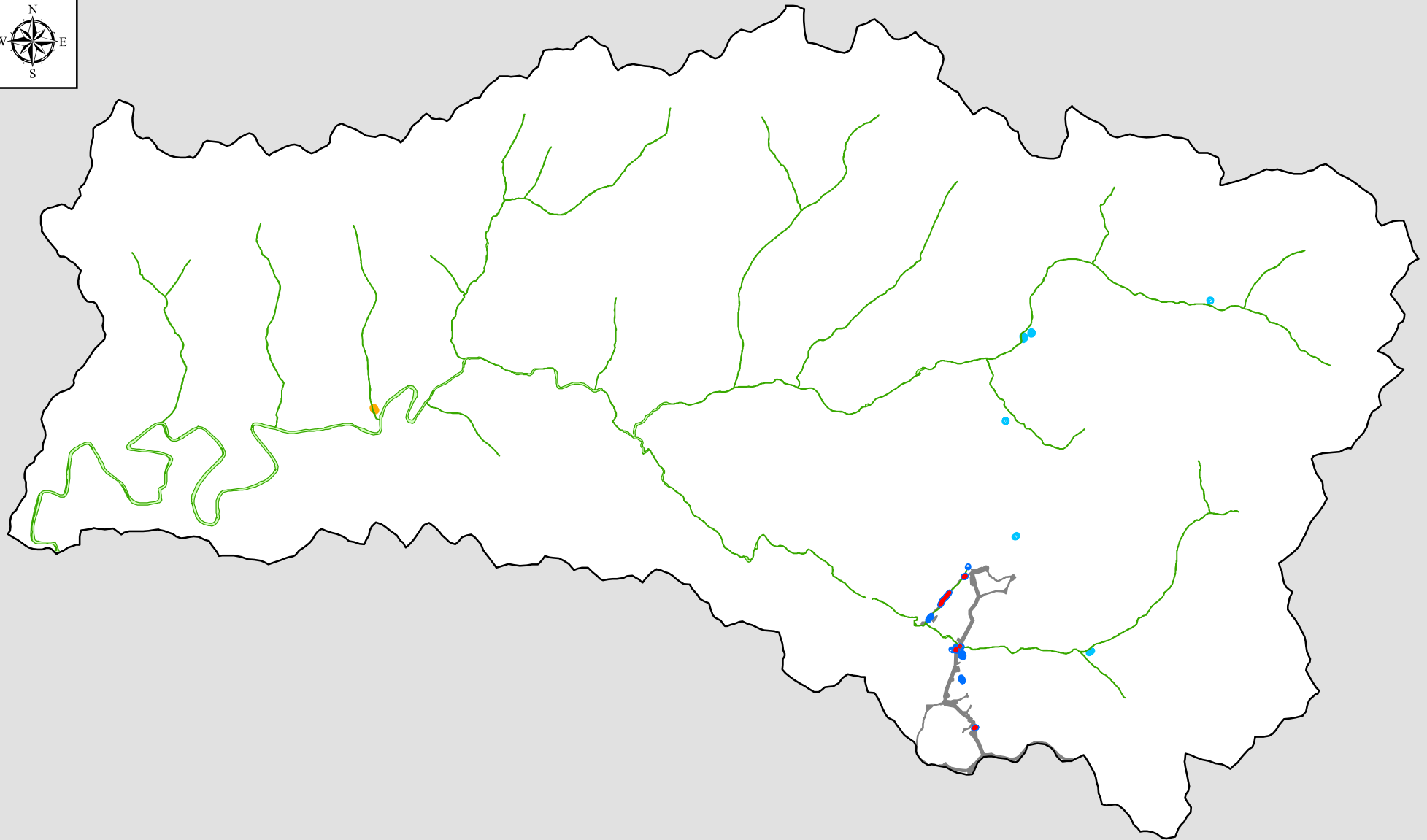
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
North Fork Fishing Creek Watershed (050302010202)
Middle Ohio-North HUC 8 Watershed, West Virginia

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Canonsburg, PA 15317

SCALE: 1" = 1 Mile
DATE: AUGUST 2021
DRAWN: KBW
CHECKED: JLY
PN: 001-174451.06
APPROVED: JLY
E:\Projects\2017_0821_MVP_EngCom_Monitoring\Map\2021_CIAReport\Figure 4 - North Fork Fishing Creek.mxd

FIGURE 4



North Fork Fishing Creek

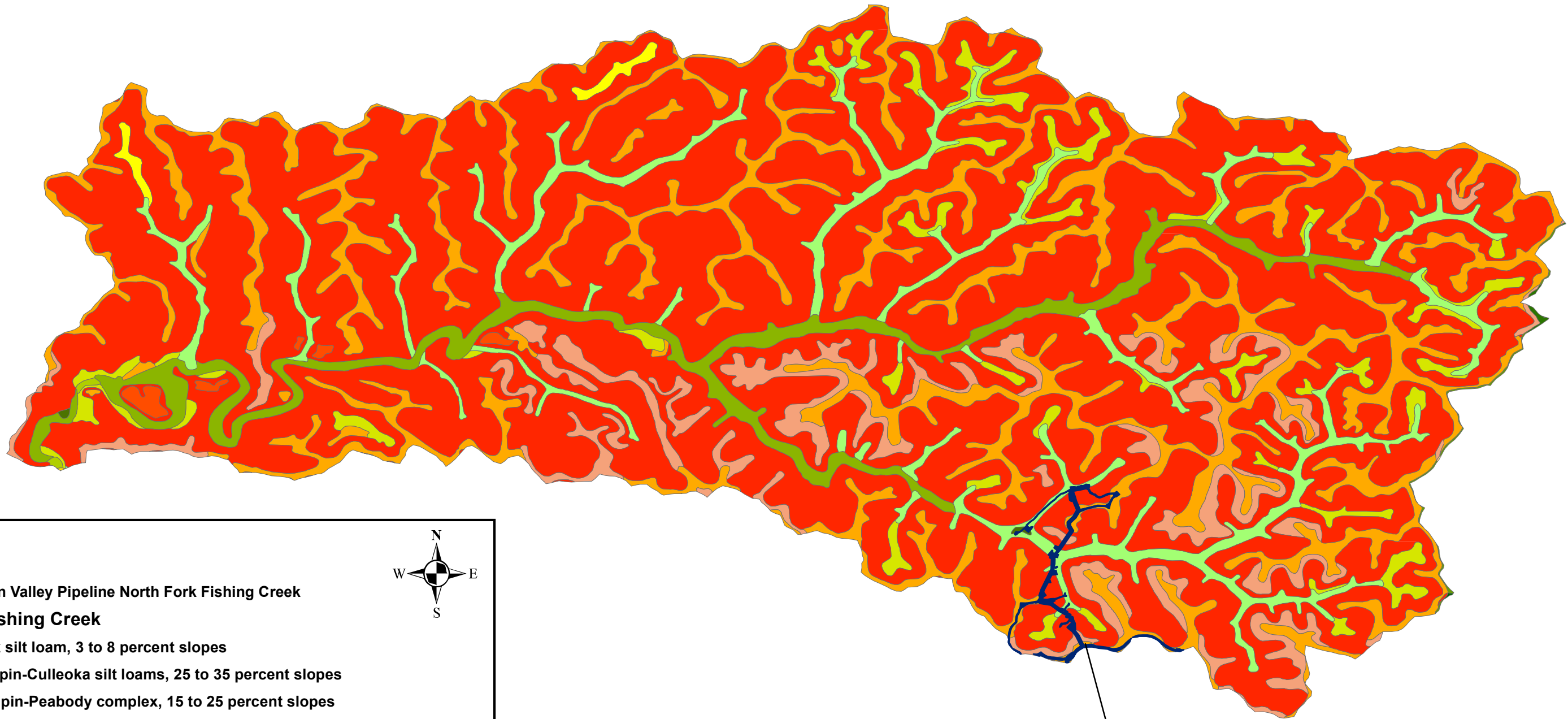
Figure 5

1:70,000

LEGEND

- Wetland Impacts - 0.3 acres
- North Fork Fishing Creek Delineated Wetland Area - 0.79 acres
- NWI Wetlands - 225.23 acres
- Freshwater Emergent Wetland - 0.35 acres
- Freshwater Pond - 0.91 acres
- Riverine - 223.97 acres
- Mountain Valley Pipeline
- 050302010202_North Fork Fishing Creek

Note: Shapes are not to scale, enlarged to improve visibility.

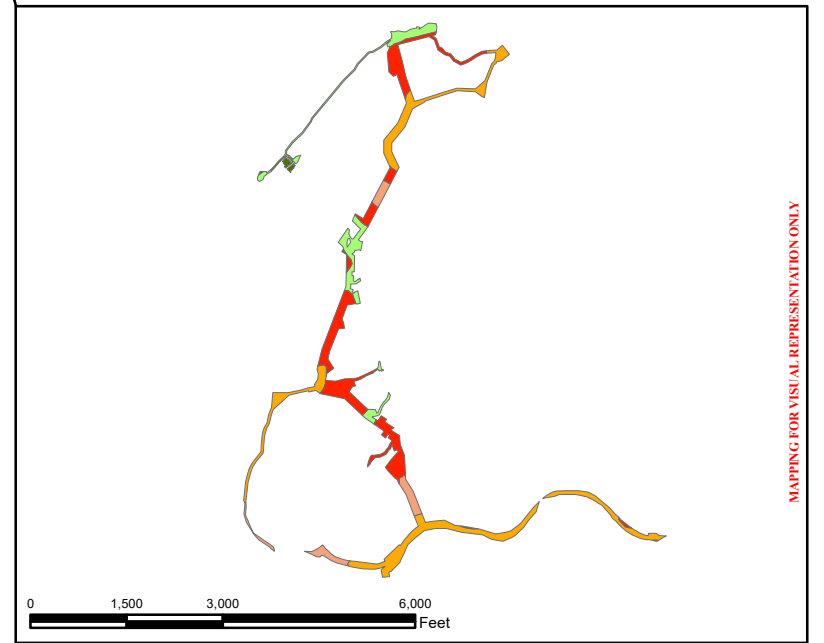


Legend

- Mountain Valley Pipeline North Fork Fishing Creek
- North Fork Fishing Creek**
- EkB: Elk silt loam, 3 to 8 percent slopes
- GcE: Gilpin-Culleoka silt loams, 25 to 35 percent slopes
- GpD: Gilpin-Peabody complex, 15 to 25 percent slopes
- GpE: Gilpin-Peabody complex, 25 to 35 percent slopes, moderately eroded
- GpF: Gilpin-Peabody complex, 35 to 70 percent slopes
- GuD: Gilpin-Culleoka-Upshur silt loams, 15 to 25 percent slopes
- GuE: Gilpin-Culleoka-Upshur silt loams, 25 to 35 percent slopes
- GuF: Gilpin-Culleoka-Upshur silt loams, 35 to 65 percent slopes
- No: Nolin loam
- OtB: Otwell silt loam, 3 to 8 percent slopes
- Sk: Skidmore gravelly loam, occasionally flooded
- Us: Udorthents, smoothed
- VaD: Vandalia silty clay loam, 15 to 25 percent slopes
- VaE: Vandalia silty clay loam, 25 to 35 percent slopes
- W: Water



0 1 2 4 Miles



SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: November 2021	CHECKED: JLY
PN: 001-17-4451016	APPROVED: JLY
PROJECT: 2017-0451 M.V.P. Pipeline Monitoring Maps 2021 CA Soil North Fork Fishing Creek Soil	

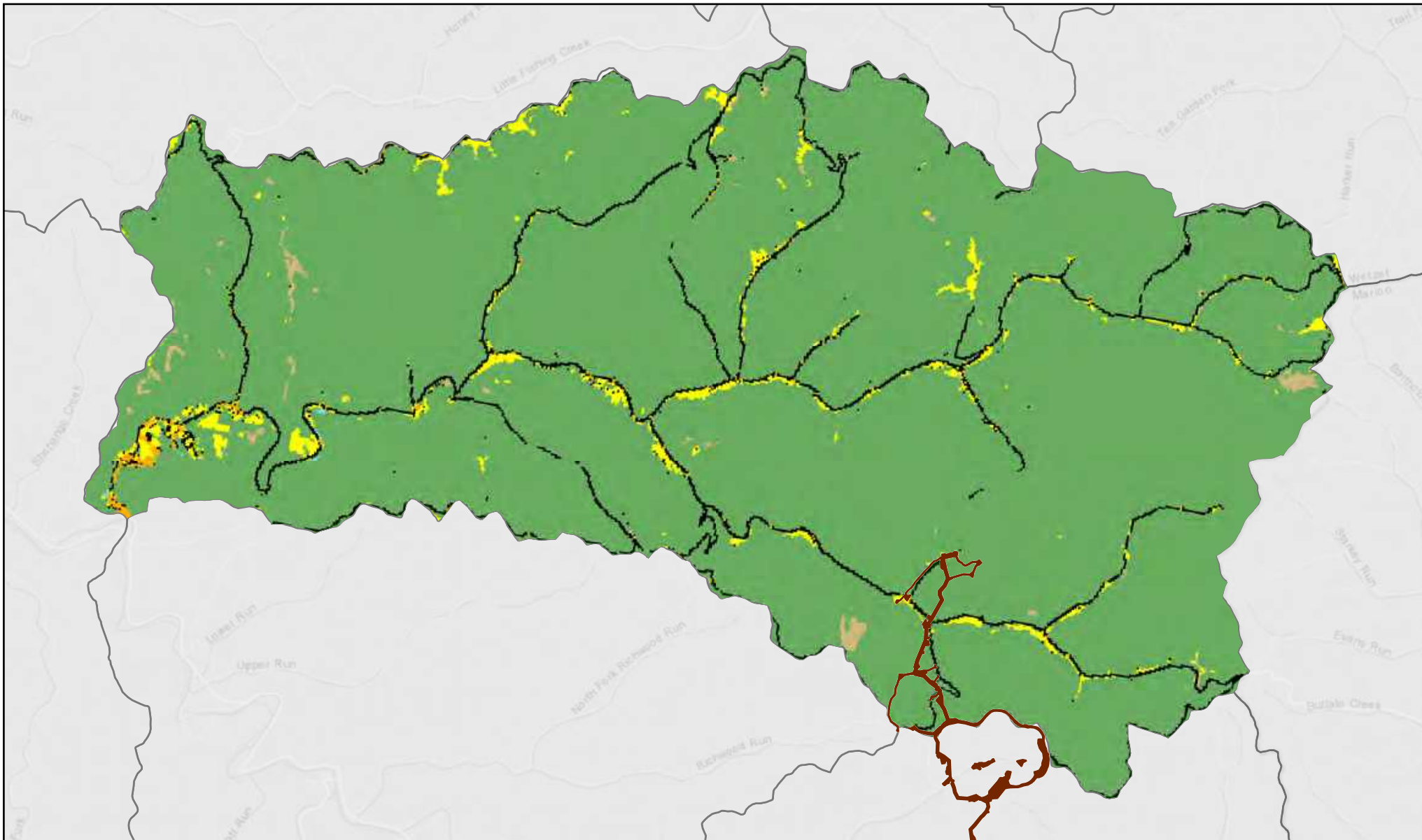
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
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Tomball, TX 77375
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Cumulative Impact Assessment - Soil
North Fork Fishing Creek Watershed (050302010202)
Middle Ohio-North HUC 8 Watershed
Marion, Monongalia, and Wetzel Counties, West Virginia
For Informational Purposes Only

FIGURE 6



Mountain Valley
PIPELINE

Figure: 7

**Land Use/Land Cover 2011
North Fork Fishing Creek
050302010202 HUC12 Watershed**

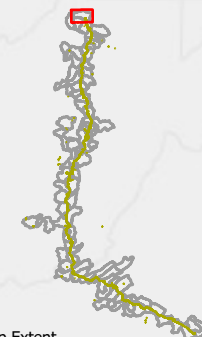
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

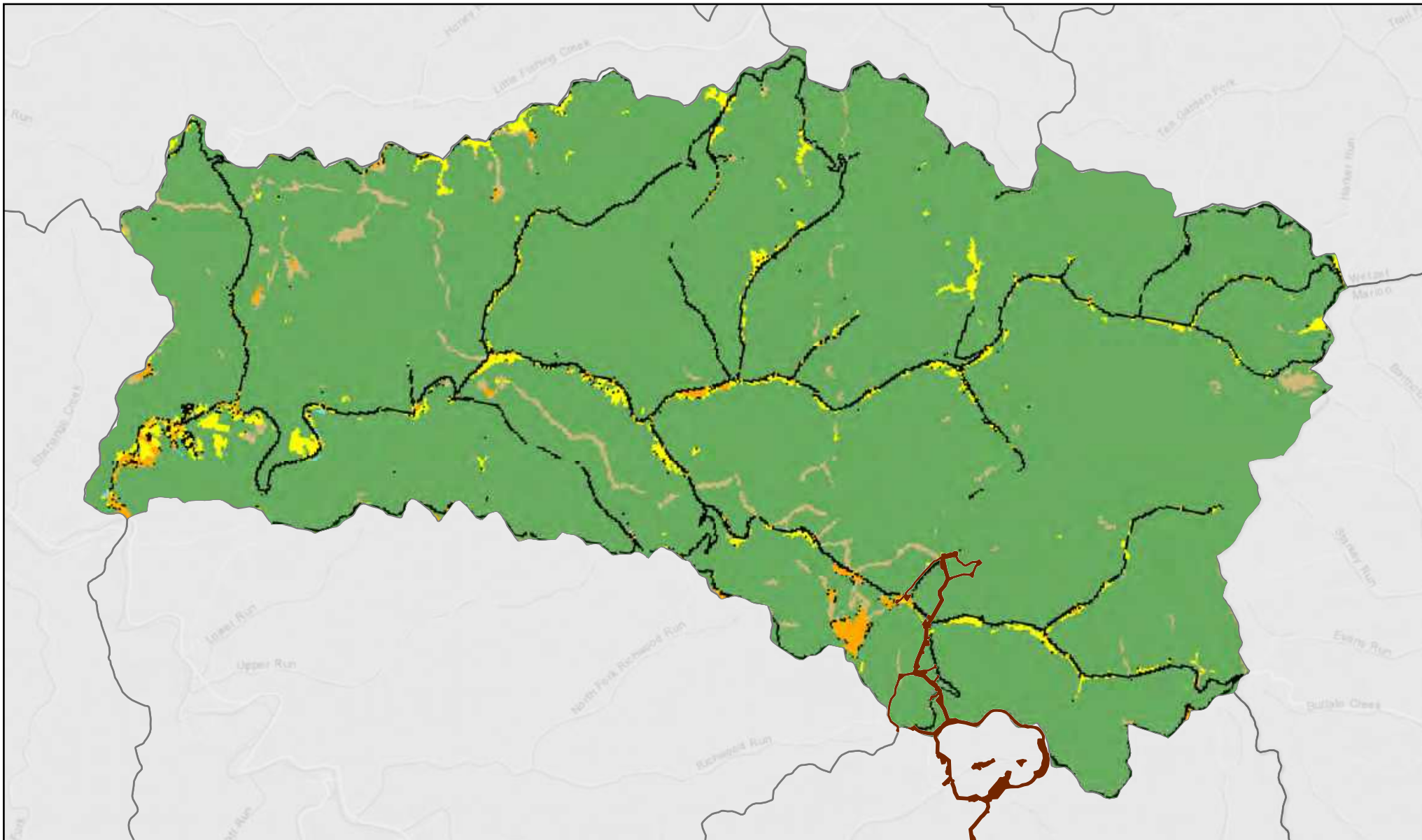


0 1 2 Miles

Scale: 1:75,000



Map Extent



Mountain Valley PIPELINE **Figure: 8**

**Land Use/Land Cover 2016
North Fork Fishing Creek
050302010202 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



0 1 2 Miles

Scale: 1:75,000



Map Extent

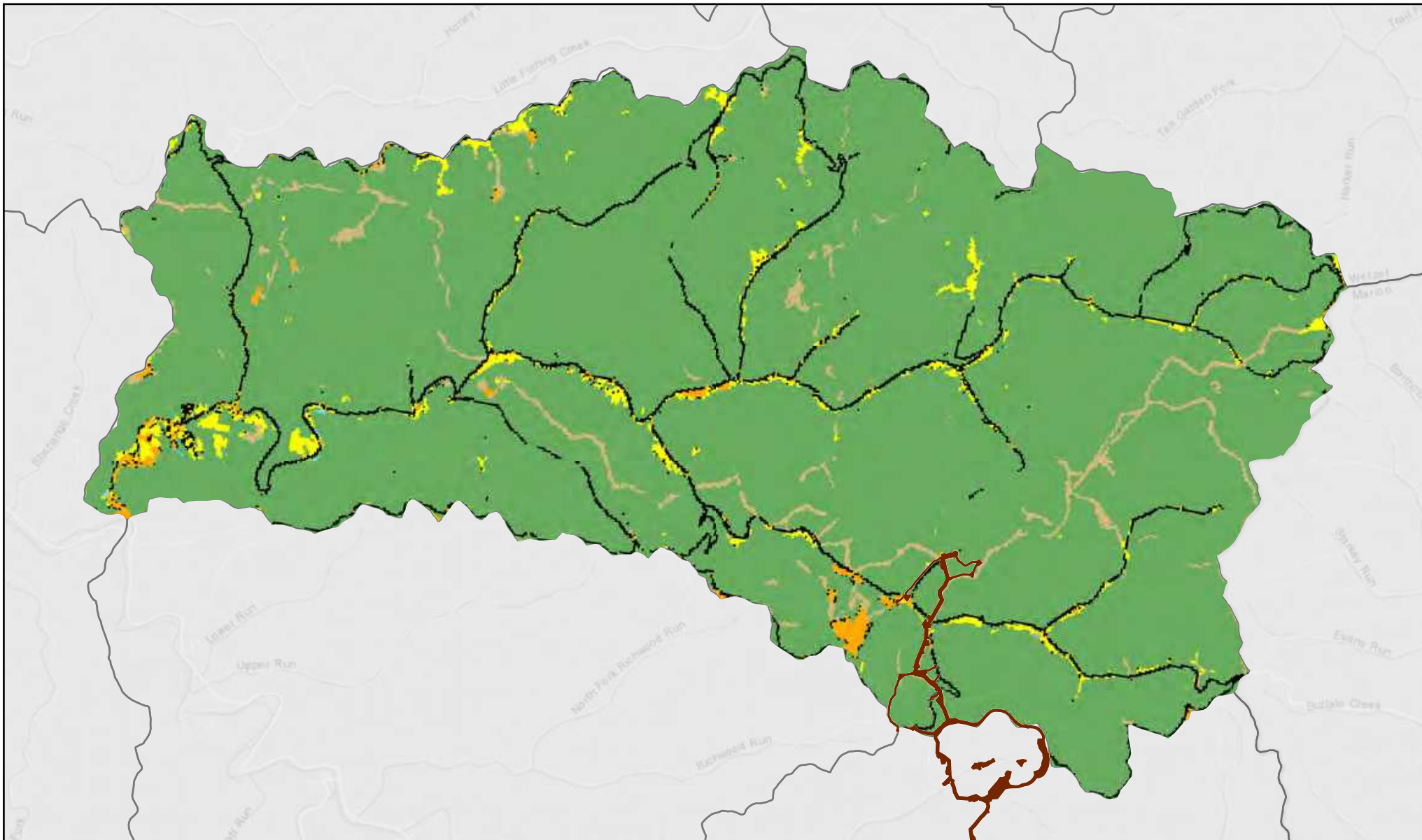


Figure: 8a

**Land Use/Land Cover 2019
North Fork Fishing Creek
050302010202 HUC12 Watershed**

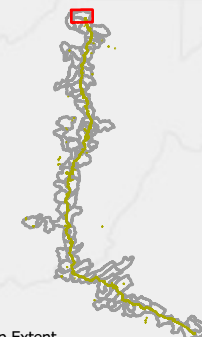
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2019 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

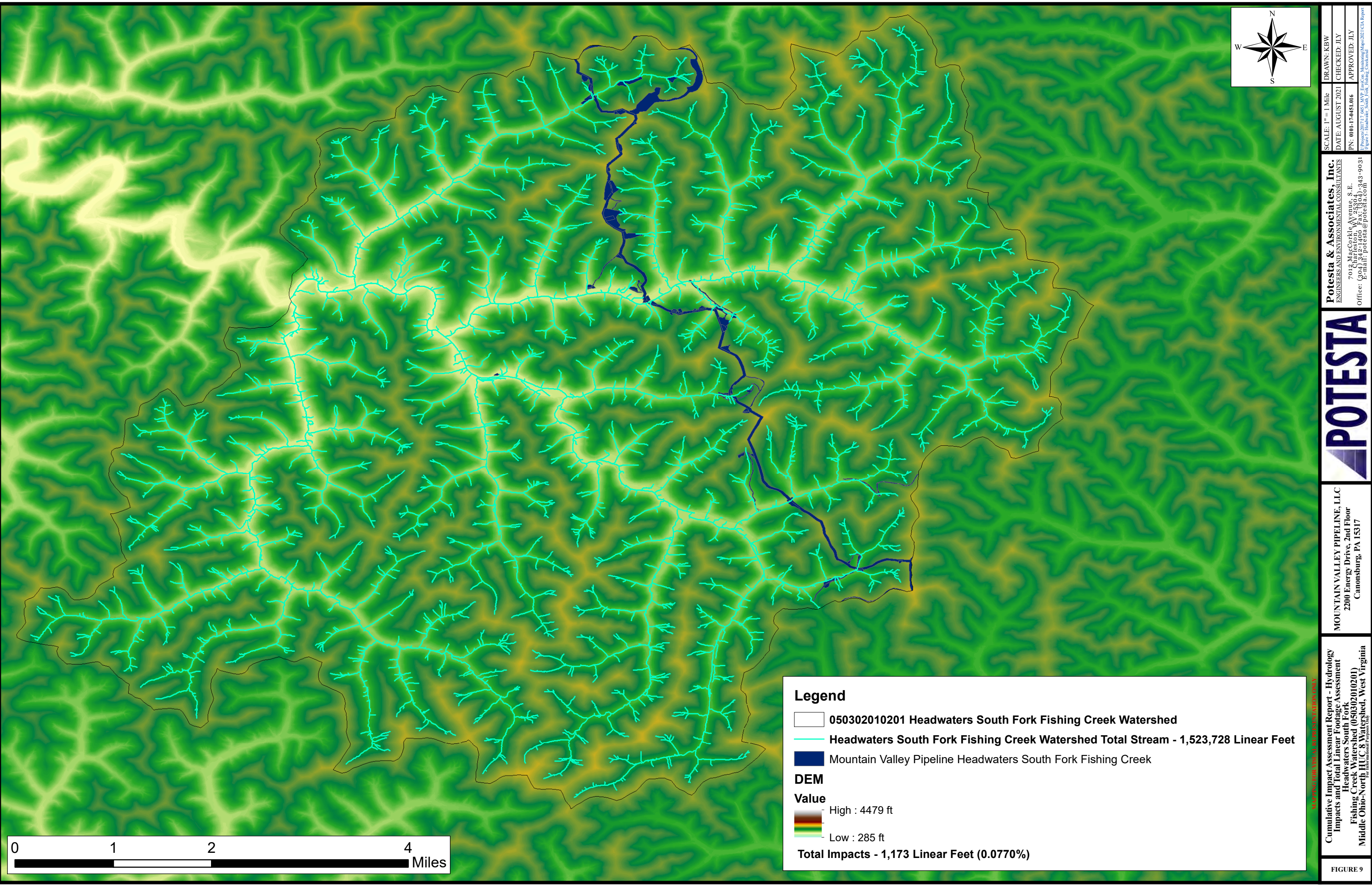


0 1 2 Miles

Scale: 1:75,000



Map Extent



Legend

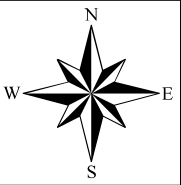
- 050302010201 Headwaters South Fork Fishing Creek Watershed
- Headwaters South Fork Fishing Creek Watershed Total Stream - 1,523,728 Linear Feet
- Mountain Valley Pipeline Headwaters South Fork Fishing Creek

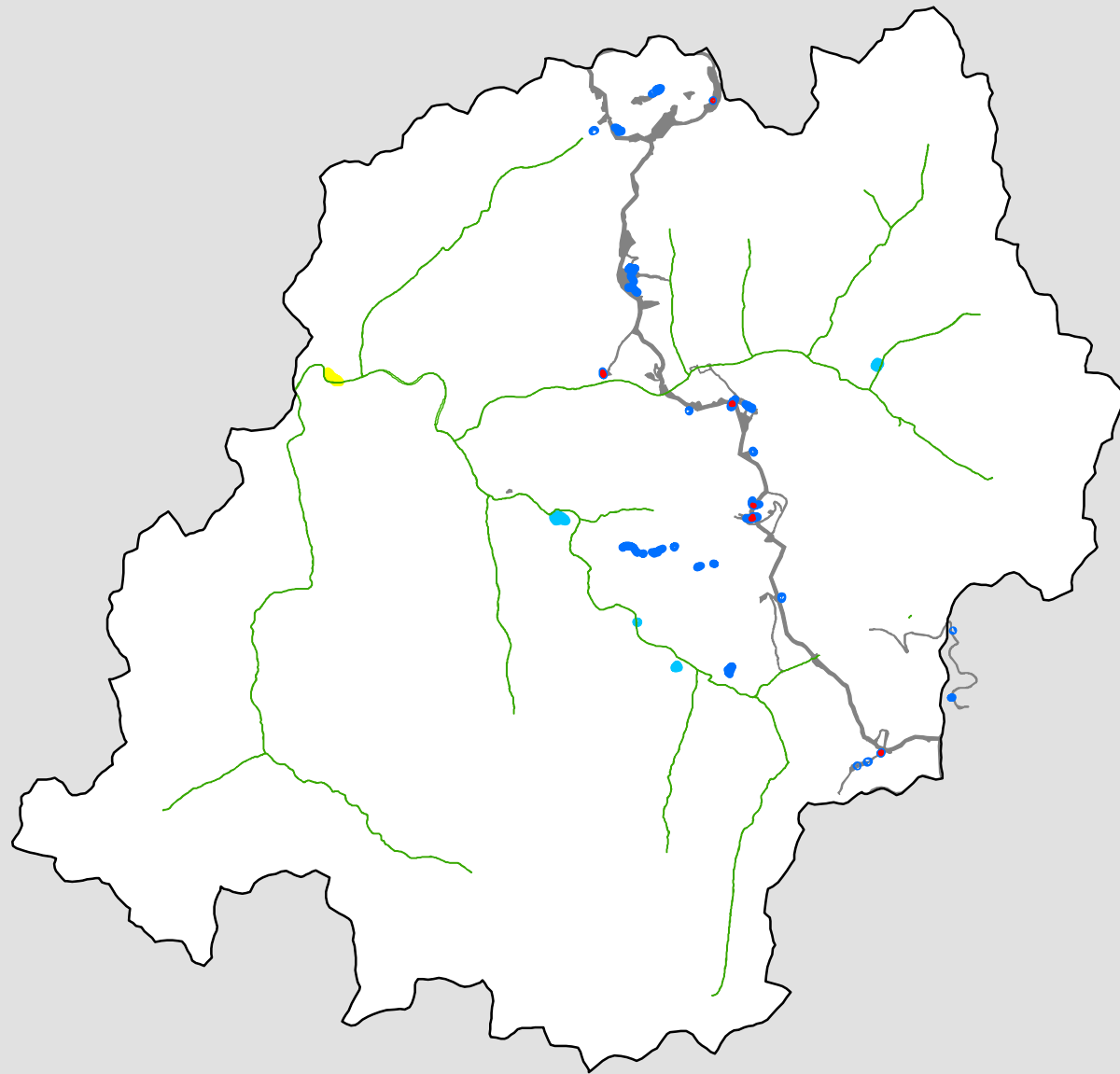
DEM

Value

- High : 4479 ft
- Low : 285 ft

Total Impacts - 1,173 Linear Feet (0.0770%)





Headwaters South Fork Fishing Creek

Figure 10

1:86,000

LEGEND

- Wetland Impacts - 0.28 acres
- Headwaters South Fork Fishing Creek Delineated Wetland Area - 3.9 acres
- NWI Wetlands - 110.06 acres
- Freshwater Forested/Shrub Wetland - 1.61 acres
- Freshwater Pond - 3.76 acres
- Riverine - 104.69 acres
- Mountain Valley Pipeline
- 050302010201_Headwaters South Fork Fishing Creek

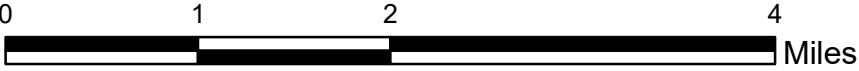
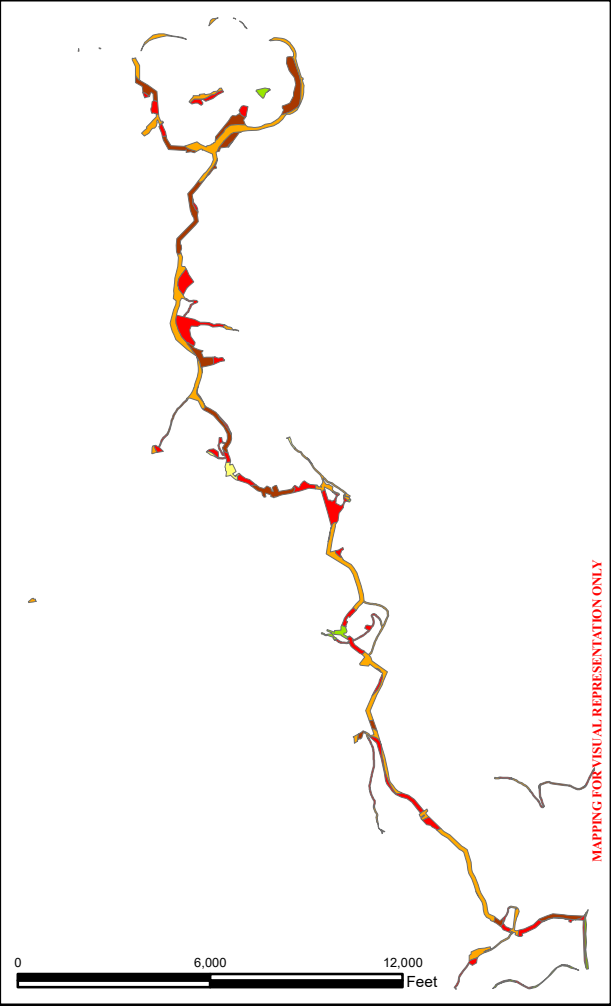
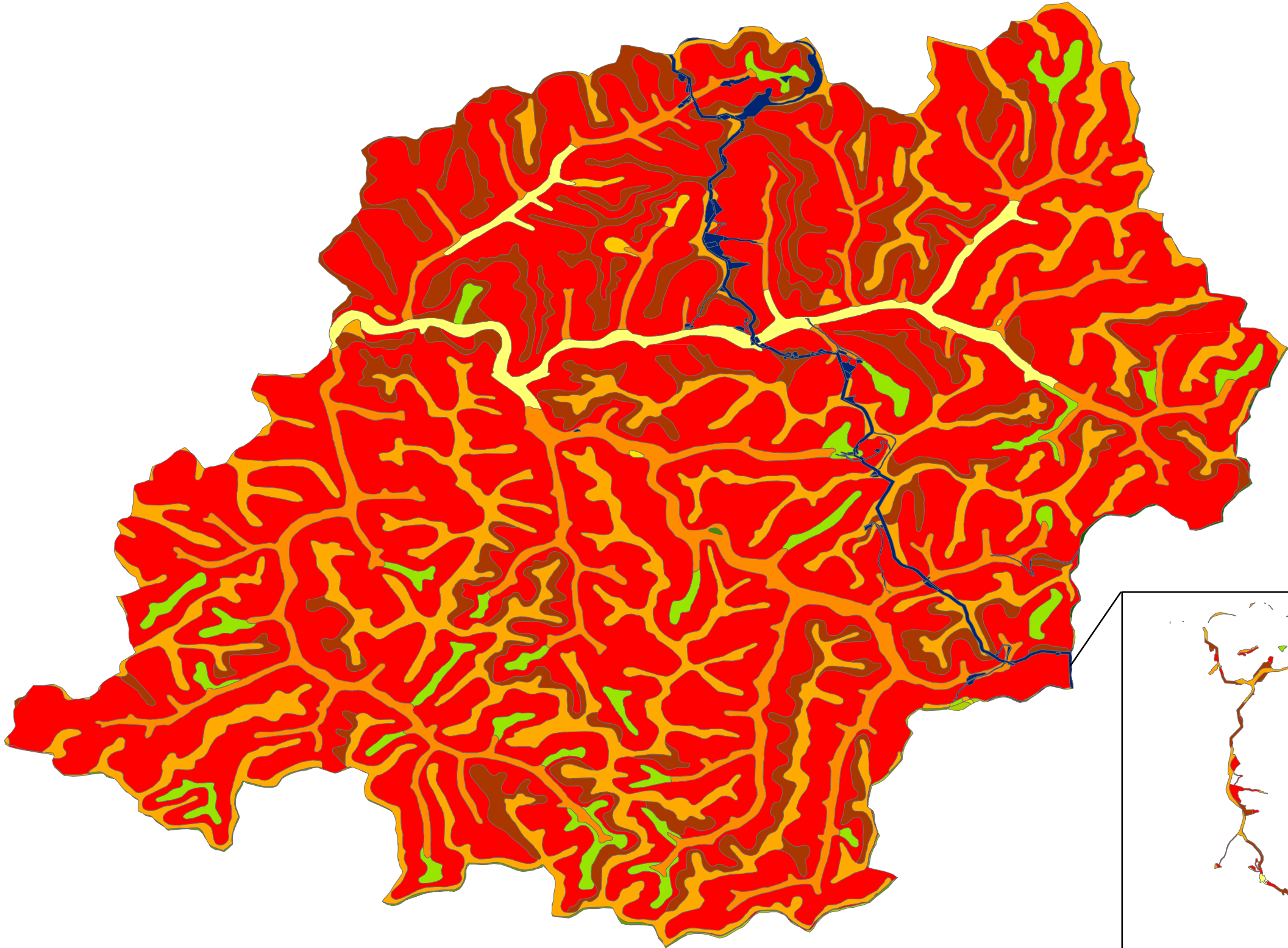
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline
Headwaters South Fork Fishing
Creek

Headwaters South Fork
Fishing Creek Soil

- GpD: Gilpin-Upshur complex, 15 to 25 percent slopes
- GpE: Gilpin-Peabody complex, 25 to 35 percent slopes, moderately eroded
- GpF: Gilpin-Upshur complex, 35 to 70 percent slopes
- GsF: Gilpin-Peabody silt loams, 35 to 70 percent slopes, very stony
- Gilpin-Upshur complex, 15 to 25 perc
- GuD: Gilpin-Upshur silt loams, 15 to 25 percent slopesent slopes (GuD)
- GuD3: Gilpin-Upshur complex, 15 to 25 percent slopes, severely eroded
- GuE: Gilpin-Culleoka-Upshur silt loams, 25 to 35 percent slopes
- GuF: Gilpin-Culleoka-Upshur silt loams, 35 to 65 percent slopes
- GuF3: Gilpin-Upshur complex, 35 to 70 percent slopes, severely eroded
- No: Nolin loam
- Sk: Skidmore gravelly loam, occasionally flooded
- Us: Udorthents, smoothed
- VaD: Vandalia silty clay loam, 15 to 25 percent slopes
- VaE: Vandalia silty clay loam, 25 to 35 percent slopes
- W: Water



POTESTA	Potesta & Associates, Inc. ENGINEERS AND ENVIRONMENTAL CONSULTANTS 7012 MacCorkie Avenue, S.E. Office: (304) 342-1400 Fax: (304) 343-9031 E-mail: potesta@potesta.com	SCALE: See Mapping	DRAWN: KBW
		DATE: AUGUST 2021	CHECKED: JLY
		PN: 001-174451016	APPROVED: JLY
		PROJECT: 2017-0451 M.V.P. Pipeline, Mountain Valley, WV CA Soil Headwaters South Fork Fishing Creek Soil.mxd	
Cumulative Impact Assessment - Soil Headwaters South Fork Fishing Creek(050302010201) Middle Ohio-North HUC 8 Watershed Doddridge, Harrison, Taylor, Marion, Monongalia, Pleasants, Tyler and Wetzel Counties, West Virginia For Informational Purposes Only		MOUNTAIN VALLEY PIPELINE, LLC 2200 Energy Drive, 2nd Floor Canonsburg, PA 15317	
FIGURE 11			

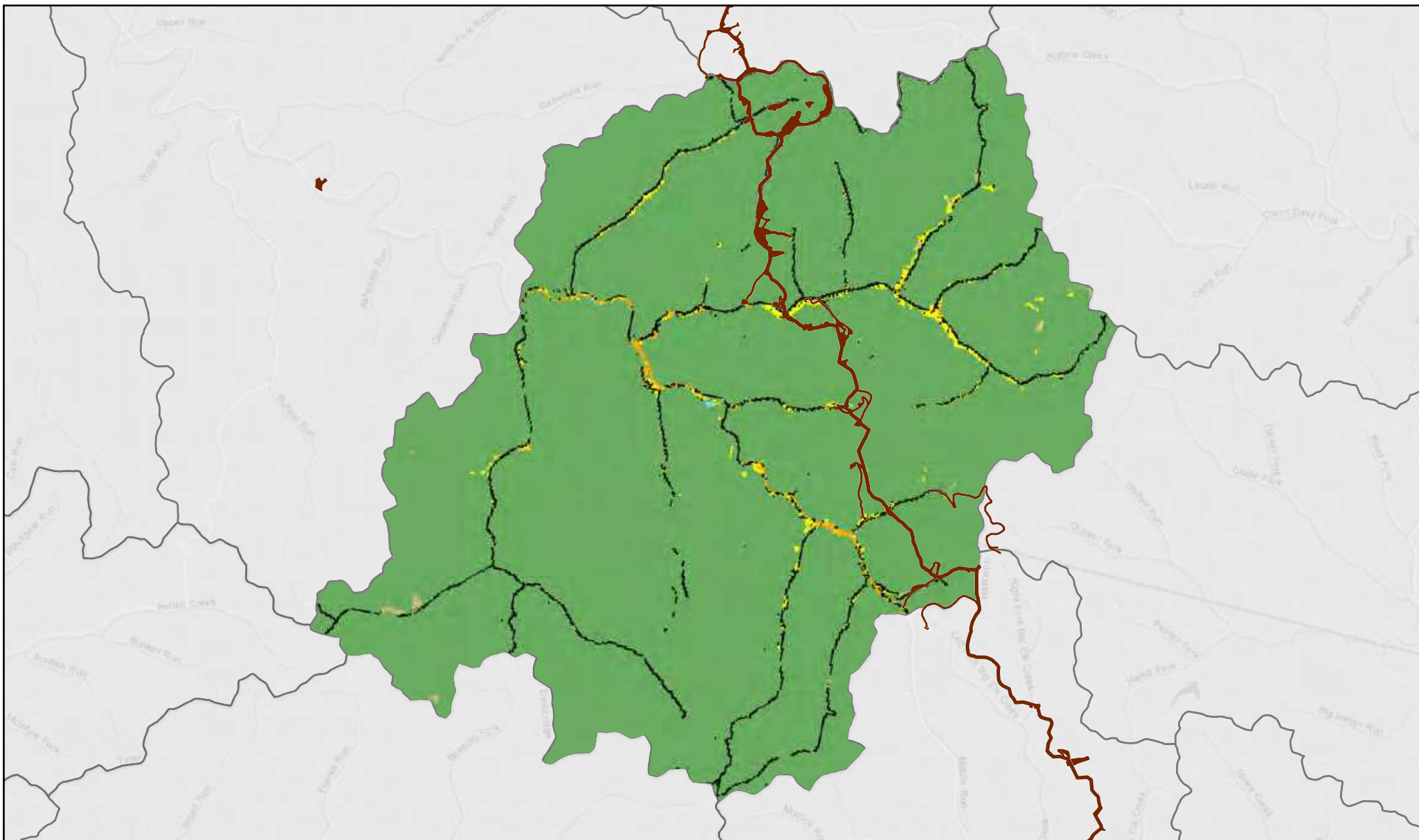


Figure: 12

**Land Use/Land Cover 2011
Headwaters South Fork Fishing Creek
050302010201 HUC12 Watershed**

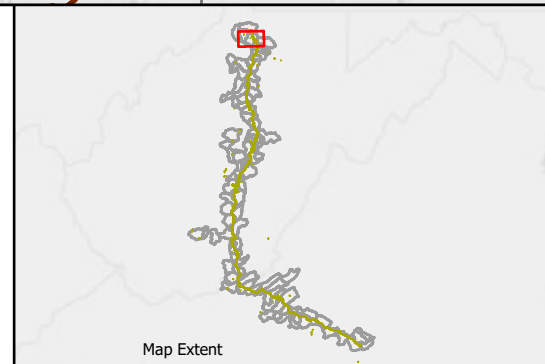
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover**
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

0 1 2 Miles



Scale: 1:90,000



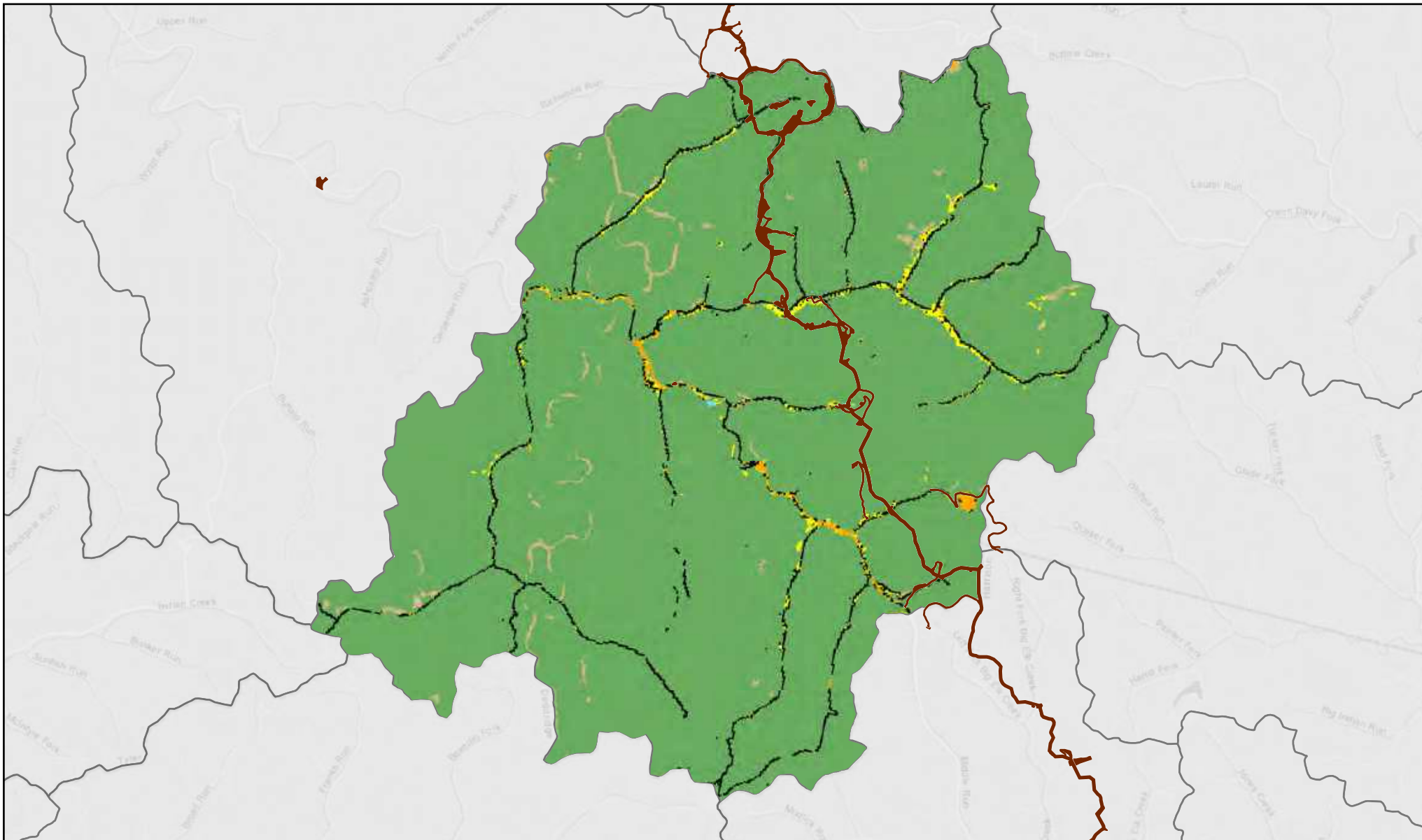


Figure: 13

**Land Use/Land Cover 2016
Headwaters South Fork Fishing Creek
050302010201 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

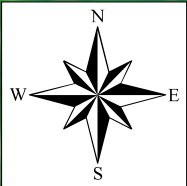
0 1 2 Miles



Scale: 1:90,000



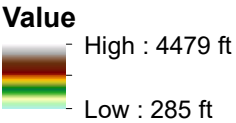
Map Extent



Legend

- 050302010402 Buckeye Creek Watershed
- Buckeye Creek Watershed Total Stream - 1,609,870 Linear Feet
- Mountain Valley Pipeline Buckeye Creek

DEM



Total Impacts - 130 Linear Feet (0.0081%)

MAP FOR MOUNTAIN VALLEY PIPELINE ONLY

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Buckeye Creek Watershed (050302010402)
Middle Ohio-North HUC 8 Watershed, West Virginia

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E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile

DRAWN: KBW

DATE: AUGUST 2021

CHECKED: JLY

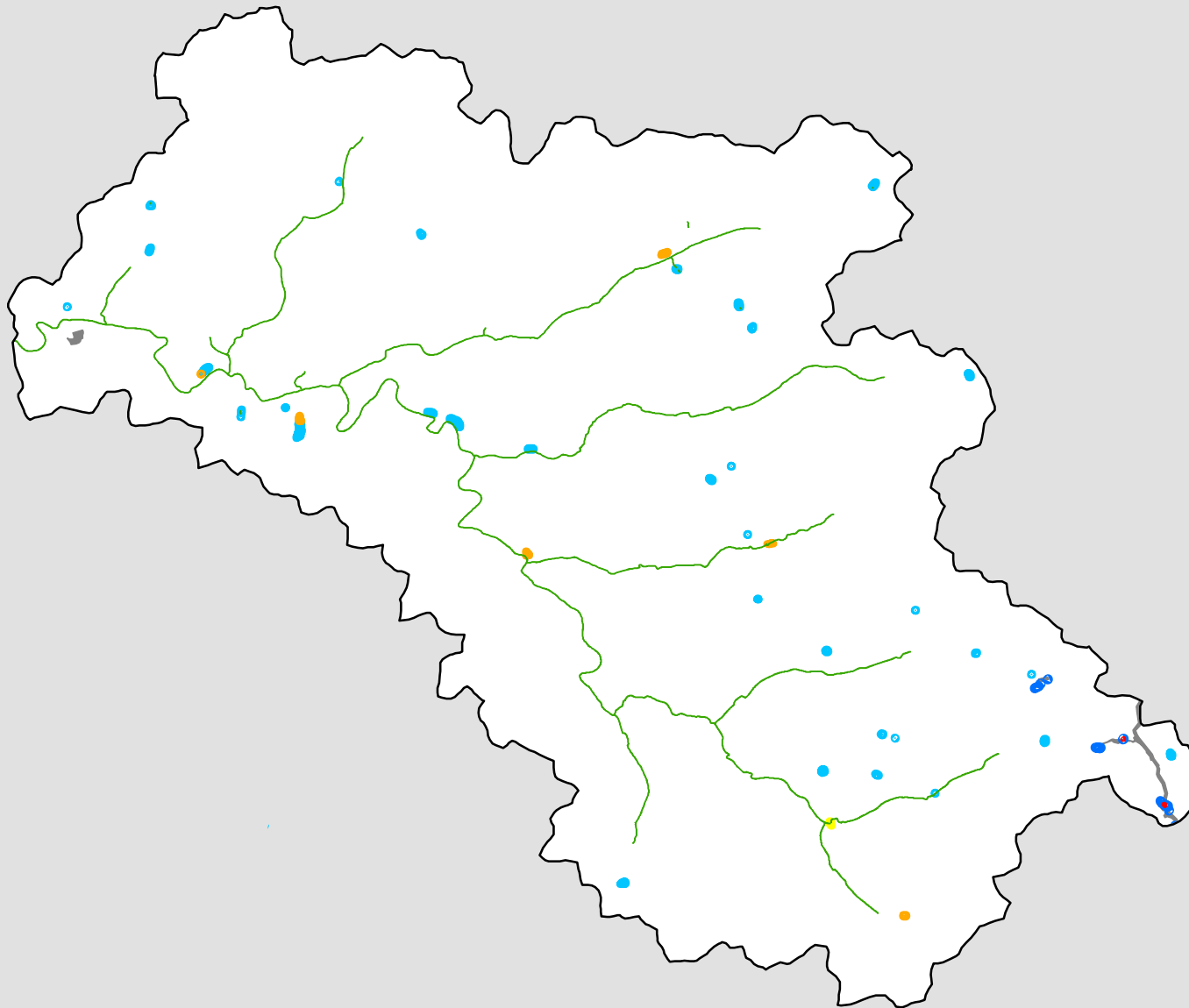
APPROVED: JLY

PN: 001-174451.06

Project: 201717_081_MVP_EnvCon_Monitoring_Map_2021

CIA Report Figure 3 - Buckeye Creek.mxd

FIGURE 14



Buckeye Creek

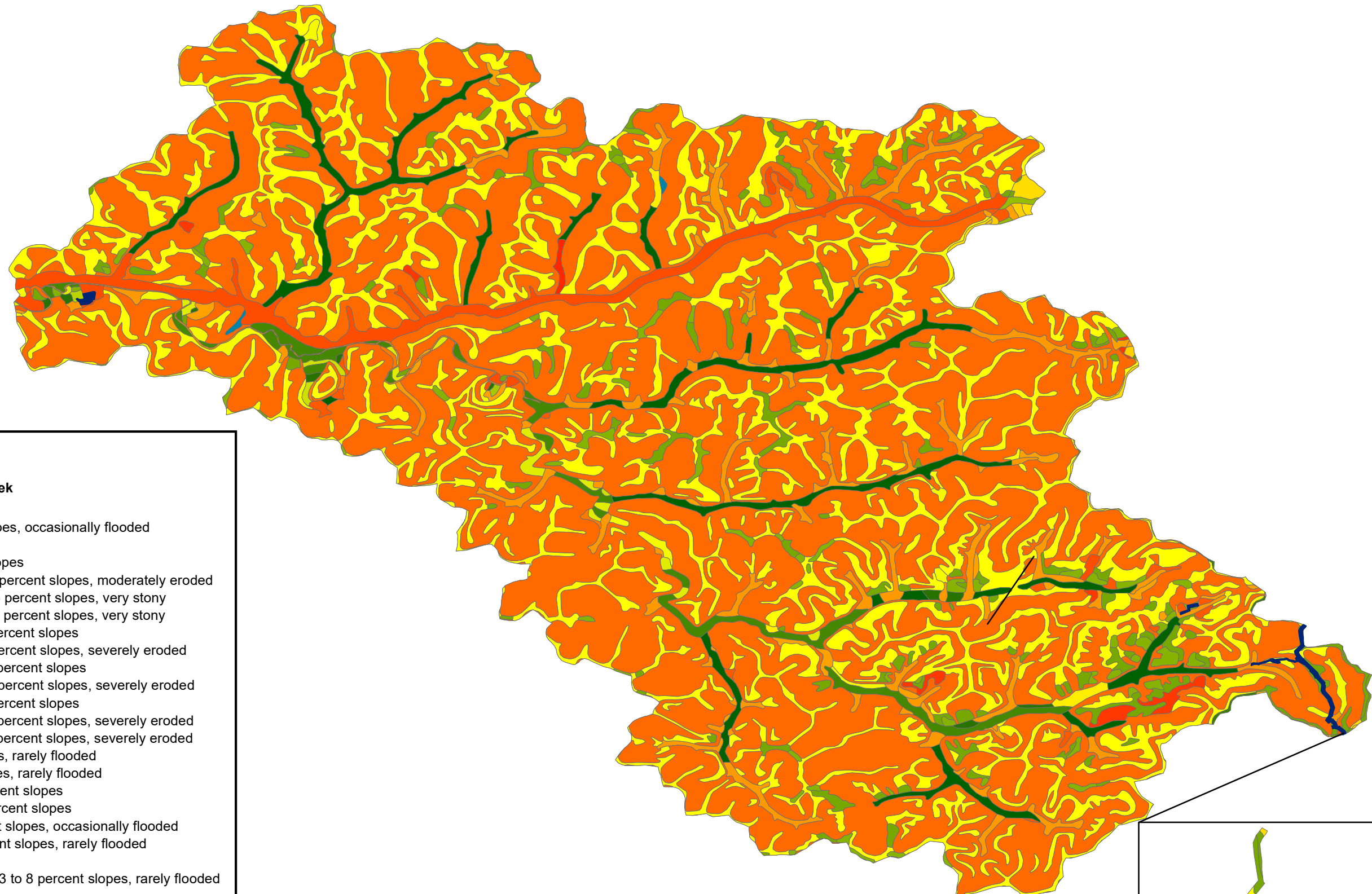
Figure 15

1:87,000

LEGEND

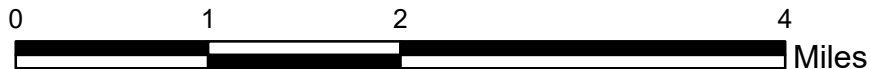
- Wetland Impacts - 0.05 acres
- Buckeye Creek Delineated Wetland Area - 0.38 acres
- NWI Wetlands - 119.33 acres
- Freshwater Emergent Wetland - 2.18 acres
- Freshwater Forested/Shrub Wetland - 0.14 acres
- Freshwater Pond - 15.8 acres
- Riverine - 101.2 acres
- Mountain Valley Pipeline
- 050302010402_Buckeye Creek

Note: Shapes are not to scale, enlarged to improve visibility.



Legend

- Mountain Valley Pipeline Buckeye Creek**
- Buckeye Creek**
- Ch: Chagrin silt loam, 0 to 3 percent slopes, occasionally flooded
 - Co: Cotaco silt loam
 - GlF: Gilpin silt loam, 35 to 70 percent slopes
 - GpE: Gilpin-Peabody complex, 25 to 35 percent slopes, moderately eroded
 - GsE: Gilpin-Peabody silt loams, 15 to 35 percent slopes, very stony
 - GsF: Gilpin-Peabody silt loams, 35 to 70 percent slopes, very stony
 - GuC: Gilpin-Upshur silt loams, 8 to 15 percent slopes
 - GuC3: Gilpin-Upshur complex, 8 to 15 percent slopes, severely eroded
 - GuD: Gilpin-Upshur silt loams, 15 to 25 percent slopes
 - GuD3: Gilpin-Upshur complex, 15 to 25 percent slopes, severely eroded
 - GuE: Gilpin-Upshur complex, 25 to 35 percent slopes
 - GuE3: Gilpin-Upshur complex, 25 to 35 percent slopes, severely eroded
 - GuF3: Gilpin-Upshur complex, 35 to 70 percent slopes, severely eroded
 - Ka: Kanawha loam, 0 to 3 percent slopes, rarely flooded
 - Me: Melvin silt loam, 0 to 3 percent slopes, rarely flooded
 - MoB: Monongahela silt loam, 3 to 8 percent slopes
 - MoC: Monongahela silt loam, 8 to 15 percent slopes
 - Se: Sensabaugh silt loam, 0 to 3 percent slopes, occasionally flooded
 - SeB: Sensabaugh silt loam, 3 to 8 percent slopes, rarely flooded
 - Su: Sensabaugh-Urban land complex
 - SuB: Sensabaugh-Urban land complex, 3 to 8 percent slopes, rarely flooded
 - UL: Urban land
 - Ud: Udorthents, smoothed
 - VaC: Vandalia silty clay loam, 8 to 15 percent slopes
 - VaD: Vandalia silty clay loam, 15 to 25 percent slopes
 - VaD3: Vandalia silty clay loam, 15 to 25 percent slopes, severely eroded
 - VaE: Vandalia silt loam, 25 to 35 percent slopes
 - VaE: Vandalia silt loam, 25 to 35 percent slopes
 - VuD: Vandalia-Urban land complex, 15 to 25 percent slopes
 - W: Water



MAPING FOR VISUAL REPRESENTATION ONLY

SCALE: See Mapping	DRAWN: KBW
DATE: November 2021	CHECKED: JLY
PN: 001-174451016	APPROVED: JLY
PROJECT: 2017-0451 MPP Env Con. Monitoring Maps 2021	

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E-mail: potesta@potesta.com



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2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317

Cumulative Impact Assessment - Soil
Buckeye Creek(050302010402)
Middle Ohio-North HUC 8 Watershed
Doddridge, Harrison, and Taylor Counties, West Virginia
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FIGURE 16

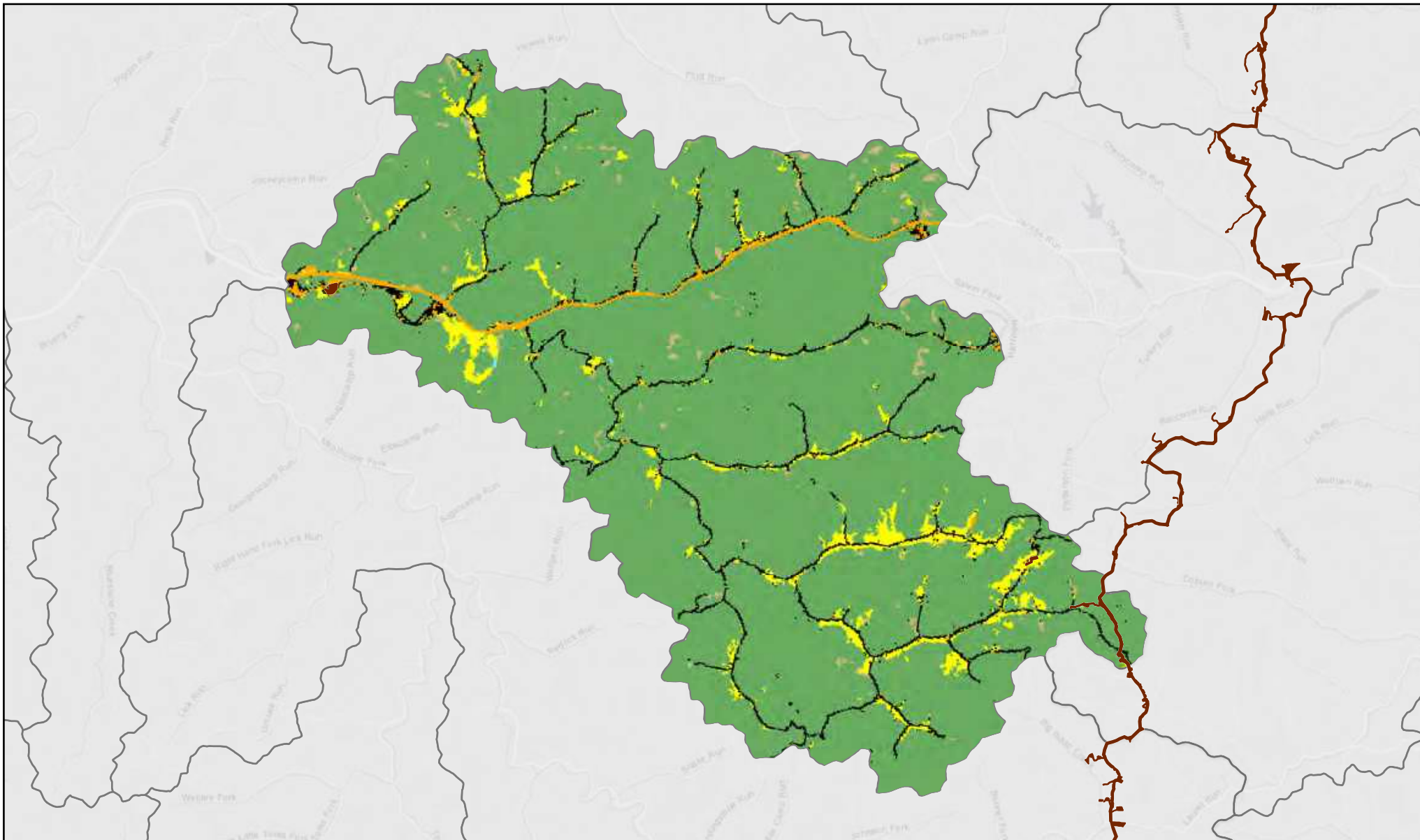


Figure: 17

**Land Use/Land Cover 2011
Buckeye Creek
050302010402 HUC12 Watershed**

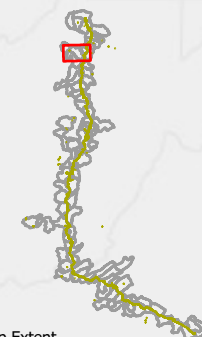
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



0 1 2 Miles

Scale: 1:95,000



Map Extent

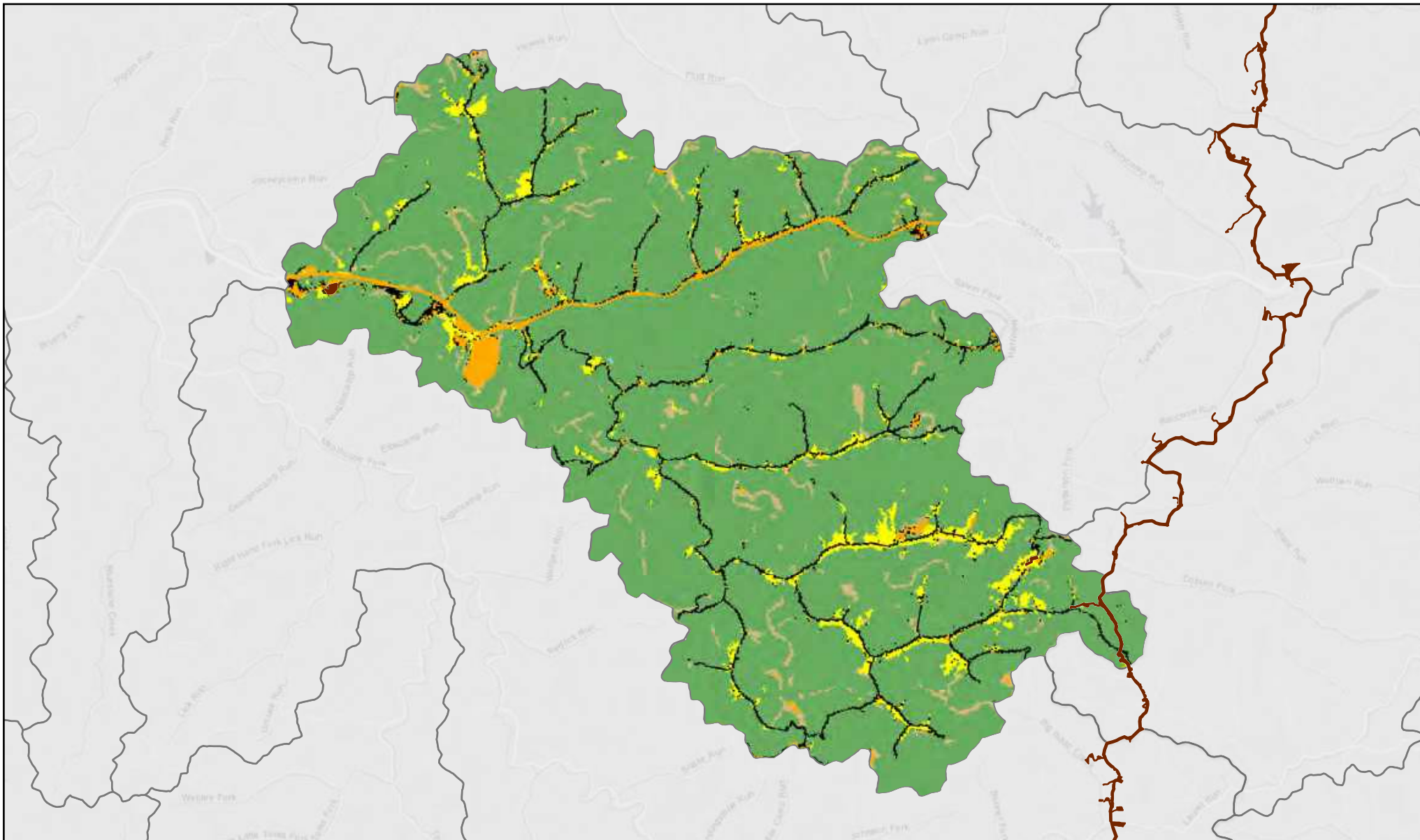
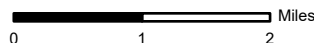


Figure: 18

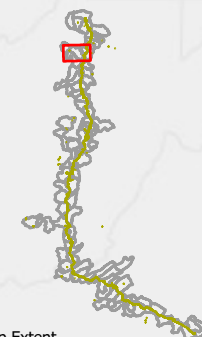
**Land Use/Land Cover 2016
Buckeye Creek
050302010402 HUC12 Watershed**

LEGEND

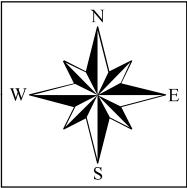
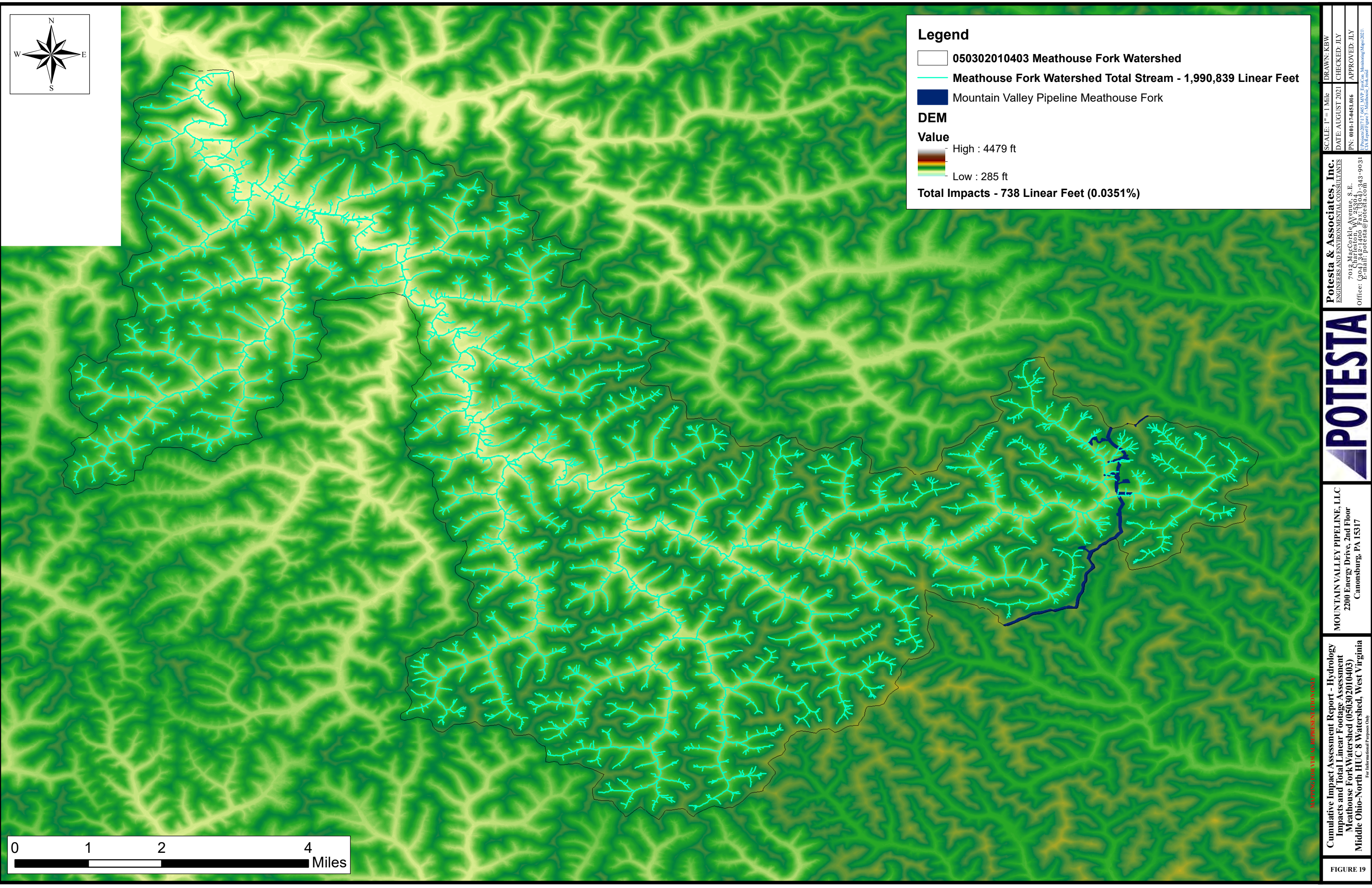
- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:95,000



Map Extent



Legend

- 050302010403 Meathouse Fork Watershed
- Meathouse Fork Watershed Total Stream - 1,990,839 Linear Feet
- Mountain Valley Pipeline Meathouse Fork

DEM

Value

High : 4479 ft
Low : 285 ft

Total Impacts - 738 Linear Feet (0.0351%)

0 1 2 4 Miles

\\potesta\c\m\w\050302010403\050302010403.dwg

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Meathouse Fork Watershed (050302010403)
Middle Ohio-North HUC 8 Watershed, West Virginia

For Informational Purposes Only

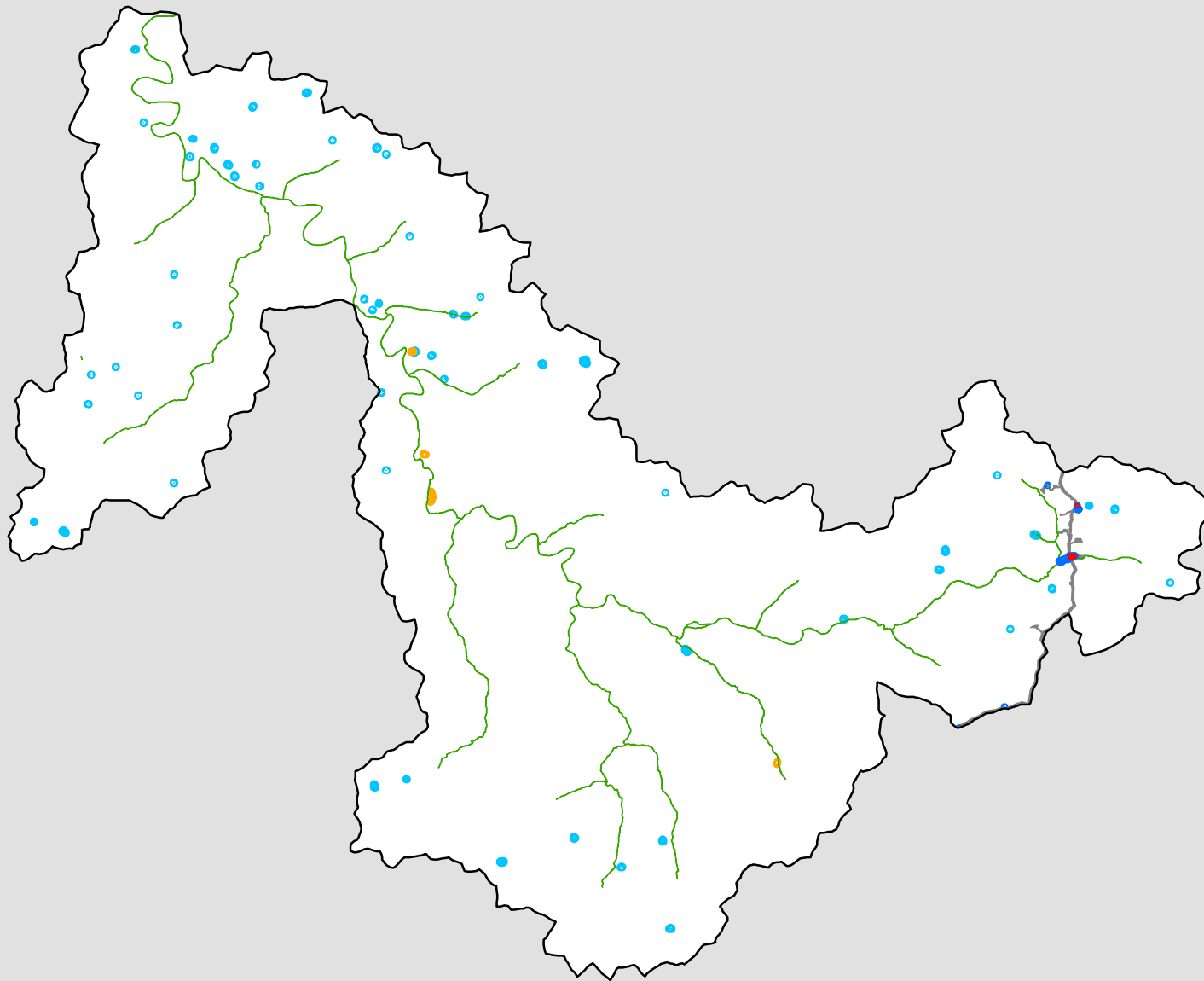
MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317



Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCortle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) -343-9031
E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
\\potesta\c\m\w\050302010403\050302010403.dwg C:\Report\Figure 3 - Meathouse_Fork.mxd	

FIGURE 19



Meathouse Fork

Figure 20
1:110,000

LEGEND

- Wetland Impacts - 0.35 acres
- Meathouse Fork Delineated Wetland Area - 1.42 acres
- NWI Wetlands - 158.82 acres
- Freshwater Emergent Wetland - 0.85 acres
- Freshwater Pond - 14.28 acres
- Riverine - 143.69 acres
- Mountain Valley Pipeline
- 050302010403_Meathouse Fork

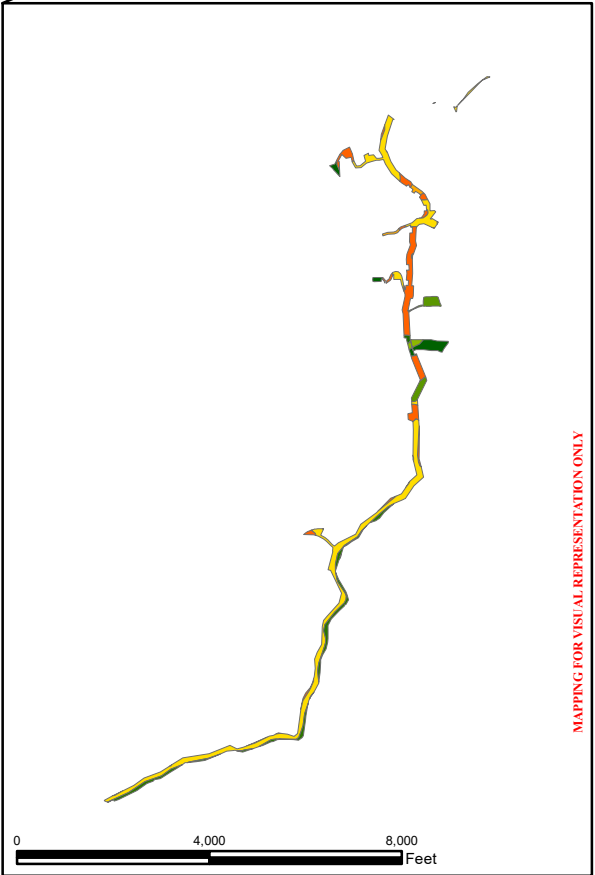
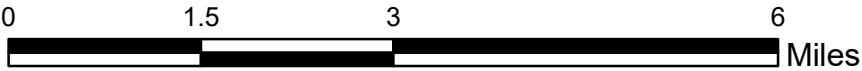
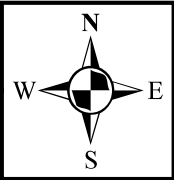
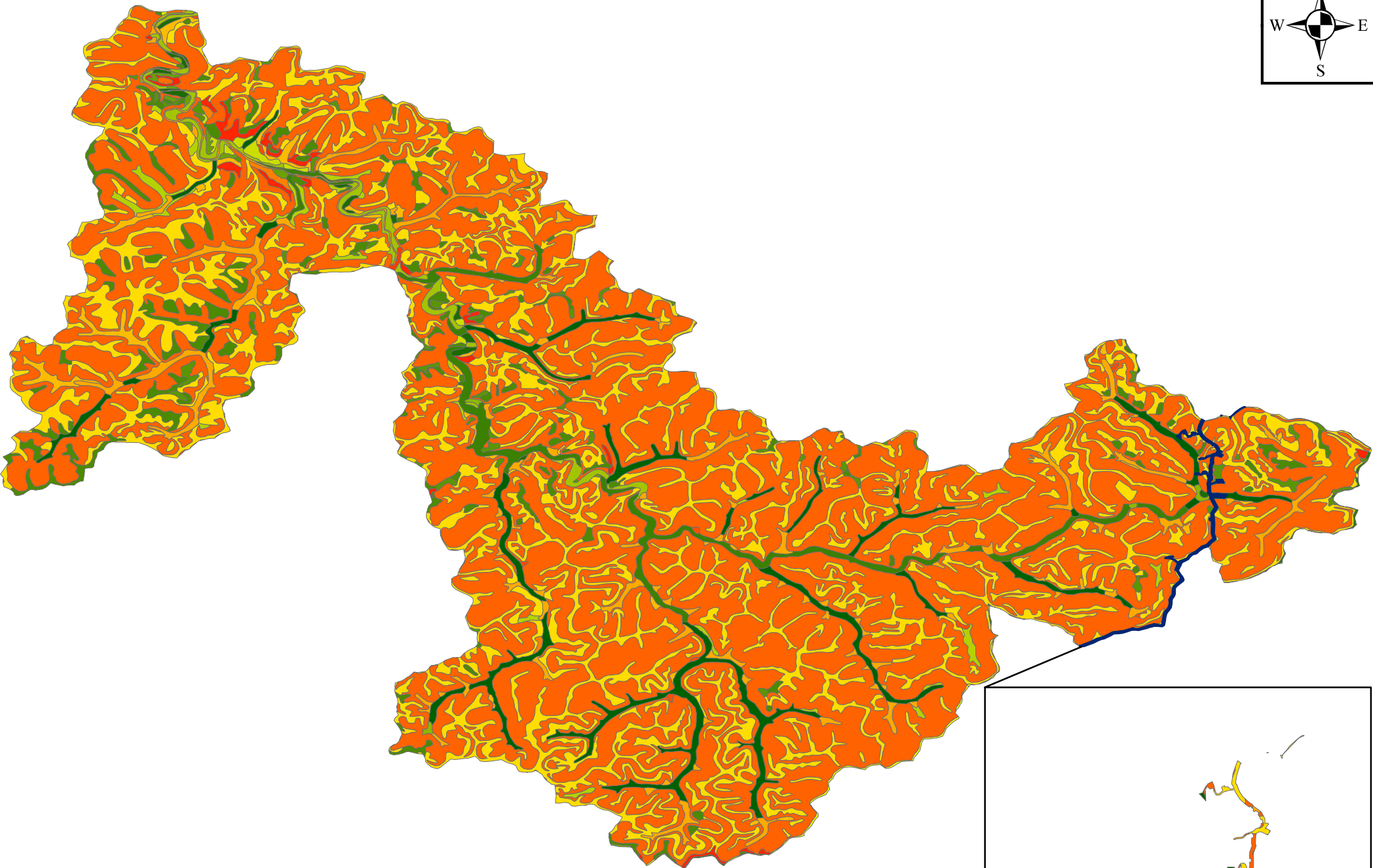
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Meathouse Fork

Meathouse Fork

- Ch: Chagrin silt loam, 0 to 3 percent slopes, occasionally flooded
- Co: Cotaco silt loam
- GaD: Gilpin silt loam, moist, 15 to 25 percent slopes
- GpE: Gilpin-Peabody silt loams, 25 to 35 percent slopes
- GsE: Gilpin-Peabody silt loams, 15 to 35 percent slopes, very stony
- GsF: Gilpin-Peabody silt loams, 35 to 70 percent slopes, very stony
- GuC: Gilpin-Upshur silt loams, 8 to 15 percent slopes
- GuD: Gilpin-Upshur silt loams, 15 to 25 percent slopes
- GuE: Gilpin-Upshur complex, 25 to 35 percent slopes
- GuE3: Gilpin-Upshur complex, 25 to 35 percent slopes, severely eroded
- GuF3: Gilpin-Upshur complex, 35 to 70 percent slopes, severely eroded
- GwF3: Gilpin-Upshur silt loams, 35 to 70 percent slopes, severely eroded
- Ka: Kanawha loam, 0 to 3 percent slopes, rarely flooded
- Me: Melvin silt loam, 0 to 3 percent slopes, rarely flooded
- MoB: Monongahela silt loam, 3 to 8 percent slopes
- MoC: Monongahela silt loam, 8 to 15 percent slopes
- MuB: Monongahela-Urban land complex, 3 to 8 percent slopes
- MuC: Monongahela-Urban land complex, 8 to 15 percent slopes
- Se: Sensabaugh silt loam, 0 to 3 percent slopes, occasionally flooded
- SeB: Sensabaugh silt loam, 3 to 8 percent slopes, rarely flooded
- Ud: Udorthents, smoothed
- UhD3: Upshur silty clay, 15 to 25 percent slopes, severely eroded
- VaC: Vandalia silt loam, 8 to 15 percent slopes
- VaD: Vandalia silt loam, 15 to 25 percent slopes
- VaE: Vandalia silt loam, 25 to 35 percent slopes
- VsE: Vandalia silt loam, 15 to 35 percent slopes, very stony
- VuD: Vandalia-Urban land complex, 15 to 25 percent slopes
- W: Water



MAPPING FOR VISUAL REPRESENTATION ONLY

	SCALE: See Mapping	DRAWN: KBW
	DATE: November 2021	CHECKED: JLY
	PN: 001-17-4451016	APPROVED: JLY
	PROJECT: 2017-0451 MPP, Env. Con. Monitoring Maps 2021 CA Soil Meathouse Fork.mxd	
Potesta & Associates, Inc. ENGINEERS AND ENVIRONMENTAL CONSULTANTS 7019 MacCorkie Avenue, S.E. Tomball, Texas 77375 Office: (361) 342-1400 Fax: (361) 343-9031 E-mail: potesta@potesta.com		
MOUNTAIN VALLEY PIPELINE, LLC 2200 Energy Drive, 2nd Floor Canonsburg, PA 15317		
Cumulative Impact Assessment - Soil Meathouse Fork (050302010405) Middle Ohio-North HUC 8 Watershed Doddridge, Harrison, Taylor, and Lewis Counties, West Virginia For Informational Purposes Only		
FIGURE 21		

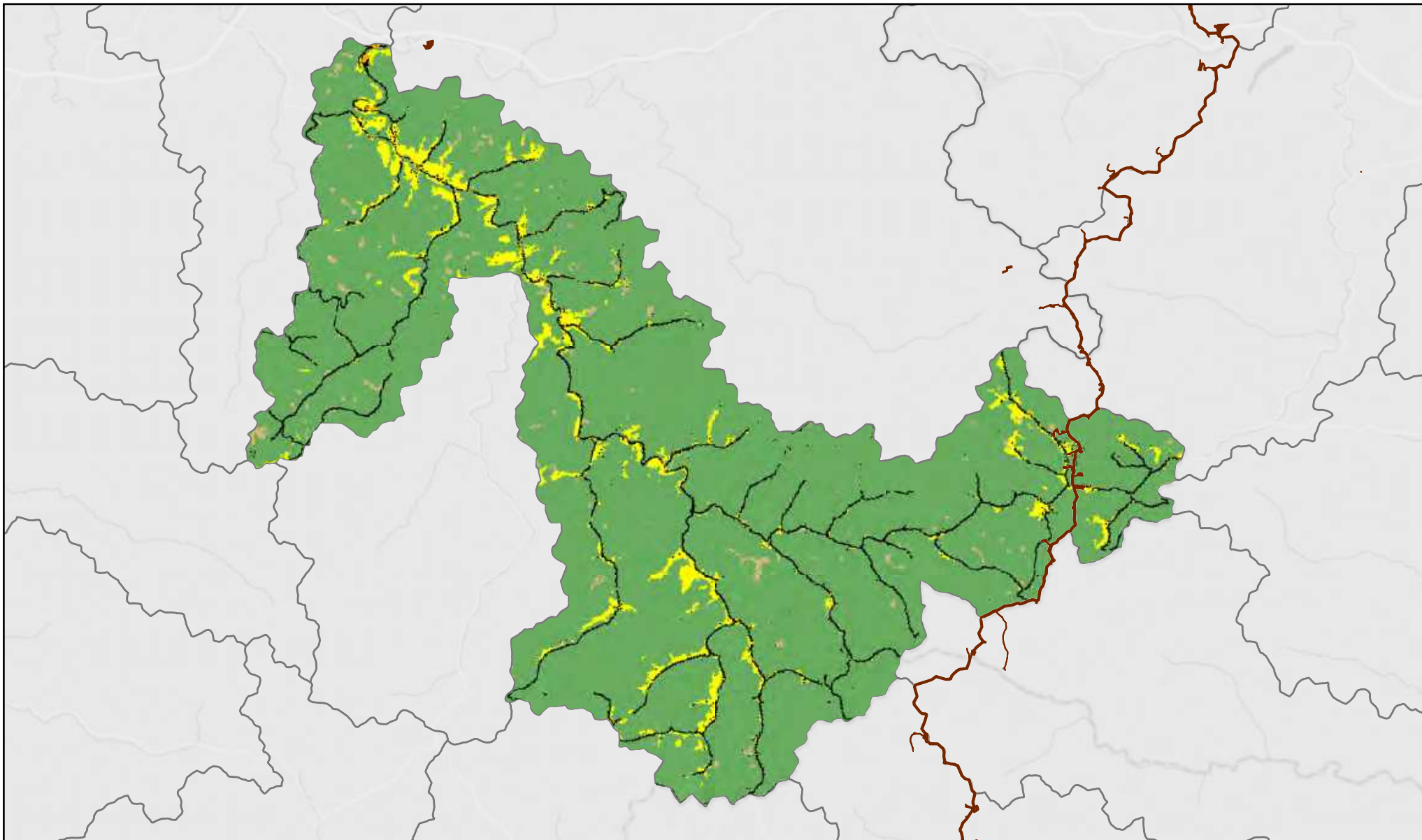


Figure: 22

**Land Use/Land Cover 2011
Meathouse Fork
050302010403 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover**
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



0 1.5 3 Miles

Scale: 1:115,000



Map Extent

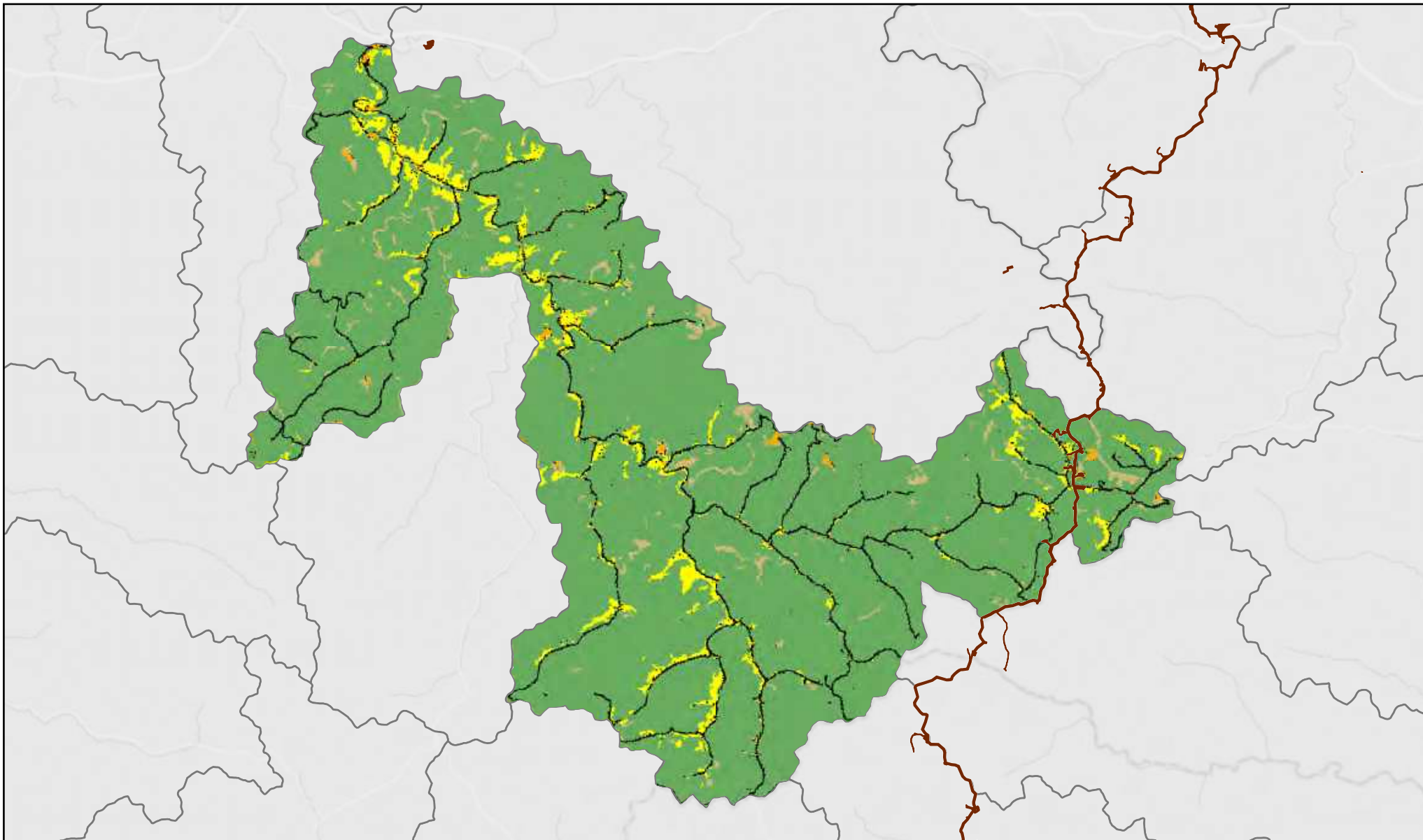


Figure: 23

**Land Use/Land Cover 2016
Meathouse Fork
050302010403 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover**
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

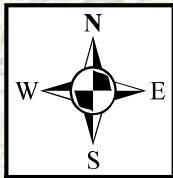


0 1.5 3 Miles


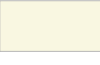

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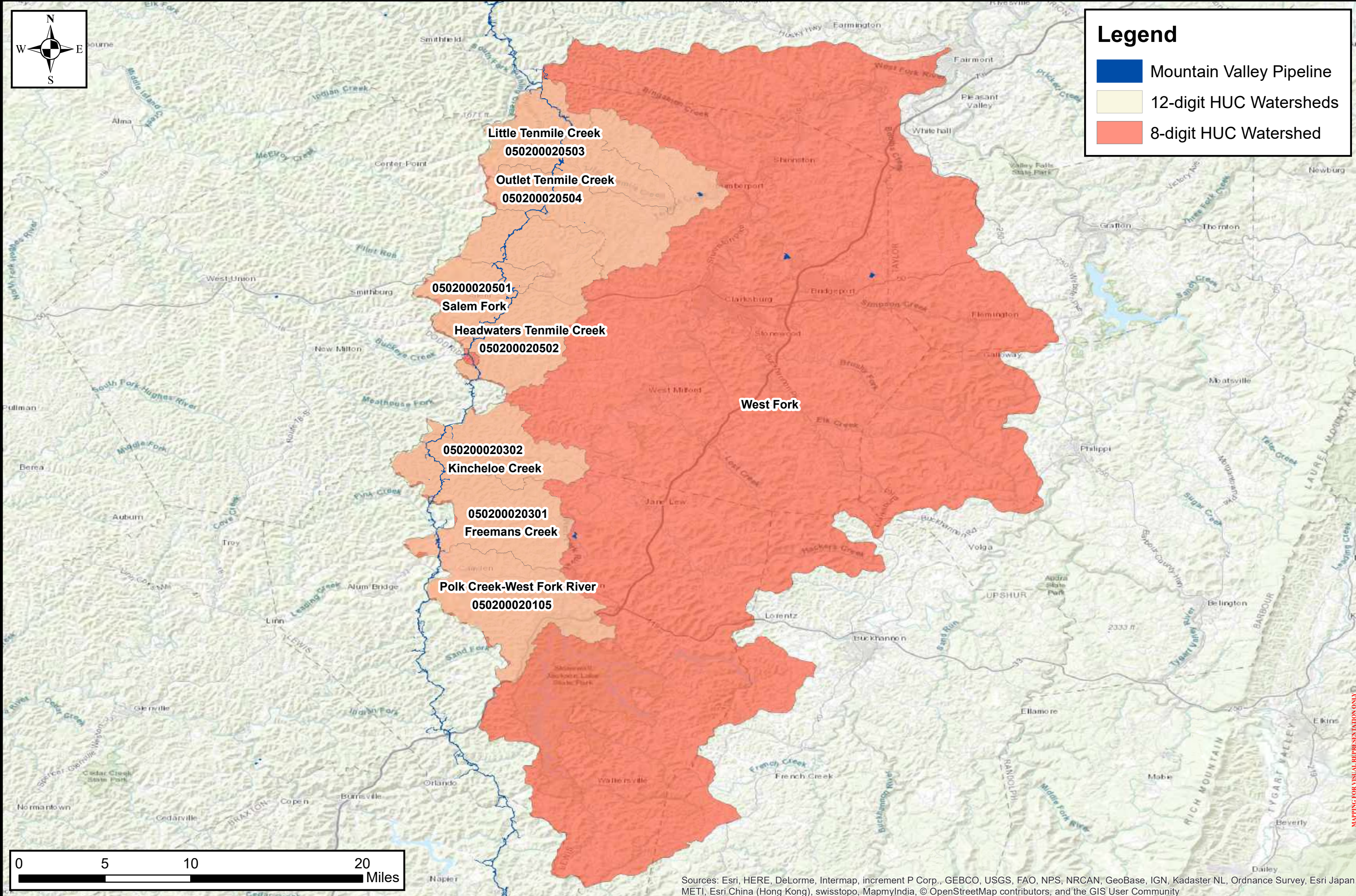


Map Extent



Legend

-  Mountain Valley Pipeline
-  12-digit HUC Watersheds
-  8-digit HUC Watershed



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

DRAWN: JLY

CHECKED: JLY

DATE: September 2021

PN: 000-17-0451.016

SCALE: 1" = 5 Miles

APPROVED: JLY

Office: 7012 MacCorkle Avenue, S.E.

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Potesta & Associates, Inc.

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POTESTA

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Charleston, West Virginia 25304

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For Informational Purposes Only

Cumulative Impact Assessment Report

West Fork Watershed

12-Digit HUC Watersheds

Multiple Counties, West Virginia

FIGURE 24

MOUNTAIN VALLEY PIPELINE, LLC

2200 Energy Drive, 2nd Floor

Canonsburg, PA 15317

MAPPING FOR VISUAL REPRESENTATION ONLY



Legend

050200020503 Little Tenmile Creek Watershed

Little Tenmile Creek Watershed Total Stream - 1,184,108 Linear Feet

Mountain Valley Pipeline Little Tenmile Creek

DEM

Value

High : 4479 ft

Low : 285 ft

Total Impacts - 570 Linear Feet (0.0481%)

MAPPING FOR VISUAL RESOURCES DATA

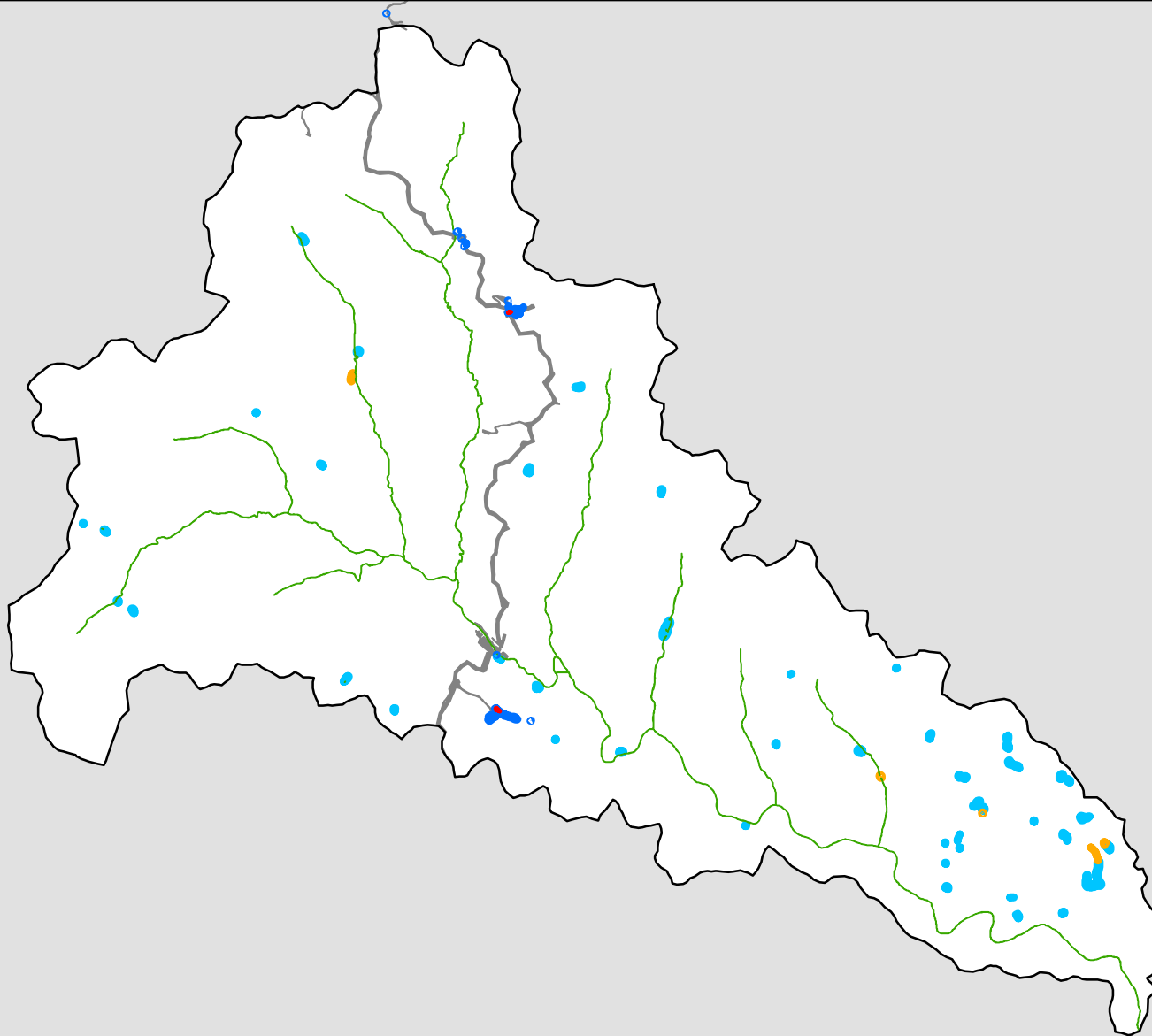
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Little Tenmile Creek Watershed (050200020503)
West Fork HUC 8 Watershed, West Virginia
For Informational Purpose Only

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SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
UPDATES(2017/17_0451.MXD, EnoCon_Monitoring/May/2021)	CA Subfigure 25 - Little Tenmile Creek.mxd



Little Tenmile Creek

Figure 26

1:83,000

LEGEND

- Wetland Impacts - 0.07 acres
- Little Tenmile Creek Delineated Wetland Area - 3 acres
- NWI Wetlands - 123.4 acres
- Freshwater Emergent Wetland - 1.47 acres
- Freshwater Pond - 26.61 acres
- Riverine - 95.32 acres
- Mountain Valley Pipeline
- 050200020503_Little Tenmile Creek

Note: Shapes are not to scale, enlarged to improve visibility.

Legend

- Mountain Valley Pipeline Little Tenmile Creek
- Little Tenmile Creek Soils
- AgC: Allegheny silt loam, 8 to 15 percent

At: Atkins silt loam, 0 to 3 percent slopes, frequently

Ch: Chavies fine sandy loam

CIB: Clarksburg silt loam, 3 to 8 percent slopes

CIC: Clarksburg silt loam, 8 to 15 percent slopes

CID: Clarksburg silt loam, 15 to 25 percent slopes

CID3: Clarksburg silt loam, 15 to 25 percent slopes, severely eroded

CoB: Cookport silt loam, 3 to 8 percent slopes

CoC: Cookport silt loam, 8 to 15 percent slopes

FaE: Faywood silty clay loam, 25 to 35 percent slopes

FaaB: Fairpoint silt loam, 0 to 8 percent slopes, reclaimed, highwall

FaaD: Fairpoint silt loam, 8 to 25 percent slopes, reclaimed, highwall

FaaF: Fairpoint silt loam, 25 to 70 percent slopes, reclaimed, highwall

FhB: Fairpoint channery silt loam, 0 to 8 percent slopes, unreclaimed, highwall

FhD: Fairpoint channery silt loam, 8 to 25 percent slopes, unreclaimed, highwall

FhF: Fairpoint channery silt loam, 25 to 70 percent slopes, unreclaimed, highwall

FpB: Fairpoint channery silt loam, 0 to 8 percent slopes, unreclaimed

FpD: Fairpoint channery silt loam, 8 to 25 percent slopes, unreclaimed

FpF: Fairpoint channery silt loam, 25 to 70 percent slopes, unreclaimed

FrB: Fairpoint silt loam, 0 to 8 percent slopes, reclaimed

FrD: Fairpoint silt loam, 8 to 25 percent slopes, reclaimed

FrF: Fairpoint silt loam, 25 to 70 percent slopes, reclaimed

GTF: Gilpin channery silt loam, 35 to 65 percent slopes, extremely stony

GIB: Gilpin silt loam, 3 to 8 percent slopes

GIC: Gilpin silt loam, 8 to 15 percent slopes

GID: Gilpin silt loam, 15 to 25 percent slopes

GIE: Gilpin silt loam, 25 to 35 percent slopes

GIF: Gilpin silt loam, 35 to 70 percent slopes

GpD: Gilpin-Peabody complex, 15 to 25 percent slopes

GpF: Gilpin-Peabody complex, 35 to 70 percent slopes

GsC: Gilpin silt loam, 3 to 15 percent slopes, very stony

GsE: Gilpin-Peabody silt loams, 15 to 35 percent slopes, very stony (Doddridge);

GsE: Gilpin silt loam, 15 to 35 percent slopes, very stony (Harrison & Taylor)

GsF: Gilpin-Peabody silt loams, 35 to 70 percent slopes, very stony

GuC: Gilpin-Upshur complex, 8 to 15 percent slopes

GuC3: Gilpin-Upshur complex, 8 to 15 percent slopes, severely eroded

GuD: Gilpin-Upshur silt loams, 15 to 25 percent slopes (Doddridge); GuD: Gilpin-Upshur complex, 15 to 25 percent slopes (Harrison & Taylor)

GuD3: Gilpin-Upshur complex, 15 to 25 percent slopes, severely eroded

GuE: Gilpin-Upshur complex, 25 to 35 percent slopes

GuE3: Gilpin-Upshur complex, 25 to 35 percent slopes, severely eroded

GuF3: Gilpin-Upshur complex, 35 to 70 percent slopes, severely eroded

GyC: Guernsey silt loam, 8 to 15 percent slopes

GyD: Guernsey silt loam, 15 to 25 percent slopes

GyD3: Guernsey silt loam, 15 to 25 percent slopes, severely eroded

Ha: Hackers silt loam, 0 to 3 percent slopes, rarely flooded

ImB: Itmann very channery loam, 0 to 8 percent slopes

ImD: Itmann very channery loam, 8 to 25 percent slopes

ImF: Itmann very channery loam, 25 to 70 percent slopes

ImF: Itmann very channery loam, 25 to 70 percent slopes

MoB: Monongahela silt loam, 3 to 8 percent slopes

MoC: Monongahela silt loam, 8 to 15 percent slopes

Ph: Philo silt loam, 0 to 3 percent slopes, occasionally flooded

Po: Pope silt loam, 0 to 3 percent slopes, occasionally flooded

Tg: Tygart silt loam

UF: Udifluvents and Fluvaquents

UL: Urban land

UhC3: Upshur silty clay, 8 to 15 percent slopes, severely eroded

VaB: Vandalia silty clay loam, 3 to 8 percent slopes

VaC: Vandalia silty clay loam, 8 to 15 percent slopes

VaD: Vandalia silty clay loam, 15 to 25 percent slopes

VaD3: Vandalia silty clay loam, 15 to 25 percent slopes, severely

W: Water

WmC: Westmoreland silt loam, 8 to 15 percent slopes

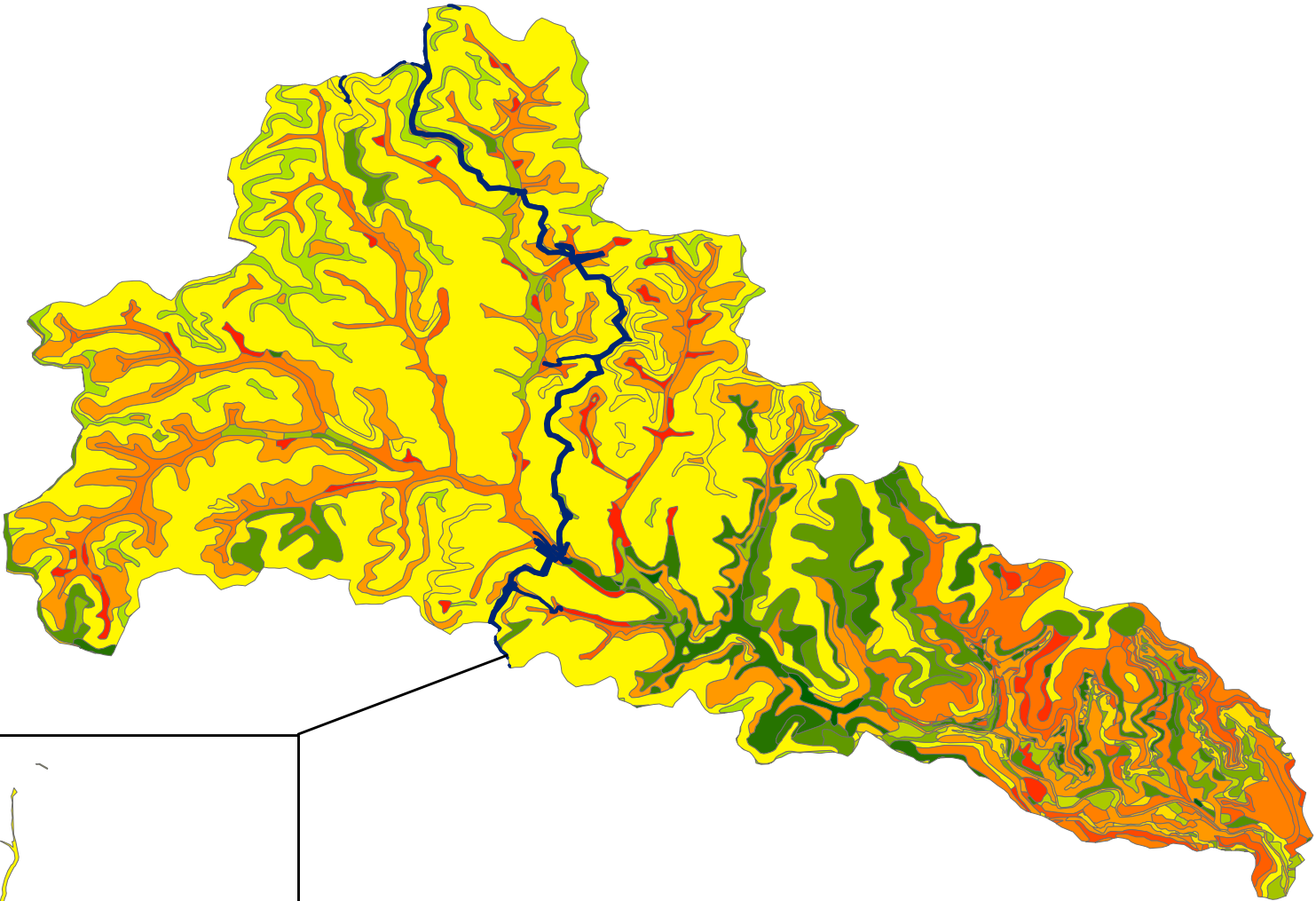
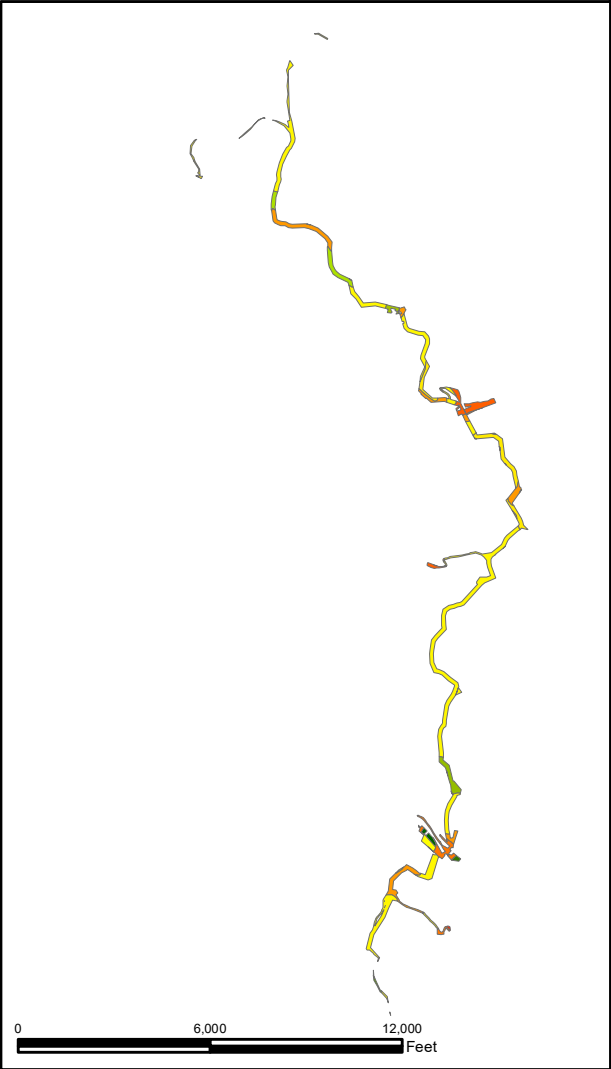
WmD: Westmoreland silt loam, 15 to 25 percent slopes

WmD3: Westmoreland silt loam 15 to 25 percent slopes, severely eroded

WmE: Westmoreland silt loam, 25 to 35 percent slopes

WmE3: Westmoreland silt loam, 25 to 35 percent slopes, severely eroded

WmF: Westmoreland silt loam, 35 to 60 percent slopes



MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: See Mapping

DRAWN: KBW

DATE: June 2022

CHECKED: JLY

PN: 001-17-0451.016

APPROVED: JLY

06/29/2022 17:04:51 MWP_Eng/Com_MountainRangeMapa2021

C:\S\Solidfigure 27 - Little Tenmile Creek Soil.mxd

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POTESTA

MOUNTAIN VALLEY PIPELINE, LLC

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Canonsburg, PA 15317

Cumulative Impact Assessment - Soil

Little Tenmile Creek (050200020503)

West Fork HUC 8 Watershed

Wetzel, Harrison, and Taylor Counties, West Virginia

For Informational Purposes Only

FIGURE 27

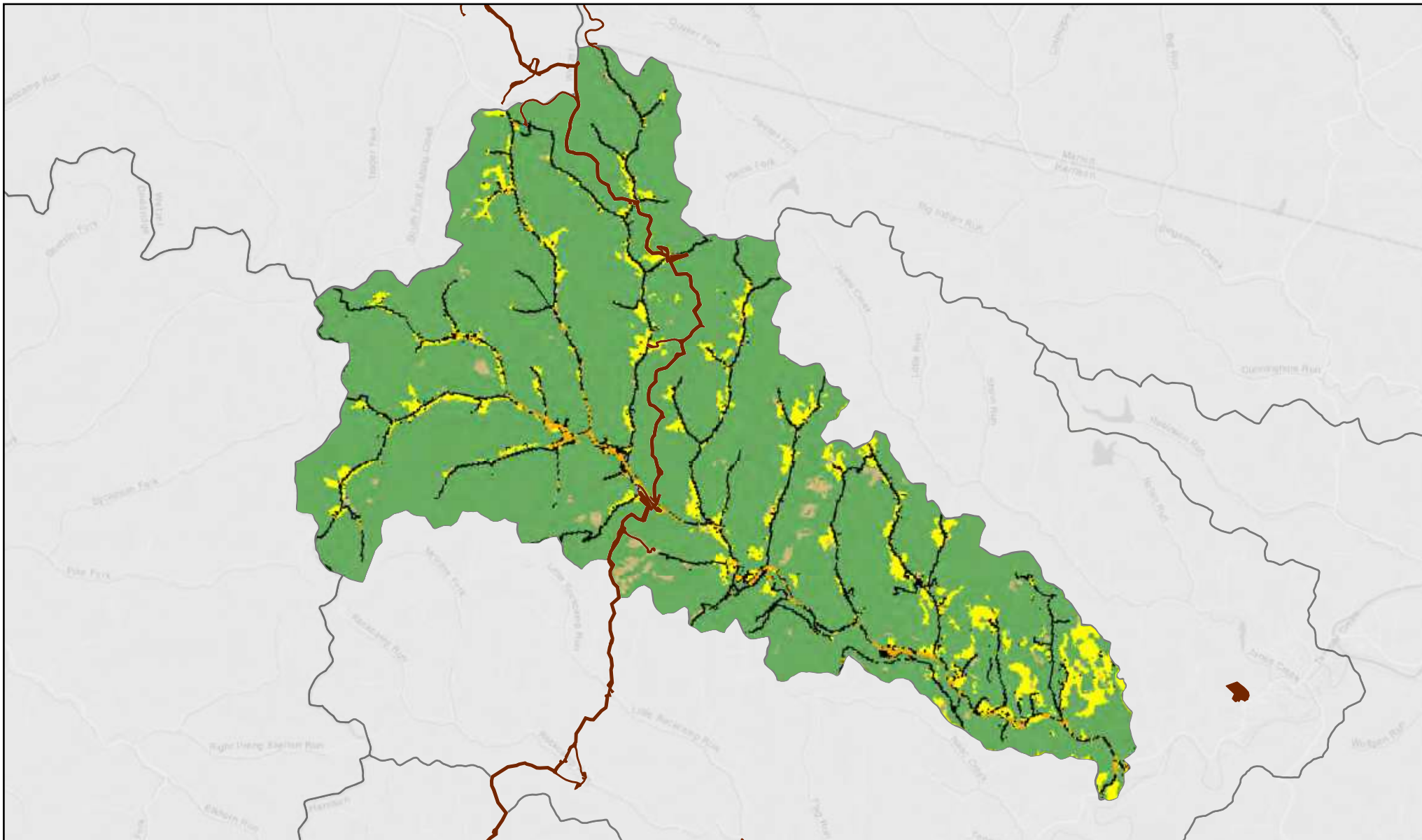


Figure: 28

**Land Use/Land Cover 2011
Little Tenmile Creek
050200020503 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

0 1 2 Miles



Scale: 1:90,000



Map Extent

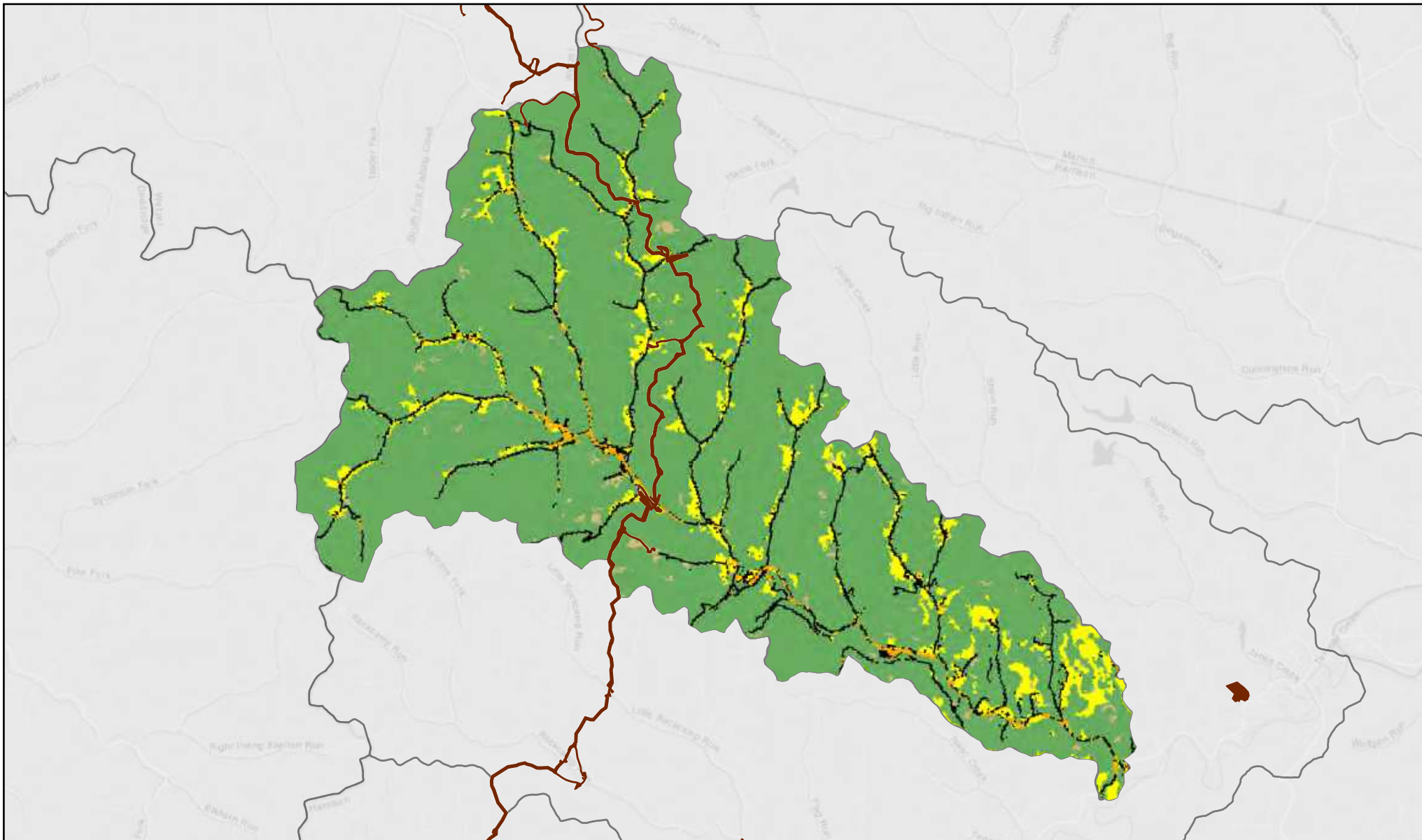


Figure: 29

**Land Use/Land Cover 2016
Little Tenmile Creek
050200020503 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

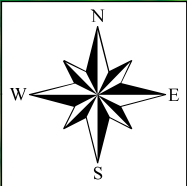
0 1 2 Miles



Scale: 1:90,000



Map Extent



Legend

- 050200020504 Outlet Tenmile Creek Watershed
- Outlet Tenmile Creek Watershed Total Stream - 1,796,037 Linear Feet
- Mountain Valley Pipeline Outlet Tenmile Creek

DEM

Value
 High : 4479 ft
Low : 285 ft

Total Impacts - 376 Linear Feet (0.0209%)

ADAPTING FOR PUBLIC REPRESENTATION 2022

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Outlet Tenmile Creek Watershed (050200020504)
West Fork HUC 8 Watershed, West Virginia

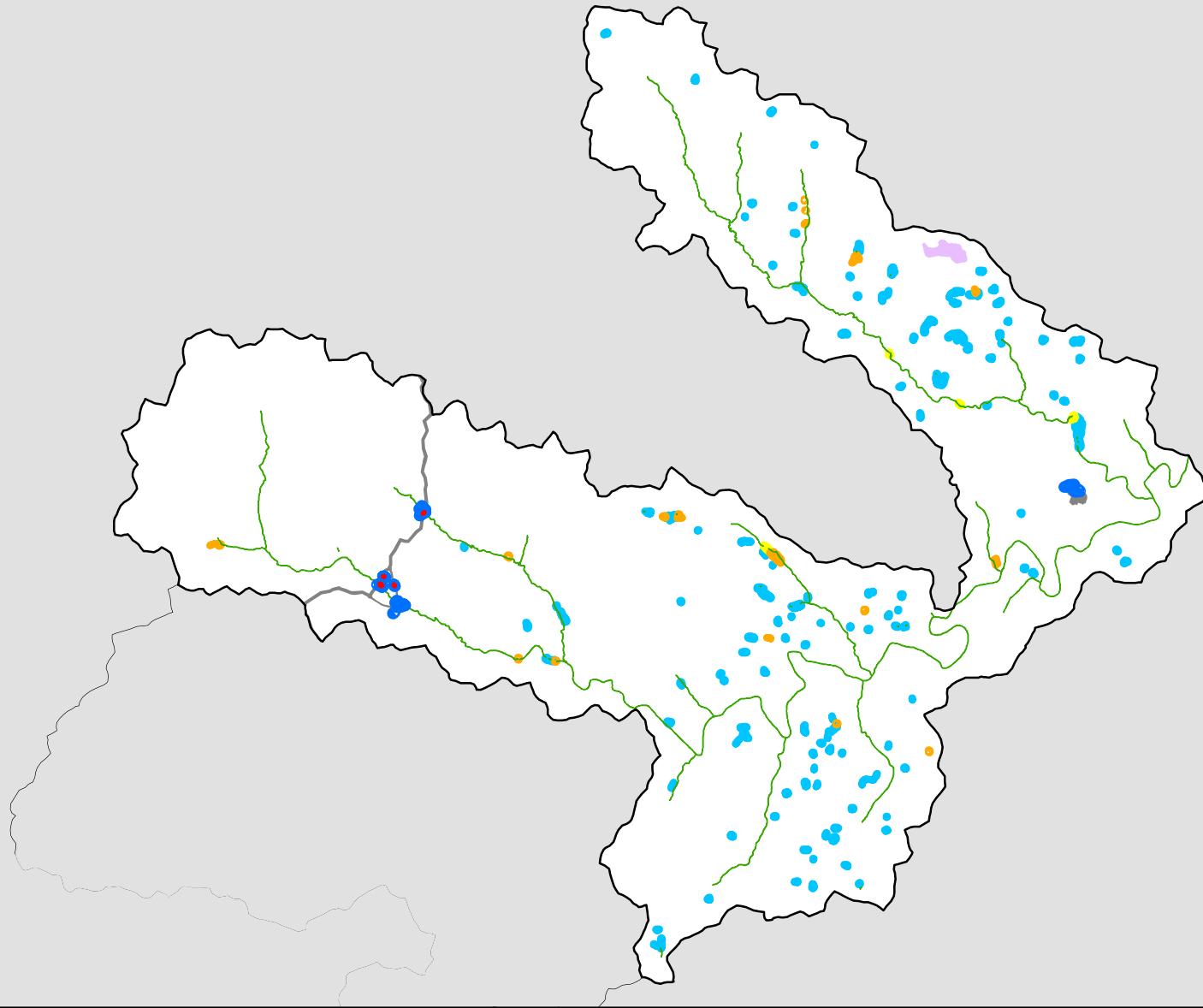
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Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
[Project\2017_081_MVP_EnvCon_Monitoring\Map\2021_CIA\SubFigure-30 - Outlet Tenmile Creek.mxd]	



Outlet Tenmile Creek

Figure 31

1:110,000

LEGEND

- Wetland Impacts - 0.39 acres
- Outlet Tenmile Creek Delineated Wetland Area - 3.29 acres
- NWI Wetlands - 260.93 acres
- Freshwater Emergent Wetland - 10.17 acres
- Freshwater Forested/Shrub Wetland - 3.25 acres
- Freshwater Pond - 80.63 acres
- Lake - 31.36 acres
- Riverine - 135.52 acres
- Mountain Valley Pipeline
- 050200020504_Outlet Tenmile Creek

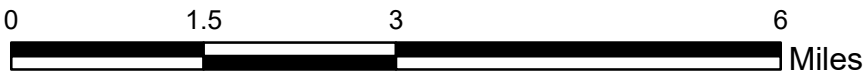
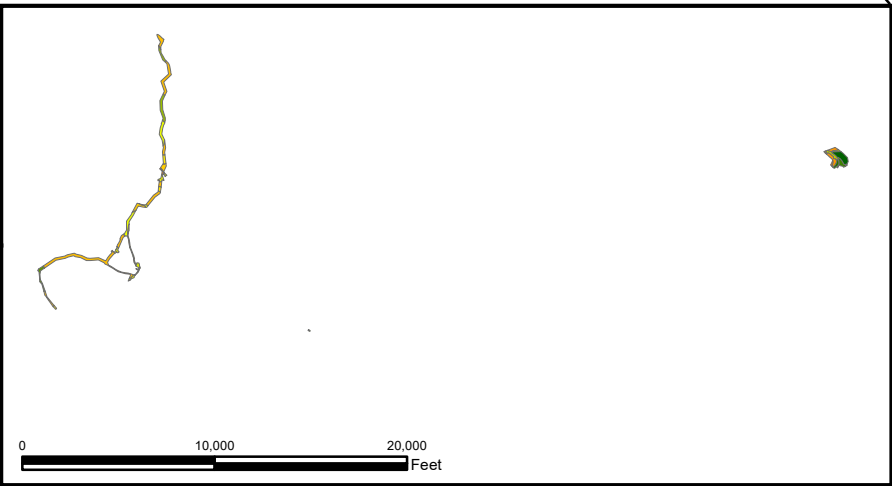
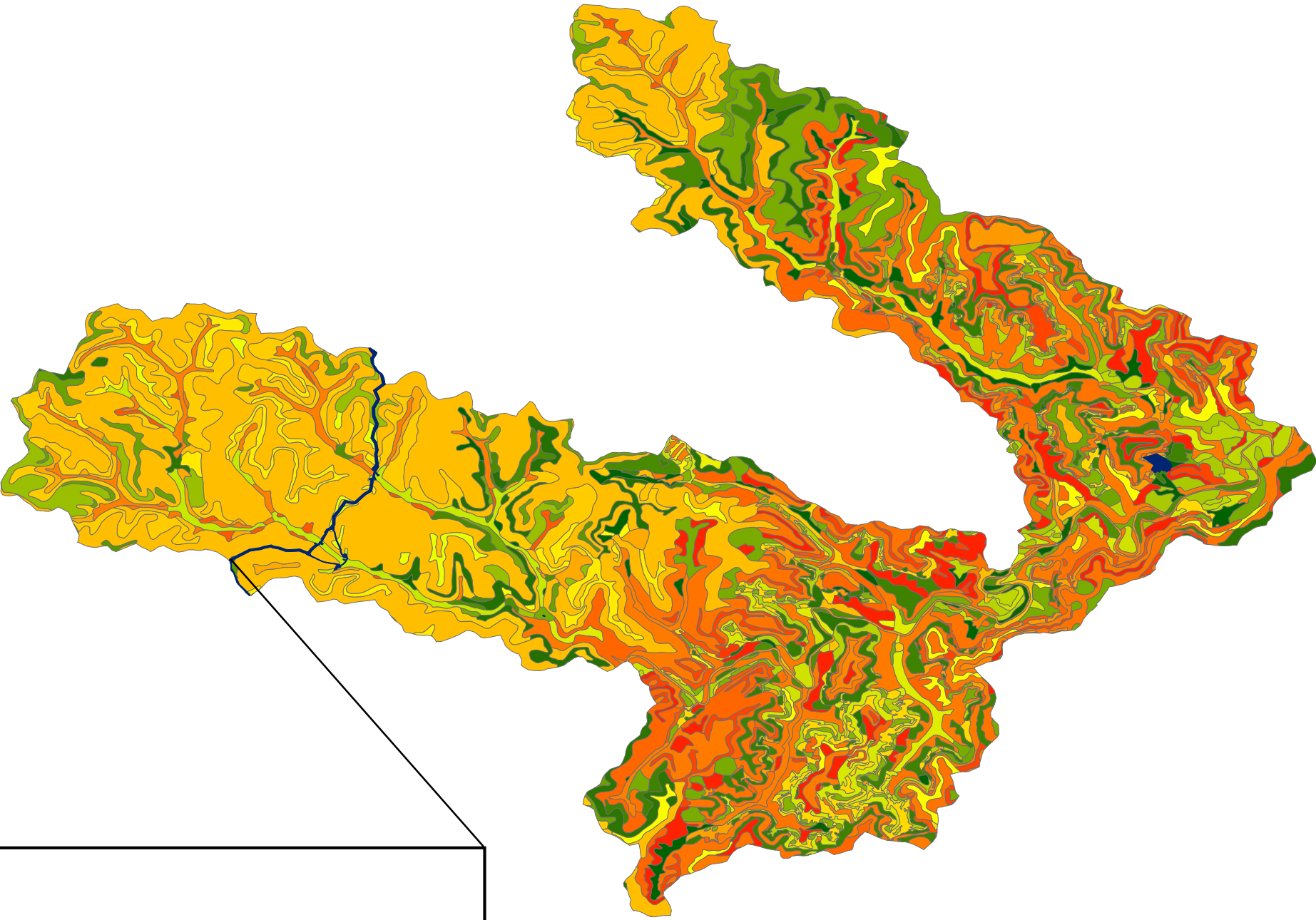
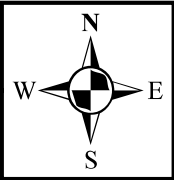
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

■ Mountain Valley Pipeline Outlet Tenmile Creek

Outlet Tenmile Creek

- AgC: Allegheny silt loam, 8 to 15 percent slopes
- AgD: Allegheny silt loam, 15 to 25 percent slopes
- Ch: Chavies fine sandy loam
- CIB: Clarksburg silt loam, 3 to 8 percent slopes
- CIC: Clarksburg silt loam, 8 to 15 percent slopes
- CID: Clarksburg silt loam, 15 to 25 percent slopes
- CID3: Clarksburg silt loam, 15 to 25 percent slopes, severely eroded
- FO: Fluvaquents, overwash
- FaC: Faywood silty clay loam, 8 to 15 percent slopes
- FaD: Faywood silty clay loam, 15 to 25 percent slopes
- FaE: Faywood silty clay loam, 25 to 35 percent slopes
- FaaB: Fairpoint silt loam, 0 to 8 percent slopes, reclaimed, highwall
- FaaD: Fairpoint silt loam, 8 to 25 percent slopes, reclaimed, highwall
- FaaF: Fairpoint silt loam, 25 to 70 percent slopes, reclaimed, highwall
- FhB: Fairpoint channery silt loam, 0 to 8 percent slopes, unreclaimed, highwall
- FhD: Fairpoint channery silt loam, 8 to 25 percent slopes, unreclaimed, highwall
- FhF: Fairpoint channery silt loam, 25 to 70 percent slopes, unreclaimed, highwall
- FpB: Fairpoint channery silt loam, 0 to 8 percent slopes, unreclaimed
- FpD: Fairpoint channery silt loam, 8 to 25 percent slopes, unreclaimed
- FpF: Fairpoint channery silt loam, 25 to 70 percent slopes, unreclaimed
- FrB: Fairpoint silt loam, 0 to 8 percent slopes, reclaimed
- FrD: Fairpoint silt loam, 8 to 25 percent slopes, reclaimed
- FrF: Fairpoint silt loam, 25 to 70 percent slopes, reclaimed
- GTF: Gilpin channery silt loam, 35 to 65 percent slopes, extremely stony
- GlC: Gilpin silt loam, 8 to 15 percent slopes
- GlD: Gilpin silt loam, 15 to 25 percent slopes
- GlE: Gilpin silt loam, 25 to 35 percent slopes
- GlF: Gilpin silt loam, 35 to 70 percent slopes
- GsC: Gilpin silt loam, 3 to 15 percent slopes, very stony
- GsE: Gilpin-Peabody silt loams, 15 to 35 percent slopes, very stony
- GsF: Gilpin-Peabody silt loams, 35 to 70 percent slopes, very stony
- GuC: Gilpin-Upshur complex, 8 to 15 percent slopes
- GuC3: Gilpin-Upshur complex, 8 to 15 percent slopes, severely eroded
- GuD: Gilpin-Upshur complex, 15 to 25 percent slopes
- GuD3: Gilpin-Upshur complex, 15 to 25 percent slopes, severely eroded
- GuE: Gilpin-Upshur complex, 25 to 35 percent slopes
- GuE3: Gilpin-Upshur complex, 25 to 35 percent slopes, severely eroded
- GuF3: Gilpin-Upshur complex, 35 to 70 percent slopes, severely eroded
- GyB: Guernsey silt loam, 3 to 8 percent slopes
- GyC: Guernsey silt loam, 8 to 15 percent slopes
- GyD: Guernsey silt loam, 15 to 25 percent slopes
- GyD3: Guernsey silt loam, 15 to 25 percent slopes, severely eroded
- Ha: Hackers silt loam, 0 to 3 percent slopes, rarely flooded
- ImB: Itmann very channery loam, 0 to 8 percent slopes
- ImD: Itmann very channery loam, 8 to 25 percent slopes
- ImF: Itmann very channery loam, 25 to 70 percent slopes
- Ln: Lindside silt loam, 0 to 3 percent slopes, occasionally flooded
- Me: Melvin silt loam, 0 to 3 percent slopes, occasionally flooded
- MoB: Monongahela silt loam, 3 to 8 percent slopes
- MoC: Monongahela silt loam, 8 to 15 percent slopes
- No: Nolin silt loam, 0 to 3 percent slopes, occasionally flooded
- Ph: Philo silt loam, 0 to 3 percent slopes, occasionally flooded
- Pm: Pits, mine
- Tg: Tygart silt loam
- UF: Udifluvents and Fluvaquents
- UL: Urban land
- UhC3: Upshur silty clay, 8 to 15 percent slopes, severely eroded
- VaB: Vandalia silty clay loam, 3 to 8 percent slopes
- VaC: Vandalia silty clay loam, 8 to 15 percent slopes
- VaD: Vandalia silty clay loam, 15 to 25 percent slopes
- VaD3: Vandalia silty clay loam, 15 to 25 percent slopes, severely eroded
- W: Water
- WmC: Westmoreland silt loam, 8 to 15 percent slopes
- WmC3: Westmoreland silt loam, 8 to 15 percent slopes severely eroded
- WmD: Westmoreland silt loam, 15 to 25 percent slopes
- WmD3: Westmoreland silt loam 15 to 25 percent slopes, severely eroded
- WmE: Westmoreland silt loam, 25 to 35 percent slopes
- WmE3: Westmoreland silt loam, 25 to 35 percent slopes, severely eroded
- WmF: Westmoreland silt loam, 35 to 60 percent slopes
- ZoC: Zoar silt loam, 8 to 15 percent slopes



MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment - Soil
Outlet Tenmile Creek (050200020504)
West Fork HUC 8 Watershed
Doddridge, Harrison, and Taylor Counties, West Virginia
For Informational Purposes Only

MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317



Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7019 MacCorrie Avenue, S.E.
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

SCALE: See Mapping	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-17-4451-016	APPROVED: JLY
Revised: 2021/17-08/11 M.V.P. Exit 200 Mountain Valley Pipeline CA Soil Figure 32 - Outlet Tenmile Creek Soils.mxd	

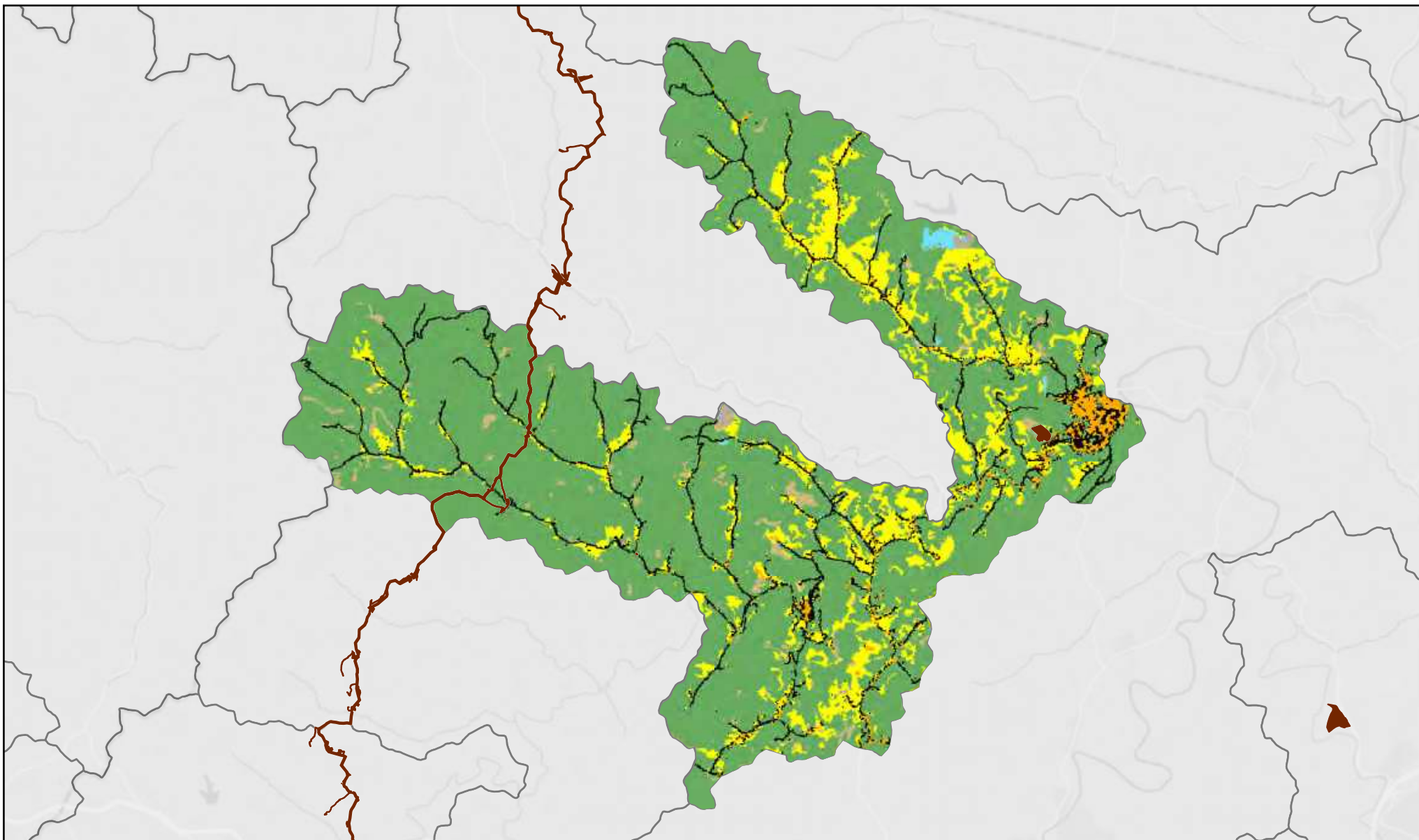
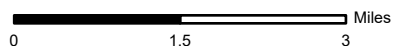


Figure: 33

**Land Use/Land Cover 2011
Outlet Tenmile Creek
050200020504 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:110,000



Map Extent

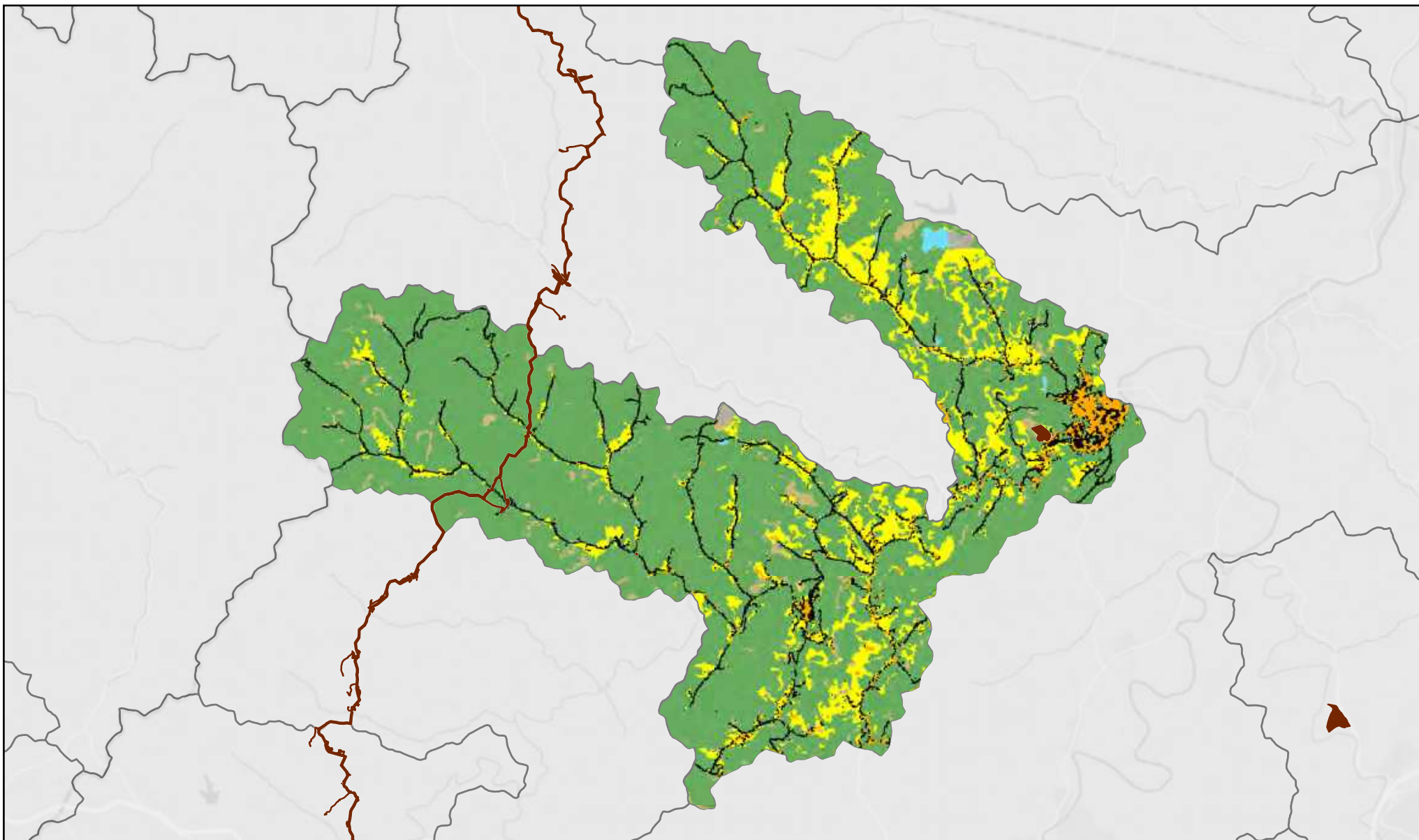
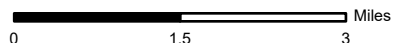


Figure: 34

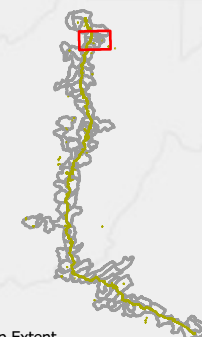
**Land Use/Land Cover 2016
Outlet Tenmile Creek
050200020504 HUC12 Watershed**

LEGEND

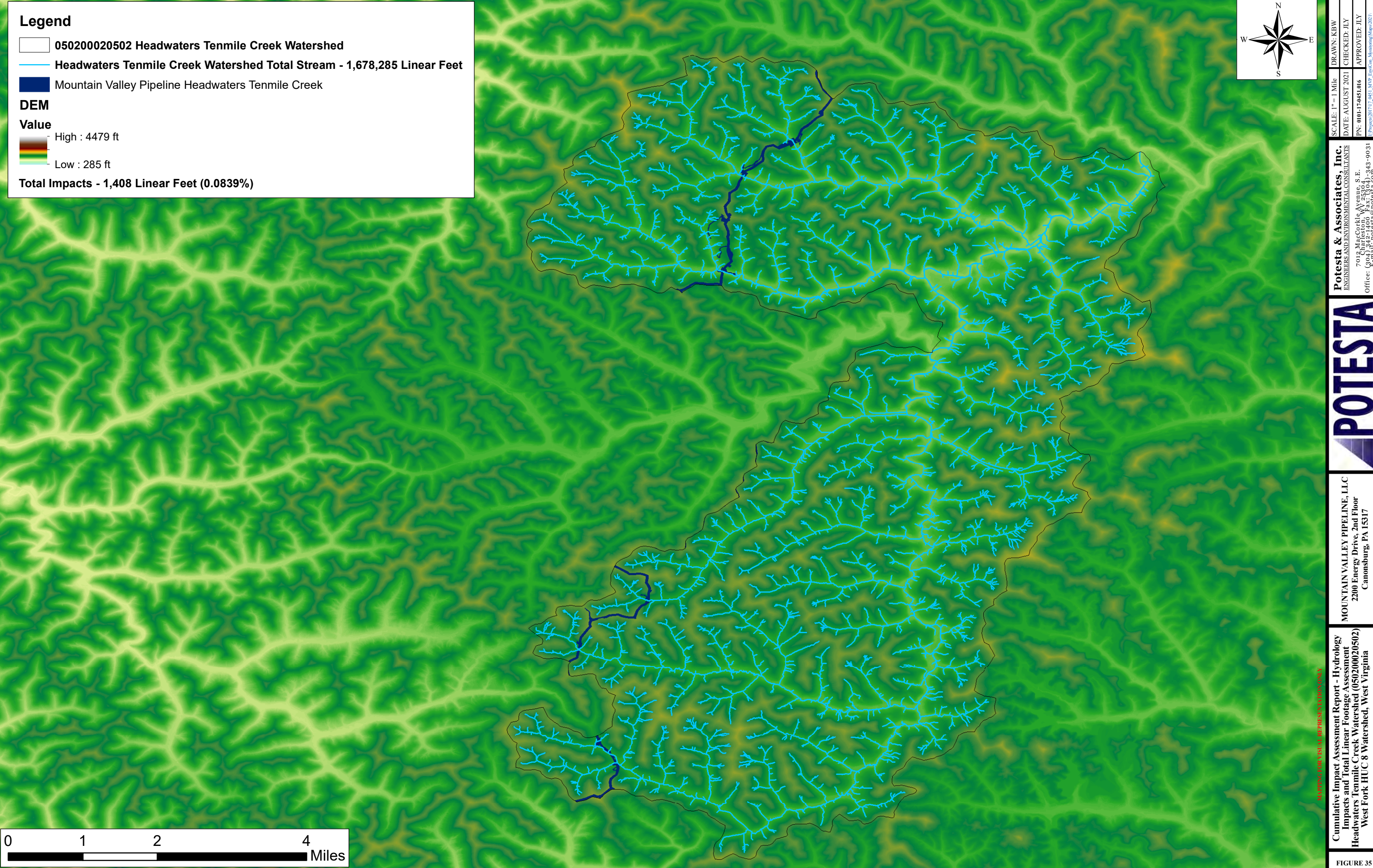
- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:110,000



Map Extent

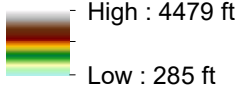


Legend

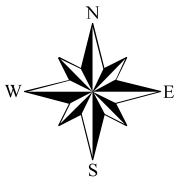
- 050200020502 Headwaters Tenmile Creek Watershed
- Headwaters Tenmile Creek Watershed Total Stream - 1,678,285 Linear Feet
- Mountain Valley Pipeline Headwaters Tenmile Creek

DEM

Value



Total Impacts - 1,408 Linear Feet (0.0839%)



ELEVATION FOR USE TO REPRESENT DATA ONLY

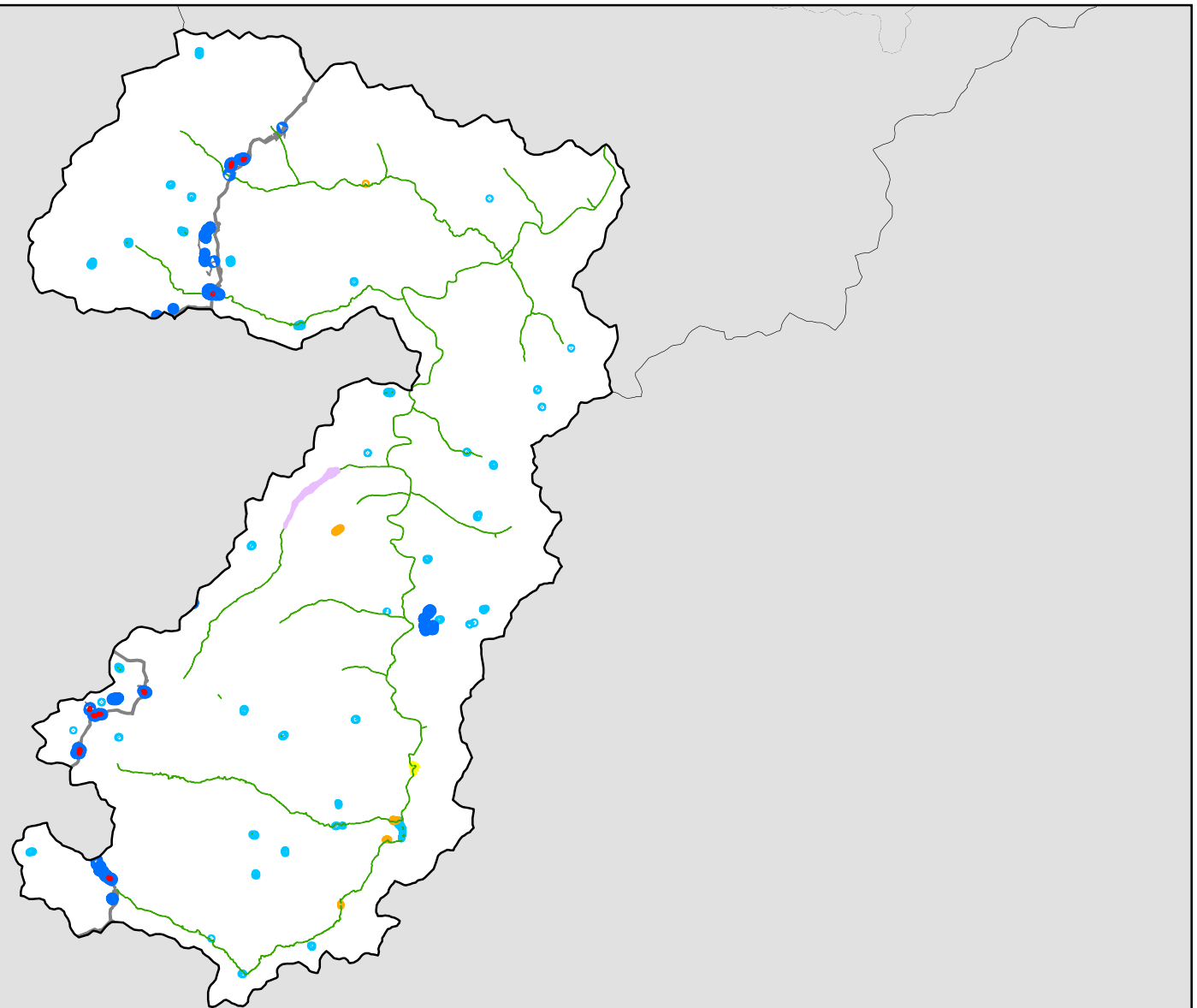
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Headwaters Tenmile Creek Watershed (050200020502)
West Fork HUC 8 Watershed, West Virginia

MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
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Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile
DATE: AUGUST 2021
DRAWN: KBW
CHECKED: JLY
APPROVED: JLY
PIN: 001-174451.06
1 Potesta/201717_0451_MVP_EnvCon_Monitoring/May/2021
CIA Subfigure 35 - Headwaters, Tenmile Creek.mxd



Headwaters Tenmile Creek

Figure 36

1:110,000

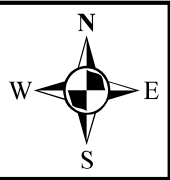
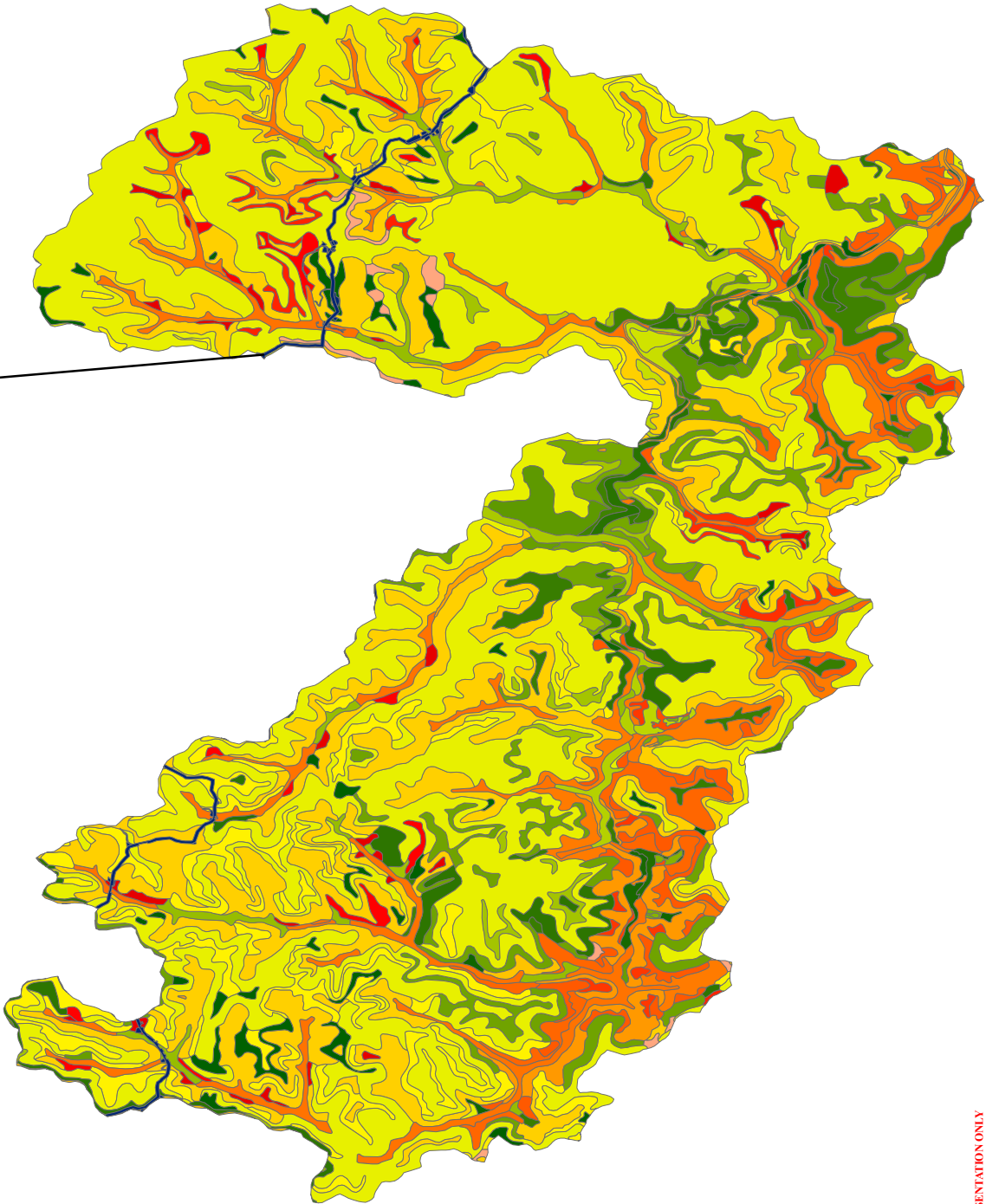
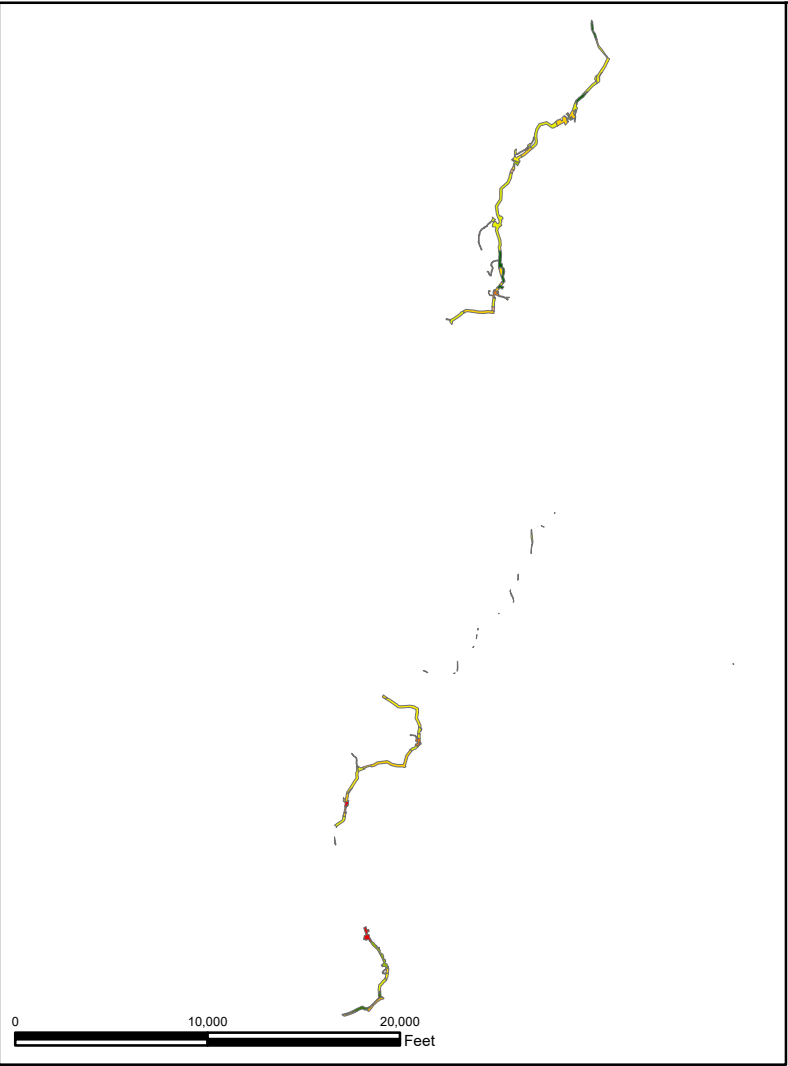
LEGEND

- Wetland Impacts - 1.3 acres
- Headwaters Tenmile Creek Delineated Wetland Area - 4.4 acres
- NWI Wetlands - 177.44 acres
- Freshwater Emergent Wetland - 1.43 acres
- Freshwater Forested/Shrub Wetland - 0.44 acres
- Freshwater Pond - 18.12 acres
- Lake - 28.43 acres
- Riverine - 129.02 acres
- Mountain Valley Pipeline
- 050200020502_Headwaters Tenmile Creek

Note: Shapes are not to scale, enlarged to improve visibility.

Legend

- Mountain Valley Pipeline Headwaters Tenmile Creek
- Headwaters Tenmile Creek Soil
- AgC: Allegheny silt loam, 8 to 15 percent slopes
 - AgD: Allegheny silt loam, 15 to 25 percent slopes
 - Ch: Chavies fine sandy loam
 - CIB: Clarksburg silt loam, 3 to 8 percent slopes
 - CIC: Clarksburg silt loam, 8 to 15 percent slopes
 - CID: Clarksburg silt loam, 15 to 25 percent slopes
 - CID3: Clarksburg silt loam, 15 to 25 percent slopes, severely eroded
 - FaD: Faywood silty clay loam, 15 to 25 percent slopes
 - FaF: Faywood silty clay loam, 35 to 60 percent slopes
 - FaaB: Fairpoint silt loam, 0 to 8 percent slopes, reclaimed, highwall
 - FaaD: Fairpoint silt loam, 8 to 25 percent slopes, reclaimed, highwall
 - FaaF: Fairpoint silt loam, 25 to 70 percent slopes, reclaimed, highwall
 - FhD: Fairpoint channery silt loam, 8 to 25 percent slopes, unreclaimed, highwall
 - FhF: Fairpoint channery silt loam, 25 to 70 percent slopes, unreclaimed, highwall
 - FpD: Fairpoint channery silt loam, 8 to 25 percent slopes, unreclaimed
 - FpF: Fairpoint channery silt loam, 25 to 70 percent slopes, unreclaimed
 - FrB: Fairpoint silt loam, 0 to 8 percent slopes, reclaimed
 - FrD: Fairpoint silt loam, 8 to 25 percent slopes, reclaimed
 - GTF: Gilpin channery silt loam, 35 to 65 percent slopes, extremely stony
 - GIB: Gilpin silt loam, 3 to 8 percent slopes
 - GIC: Gilpin silt loam, 8 to 15 percent slopes
 - GID: Gilpin silt loam, 15 to 25 percent slopes
 - GIE: Gilpin silt loam, 25 to 35 percent slopes
 - GIF: Gilpin silt loam, 35 to 70 percent slopes
 - GsE: Gilpin-Peabody silt loams, 15 to 35 percent slopes, very stony (Doddridge); GsE: Gilpin silt loam, 15 to 35 percent slopes, very stony (Harrison & Taylor)
 - GsF: Gilpin-Peabody silt loams, 35 to 70 percent slopes, very stony
 - GuC: Gilpin-Upshur silt loams, 8 to 15 percent slopes (Doddridge) GuC: Gilpin-Upshur complex, 8 to 15 percent slopes (Harrison and Taylor)
 - GuC3: Gilpin-Upshur complex, 8 to 15 percent slopes, severely eroded
 - GuD: Gilpin-Upshur silt loams, 15 to 25 percent slopes (Doddridge); GuD: Gilpin-Upshur complex, 15 to 25 percent slopes (Harrison & Taylor)
 - GuD3: Gilpin-Upshur complex, 15 to 25 percent slopes, severely eroded
 - GuE: Gilpin-Upshur complex, 25 to 35 percent slopes
 - GuE3: Gilpin-Upshur complex, 25 to 35 percent slopes, severely eroded
 - GuF3: Gilpin-Upshur complex, 35 to 70 percent slopes, severely eroded
 - Ha: Hackers silt loam, 0 to 3 percent slopes, rarely flooded
 - ImB: Itmann very channery loam, 0 to 8 percent slopes
 - ImD: Itmann very channery loam, 8 to 25 percent slopes
 - Ln: Lindside silt loam, 0 to 3 percent slopes, occasionally flooded
 - MoB: Monongahela silt loam, 3 to 8 percent slopes
 - MoC: Monongahela silt loam, 8 to 15 percent slopes
 - No: Nolin silt loam, 0 to 3 percent slopes, occasionally flooded
 - Ph: Philo silt loam, 0 to 3 percent slopes, occasionally flooded
 - Po: Pope silt loam, 0 to 3 percent slopes, occasionally flooded
 - Tg: Tygart silt loam
 - UF: Udifluvents and Fluvuquents
 - UL: Urban land
 - UhC3: Upshur silty clay, 8 to 15 percent slopes, severely eroded
 - UhD3: Upshur silty clay, 15 to 25 percent slopes, severely eroded
 - VaB: Vandalia silty clay loam, 3 to 8 percent slopes
 - VaC: Vandalia silty clay loam, 8 to 15 percent slopes
 - VaD: Vandalia silt loam, 15 to 25 percent slopes (Doddridge); VaD: Vandalia silty clay loam, 15 to 25 percent slopes (Harrison and Taylor)
 - VaD3: Vandalia silty clay loam, 15 to 25 percent slopes, severely eroded
 - W: Water
 - WmC: Westmoreland silt loam, 8 to 15 percent slopes
 - WmD: Westmoreland silt loam, 15 to 25 percent slopes
 - WmD3: Westmoreland silt loam 15 to 25 percent slopes, severely eroded
 - WmE: Westmoreland silt loam, 25 to 35 percent slopes
 - WmE3: Westmoreland silt loam, 25 to 35 percent slopes, severely eroded
 - WmF: Westmoreland silt loam, 35 to 60 percent slopes



MAPPING FOR VISUAL REPRESENTATION ONLY

POTESTA ENGINEERS AND ENVIRONMENTAL CONSULTANTS 7019 MacCorkie Avenue, S.E. Atlanta, Georgia 30328 Office: (404) 342-1400 Fax: (404) 343-9031 E-mail: potesta@potesta.com	SCALE: See Mapping	DRAWN: KBW
	DATE: AUGUST 2021	CHECKED: JLY
	PN: 001-17-4451016	APPROVED: JLY
	PROJECT: 2017-0451 MTP Back-Cast Mapping Maps 2021 CUA, Sub- Figure 37: Headwaters Tenmile Creek Soil	
Cumulative Impact Assessment - Soil Headwaters Tenmile Creek (050200020502) West Fork HUC 8 Watershed Doddridge, Harrison, and Taylor, West Virginia For Informational Purposes Only	MOUNTAIN VALLEY PIPELINE, LLC 2200 Energy Drive, 2nd Floor Canonsburg, PA 15317	
FIGURE 37		

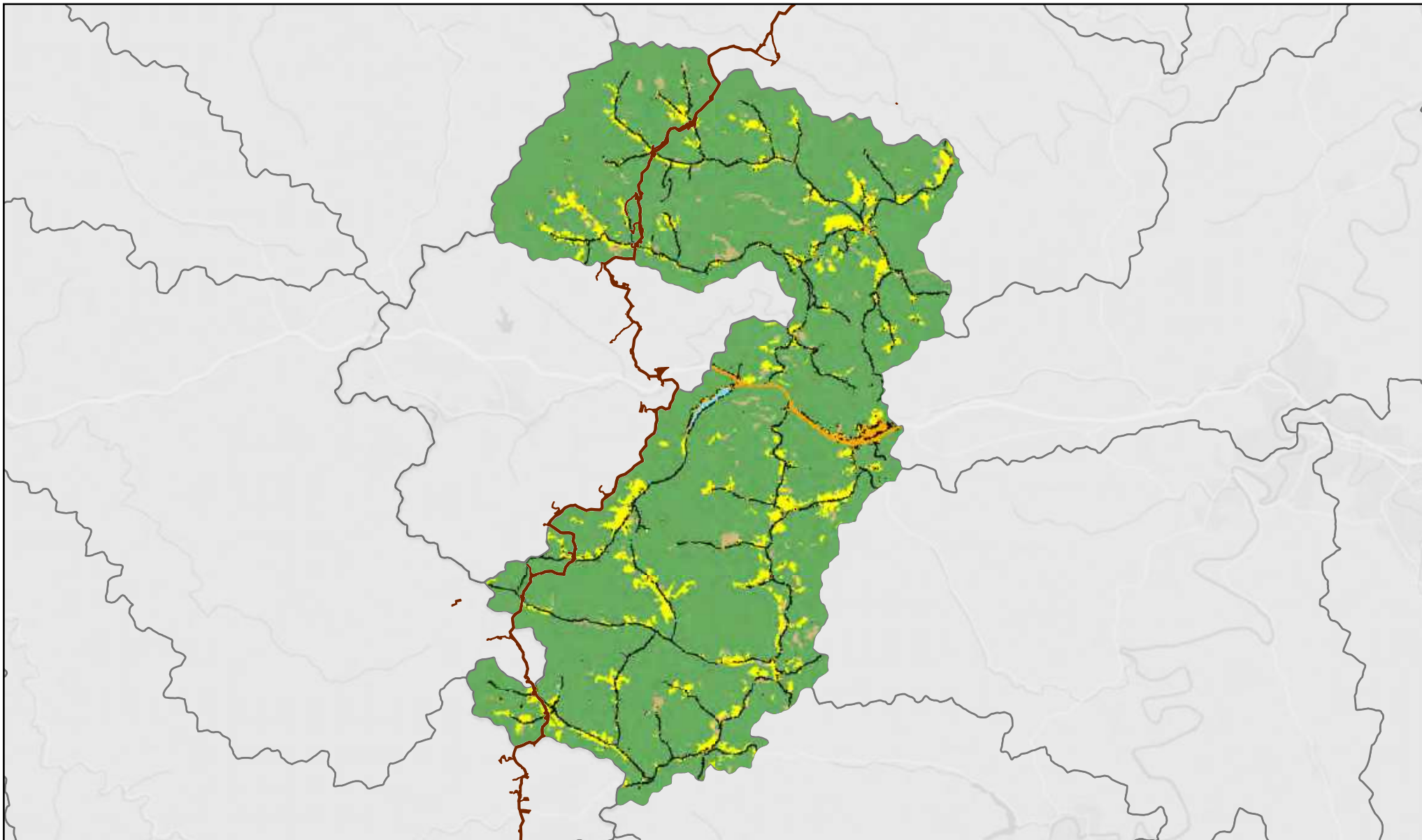


Figure: 38

**Land Use/Land Cover 2011
Headwaters Tenmile Creek
050200020502 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



0 1.5 3 Miles

Scale: 1:120,000



Map Extent

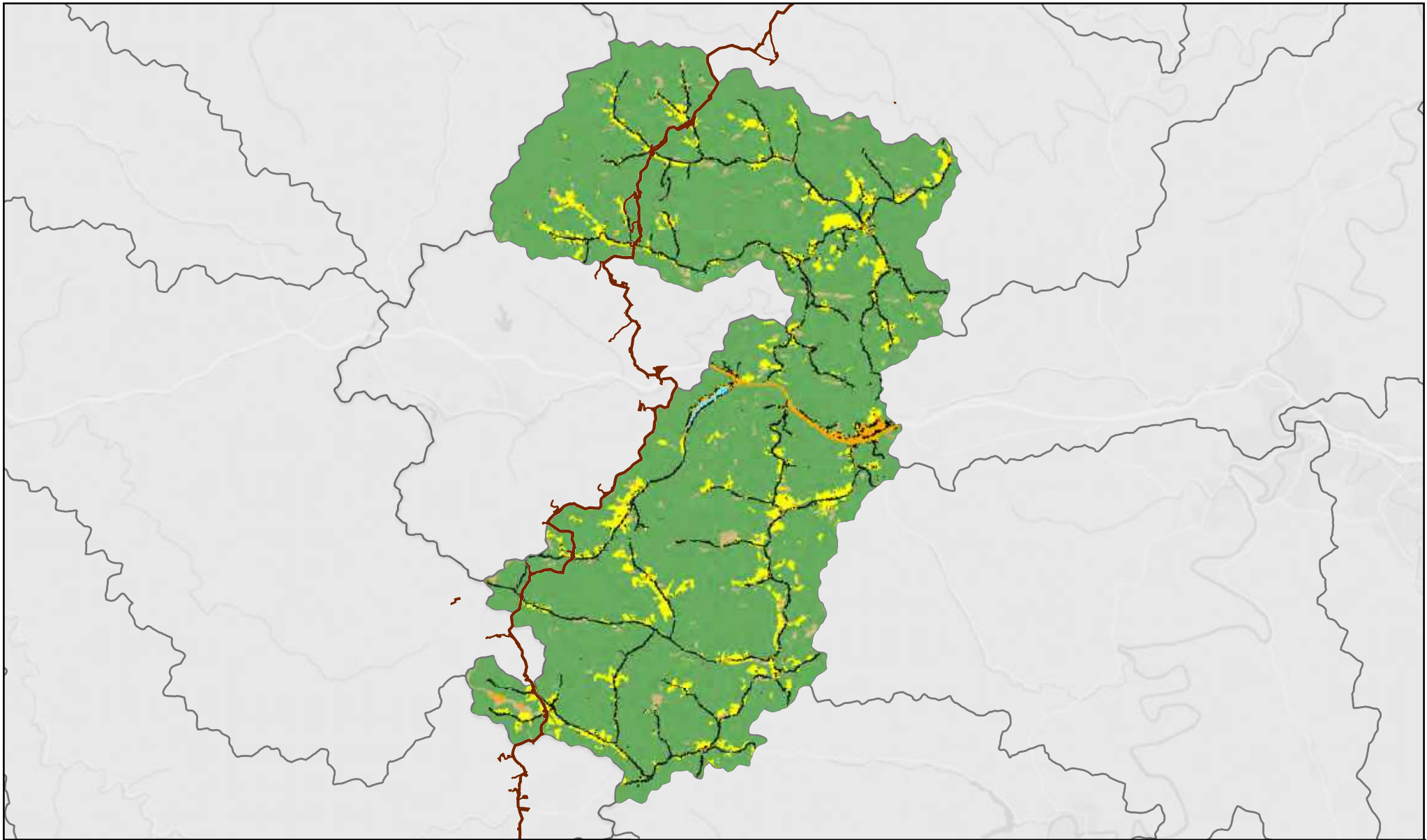


Figure: 39

**Land Use/Land Cover 2016
Headwaters Tenmile Creek
050200020502 HUC12 Watershed**

LEGEND

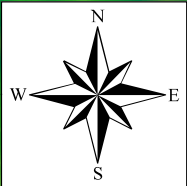
- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



0 1.5 3 Miles

Scale: 1:120,000

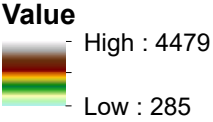




Legend

- 050200020501 Salem Fork Watershed
- Salem Fork Total Stream - 734,073 Linear Feet
- Mountain Valley Pipeline Salem Fork

DEM



Total Impacts - 76 Linear Feet (0.0104%)

MAPS FOR USE ONLY - NOT FOR CONSTRUCTION

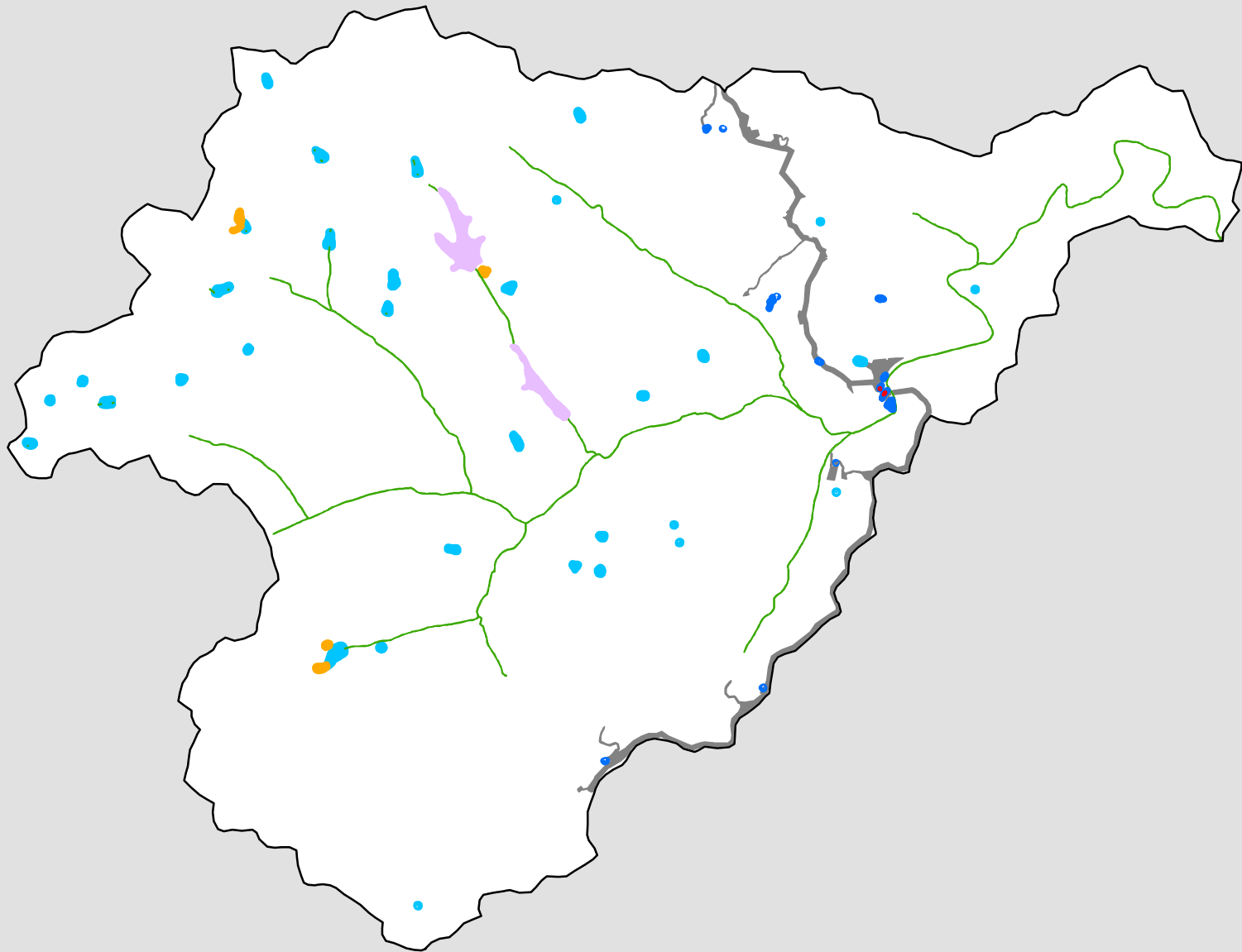
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Salem Fork HUC (050200020501)
West Fork HUC 8 Watershed, West Virginia

MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317



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Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
E:\Projects\2017-08-1 M.V.P. EnvCon_Monitoring\Map\2021\ CIA Subfigure-40 - Salem Fork2.mxd	



Salem Fork

Figure 41

1:53,000

LEGEND

- Wetland Impacts - 0.01 acres
- Salem Fork Delineated Wetland Area - 1.04 acres
- NWI Wetlands - 121.58 acres
- Freshwater Emergent Wetland - 2.5 acres
- Freshwater Pond - 22.94 acres
- Lake - 42.08 acres
- Riverine - 54.06 acres
- Mountain Valley Pipeline
- 050200020501_Salem Fork

Note: Shapes are not to scale, enlarged to improve visibility.

Legend

- Mountain Valley Pipeline Salem Fork
- Salem Fork Soil
- AgD: Allegheny silt loam, 15 to 25 percent slopes

At: Atkins silt loam, 0 to 3 percent slopes, frequently flooded

Ch: Chavies fine sandy loam

GTF: Gilpin channery silt loam, 35 to 65 percent slopes, extremely stony

GIB: Gilpin silt loam, 3 to 8 percent slopes

GIC: Gilpin silt loam, 8 to 15 percent slopes

GID: Gilpin silt loam, 15 to 25 percent slopes

GIE: Gilpin silt loam, 25 to 35 percent slopes

GIF: Gilpin silt loam, 35 to 70 percent slopes

GpE: Gilpin-Peabody silt loams, 25 to 35 percent slopes

GsE: Gilpin-Peabody silt loams, 15 to 35 percent slopes, very stony

GsF: Gilpin-Peabody silt loams, 35 to 70 percent slopes, very stony

GuC: Gilpin-Upshur silt loams, 8 to 15 percent slopes (Doddridge); GuC: Gilpin-Upshur silt loams, 8 to 15 percent slopes (Harrison and Taylor)

GuC3: Gilpin-Upshur complex, 8 to 15 percent slopes, severely eroded

GuD: Gilpin-Upshur complex, 15 to 25 percent slopes

GuD3: Gilpin-Upshur complex, 15 to 25 percent slopes, severely eroded

GuE: Gilpin-Upshur complex, 25 to 35 percent slopes

GuE3: Gilpin-Upshur complex, 25 to 35 percent slopes, severely eroded

GuF3: Gilpin-Upshur complex, 35 to 70 percent slopes, severely eroded

Ha: Hackers silt loam, 0 to 3 percent slopes, rarely flooded

Ln: Linside silt loam, 0 to 3 percent slopes, occasionally flooded

MoB: Monongahela silt loam, 3 to 8 percent slopes

MoC: Monongahela silt loam, 8 to 15 percent slopes

No: Nolin silt loam, 0 to 3 percent slopes, occasionally flooded

Ph: Philo silt loam, 0 to 3 percent slopes, occasionally flooded

Po: Pope silt loam, 0 to 3 percent slopes, occasionally flooded

UF: Udifluvents and Fluvaquents

UL: Urban land

UhC3: Upshur silty clay, 8 to 15 percent slopes, severely eroded

UhD3: Upshur silty clay, 15 to 25 percent slopes, severely eroded

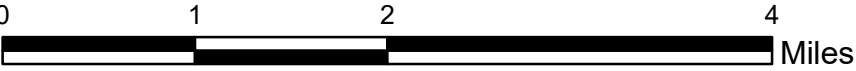
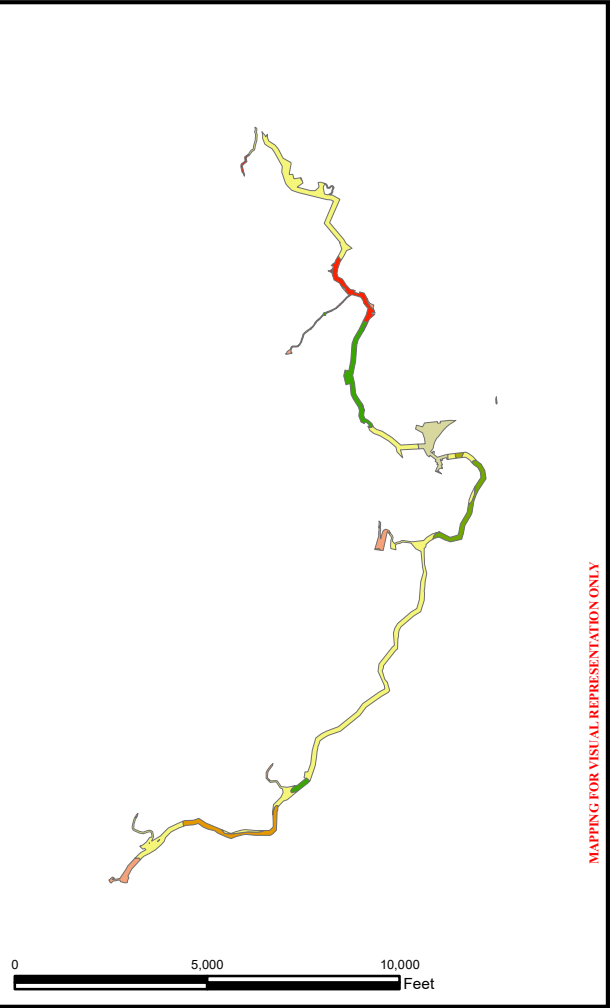
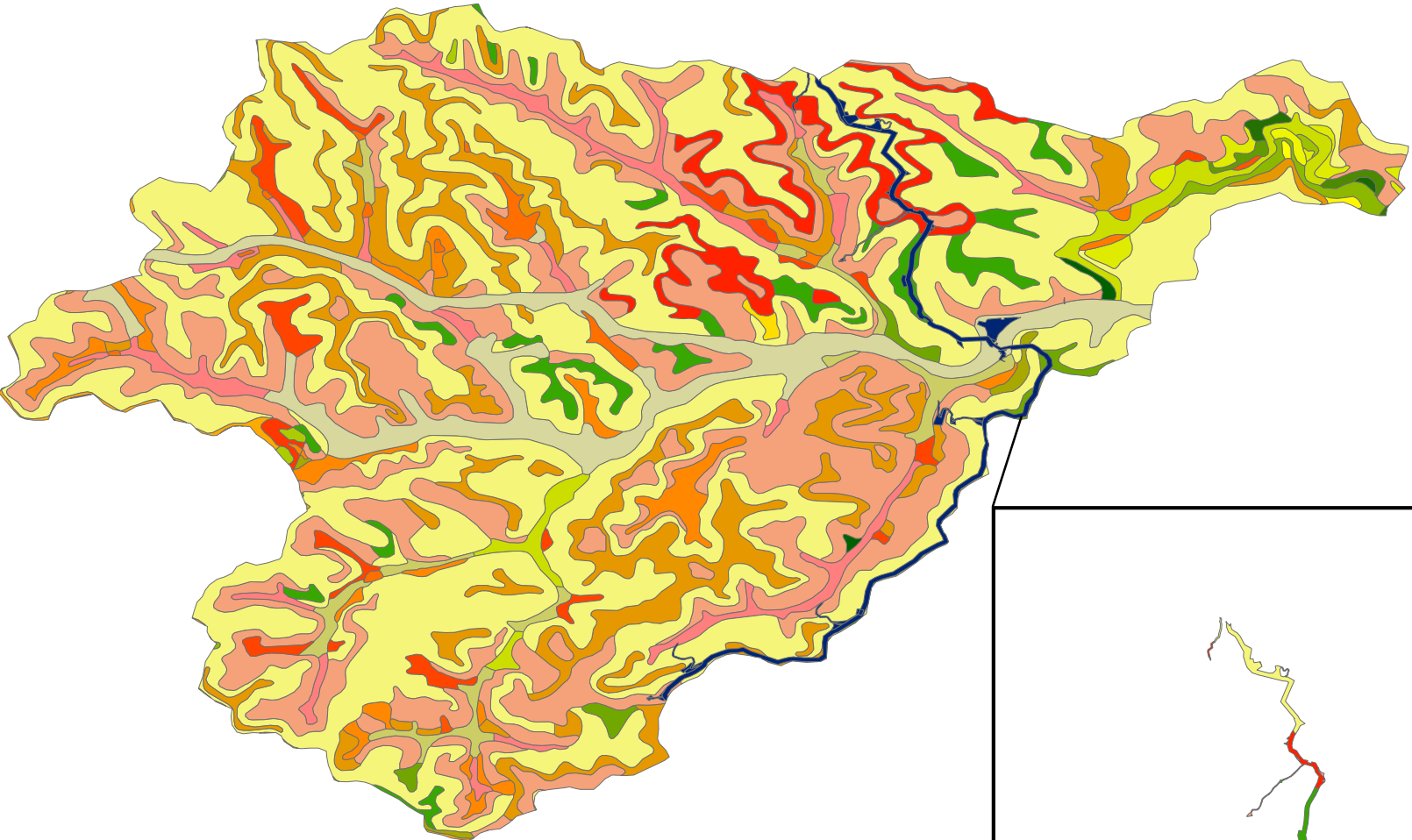
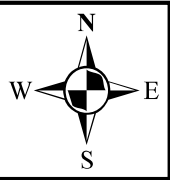
VaB: Vandalia silty clay loam, 3 to 8 percent slopes

VaC: Vandalia silty clay loam, 8 to 15 percent slopes

VaD: Vandalia silt loam, 15 to 25 percent slopes (Doddridge); VaD: Vandalia silty clay loam, 15 to 25 percent slopes (Harrison and Taylor)

VaD3: Vandalia silty clay loam, 15 to 25 percent slopes, severely eroded

W: Water



Cumulative Impact Assessment - Soil
Salem Fork (050200020501)
West Fork HUC 8 Watershed
Doddridge, Harrison, and Taylor Counties, West Virginia
For Informational Purposes Only

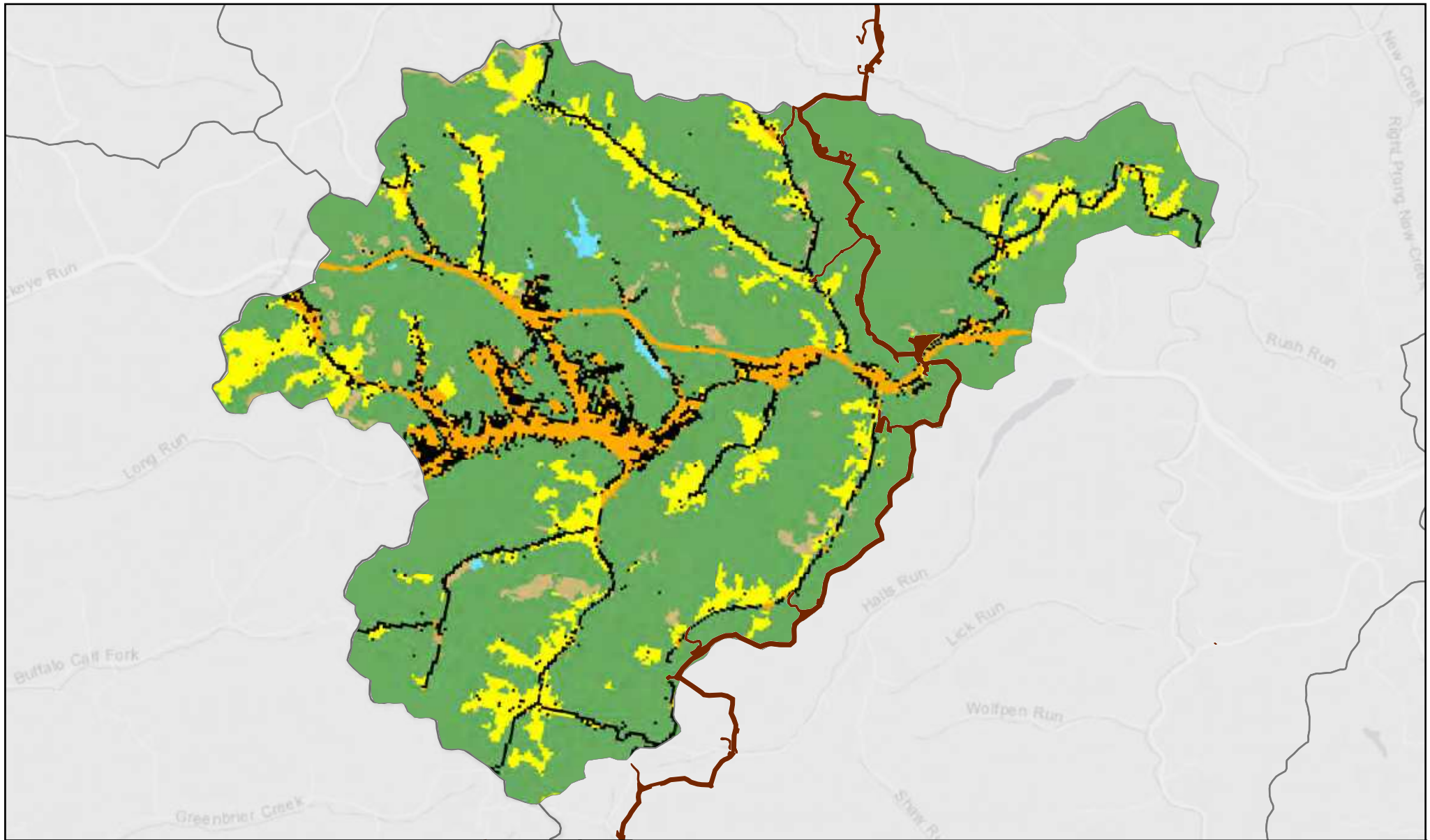
FIGURE 42

MOUNTAIN VALLEY PIPELINE, LLC
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Potesta & Associates, Inc.
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E-mail: potesta@potesta.com

SCALE: See Mapping	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-17-4451016	APPROVED: JLY
08/24/2021 17:45:11 WVP Env Con Monitoring Maps 2021 C1A_Soils Figure 42 - Salem Fork Soil.mxd	



Mountain Valley
PIPELINE

Figure: 43

**Land Use/Land Cover 2011
Salem Fork
050200020501 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover**
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

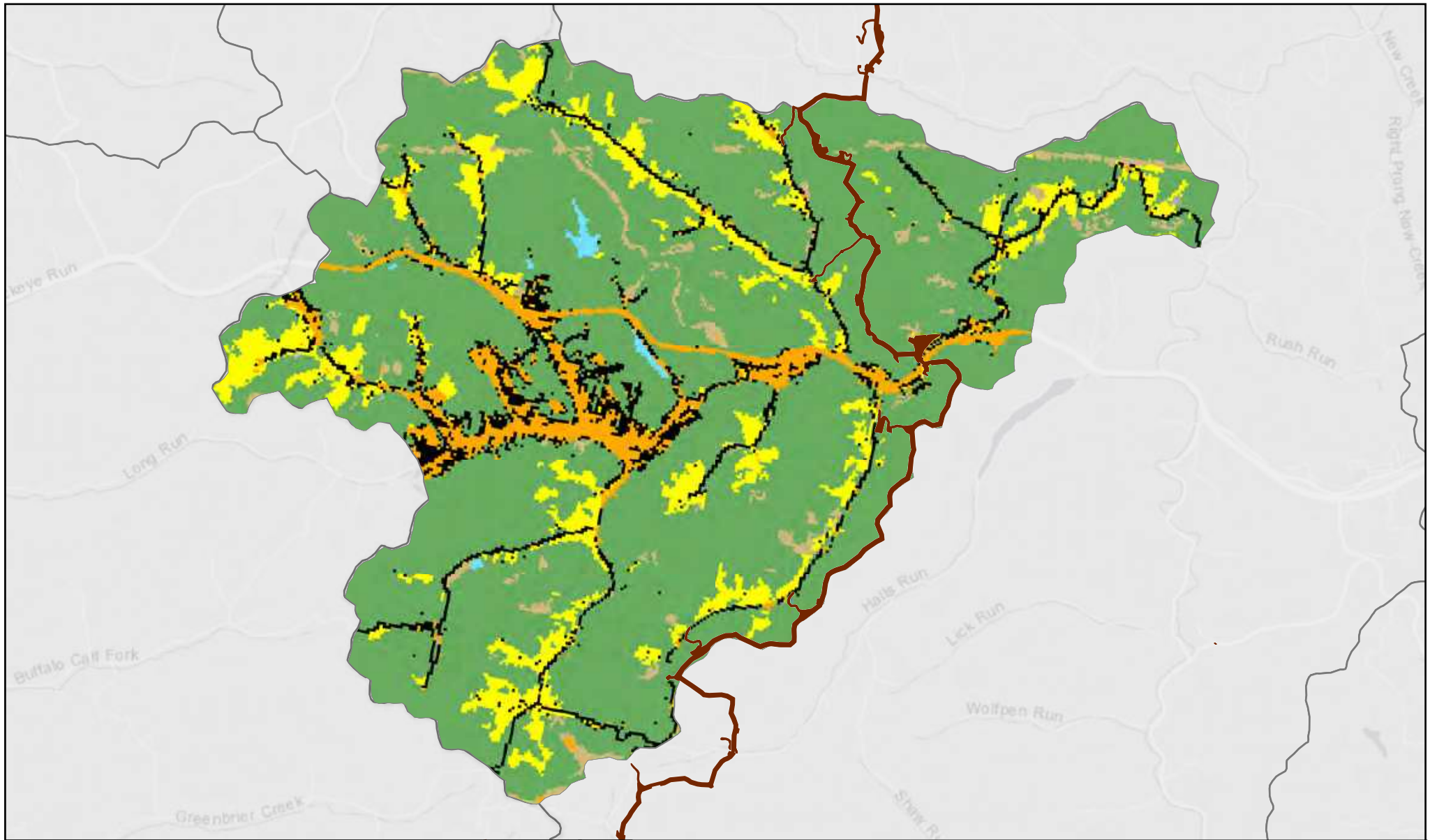


0 0.8 1.6 Miles

Scale: 1:55,000



Map Extent



Mountain Valley
PIPELINE

Figure: 44

**Land Use/Land Cover 2016
Salem Fork
050200020501 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

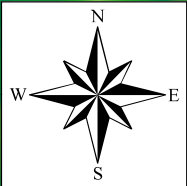


0 0.8 1.6 Miles

Scale: 1:55,000



Map Extent

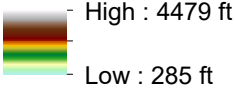


Legend

- 050200020302 Kincheloe Creek Watershed
- Kincheloe Creek Watershed Total Stream - 896,119 Linear Feet
- Mountain Valley Pipeline Kincheloe Creek

DEM

Value



Total Impacts - 701 Linear Feet (0.0782%)

MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Kincheloe Creek Watershed (050200020302)
West Fork HUC 8 Watershed, West Virginia

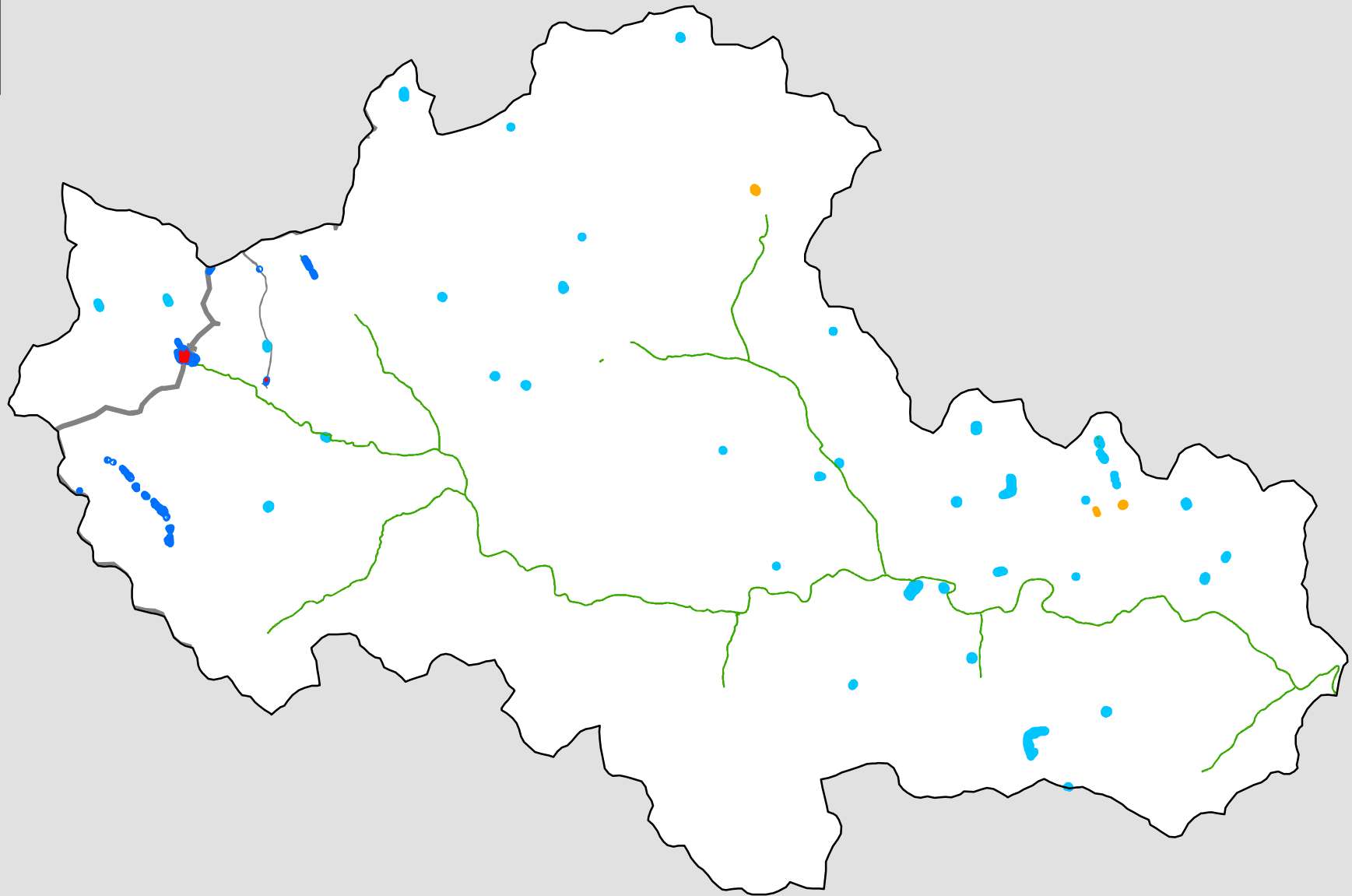
FIGURE 45

MOUNTAIN VALLEY PIPELINE, LLC
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Office: (304) 342-1400 Fax: (304) -343-9031
E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
[Project/2017/081_NVP_EnvCon_Monitoring/May/2021] [C:\SubFigure-45 - Kinchloe Creek.mxd]	



Kincheloe Creek

Figure 46

1:55,000

LEGEND

- Wetland Impacts - 0.47 acres
- Kincheloe Creek Delineated Wetland Area - 4.82 acres
- NWI Wetlands - 72.05 acres
- Freshwater Emergent Wetland - 0.72 acres
- Freshwater Pond - 18.2 acres
- Riverine - 53.13 acres
- Mountain Valley Pipeline
- 050200020302_Kincheloe Creek

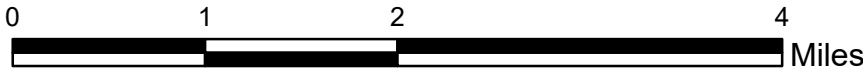
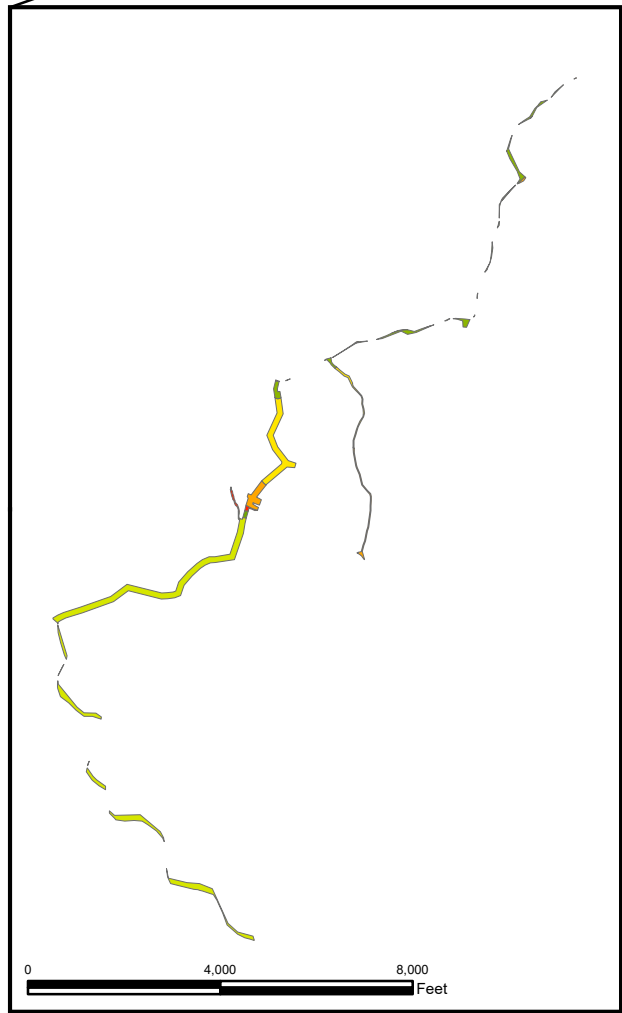
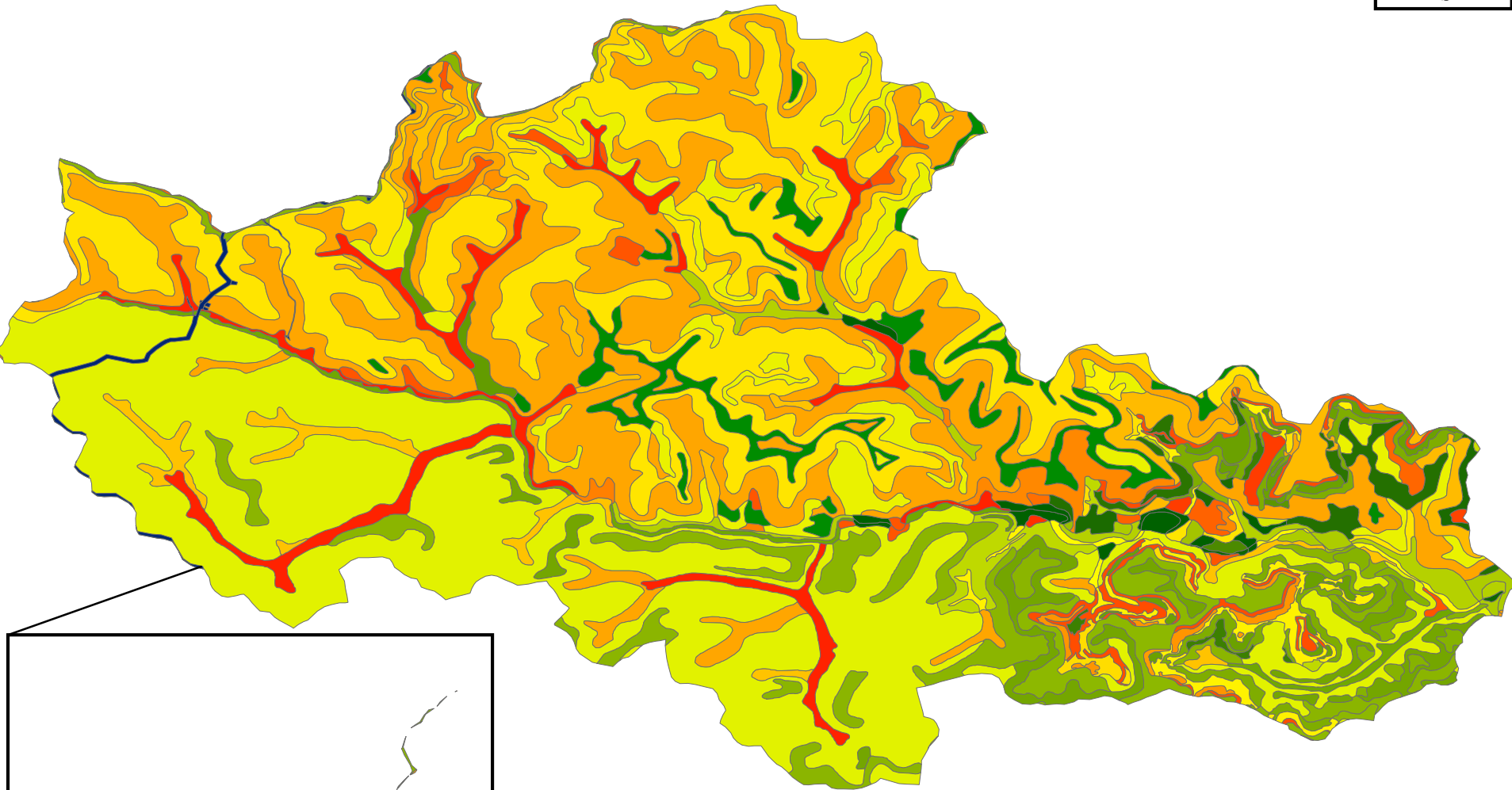
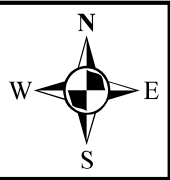
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Kincheloe Creek

Kincheloe Creek Soil

- Ch: Chavies fine sandy loam
- CiC: Clarksburg silt loam, 8 to 15 percent slopes
- Cn: Chagrin silt loam, 0 to 3 percent slopes, occasionally flooded
- CoB: Cookport silt loam, 3 to 8 percent slopes
- FaB: Fairpoint silt loam, 0 to 8 percent slopes, reclaimed, highwall
- FaD: Fairpoint silt loam, 8 to 25 percent slopes, reclaimed, highwall
- FaaB: Fairpoint silt loam, 0 to 8 percent slopes, reclaimed, highwall
- FaaD: Fairpoint silt loam, 8 to 25 percent slopes, reclaimed, highwall
- FaaF: Fairpoint silt loam, 25 to 70 percent slopes, reclaimed, highwall
- FhB: Fairpoint channery silt loam, 0 to 8 percent slopes, unreclaimed, highwall
- FhD: Fairpoint channery silt loam, 8 to 25 percent slopes, unreclaimed, highwall
- FhF: Fairpoint channery silt loam, 25 to 70 percent slopes, unreclaimed, highwall
- FpD: Fairpoint channery silt loam, 8 to 25 percent slopes, unreclaimed
- FpF: Fairpoint channery silt loam, 25 to 70 percent slopes, unreclaimed
- FrB: Fairpoint silt loam, 0 to 8 percent slopes, reclaimed
- FrD: Fairpoint silt loam, 8 to 25 percent slopes, reclaimed
- FrF: Fairpoint silt loam, 25 to 70 percent slopes, reclaimed
- GaC: Gilpin silt loam, moist, 8 to 15 percent slopes
- GsE: Gilpin-Peabody silt loams, 15 to 35 percent slopes, very stony
- GsF: Gilpin-Peabody silt loams, 35 to 70 percent slopes, very stony
- GuC: Gilpin-Upshur silt loams, 8 to 15 percent slopes
- GuC3: Gilpin-Upshur complex, 8 to 15 percent slopes, severely eroded
- GuD: Gilpin-Upshur silt loams, 15 to 25 percent slopes
- GuD3: Gilpin-Upshur complex, 15 to 25 percent slopes, severely eroded
- GuE: Gilpin-Upshur complex, 25 to 35 percent slopes (Harrison and Taylor); GuE: Gilpin-Upshur silt loams, 25 to 35 percent slopes (Lewis)
- GuE3: Gilpin-Upshur complex, 25 to 35 percent slopes, severely eroded
- GuF3: Gilpin-Upshur complex, 35 to 70 percent slopes, severely eroded
- GwF3: Gilpin-Upshur silt loams, 35 to 70 percent slopes, severely eroded
- GyC: Guernsey silt loam, 8 to 15 percent slopes
- GyD3: Guernsey silt loam, 15 to 25 percent slopes, severely eroded
- Ha: Hackers silt loam, 0 to 3 percent slopes, rarely flooded
- Lh: Lobdell-Holly silt loams
- Ln: Lindside silt loam, 0 to 3 percent slopes, occasionally flooded
- MoB: Monongahela silt loam, 3 to 8 percent slopes
- MoC: Monongahela silt loam, 8 to 15 percent slopes
- No: Nolin silt loam, 0 to 3 percent slopes, occasionally flooded
- Sn: Senecaville silt loam, 0 to 3 percent slopes, occasionally flooded
- Su: Sensabaugh silt loam, 0 to 3 percent slopes, occasionally flooded
- Tg: Tygart silt loam
- UF: Udifluvents and Fluvaquents
- UhD3: Upshur silty clay, 15 to 25 percent slopes, severely eroded
- VaB: Vandalia silty clay loam, 3 to 8 percent slopes
- VaC: Vandalia silty clay loam, 8 to 15 percent slopes (Harrison and Taylor); VaC: Vandalia silt loam, 8 to 15 percent slopes (Lewis)
- VaD: Vandalia silty clay loam, 15 to 25 percent slopes (Harrison and Taylor); VaD: Vandalia silt loam, 15 to 25 percent slopes (Lewis)
- VaD3: Vandalia silty clay loam, 15 to 25 percent slopes, severely eroded
- VaE: Vandalia silt loam, 25 to 35 percent slopes
- W: Water
- WmC: Westmoreland silt loam, 8 to 15 percent slopes
- WmC3: Westmoreland silt loam, 8 to 15 percent slopes severely eroded
- WmD: Westmoreland silt loam, 15 to 25 percent slopes
- WmD3: Westmoreland silt loam 15 to 25 percent slopes, severely eroded
- WmE: Westmoreland silt loam, 25 to 35 percent slopes
- WmE3: Westmoreland silt loam, 25 to 35 percent slopes, severely eroded
- WmF: Westmoreland silt loam, 35 to 60 percent slopes
- WuE3: Westmoreland-Upshur complex, 25 to 35 percent slopes, severely eroded



SCALE: See Mapping	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451016	APPROVED: JLY
08/24/2021 17:45:11 MDT, KBW, Bas, Can, Mapping Maps 2021 CA Soil Figure 47 - Kincheloe Creek Soil.mxd	

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Canonsburg, PA 15317

Cumulative Impact Assessment - Soil
Kincheloe Creek(050200020302)
West Fork HUC 8 Watershed
Doddridge, Harrison, Taylor and
Lewis Counties, West Virginia
For Informational Purposes Only

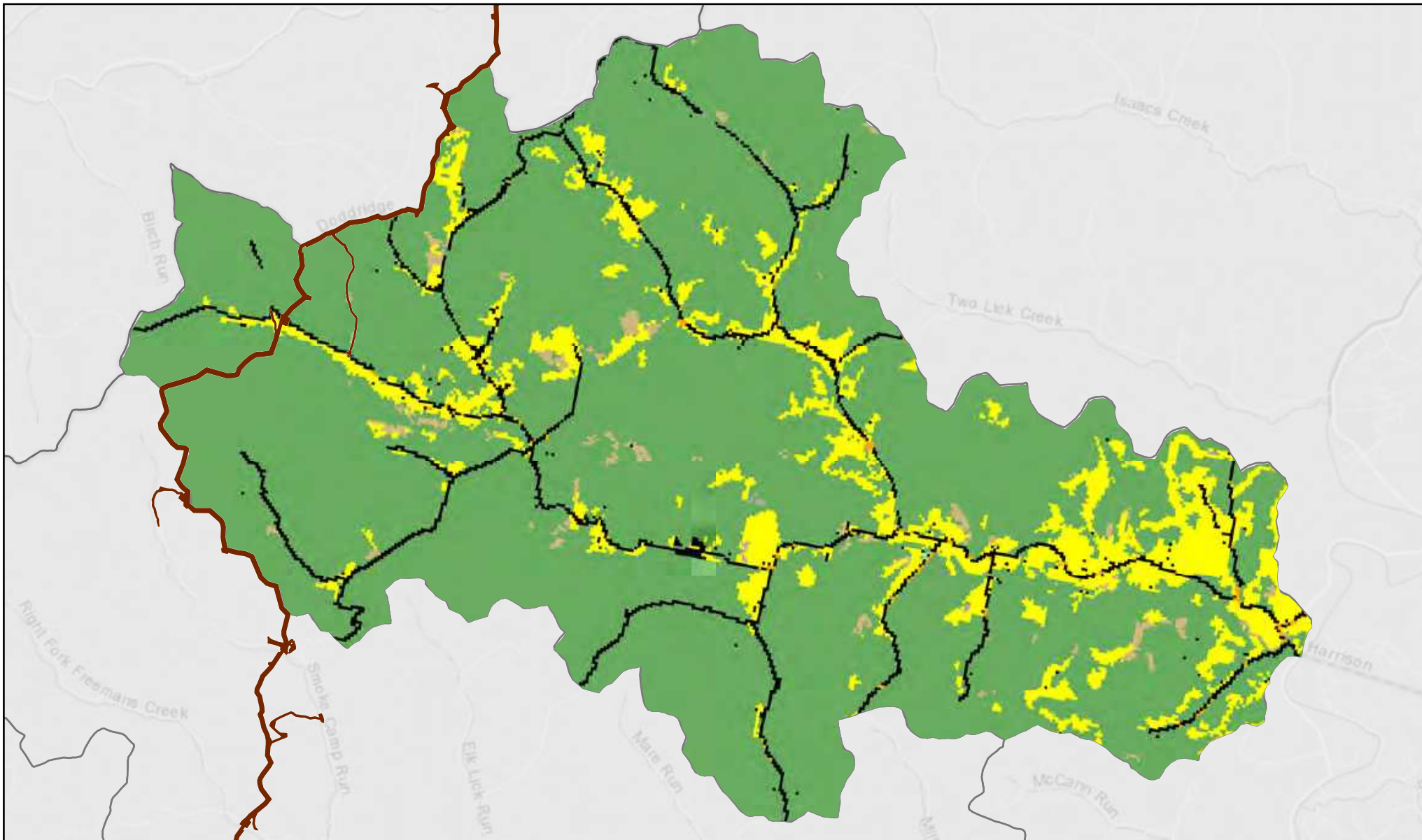


Figure: 48

**Land Use/Land Cover 2011
Kincheloe Creek
050200020302 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover**
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

0 0.8 1.6 Miles



Scale: 1:55,000



Map Extent

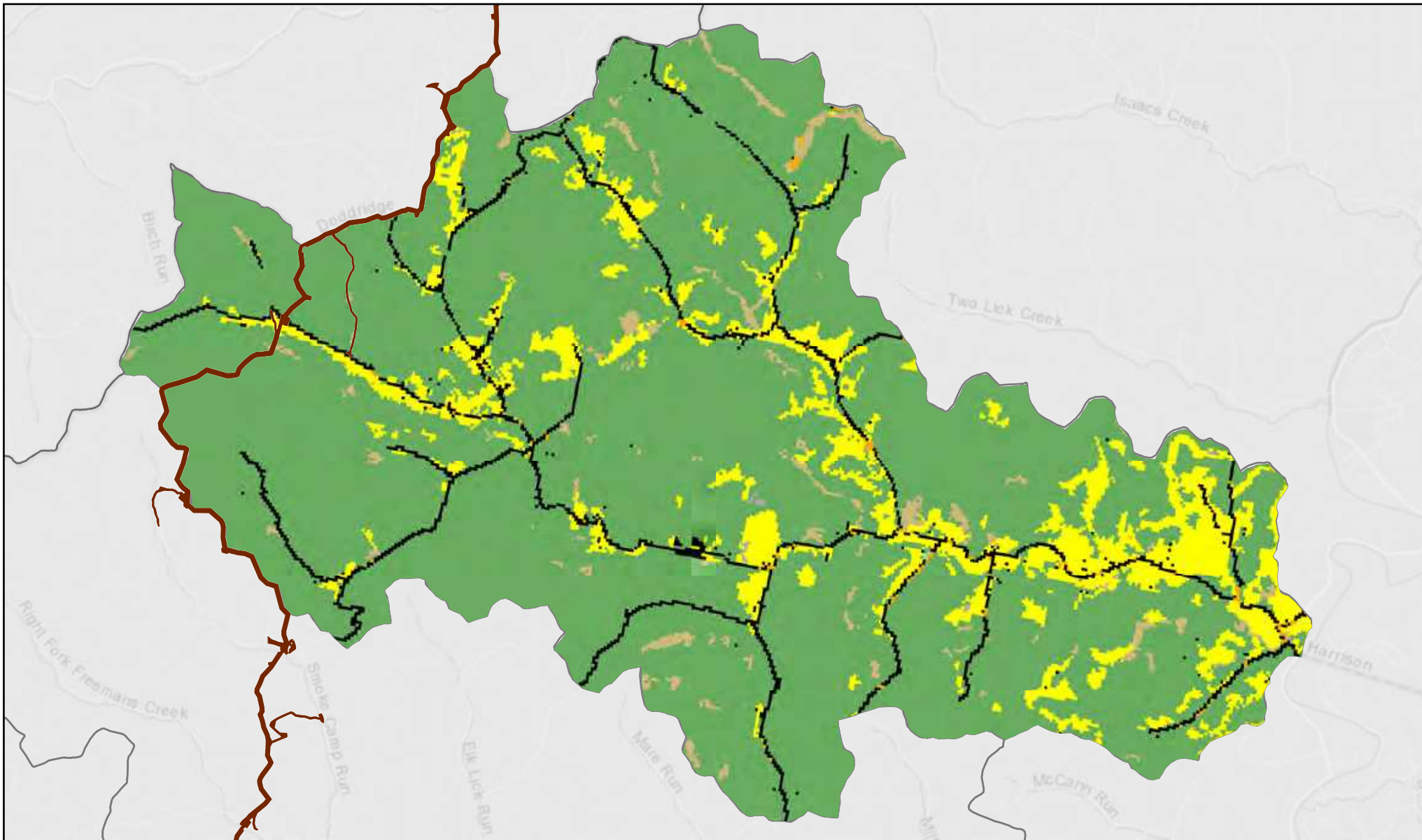


Figure: 49

**Land Use/Land Cover 2016
Kincheloe Creek
050200020302 HUC12 Watershed**

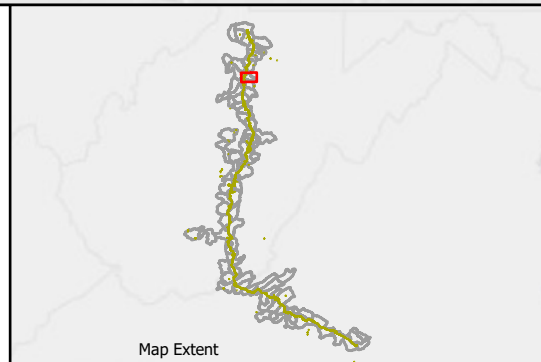
LEGEND

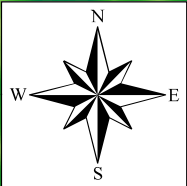
- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



0 0.8 1.6 Miles

Scale: 1:55,000





Legend

050200020301 Freemans Creek Watershed

Freemans Creek Watershed Total Stream - 1,459,867 Linear Feet

Mountain Valley Pipeline Freemans Creek

DEM

Value

High : 4479 ft

Low : 285 ft

Total Impacts - 812 Linear Feet (0.0556%)

WATER USE FOR VISUAL REPRESENTATION ONLY

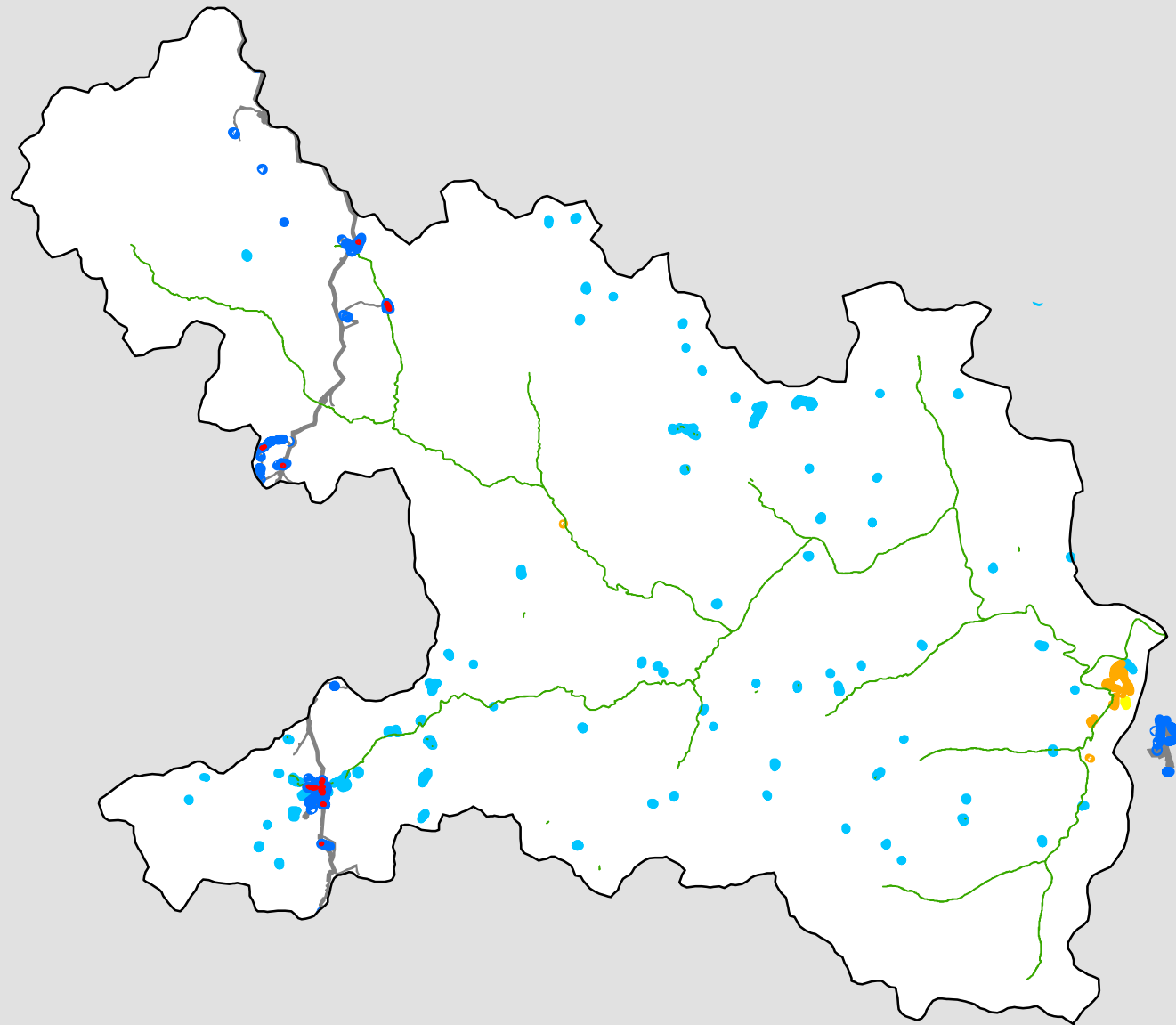
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Freemans Creek Watershed (050200020301)
West Fork HUC 8 Watershed, West Virginia
For Informational Purposes Only

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E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
[Project/2017/08/1 M.V.P. EnvCon Monitoring Map/2021] CIA Subfigure 50 - Freemans Creek	



Freemans Creek

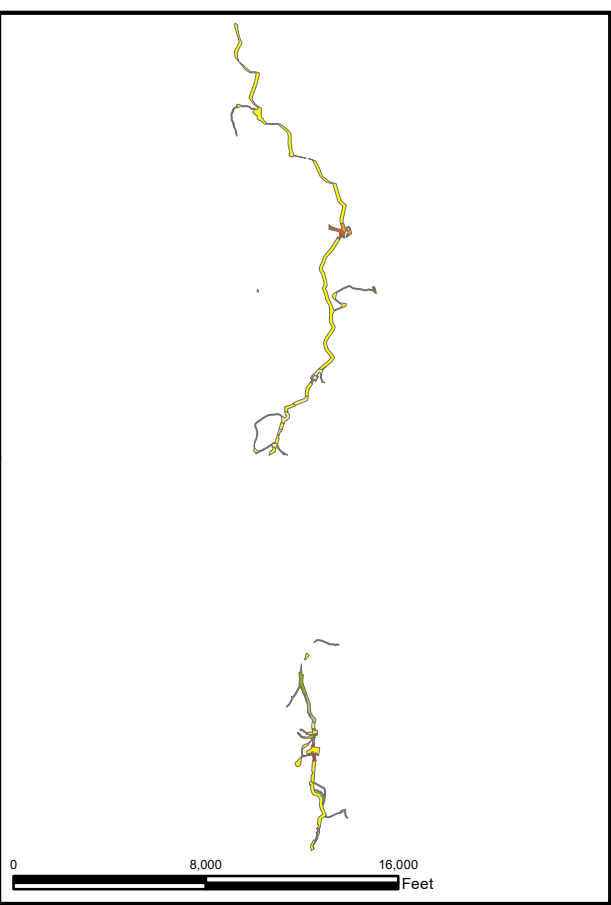
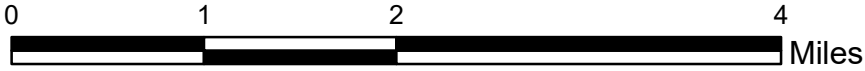
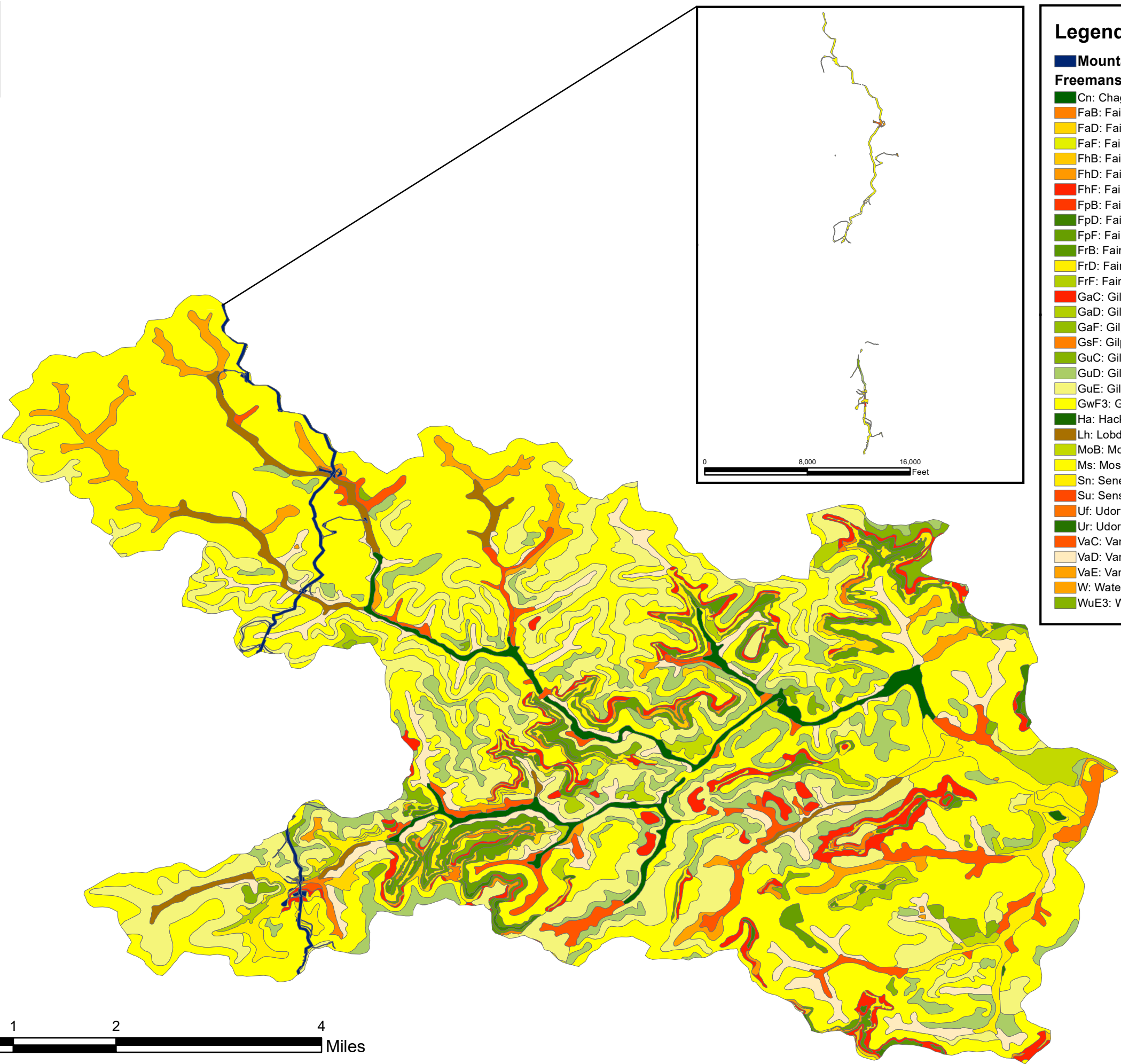
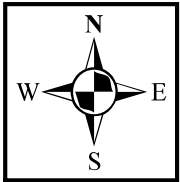
Figure 51

1:79,000

LEGEND

- Wetland Impacts - 0.65 acres
- Freemans Creek Delineated Wetland Area - 3.8 acres
- NWI Wetlands - 127.75 acres
- Freshwater Emergent Wetland - 2.05 acres
- Freshwater Forested/Shrub Wetland - 0.52 acres
- Freshwater Pond - 34.9 acres
- Riverine - 90.29 acres
- Mountain Valley Pipeline
- 050200020301_Freemans Creek

Note: Shapes are not to scale, enlarged to improve visibility.



Legend

Mountain Valley Pipeline Freemans Creek

Freemans Creek Soil

- Cn: Chagrin silt loam, 0 to 3 percent slopes, occasionally flooded
- FaB: Fairpoint silt loam, 0 to 8 percent slopes, reclaimed, highwall
- FaD: Fairpoint silt loam, 8 to 25 percent slopes, reclaimed, highwall
- FaF: Fairpoint silt loam, 25 to 70 percent slopes, reclaimed, highwall
- FhB: Fairpoint channery silt loam, 0 to 8 percent slopes, unreclaimed, highwall
- FhD: Fairpoint channery silt loam, 8 to 25 percent slopes, unreclaimed, highwall
- FhF: Fairpoint channery silt loam, 25 to 70 percent slopes, unreclaimed, highwall
- FpB: Fairpoint channery silt loam, 0 to 8 percent slopes, unreclaimed
- FpD: Fairpoint channery silt loam, 8 to 25 percent slopes, unreclaimed
- FpF: Fairpoint channery silt loam, 25 to 70 percent slopes, unreclaimed
- FrB: Fairpoint silt loam, 0 to 8 percent slopes, reclaimed
- FrD: Fairpoint silt loam, 8 to 25 percent slopes, reclaimed
- FrF: Fairpoint silt loam, 25 to 70 percent slopes, reclaimed
- GaC: Gilpin silt loam, moist, 8 to 15 percent slopes
- GaD: Gilpin silt loam, moist, 15 to 25 percent slopes
- GaF: Gilpin silt loam, moist, 35 to 65 percent slopes
- GsF: Gilpin-Peabody silt loams, 35 to 70 percent slopes, very stony
- GuC: Gilpin-Upshur silt loams, 8 to 15 percent slopes
- GuD: Gilpin-Upshur silt loams, 15 to 25 percent slopes
- GuE: Gilpin-Upshur silt loams, 25 to 35 percent slopes
- GwF3: Gilpin-Upshur silt loams, 35 to 70 percent slopes, severely eroded
- Ha: Hackers silt loam, 0 to 3 percent slopes, rarely flooded
- Lh: Lobdell-Holly silt loams
- MoB: Monongahela silt loam, 3 to 8 percent slopes
- Ms: Moshannon silt loam, 0 to 3 percent slopes, occasionally flooded
- Sn: Senecaville silt loam, 0 to 3 percent slopes, occasionally flooded
- Su: Sensabaugh silt loam, 0 to 3 percent slopes, occasionally flooded
- Uf: Udorthents, smoothed
- Ur: Udorthents-Urban land complex
- VaC: Vandalia silt loam, 8 to 15 percent slopes
- VaD: Vandalia silt loam, 15 to 25 percent slopes
- VaE: Vandalia silt loam, 25 to 35 percent slopes
- W: Water
- WuE3: Westmoreland-Upshur complex, 25 to 35 percent slopes, severely eroded

MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment - Soil
Freemans Creek (050300020301)
West Fork HUC 8 Watershed
Lewis County, West Virginia
For Informational Purposes Only

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SCALE: See Mapping
DATE: AUGUST 2021
PN: 001-174451016
DRAWN: KBW
CHECKED: JLY
APPROVED: JLY
Project: 2017-0451 M.V.P. East-Central Monitoring Maps 2021
CA Soil Figure 52- Freemans Creek Soil Type

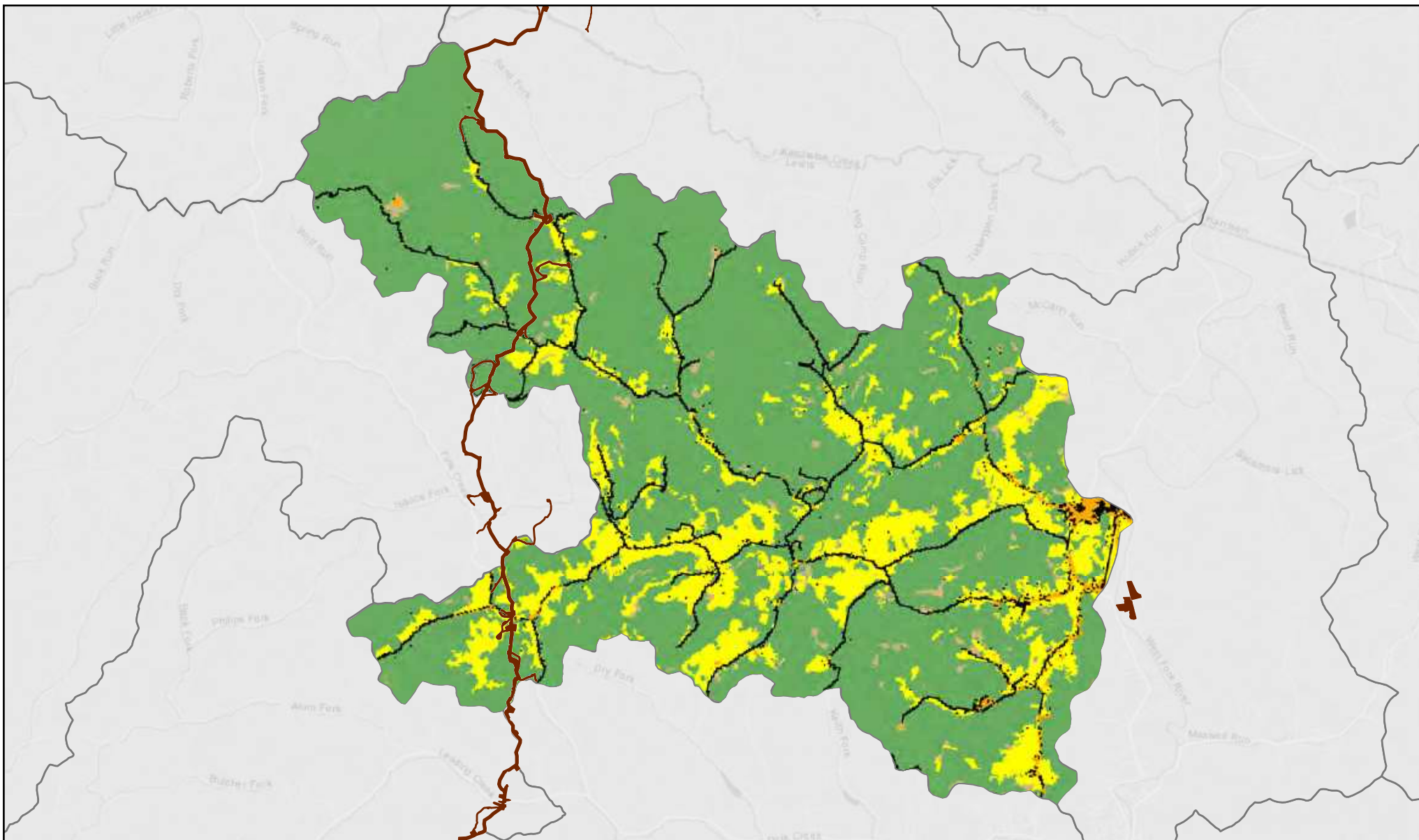


Figure: 53

**Land Use/Land Cover 2011
Freemans Creek
050200020301 HUC12 Watershed**

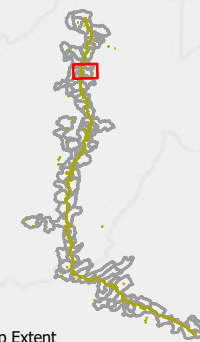
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

0 1 2 Miles



Scale: 1:85,000



Map Extent

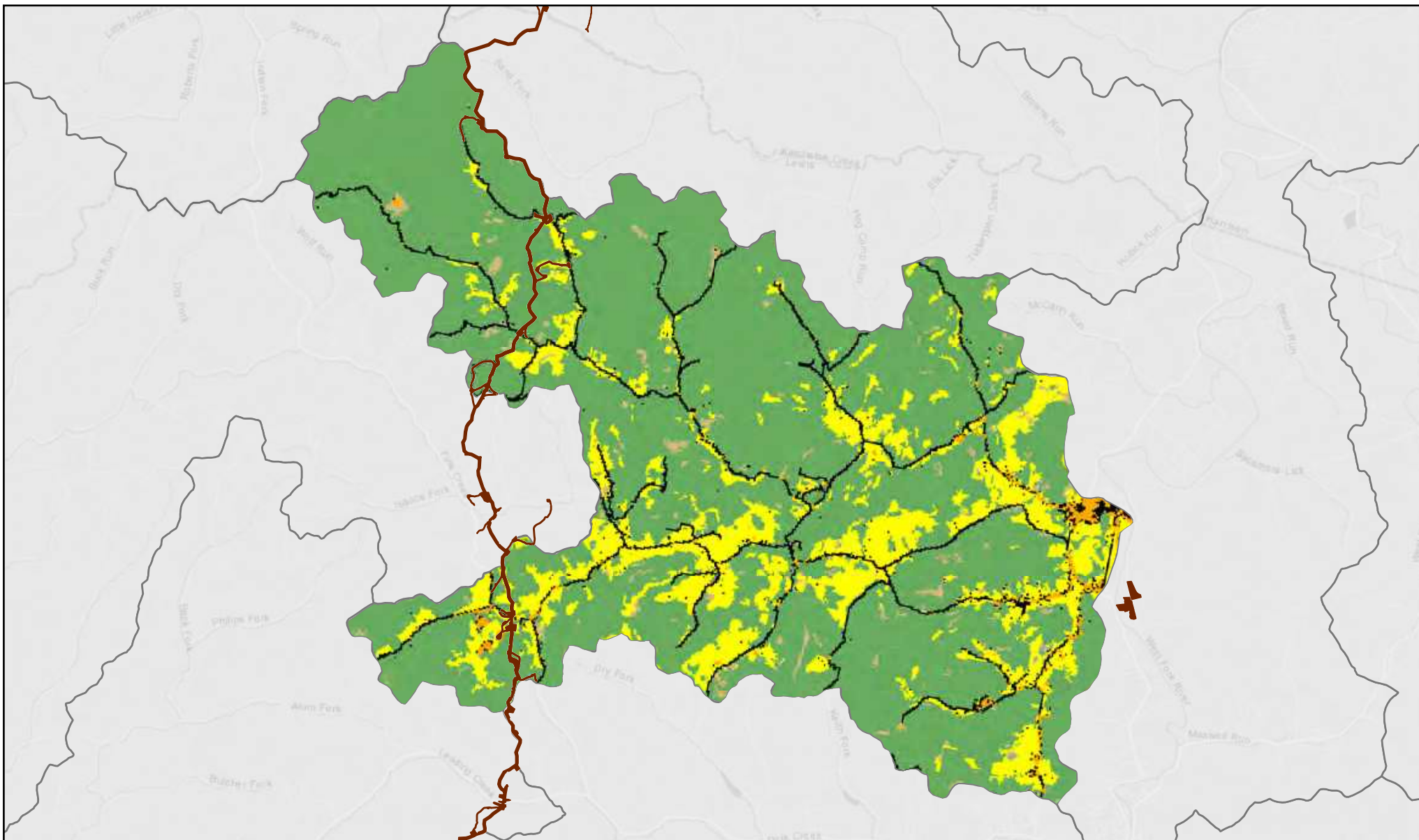


Figure: 54

**Land Use/Land Cover 2016
Freemans Creek
050200020301 HUC12 Watershed**

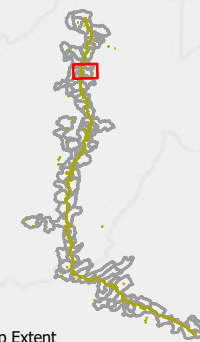
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

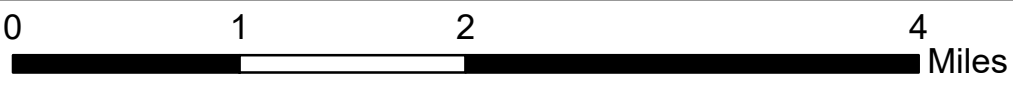
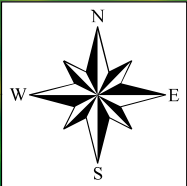
0 1 2 Miles




Scale: 1:85,000




Map Extent




Legend



050200020105 Polk Creek-West Fork River Watershed




Polk Creek-West Fork River Watershed Total Stream - 1,496,397 Linear Feet




Mountain Valley Pipeline Polk Creek-West Fork River

DEM

Value

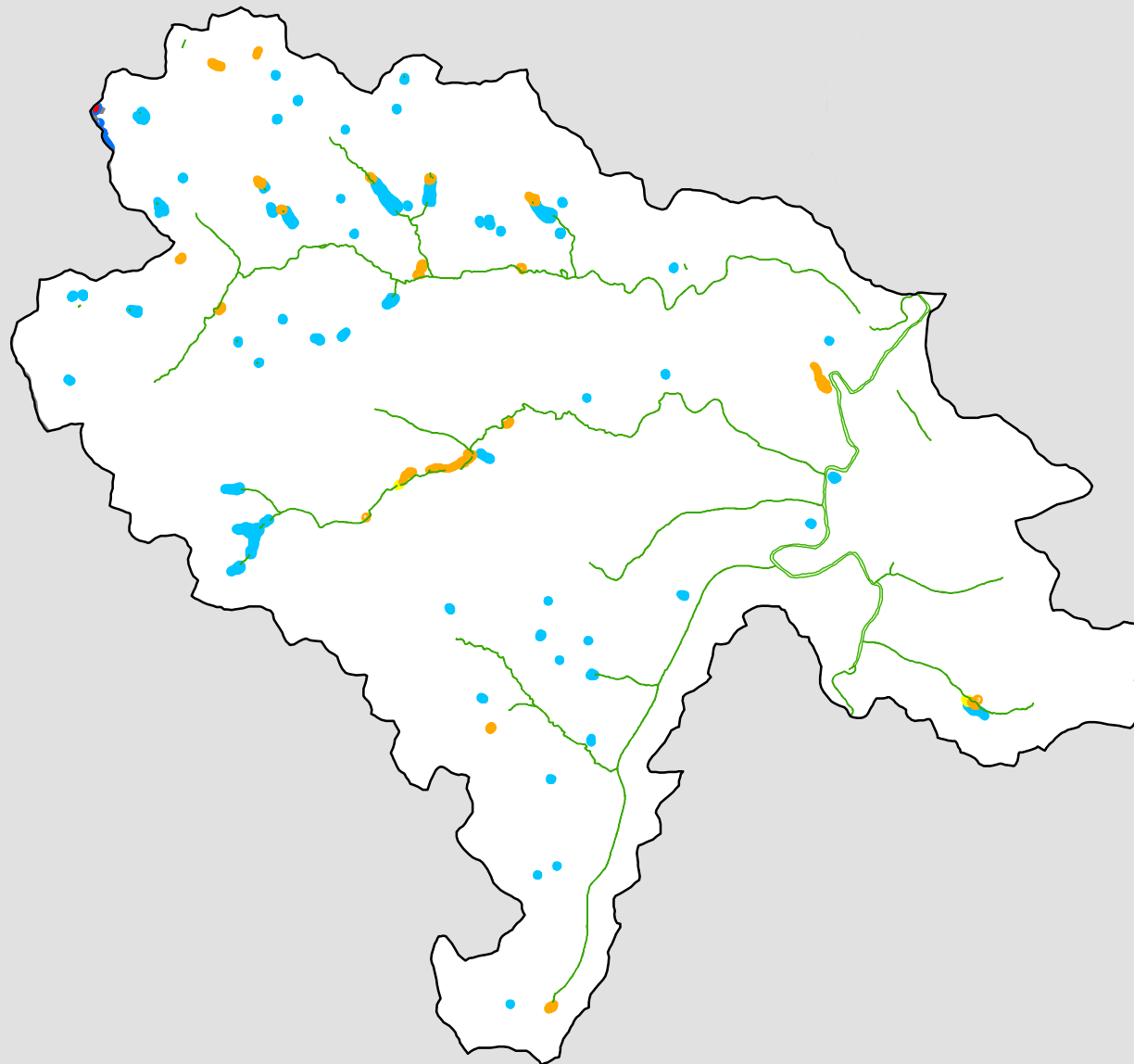


High : 4479 ft



Low : 285 ft

Total Impacts - None



Polk Creek-West Fork River

Figure 56

1:87,000

LEGEND

- Wetland Impacts - 0.02 acres
- Polk Creek-West Fork River Delineated Wetland Area - 0.28 acres
- NWI Wetlands - 224.24 acres
- Freshwater Emergent Wetland - 11.61 acres
- Freshwater Forested/Shrub Wetland - 0.95 acres
- Freshwater Pond - 57.88 acres
- Riverine - 153.8 acres
- Mountain Valley Pipeline
- 050200020105_Polk Creek-West Fork River

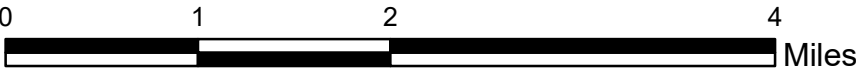
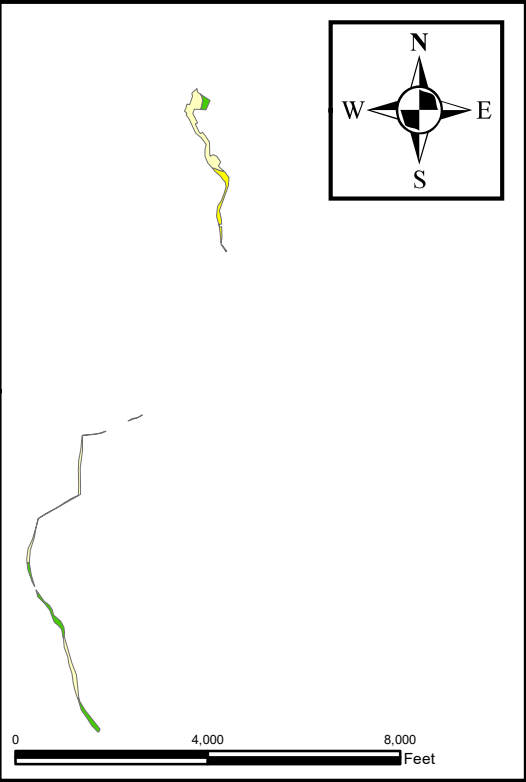
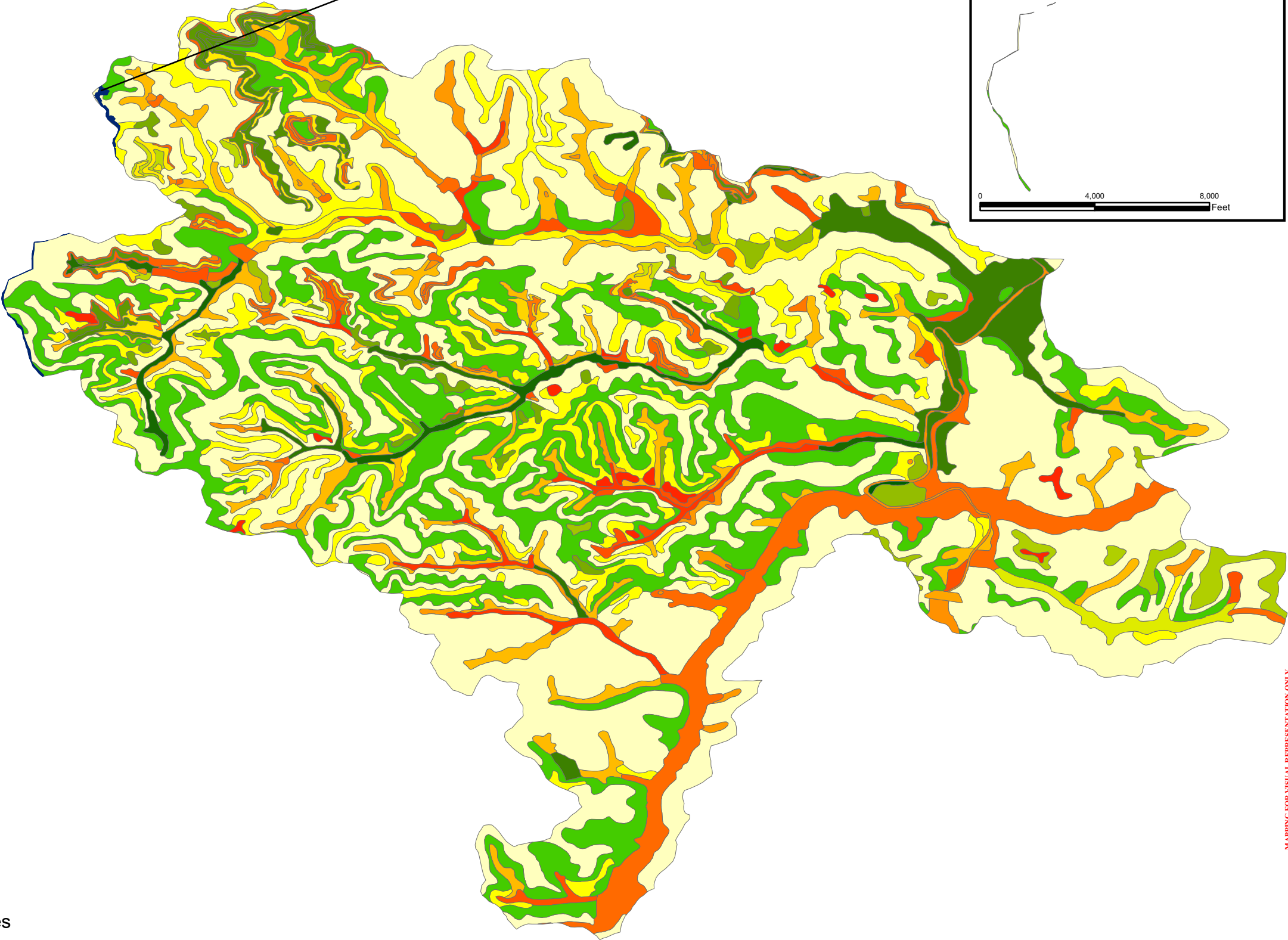
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Polk Creek-West Fork River

Polk Creek-West Fork River Soil

- BdF: Bethesda channery loam, 25 to 70 percent slopes, unreclaimed
- BhD: Bethesda channery loam, 8 to 25 percent slopes, unreclaimed, highwall
- BhF: Bethesda channery loam, 25 to 70 percent slopes, unreclaimed, highwall
- BsD: Bethesda loam, 8 to 25 percent slopes, reclaimed
- Cn: Chagrin silt loam, 0 to 3 percent slopes, occasionally flooded
- DAM
- FaB: Fairpoint silt loam, 0 to 8 percent slopes, reclaimed, highwall
- FaD: Fairpoint silt loam, 8 to 25 percent slopes, reclaimed, highwall
- FaF: Fairpoint silt loam, 25 to 70 percent slopes, reclaimed, highwall
- FhB: Fairpoint channery silt loam, 0 to 8 percent slopes, unreclaimed, highwall
- FhD: Fairpoint channery silt loam, 8 to 25 slopes, unreclaimed, highwall
- FhF: Fairpoint channery silt loam 25 to 70 percent slopes, unreclaimed
- FpD: Fairpoint channery silt loam, 8 to 25 percent slopes, unreclaimed
- FpF: Fairpoint channery silt loam, 25 to 70 percent slopes, unreclaimed
- FrB: Fairpoint silt loam, 0 to 8 percent slopes, reclaimed
- FrD: Fairpoint silt loam, 8 to 25 percent slopes, reclaimed
- FrF: Fairpoint silt loam, 25 to 70 percent slopes, reclaimed
- GDF: Gilpin-Dekalb association, very steep, very stony
- GaC: Gilpin silt loam, moist, 8 to 15 percent slopes
- GaD: Gilpin silt loam, moist, 15 to 25 percent slopes
- GaE: Gilpin silt loam, moist 25 to 35 percent slopes
- GuC: Gilpin-Upshur silt loams, 8 to 15 percent slopes
- GuD: Gilpin-Upshur silt loams, 15 to 25 percent slopes
- GuE: Gilpin-Upshur silt loams, 25 to 35 percent slopes
- GwF3: Gilpin-Upshur silt loams, 35 to 70 percent slopes, severely eroded
- Ha: Hackers silt loam, 0 to 3 percent slopes, rarely flooded
- Lh: Lobdell-Holly silt loams
- MoB: Monongahela silt loam, 3 to 8 percent slopes
- Ms: Moshannon silt loam, 0 to 3 percent slopes, occasionally flooded
- Sn: Senecaville silt loam, 0 to 3 percent slopes, occasionally flooded
- Su: Sensabaugh silt loam, 0 to 3 percent slopes, occasionally flooded
- Uf: Udorthents, smoothed
- Ur: Udorthents-Urban land complex
- VaC: Vandalia silt loam, 8 to 15 percent slopes
- VaD: Vandalia silt loam, 15 to 25 percent slopes
- VaE: Vandalia silt loam, 25 to 35 percent slopes
- W: Water



MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment - Soil
Polk Creek-West Fork River (050200020105)
West Fork HUC 8 Watershed
Lewis County, West Virginia
For Informational Purposes Only

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POTESTA

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SCALE: See Mapping
DATE: AUGUST 2021
PN: 001-17-4451-016
APPROVED: JLY
DRAWN: KBW
CHECKED: JLY

FIGURE 57
Polk Creek-West Fork River Soil

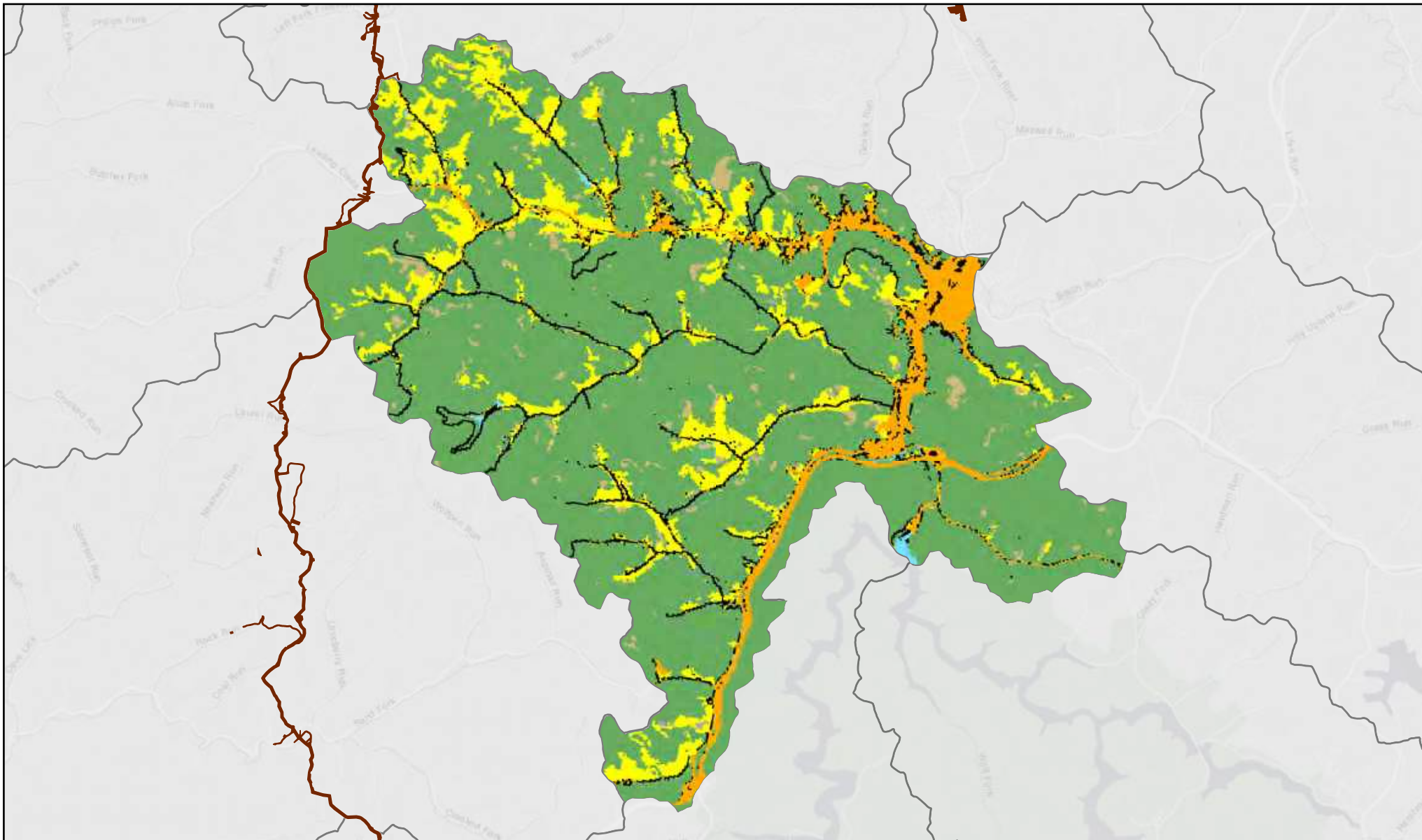


Figure: 58

**Land Use/Land Cover 2011
Polk Creek-West Fork River
050200020105 HUC12 Watershed**

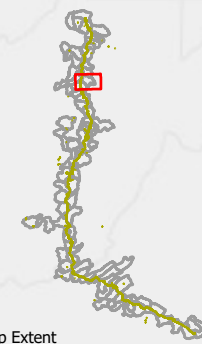
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



0 1 2 Miles

Scale: 1:90,000



Map Extent

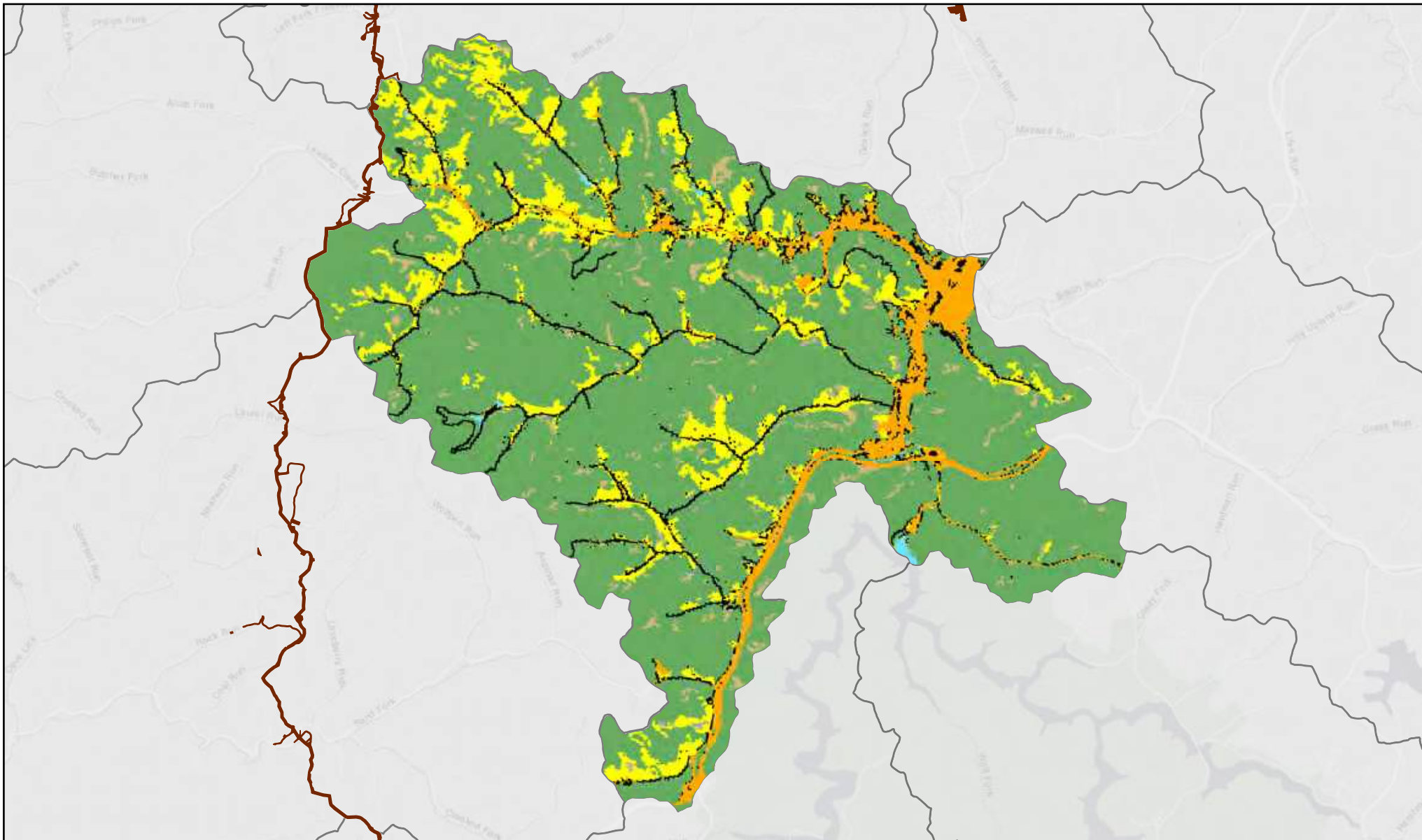


Figure: 59

**Land Use/Land Cover 2016
Polk Creek-West Fork River
050200020105 HUC12 Watershed**

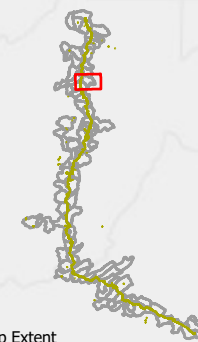
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

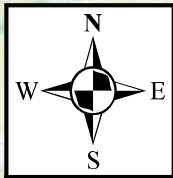


0 1 2 Miles

Scale: 1:90,000

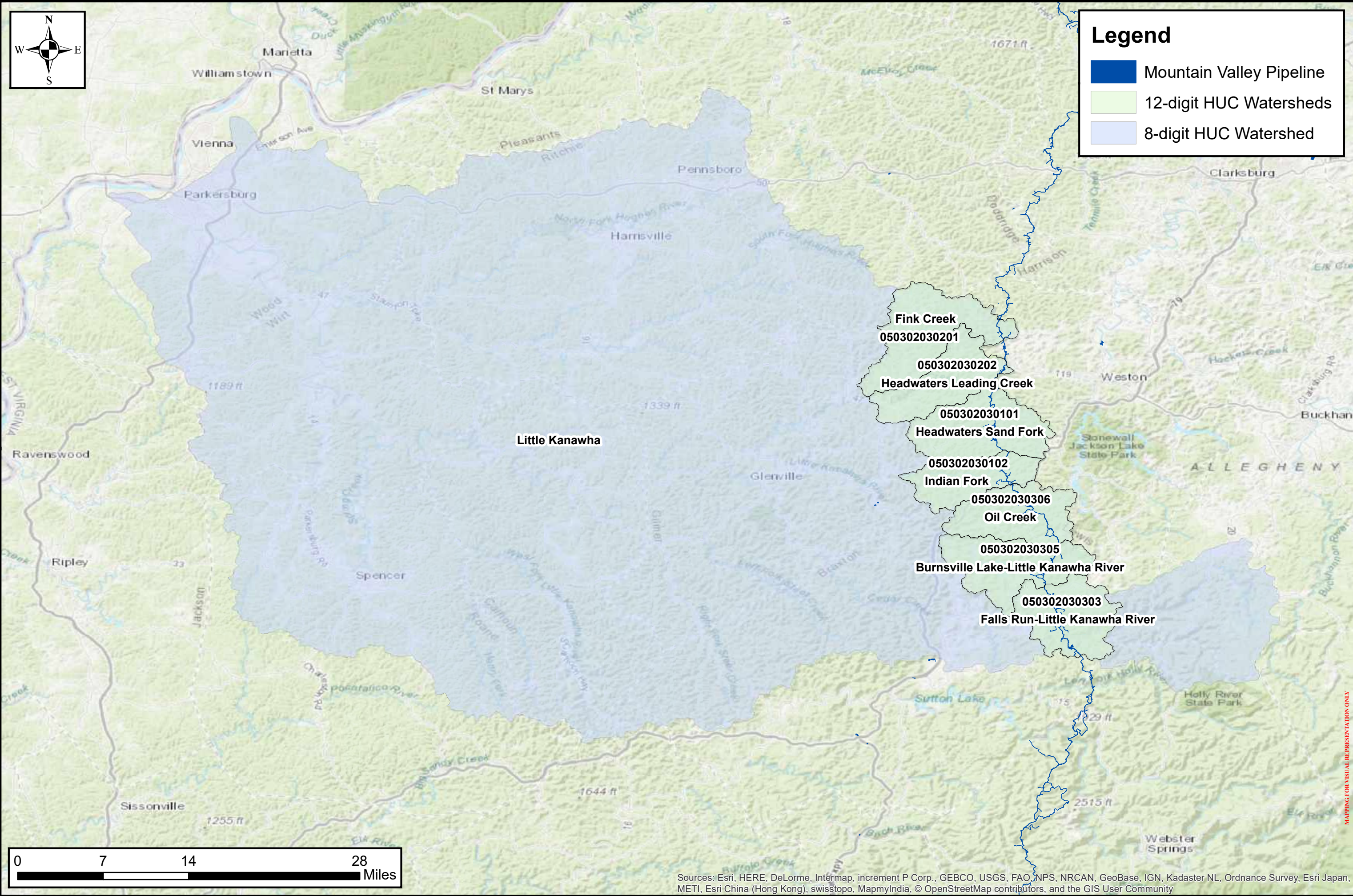


Map Extent



Legend

- Mountain Valley Pipeline
- 12-digit HUC Watersheds
- 8-digit HUC Watershed



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, JNPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

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E-mail: potesta@potesta.com

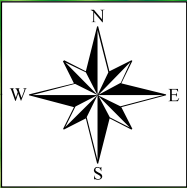


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Canonsburg, PA 15317

Cumulative Impact Assessment Report
Little Kanawha Watershed
12-Digit HUC Watersheds
Multiple Counties, West Virginia
For Informational Purposes Only

MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: 1" = 7 Miles
DRAWN: JLY
DATE: September 2021
CHECKED: JLY
PN: 000-17-0451.016
APPROVED: JLY
File Path: \\p0171\p0171_0451_016_VP_EnvCon_Monitoring_Maps\2021_Figure 60_Visual_Representation.mxd



Legend

050302030201 Fink Creek Watershed

Fink Creek Watershed Total Stream - 1,757,227 Linear Feet

Mountain Valley Pipeline Freemans Creek

DEM

Value

High : 4479 ft

Low : 285 ft

Total Impacts - 240 Linear Feet (0.0137%)

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Fink Creek Watershed (050302030201)
Little Kanawha HUC 8 Watershed, West Virginia

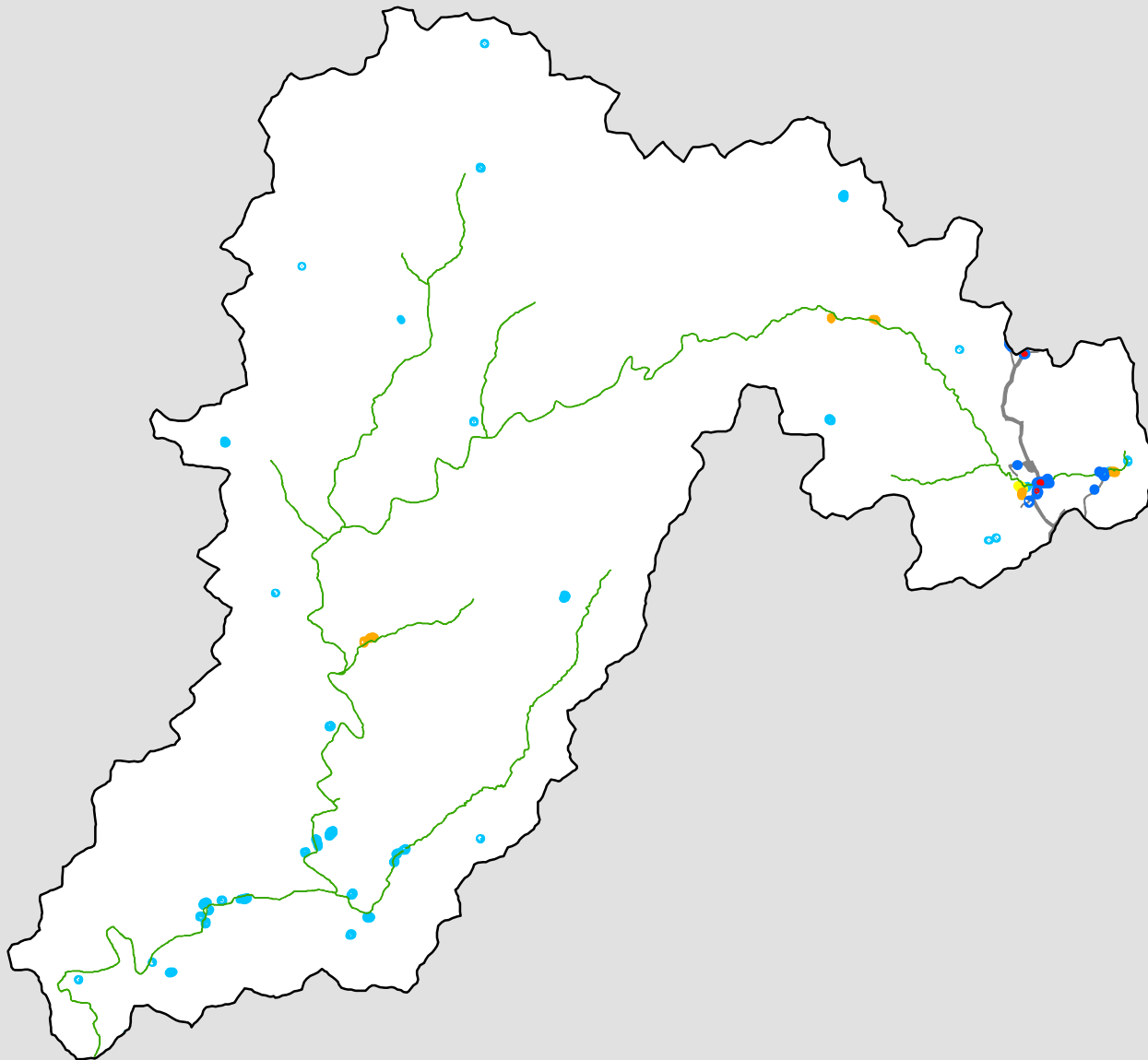
MOUNTAIN VALLEY PIPELINE, LLC
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Canonsburg, PA 15317



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Charleston, WV 25304
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E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
I:\projects\2017_0431_AVE_Freeman_Monitoring\Map\021	
CIA\SolarFigure 61 - Fink_Creek.mxd	

FIGURE 61



Fink Creek

Figure 62

1:100,000

LEGEND

- Wetland Impacts - 0.22 acres
- Fink Creek Delineated Wetland Area - 1.65 acres
- NWI Wetlands - 125.13 acres
- Freshwater Emergent Wetland - 1.85 acres
- Freshwater Forested/Shrub Wetland - 1.27 acres
- Freshwater Pond - 13.2 acres
- Riverine - 108.82 acres
- Mountain Valley Pipeline
- 050302030201_Fink Creek

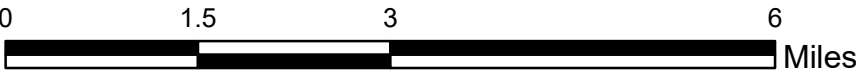
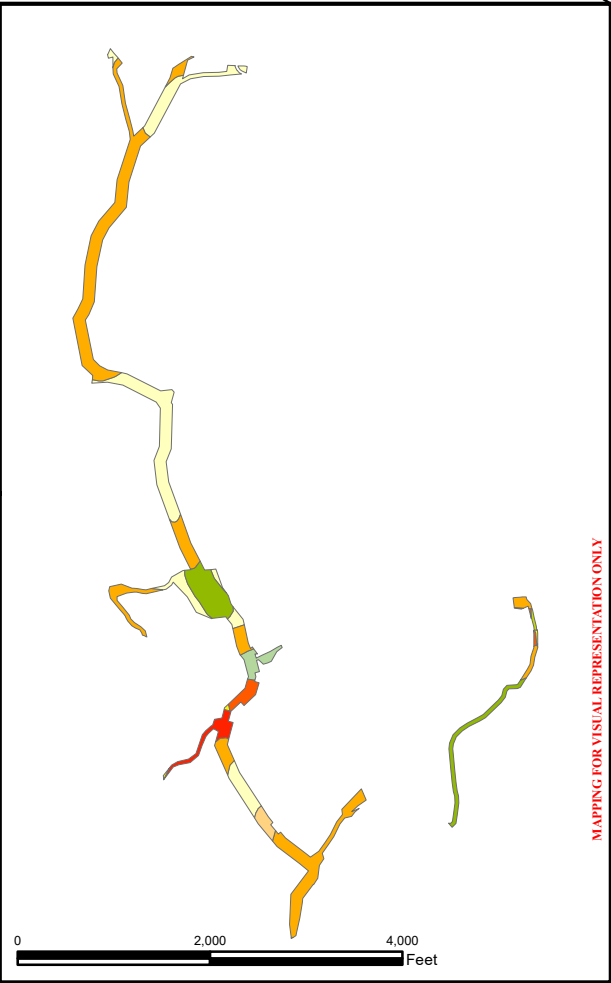
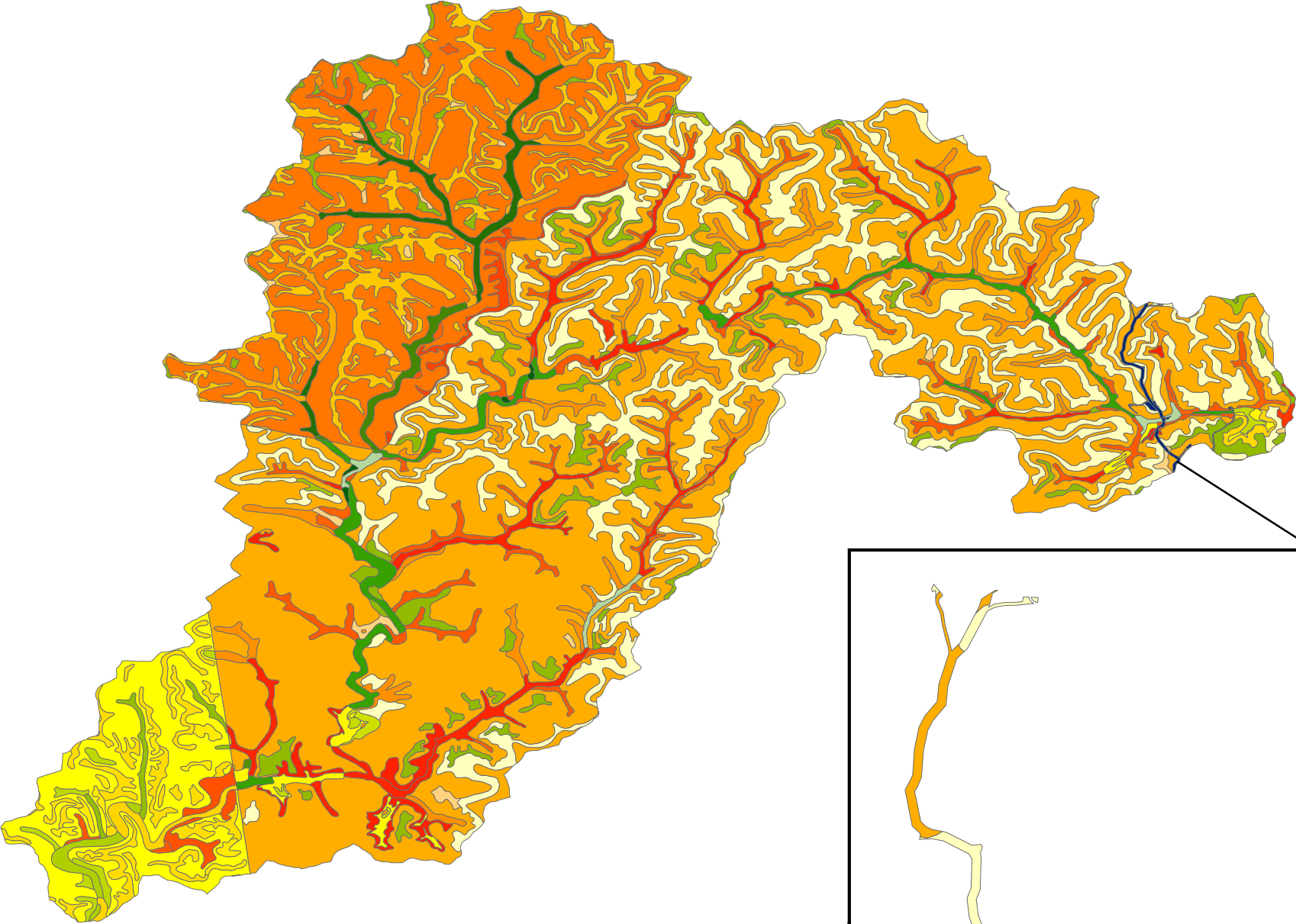
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Fink Creek

Fink Creek Soil

- Cg: Chagrin loam, 0 to 3 percent slopes, occasionally flooded
- Ch: Chagrin silt loam, 0 to 3 percent slopes, occasionally flooded
- Cn: Chagrin silt loam, 0 to 3 percent slopes, occasionally flooded
- FaF: Fairpoint silt loam, 25 to 70 percent slopes, reclaimed, highwall
- FhD: Fairpoint channery silt loam, 8 to 25 percent slopes, unreclaimed, highwall
- FhF: Fairpoint channery silt loam, 25 to 70 percent slopes, unreclaimed, highwall
- FpF: Fairpoint channery silt loam, 25 to 70 percent slopes, unreclaimed
- FrB: Fairpoint silt loam, 0 to 8 percent slopes, reclaimed
- FrD: Fairpoint silt loam, 8 to 25 percent slopes, reclaimed
- FrF: Fairpoint silt loam, 25 to 70 percent slopes, reclaimed
- GaC: Gilpin silt loam, moist, 8 to 15 percent slopes
- GaD: Gilpin silt loam, moist, 15 to 25 percent slopes
- GaF: Gilpin silt loam, moist, 35 to 65 percent slopes
- GpE: Gilpin-Peabody silt loams, 25 to 35 percent slopes
- GpF3: Gilpin-Peabody complex, 35 to 70 percent slopes, severely eroded, very stony
- GsE: Gilpin-Peabody silt loams, 15 to 35 percent slopes, very stony
- GsF: Gilpin-Peabody silt loams, 35 to 70 percent slopes, very stony
- GuC: Gilpin-Upshur silt loams, 8 to 15 percent slopes
- GuD: Gilpin-Upshur silt loams, 15 to 25 percent slopes
- GuD3: Gilpin-Upshur silt loams, 15 to 25 percent slopes, severely eroded
- GuE: Gilpin-Upshur silt loams, 25 to 35 percent slopes
- GuE3: Gilpin-Upshur silt loams, 25 to 35 percent slopes, severely eroded
- GwF3: Gilpin-Upshur silt loams, 35 to 70 percent slopes, severely eroded
- Ha: Hackers silt loam, 0 to 3 percent slopes, rarely flooded
- JnE: Janelew channery silt loam, steep
- Ka: Kanawha loam, 0 to 3 percent slopes, rarely flooded
- Lh: Lobdell-Holly silt loams
- Sb: Sensabaugh loam, 0 to 3 percent slopes, occasionally flooded
- Se: Sensabaugh silt loam, 0 to 3 percent slopes, occasionally flooded
- SeB: Sensabaugh silt loam, 3 to 8 percent slopes, rarely flooded
- Su: Sensabaugh silt loam, 0 to 3 percent slopes, occasionally flooded
- Uf: Udorthents, smoothed
- VaC: Vandalia silt loam, 8 to 15 percent slopes
- VaD: Vandalia silt loam, 15 to 25 percent slopes
- VaE: Vandalia silt loam, 25 to 35 percent slopes
- VsE: Vandalia silt loam, 15 to 35 percent slopes, very stony
- W: Water



DRAWN: KBW
CHECKED: JLY
APPROVED: JLY
DATE: December 2021
PN: 001-17-4451016
SCALE: See Mapping

Potesta & Associates, Inc. ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7019 MacCorkie Avenue, S.E. Atlanta, Georgia 30328 Office: (404) 342-1400 Fax: (404) 343-9031 E-mail: potesta@potesta.com



MOUNTAIN VALLEY PIPELINE, LLC 2200 Energy Drive, 2nd Floor Canonsburg, PA 15317
--

Cumulative Impact Assessment - Soil Fink Creek(050302030201) Little Kanawha HUC 8 Watershed Gilmer, Doddridge, and Lewis Counties, West Virginia For Informational Purposes Only
--

FIGURE 63

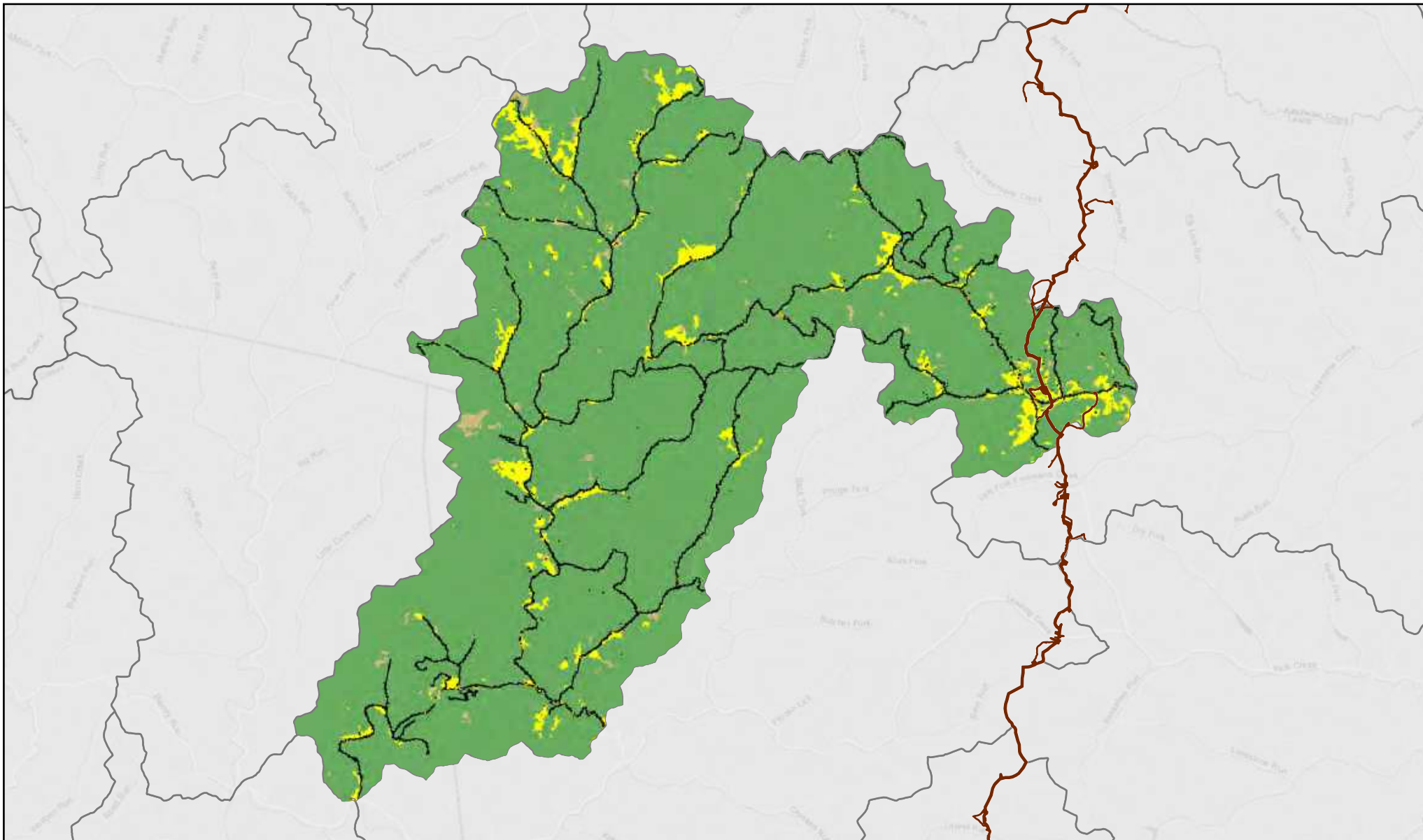


Figure: 64

**Land Use/Land Cover 2011
Fink Creek
050302030201 HUC12 Watershed**

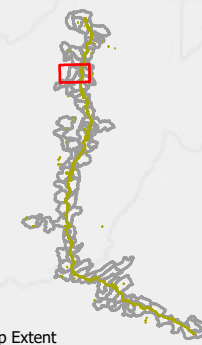
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



0 1.5 3 Miles

Scale: 1:105,000



Map Extent

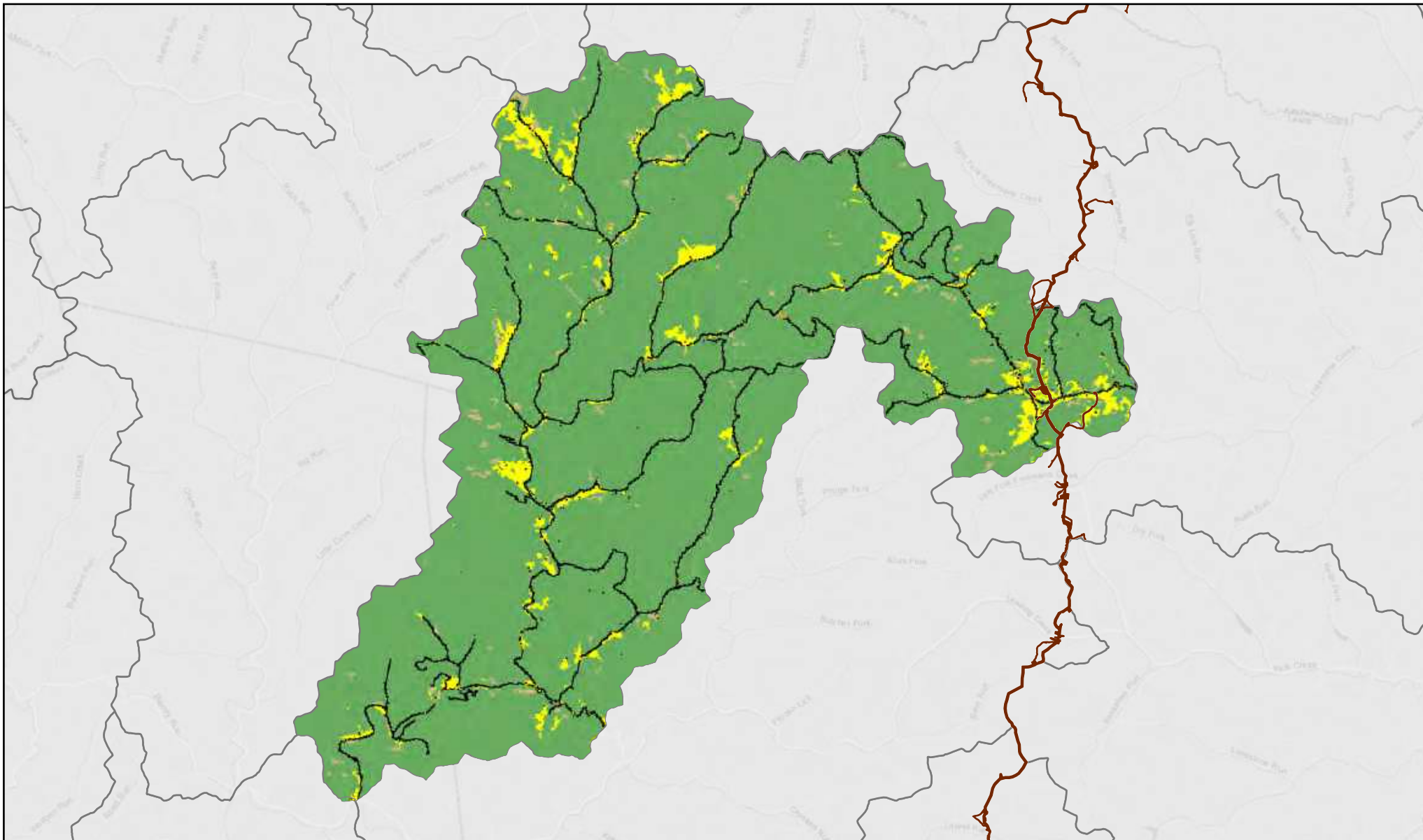


Figure: 65

**Land Use/Land Cover 2016
Fink Creek
050302030201 HUC12 Watershed**

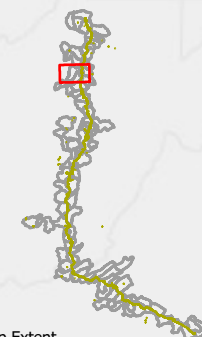
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

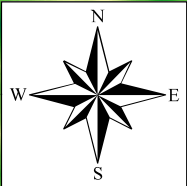


0 1.5 3 Miles

Scale: 1:105,000



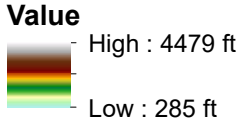
Map Extent



Legend

- 050302030202 Headwaters Leading Creek Watershed
- Headwaters Leading Creek Watershed Total Stream - 1,391,441 Linear Feet
- Mountain Valley Pipeline Headwaters Leading Creek

DEM



Total Impacts - 89 Linear Feet (0.0064%)

MAPS: CARVIS - E REPRESENTATIVE ONLY

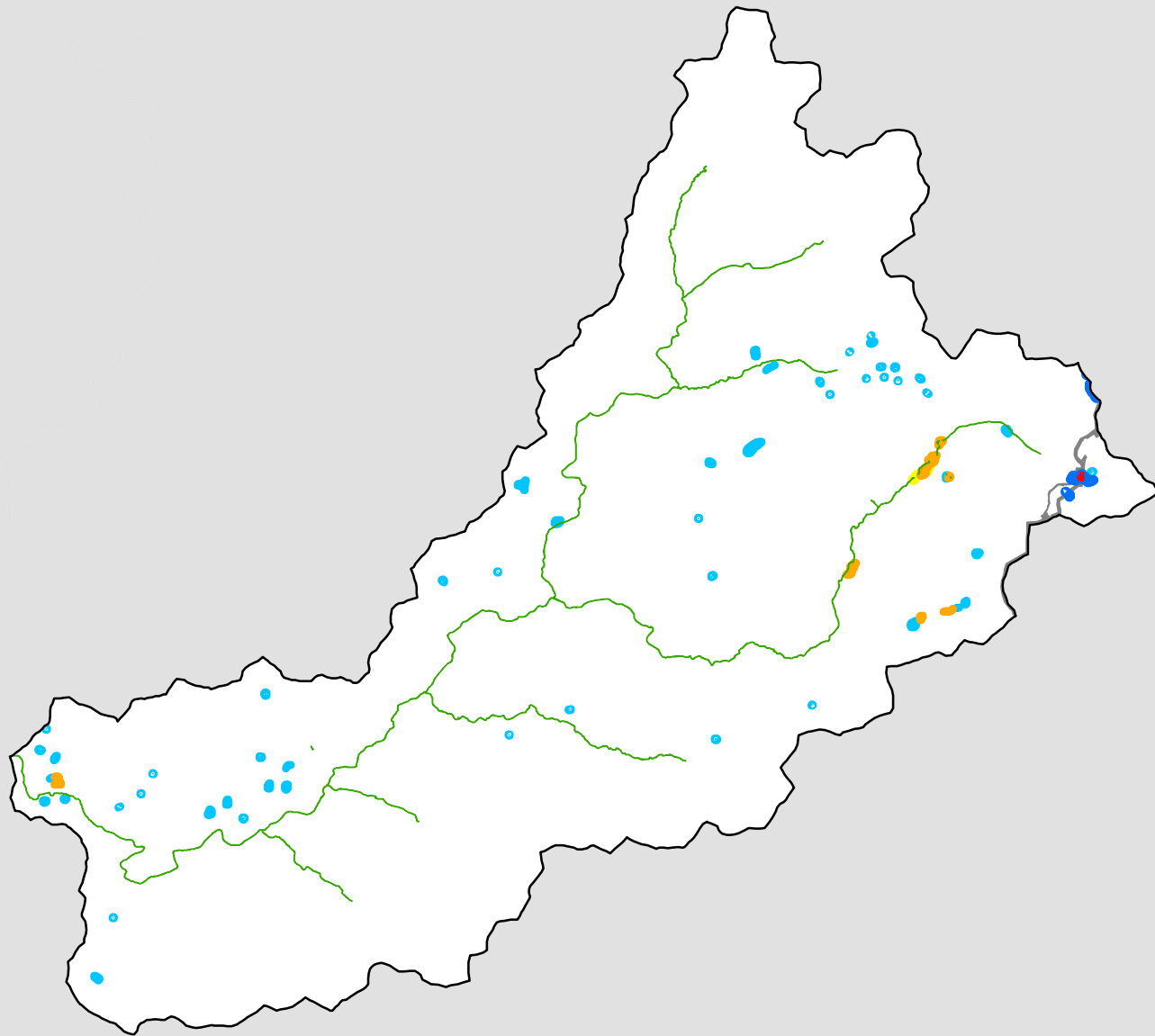
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Headwaters Leading Creek Watershed (050302030202)
Little Kanawha HUC 8 Watershed, West Virginia

MOUNTAIN VALLEY PIPELINE, LLC
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Charleston, WV 25304
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E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile
DRAWN: KBW
DATE: AUGUST 2021
CHECKED: JLY
PN: 001-174451.06
APPROVED: JLY
1/Project/2017/051_NVP_EnvCon_Monitoring/May/2021
CIA Subfigure 66 - Headwaters Leading Creek



Headwaters Leading Creek

Figure 67

1:88,000

LEGEND

- Wetland Impacts - 0.03 acres
- Headwaters Leading Creek Delineated Wetland Area - 1.06 acres
- NWI Wetlands - 109.17 acres
- Freshwater Emergent Wetland - 6.79 acres
- Freshwater Forested/Shrub Wetland - 2.09 acres
- Freshwater Pond - 19.89 acres
- Riverine - 80.4 acres
- Mountain Valley Pipeline
- 050302030202_Headwaters Leading Creek

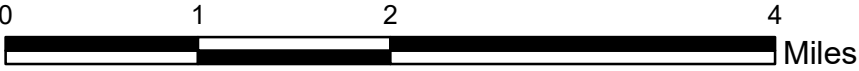
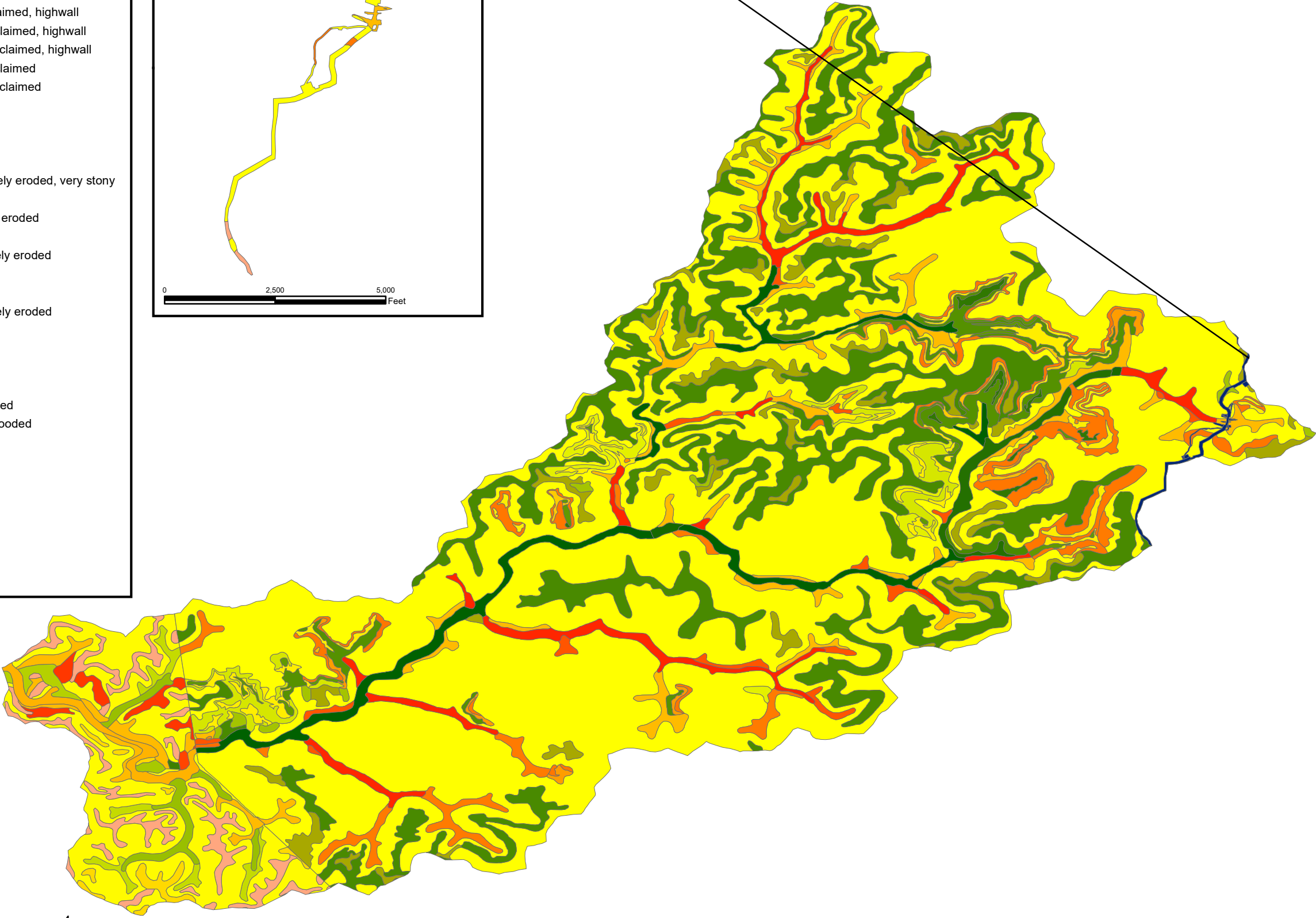
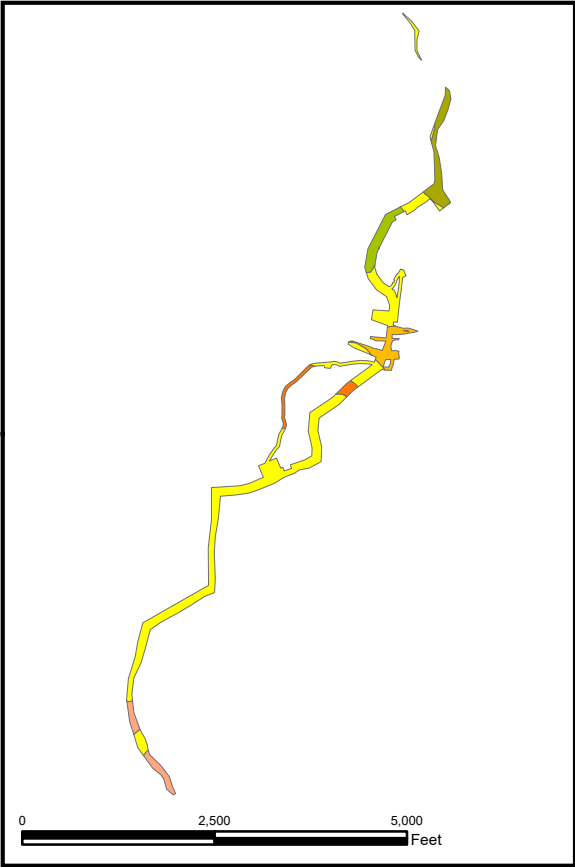
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Headwaters Leading Creek

Headwaters Leading Creek Soil

- Cg: Chagrin loam, 0 to 3 percent slopes, occasionally flooded
- Cn: Chagrin silt loam, 0 to 3 percent slopes, occasionally flooded
- FaB: Fairpoint silt loam, 0 to 8 percent slopes, reclaimed, highwall
- FaD: Fairpoint silt loam, 8 to 25 percent slopes, reclaimed, highwall
- FaF: Fairpoint silt loam, 25 to 70 percent slopes, reclaimed, highwall
- FhB: Fairpoint channery silt loam, 0 to 8 percent slopes, unreclaimed, highwall
- FhD: Fairpoint channery silt loam, 8 to 25 percent slopes, unreclaimed, highwall
- FhF: Fairpoint channery silt loam, 25 to 70 percent slopes, unreclaimed, highwall
- FpD: Fairpoint channery silt loam, 8 to 25 percent slopes, unreclaimed
- FpF: Fairpoint channery silt loam, 25 to 70 percent slopes, unreclaimed
- FrB: Fairpoint silt loam, 0 to 8 percent slopes, reclaimed
- FrD: Fairpoint silt loam, 8 to 25 percent slopes, reclaimed
- FrF: Fairpoint silt loam, 25 to 70 percent slopes, reclaimed
- GaE: Gilpin silt loam, moist, 25 to 35 percent slopes
- GpF3: Gilpin-Peabody complex, 35 to 70 percent slopes, severely eroded, very stony
- GuC: Gilpin-Upshur silt loams, 8 to 15 percent slopes
- GuC3: Gilpin-Upshur complex, 8 to 15 percent slopes, severely eroded
- GuD: Gilpin-Upshur silt loams, 15 to 25 percent slopes
- GuD3: Gilpin-Upshur silt loams, 15 to 25 percent slopes, severely eroded
- GuE: Gilpin-Upshur silt loams, 25 to 35 percent slopes
- GuE: Gilpin-Upshur silt loams, 25 to 35 percent slopes
- GwF3: Gilpin-Upshur silt loams, 35 to 70 percent slopes, severely eroded
- JnE: Janelew channery silt loam, steep
- Ka: Kanawha loam, 0 to 3 percent slopes, rarely flooded
- Lh: Lobdell-Holly silt loams
- MoB: Monongahela silt loam, 3 to 8 percent slopes
- Sb: Sensabaugh loam, 0 to 3 percent slopes, occasionally flooded
- Su: Sensabaugh silt loam, 0 to 3 percent slopes, occasionally flooded
- Ud: Udorthents, smoothed
- Uf: Udorthents, smoothed
- Ur: Udorthents-Urban land complex
- VaC: Vandalia silt loam, 8 to 15 percent slopes
- VaD: Vandalia silt loam, 15 to 25 percent slopes
- VaE: Vandalia silt loam, 25 to 35 percent slopes
- VsE: Vandalia silt loam, 15 to 35 percent slopes, very stony
- W: Water



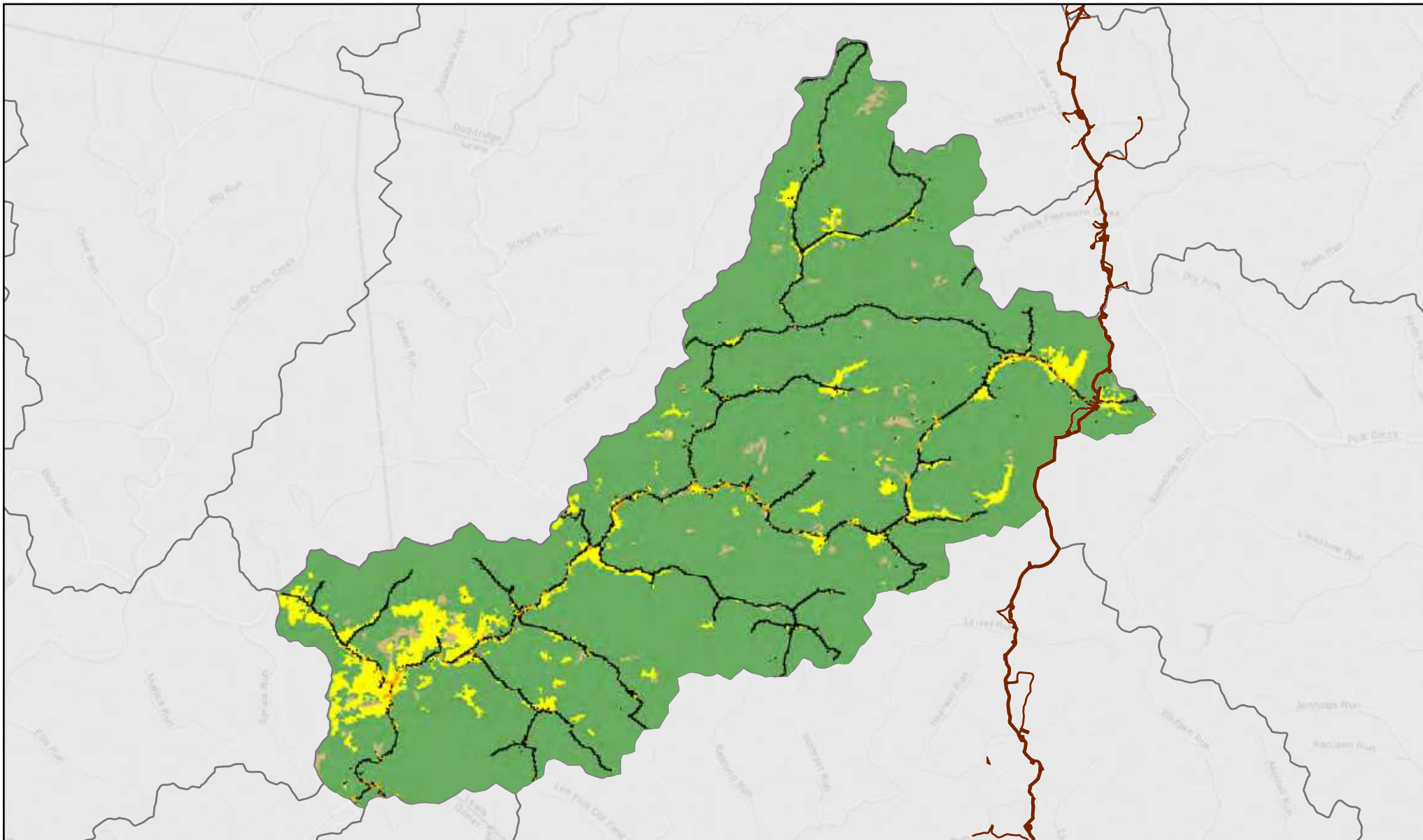


Figure: 69

**Land Use/Land Cover 2011
Headwaters Leading Creek
050302030202 HUC12 Watershed**

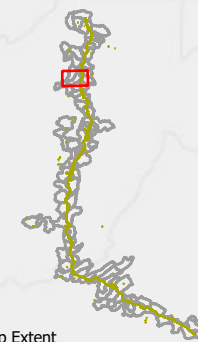
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

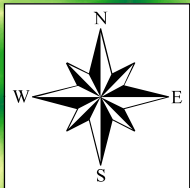
0 1 2 Miles






Scale: 1:90,000



Map Extent





Legend

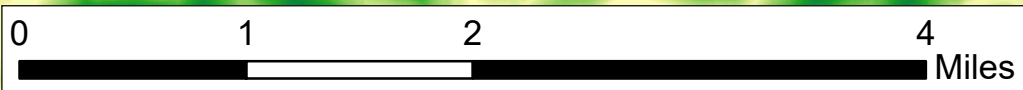
-  050302030101 Headwaters Sand Fork Watershed
-  Headwaters Sand Fork Watershed Total Stream - 1,500,869 Linear Feet
-  Mountain Valley Pipeline Headwater Sand Fork

DEM

Value

-  High : 4479 ft
-  Low : 285 ft

Total Impacts - 1,056 Linear Feet (0.0704%)



WARNING: FOR VISUAL REFERENCE ONLY

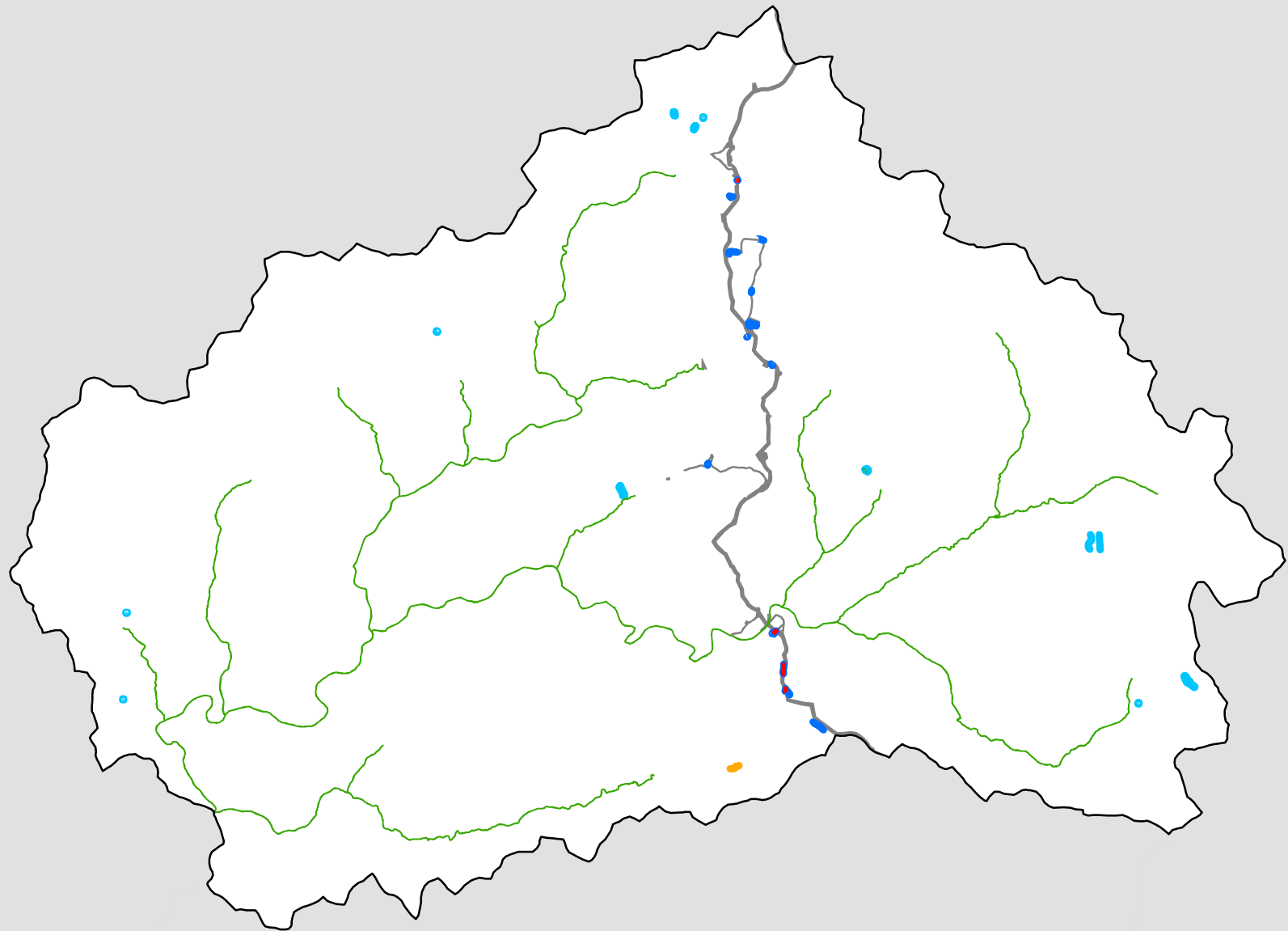
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Headwaters Sand Fork Watershed (050302030101)
Little Kanawha HUC 8 Watershed, West Virginia
For Informational Purposes Only

MOUNTAIN VALLEY PIPELINE, LLC
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E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
[Project/2017/081_MVP_EnvCon_Monitoring/May/2021] CIA Subfigure 17 - HW Sand Fork Land	



Headwaters Sand Fork

Figure 72

1:74,000

LEGEND

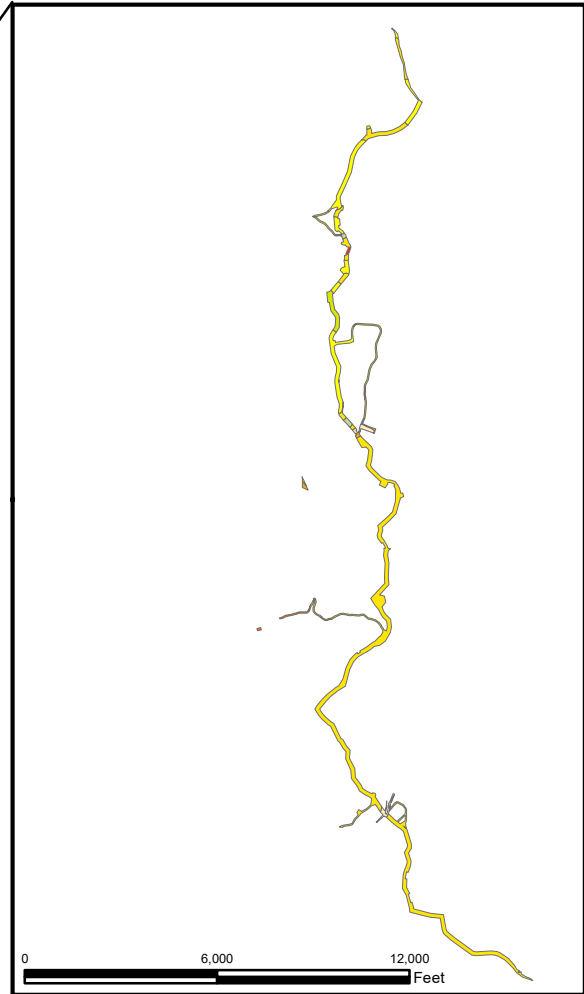
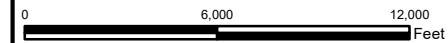
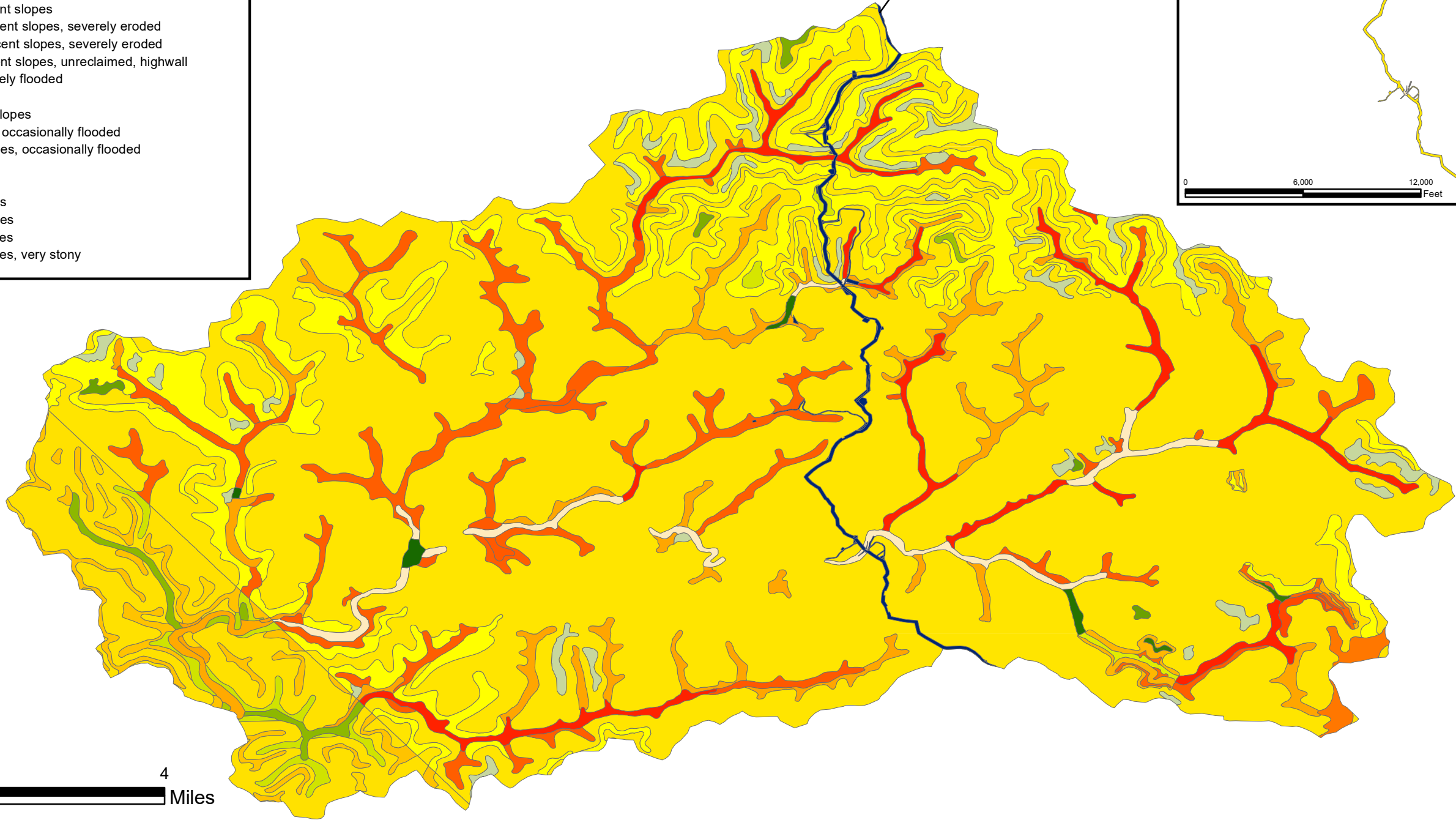
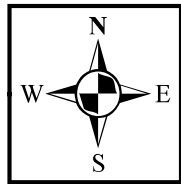
- Wetland Impacts - 0.32 acres
- Headwaters Sand Fork Delineated Wetland Area - 1.54 acres
- NWI Wetlands - 119 acres
- Freshwater Emergent Wetland - 0.18 acres
- Freshwater Pond - 4.3 acres
- Riverine - 114.52 acres
- Mountain Valley Pipeline
- 050302030101_Headwaters Sand Fork

Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Headwater Sand Fork
Headwaters Sand Fork Soil

- BaF: Bethesda loam, 25 to 70 percent slopes, reclaimed, highwall
- BdB: Bethesda channery loam, 0 to 8 percent slopes, unreclaimed
- BhD: Bethesda channery loam, 8 to 25 percent slopes, unreclaimed, highwall
- BhF: Bethesda channery loam, 25 to 70 percent slopes, unreclaimed, highwall
- BsB: Bethesda loam, 0 to 8 percent slopes, reclaimed
- BsD: Bethesda loam, 8 to 25 percent slopes, reclaimed
- BsF: Bethesda loam, 25 to 70 percent slopes, reclaimed
- Cg: Chagrin loam, 0 to 3 percent slopes, occasionally flooded
- Cn: Chagrin silt loam, 0 to 3 percent slopes, occasionally flooded
- GaC: Gilpin silt loam, moist, 8 to 15 percent slopes
- GaD: Gilpin silt loam, moist, 15 to 25 percent slopes
- GaE: Gilpin silt loam, moist, 25 to 35 percent slopes
- GaF: Gilpin silt loam, moist, 35 to 65 percent slopes
- GpF3: Gilpin-Peabody complex, 35 to 70 percent slopes, severely eroded, very stony
- GuC: Gilpin-Upshur silt loams, 8 to 15 percent slopes
- GuD: Gilpin-Upshur silt loams, 15 to 25 percent slopes
- GuD3: Gilpin-Upshur silt loams, 15 to 25 percent slopes, severely eroded
- GuE: Gilpin-Upshur silt loams, 25 to 35 percent slopes
- GuE3: Gilpin-Upshur silt loams, 25 to 35 percent slopes, severely eroded
- GwF3: Gilpin-Upshur silt loams, 35 to 70 percent slopes, severely eroded
- JhB: Janelew channery silt loam, 0 to 8 percent slopes, unreclaimed, highwall
- Ka: Kanawha loam, 0 to 3 percent slopes, rarely flooded
- Lh: Lobdell-Holly silt loams
- MoB: Monongahela silt loam, 3 to 8 percent slopes
- Sb: Sensabaugh loam, 0 to 3 percent slopes, occasionally flooded
- Su: Sensabaugh silt loam, 0 to 3 percent slopes, occasionally flooded
- Uf: Udorthents, smoothed
- Ur: Udorthents-Urban land complex
- VaC: Vandalia silt loam, 8 to 15 percent slopes
- VaD: Vandalia silt loam, 15 to 25 percent slopes
- VaE: Vandalia silt loam, 25 to 35 percent slopes
- VsE: Vandalia silt loam, 15 to 35 percent slopes, very stony



MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment - Soil
Headwaters Sand Fork (050302030101)
Little Kanawha HUC 8 Watershed
Gilmer and Lewis Counties, West Virginia
For Informational Purposes Only

MOUNTAIN VALLEY PIPELINE, LLC
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7012 MacCorkie Avenue, S.E.
Gainesville, TX 77603
Office: (940) 342-1400 Fax: (940) 343-9031
E-mail: potesta@potesta.com

SCALE: See Mapping
DATE: December 2021
PN: 001-17-4451016
DRAWN: KBW
CHECKED: JLY
APPROVED: JLY
05/05/2017 17:44:51 MXP_EIS_Soils_MountainValley.mxd
C:\S\01\figure 73 - Headwaters Sand Fork Soil.mxd

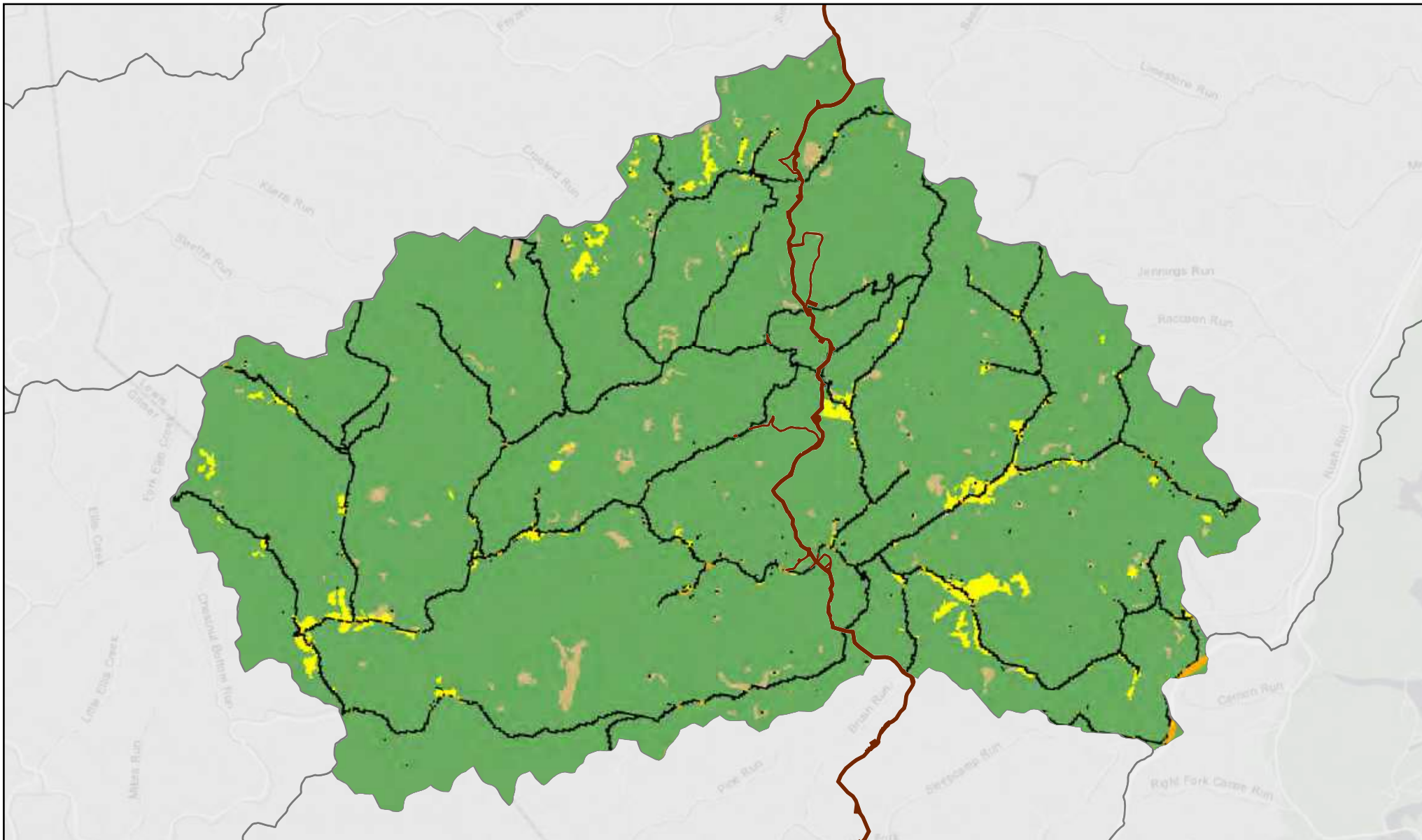
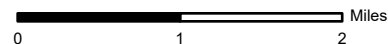


Figure: 74

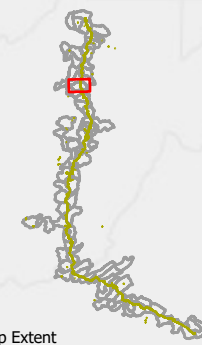
**Land Use/Land Cover 2011
Headwaters Sand Fork
050302030101 HUC12 Watershed**

LEGEND

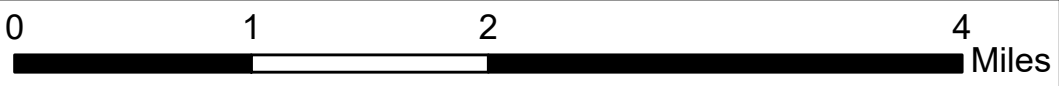
- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover**
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:75,000



Map Extent



Legend

050302030102 Indian Fork Watershed

Indian Fork Watershed Total Stream - 902,452 Linear Feet

Mountain Valley Pipeline Indian Fork

DEM

Value

High : 4479 ft

Low : 285 ft

Total Impacts - 367 Linear Feet (0.0407%)

MAPS FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Indian Fork Watershed (050302030102)
Little Kanawha HUC 8 Watershed, West Virginia
For Informational Purposes Only

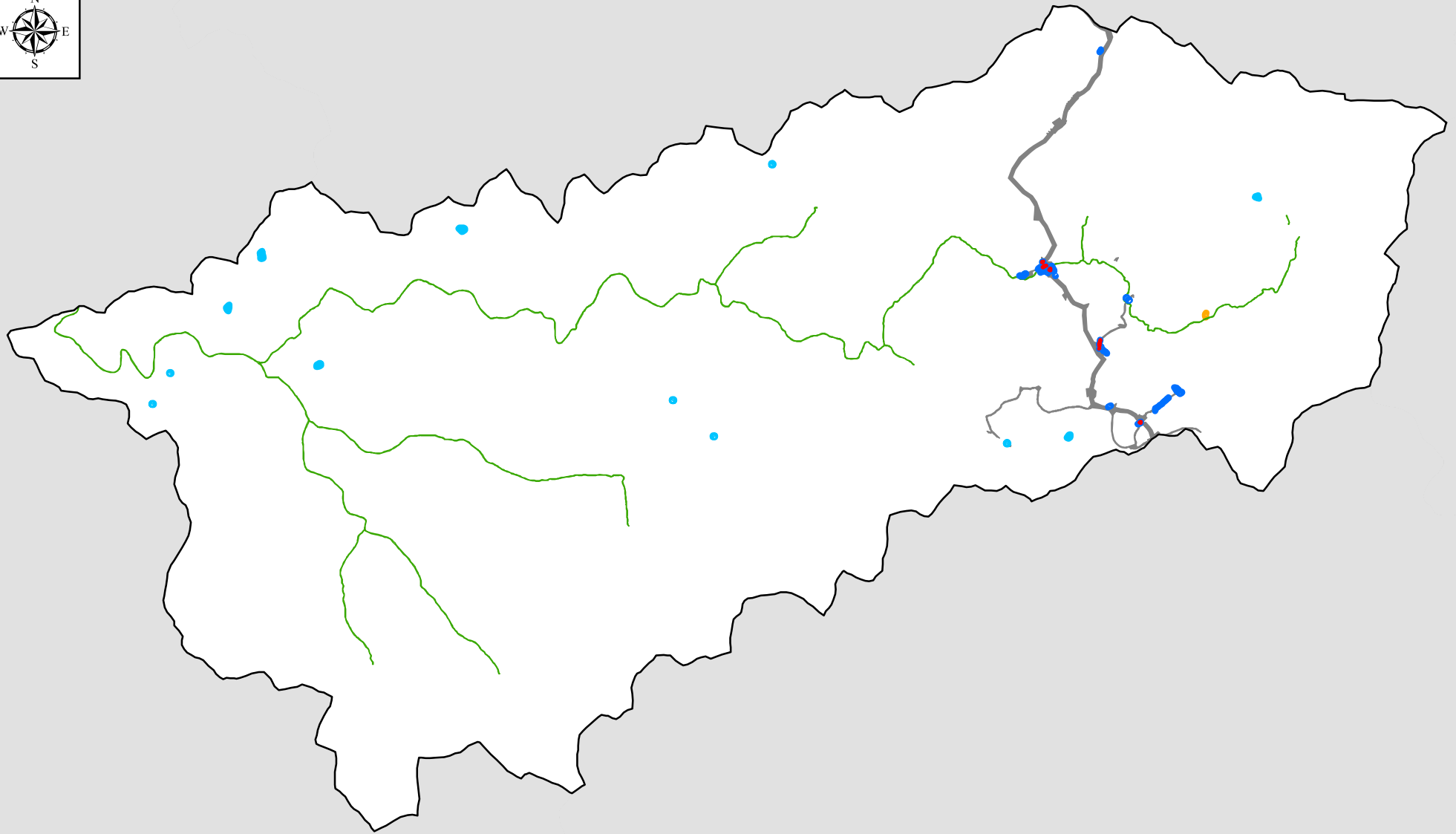
MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317



Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: 800-438-4444
E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: JUNE 2022	CHECKED: JLY
PN: 001-17-045106	APPROVED: JLY
Project: 201717-0451 MVP, EnvCon, Monitoring Maps 2021 File: 20210620-EnvCon-Monitoring-Maps-2021.mxd	

FIGURE 76



Indian Fork

Figure 77

1:58,000

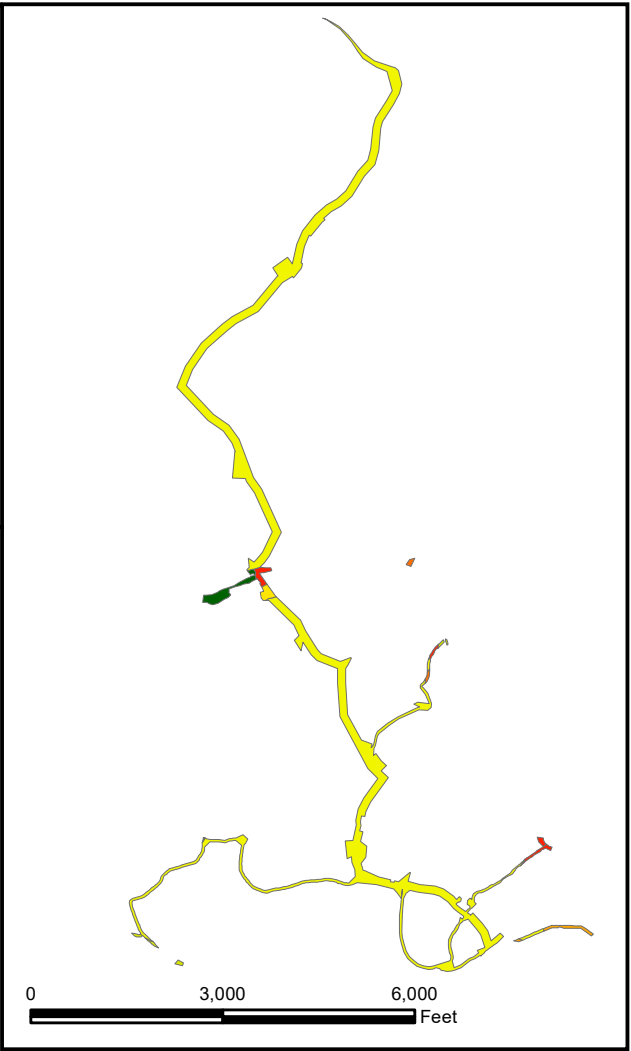
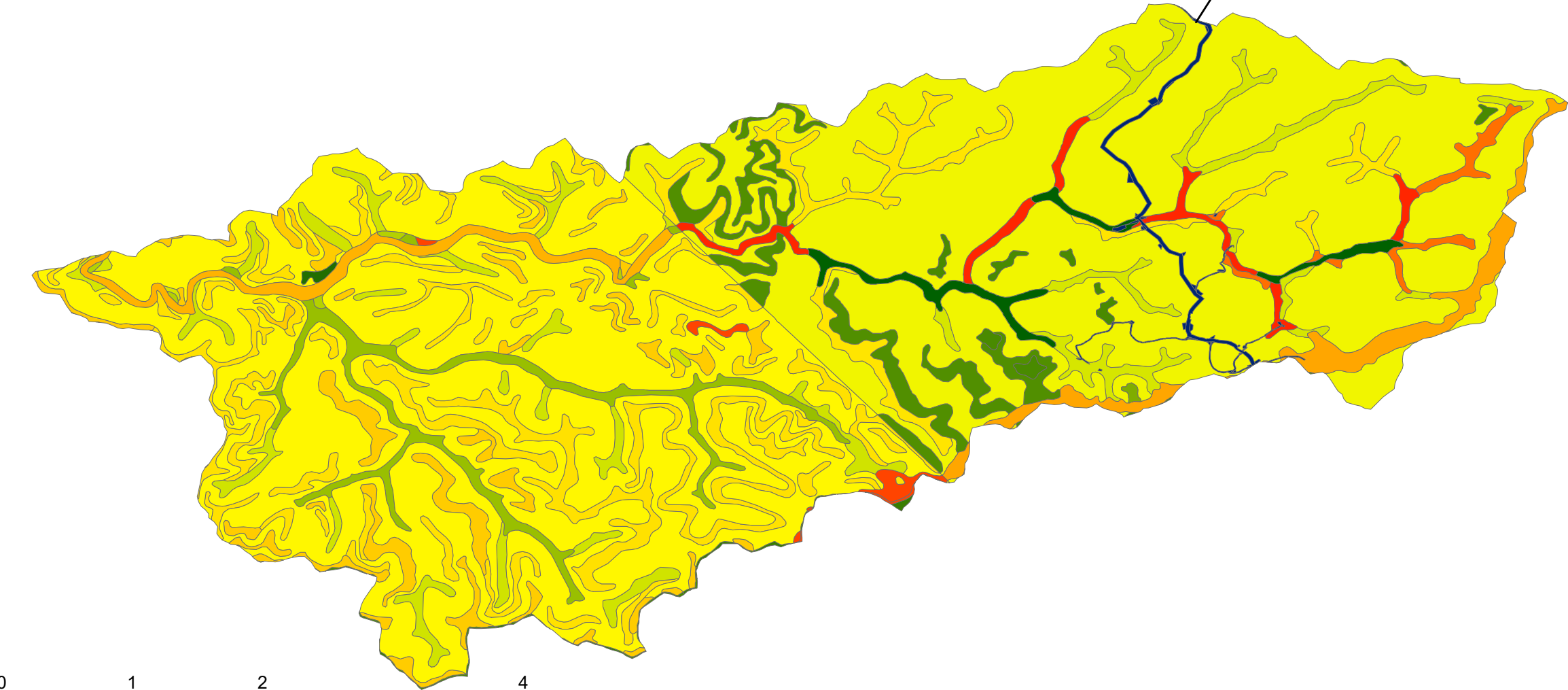
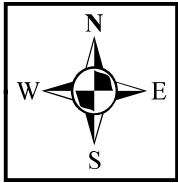
LEGEND

- Wetland Impacts - 0.15 acres
- Indian Fork Delineated Wetland Area - 1.68 acres
- NWI Wetlands - 64.85 acres
- Freshwater Emergent Wetland - 0.08 acres
- Freshwater Pond - 2.83 acres
- Riverine - 61.94 acres
- Mountain Valley Pipeline
- 050302030102_Indian Fork

Note: Shapes are not to scale, enlarged to improve visibility.

Legend

- Mountain Valley Pipeline Indian Fork**
- Indian Fork Soil**
- Cg: Chagrin loam, 0 to 3 percent slopes, occasionally flooded
 - Cn: Chagrin silt loam, 0 to 3 percent slopes, occasionally flooded
 - GpF3: Gilpin-Peabody complex, 35 to 70 percent slopes, severely eroded, very stony
 - GuC: Gilpin-Upshur silt loams, 8 to 15 percent slopes
 - GuC3: Gilpin-Upshur complex, 8 to 15 percent slopes, severely eroded
 - GuD: Gilpin-Upshur silt loams, 15 to 25 percent slopes
 - GuD3: Gilpin-Upshur silt loams, 15 to 25 percent slopes, severely eroded
 - GuE: Gilpin-Upshur silt loams, 25 to 35 percent slopes
 - GuE3: Gilpin-Upshur silt loams, 25 to 35 percent slopes, severely eroded
 - GuF: Gilpin-Upshur silt loams, 35 to 70 percent slopes
 - GwF3: Gilpin-Upshur silt loams, 35 to 70 percent slopes, severely eroded
 - Ka: Kanawha loam, 0 to 3 percent slopes, rarely flooded
 - Sb: Sensabaugh loam, 0 to 3 percent slopes, occasionally flooded
 - Su: Sensabaugh silt loam, 0 to 3 percent slopes, occasionally flooded
 - Ud: Udorthents, smoothed
 - Uf: Udorthents, smoothed
 - VaC: Vandalia silt loam, 8 to 15 percent slopes
 - VaD: Vandalia silt loam, 15 to 25 percent slopes
 - VaE: Vandalia silt loam, 25 to 35 percent slopes
 - VsE: Vandalia silt loam, 15 to 35 percent slopes, very stony



MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment - Soil
Indian Fork (050302030102)
Little KanawhaHUC 8 Watershed
Braxton, Gilmer, and Lewis Counties, West Virginia
For Informational Purposes Only

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7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

SCALE: See Mapping
DRAWN: KBW
DATE: JUNE 2022
CHECKED: JLY
PN: 001-17451.016
APPROVED: JLY
05/20/2021
C:\S\figure-78 - Indian Creek Soil.mxd

FIGURE 78

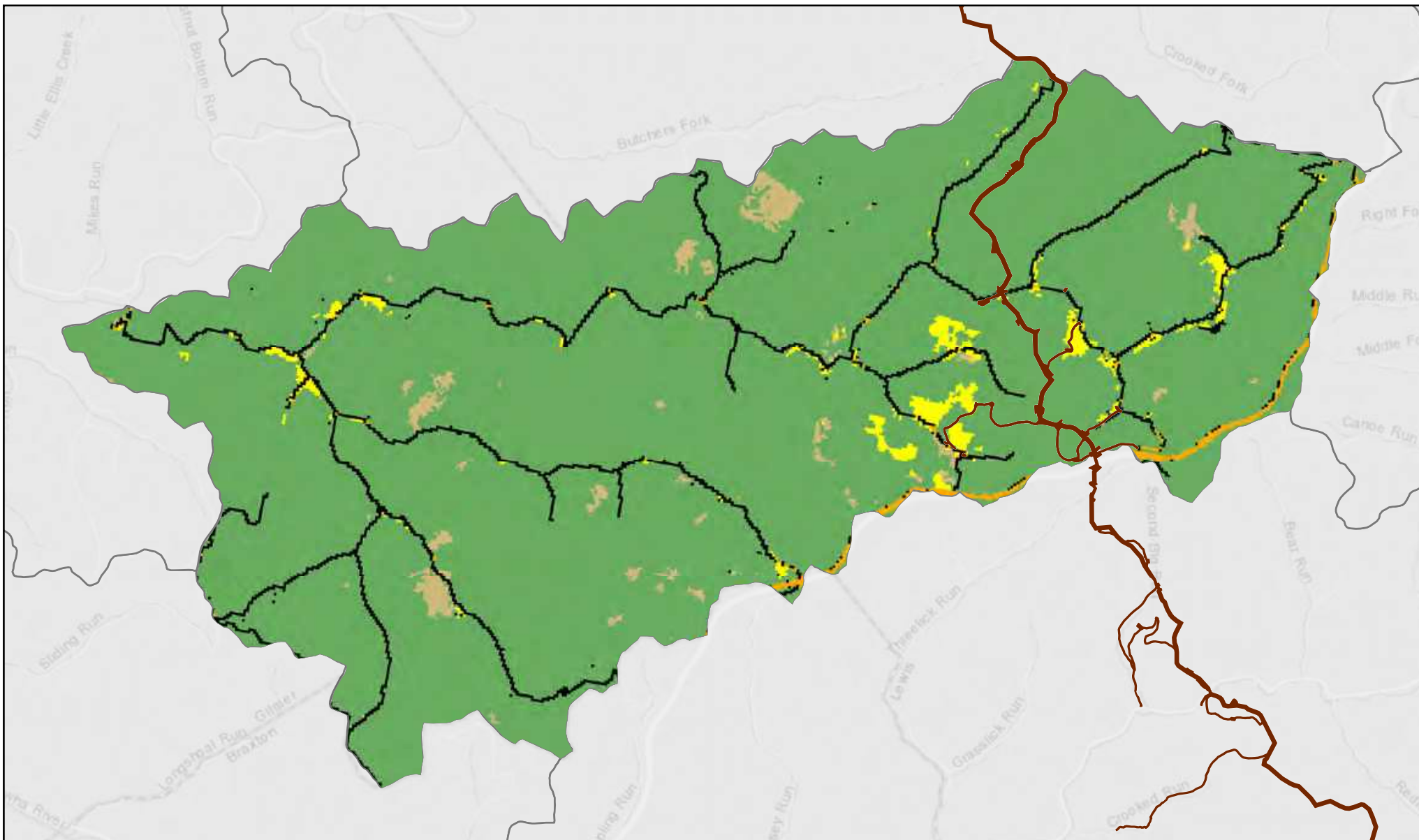
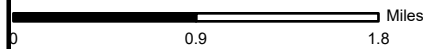


Figure: 79

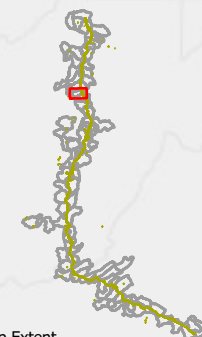
**Land Use/Land Cover 2011
Indian Fork
050302030102 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover**
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:60,000



Map Extent

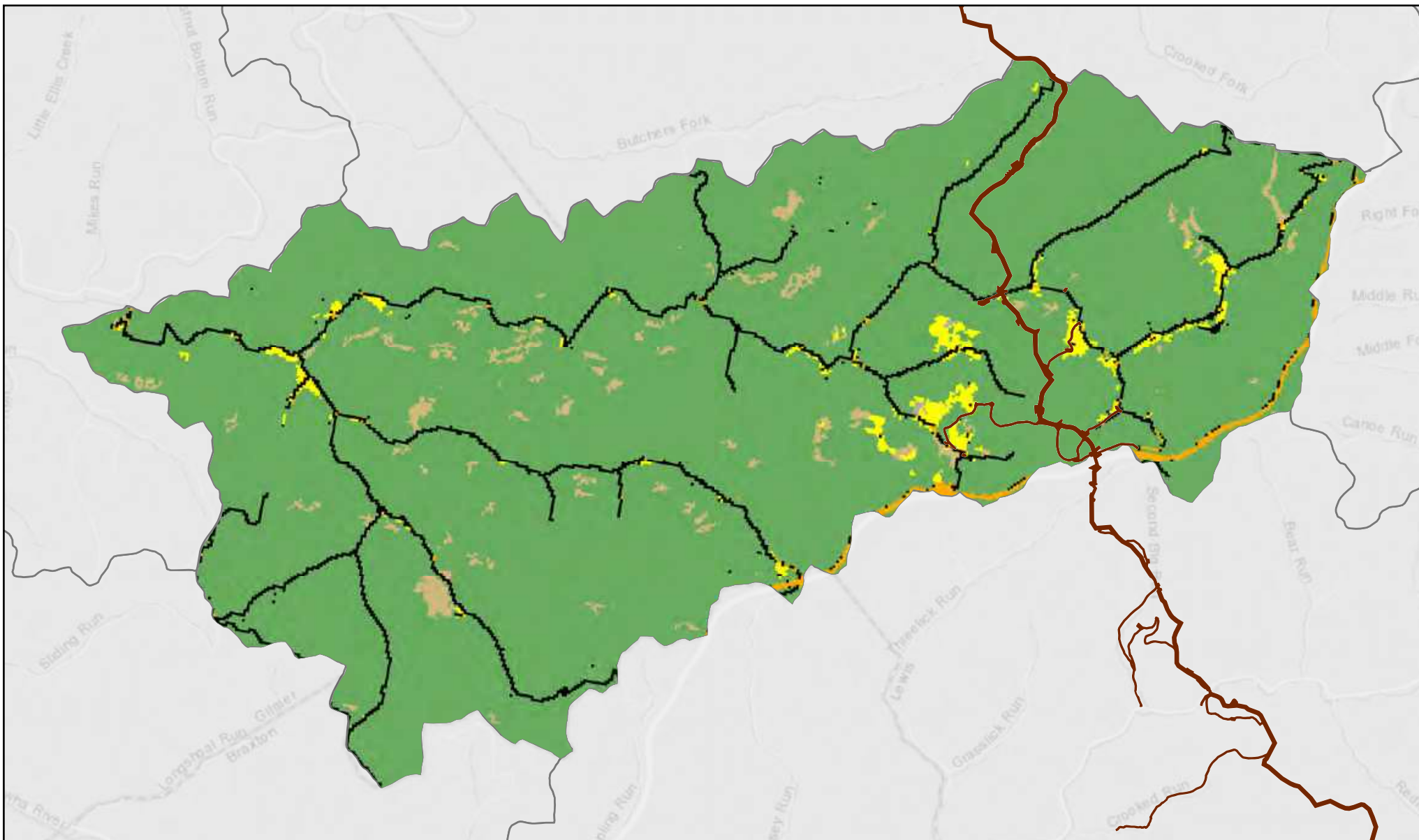


Figure: 80

**Land Use/Land Cover 2016
Indian Fork
050302030102 HUC12 Watershed**

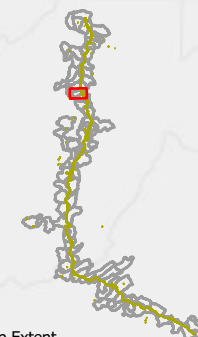
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

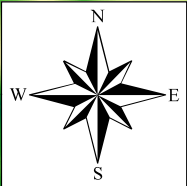


0 0.9 1.8 Miles

Scale: 1:60,000



Map Extent



Legend

050302030306 Oil Creek Watershed

Oil Creek Watershed Total Stream - 1,310,301 Linear Feet

Mountain Valley Pipeline Oil Creek

DEM

Value

High : 4479 ft

Low : 285 ft

Total Impacts - 1,664 Linear Feet (0.1270%)

MAPS FOR VISUAL REPRESENTATION ONLY

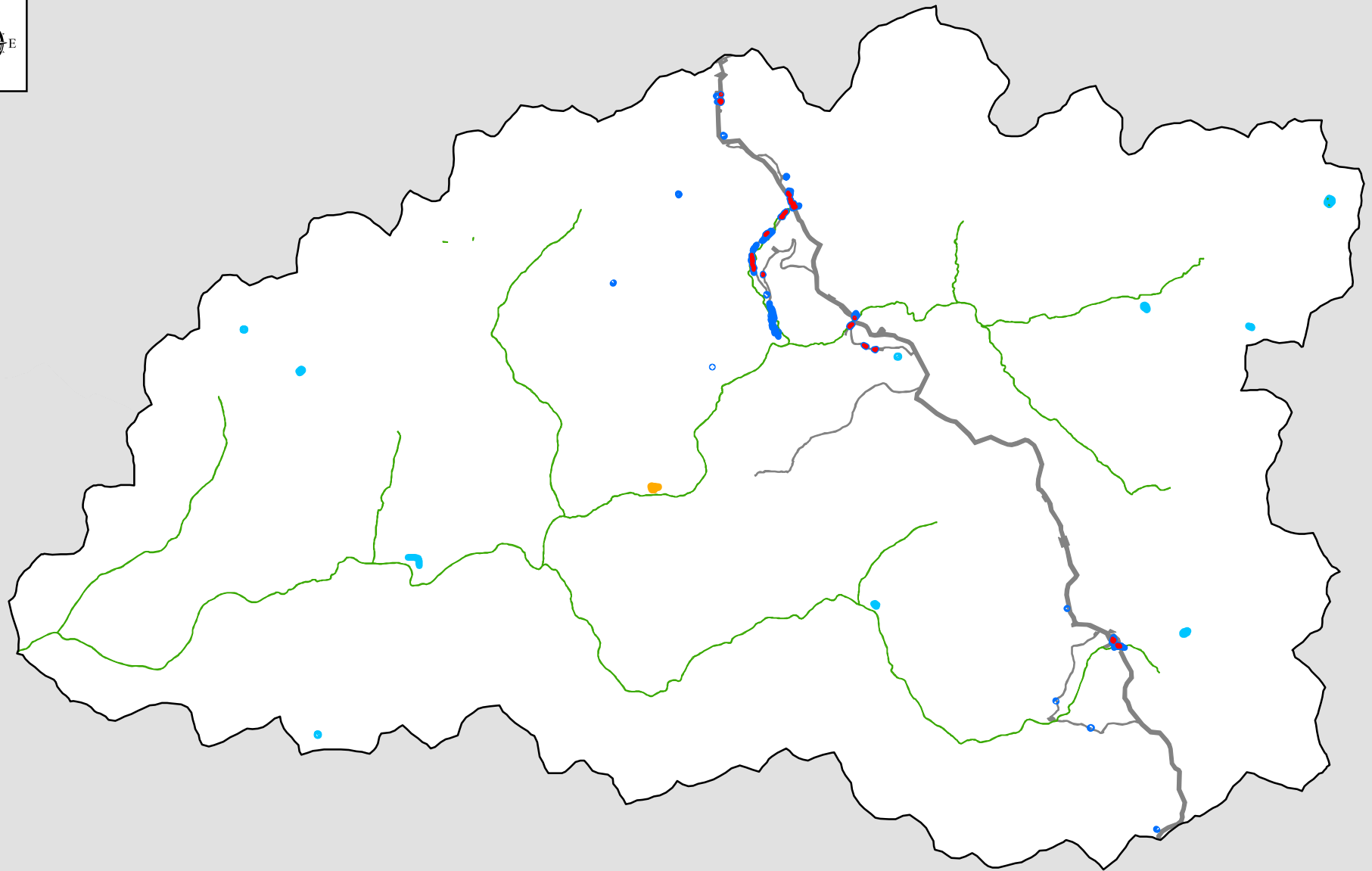
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Oil Creek Watershed (050302030306)
Little Kanawha HUC 8 Watershed, West Virginia

MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
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E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
E:\Projects\2017_081_MVP_EnvCom_Monitoring\Map\2021_CIA_Subs\Figure 81 - Oil_Creek.mxd	



Oil Creek
Figure 82
1:59,000

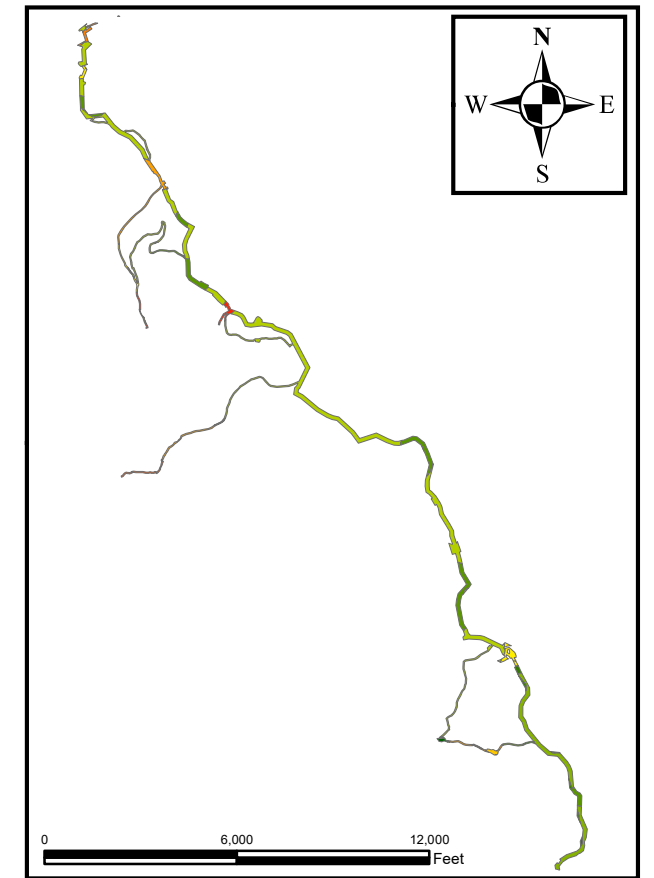
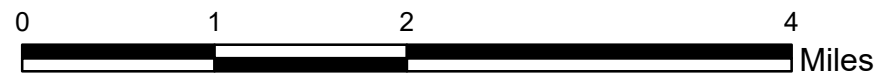
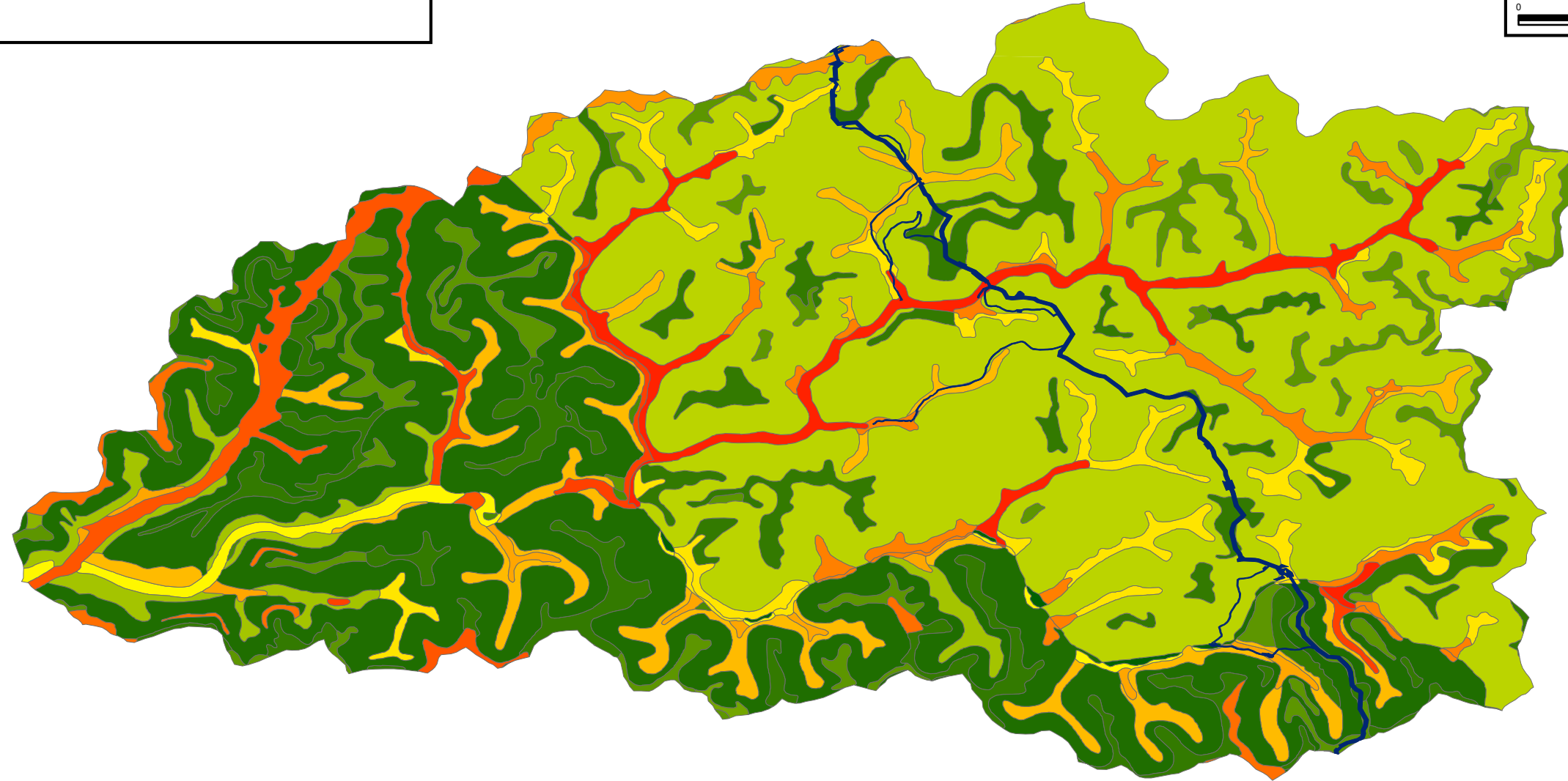
LEGEND

- Wetland Impacts - 0.71 acres
- Oil Creek Delineated Wetland Area - 3.06 acres
- NWI Wetlands - 84.56 acres
- Freshwater Emergent Wetland - 0.66 acres
- Freshwater Pond - 2.66 acres
- Riverine - 81.24 acres
- Mountain Valley Pipeline
- 050302030306_Oil Creek

Note: Shapes are not to scale, enlarged to improve visibility.

Oil Creek Soil

 W: Water



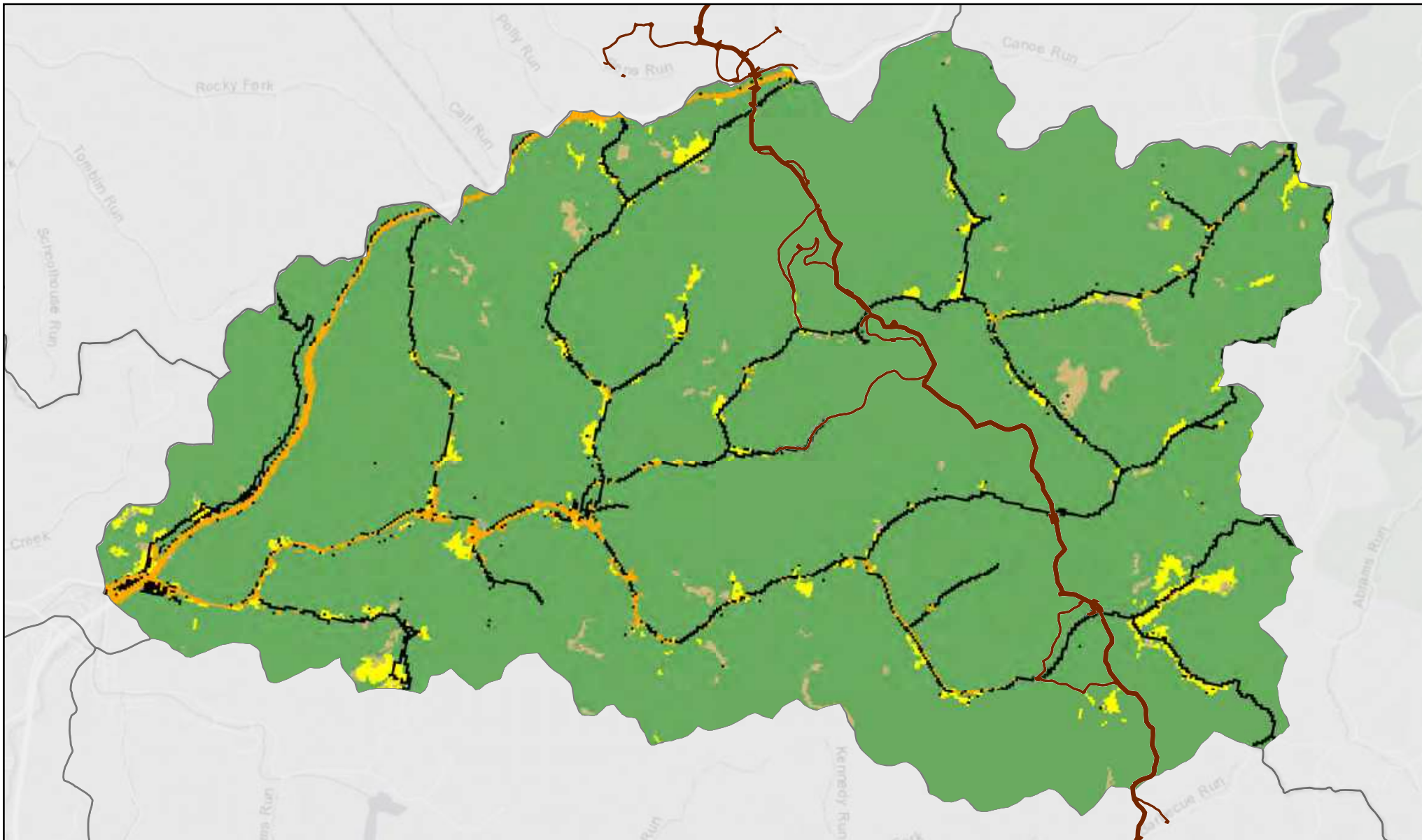


Figure: 84

**Land Use/Land Cover 2011
Oil Creek
050302030306 HUC12 Watershed**

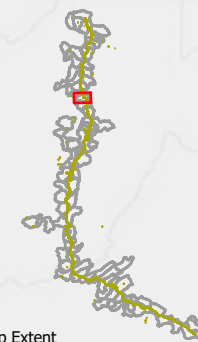
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



0 0.9 1.8 Miles

Scale: 1:60,000



Map Extent

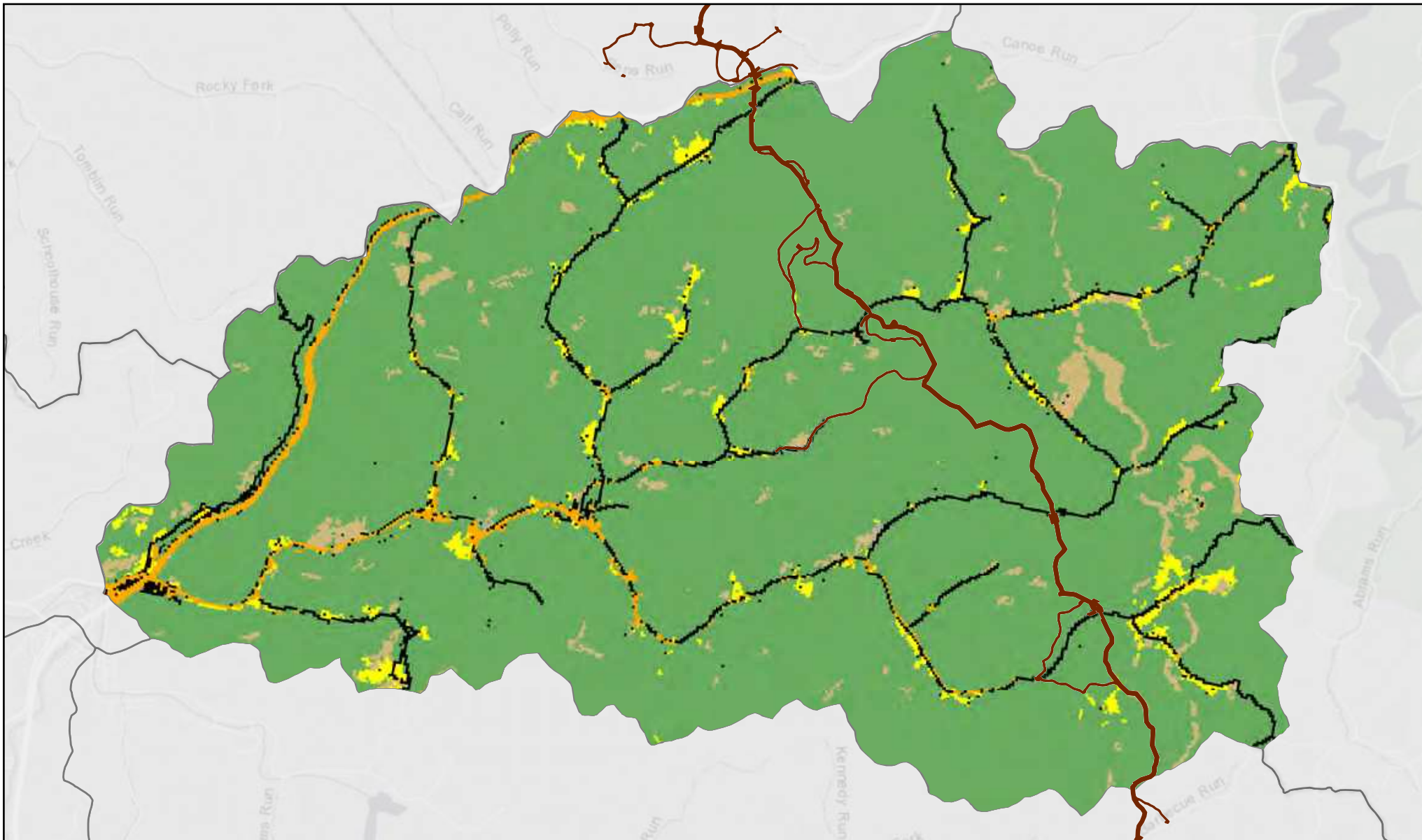


Figure: 85

**Land Use/Land Cover 2016
Oil Creek
050302030306 HUC12 Watershed**

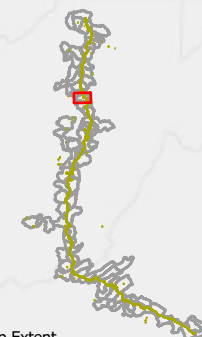
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover**
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

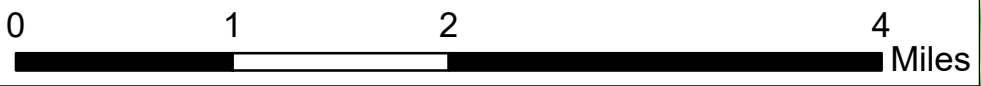
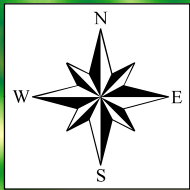


0 0.9 1.8 Miles

Scale: 1:60,000



Map Extent

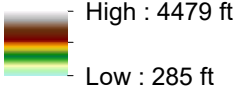


Legend

- 050302030305 Burnsville Lake-Little Kanawha River Watershed
- Burnsville Lake (Excluded)
- Burnsville Lake-Little Kanawha River Watershed Total Streams - 1,158,723 Linear Feet
- Mountain Valley Pipeline Burnsville Lake-Little Kanawha River

DEM

Value



Total Impacts - 639 Linear Feet (0.0551%)

MAP PREPARED FOR MOUNTAIN VALLEY PIPELINE, LLC

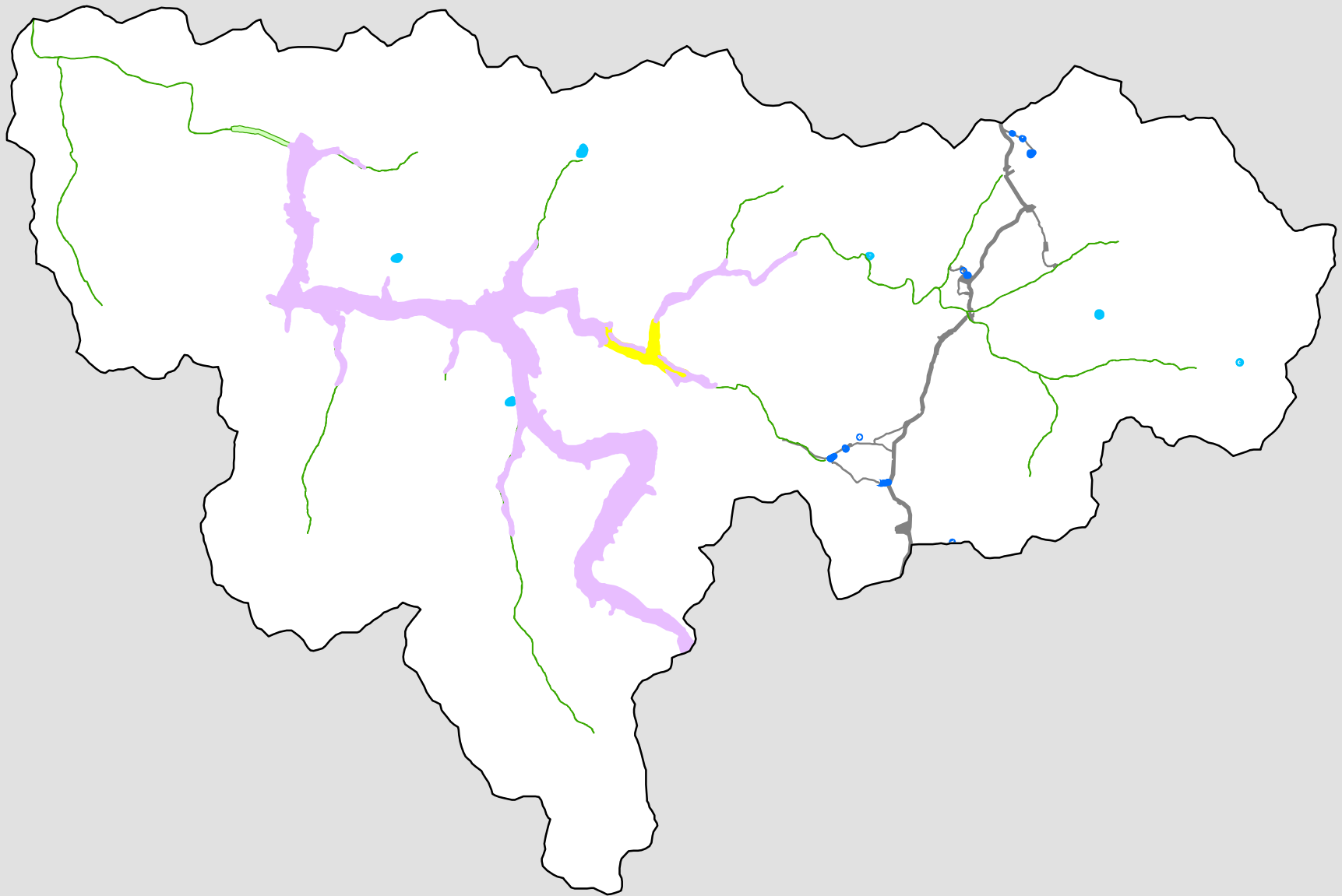
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Burnsville Lake-Little Kanawha River
Watershed (050302030305)
Little Kanawha HUC 8 Watershed, West Virginia
For Informational Purposes Only

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SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-P40451.06	APPROVED: JLY
[Project 2017-17-0451.MXD, EnvsCom, Monitoring Map 2021, CIA Scale Figure 86 - Burnsville Lake 2nd]	



Burnsville Lake-Little Kanawha River

Figure 87

1:72,000

LEGEND

- Wetland Impacts - 0 acres
- Burnsville Lake-Little Kanawha River Delineated Wetland Area - 0.47 acres
- NWI Wetlands - 964.81 acres
- Freshwater Forested/Shrub Wetland - 27.89 acres
- Freshwater Pond - 2.61 acres
- Lake - 864.7 acres
- Riverine - 69.61 acres
- Mountain Valley Pipeline
- 050302030305_Burnsville Lake-Little Kanawha River

Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Burnsville Lake-Little Kanawha River

Burnsville Lake-Little Kanawha River Soils

AgB: Allegheny loam, 3 to 8 percent slopes

BuE: Buchanan gravelly loam, moist, 15 to 35 percent slopes, extremely stony

Cg: Chagrin silt loam, 0 to 3 percent slopes, occasionally flooded

Cp: Chavies fine sandy loam, protected

GaF: Gilpin silt loam, 35 to 70 percent slopes, very stony

GiD: Gilpin-Lily complex, 15 to 25 percent slopes

GiE: Gilpin-Lily complex, 25 to 35 percent slopes

GuC: Gilpin-Upshur silt loams, 8 to 15 percent slopes

GuD: Gilpin-Upshur silt loams, 15 to 25 percent slopes

GuE: Gilpin-Upshur silt loams, 25 to 35 percent slopes

GuF: Gilpin-Upshur silt loams, 35 to 70 percent slopes

GwF3: Gilpin-Upshur silt loams, 35 to 70 percent slopes, severely eroded

GxF: Gilpin-Upshur silt loams, 35 to 70 percent slopes, extremely bouldery

MgB: Monongahela silt loam, 3 to 8 percent slopes

Po: Pope sandy loam, 0 to 3 percent slopes, occasionally flooded

SoA: Sensabaugh silt loam, 0 to 3 percent slopes, occasionally flooded

SrB: Sensabaugh silt loam, 3 to 8 percent slopes, rarely flooded

Ud: Udorthents, smoothed

VaC: Vandalia silt loam, 8 to 15 percent slopes

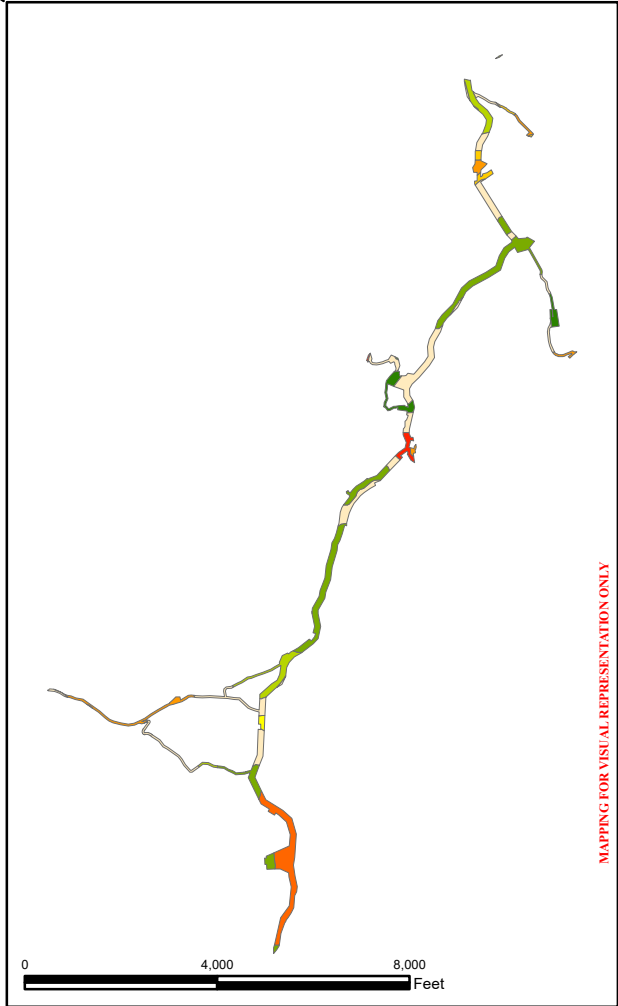
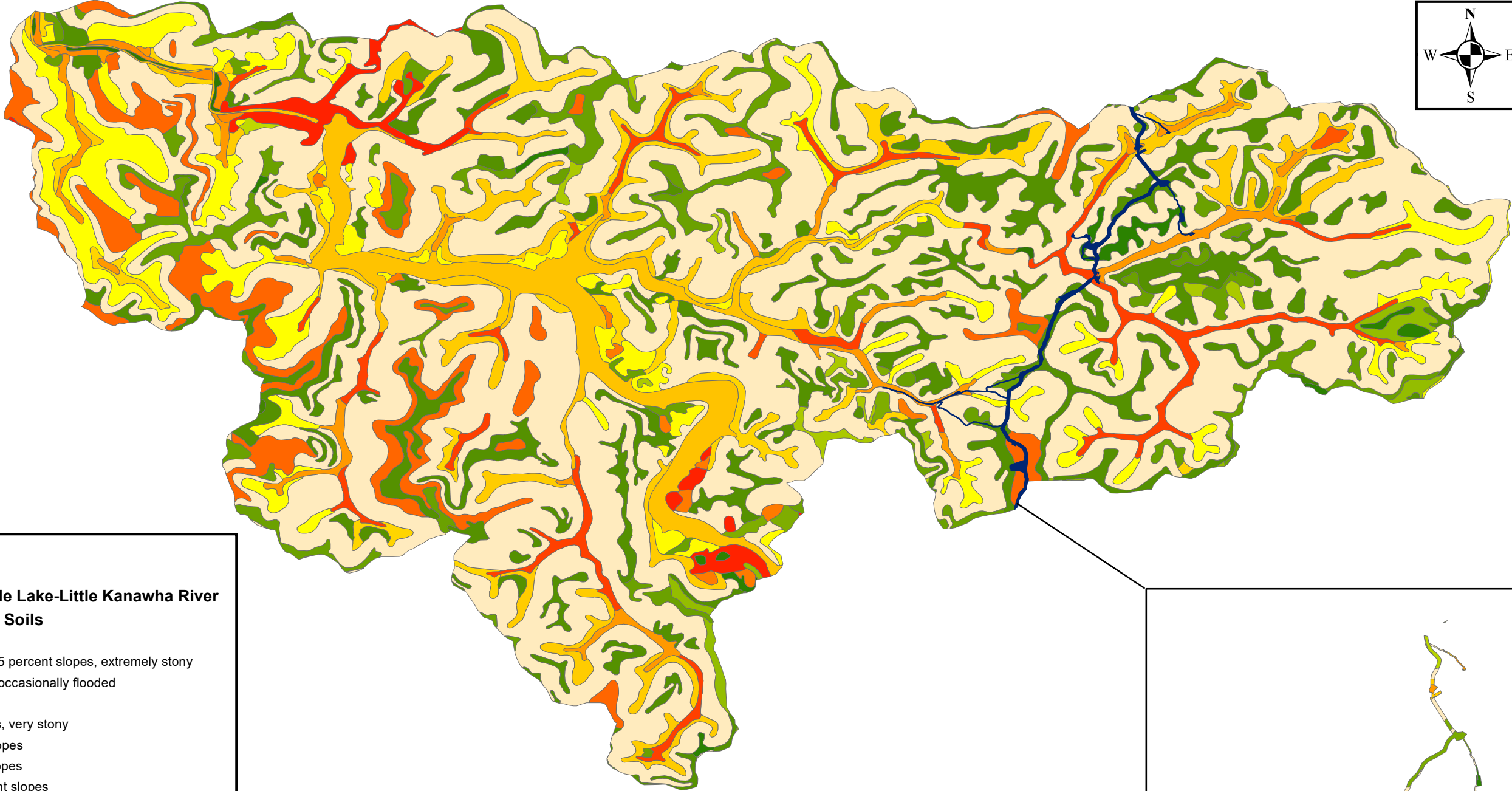
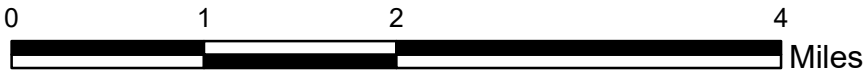
VaD: Vandalia silt loam, 15 to 25 percent slopes

VaE: Vandalia silt loam, 25 to 35 percent slopes

VxE: Vandalia silt loam, 15 to 35 percent slopes, very stony

W: Water

ZoB: Zoar silt loam, 3 to 8 percent slopes



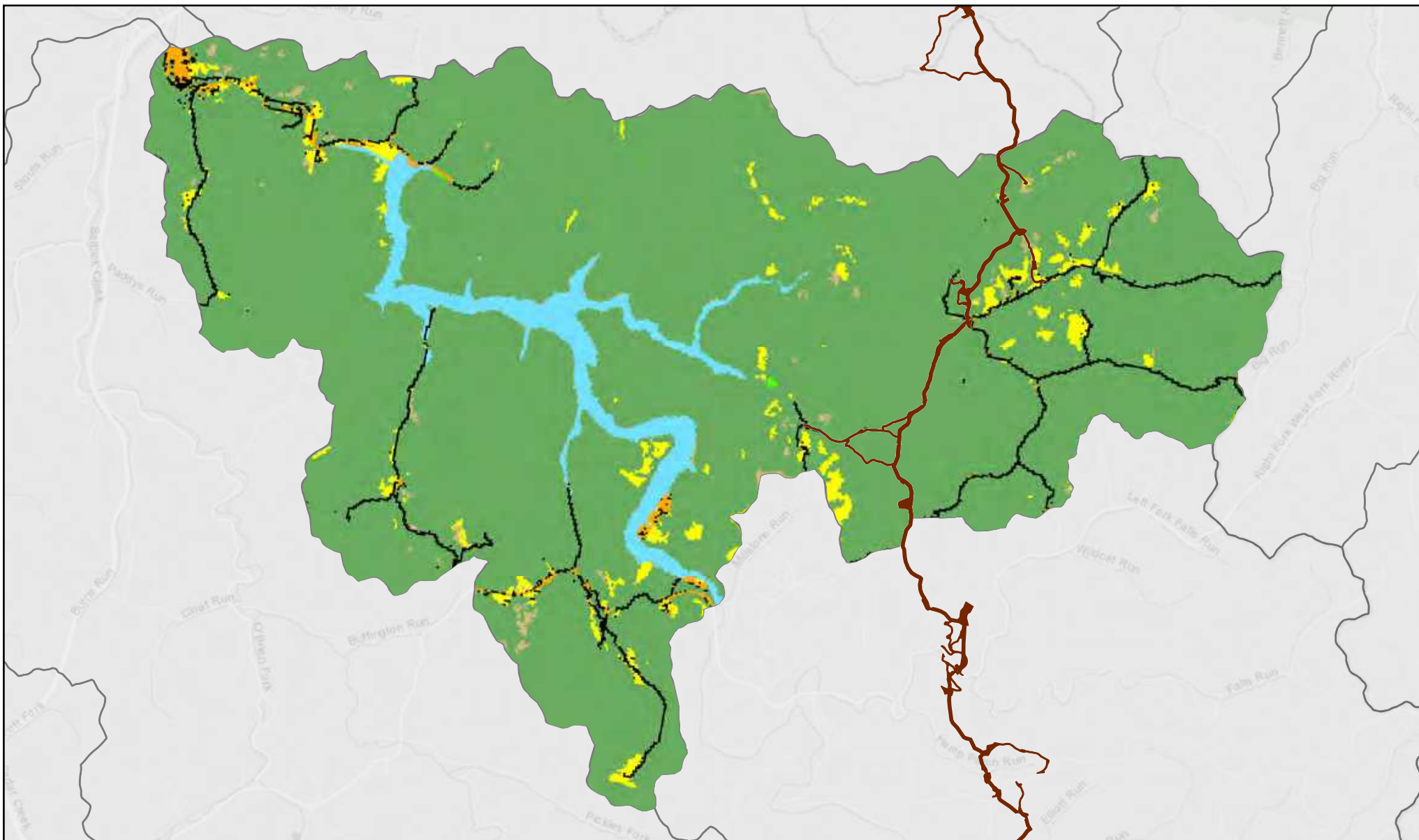
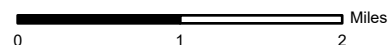


Figure: 89

**Land Use/Land Cover 2011
Burnsville Lake-Little Kanawha River
050302030305 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:75,000



Map Extent

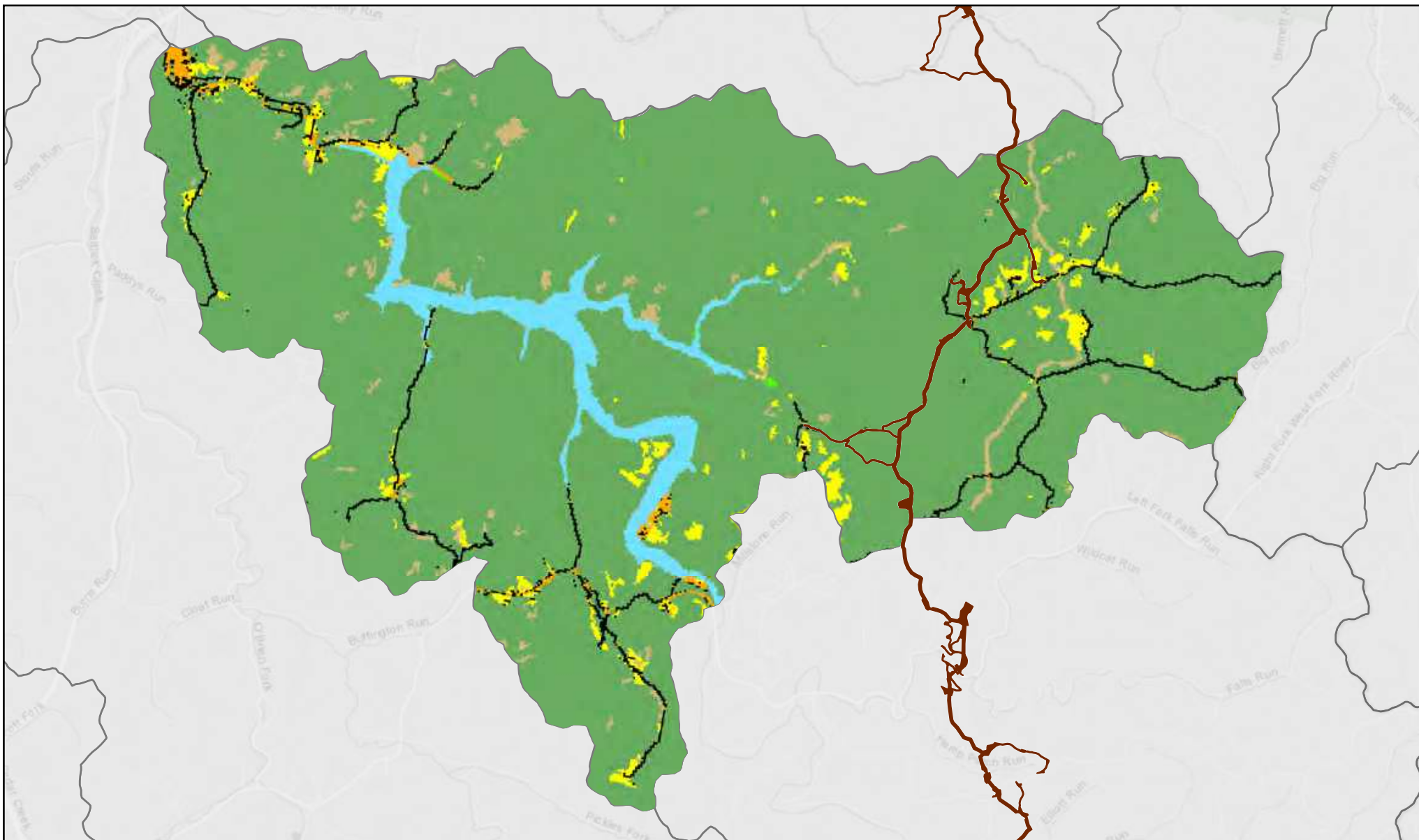


Figure: 90

**Land Use/Land Cover 2016
Burnsville Lake-Little Kanawha River
050302030305 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover**
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

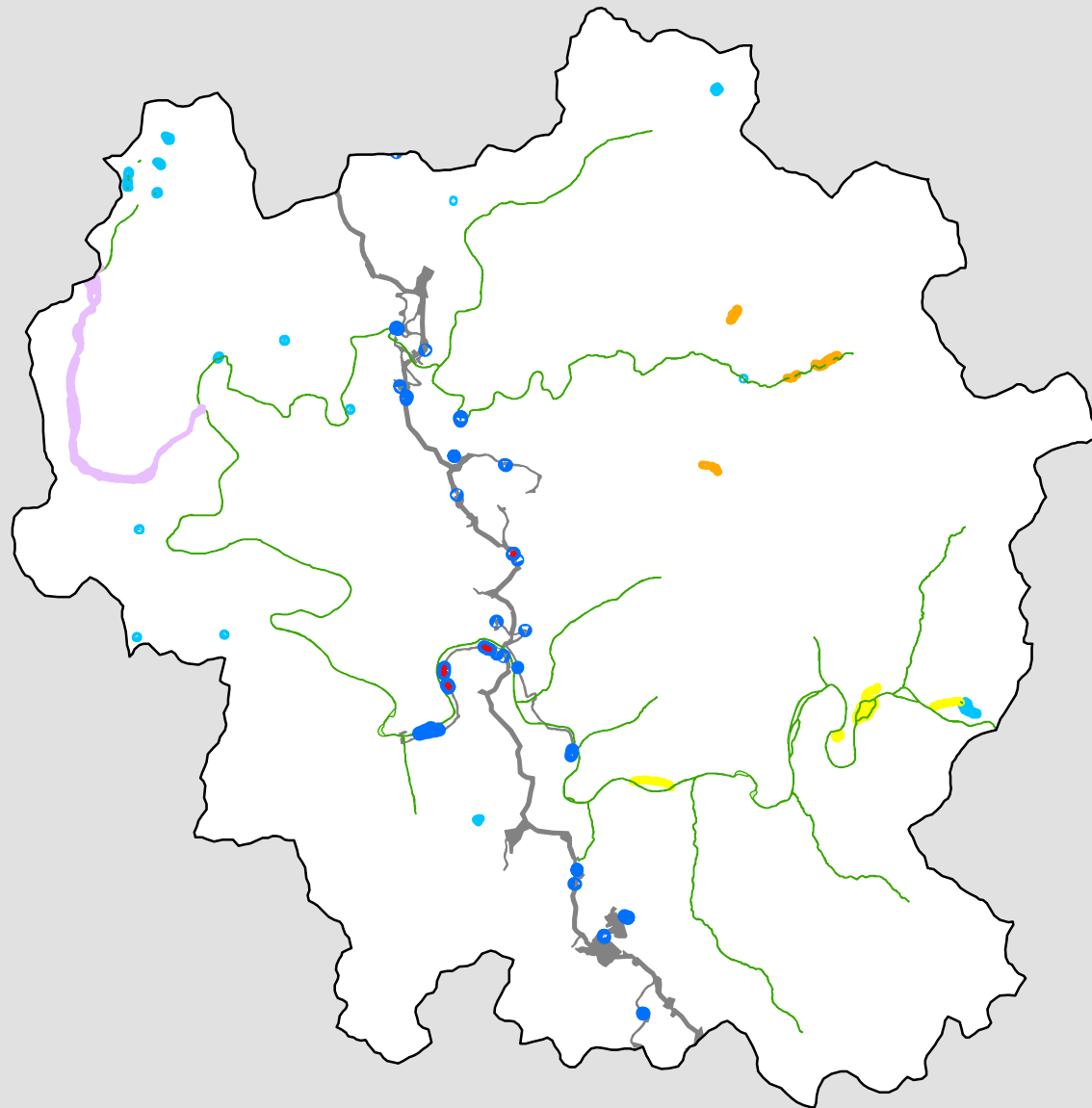


0 1 2 Miles

Scale: 1:75,000



Map Extent



Falls Run-Little Kanawha River

Figure 92

1:77,000

LEGEND

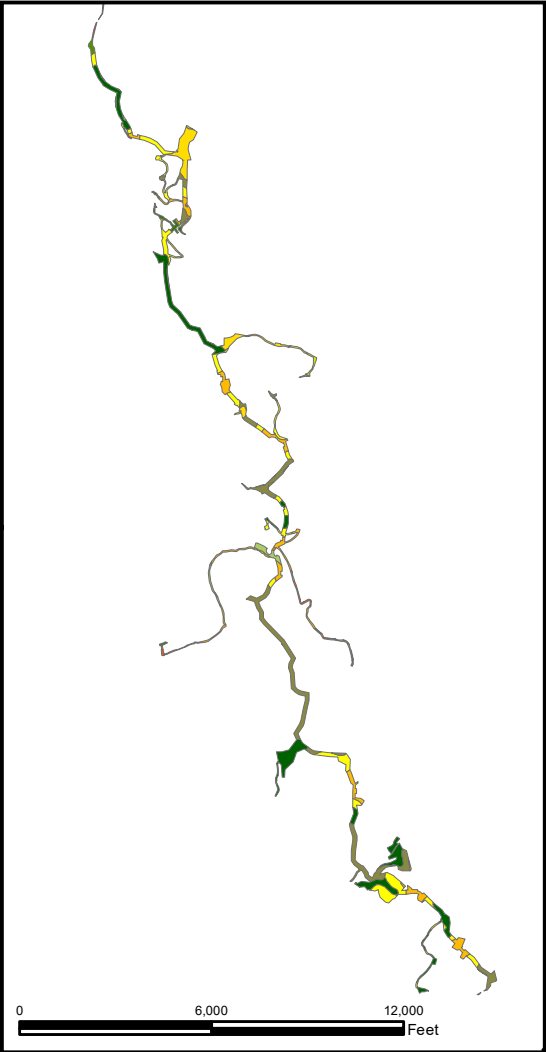
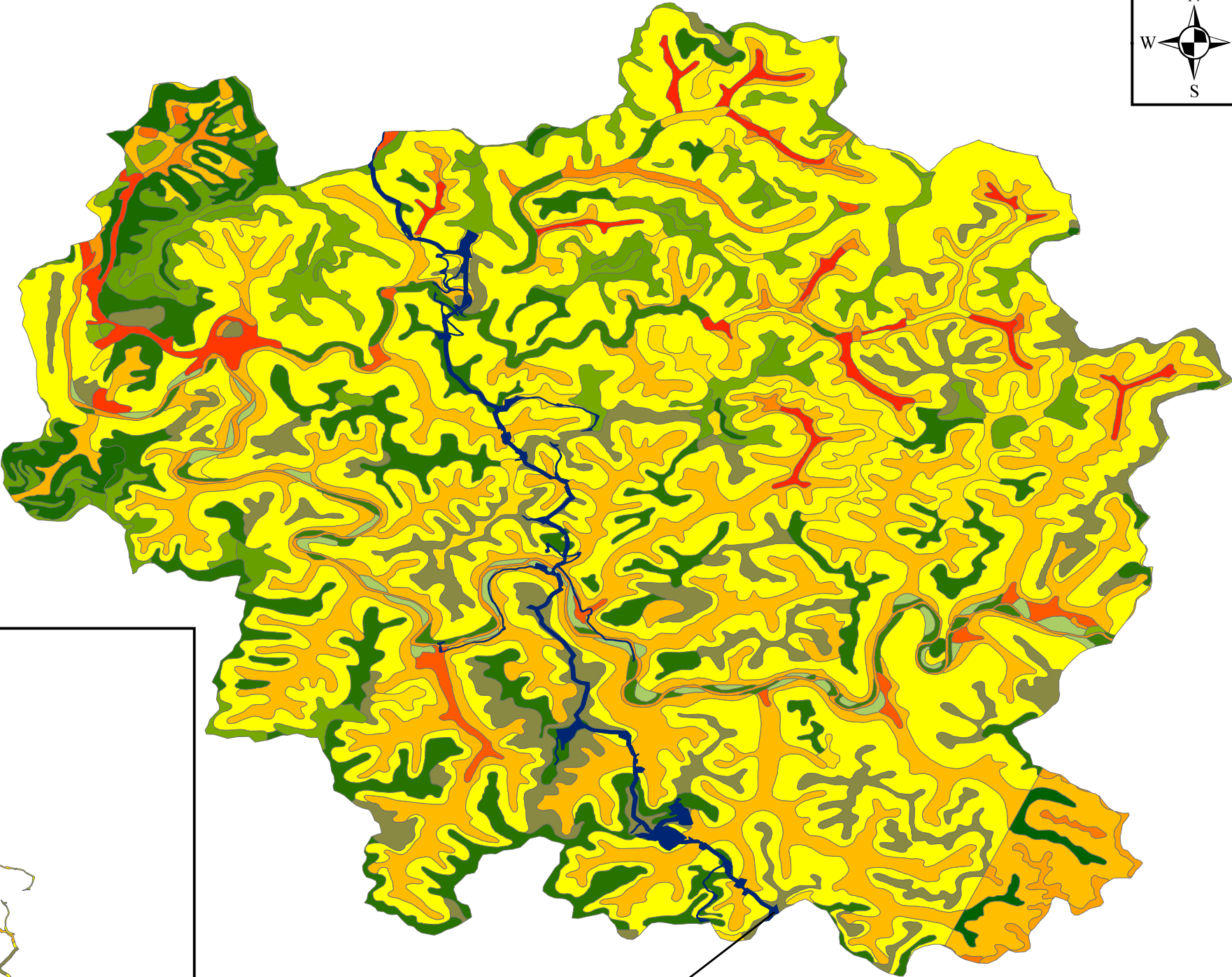
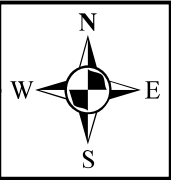
- Wetland Impacts - 0.24 acres
- Falls Run-Little Kanawha River Delineated Wetland Area - 2.12 acres
- NWI Wetlands - 184.25 acres
- Freshwater Emergent Wetland - 3.29 acres
- Freshwater Forested/Shrub Wetland - 6.57 acres
- Freshwater Pond - 6.89 acres
- Lake - 64.51 acres
- Riverine - 102.99 acres
- Mountain Valley Pipeline
- 0503020303_Falls Run-Little Kanawha River

Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Falls Run-Little Kanawha River
Falls Run-Little Kanawha River Soils

- AgB: Allegheny loam, 3 to 8 percent slopes
- BuE: Buchanan gravelly loam, moist, 15 to 35 percent slopes, extremely
- Cg: Chagrin silt loam, 0 to 3 percent slopes, occasionally flooded
- Ch: Chavies fine sandy loam, rarely flooded
- Cr: Craigsville gravelly sandy loam
- GaD: Gilpin silt loam, moist, 15 to 25 percent slopes
- GaE: Gilpin silt loam, moist, 25 to 35 percent slopes
- GaF: Gilpin silt loam, 35 to 70 percent slopes, very stony (Braxton); GaF: Gilpin silt loam, moist, 35 to 65 percent slopes (Lewis)
- GbE: Gilpin silt loam, 25 to 35 percent slopes
- GdE: Gilpin-Dekalb complex, 15 to 35 percent slopes, extremely stony
- GIC: Gilpin-Lily complex, 8 to 15 percent slopes
- GID: Gilpin-Lily complex, 15 to 25 percent slopes
- GIE: Gilpin-Lily complex, 25 to 35 percent slopes
- GuC: Gilpin-Upshur silt loams, 8 to 15 percent slopes
- GuD: Gilpin-Upshur silt loams, 15 to 25 percent slopes
- GuE: Gilpin-Upshur silt loams, 25 to 35 percent slopes
- GuF: Gilpin-Upshur silt loams, 35 to 70 percent slopes
- GW3: Gilpin-Upshur silt loams, 35 to 70 percent slopes, severely
- GxF: Gilpin-Upshur silt loams, 35 to 70 percent slopes, extremely
- HiF: Highsplint channery silt loam, moist, 35 to 70 percent slopes, extremely
- LdEm: Laidig channery silt loam, moist, 15 to 35 percent slopes, extremely
- Lo: Lobdell silt loam, 0 to 3 percent slopes, occasionally flooded
- MgB: Monongahela silt loam, 3 to 8 percent slopes
- Po: Pope sandy loam, 0 to 3 percent slopes, occasionally flooded
- SoA: Sensabaugh silt loam, 0 to 3 percent slopes, occasionally
- SrB: Sensabaugh silt loam, 3 to 8 percent slopes, rarely flooded
- Ud: Udorthents, smoothed
- VaD: Vandalia silt loam, 15 to 25 percent slopes
- W: Water
- ZoB: Zoar silt loam, 3 to 8 percent slopes



SCALE: See Mapping	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.016	APPROVED: JLY
[Logo] 08/2021 0451 MVP_Eng.Com_MountainValleyPipeline/Mapa2021/CL/Solifigure-93 - Falls Run-Little Kanawha River Soil.mxd	

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E-mail: potesta@potesta.com



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Canonsburg, PA 15317

Cumulative Impact Assessment - Soil
Falls Run-Little Kanawha River (050302030303)
Little Kanawha HUC 8 Watershed
Braxton and Lewis Counties, West Virginia
For Informational Purposes Only

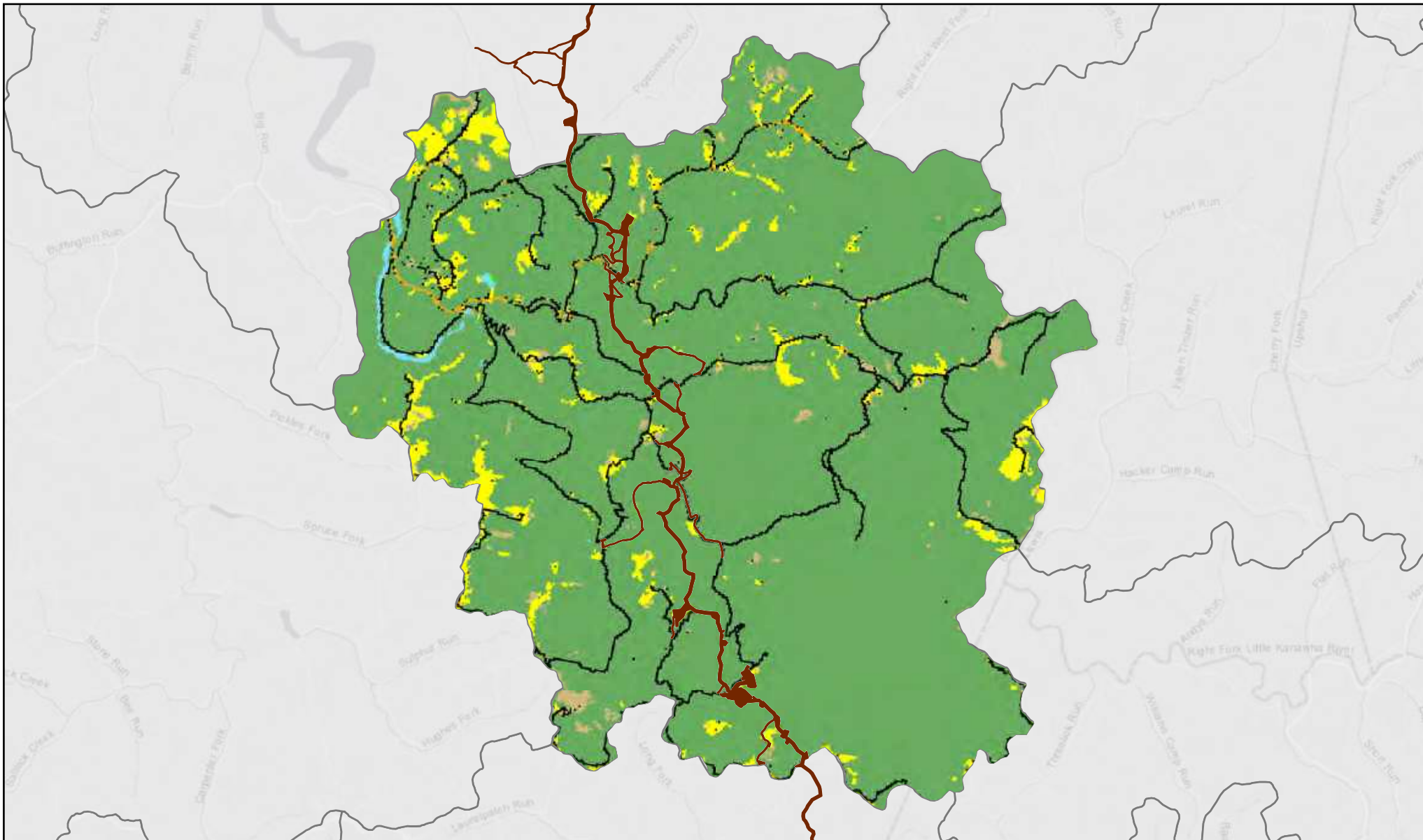


Figure: 94

**Land Use/Land Cover 2011
Falls Run-Little Kanawha River
050302030303 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



0 1 2 Miles

Scale: 1:80,000



Map Extent

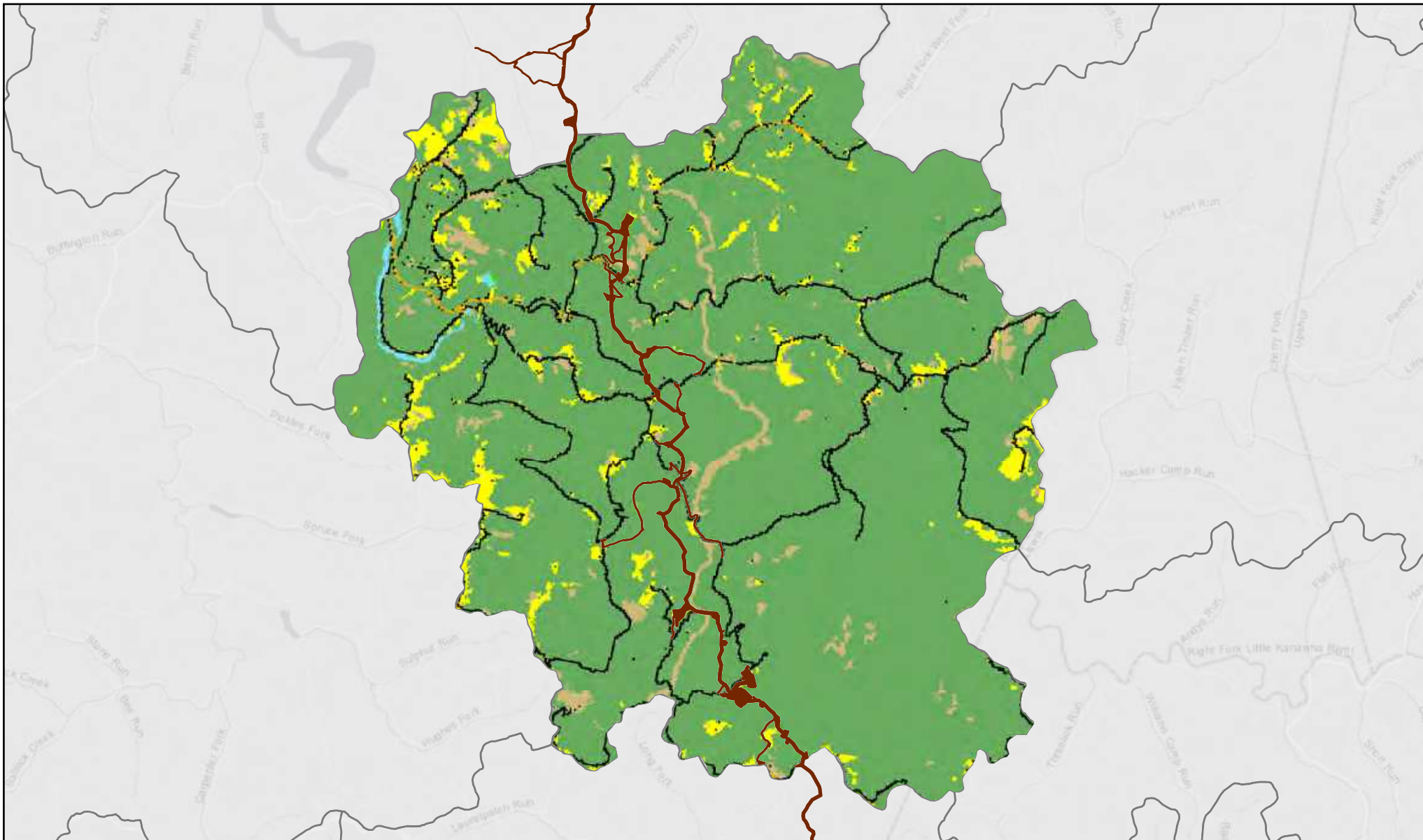


Figure: 95

**Land Use/Land Cover 2016
Falls Run-Little Kanawha River
050302030303 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

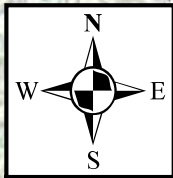


0 1 2 Miles




Scale: 1:80,000



Map Extent



Legend

-  Mountain Valley Pipeline
-  12-digit HUC Watersheds
-  8-digit HUC Watershed



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

DRAWN: JLY
CHECKED: JLY
APPROVED: JLY
DATE: September 2021
PN: 000-17-0451.016
FILE: 000-17-0451.016
PROJECT: 000-17-0451.016
DATE: 09/20/2021
TIME: 10:00 AM
BY: JLY
FOR: JLY

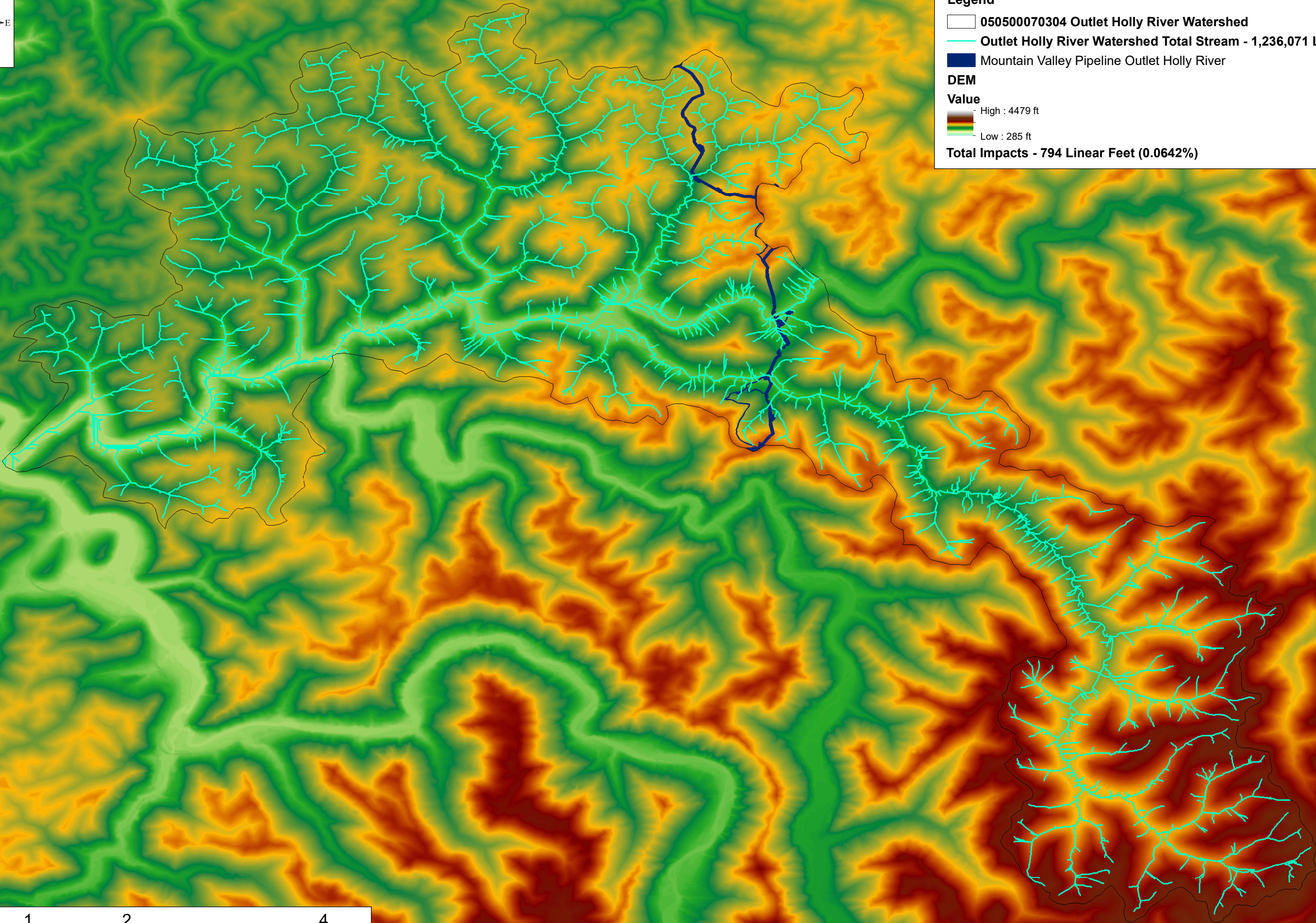
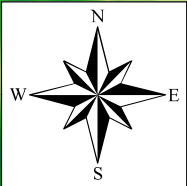
Potesta & Associates, Inc.
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Charleston, West Virginia 25304
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E-mail: potesta@potesta.com



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Cumulative Impact Assessment Report
Elk Watershed
12-Digit HUC Watersheds
Multiple Counties, West Virginia
For Informational Purposes Only

FIGURE 96



Legend

- 050500070304 Outlet Holly River Watershed
- Outlet Holly River Watershed Total Stream - 1,236,071 Linear Feet
- Mountain Valley Pipeline Outlet Holly River

DEM

Value

- High : 4479 ft
- Low : 285 ft

Total Impacts - 794 Linear Feet (0.0642%)



MAPPIED FOR HYDROLOGICAL REPRESENTATION ONLY

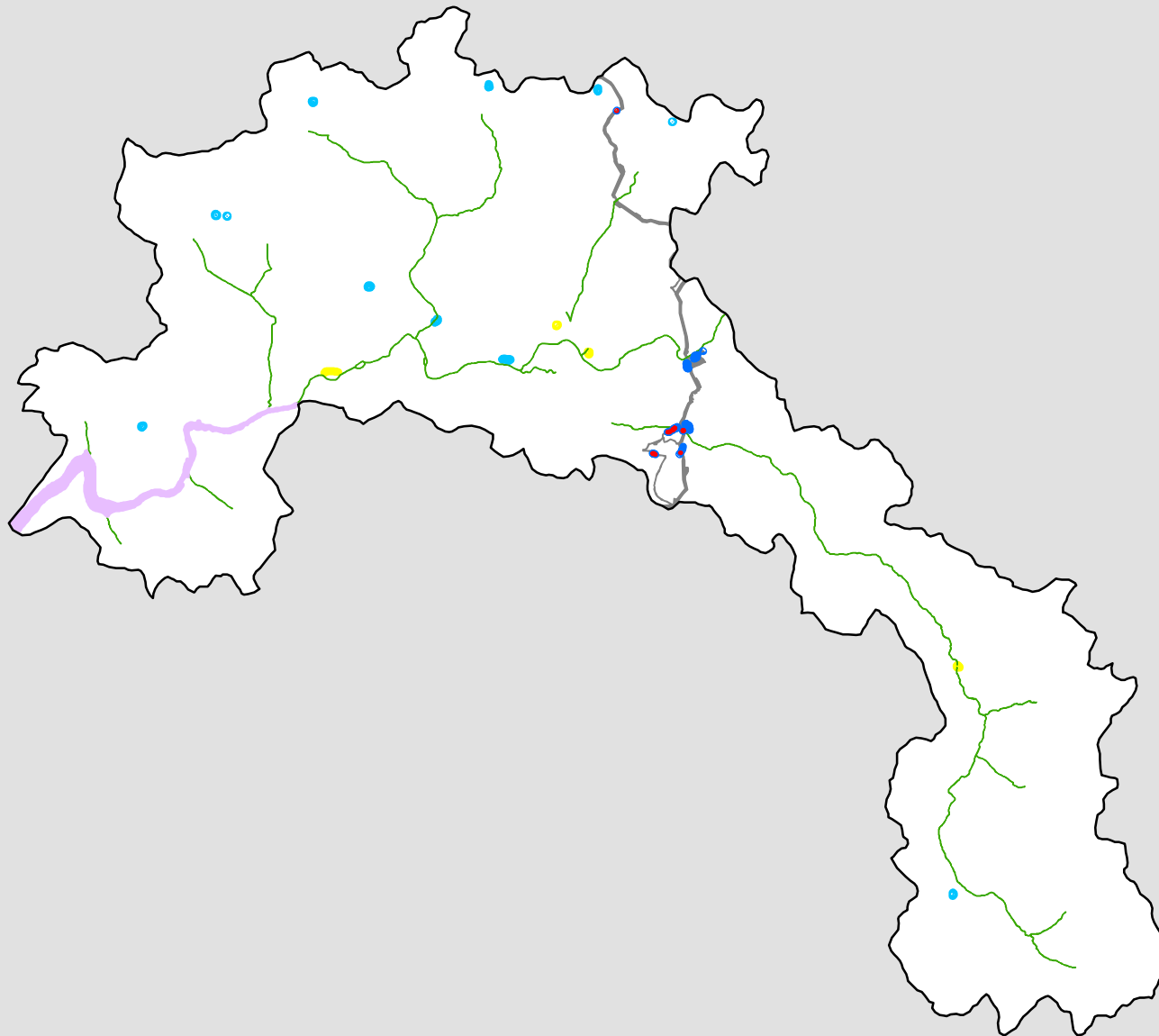
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Outlet Holly River Watershed (050500070304)
Elk HUC 8 Watershed, West Virginia

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E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
Project: 201717_061_MVP_EngCon_Monitoring Map 2021	
CIA Subfigure 97 - Outlet Holly River	



Outlet Holly River

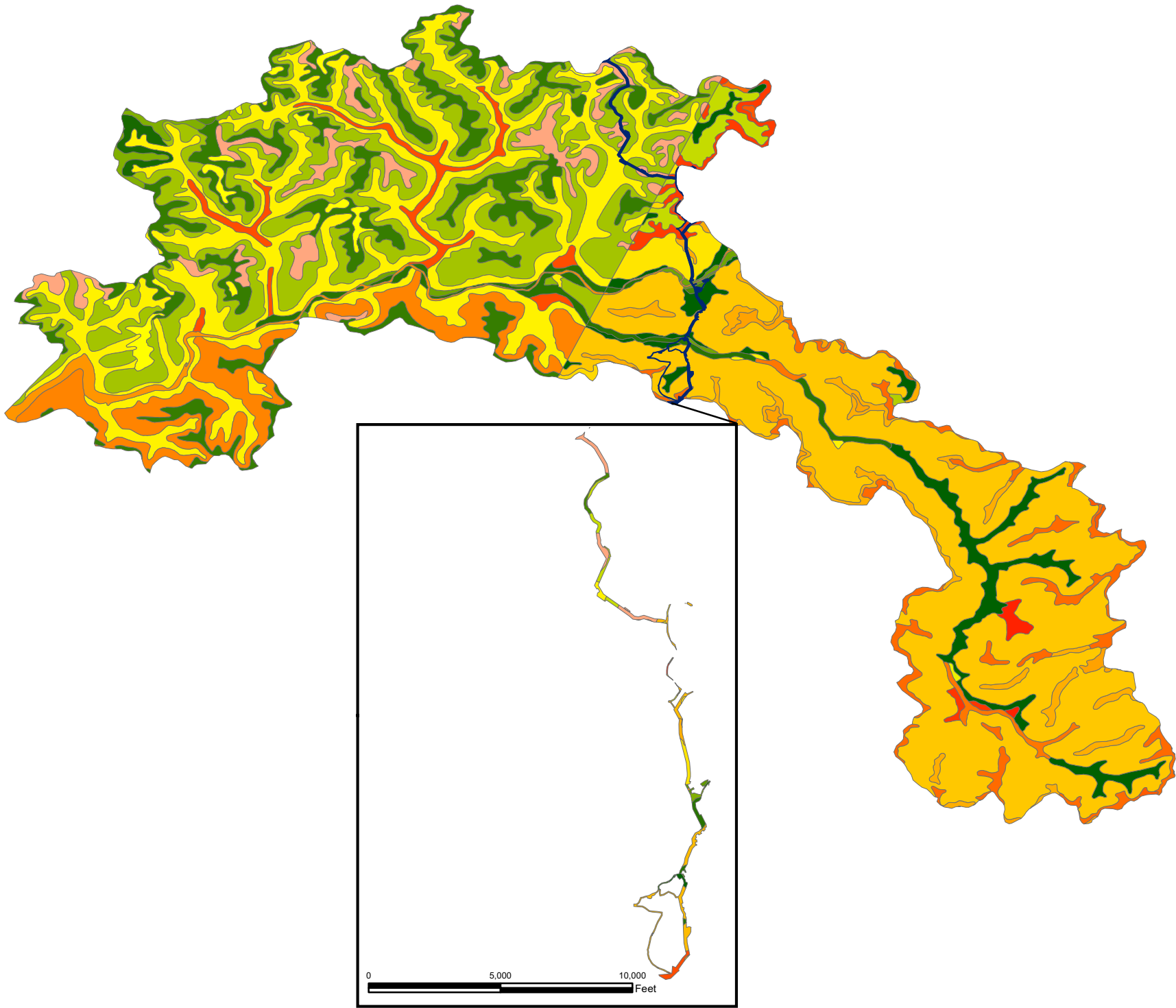
Figure 98

1:99,000

LEGEND

- Wetland Impacts - 0.17 acres
- Outlet Holly River Delineated Wetland Area - 1.28 acres
- NWI Wetlands - 245.14 acres
- Freshwater Forested/Shrub Wetland - 1.33 acres
- Freshwater Pond - 3.57 acres
- Lake - 159.7 acres
- Riverine - 80.55 acres
- Mountain Valley Pipeline
- 050500070304_Outlet Holly River

Note: Shapes are not to scale, enlarged to improve visibility.

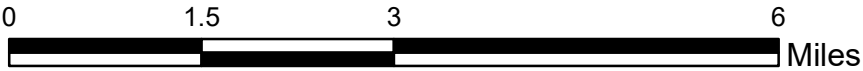


Legend

Mountain Valley Pipeline Outlet Holly River

Outlet Holly River Soil

- BuE: Buchanan gravelly loam, moist, 15 to 35 percent slopes, extremely stony
- CSF: Clifftop-Laidig association, very steep, extremely stony
- Ch: Chavies fine sandy loam, rarely flooded (Braxton); Ch: Chavies fine sandy loam, moist, 0 to 3 percent slopes, rarely flooded (Webster)
- Cr: Craigsville gravelly sandy loam
- CtB: Cotaco silt loam, 3 to 8 percent slopes
- Cv: Craigsville gravelly loam, 0 to 5 percent slopes
- DrF: Dekalb-Rock outcrop complex, 35 to 70 percent slopes, extremely stony
- FeC: Fenwick loam, 3 to 15 percent slopes, very stony
- GZF: Gilpin-Pineville association, very steep, extremely stony
- GaF: Gilpin silt loam, 35 to 70 percent slopes, very stony
- GbC: Gilpin silt loam, 8 to 15 percent slopes
- GbD: Gilpin silt loam, 15 to 25 percent slopes
- GbE: Gilpin silt loam, 25 to 35 percent slopes
- GcC: Gilpin silt loam, 3 to 15 percent slopes, very stony
- GdE: Gilpin-Dekalb complex, 15 to 35 percent slopes, extremely stony
- GIC: Gilpin-Lily complex, 8 to 15 percent slopes
- GID: Gilpin-Lily complex, 15 to 25 percent slopes
- GIE: Gilpin-Lily complex, 25 to 35 percent slopes
- GuD: Gilpin-Upshur silt loams, 15 to 25 percent slopes
- GuE: Gilpin-Upshur silt loams, 25 to 35 percent slopes
- GuF: Gilpin-Upshur silt loams, 35 to 70 percent slopes
- HiF: Highsplint channery silt loam, moist, 35 to 70 percent slopes, extremely stony
- LaCm: Laidig channery silt loam, moist, 8 to 15 percent slopes
- LaDm: Laidig channery silt loam, moist, 15 to 25 percent slopes
- LdCm: Laidig channery silt loam, moist, 3 to 15 percent slopes, extremely stony
- LdEm: Laidig channery silt loam, moist, 15 to 35 percent slopes, extremely stony
- MgB: Monongahela silt loam, 3 to 8 percent slopes
- PLF: Pineville-Gilpin-Guyandotte association, very steep, extremely stony
- Po: Pope sandy loam, 0 to 3 percent slopes, occasionally flooded
- Pp: Pope-Potomac complex, very cobbly
- W: Water



MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment - Soil
Outlet Holly River (050500070304)
Elk HUC 8 Watershed
Braxton and Webster Counties, West Virginia
For Informational Purposes Only

FIGURE 99

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E-mail: potesta@potesta.com

SCALE: See Mapping	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-17-4451016	APPROVED: JLY
PROJECT: 201717-0451 MVP Electric Transmission Map 2021 CA Soil Figure 99 - Outlet Holly River Soil.mxd	

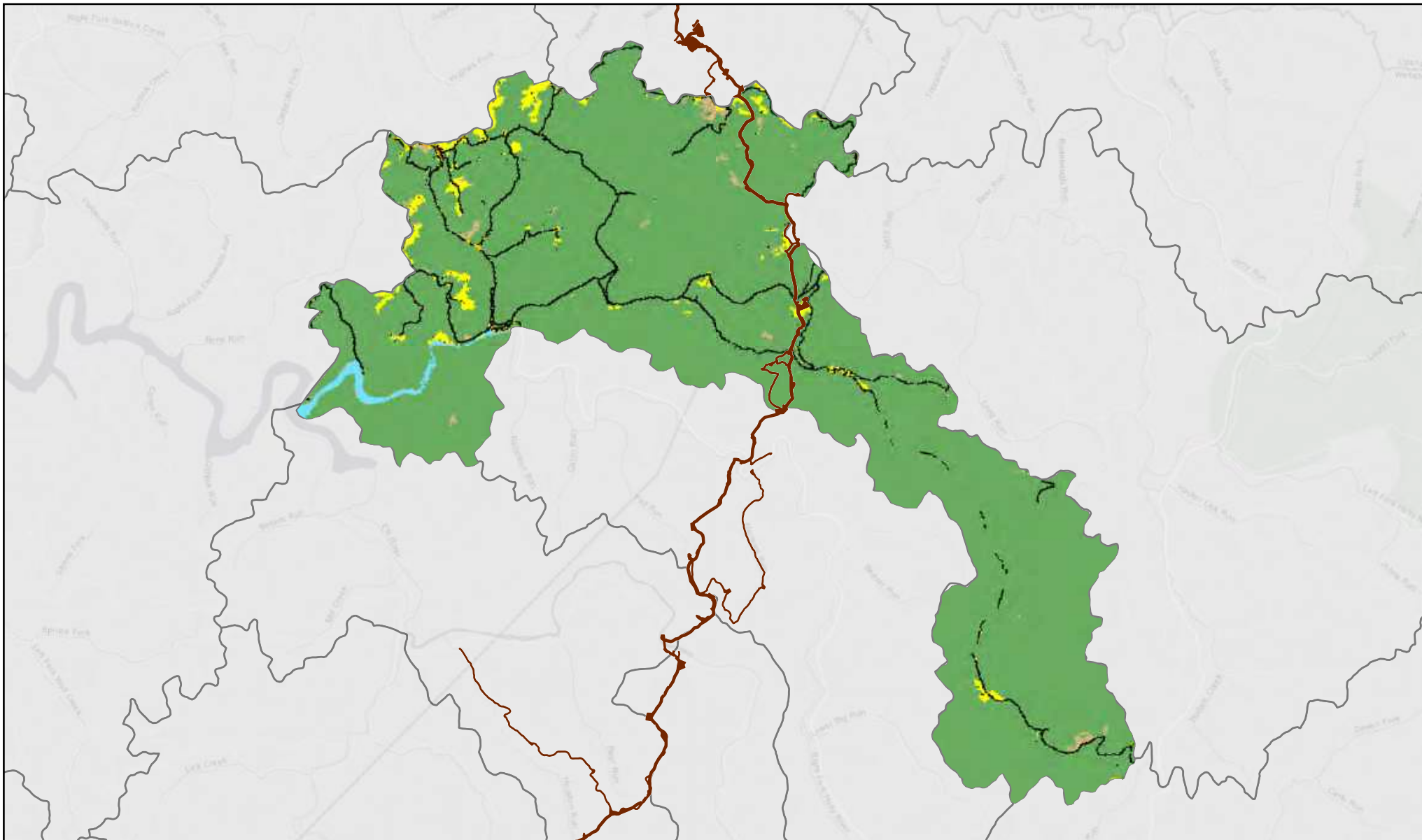


Figure: 100

**Land Use/Land Cover 2011
Outlet Holly River
050500070304 HUC12 Watershed**

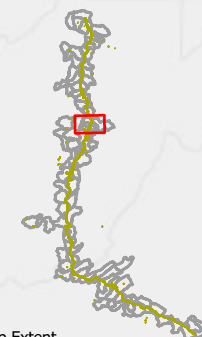
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



0 1.5 3 Miles

Scale: 1:105,000



Map Extent

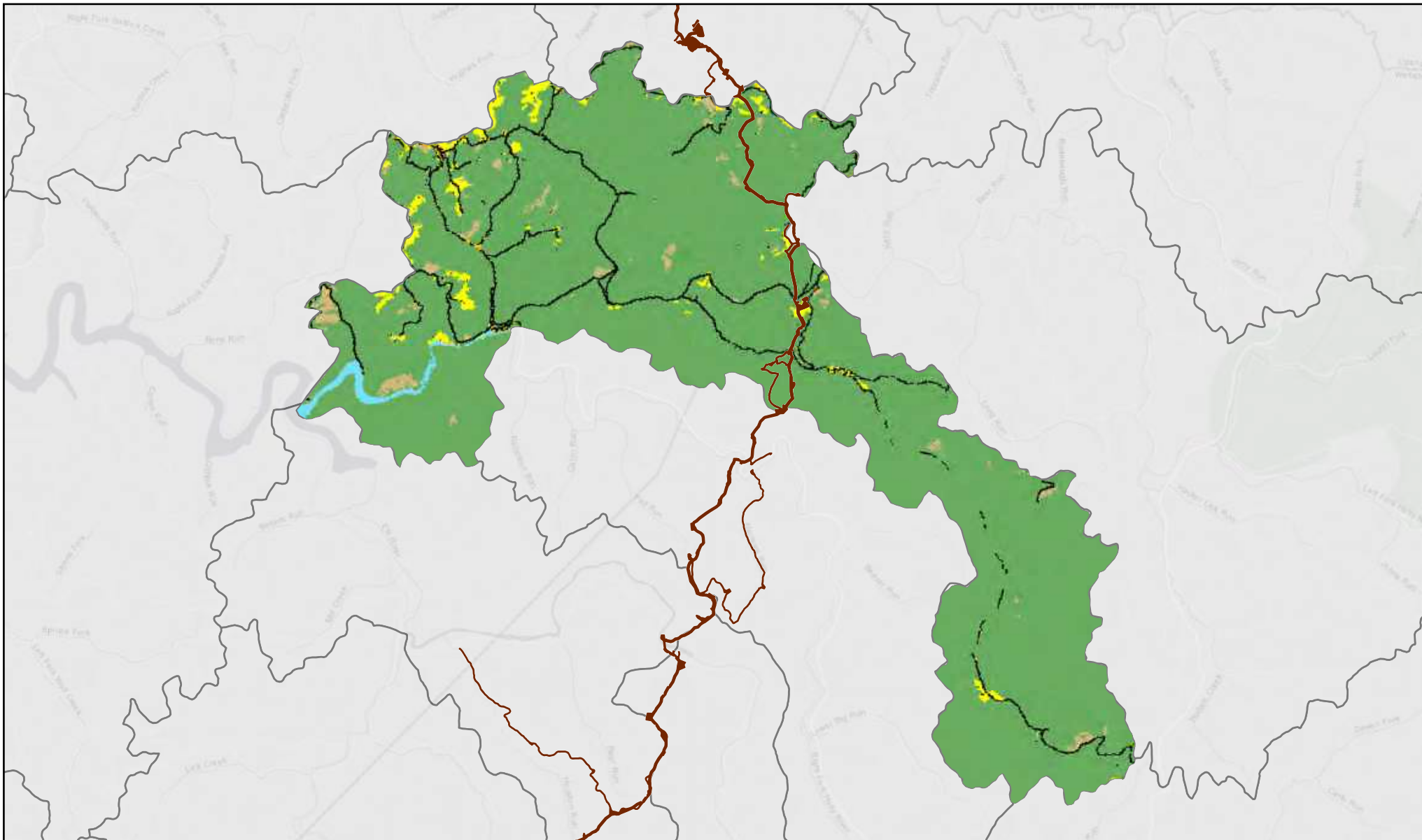


Figure: 101

**Land Use/Land Cover 2016
Outlet Holly River
050500070304 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

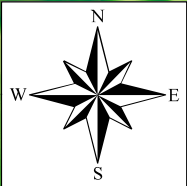


0 1.5 3 Miles

Scale: 1:105,000



Map Extent



Legend

050500070301 Headwaters Holly River Watershed

Headwaters Holly River Watershed Total Stream - 2,183,798 Linear Feet

Mountain Valley Pipeline Headwaters Holly River

DEM
Value

High : 4479 ft

Low : 285 ft

Total Impacts - 634 Linear Feet (0.0290%)

MAPPING FOR VISUAL REPRESENTATION ONLY

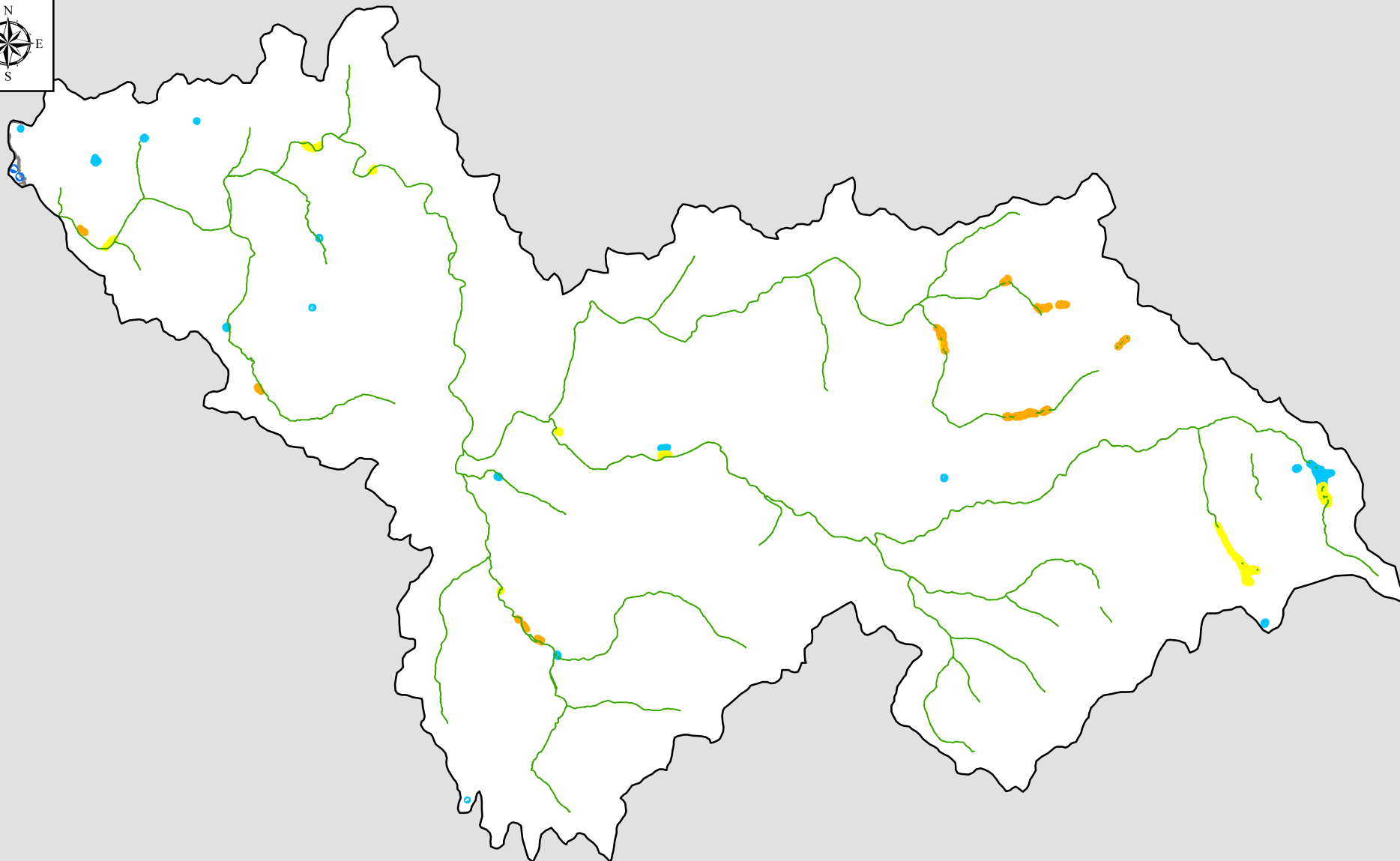
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Headwaters Holly River Watershed (050500070301)
Elk HUC 8 Watershed, West Virginia
For Informational Purposes Only

MOUNTAIN VALLEY PIPELINE, LLC
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Canonsburg, PA 15317



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Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) -343-9031
E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
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C:\Sinks\figure 102 - Headwater Holly River.mxd	



Headwaters Holly River

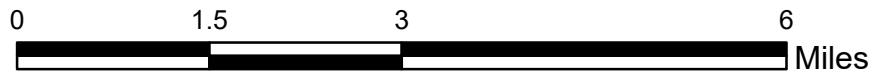
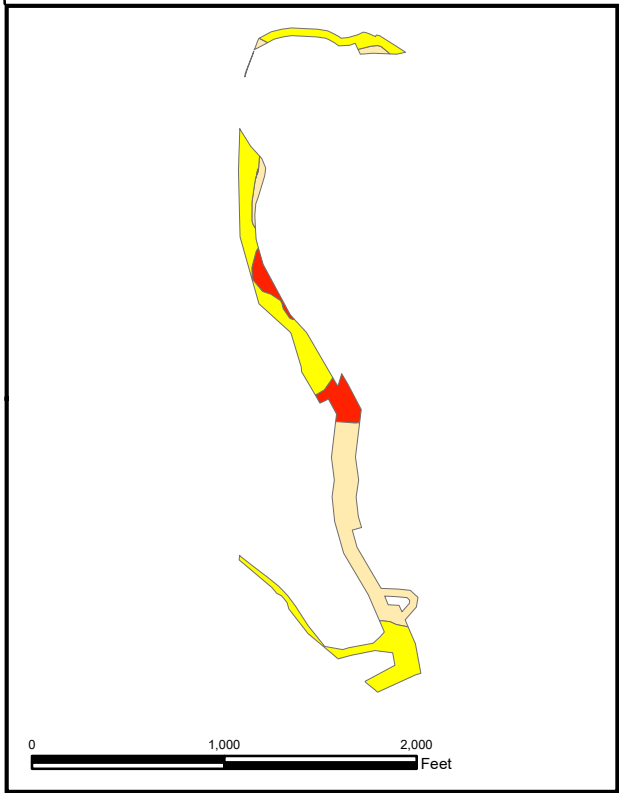
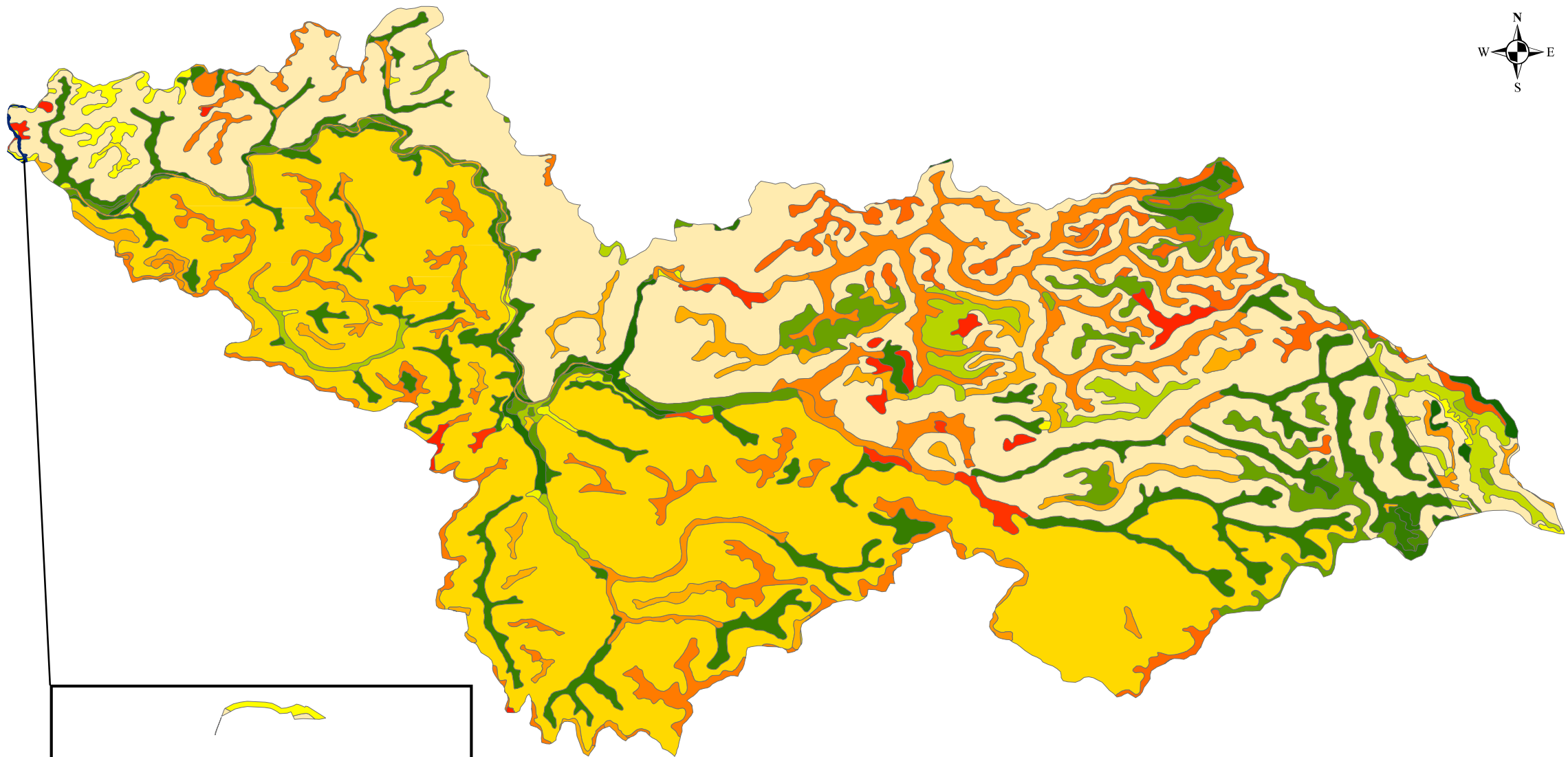
Figure 103

1:90,000

LEGEND

- Wetland Impacts - 0 acres
- Headwaters Holly River Delineated Wetland Area - 0.07 acres
- NWI Wetlands - 244.4 acres
 - Freshwater Emergent Wetland - 12.5 acres
 - Freshwater Forested/Shrub Wetland - 15.61 acres
 - Freshwater Pond - 13.98 acres
 - Riverine - 202.31 acres
- Mountain Valley Pipeline
- 050500070301_Headwaters Holly River

Note: Shapes are not to scale, enlarged to improve visibility.



Legend

**Mountain Valley Pipeline Headwaters Holly River
Headwaters Holly Creek Soil**

- At: Atkins loam, moist, 0 to 3 percent slopes, frequently flooded
- BtC: Buchanan and Ernest stony soils, 3 to 15 percent slopes
- BtE: Buchanan and Ernest stony soils, 15 to 35 percent slopes
- CeF: Cedar creek very channery loam, very steep, extremely stony
- Ch: Chavies fine sandy loam, moist, 0 to 3 percent slopes, rarely flooded
- CiC: Clifftop channery silt loam, 8 to 15 percent slopes
- CiD: Clifftop channery silt loam, 15 to 25 percent slopes
- CnC: Clifftop channery silt loam, 3 to 15 percent slopes, very stony
- CpE: Clifftop-Dekalb complex, 15 to 35 percent slopes, extremely stony
- CsC: Cookport variant very stony silt loam, 3 to 15 percent slopes
- CtB: Cotaco silt loam, 3 to 8 percent slopes
- Cv: Craigsville gravelly loam, 0 to 5 percent slopes
- DbC: Dekalb channery loam, moist, 8 to 15 percent slopes
- DkC: Dekalb channery sandy loam, 3 to 15 percent slopes, extremely stony
- DrF: Dekalb-Rock outcrop complex, 35 to 70 percent slopes, extremely stony
- Ek: Elkins silt loam
- EnD: Ernest silt loam, moist, 15 to 25 percent slopes
- FeC: Fenwick loam, 3 to 15 percent slopes, very stony
- GbC: Gilpin silt loam, 8 to 15 percent slopes
- GbD: Gilpin silt loam, 15 to 25 percent slopes
- GbE: Gilpin silt loam, 25 to 35 percent slopes
- GcC: Gilpin channery silt loam, moist, 8 to 15 percent slopes (Randolph); GcC: Gilpin silt loam, 3 to 15 percent slopes, very stony (Webster)
- GcD: Gilpin channery silt loam, moist, 15 to 25 percent slopes
- GcE: Gilpin channery silt loam, moist, 25 to 35 percent slopes
- GcF: Gilpin channery silt loam, moist, 35 to 65 percent slopes
- GdC: Gilpin-Dekalb stony complex, 3 to 15 percent slopes
- GdE: Gilpin-Dekalb complex, 15 to 35 percent slopes, extremely stony
- GkC: Gilpin-Dekalb stony complex, moist, 3 to 15 percent slopes
- HLE: Highsplint-Laidig complex, moist, 15 to 35 percent slopes, extremely stony (Randolph); HLE: Highsplint-Laidig complex, moist, 15 to 35 percent slopes, extremely stony (Webster)
- HiF: Highsplint channery silt loam, moist, 35 to 70 percent slopes, extremely stony (Randolph); HiF: Highsplint channery silt loam, moist, 35 to 70 percent slopes, extremely stony (Webster)
- LaCm: Laidig channery silt loam, moist, 8 to 15 percent slopes
- LaDm: Laidig channery silt loam, moist, 15 to 25 percent slopes
- LdCm: Laidig channery silt loam, moist, 3 to 15 percent slopes, extremely stony
- LdEm: Laidig channery silt loam, moist, 15 to 35 percent slopes, extremely stony
- LgEm: Laidig channery silt loam, moist, 8 to 35 percent slopes, rubbly
- MaC: Mandy channery silt loam, 3 to 15 percent slopes, extremely stony
- PLF: Pineville-Gilpin-Guyandotte association, very steep, extremely stony
- Pe: Philo-Pope complex, moist, 0 to 3 percent slopes, occasionally flooded
- Po: Pope loam, moist, 0 to 3 percent slopes, occasionally flooded
- Pp: Pope-Potomac complex, very cobbly
- W: Water

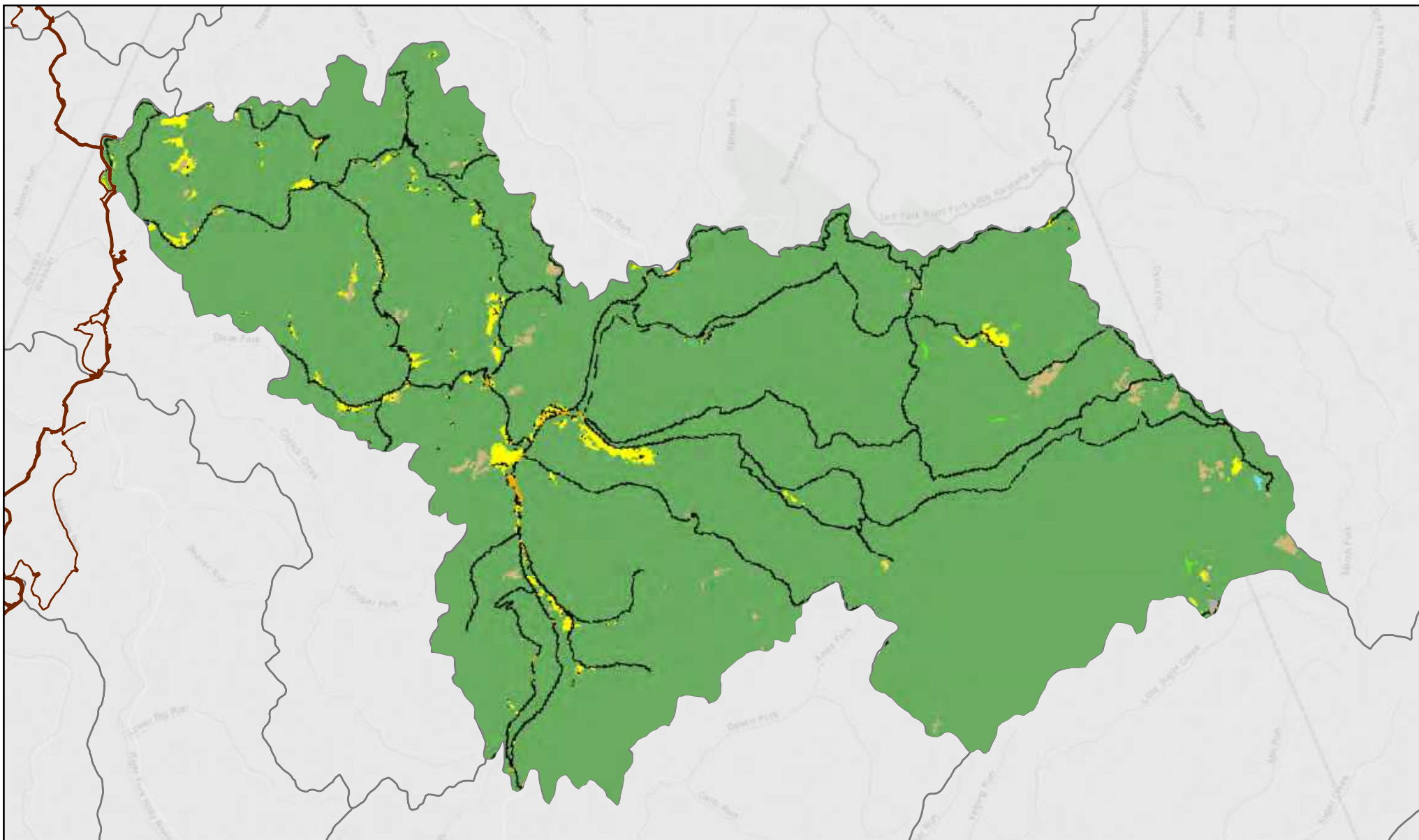
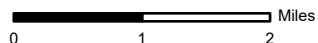


Figure: 105

**Land Use/Land Cover 2011
Headwaters Holly River
050500070301 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover**
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:95,000



Map Extent

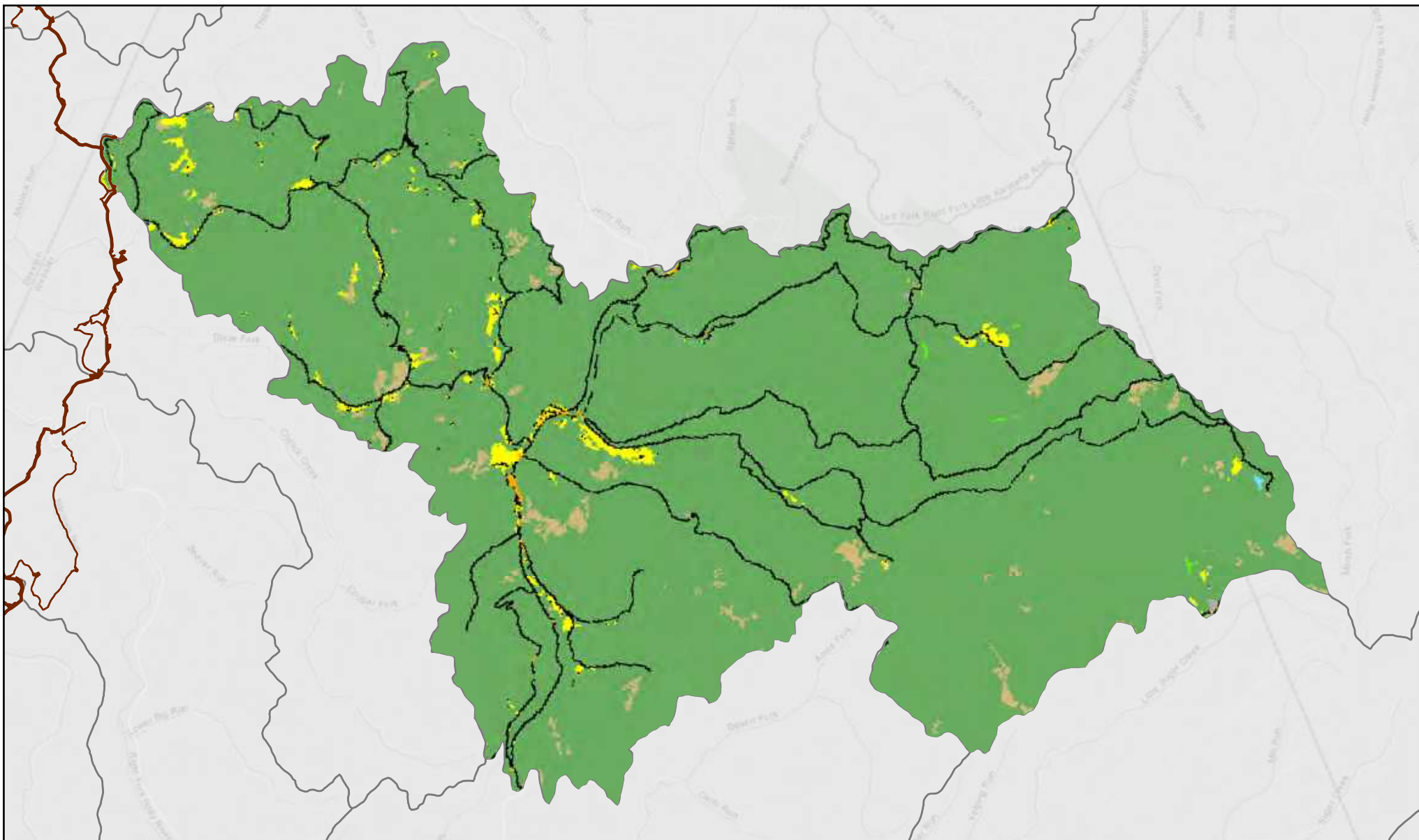


Figure: 106

**Land Use/Land Cover 2016
Headwaters Holly River
050500070301 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

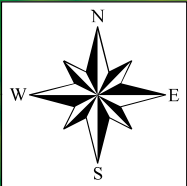
0 1 2 Miles



Scale: 1:95,000



Map Extent



Legend

050500070303 Outlet Right Fork Holly River Watershed

Outlet Right Fork Holly River Watershed Total Stream - 964,639 Linear Feet

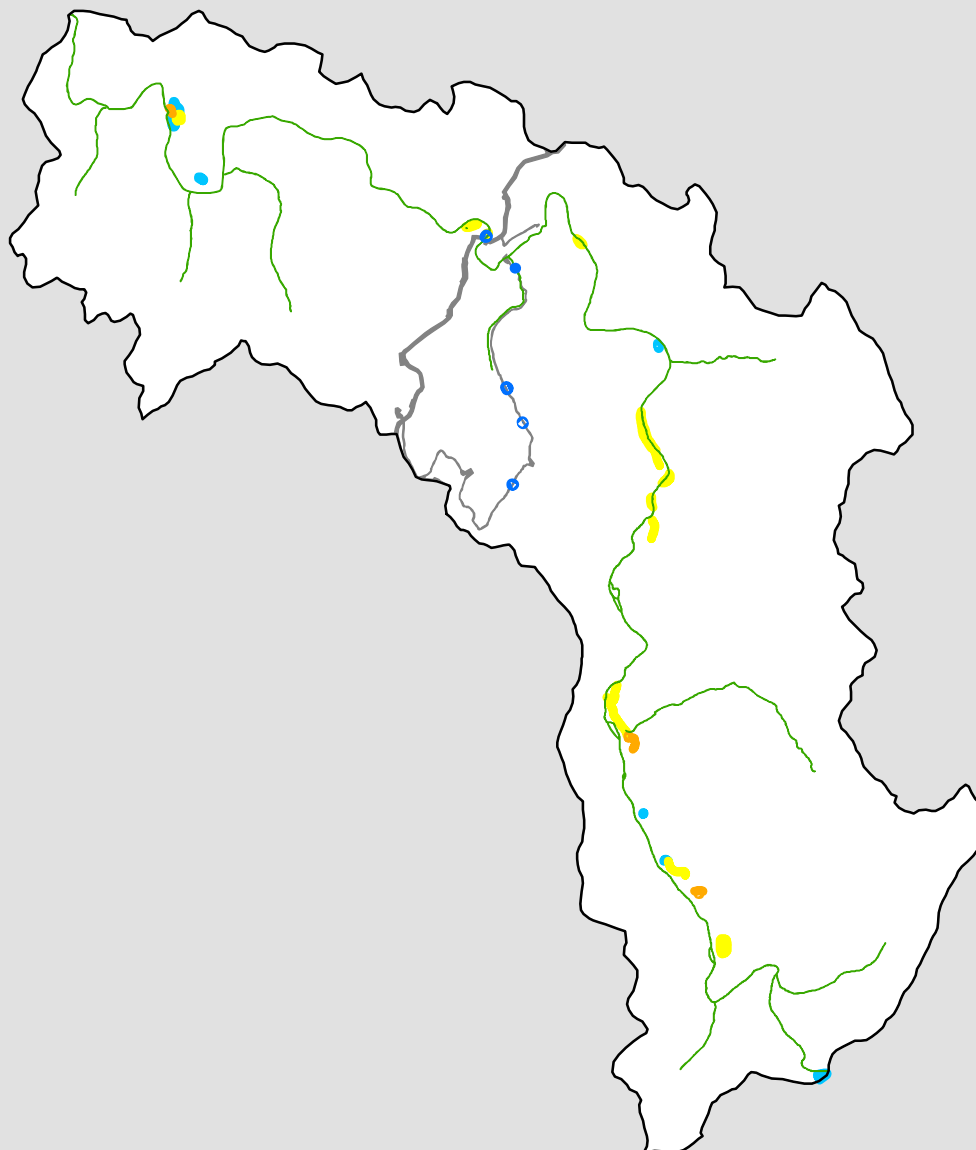
Mountain Valley Pipeline Outlet Right Fork Holly River

DEM
Value

High : 4479 ft

Low : 285 ft

Total Impacts - 136 Linear Feet (0.0141%)



Outlet Right Fork Holly River

Figure 108

1:84,000

LEGEND

- Wetland Impacts - 0 acres
- Outlet Right Fork Holly River Delineated Wetland Area - 0.18 acres
- NWI Wetlands - 93.35 acres
- Freshwater Emergent Wetland - 0.77 acres
- Freshwater Forested/Shrub Wetland - 13.17 acres
- Freshwater Pond - 5.93 acres
- Riverine - 73.48 acres
- Mountain Valley Pipeline
- 050500070303_Outlet Right Fork Holly River

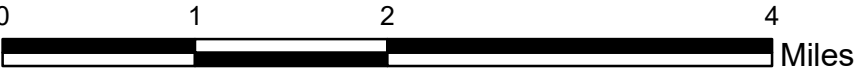
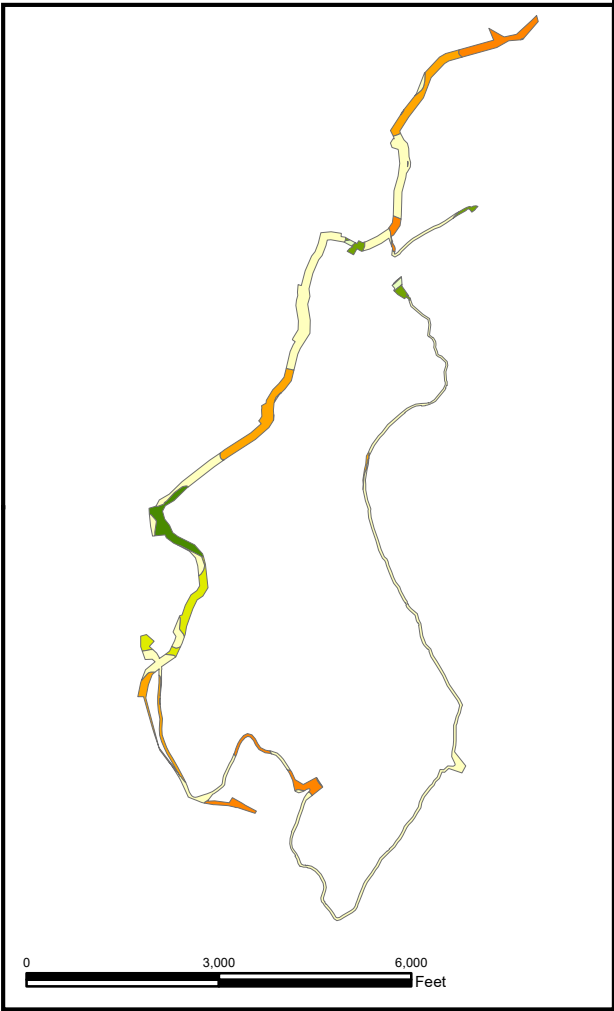
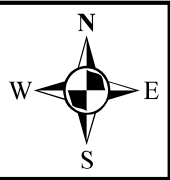
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Outlet Right Fork Holly River

Outlet Right Fork Holly River Soil

- At: Atkins loam, moist, 0 to 3 percent slopes, frequently flooded
- BuE: Buchanan gravelly loam, moist, 15 to 35 percent slopes, extremely stony
- Ch: Chavies fine sandy loam, rarely flooded (Braxton); Ch: Chavies fine sandy loam, moist, 0 to 3 percent slopes, rarely flooded (Webster)
- Cr: Craigsville gravelly sandy loam
- CtB: Cotaco silt loam, 3 to 8 percent slopes
- Cv: Craigsville gravelly loam, 0 to 5 percent slopes
- DrF: Dekalb-Rock outcrop complex, 35 to 70 percent slopes, extremely stony
- GZF: Gilpin-Pineville association, very steep, extremely stony
- GbC: Gilpin silt loam, 8 to 15 percent slopes
- GbD: Gilpin silt loam, 15 to 25 percent slopes
- GbE: Gilpin silt loam, 25 to 35 percent slopes
- GcC: Gilpin silt loam, 3 to 15 percent slopes, very stony
- GdE: Gilpin-Dekalb complex, 15 to 35 percent slopes, extremely stony
- GID: Gilpin-Lily complex, 15 to 25 percent slopes
- GIE: Gilpin-Lily complex, 25 to 35 percent slopes
- KaF: Kaymine very channery silt loam, very steep, extremely stony
- LaCm: Laidig channery silt loam, moist, 8 to 15 percent slopes
- LaDm: Laidig channery silt loam, moist, 15 to 25 percent slopes
- LdCm: Laidig channery silt loam, moist, 3 to 15 percent slopes, extremely stony
- LdEm: Laidig channery silt loam, moist, 15 to 35 percent slopes, extremely stony
- MgB: Monongahela silt loam, 3 to 8 percent slopes
- PLF: Pineville-Gilpin-Guyandotte association, very steep, extremely stony
- Po: Pope sandy loam, 0 to 3 percent slopes, occasionally flooded (Braxton); Po: Pope loam, moist, 0 to 3 percent slopes, occasionally flooded (Webster)
- Pp: Pope-Potomac complex, very cobbly
- W: Water
- ZoB: Zoar silt loam, 3 to 8 percent slopes



MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment - Soil
Outlet Right Fork Holly River (050500070303)
Elk HUC 8 Watershed
Braxton and Webster Counties, West Virginia
For Informational Purposes Only

MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317



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7012 MacCorrie Avenue, S.E.
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E-mail: potesta@potesta.com

SCALE: See Mapping	DRAWN: KBW
DATE: December 2021	CHECKED: JLY
PN: 001-17-4451016	APPROVED: JLY
PROJECT: 2017-0451 MVP, Braxton and Webster Counties, West Virginia FIGURE 109 - Outlet Right Fork Holly River Soil	

FIGURE 109

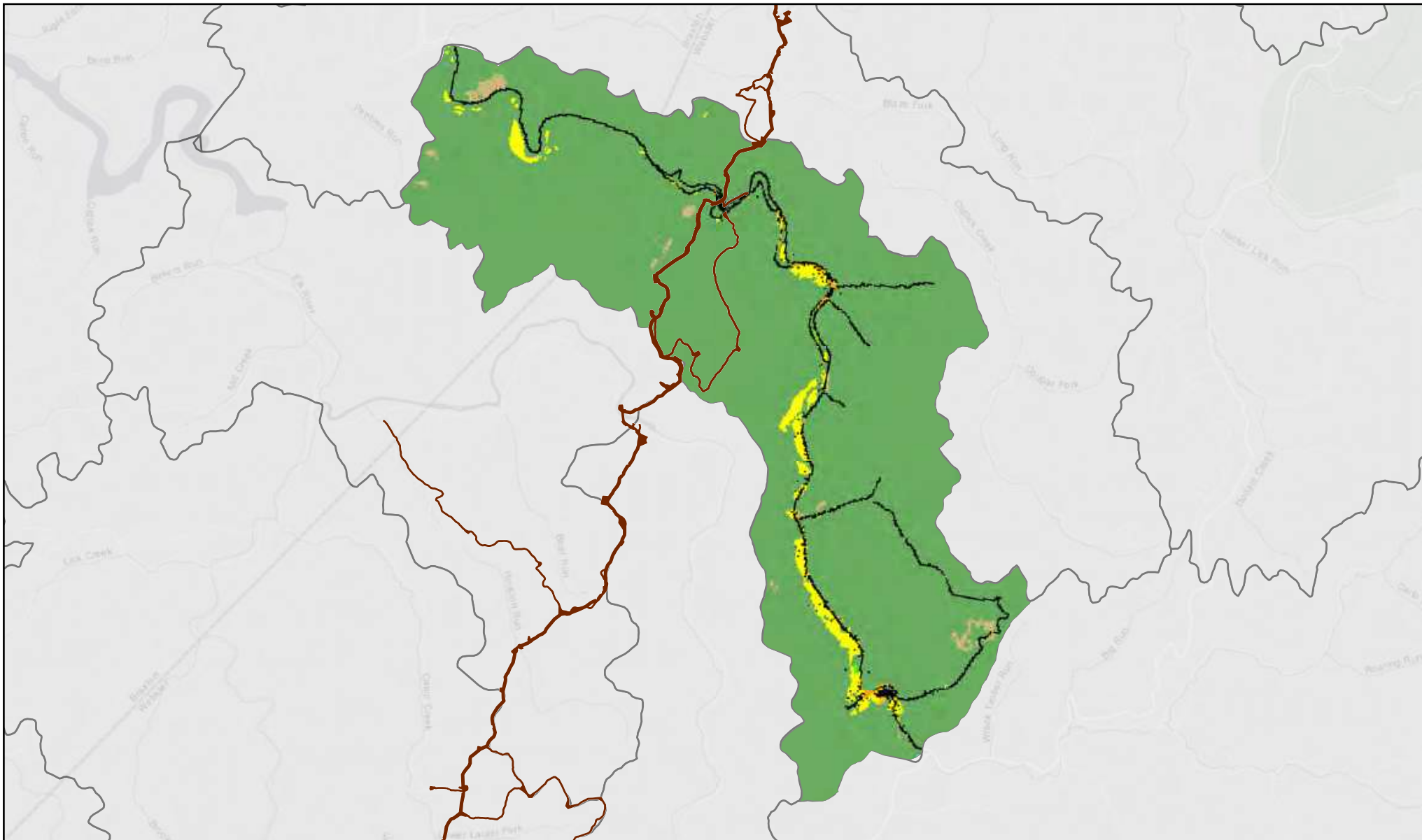


Figure: 110

**Land Use/Land Cover 2011
Outlet Right Fork Holly River
050500070303 HUC12 Watershed**

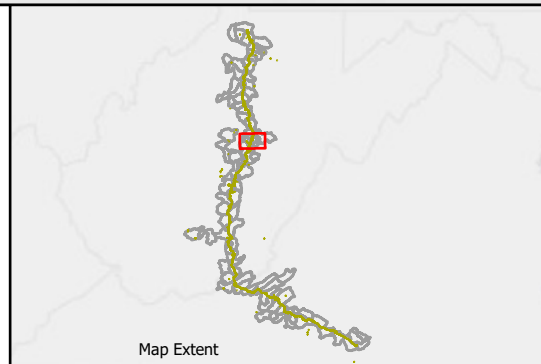
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover**
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

0 1 2 Miles



Scale: 1:90,000



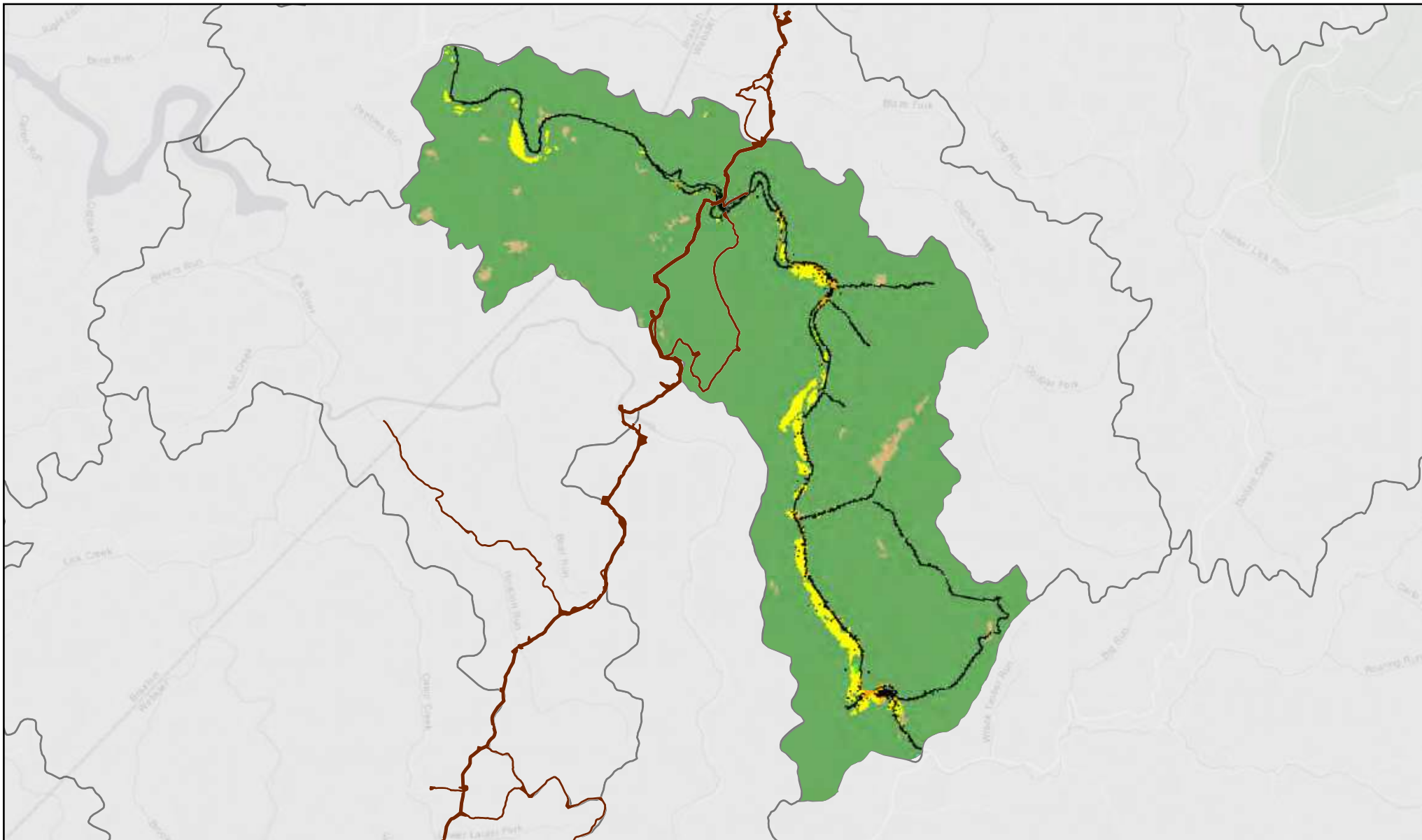
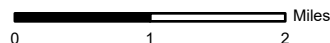


Figure: 111

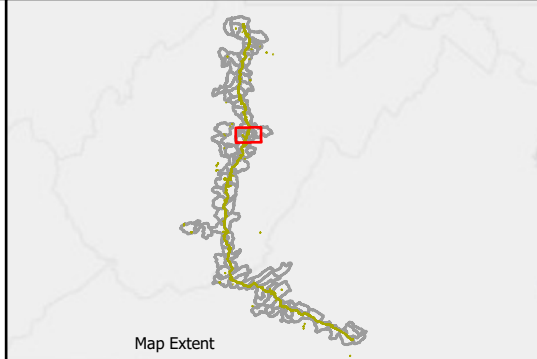
**Land Use/Land Cover 2016
Outlet Right Fork Holly River
050500070303 HUC12 Watershed**

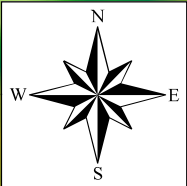
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:90,000





Legend

050500070602 Upper Sutton Lake-Elk River Watershed

Sutton Lake (Excluded)

Upper Sutton Lake-Elk River Watershed Total Stream - 681,017 Linear Feet

Mountain Valley Pipeline Upper Sutton Lake-Elk River

DEM

Value

High : 4479 ft

Low : 285 ft

Total Impacts - 208 Linear Feet (0.0305%)

MAP IS FOR VISUAL REPRESENTATION ONLY

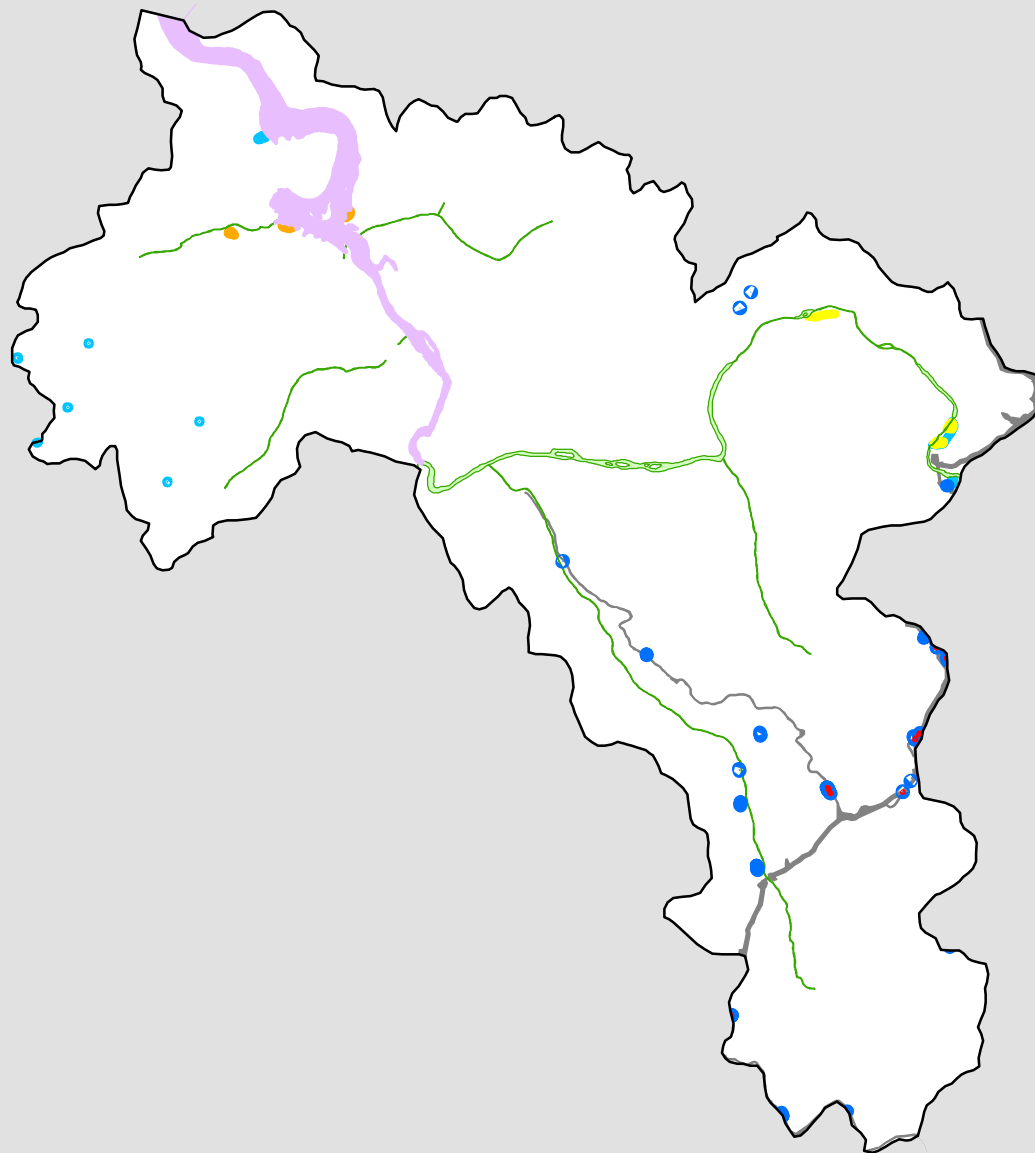
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Upper Sutton Lake-Elk River
Watershed (050500070602)
Elk HUC 8 Watershed, West Virginia
for informational purposes only

MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317



Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCortle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) -343-9031
E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
[Project 2017 081 MVP EnvCon Monitoring Map 2021] CIA Subfigure 1D - Upper Sutton	



Upper Sutton Lake-Elk River

Figure 113

1:74,000

LEGEND

- Wetland Impacts - 0.07 acres
- Upper Sutton Lake-Elk River Delineated Wetland Area - 0.5 acres
- NWI Wetlands - 365.44 acres
- Freshwater Emergent Wetland - 2.3 acres
- Freshwater Forested/Shrub Wetland - 1.85 acres
- Freshwater Pond - 2.26 acres
- Lake - 267.84 acres
- Riverine - 91.19 acres
- Mountain Valley Pipeline
- 050500070602_Upper Sutton Lake-Elk River

Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Upper Sutton Lake-Elk River

Upper Sutton Lake-Elk River

<all other values>

AgB: Allegheny loam, 3 to 8 percent slopes

BuE: Buchanan gravelly loam, moist, 15 to 35 percent slopes, extremely stony

Ch: Chavies fine sandy loam, moist, 0 to 3 percent slopes, rarely flooded (Webster); Ch: Chavies fine sandy loam, rarely flooded (Braxton)

Cr: Craigsville gravelly sandy loam

DrF: Dekalb-Rock outcrop complex, 35 to 70 percent slopes, extremely stony

GZF: Gilpin-Pineville association, very steep, extremely stony

GaF: Gilpin silt loam, 35 to 70 percent slopes, very stony

GbD: Gilpin silt loam, 15 to 25 percent slopes

GbE: Gilpin silt loam, 25 to 35 percent slopes

GcC: Gilpin silt loam, 3 to 15 percent slopes, very stony

GdE: Gilpin-Dekalb complex, 15 to 35 percent slopes, extremely stony

GIC: Gilpin-Lily complex, 8 to 15 percent slopes

GID: Gilpin-Lily complex, 15 to 25 percent slopes

GIE: Gilpin-Lily complex, 25 to 35 percent slopes

GuC: Gilpin-Upshur silt loams, 8 to 15 percent slopes

GuD: Gilpin-Upshur silt loams, 15 to 25 percent slopes

GuE: Gilpin-Upshur silt loams, 25 to 35 percent slopes

LdCm: Laidig channery silt loam, moist, 3 to 15 percent slopes, extremely stony

LdEm: Laidig channery silt loam, moist, 15 to 35 percent slopes, extremely stony

PLF: Pineville-Gilpin-Guyandotte association, very steep, extremely stony

Po: Pope sandy loam, 0 to 3 percent slopes, occasionally flooded (Braxton); Po: Pope loam, moist, 0 to 3 percent slopes, occasionally flooded (Webster)

Pp: Pope-Potomac complex, very cobbly

Ud: Udorthents, smoothed

W: Water

MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment - Soil
Upper Sutton Lake-Elk Run (050500070602)
Elk Run HUC 8 Watershed
Braxton and Webster Counties, West Virginia
For Informational Purposes Only

MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317

Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7019 MacCorrie Avenue, S.E.
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

SCALE: See Mapping	DRAWN: KBW
DATE: December 2021	CHECKED: JLY
PN: 001-17-4451016	APPROVED: JLY
PROJECT: 201717-0451-MVP-Braxton-Webster-Maps-2021 FIGURE 114 - Upper Sutton Lake-Elk River-Soil	

FIGURE 114

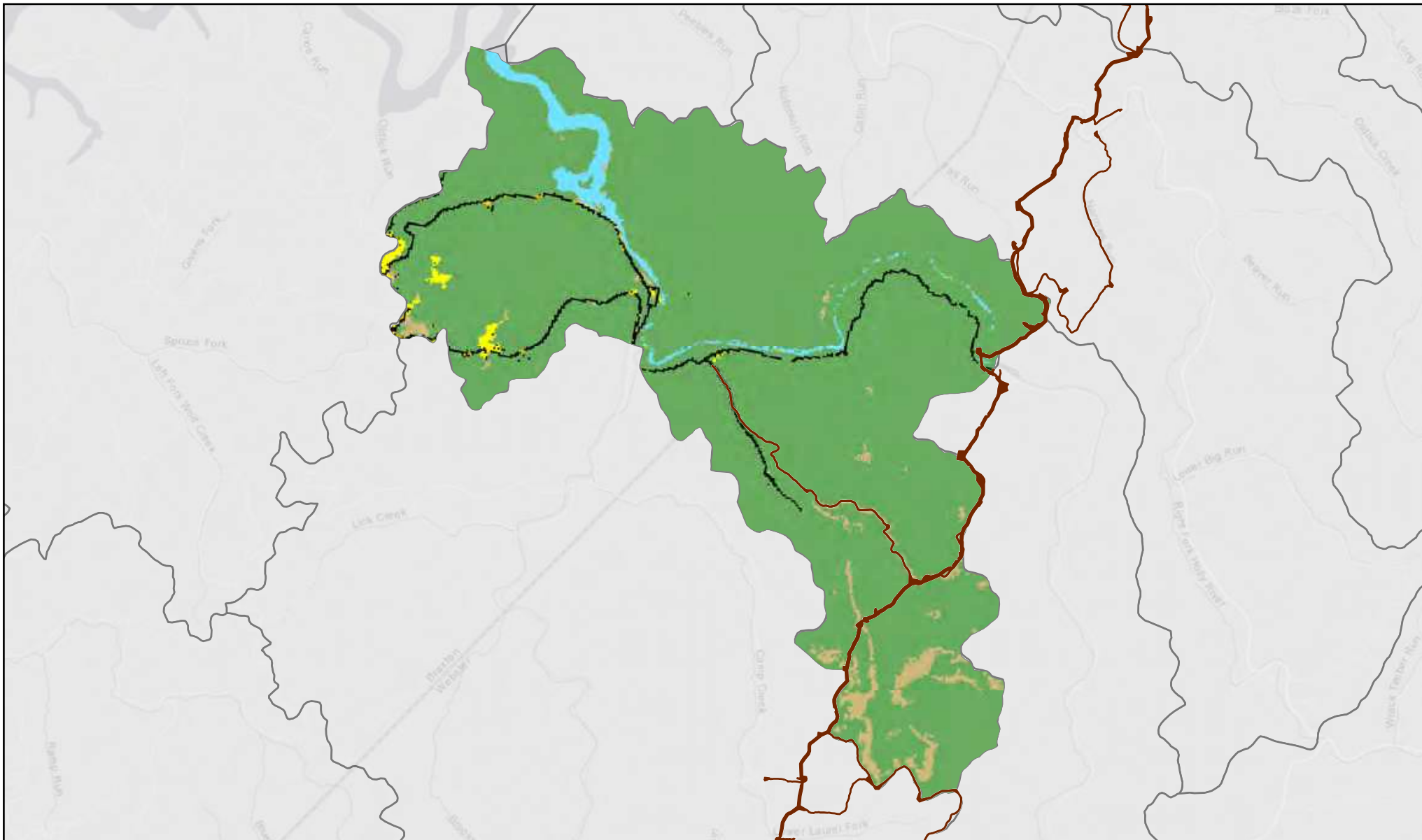
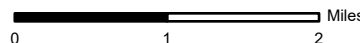


Figure: 115

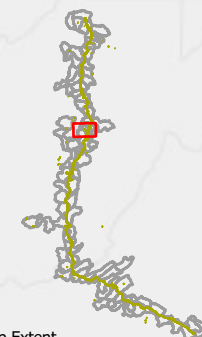
**Land Use/Land Cover 2011
Upper Sutton Lake-Elk River
050500070602 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:80,000



Map Extent

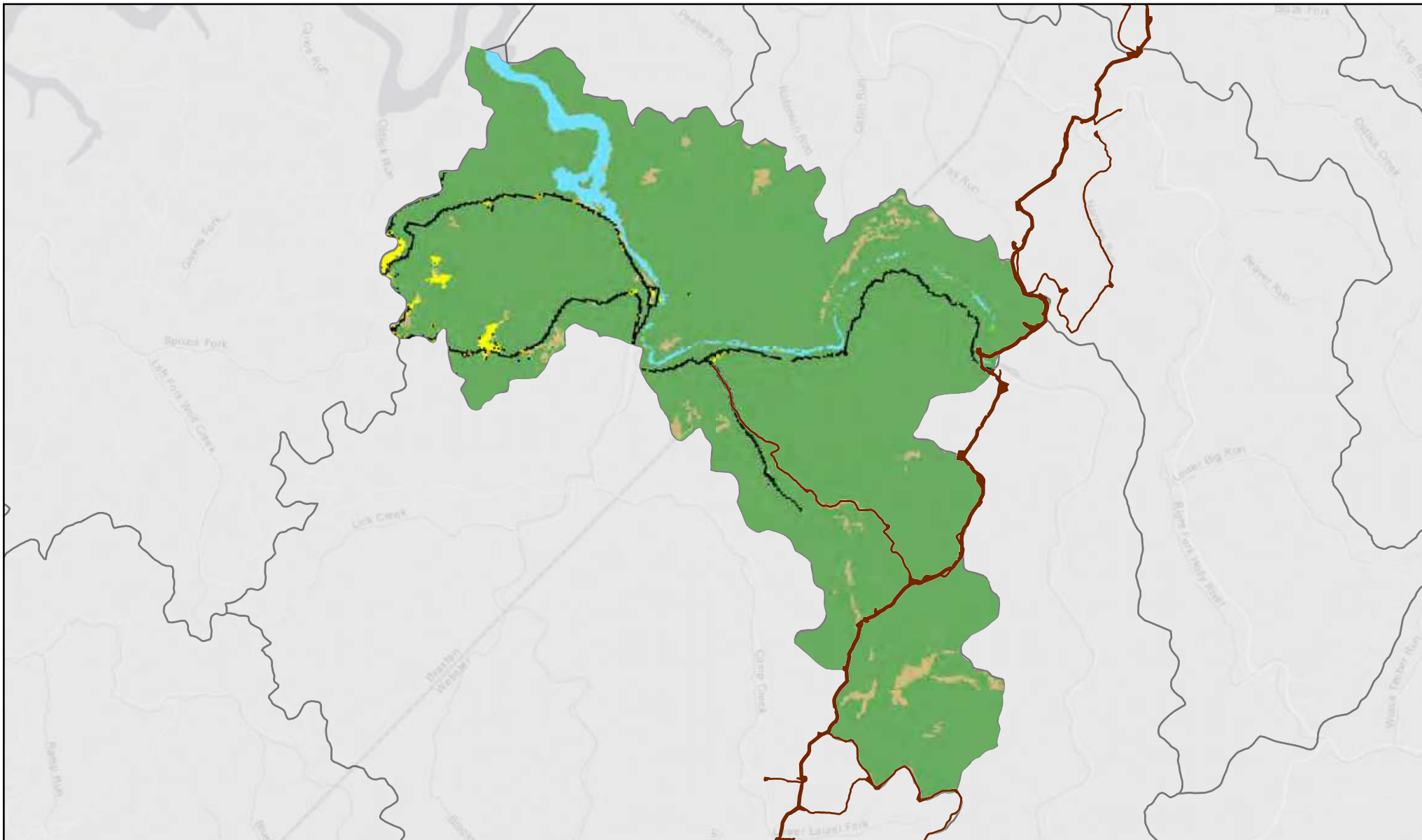
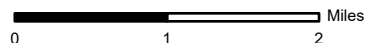


Figure: 116

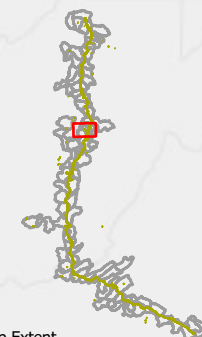
**Land Use/Land Cover 2016
Upper Sutton Lake-Elk River
050500070602 HUC12 Watershed**

LEGEND

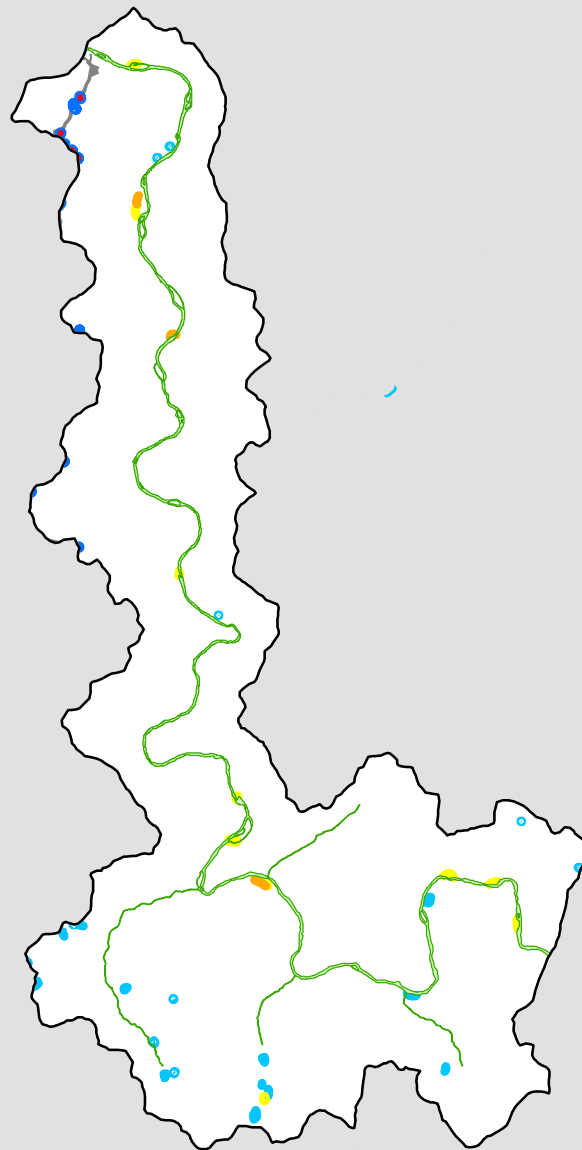
- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:80,000



Map Extent



Big Run-Elk River

Figure 118

1:120,000

LEGEND

- Wetland Impacts - 0.1 acres
- Big Run-Elk River Delineated Wetland Area - 0.13 acres
- NWI Wetlands - 333.77 acres
- Freshwater Emergent Wetland - 0.75 acres
- Freshwater Forested/Shrub Wetland - 5.01 acres
- Freshwater Pond - 7.94 acres
- Riverine - 320.07 acres
- Mountain Valley Pipeline
- 050500070601_Big Run-Elk River

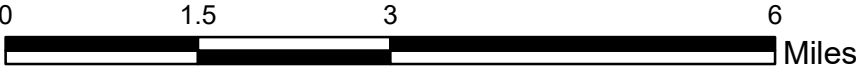
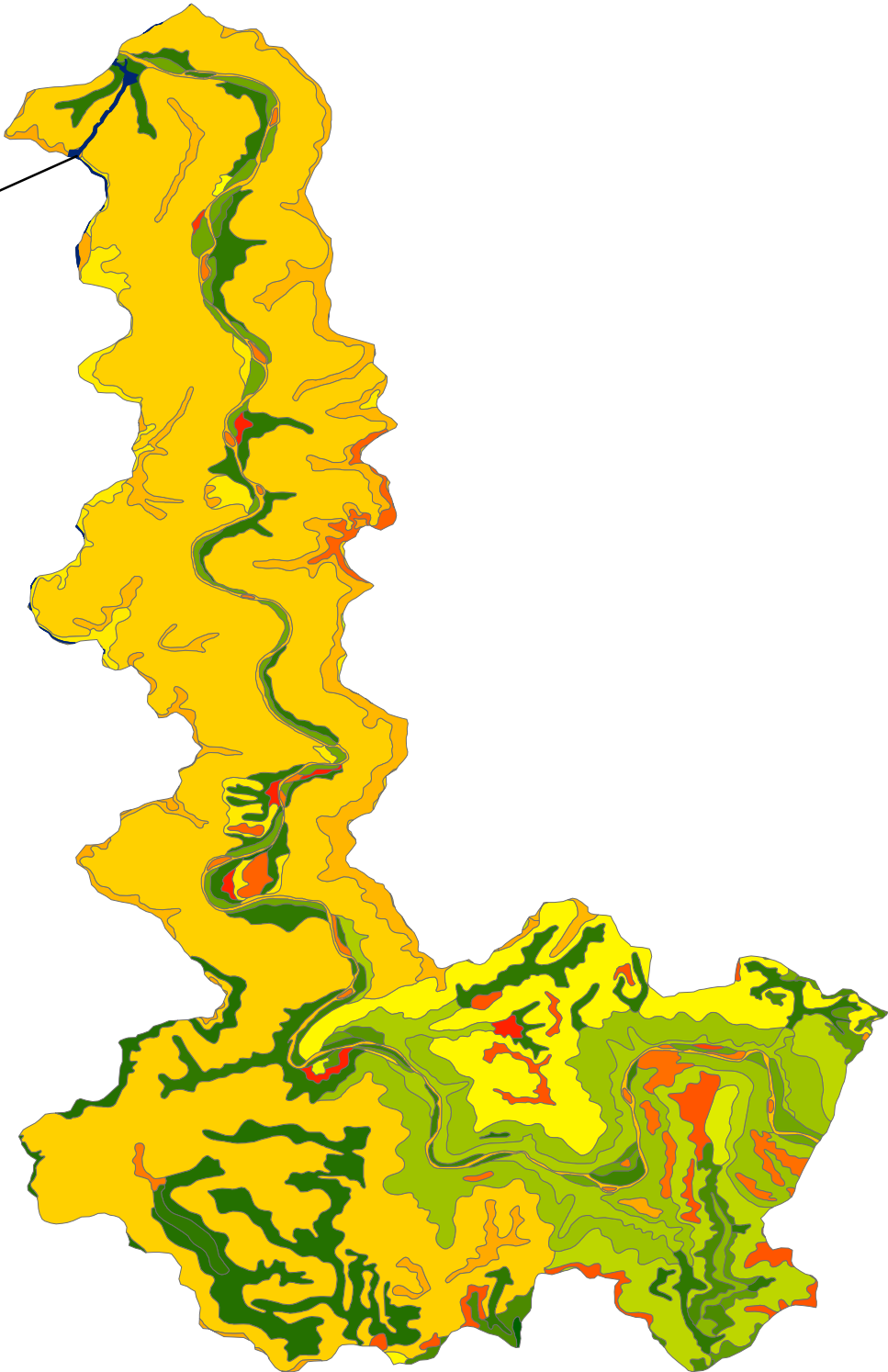
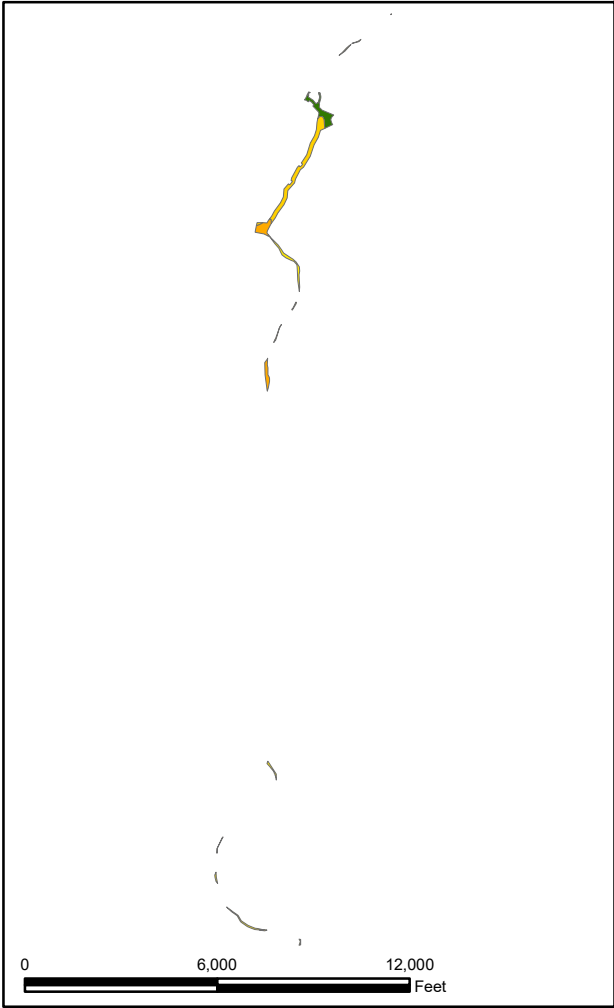
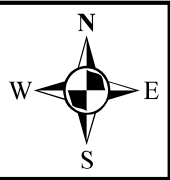
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Big Run-Elk River

Big Run-Elk River Soil

- At: Atkins loam, moist, 0 to 3 percent slopes, frequently flooded
- CSF: Clifftop-Laidig association, very steep, extremely stony
- CaE: Cateache channery silt loam, 15 to 35 percent slopes, extremely stony
- CeF: Cedarcreek very channery loam, very steep, extremely stony
- Ch: Chavies fine sandy loam, moist, 0 to 3 percent slopes, rarely flooded
- CIB: Clifftop channery silt loam, 3 to 8 percent slopes
- CIC: Clifftop channery silt loam, 8 to 15 percent slopes
- CID: Clifftop channery silt loam, 15 to 25 percent slopes
- CIE: Clifftop channery silt loam, 25 to 35 percent slopes
- CIF: Clifftop channery silt loam, 35 to 70 percent slopes
- CnC: Clifftop channery silt loam, 3 to 15 percent slopes, very stony
- CnF: Clifftop channery silt loam, 35 to 70 percent slopes, very stony
- CpE: Clifftop-Dekalb complex, 15 to 35 percent slopes, extremely stony
- CtB: Cotaco silt loam, 3 to 8 percent slopes
- Cv: Craigsville gravelly loam, 0 to 5 percent slopes
- DrF: Dekalb-Rock outcrop complex, 35 to 70 percent slopes, extremely stony
- GbB: Gilpin silt loam, 3 to 8 percent slopes
- GbC: Gilpin silt loam, 8 to 15 percent slopes
- GbE: Gilpin silt loam, 25 to 35 percent slopes
- GcC: Gilpin silt loam, 3 to 15 percent slopes, very stony
- GcF: Gilpin silt loam, 35 to 70 percent slopes, very stony
- GdE: Gilpin-Dekalb complex, 15 to 35 percent slopes, extremely stony
- HiF: Highsplint channery silt loam, moist, 35 to 70 percent slopes, extremely stony
- KaF: Kaymine very channery silt loam, very steep, extremely stony
- LaDm: Laidig channery silt loam, moist, 15 to 25 percent slopes
- LdCm: Laidig channery silt loam, moist, 3 to 15 percent slopes, extremely stony
- LdEm: Laidig channery silt loam, moist, 15 to 35 percent slopes, extremely stony
- LgEm: Laidig channery silt loam, moist, 8 to 35 percent slopes, rubbly
- MkE: Meckesville silt loam, 15 to 35 percent slopes, extremely stony
- PLF: Pineville-Gilpin-Guyandotte association, very steep, extremely stony
- Po: Pope loam, moist, 0 to 3 percent slopes, occasionally flooded
- Pp: Pope-Potomac complex, very cobbly
- ScF: Shouns-Cateache complex, 35 to 70 percent slopes, extremely stony
- Ud: Udorthents, smoothed
- W: Water



MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment - Soil
Big Run-Elk River (050500070601)
Elk HUC 8 Watershed
Webster County, West Virginia
For Informational Purposes Only

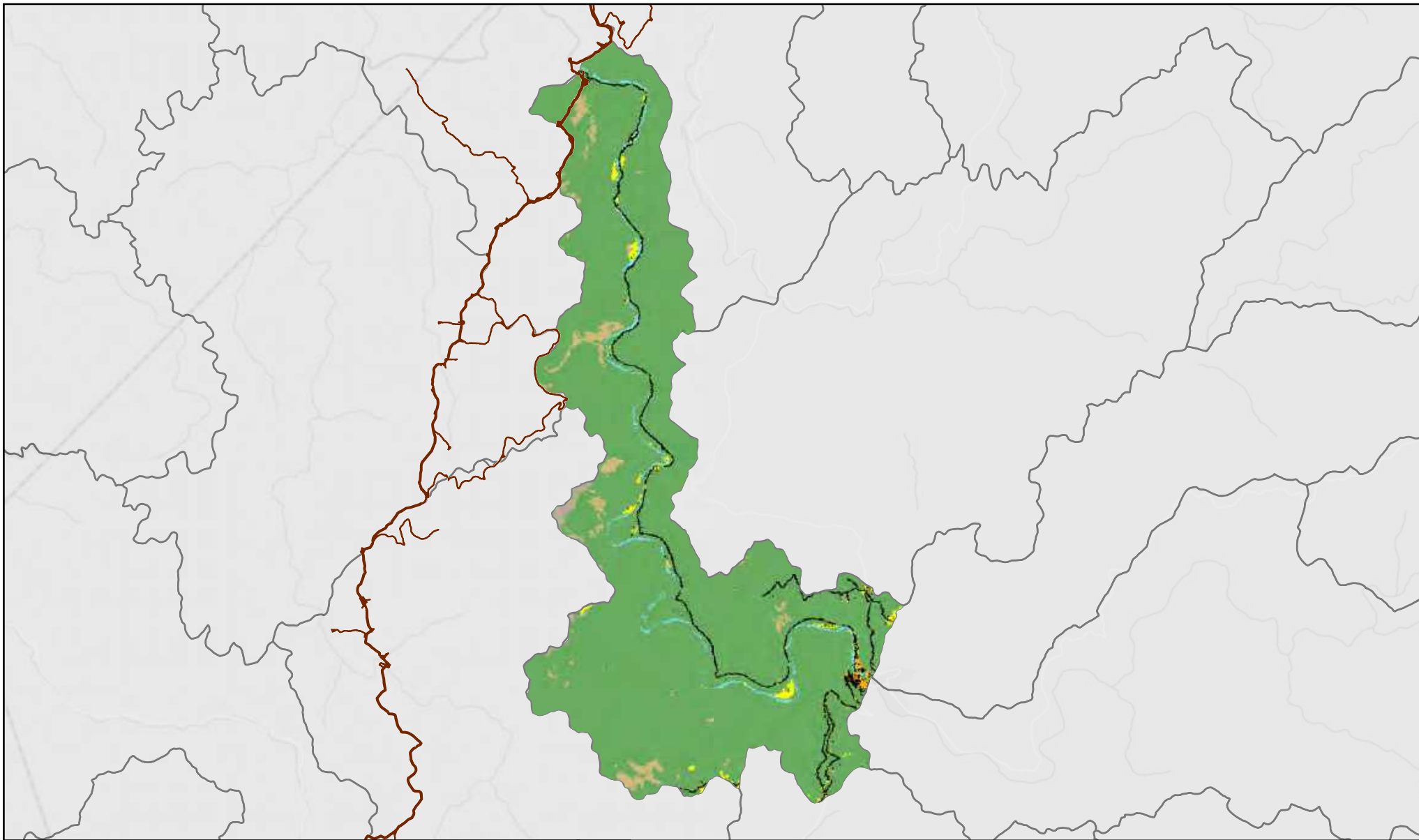
FIGURE 119

MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317



Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7019 MacCorkie Avenue, S.E.
(304) 342-1400 Fax: (304) 343-9031
Office: E-mail: potesta@potesta.com

SCALE: See Mapping	DRAWN: KBW
DATE: December 2021	CHECKED: JLY
PN: 001-17-4451016	APPROVED: JLY
05/26/2017 17:44:51 MXP Elk Run-Elk River Soil.mxd C:\A Soils\Figure 119: Big Run-Elk River Soil.mxd	



Mountain Valley
PIPELINE

Figure: 120

**Land Use/Land Cover 2011
Big Run-Elk River
050500070601 HUC12 Watershed**

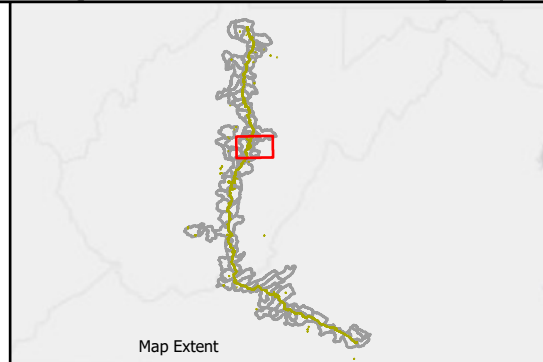
LEGEND

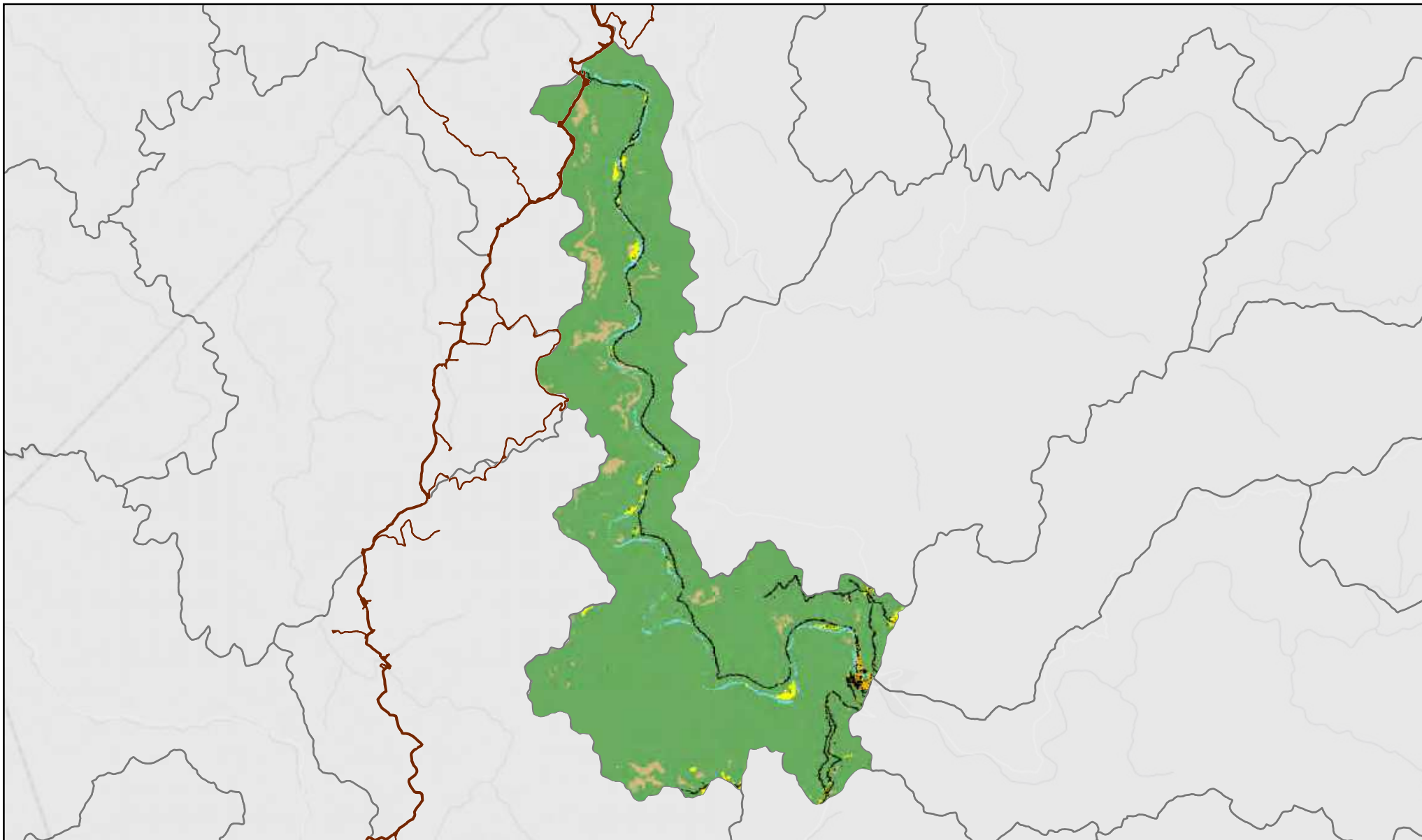
- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



0 1.5 3 Miles

Scale: 1:130,000





Mountain Valley
PIPELINE

Figure: 121

Land Use/Land Cover 2016
Big Run-Elk River
050500070601 HUC12 Watershed

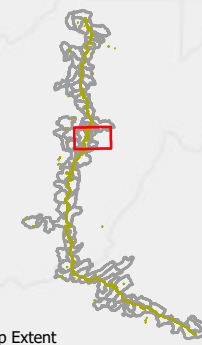
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

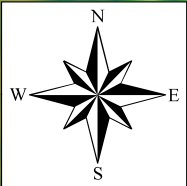


0 1.5 3 Miles

Scale: 1:130,000



Map Extent



Legend

050500070202 Outlet Laurel Creek Watershed

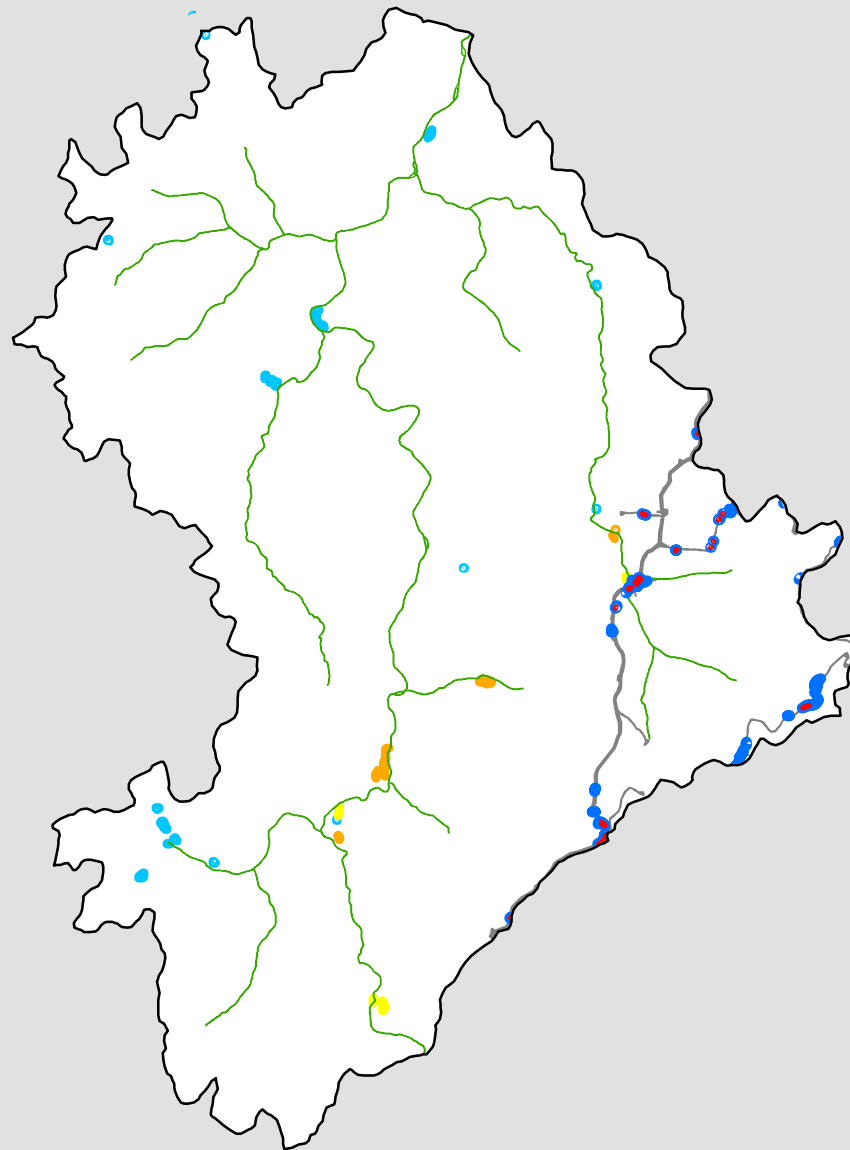
Outlet Laurel Creek Watershed Total Stream - 1,463,657 Linear Feet**DEM****Value**

High : 4479 ft

Low : 285 ft

Total Impacts - 803 Linear Feet (0.0549%)

MAPPING FOR VISUAL REPRESENTATION ONLY



Outlet Laurel Creek

Figure 123

1:100,000

LEGEND

- Wetland Impacts - 0.98 acres
- Outlet Laurel Creek Delineated Wetland Area - 3.15 acres
- NWI Wetlands - 129.49 acres
- Freshwater Emergent Wetland - 3.26 acres
- Freshwater Forested/Shrub Wetland - 1.87 acres
- Freshwater Pond - 7.51 acres
- Riverine - 116.85 acres
- Mountain Valley Pipeline
- 050500070202_Outlet Laurel Creek

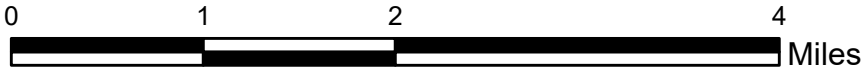
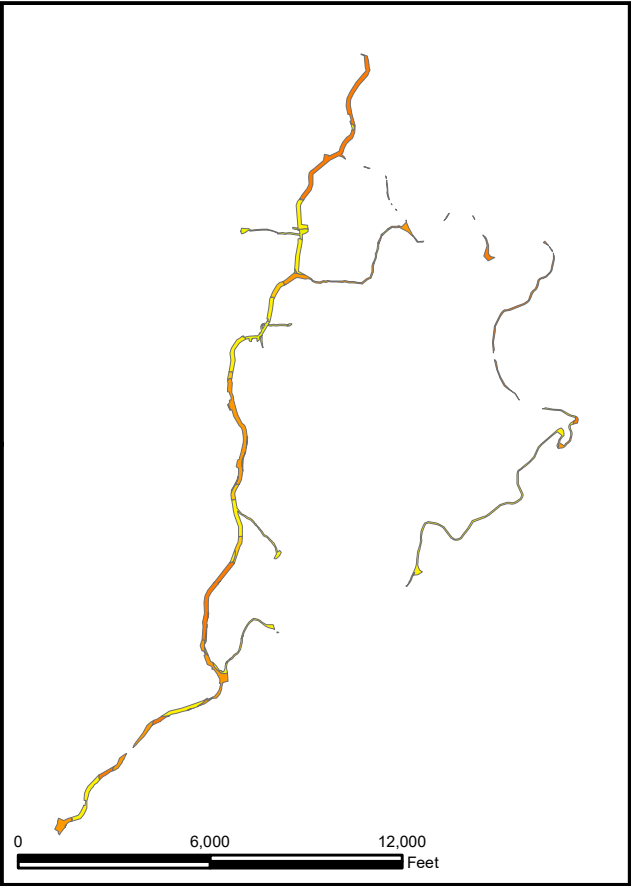
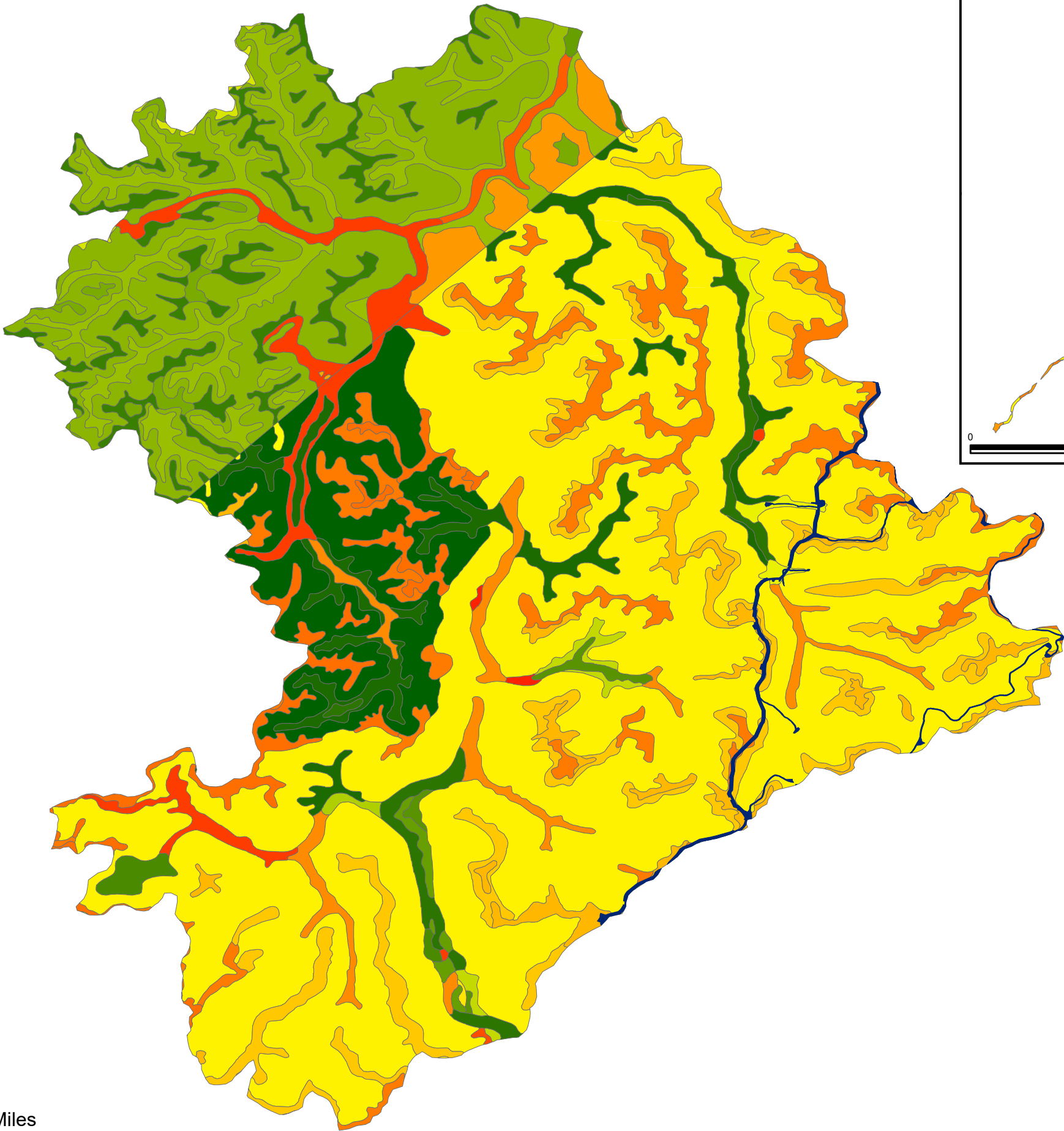
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Outlet Laurel Creek

Outlet Laurel Creek Soil

- At: Atkins loam, moist, 0 to 3 percent slopes, frequently flooded
- BuE: Buchanan gravelly loam, moist, 15 to 35 percent slopes, extremely stony
- Ch: Chavies fine sandy loam, rarely flooded (Braxton); Ch: Chavies fine sandy loam, moist, 0 to 3 percent slopes, rarely flooded (Webster)
- Cr: Craigsville gravelly sandy loam
- CtB: Cotaco silt loam, 3 to 8 percent slopes
- Cv: Craigsville gravelly loam, 0 to 5 percent slopes
- DrF: Dekalb-Rock outcrop complex, 35 to 70 percent slopes, extremely stony
- GZF: Gilpin-Pineville association, very steep, extremely stony
- GaF: Gilpin silt loam, 35 to 70 percent slopes, very stony
- GbC: Gilpin silt loam, 8 to 15 percent slopes
- GbD: Gilpin silt loam, 15 to 25 percent slopes
- GbE: Gilpin silt loam, 25 to 35 percent slopes
- GcC: Gilpin silt loam, 3 to 15 percent slopes, very stony
- GcF: Gilpin silt loam, 35 to 70 percent slopes, very stony
- GdE: Gilpin-Dekalb complex, 15 to 35 percent slopes, extremely stony
- GIC: Gilpin-Lily complex, 8 to 15 percent slopes
- GID: Gilpin-Lily complex, 15 to 25 percent slopes
- GIE: Gilpin-Lily complex, 25 to 35 percent slopes
- ItF: Itmann channery loam, very steep
- LaCm: Laidig channery silt loam, moist, 8 to 15 percent slopes
- LaDm: Laidig channery silt loam, moist, 15 to 25 percent slopes
- LdCm: Laidig channery silt loam, moist, 3 to 15 percent slopes, extremely stony
- LdEm: Laidig channery silt loam, moist, 15 to 35 percent slopes, extremely stony
- PLF: Pineville-Gilpin-Guyandotte association, very steep, extremely stony
- Pe: Philo-Pope complex, moist, 0 to 3 percent slopes, occasionally flooded
- Po: Pope loam, moist, 0 to 3 percent slopes, occasionally flooded
- Pp: Pope-Potomac complex, very cobbly
- Ud: Udorthents, smoothed
- W: Water



MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment - Soil
Outlet Laurel Creek (0505000702020)
Elk HUC 8 Watershed
Braxton and Webster Counties, West Virginia
For Informational Purposes Only

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E-mail: potesta@potesta.com

SCALE: See Mapping	DRAWN: KBW
DATE: JUNE 2022	CHECKED: JLY
PN: 001-174451.016	APPROVED: JLY
[U:\p\jan2017\17_0451_MVP_Eng\Con_MountainValleyMap2021\CLC_SoilsFigure124-OutletLaurelCreekSoil.mxd]	

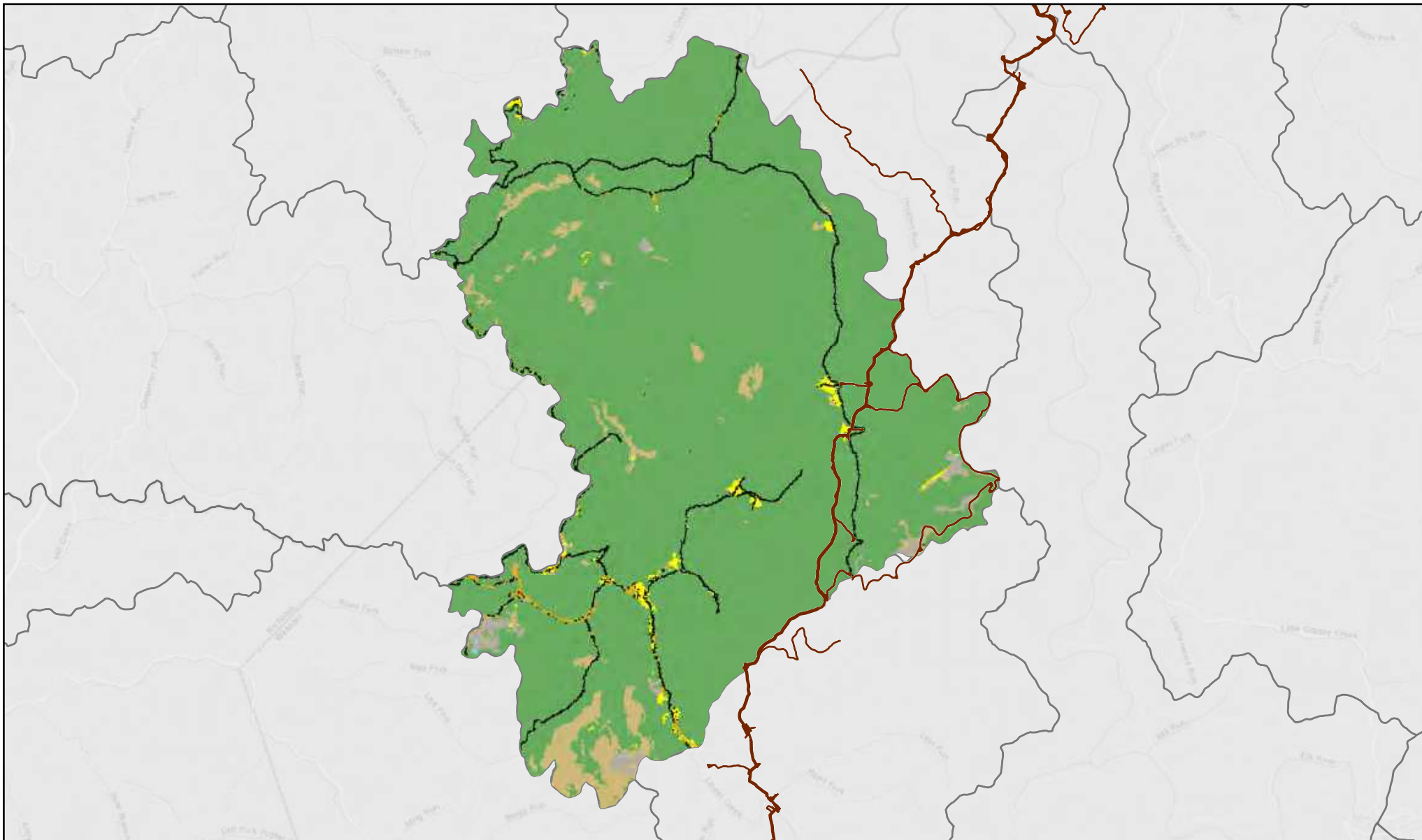
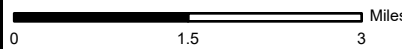


Figure: 125

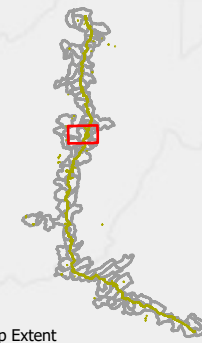
**Land Use/Land Cover 2011
Outlet Laurel Creek
050500070202 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover**
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:105,000



Map Extent

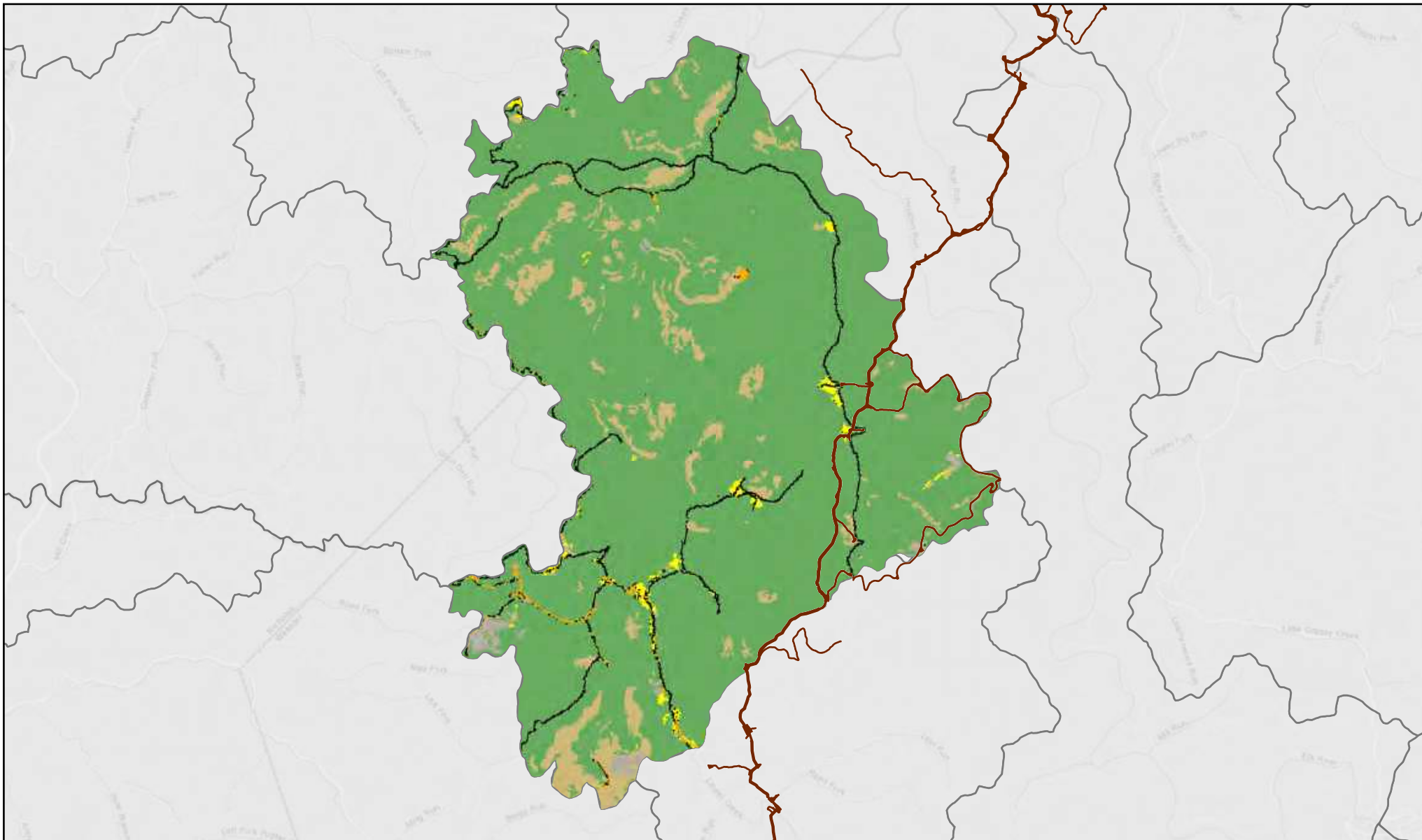
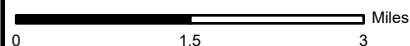


Figure: 126

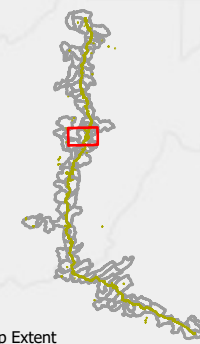
**Land Use/Land Cover 2016
Outlet Laurel Creek
050500070202 HUC12 Watershed**

LEGEND

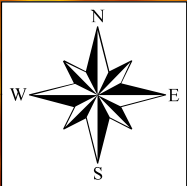
- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:105,000



Map Extent



Legend

050500070201 Headwaters Laurel Creek Watershed

Headwaters Laurel Creek Watershed Total Stream - 1,270,457 Linear Feet

Mountain Valley Pipeline Headwaters Laurel Creek

DEM

Value

High : 4479 ft

Low : 285 ft

Total Impacts - 1,498 Linear Feet (0.1179%)

MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Headwaters Laurel Creek Watershed (050500070201)
Elk HUC 8 Watershed, West Virginia
For Informational Purposes Only

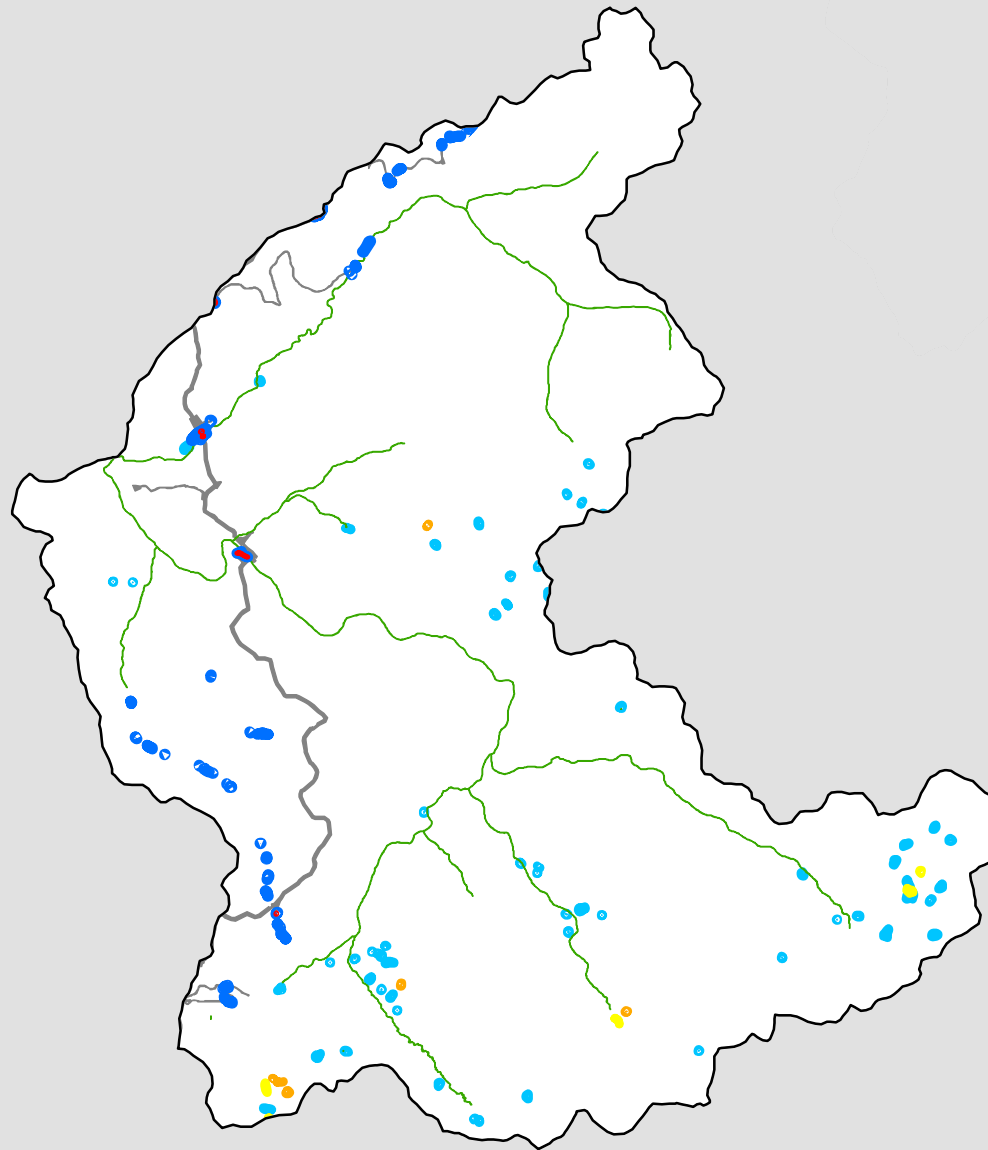
MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317



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E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
E:\Projects\2017_0851_MVP_Eng\Com_Monitoring\Map\2021_CIA_Subs\Figure 127-HW-Laurel_Creek.mxd	

FIGURE 127



Headwaters Laurel Creek

Figure 128

1:89,000

LEGEND

- Wetland Impacts - 0.31 acres
- Headwaters Laurel Creek Delineated Wetland Area - 2.96 acres
- NWI Wetlands - 109.8 acres
- Freshwater Emergent Wetland - 1.01 acres
- Freshwater Forested/Shrub Wetland - 1.57 acres
- Freshwater Pond - 20.81 acres
- Riverine - 86.41 acres
- Mountain Valley Pipeline
- 050500070201_Headwaters Laurel Creek

Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Headwaters Laurel Creek

Headwaters Laurel Creek Soil

At: Atkins loam, moist, 0 to 3 percent slopes, frequently flooded

CSF: Clifftop-Laidig association, very steep, extremely stony

Ch: Chavies fine sandy loam, moist, 0 to 3 percent slopes, rarely flooded

CIB: Clifftop channery silt loam, 3 to 8 percent slopes

CIC: Clifftop channery silt loam, 8 to 15 percent slopes

CID: Clifftop channery silt loam, 15 to 25 percent slopes

CIE: Clifftop channery silt loam, 25 to 35 percent slopes

CnC: Clifftop channery silt loam, 3 to 15 percent slopes, very stony

CtB: Cotaco silt loam, 3 to 8 percent slopes

Cv: Craigsville gravelly loam, 0 to 5 percent slopes

DrF: Dekalb-Rock outcrop complex, 35 to 70 percent slopes, extremely stony

Ek: Elkins silt loam

GbD: Gilpin silt loam, 15 to 25 percent slopes

GbE: Gilpin silt loam, 25 to 35 percent slopes

GbF: Gilpin silt loam, 35 to 70 percent slopes

GcC: Gilpin silt loam, 3 to 15 percent slopes, very stony

GdE: Gilpin-Dekalb complex, 15 to 35 percent slopes, extremely stony

HLE: Highsplint-Laidig complex, moist, 15 to 35 percent slopes, extremely stony

HiF: Highsplint channery silt loam, moist, 35 to 70 percent slopes, extremely stony

KaF: Kaymine very channery silt loam, very steep, extremely stony

LaCm: Laidig channery silt loam, moist, 8 to 15 percent slopes

LaDm: Laidig channery silt loam, moist, 15 to 25 percent slopes

LdCm: Laidig channery silt loam, moist, 3 to 15 percent slopes, extremely stony

LdEm: Laidig channery silt loam, moist, 15 to 35 percent slopes, extremely stony

PLF: Pineville-Gilpin-Guyandotte association, very steep, extremely stony

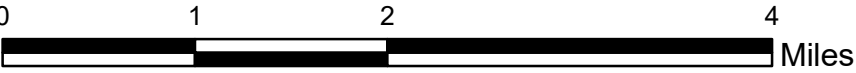
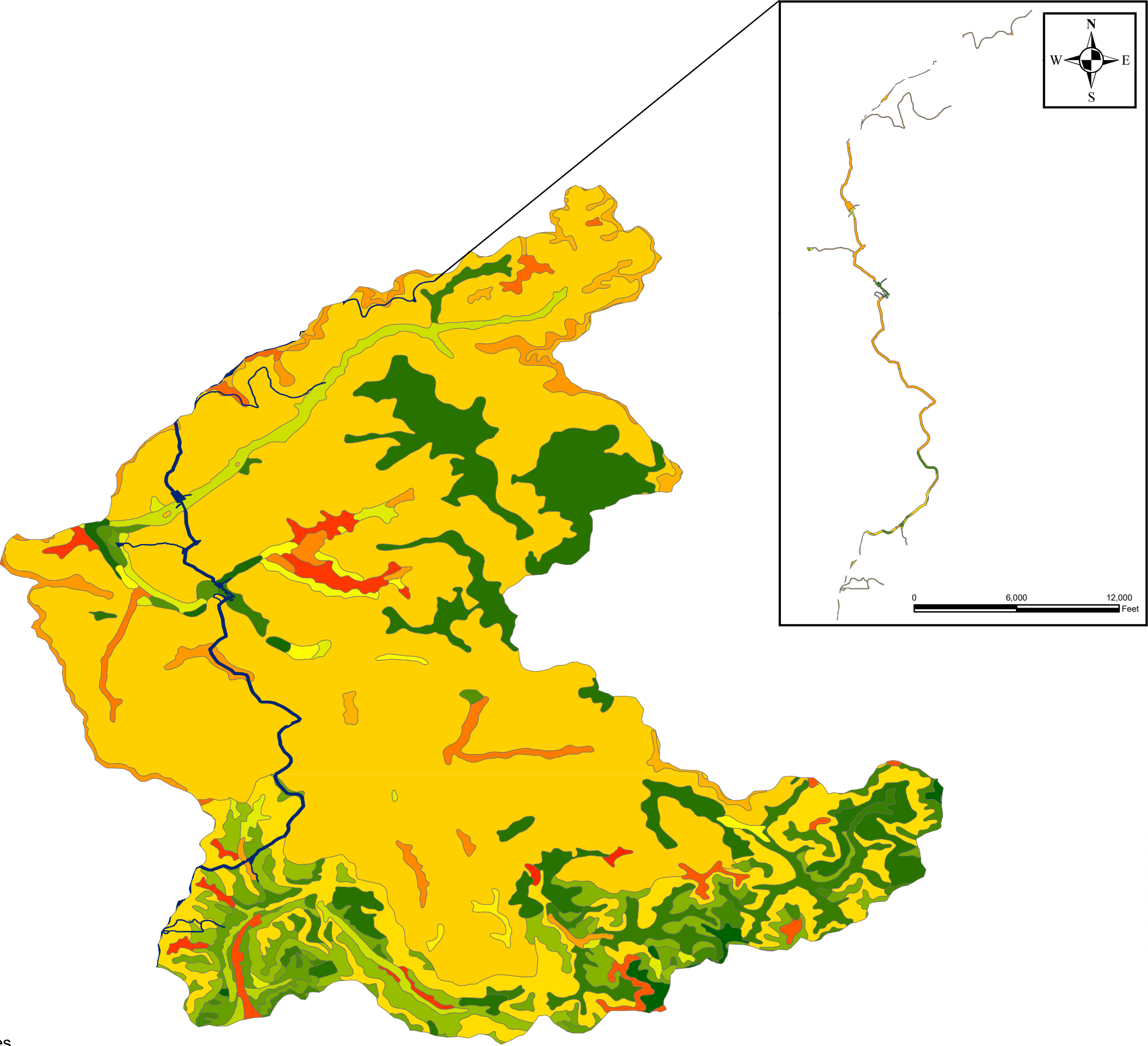
Pe: Philo-Pope complex, moist, 0 to 3 percent slopes, occasionally flooded

Po: Pope loam, moist, 0 to 3 percent slopes, occasionally flooded

Pp: Pope-Potomac complex, very cobbly

Ud: Udorthents, smoothed

W: Water



MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment - Soil
Headwaters Laurel Creek (050500070401)
Elk HUC 8 Watershed
Webster County, West Virginia
For Informational Purposes Only

MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317



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Gainesville, TX 77603
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E-mail: potesta@potesta.com

SCALE: See Mapping	DRAWN: KBW
DATE: December 2021	CHECKED: JLY
PN: 001-17-4451-016	APPROVED: JLY
PROJECT: 201717-0451-MVP-Elk HUC 8 Watershed Map (2021) C:\A Soil Figure 129 - Headwaters Laurel Creek Soil.mxd	

FIGURE 129

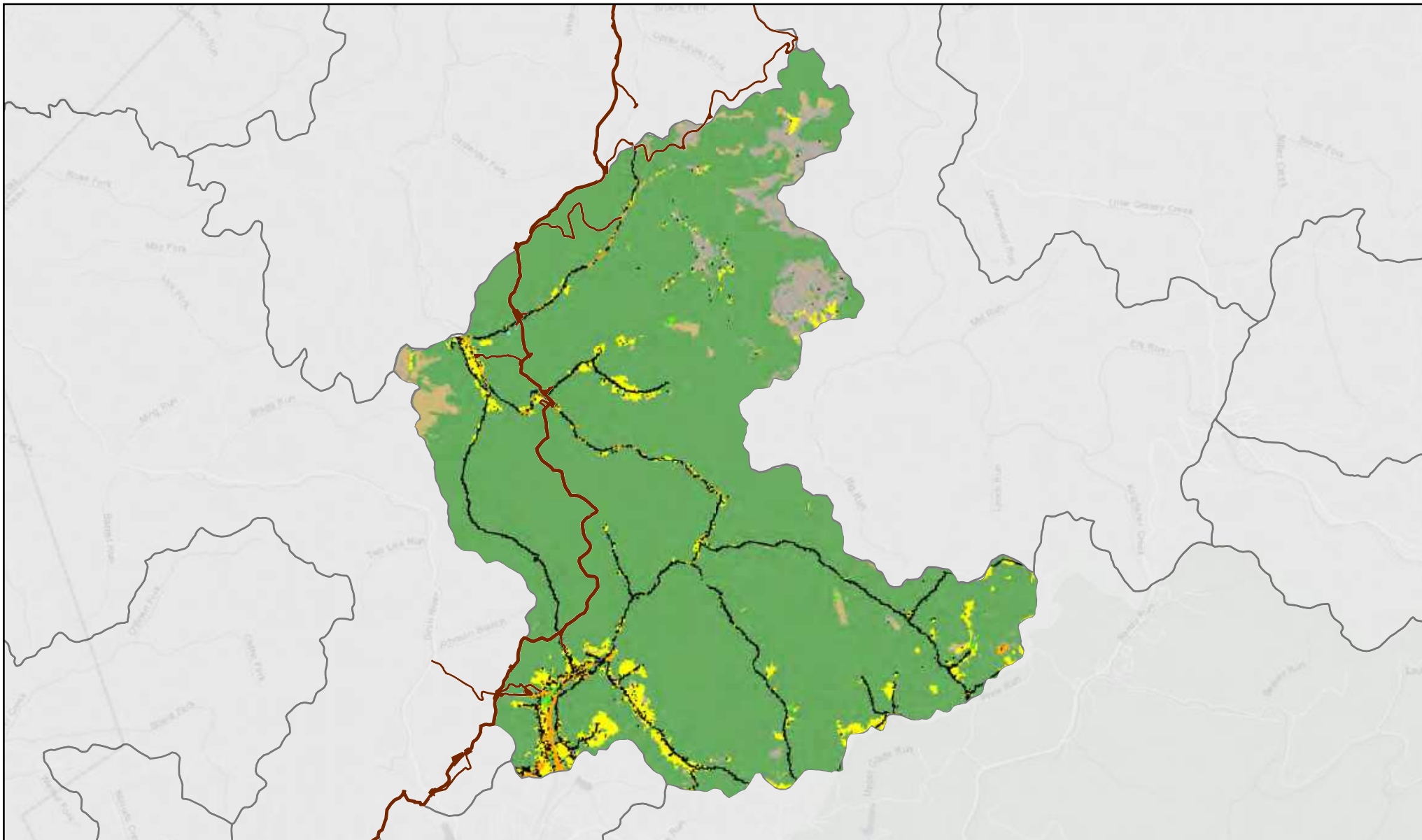


Figure: 130

**Land Use/Land Cover 2011
Headwaters Laurel Creek
050500070201 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover**
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



0 1 2 Miles

Scale: 1:95,000



Map Extent

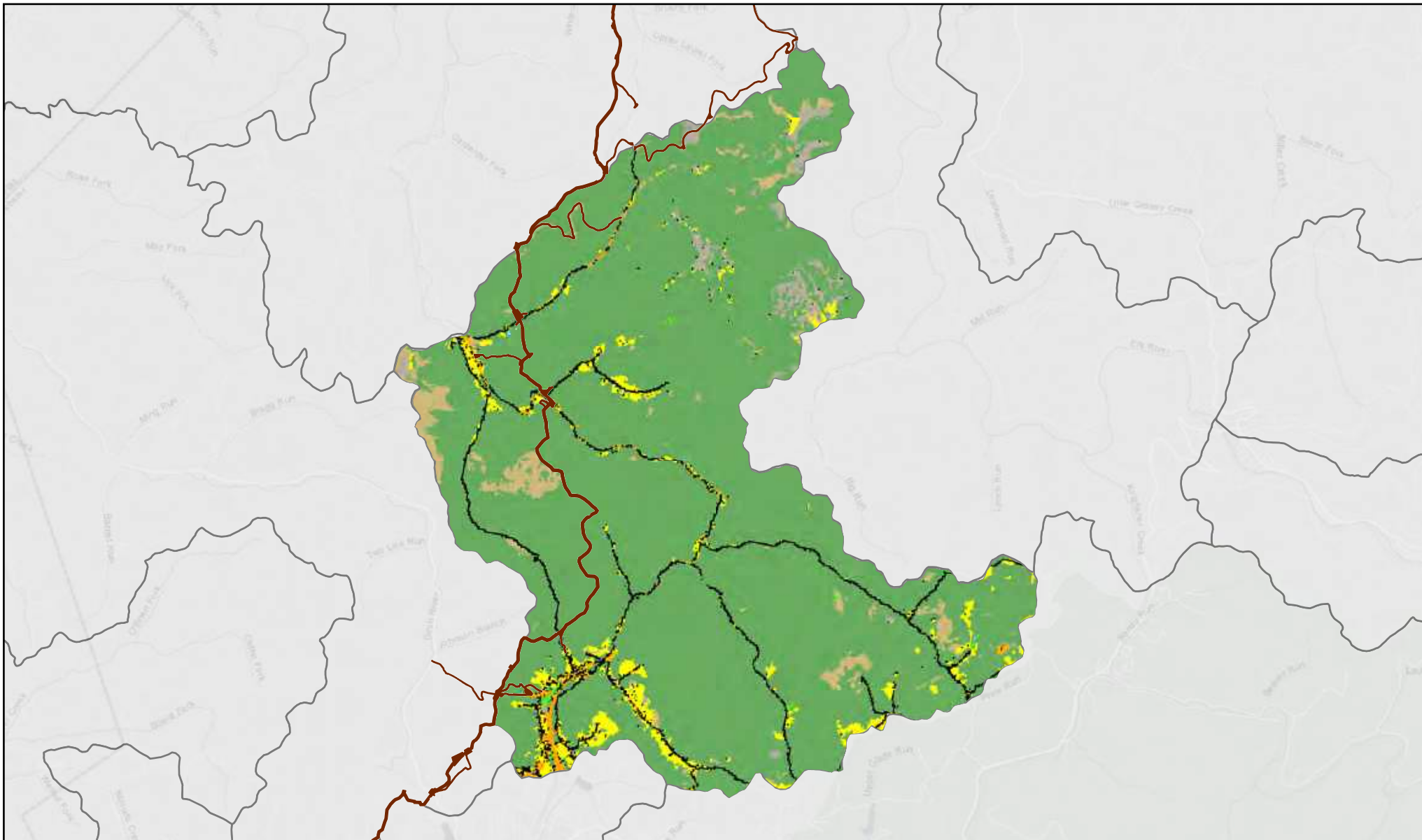


Figure: 131

**Land Use/Land Cover 2016
Headwaters Laurel Creek
050500070201 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

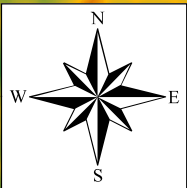


0 1 2 Miles

Scale: 1:95,000



Map Extent



Legend

050500070401 Upper Birch River Watershed

Upper Birch River Watershed Total Stream - 2,191,918 Linear Feet

Mountain Valley Pipeline Upper Birch River

DEM

Value

High : 4479 ft

Low : 285 ft

Total Impacts - 700 Linear Feet (0.0319%)

MAPPING FOR VISUAL REPRESENTATION ONLY

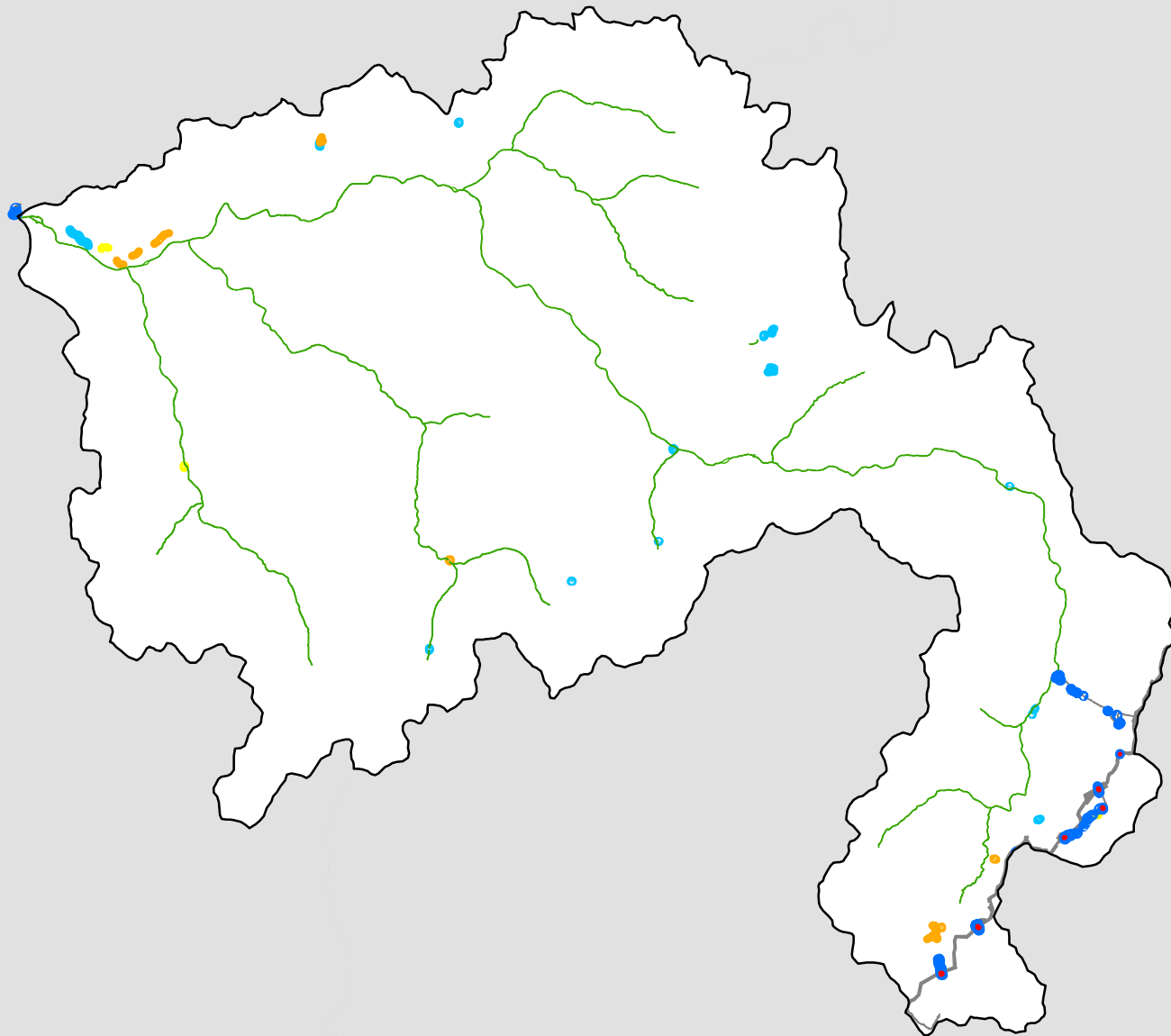
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Upper Birch River Watershed (050500070401)
Elk HUC 8 Watershed, West Virginia

MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
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Office: (304) 342-1400 Fax: (304) -343-9031
E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
E:\Projects\201717_081_MVP_Enc\Com_Monitoring\Map\2021_CIA_Subs\Figure 132 - Upper Birch River.mxd	



Upper Birch River

Figure 133

1:100,000

LEGEND

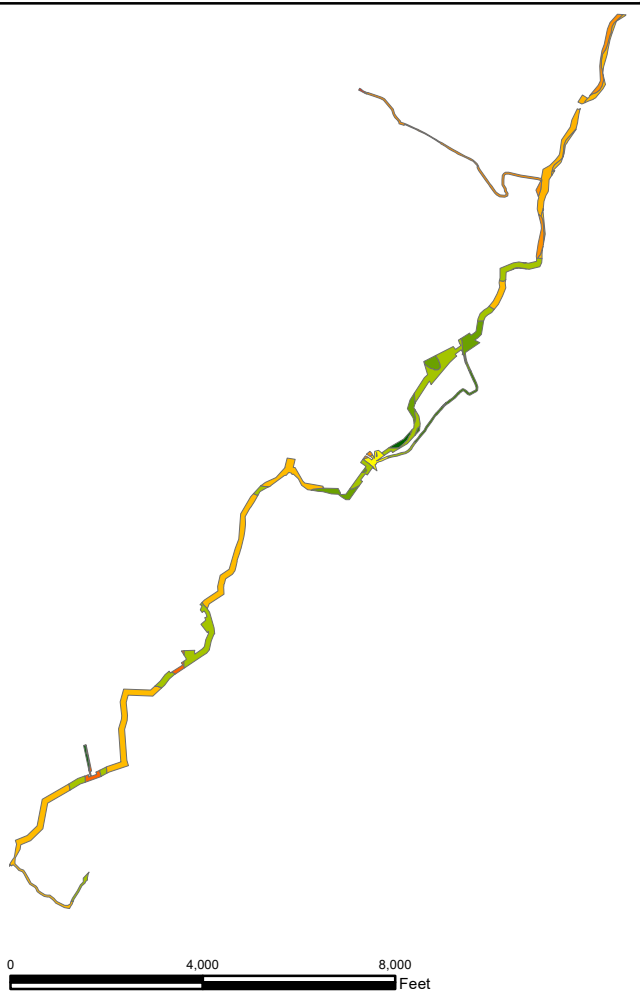
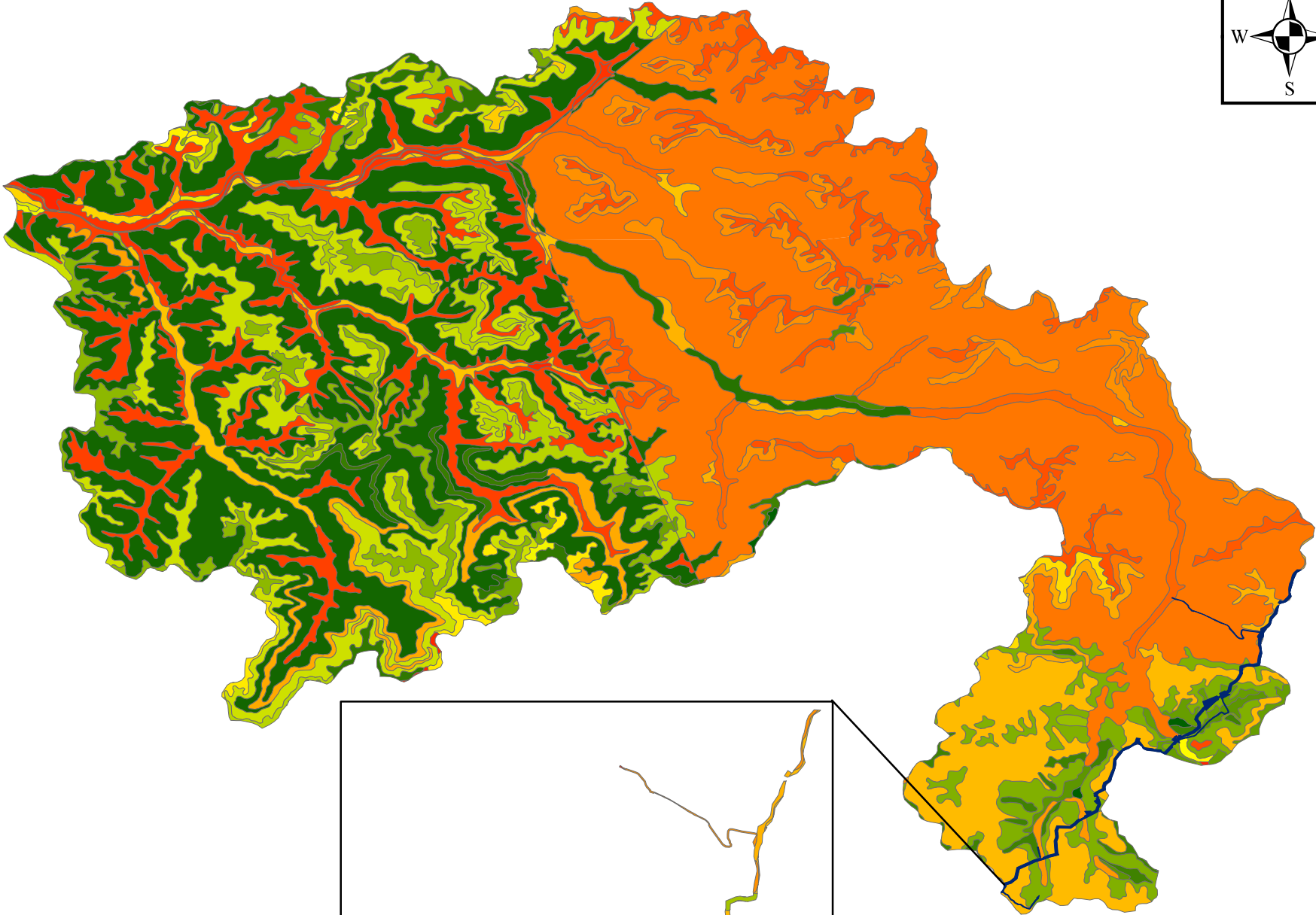
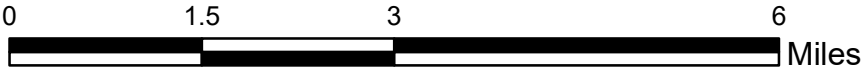
- Wetland Impacts - 0.19 acres
- Upper Birch River Delineated Wetland Area - 2.96 acres
- NWI Wetlands - 140.94 acres
- Freshwater Emergent Wetland - 3.27 acres
- Freshwater Forested/Shrub Wetland - 0.81 acres
- Freshwater Pond - 7.46 acres
- Riverine - 129.4 acres
- Mountain Valley Pipeline
- 050500070401_Upper Birch River

Note: Shapes are not to scale, enlarged to improve visibility.

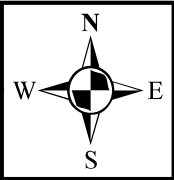
Legend

Mountain Valley Pipeline Upper Birch River
Upper Birch River Soil

- At: Atkins loam, moist, 0 to 3 percent slopes, frequently flooded
- BuB: Buchanan loam, moist, 3 to 8 percent slopes
- BuC: Buchanan loam, moist, 8 to 15 percent slopes
- BuD: Buchanan loam, moist, 15 to 25 percent slopes
- BvE: Buchanan gravelly sandy loam, moist, 15 to 35 percent slopes, extremely stony
- CeF: Cedarcreek channery loam, very steep, extremely stony
- Ch: Chavies fine sandy loam, moist, 0 to 3 percent slopes, rarely flooded
- ChB: Chavies fine sandy loam, moist, 3 to 8 percent slopes, rarely flooded
- ClB: Clifftop channery silt loam, 3 to 8 percent slopes
- ClC: Clifftop channery silt loam, 8 to 15 percent slopes
- ClD: Clifftop channery silt loam, 15 to 25 percent slopes
- ClE: Clifftop channery silt loam, 25 to 35 percent slopes
- ClF: Clifftop channery silt loam, 35 to 70 percent slopes
- CnC: Clifftop channery silt loam, 3 to 15 percent slopes, very stony
- CnF: Clifftop channery silt loam, 35 to 70 percent slopes, very stony
- CtB: Cotaco silt loam, 3 to 8 percent slopes
- Cv: Craigsville gravelly sandy loam, 0 to 5 percent slopes (Nicholas); Cv: Craigsville gravelly loam, 0 to 5 percent slopes (Webster)
- DeC: Dekalb channery sandy loam, 3 to 15 percent slopes, extremely stony
- DeE: Dekalb channery sandy loam, 15 to 35 percent slopes, extremely stony
- DeF: Dekalb channery sandy loam, 35 to 70 percent slopes, extremely stony
- DrF: Dekalb-Rock outcrop complex, 35 to 70 percent slopes, extremely stony
- FeC: Fenwick silt loam, 8 to 15 percent slopes (Nicholas); FeC: Fenwick loam, 3 to 15 percent slopes, very stony (Webster)
- GPF: Gilpin-Pineville-Guyandotte association, very steep, extremely stony
- GbC: Gilpin silt loam, 8 to 15 percent slopes
- GbD: Gilpin silt loam, 15 to 25 percent slopes
- GbE: Gilpin silt loam, 25 to 35 percent slopes
- GcC: Gilpin silt loam, 3 to 15 percent slopes, very stony
- GdE: Gilpin-Dekalb complex, 15 to 35 percent slopes, extremely stony
- GIB: Gilpin silt loam, 3 to 8 percent slopes
- GIC: Gilpin-Lily complex, 8 to 15 percent slopes (Braxton); GIC: Gilpin silt loam, 8 to 15 percent slopes (Nicholas)
- GID: Gilpin silt loam, 15 to 25 percent slopes
- GIE: Gilpin silt loam, 25 to 35 percent slopes
- GnE: Gilpin silt loam, 15 to 35 percent slopes, very stony
- GnF: Gilpin silt loam, 35 to 70 percent slopes, very stony
- HiF: Highsplint channery silt loam, moist, 35 to 70 percent slopes, extremely stony
- ItF: Itmann channery loam, very steep
- KaF: Kaymine channery loam, very steep, extremely stony (Nicholas); KaF: Kaymine very channery silt loam, very steep, extremely stony (Webster)
- LaCm: Laidig channery silt loam, moist, 8 to 15 percent slopes
- LdEm: Laidig channery silt loam, moist, 15 to 35 percent slopes, extremely stony
- LIC: Lily loam, moist, 8 to 15 percent slopes (Nicholas); LIC: Lily loam, 8 to 15 percent slopes (Webster)
- LID: Lily loam, 15 to 25 percent slopes
- LIE: Lily loam, 25 to 35 percent slopes
- MoB: Monongahela silt loam, moist, 3 to 8 percent slopes
- PLF: Pineville-Gilpin-Guyandotte association, very steep, extremely stony
- Po: Pope loam, moist, 0 to 3 percent slopes, occasionally flooded
- Pp: Pope-Potomac complex, very cobbly
- Pr: Pope-Craigsville complex
- Ud: Udorthents, smoothed
- W: Water



MAPPING FOR VISUAL REPRESENTATION ONLY



POTESTA ENGINEERS AND ENVIRONMENTAL CONSULTANTS 7019 MacCorkie Avenue, S.E. Office: (304) 342-1400 Fax: (304) 343-9031 E-mail: potesta@potesta.com	SCALE: See Mapping	DRAWN: KBW
	DATE: AUGUST 2021	CHECKED: JLY
	PN: 001-17-4451016	APPROVED: JLY
	PROJECT: 2017-0451 MTP Elk River, Mountain View, WV C:\S\ElkRiver\South Fork Fishing Creek\Soil.mxd	
Cumulative Impact Assessment - Soil Upper Birch River (050500070401) Elk HUC 8 Watershed Nicholas and Webster Counties, West Virginia For Informational Purposes Only		
MOUNTAIN VALLEY PIPELINE, LLC 2200 Energy Drive, 2nd Floor Canonsburg, PA 15317		
FIGURE 134		

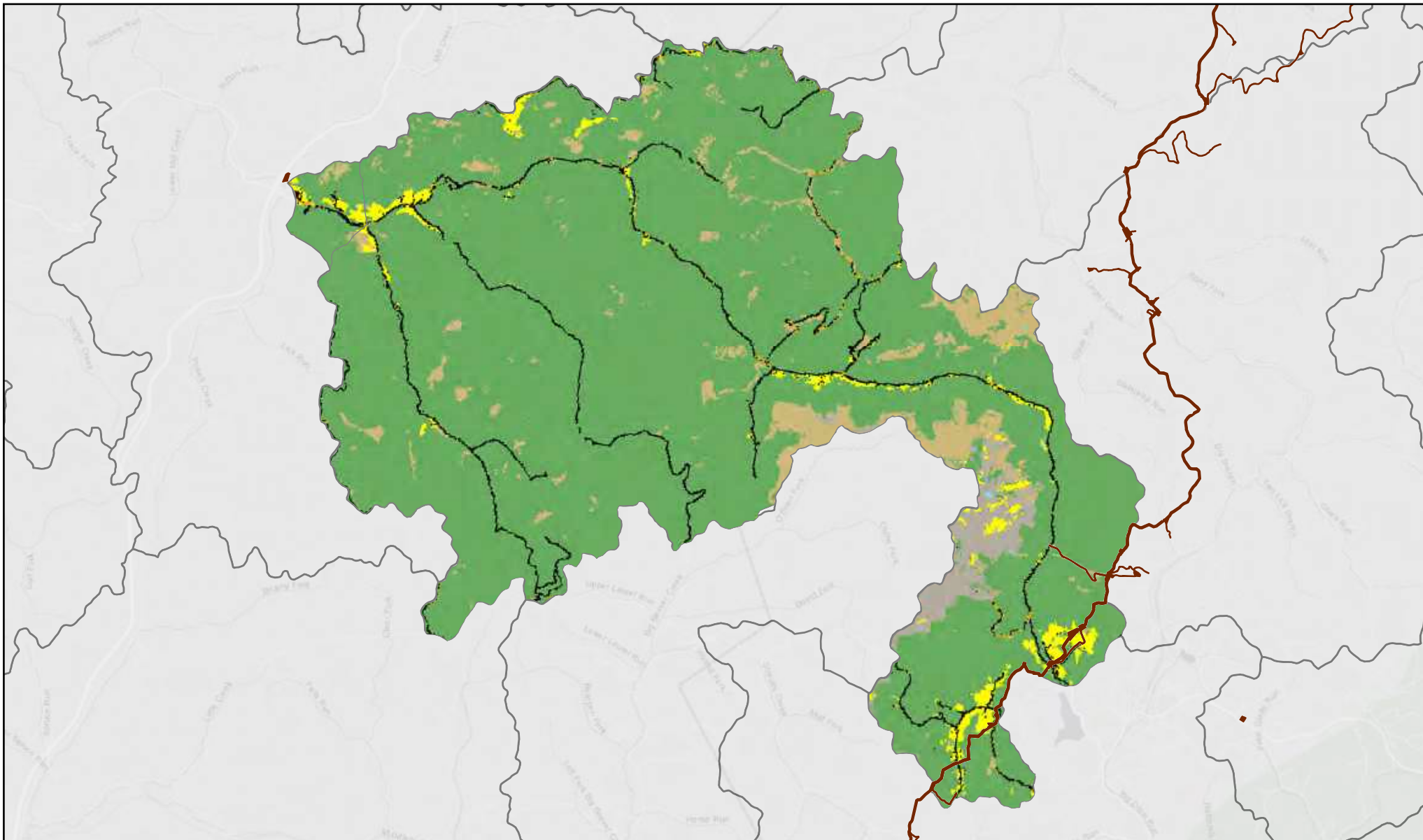
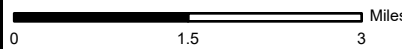


Figure: 135

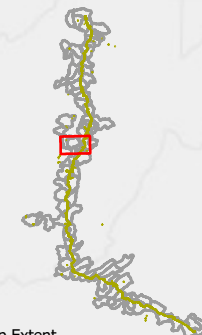
**Land Use/Land Cover 2011
Upper Birch River
050500070401 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:105,000



Map Extent

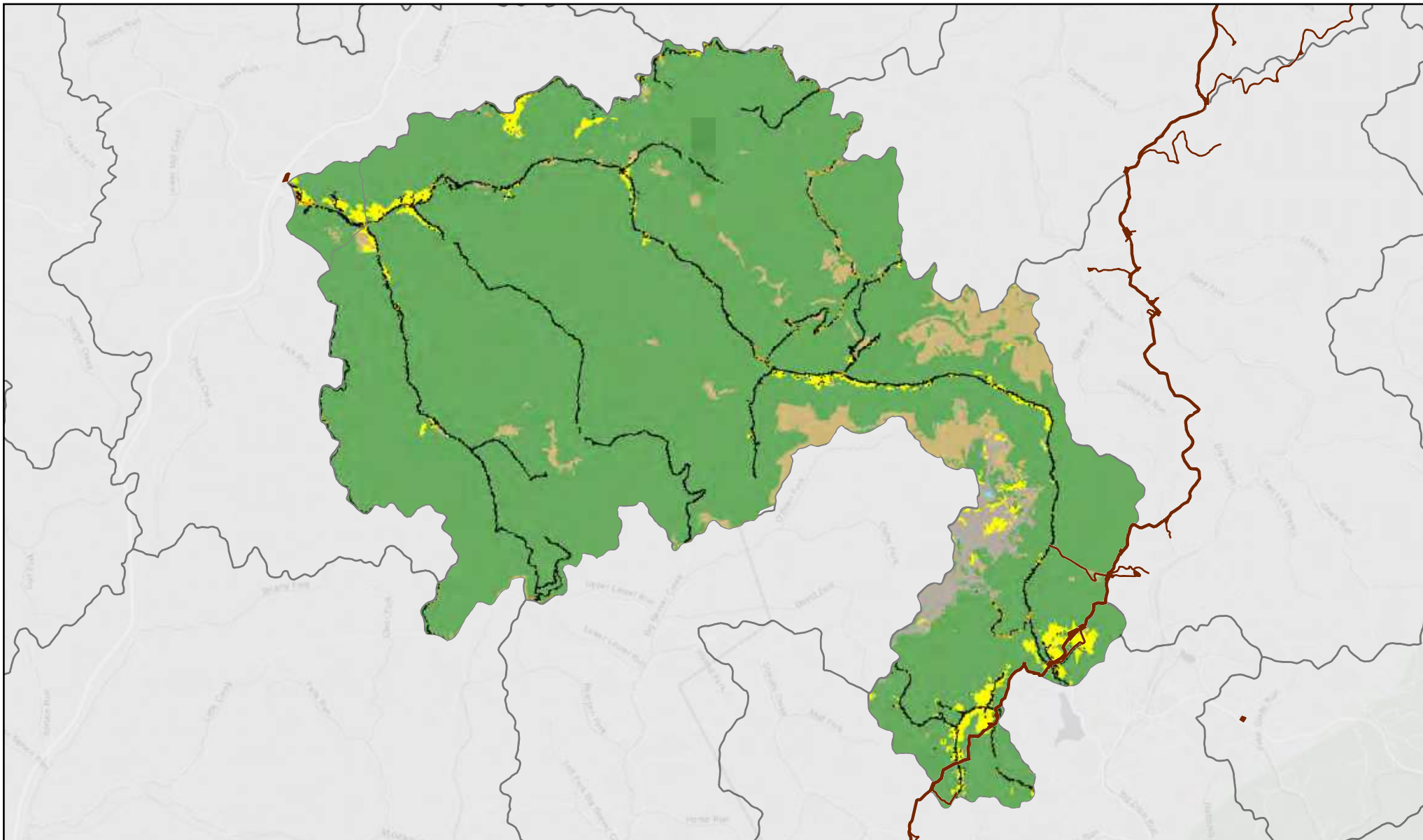


Figure: 136

**Land Use/Land Cover 2016
Upper Birch River
050500070401 HUC12 Watershed**

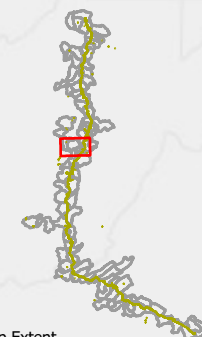
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

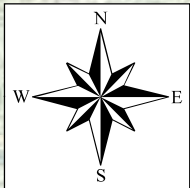


0 1.5 3 Miles

Scale: 1:105,000



Map Extent

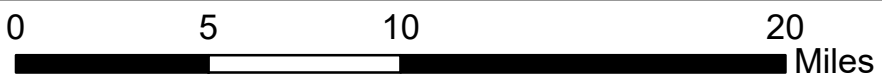


Legend

Mountain Valley Pipeline

12-digit HUC Watersheds

8-digit HUC Watershed



Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

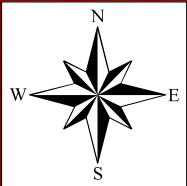
Cumulative Impact Assessment Report
Gauley Watershed
12-Digit HUC Watersheds
Multiple Counties, West Virginia
For Informational Purposes Only

MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
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E-mail: potesta@potesta.com

SCALE: 1" = 5 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
[Project/Map/Report Title]	



Legend

050500050303 Big Laurel Creek-Gauley River Watershed

Big Laurel Creek-Gauley River Watershed Total Stream - 2,550,891 Linear Feet

Mountain Valley Pipeline Big Laurel Creek-Gauley River

DEM

Value

High : 4479 ft

Low : 285 ft

Total Impacts - 851 Linear Feet (0.0338%)

MAPPING FOR VISUAL REPRESENTATION ONLY

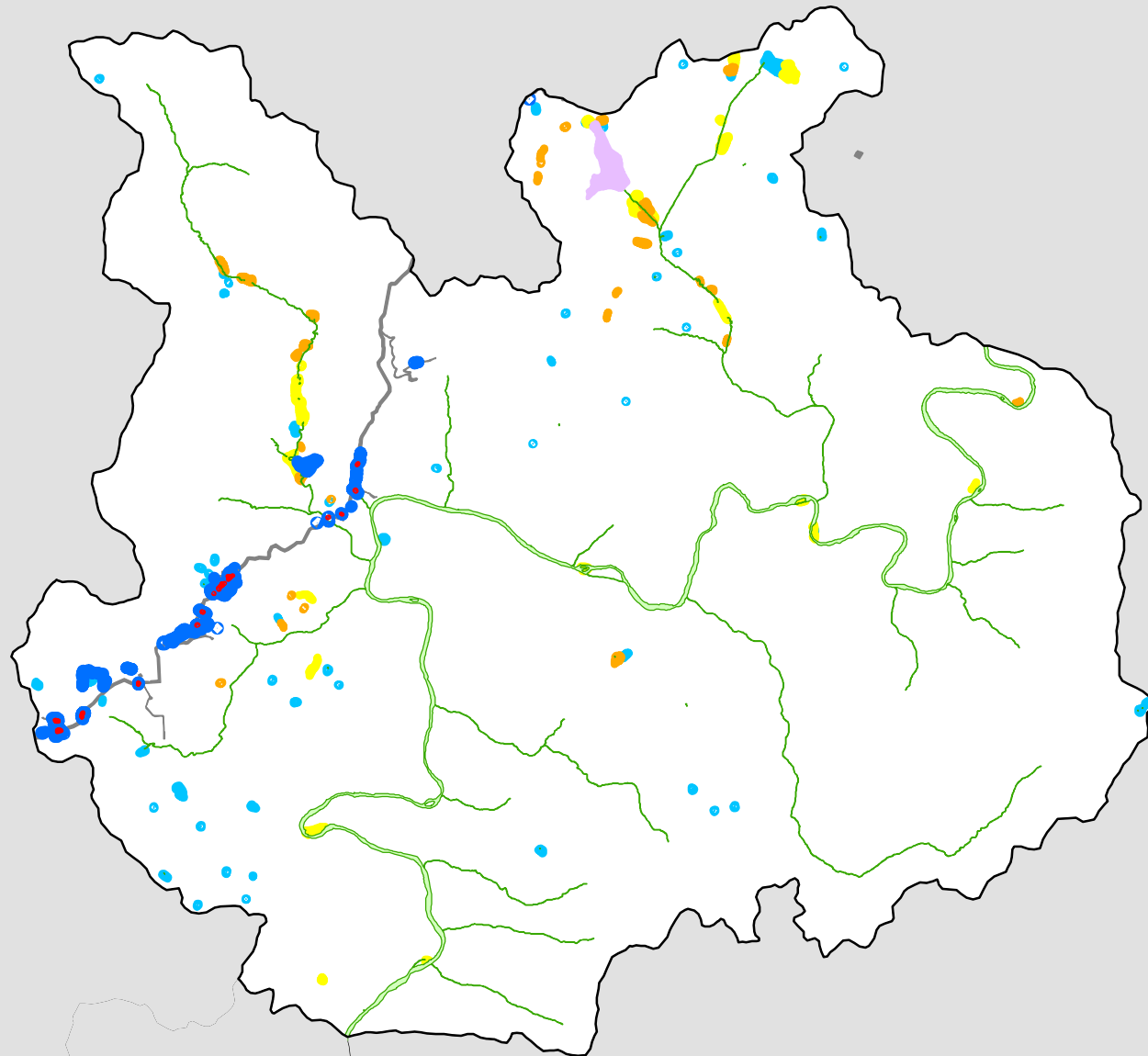
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Big Laurel Creek-Gauley River
Watershed (050500050303)
Gauley HUC 8 Watershed, West Virginia
For Informational Purposes Only

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Charleston, WV 25304
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E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
[Project/2017/17_081_MVP_Eng/Con_Monitoring/Map/2021/] CIA Subfigure 138- Big Laurel Creekhead	



Big Laurel Creek-Gauley River

Figure 139

1:95,000

LEGEND

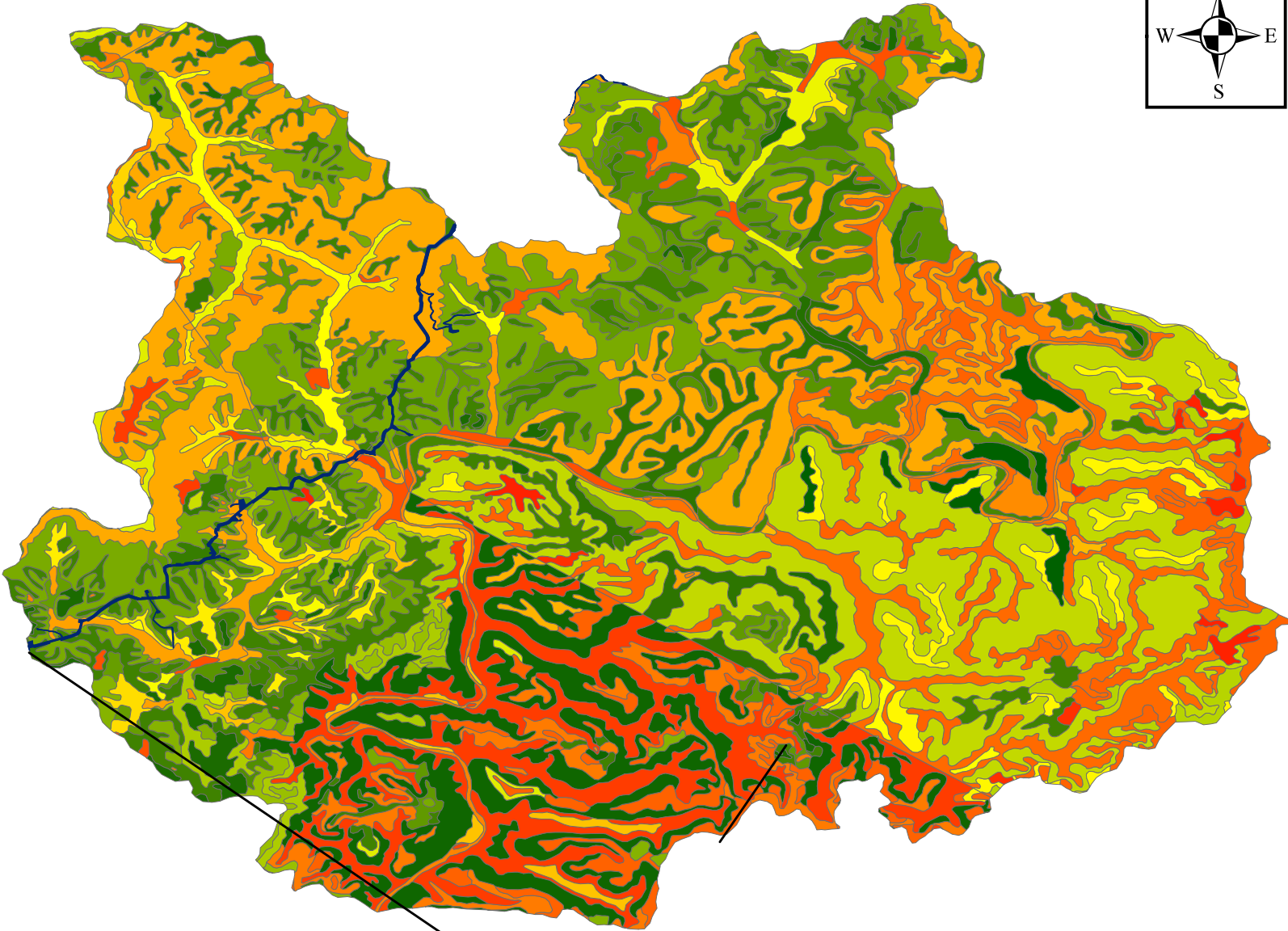
- Wetland Impacts - 0.74 acres
- Big Laurel Creek-Gauley River Delineated Wetland Area - 15.49 acres
- NWI Wetlands - 625.08 acres
- Freshwater Emergent Wetland - 18.96 acres
- Freshwater Forested/Shrub Wetland - 45.25 acres
- Freshwater Pond - 33.19 acres
- Lake - 65.84 acres
- Riverine - 461.84 acres
- Mountain Valley Pipeline
- 050500050303_Big Laurel Creek-Gauley River

Note: Shapes are not to scale, enlarged to improve visibility.

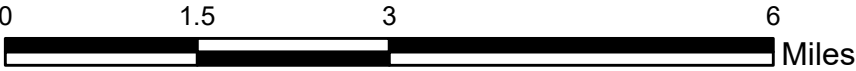
Legend

Mountain Valley Pipeline Big Laurel Creek-Gauley River
Big Laurel Creek-Gauley River Soil

- At: Atkins loam, moist, 0 to 3 percent slopes, frequently
- BuB: Buchanan loam, moist, 3 to 8 percent slopes
- BuC: Buchanan loam, moist, 8 to 15 percent slopes
- BuD: Buchanan loam, moist, 15 to 25 percent slopes
- BvC: Buchanan gravelly sandy loam, moist, 8 to 15 percent slopes, extremely stony
- BvE: Buchanan gravelly sandy loam, moist, 15 to 35 percent slopes, extremely stony
- CSF: Clifftop-Laidig association, very steep, extremely stony
- Ch: Chavies fine sandy loam, moist, 0 to 3 percent slopes, rarely flooded
- ChB: Chavies fine sandy loam, moist, 3 to 8 percent slopes, rarely flooded
- CIB: Clifftop channery silt loam, 3 to 8 percent slopes
- CIC: Clifftop channery silt loam, 8 to 15 percent slopes
- CID: Clifftop channery silt loam, 15 to 25 percent slopes
- CIE: Clifftop channery silt loam, 25 to 35 percent slopes
- CIF: Clifftop channery silt loam, 35 to 70 percent slopes
- CnC: Clifftop channery silt loam, 3 to 15 percent slopes, very stony
- CnE: Clifftop channery silt loam, 15 to 35 percent slopes, very stony
- CnF: Clifftop channery silt loam, 35 to 70 percent slopes, very stony
- CoF: Clifftop-Buchanan complex, 35 to 70 percent slopes, extremely stony
- CpE: Clifftop-Dekalb complex, 15 to 35 percent slopes, extremely stony
- CtB: Cotaco silt loam, 3 to 8 percent slopes
- Cv: Craigsville gravelly loam, 0 to 5 percent slopes
- DeC: Dekalb channery sandy loam, 3 to 15 percent slopes, extremely stony
- DeE: Dekalb channery sandy loam, 15 to 35 percent slopes, extremely stony
- DeF: Dekalb channery sandy loam, 35 to 70 percent slopes, extremely stony
- DkC: Dekalb channery sandy loam, 3 to 15 percent slopes, extremely stony
- DrF: Dekalb-Rock outcrop complex, 35 to 70 percent slopes, extremely stony
- Ed: Elkins silt loam, drained
- Ek: Elkins silt loam
- FeB: Fenwick silt loam, 3 to 8 percent slopes
- FeC: Fenwick loam, 3 to 15 percent slopes, very stony
- HLE: Highsplint-Laidig complex, moist, 15 to 35 percent slopes, extremely stony
- HiF: Highsplint channery silt loam, moist, 35 to 70 percent slopes, extremely stony
- KaB: Kaymine channery loam, 3 to 8 percent slopes, extremely stony
- KaF: Kaymine channery loam, very steep, extremely stony (Nicholas); KaF: Kaymine very channery silt loam, very steep, extremely stony (Webster)
- LaCm: Laidig channery silt loam, moist, 8 to 15 percent slopes
- LaDm: Laidig channery silt loam, moist, 15 to 25 percent slopes
- LdCm: Laidig channery silt loam, moist, 3 to 15 percent slopes, extremely stony
- LdEm: Laidig channery silt loam, moist, 15 to 35 percent slopes, extremely stony
- LgEm: Laidig channery silt loam, moist, 8 to 35 percent slopes, rubbly
- LIB: Lily loam, moist, 3 to 8 percent slopes
- LIC: Lily loam, moist, 8 to 15 percent slopes (Nicholas); LIC: Lily loam, 8 to 15 percent slopes (Webster)
- LID: Lily loam, 15 to 25 percent slopes
- LIE: Lily loam, 25 to 35 percent slopes
- PLF: Pineville-Gilpin-Guyandotte association, very steep, extremely stony
- Pe: Philo-Pope complex, moist, 0 to 3 percent slopes, occasionally flooded
- PfG: Pineville-Clifftop complex, 55 to 70 percent slopes, extremely stony
- Po: Pope loam, moist, 0 to 3 percent slopes, occasionally flooded
- Pp: Pope-Potomac complex, very cobbly
- Pr: Pope-Craigsville complex
- Pu: Purdy silt loam, 0 to 5 percent slopes
- Ud: Udorthents, smoothed
- W: Water



MAPPING FOR VISUAL REPRESENTATION ONLY



SCALE: See Mapping	DRAWN: KBW
DATE: JUNE 2022	CHECKED: JLY
PN: 001-17-0451.016	APPROVED: JLY
[U:\proj\2017_0451_MVP_Eng\Com_MountainVgMap\2021\CLG_Soils\Figure 140- Big Laurel Creek-Gauley River Soil.mxd]	

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Canonsburg, PA 15317

Cumulative Impact Assessment - Soil
Big Laurel Creek-Gauley River (050500050303)
Gauley HUC 8 Watershed
Nicholas and Webster Counties, West Virginia
For Informational Purposes Only

FIGURE 140

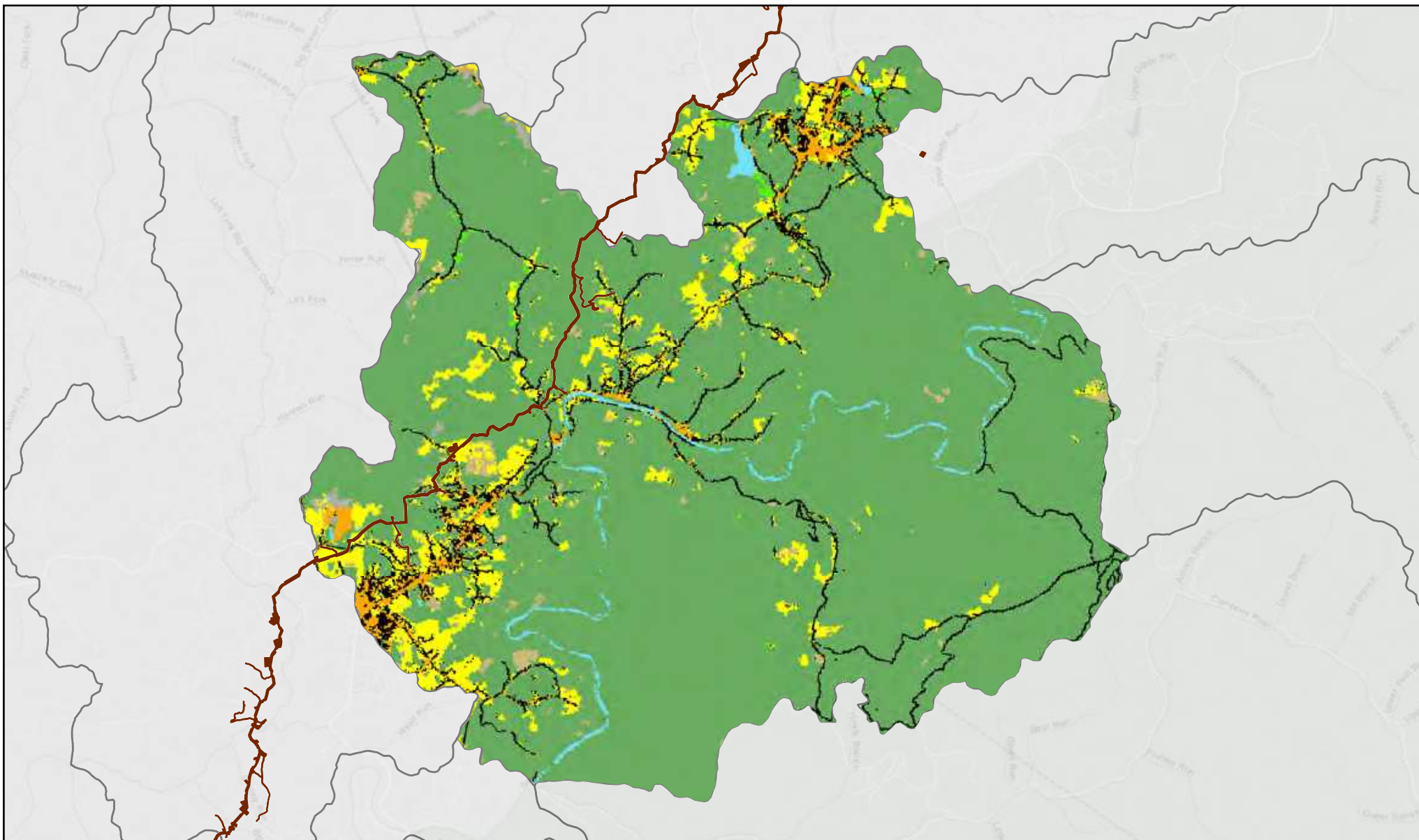
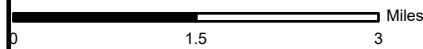


Figure: 141

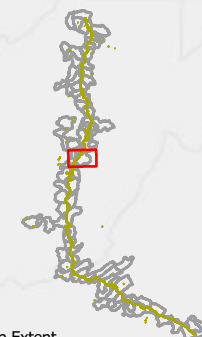
**Land Use/Land Cover 2011
Big Laurel Creek-Gauley River
050500050303 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:100,000



Map Extent

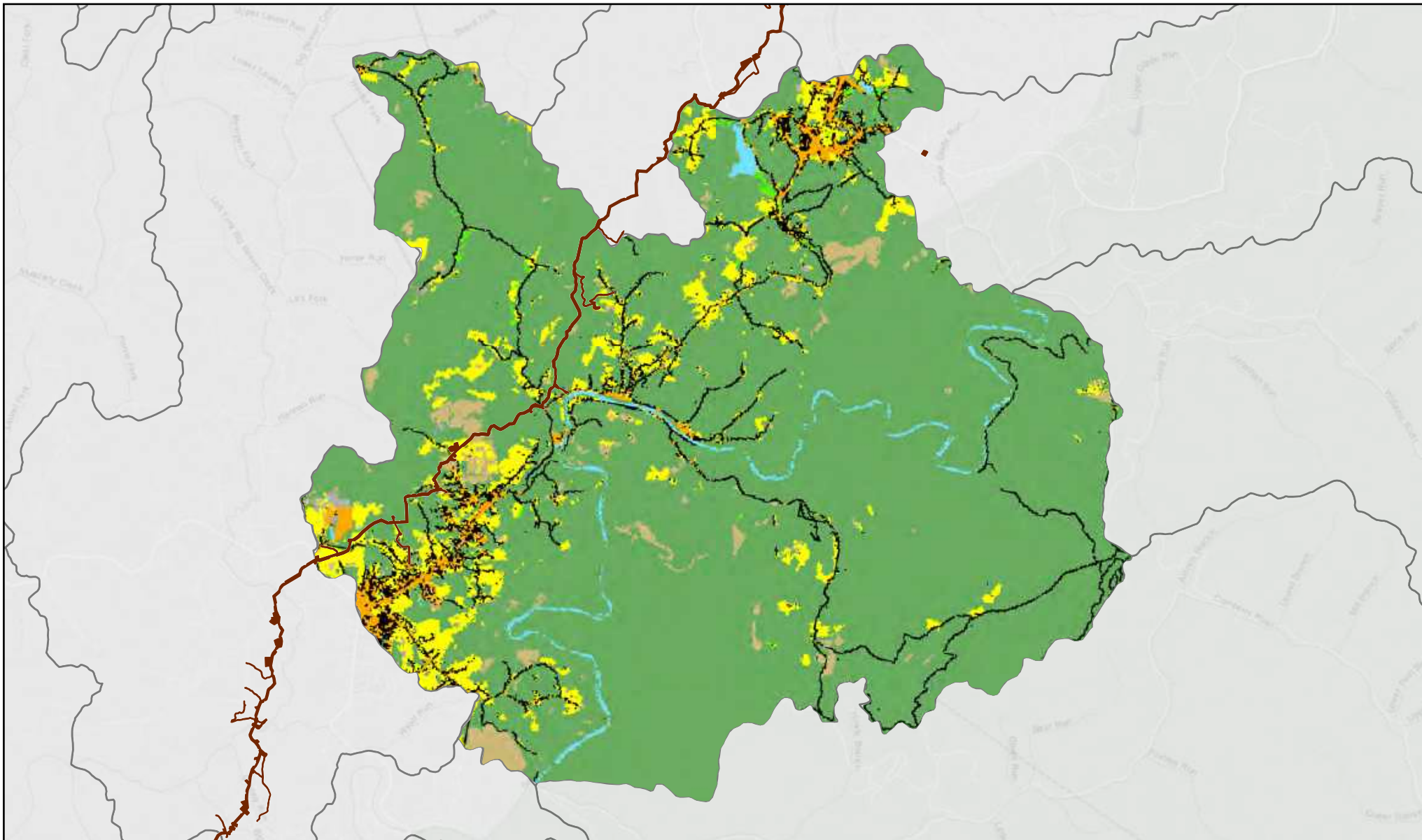
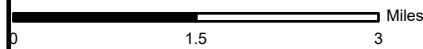


Figure: 142

**Land Use/Land Cover 2016
Big Laurel Creek-Gauley River
050500050303 HUC12 Watershed**

LEGEND

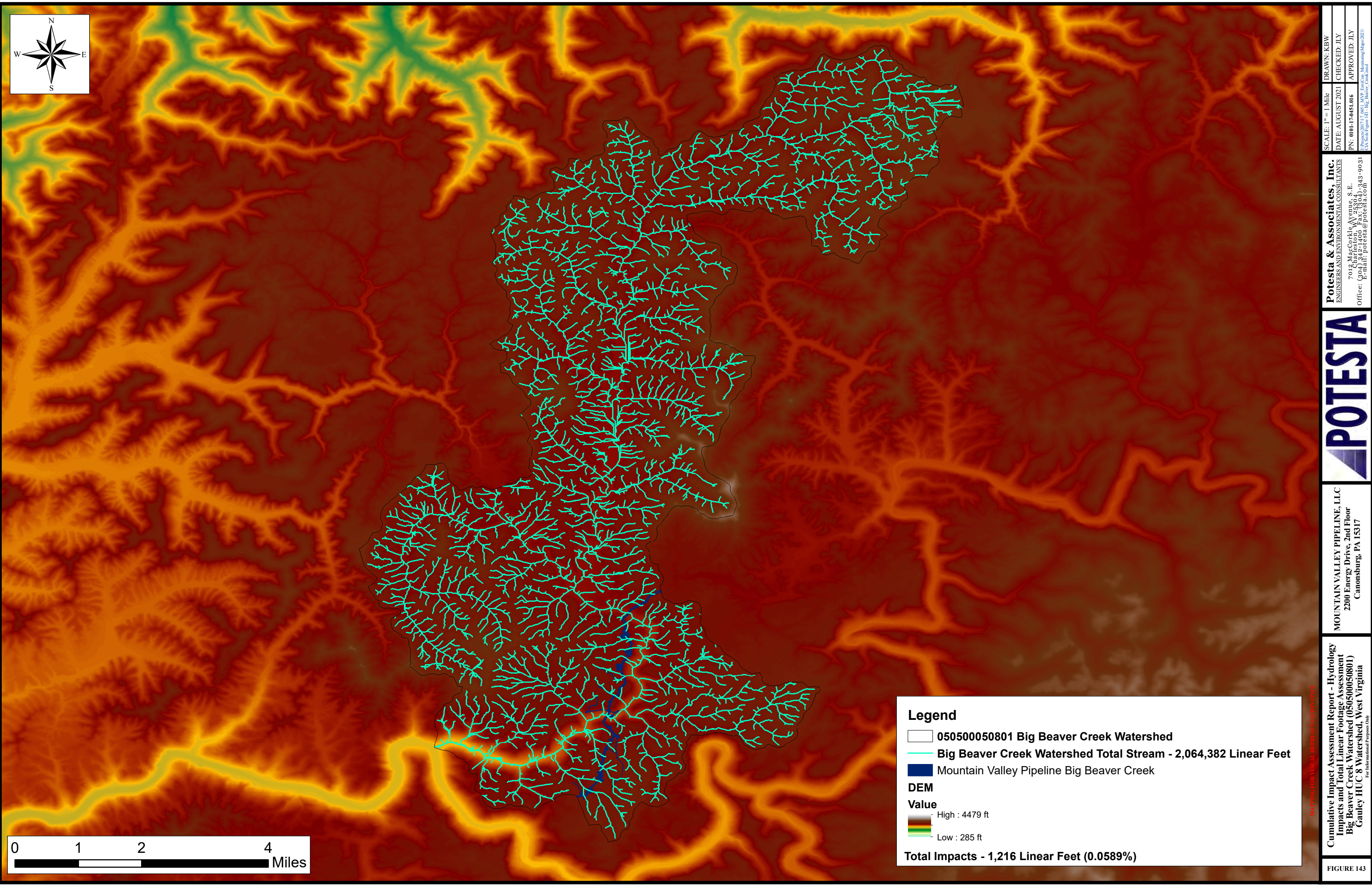
- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover**
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:100,000



Map Extent



Legend

- 050500050801 Big Beaver Creek Watershed
- Big Beaver Creek Watershed Total Stream - 2,064,382 Linear Feet
- Mountain Valley Pipeline Big Beaver Creek

DEM

Value
High : 4479 ft
Low : 285 ft

Total Impacts - 1,216 Linear Feet (0.0589%)

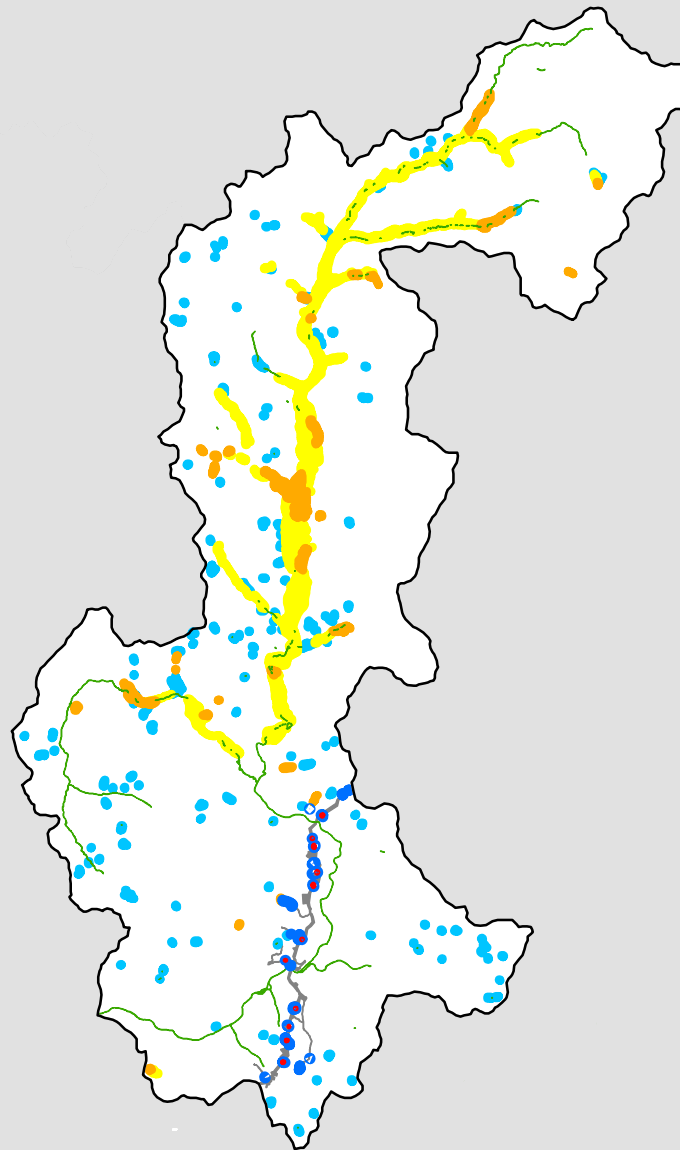
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Big Beaver Creek Watershed (050500050801)
Gauley HUC 8 Watershed, West Virginia

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Canonsburg, PA 15317



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E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-P74451.06	APPROVED: JLY
[Project 2017] 0851 MVP EnvCon Monitoring Map 2021 CIA Subfigure H3 - Big Beaver Creek and	



Big Beaver Creek

Figure 144

1:130,000

LEGEND

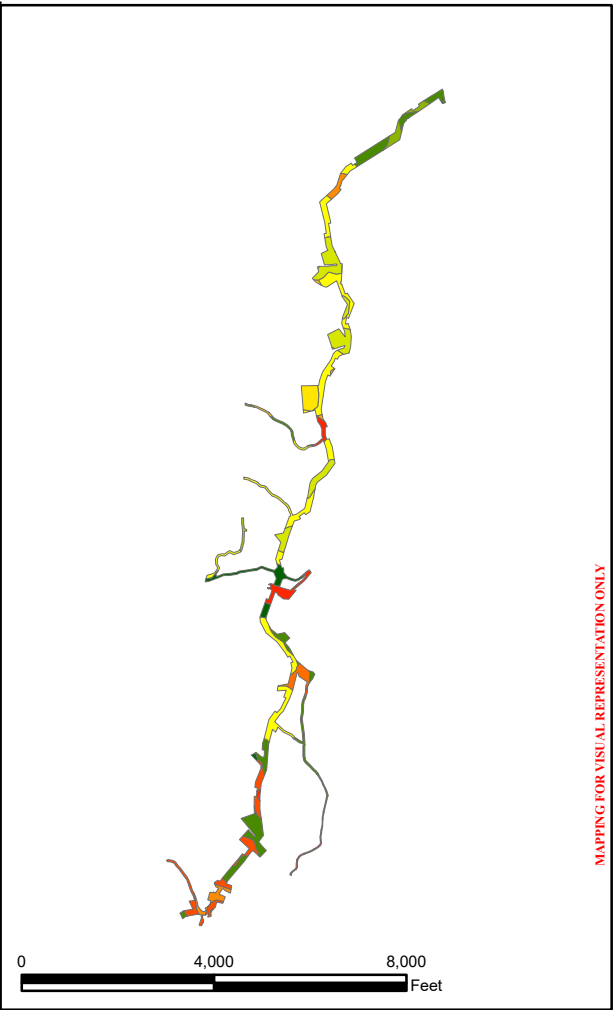
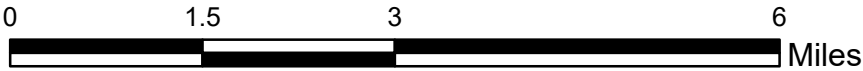
- Wetland Impacts - 0.39 acres
- Big Beaver Creek Delineated Wetland Area - 2.93 acres
- NWI Wetlands - 809.5 acres
- Freshwater Emergent Wetland - 102.39 acres
- Freshwater Forested/Shrub Wetland - 569.46 acres
- Freshwater Pond - 72.55 acres
- Riverine - 65.1 acres
- Mountain Valley Pipeline
- 050500050801_Big Beaver Creek

Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Big Beaver Creek
Big Beaver Creek Soil

- BuB: Buchanan loam, moist, 3 to 8 percent slopes
- BuC: Buchanan loam, moist, 8 to 15 percent slopes
- BuD: Buchanan loam, moist, 15 to 25 percent slopes
- BvC: Buchanan gravelly sandy loam, moist, 8 to 15 percent slopes, extremely stony
- BvE: Buchanan gravelly sandy loam, moist, 15 to 35 percent slopes, extremely stony
- CeF: Cedar creek channery loam, very steep, extremely stony (Nicholas); CeF: Cedar creek very channery loam, very steep, extremely stony (Webster)
- CIB: Cliff top channery silt loam, 3 to 8 percent slopes
- CIC: Cliff top channery silt loam, 8 to 15 percent slopes
- CID: Cliff top channery silt loam, 15 to 25 percent slopes
- CIE: Cliff top channery silt loam, 25 to 35 percent slopes
- CIF: Cliff top channery silt loam, 35 to 70 percent slopes
- CnC: Cliff top channery silt loam, 3 to 15 percent slopes, very stony
- CnE: Cliff top channery silt loam, 15 to 35 percent slopes, very stony
- CnF: Cliff top channery silt loam, 35 to 70 percent slopes, very stony
- CoF: Cliff top-Buchanan complex, 35 to 70 percent slopes, extremely stony
- CpE: Cliff top-Dekalb complex, 15 to 35 percent slopes, extremely stony
- CtB: Cotaco silt loam, 3 to 8 percent slopes
- Cv: Craigsville gravelly sandy loam, 0 to 5 percent slopes
- DeC: Dekalb channery sandy loam, 3 to 15 percent slopes, extremely stony
- DeE: Dekalb channery sandy loam, 15 to 35 percent slopes, extremely stony
- DeF: Dekalb channery sandy loam, 35 to 70 percent slopes, extremely stony
- DrF: Dekalb-Rock outcrop complex, 35 to 70 percent slopes, extremely stony
- Ed: Elkins silt loam, drained
- Ek: Elkins silt loam
- Ep: Elkins silt loam, ponded
- FeB: Fenwick silt loam, 3 to 8 percent slopes
- FeC: Fenwick silt loam, 8 to 15 percent slopes (Nicholas); FeC: Fenwick loam, 3 to 15 percent slopes, very stony (Webster)
- FvB: Fiveblock channery sandy loam, 3 to 8 percent slopes, extremely stony
- FvF: Fiveblock channery sandy loam, very steep, extremely stony
- GbC: Gilpin silt loam, 8 to 15 percent slopes
- GbE: Gilpin silt loam, 25 to 35 percent slopes
- GdE: Gilpin-Dekalb complex, 15 to 35 percent slopes, extremely stony
- GIC: Gilpin silt loam, 8 to 15 percent slopes
- GID: Gilpin silt loam, 15 to 25 percent slopes
- GIE: Gilpin silt loam, 25 to 35 percent slopes
- GnE: Gilpin silt loam, 15 to 35 percent slopes, very stony
- HLE: Highsplint-Laidig complex, moist, 15 to 35 percent slopes, extremely stony
- HiF: Highsplint channery silt loam, moist, 35 to 70 percent slopes, extremely stony (Nicholas); HiF: Highsplint channery silt loam, moist, 35 to 70 percent slopes, extremely stony (Webster)
- ItF: Itmann channery sandy loam, very steep
- KaB: Kaymine channery loam, 3 to 8 percent slopes, extremely stony
- KaF: Kaymine channery loam, very steep, extremely stony (Nicholas); KaF: Kaymine very channery silt loam, very steep, extremely stony (Webster)
- LaCm: Laidig channery silt loam, moist, 8 to 15 percent slopes
- LdEm: Laidig channery silt loam, moist, 15 to 35 percent slopes, extremely stony
- LIB: Lily loam, moist, 3 to 8 percent slopes
- LIC: Lily loam, moist, 8 to 15 percent slopes (Nicholas); LIC: Lily loam, 8 to 15 percent slopes (Webster)
- LID: Lily loam, 15 to 25 percent slopes
- LIE: Lily loam, 25 to 35 percent slopes
- PLF: Pineville-Gilpin-Guyandotte association, very steep, extremely stony
- Pe: Philo-Pope complex, moist, 0 to 3 percent slopes, occasionally flooded
- Pu: Purdy silt loam, 0 to 5 percent slopes
- Ud: Udorthents, smoothed
- W: Water



Cumulative Impact Assessment - Soil
Big Beaver Creek (050500050801)
Gauley HUC 8 Watershed
Nicholas and Webster Counties, West Virginia
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FIGURE 145

MOUNTAIN VALLEY PIPELINE, LLC
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(304) 342-1400 Fax: (304) 343-9031
Office: E-mail: potesta@potesta.com

SCALE: See Mapping
DATE: December 2021
PN: 001-17-4451016
APPROVED: JLY
CHECKED: JLY
DRAWN: KBW

001-17-4451016
APPROVED: JLY
CHECKED: JLY
DRAWN: KBW

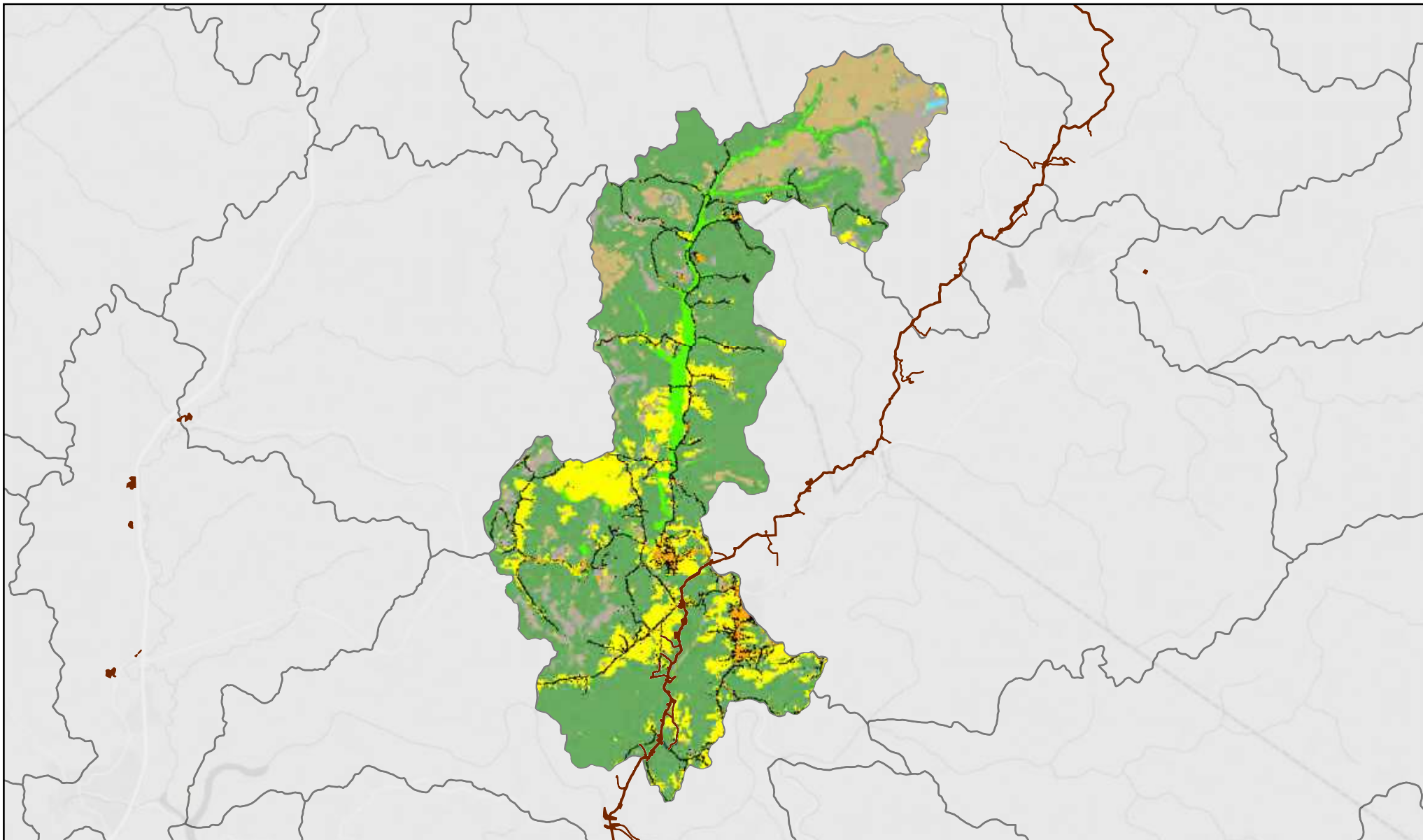
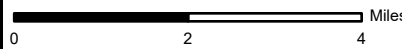


Figure: 146

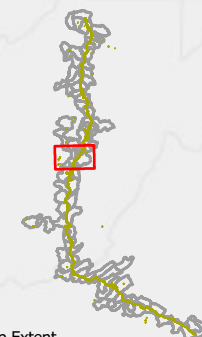
**Land Use/Land Cover 2011
Big Beaver Creek
050500050801 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:140,000



Map Extent

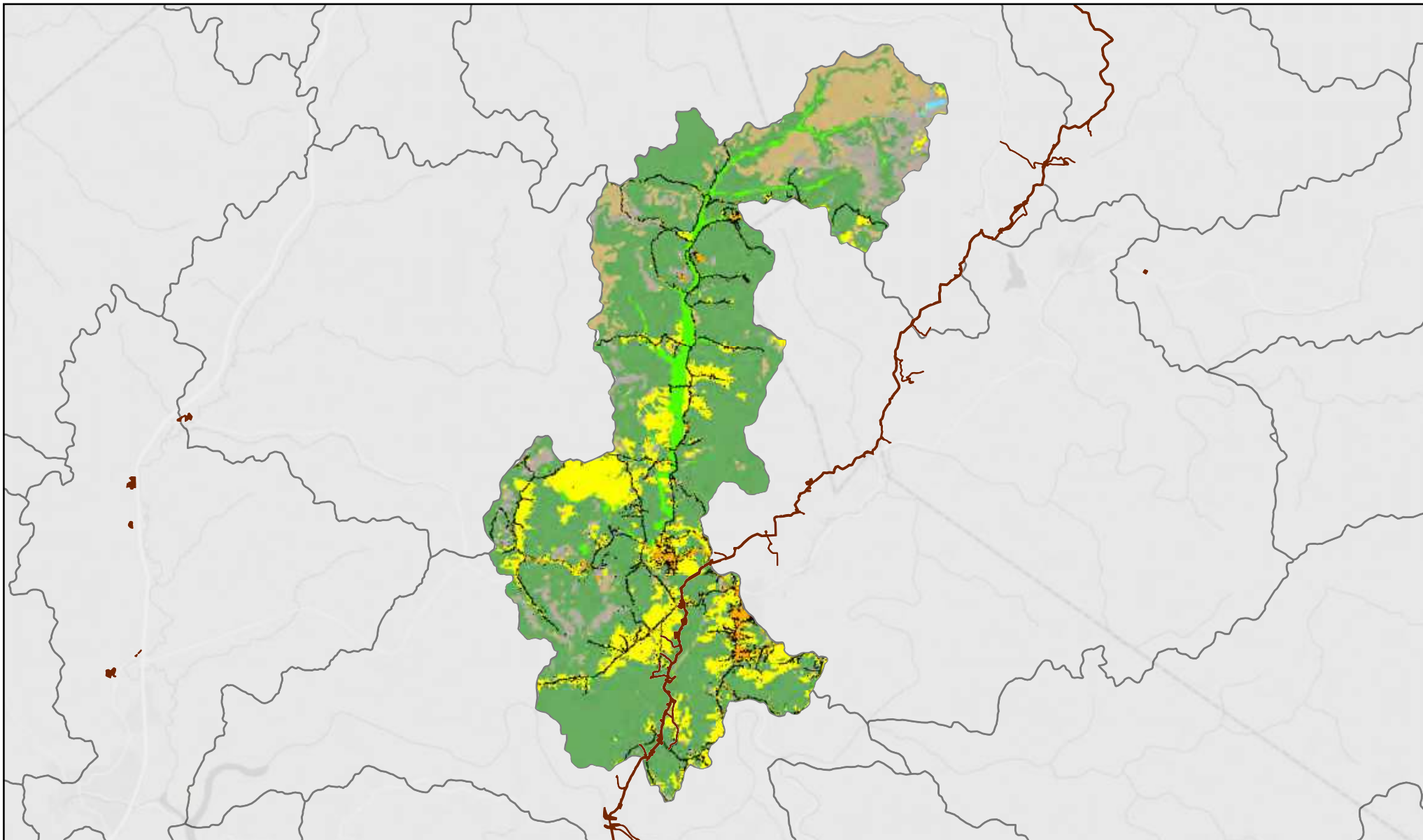


Figure: 147

**Land Use/Land Cover 2016
Big Beaver Creek
050500050801 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

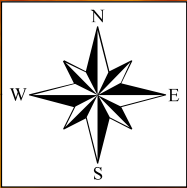


0 2 4 Miles

Scale: 1:140,000



Map Extent



Legend

050500050804 Panther Creek-Gauley River Watershed

Summersville Lake (Excluded)

Panther Creek-Gauley River Watershed Total Stream - 1,758,427 Linear Feet

Mountain Valley Pipeline Panther Creek-Gauley River

DEM

Value

High : 4479 ft

Low : 285 ft

Total Impacts - 604 Linear Feet (0.0343%)



MAP PREPARED FOR MOUNTAIN VALLEY PIPELINE, LLC

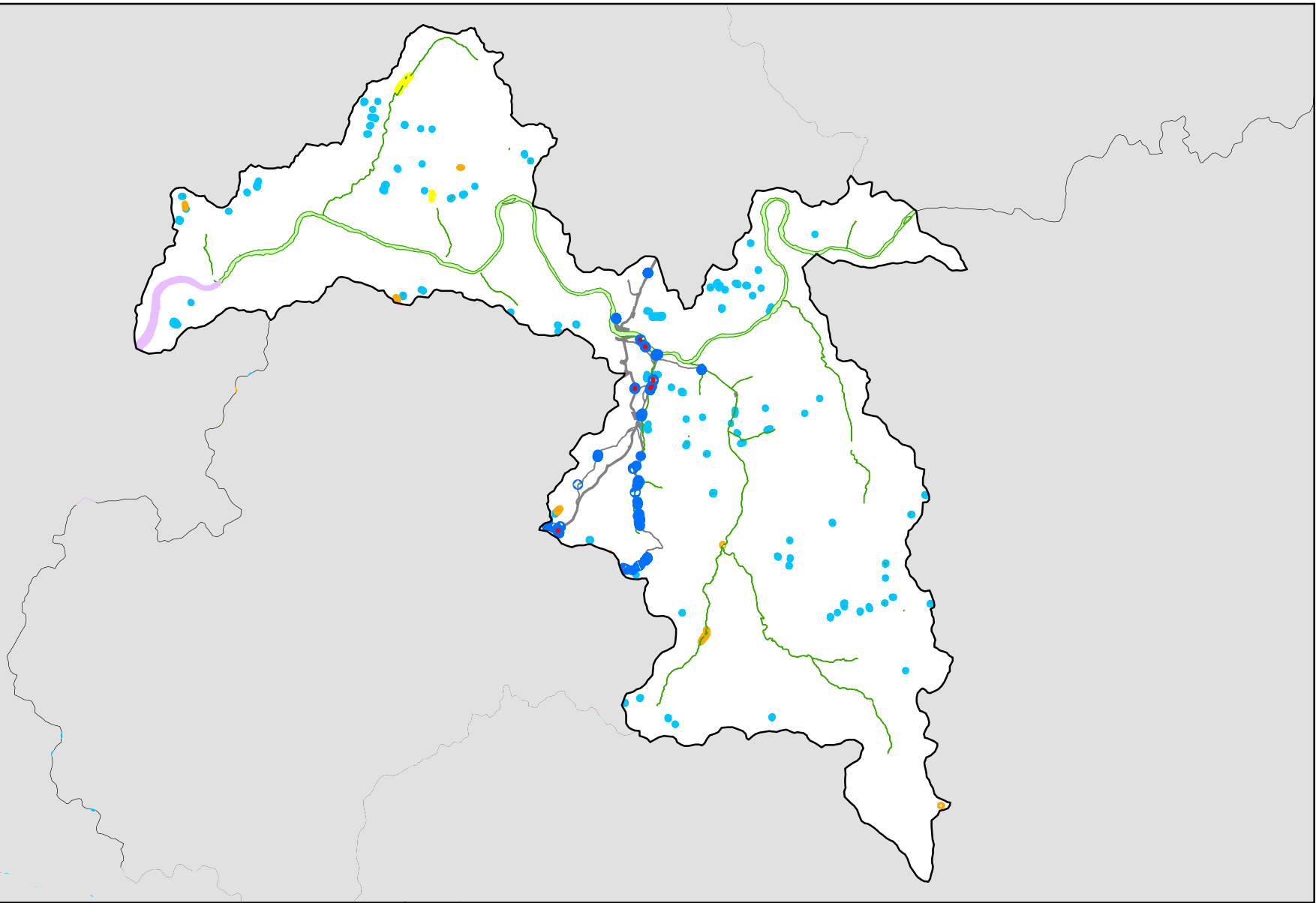
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Panther Creek-Gauley River
Watershed (050500050804)
Gauley HUC 8 Watershed, West Virginia
For Informational Purpose Only

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Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) -343-9031
E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
E:\Projects\201717_081_MVP_EngCom_Monitoring\Map\2021_CIA_Subs\Figure 148 - Panther Creek.mxd	



Panther Creek-Gauley River

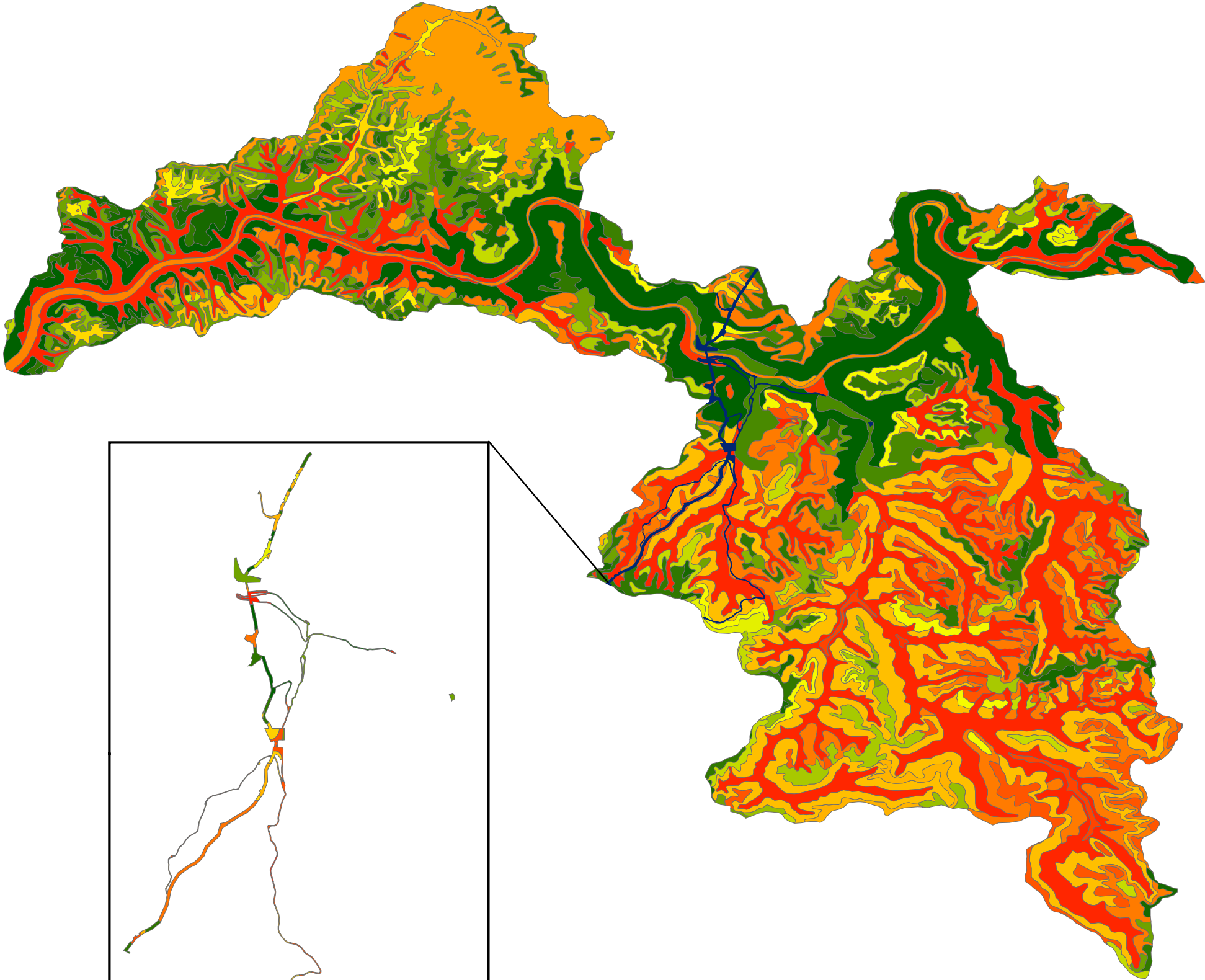
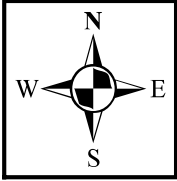
Figure 149

1:130,000

LEGEND

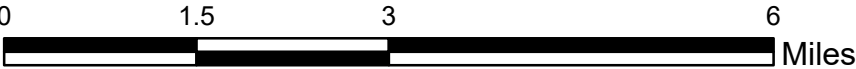
- Wetland Impacts - 0.22 acres
- Panther Creek-Gauley River Delineated Wetland Area - 2.04 acres
- NWI Wetlands - 688.3 acres
- Freshwater Emergent Wetland - 3.85 acres
- Freshwater Forested/Shrub Wetland - 6.18 acres
- Freshwater Pond - 33.81 acres
- Lake - 98.92 acres
- Riverine - 545.54 acres
- Mountain Valley Pipeline
- 050500050804_Panther Creek-Gauley River

Note: Shapes are not to scale, enlarged to improve visibility.



Legend

- Mountain Valley Pipeline Panther Creek-Gauley River**
- Panther Creek-Gauley River Soil**
- BuB: Buchanan loam, moist, 3 to 8 percent slopes
 - BuC: Buchanan loam, moist, 8 to 15 percent slopes
 - BuD: Buchanan loam, moist, 15 to 25 percent slopes
 - BvC: Buchanan gravelly sandy loam, moist, 8 to 15 percent slopes, extremely stony
 - BvE: Buchanan gravelly sandy loam, moist, 15 to 35 percent slopes, extremely stony
 - ChB: Chavies fine sandy loam, moist, 3 to 8 percent slopes, rarely flooded
 - CIB: Clifftop channery silt loam, 3 to 8 percent slopes
 - CIC: Clifftop channery silt loam, 8 to 15 percent slopes
 - CID: Clifftop channery silt loam, 15 to 25 percent slopes
 - CIE: Clifftop channery silt loam, 25 to 35 percent slopes
 - CnC: Clifftop channery silt loam, 3 to 15 percent slopes, very stony
 - CnE: Clifftop channery silt loam, 15 to 35 percent slopes, very stony
 - CnF: Clifftop channery silt loam, 35 to 70 percent slopes, very stony
 - CoF: Clifftop-Buchanan complex, 35 to 70 percent slopes, extremely stony
 - CtB: Cotaco silt loam, 3 to 8 percent slopes
 - Cv: Craigsville gravelly sandy loam, 0 to 5 percent slopes
 - DeC: Dekalb channery sandy loam, 3 to 15 percent slopes, extremely stony
 - DeE: Dekalb channery sandy loam, 15 to 35 percent slopes, extremely stony
 - DeF: Dekalb channery sandy loam, 35 to 70 percent slopes, extremely stony
 - Ed: Elkins silt loam, drained
 - Ep: Elkins silt loam, ponded
 - FeB: Fenwick silt loam, 3 to 8 percent slopes
 - FeC: Fenwick silt loam, 8 to 15 percent slopes
 - FvB: Fiveblock channery sandy loam, 3 to 8 percent slopes, extremely stony
 - HLE: Highsplint-Laidig complex, moist, 15 to 35 percent slopes, extremely stony
 - HiF: Highsplint channery silt loam, moist, 35 to 70 percent slopes, extremely stony
 - ItF: Itmann channery sandy loam, very steep
 - KaF: Kaymine channery loam, very steep, extremely stony
 - LIB: Lily loam, moist, 3 to 8 percent slopes
 - LIC: Lily loam, moist, 8 to 15 percent slopes
 - LID: Lily loam, 15 to 25 percent slopes
 - LIE: Lily loam, 25 to 35 percent slopes
 - Pr: Pope-Craigsville complex
 - Pu: Purdy silt loam, 0 to 5 percent slopes
 - Ud: Udorthents, smoothed
 - W: Water



MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment - Soil
Panther Creek-Gauley River
Gauley HUC 8 Watershed
Nicholas County, West Virginia
For Informational Purposes Only

MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317



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7019 MacCorkie Avenue, S.E.
(304) 342-1400 Fax: (304) 343-9031
Office: E-mail: potesta@potesta.com

SCALE: See Mapping
DATE: December 2021
DRAWN: KBW
CHECKED: JLY
APPROVED: JLY
FIGURE 150: Panther Creek-Gauley River Soil

FIGURE 150

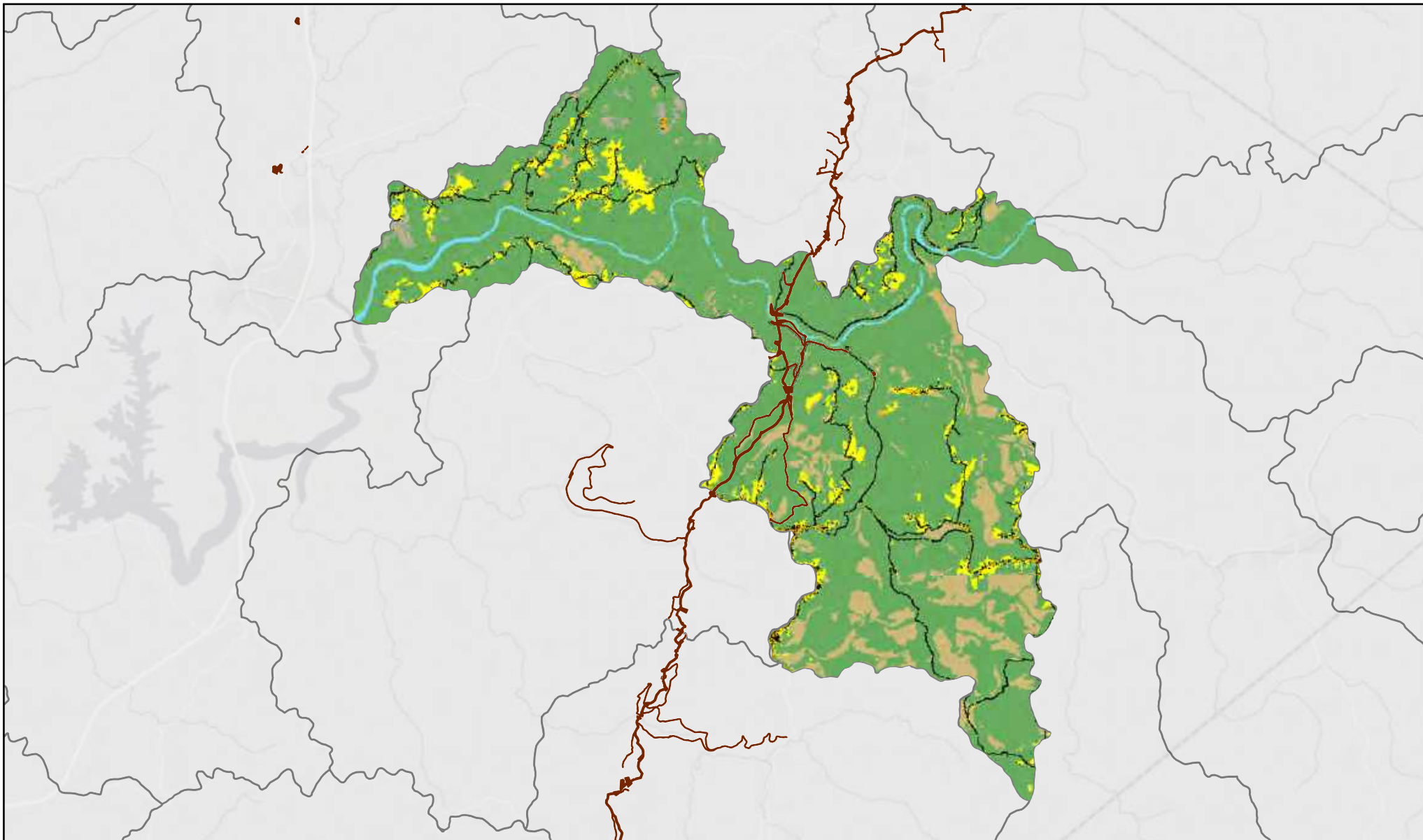


Figure: 151

**Land Use/Land Cover 2011
Panther Creek-Gauley River
050500050804 HUC12 Watershed**

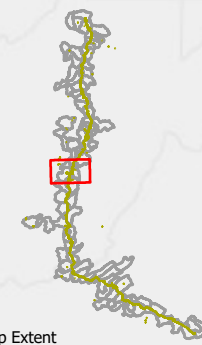
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

0 2 4 Miles



Scale: 1:140,000



Map Extent

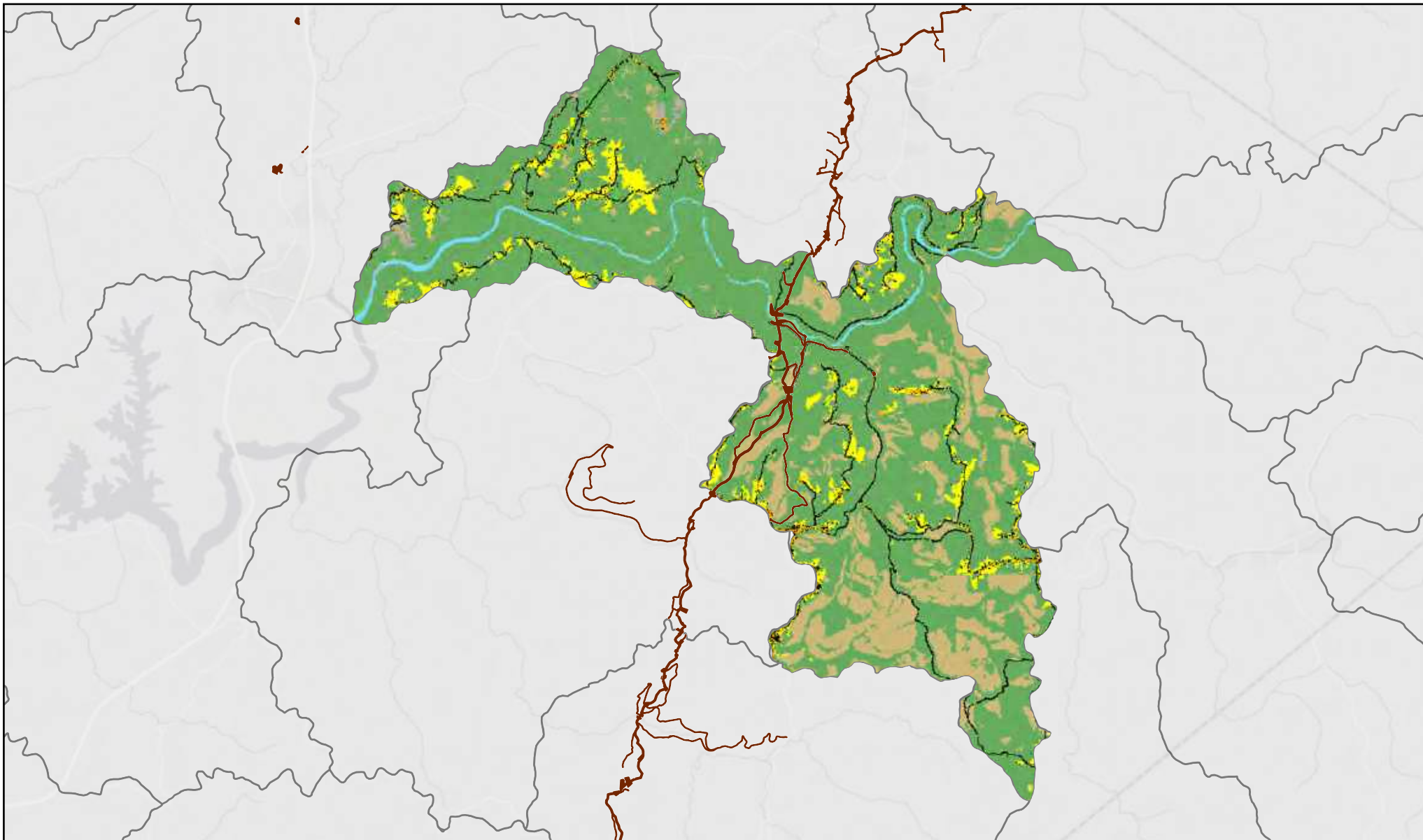


Figure: 152

**Land Use/Land Cover 2016
Panther Creek-Gauley River
050500050804 HUC12 Watershed**

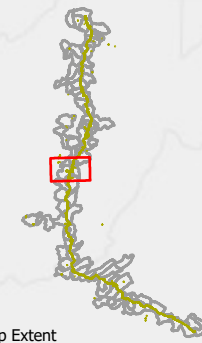
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



0 2 4 Miles

Scale: 1:140,000



Map Extent



Legend

050500050502 Outlet Hominy Creek Watershed

Outlet Hominy Creek Watershed Total Stream - 2,272,489 Linear Feet**DEM****Value**

High : 4479 ft

Low : 285 ft

Total Impacts - 782 Linear Feet (0.0344%)

MAPS AND VISUAL REPRESENTATION ONLY

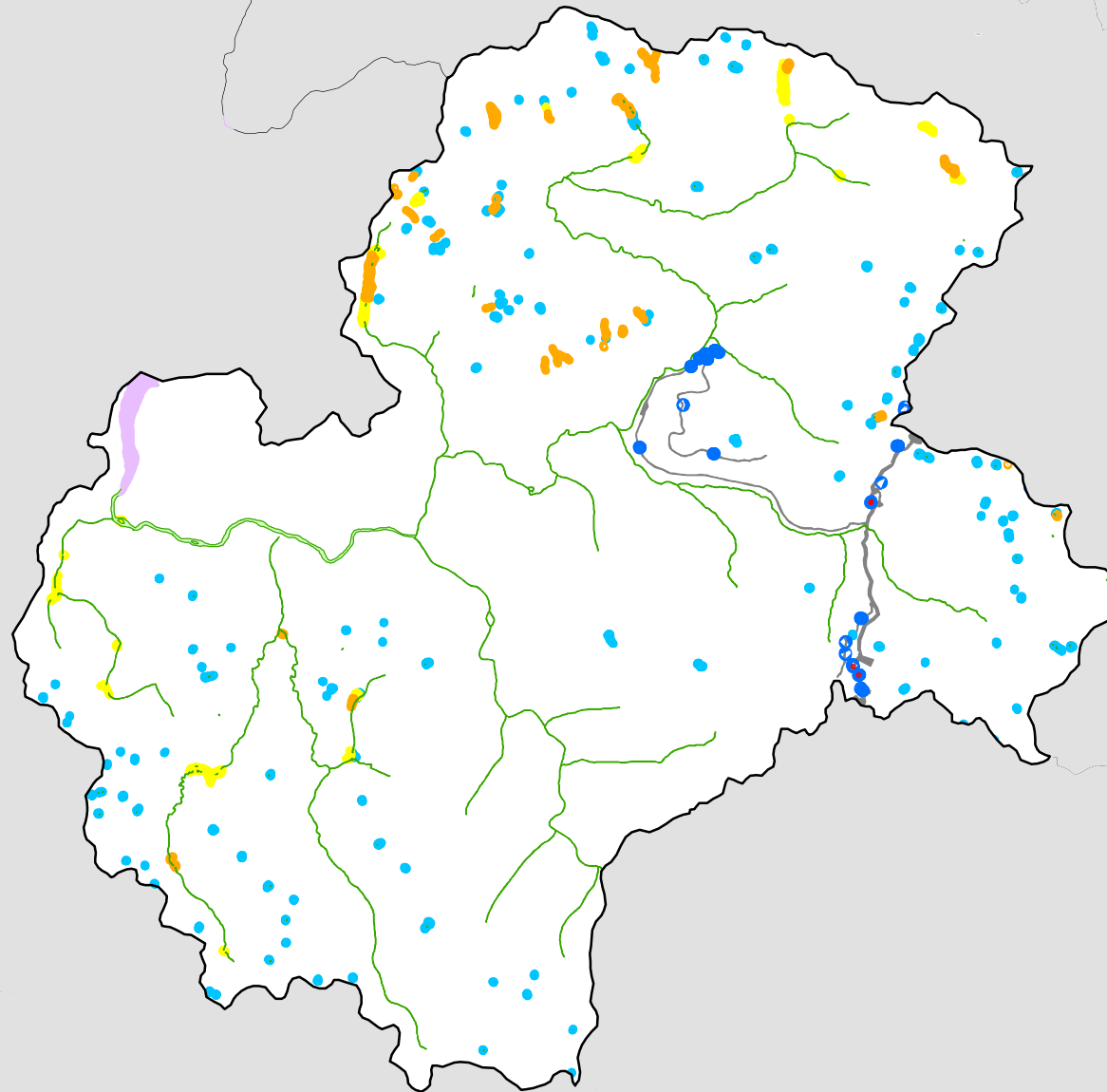
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Outlet Hominy Creek Watershed (050500050502)
Gauley HUC 8 Watershed, West Virginia

MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317



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7012 MacCortle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.06	APPROVED: JLY
J:\Projects\201717_0451_MVP_EIS\Con_Monitoring_Map\2021 C:\Siskel\gare\153_Outlet_Hominy_Check.mxd	



Outlet Hominy Creek

Figure 154

1:100,000

LEGEND

- Wetland Impacts - 0.02 acres
- Outlet Hominy Creek Delineated Wetland Area - 0.52 acres
- NWI Wetlands - 391.57 acres
- Freshwater Emergent Wetland - 28.08 acres
- Freshwater Forested/Shrub Wetland - 33.48 acres
- Freshwater Pond - 48.33 acres
- Lake - 75.37 acres
- Riverine - 206.32 acres
- Mountain Valley Pipeline
- 050500050502_Outlet Hominy Creek

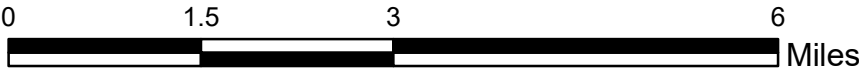
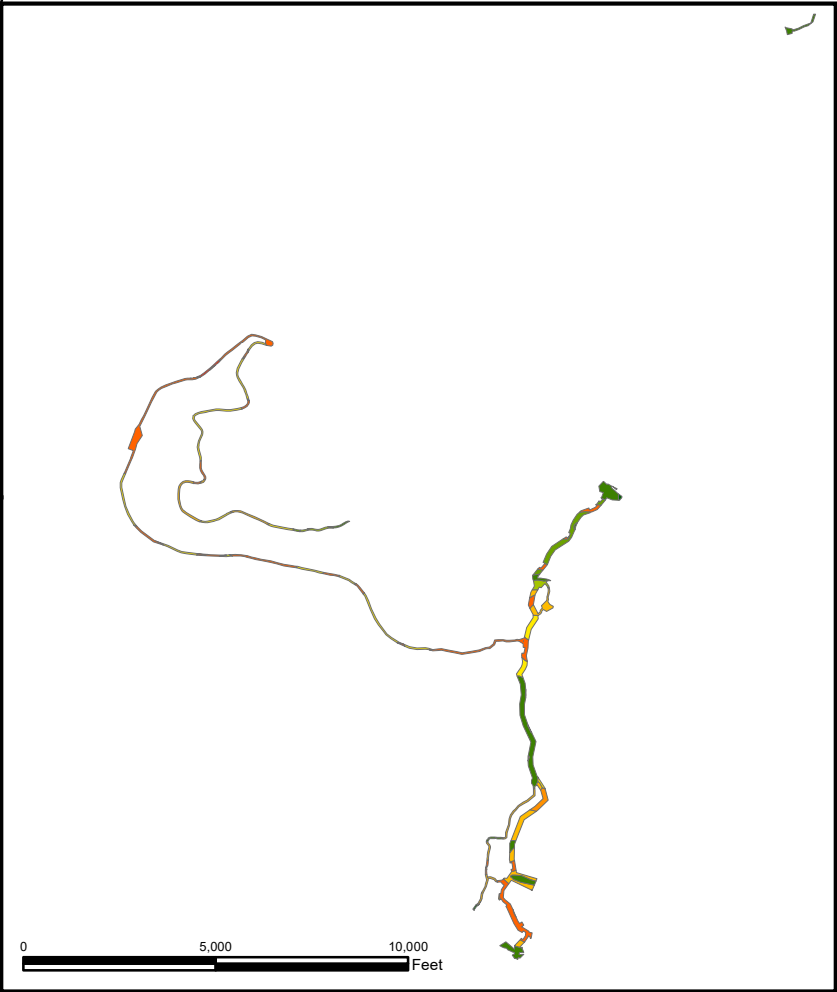
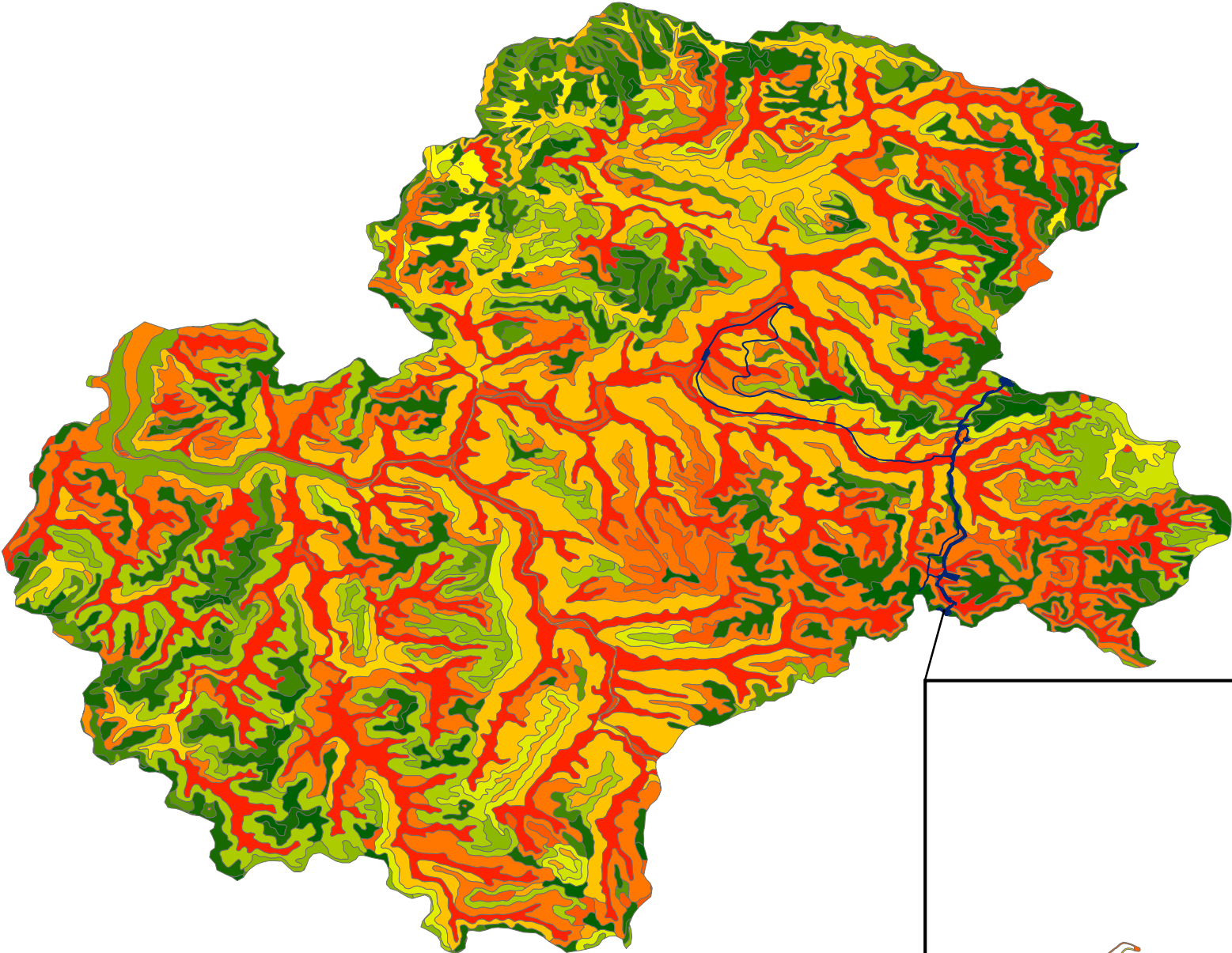
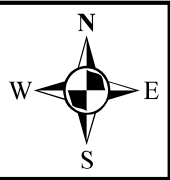
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Outlet Hominy Creek

Outlet Hominy Creek Soil

- BuB: Buchanan loam, moist, 3 to 8 percent slopes
- BuC: Buchanan loam, moist, 8 to 15 percent slopes
- BuD: Buchanan loam, moist, 15 to 25 percent slopes
- BvC: Buchanan gravelly sandy loam, moist, 8 to 15 percent slopes, extremely stony
- BvE: Buchanan gravelly sandy loam, moist, 15 to 35 percent slopes, extremely stony
- CIB: Clifftop channery silt loam, 3 to 8 percent slopes
- CIC: Clifftop channery silt loam, 8 to 15 percent slopes
- CID: Clifftop channery silt loam, 15 to 25 percent slopes
- CIE: Clifftop channery silt loam, 25 to 35 percent slopes
- CnC: Clifftop channery silt loam, 3 to 15 percent slopes, very stony
- CnC: Clifftop channery silt loam, 3 to 15 percent slopes, very stony
- CnF: Clifftop channery silt loam, 35 to 70 percent slopes, very stony
- CtB: Cotaco silt loam, 3 to 8 percent slopes
- Cv: Craigsville gravelly sandy loam, 0 to 5 percent slopes
- DRF: Dekalb-Buchanan-Rock outcrop association, very steep, rubbly
- DeC: Dekalb channery sandy loam, 3 to 15 percent slopes, extremely stony
- DeE: Dekalb channery sandy loam, 15 to 35 percent slopes, extremely stony
- DeF: Dekalb channery sandy loam, 35 to 70 percent slopes, extremely stony
- Ed: Elkins silt loam, drained
- Ep: Elkins silt loam, ponded
- FeB: Fenwick silt loam, 3 to 8 percent slopes
- FeC: Fenwick silt loam, 8 to 15 percent slopes
- HiF: Highsplint channery silt loam, moist, 35 to 70 percent slopes, extremely stony
- LIB: Lily loam, moist, 3 to 8 percent slopes
- LIC: Lily loam, moist, 8 to 15 percent slopes
- LID: Lily loam, 15 to 25 percent slopes
- LIE: Lily loam, 25 to 35 percent slopes
- MoB: Monongahela silt loam, moist, 3 to 8 percent slopes
- Pr: Pope-Craigsville complex
- Pu: Purdy silt loam, 0 to 5 percent slopes
- Ud: Udorthents, smoothed
- W: Water



MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment - Soil
Outlet Hominy Creek (050500050502)
Gauley HUC 8 Watershed
Nicholas County, West Virginia
For Informational Purposes Only

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(304) 342-1400 Fax: (304) 343-9031
Office: E-mail: potesta@potesta.com

Potesta & Associates, Inc.

SCALE: See Mapping
DRAWN: KBW
DATE: December 2021
CHECKED: JLY
PN: 001-17-4451016
APPROVED: JLY
05/26/2017 17:45:11 WVP Basemap, Mountain Maps 2021
GA Soil Figure 155: Outlet Hominy Creek Soil map

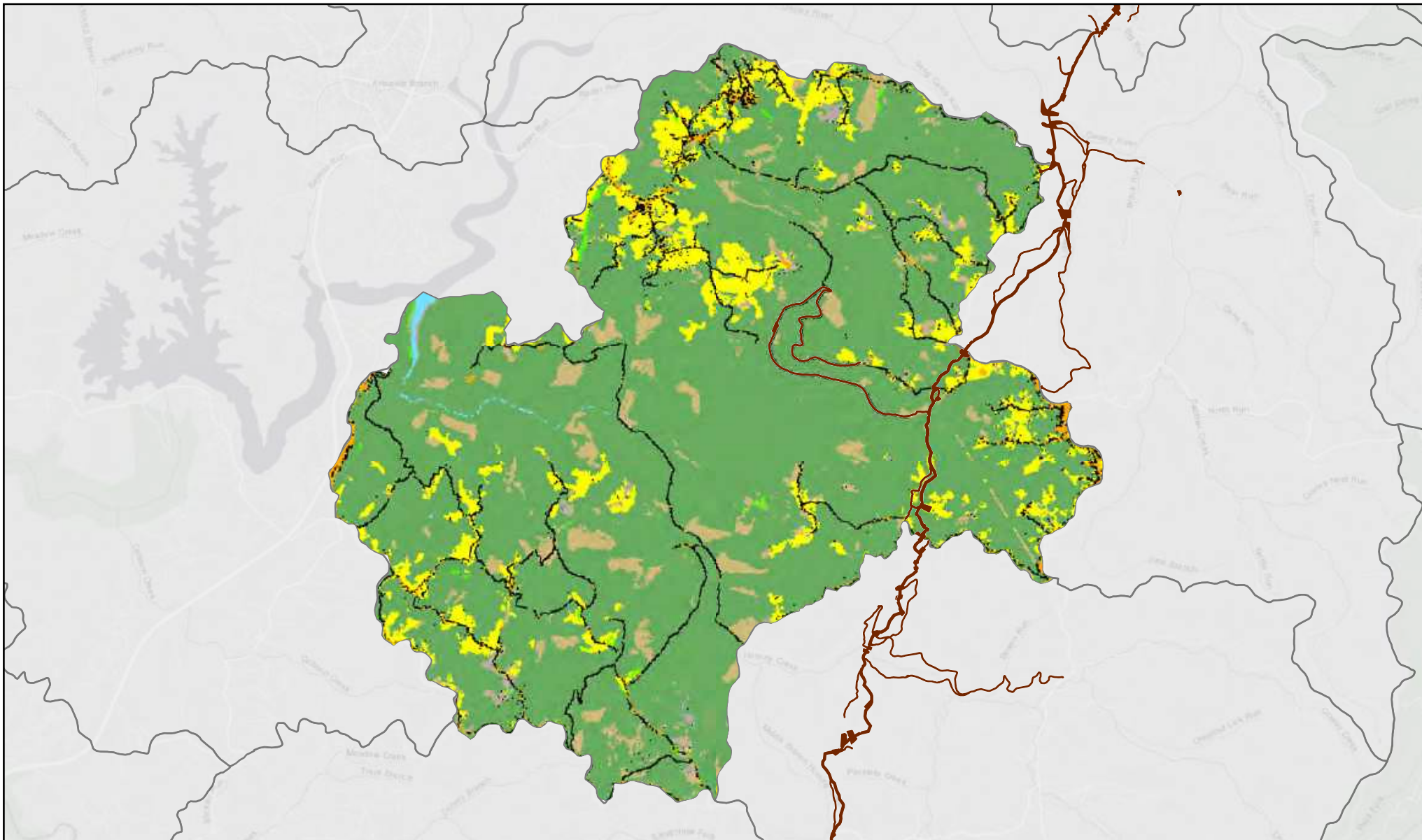
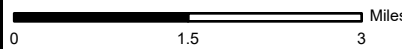


Figure: 156

**Land Use/Land Cover 2011
Outlet Hominy Creek
050500050502 HUC12 Watershed**

LEGEND

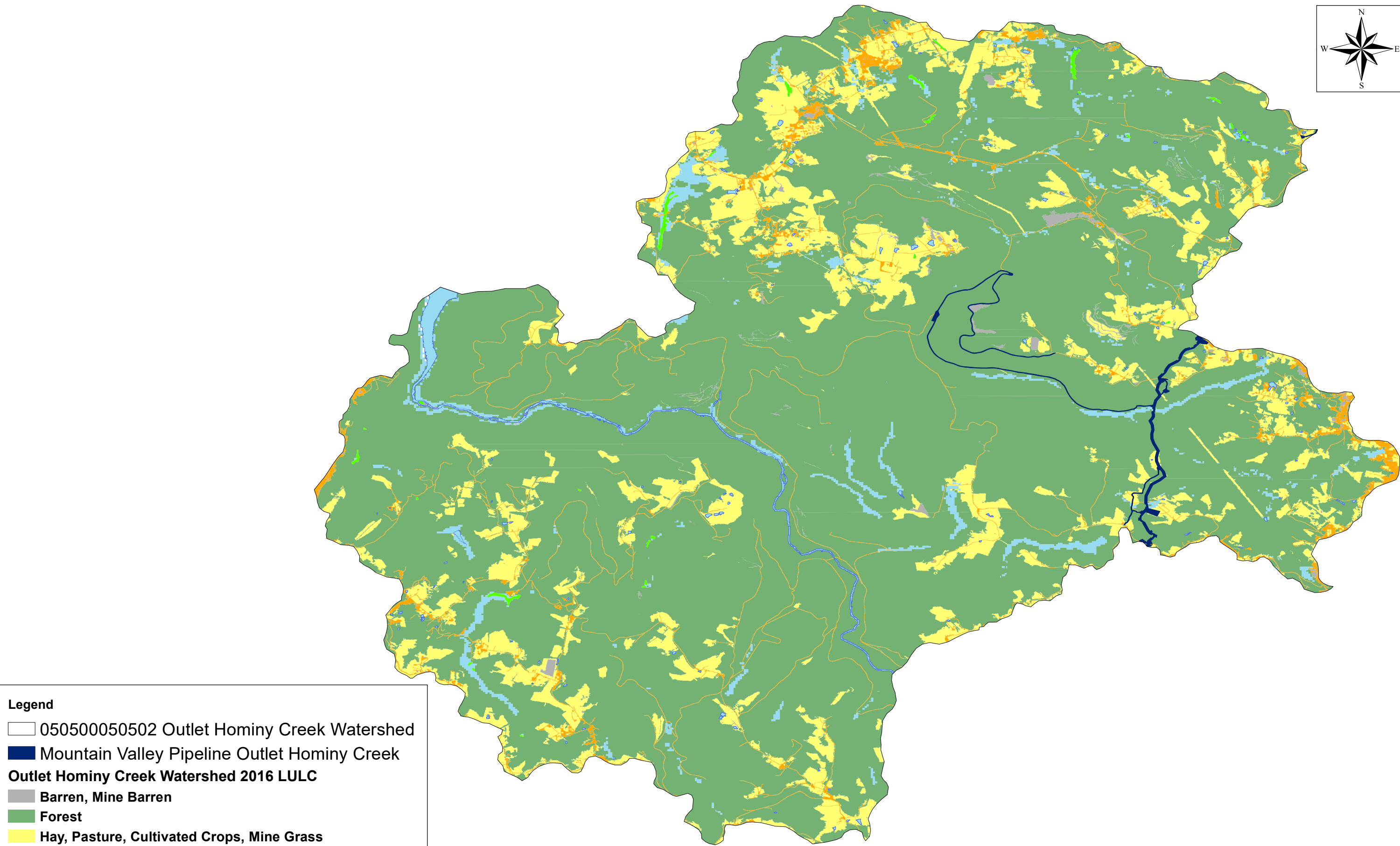
- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover**
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:105,000

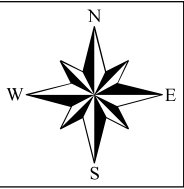
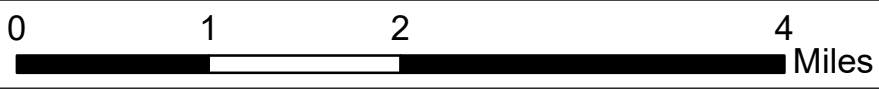


Map Extent



Legend

- 050500050502 Outlet Hominy Creek Watershed
- Mountain Valley Pipeline Outlet Hominy Creek
- Outlet Hominy Creek Watershed 2016 LULC**
- Barren, Mine Barren
- Forest
- Hay, Pasture, Cultivated Crops, Mine Grass
- Mixed Development
- Stream Riparian Corridor, Floodplain
- Water
- Wetland



MAPPING FOR VISUAL REPRESENTATION ONLY

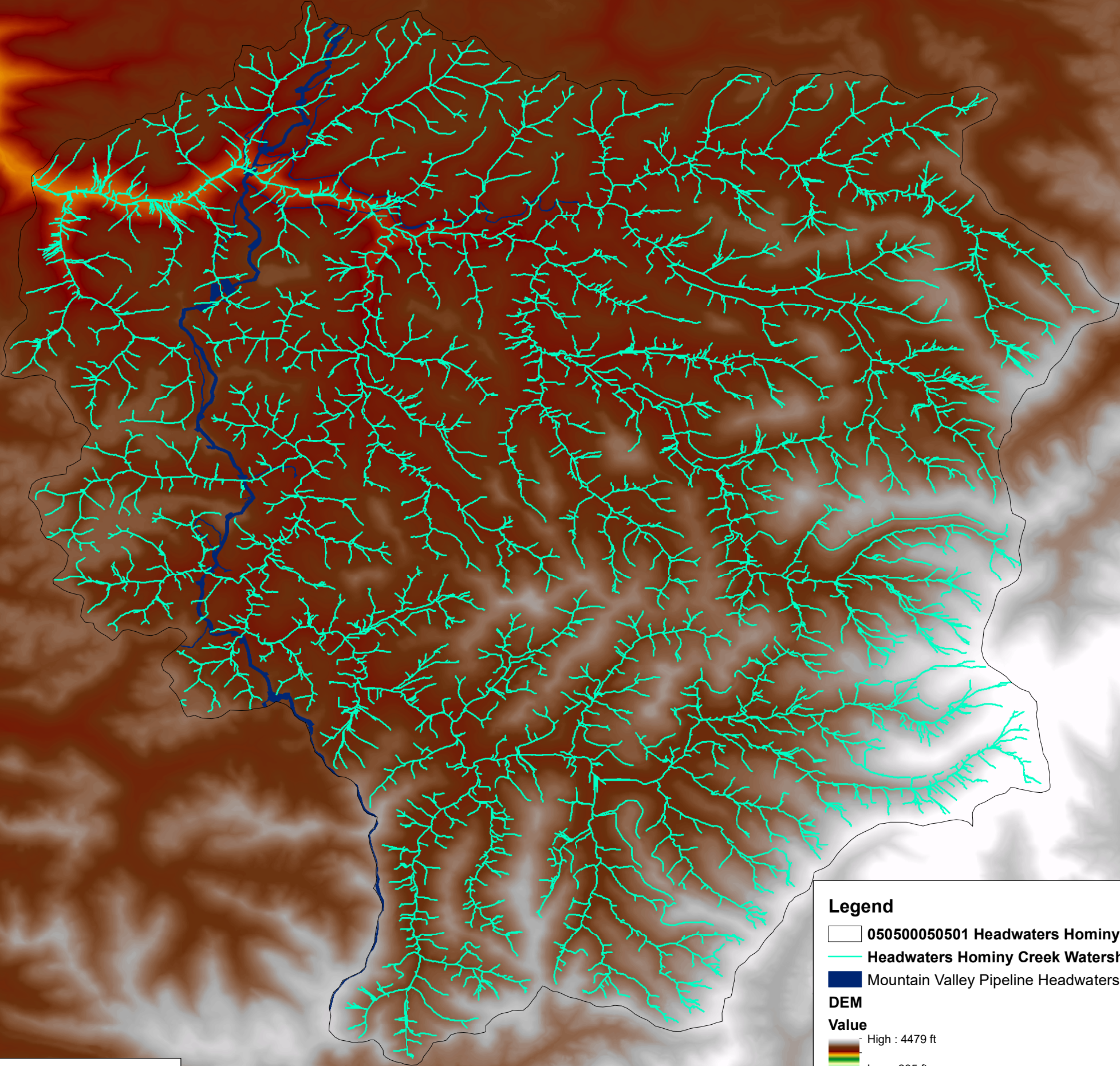
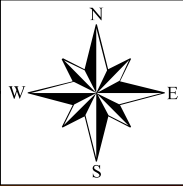
Cumulative Impact Assessment
Land Use/Land Cover 2016
Outlet Hominy Creek Watershed (050500050502)
Gaulley HUC 8 Watershed
Nicholas County, West Virginia

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E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile
DRAWN: KBW
DATE: JAN 2022
CHECKED: JLY
PN: 17-0451.016
APPROVED: JLY
2021 WV LULC Outlet Hominy Creek LULC 2016.mxd



Legend

- 050500050501 Headwaters Hominy Creek Watershed
- Headwaters Hominy Creek Watershed Total Stream - 2,445,086 Linear Feet
- Mountain Valley Pipeline Headwaters Hominy Creek

DEM

Value

High : 4479 ft

Low : 285 ft

Total Impacts - 1,261 Linear Feet (0.0516%)

MAPPING FOR VISUAL REPRESENTATION ONLY

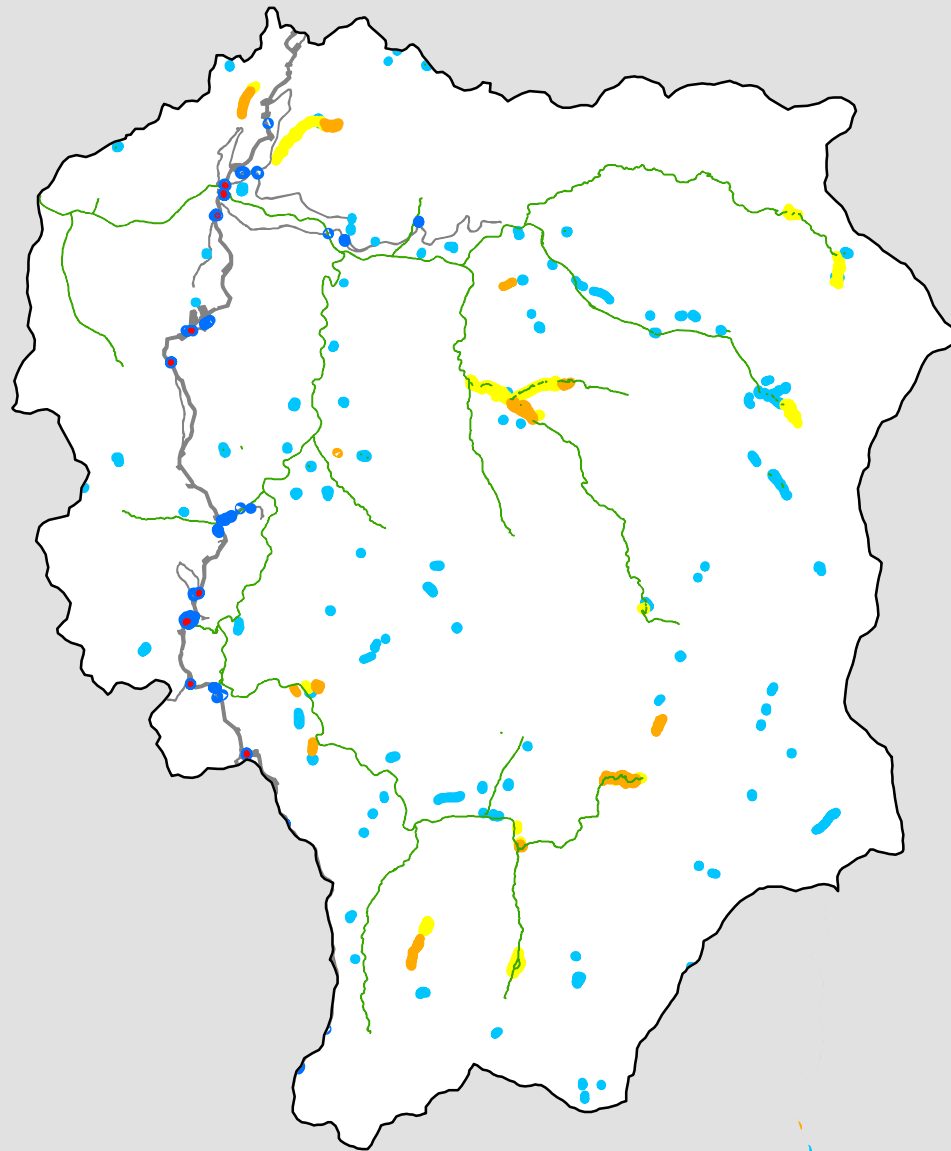
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Headwater Hominy Creek Watershed (050500050501)
Gauley HUC 8 Watershed, West Virginia

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Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-P74451.06	APPROVED: JLY
P:\proj\2017\17_081_MVP_EnvCom_Monitoring\Map\2021\	
CIA Subfigure 158-1W Hominy Creek.mxd	



Headwaters Hominy Creek

Figure 159

1:110,000

LEGEND

- Wetland Impacts - 0.37 acres
- Headwaters Hominy Creek Delineated Wetland Area - 2.07 acres
- NWI Wetlands - 247.06 acres
- Freshwater Emergent Wetland - 25.69 acres
- Freshwater Forested/Shrub Wetland - 49.12 acres
- Freshwater Pond - 45.89 acres
- Riverine - 126.36 acres
- Mountain Valley Pipeline
- 050500050501_Headwaters Hominy Creek

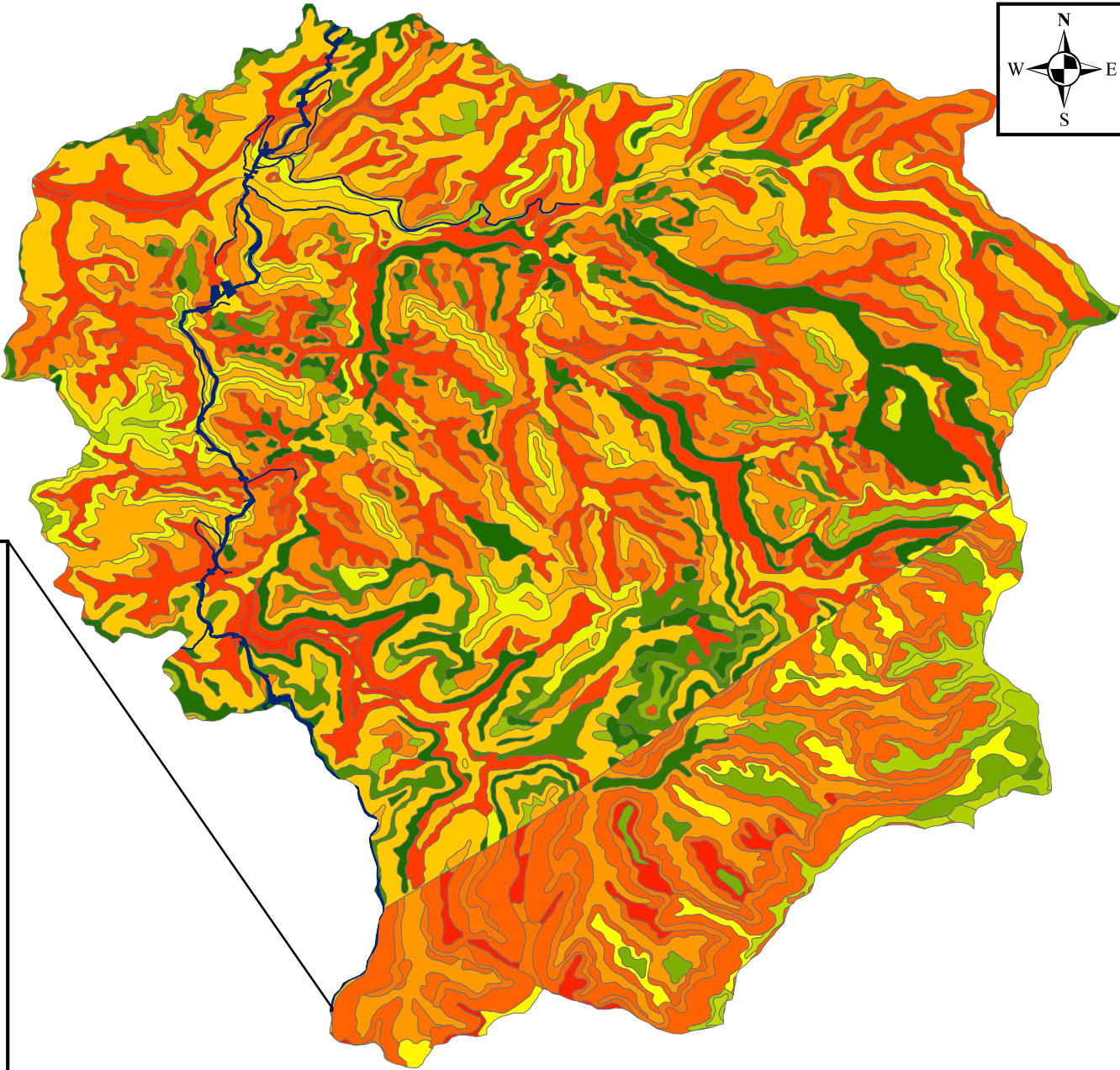
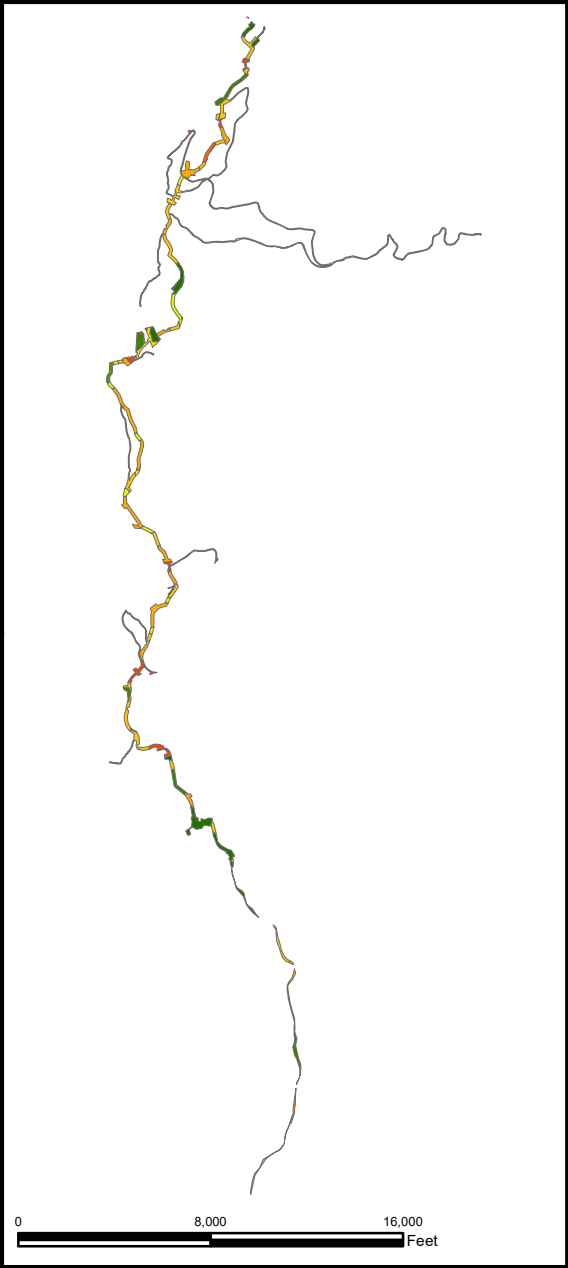
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Headwaters Hominy Creek

Headwaters Hominy Creek Soil

- BIC: Berks-Dekalb complex, 3 to 15 percent slopes, very stony
- BI E: Berks-Dekalb complex, 15 to 35 percent slopes, very stony
- BuB: Buchanan loam, moist, 3 to 8 percent slopes
- BuC: Buchanan loam, moist, 8 to 15 percent slopes
- BvC: Buchanan gravelly sandy loam, moist, 8 to 15 percent slopes, extremely stony
- BvE: Buchanan gravelly sandy loam, moist, 15 to 35 percent slopes, extremely stony
- CeF: Cedar creek channery loam, very steep, extremely stony
- ChB: Chavies fine sandy loam, moist, 3 to 8 percent slopes, rarely flooded
- CIB: Clifftop channery silt loam, 3 to 8 percent slopes
- CIC: Clifftop channery silt loam, 8 to 15 percent slopes
- CID: Clifftop channery silt loam, 15 to 25 percent slopes
- CIE: Clifftop channery silt loam, 25 to 35 percent slopes
- CIF: Clifftop channery silt loam, 35 to 70 percent slopes
- CnC: Clifftop channery silt loam, 3 to 15 percent slopes, very stony
- CnE: Clifftop channery silt loam, 15 to 35 percent slopes, very stony
- CnF: Clifftop channery silt loam, 35 to 70 percent slopes, very stony
- CoF: Clifftop-Buchanan complex, 35 to 70 percent slopes, extremely stony
- CpB: Cookport loam, warm, 3 to 8 percent slopes
- CtB: Cotaco silt loam, 3 to 8 percent slopes
- Cv: Craigsville gravelly sandy loam, 0 to 5 percent slopes
- DeC: Dekalb channery sandy loam, 3 to 15 percent slopes, very stony (Greenbrier); DeC: Dekalb channery sandy loam, 3 to 15 percent slopes, extremely stony (Nicholas)
- DeE: Dekalb channery sandy loam, 15 to 35 percent slopes, extremely stony
- DeF: Dekalb channery sandy loam, 35 to 55 percent slopes, very stony (Greenbrier); DeF: Dekalb channery sandy loam, 35 to 70 percent slopes, extremely stony (Nicholas)
- Ed: Elkins silt loam, drained
- Ep: Elkins silt loam, ponded
- EsC: Ernest silt loam, moist, 3 to 15 percent slopes, extremely stony
- FeB: Fenwick silt loam, 3 to 8 percent slopes
- FeC: Fenwick silt loam, 8 to 15 percent slopes
- GnC: Gilpin channery silt loam, moist, 8 to 15 percent slopes
- GnD: Gilpin channery silt loam, moist, 15 to 25 percent slopes
- GpC: Gilpin channery silt loam, moist, 3 to 15 percent slopes, very stony
- GpE: Gilpin channery silt loam, moist, 15 to 35 percent slopes, very stony
- Ho: Holly silt loam
- ItF: Itmann channery sandy loam, very steep
- KaB: Kaymine channery loam, 3 to 8 percent slopes, extremely stony
- KaF: Kaymine channery loam, very steep, extremely stony
- KxF: Kaymine-rock outcrop complex, very steep
- LIB: Lily loam, moist, 3 to 8 percent slopes
- LIC: Lily loam, moist, 8 to 15 percent slopes
- LID: Lily loam, 15 to 25 percent slopes
- LIE: Lily loam, 25 to 35 percent slopes
- McC: Macove channery silt loam, 3 to 15 percent slopes, very stony
- McE: Macove channery silt loam, 15 to 35 percent slopes, very stony
- MeF: Macove-Gilpin complex, 35 to 55 percent slopes, very stony
- MKE: Mandy channery silt loam, 15 to 35 percent slopes, very stony
- MkF: Mandy channery silt loam, 35 to 55 percent slopes, very stony
- Po: Pope fine sandy loam, warm, 0 to 3 percent slopes, occasionally flooded
- Pr: Pope-Craigsville complex
- SoE: Snowdog silt loam, 15 to 35 percent slopes, extremely stony
- SoF: Snowdog silt loam, 35 to 55 percent slopes, extremely stony
- SvC: Summers very channery sandy loam, 0 to 15 percent slopes, very stony
- Tp: Tioga-Potomac complex
- Ud: Udorthents, smoothed
- W: Water



MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment - Soil
Headwaters Hominy Creek (050500050501)
Gauley HUC 8 Watershed
Greenbrier and Nicholas Counties, West Virginia
For Informational Purposes Only

MOUNTAIN VALLEY PIPELINE, LLC
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7019 MacCorkie Avenue, S.E.
Atlanta, Georgia 30328
Office: (303) 342-1400 Fax: (770) 343-9031
E-mail: potesta@potesta.com

SCALE: See Mapping	DRAWN: KBW
DATE: December 2021	CHECKED: JLY
PN: 001-17-4451-016	APPROVED: JLY
Project: 201717-0451 MVP, Inc. Gauley Mountain May 2021 CA Soil Figure 160 - Headwaters Hominy Creek Soil Land	

FIGURE 160

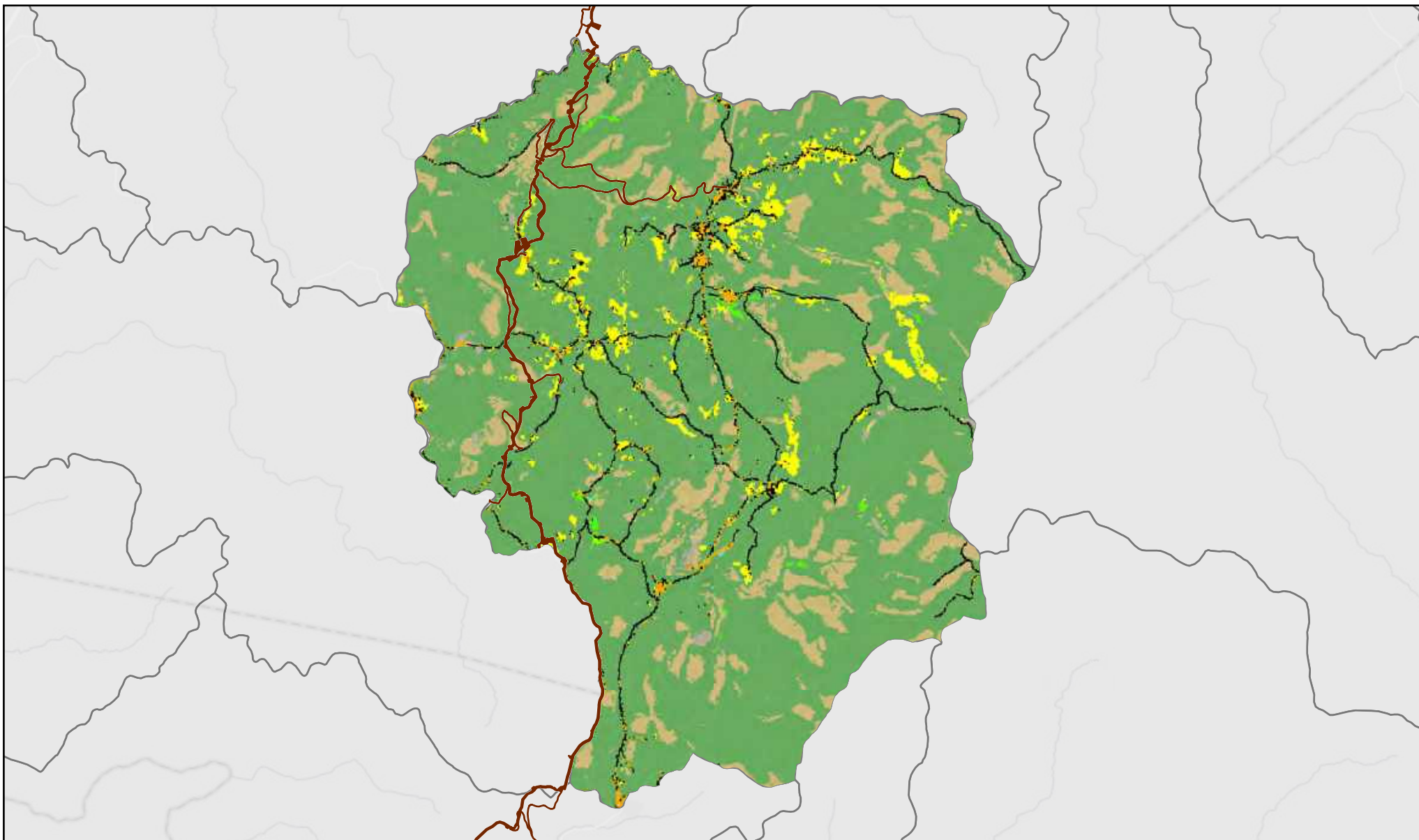
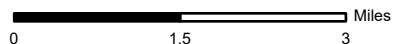


Figure: 161

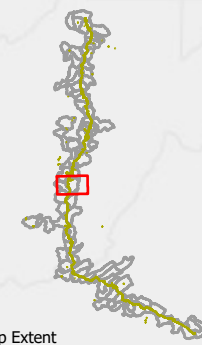
**Land Use/Land Cover 2011
Headwaters Hominy Creek
050500050501 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:110,000



Map Extent

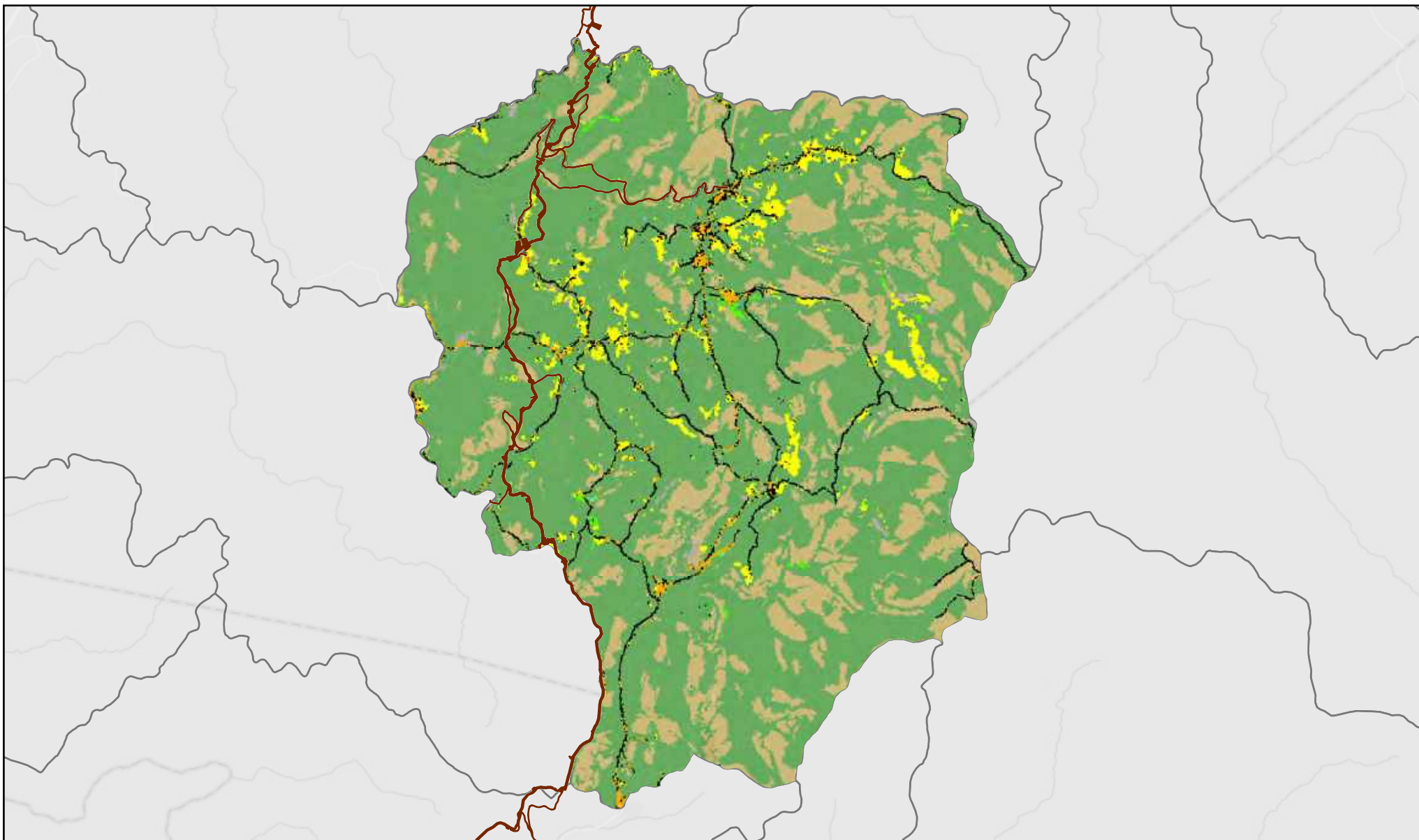
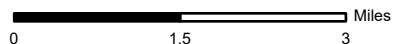


Figure: 162

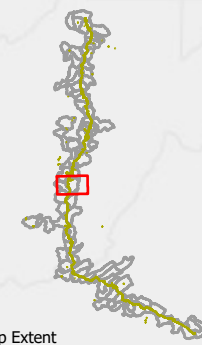
**Land Use/Land Cover 2016
Headwaters Hominy Creek
050500050501 HUC12 Watershed**

LEGEND

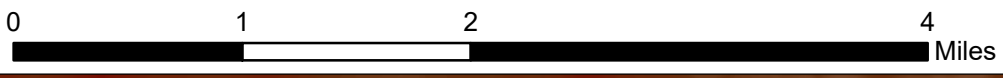
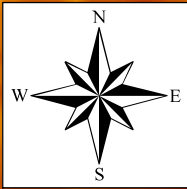
- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:110,000



Map Extent



Legend

- 050500050607 Anglins Creek Watershed
- Anglins Creek Watershed Total Stream - 1,365,792 Linear Feet
- Mountain Valley Pipeline Anglins Creek

DEM

Value

- High : 4479 ft
- Low : 285 ft

Total Impacts - 0 Linear Feet (0.0000%)

MAPPING FOR VISUAL REFERENCE ONLY

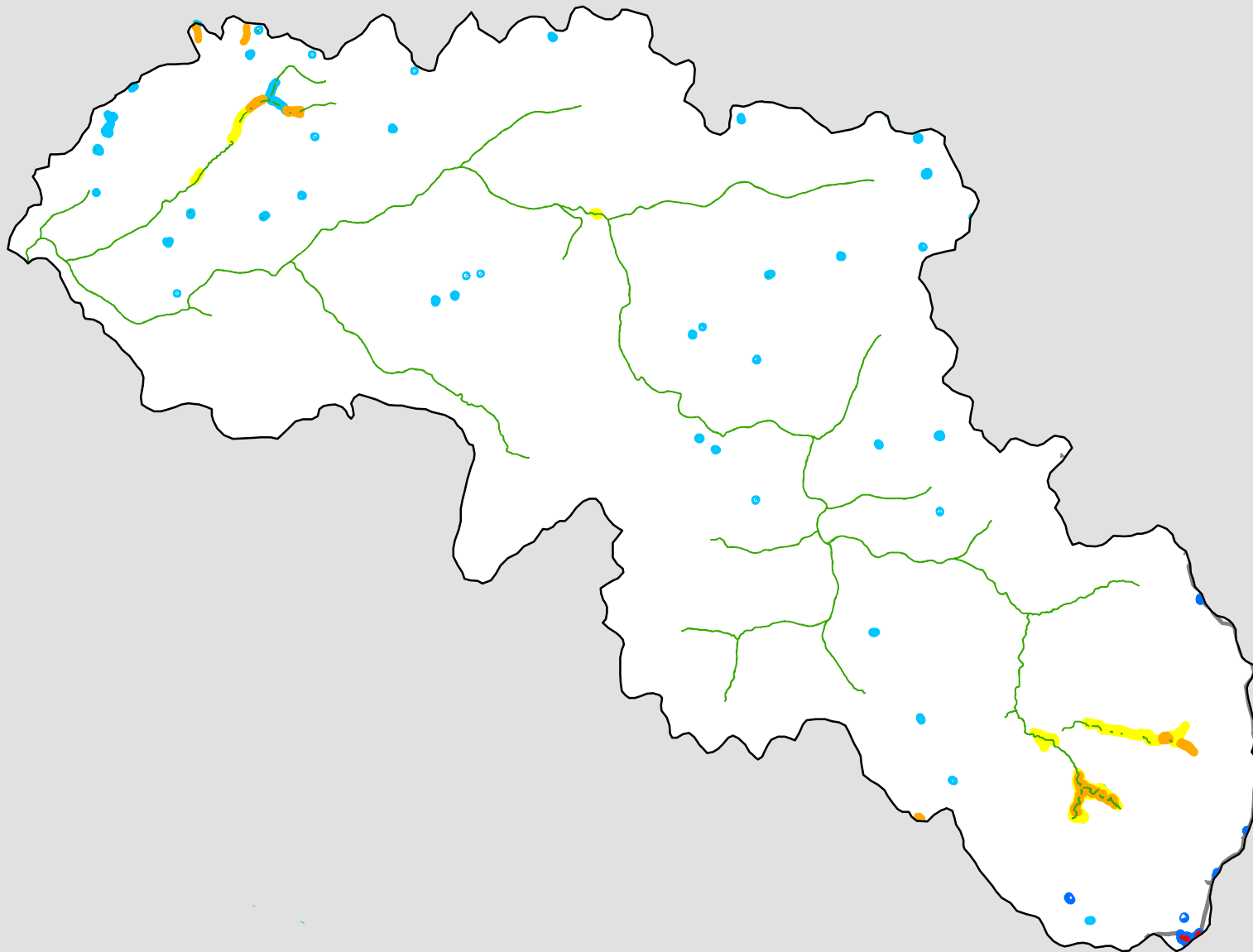
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Anglins Creek Watershed (050500050607)
Gauley HUC 8 Watershed, West Virginia

MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
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E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile
DRAWN: KBW
DATE: AUGUST 2021
CHECKED: JLY
PIN: 001-174451.06
APPROVED: JLY
L:\Projects\2017\081_MVP_Eng\Com_MountainMap\2021
CIA\SolarFigure 163-Anglins_Creek.mxd



Anglins Creek

Figure 164

1:78,000

LEGEND

- Wetland Impacts - 0.1 acres
- Anglins Creek Delineated Wetland Area - 0.48 acres
- NWI Wetlands - 172.7 acres
- Freshwater Emergent Wetland - 13.53 acres
- Freshwater Forested/Shrub Wetland - 38.95 acres
- Freshwater Pond - 18.8 acres
- Riverine - 101.42 acres
- Mountain Valley Pipeline
- 050500050607_Anglins Creek

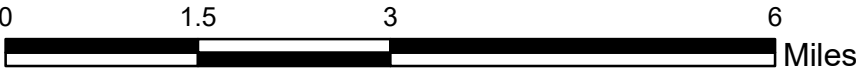
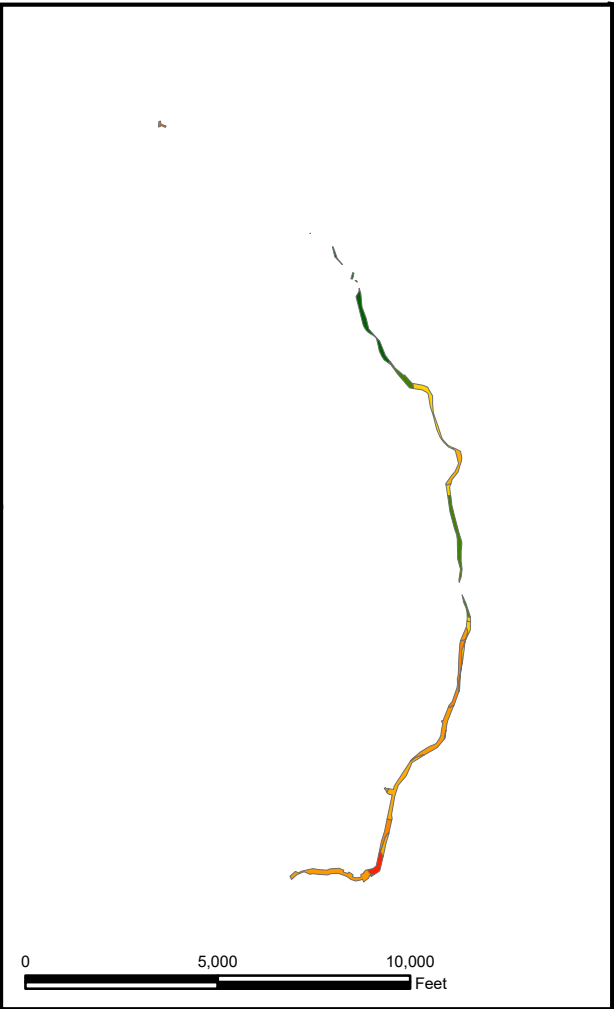
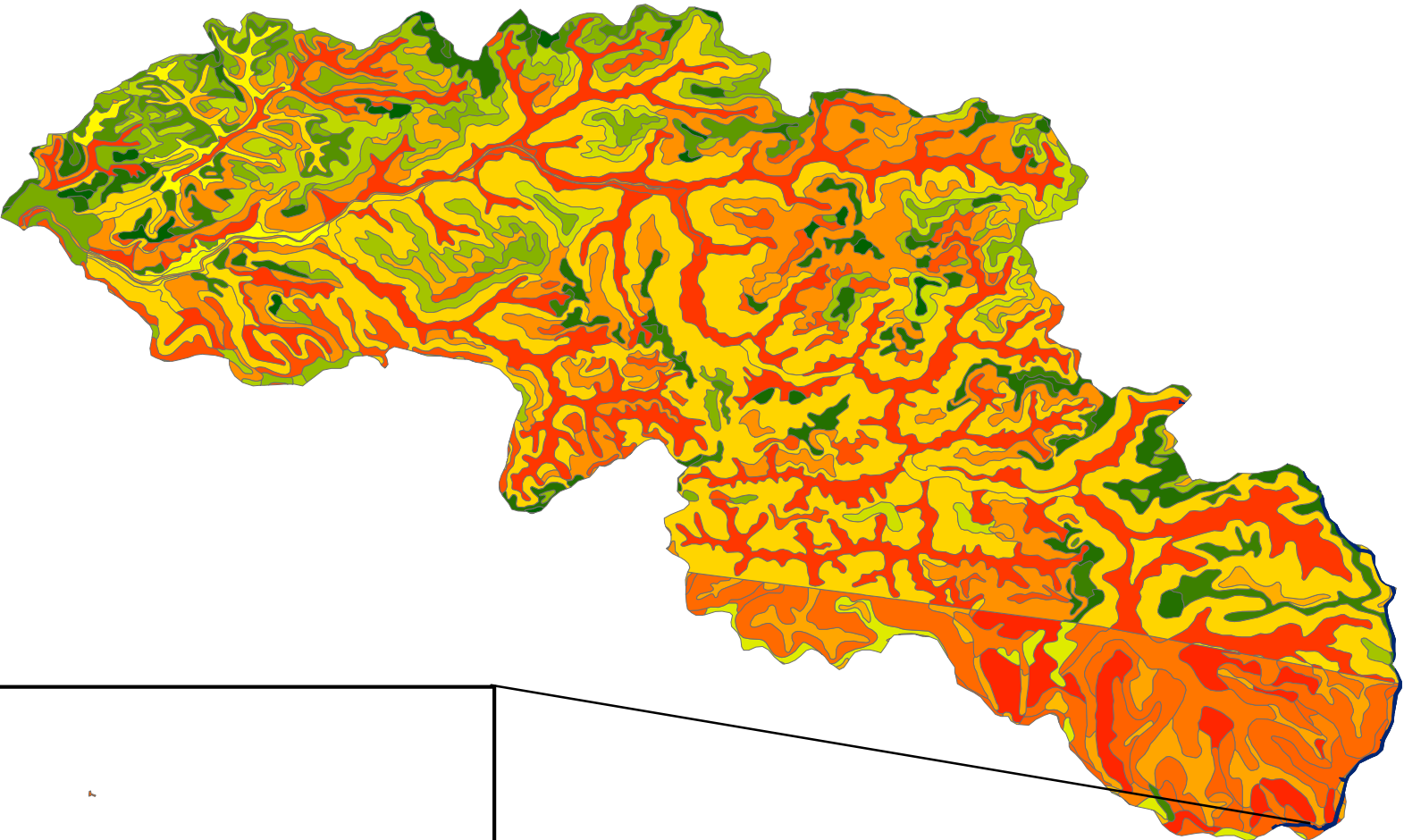
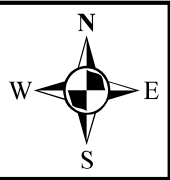
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Anglins Creek

Anglins Creek Soil

- BuB: Buchanan loam, moist, 3 to 8 percent slopes
- BuC: Buchanan loam, moist, 8 to 15 percent slopes
- BuD: Buchanan loam, moist, 15 to 25 percent slopes
- BvC: Buchanan gravelly sandy loam, moist, 8 to 15 percent slopes, extremely stony
- BvE: Buchanan gravelly sandy loam, moist, 15 to 35 percent slopes, extremely stony
- ChB: Chavies fine sandy loam, moist, 3 to 8 percent slopes, rarely flooded
- CIB: Clifftop channery silt loam, 3 to 8 percent slopes
- CIC: Clifftop channery silt loam, 8 to 15 percent slopes
- CID: Clifftop channery silt loam, 15 to 25 percent slopes
- CIE: Clifftop channery silt loam, 25 to 35 percent slopes
- CnC: Clifftop channery silt loam, 3 to 15 percent slopes, very stony
- CnE: Clifftop channery silt loam, 15 to 35 percent slopes, very stony
- CnF: Clifftop channery silt loam, 35 to 70 percent slopes, very stony
- CpB: Cookport loam, warm, 3 to 8 percent slopes
- Cv: Craigsville gravelly sandy loam, 0 to 5 percent slopes
- DRF: Dekalb-Buchanan-Rock outcrop association, very steep, rubbly
- DeC: Dekalb channery sandy loam, 3 to 15 percent slopes, very stony (Greenbrier):
- DeC: Dekalb channery sandy loam, 3 to 15 percent slopes, extremely stony (Nicholas)
- DeE: Dekalb channery sandy loam, 15 to 35 percent slopes, extremely stony
- DeF: Dekalb channery sandy loam, 35 to 70 percent slopes, extremely stony
- EsC: Ernest silt loam, moist, 3 to 15 percent slopes, extremely stony
- FeB: Fenwick silt loam, 3 to 8 percent slopes
- FeC: Fenwick silt loam, 8 to 15 percent slopes
- GnC: Gilpin channery silt loam, moist, 8 to 15 percent slopes
- GnD: Gilpin channery silt loam, moist, 15 to 25 percent slopes
- GpC: Gilpin channery silt loam, moist, 3 to 15 percent slopes, very stony
- GpE: Gilpin channery silt loam, moist, 15 to 35 percent slopes, very stony
- KaF: Kaymine channery loam, very steep, extremely stony
- LIB: Lily loam, moist, 3 to 8 percent slopes
- LIC: Lily loam, moist, 8 to 15 percent slopes
- LID: Lily loam, 15 to 25 percent slopes
- LIE: Lily loam, 25 to 35 percent slopes
- McC: Macove channery silt loam, 3 to 15 percent slopes, very stony
- McE: Macove channery silt loam, 15 to 35 percent slopes, very stony
- MeF: Macove-Gilpin complex, 35 to 55 percent slopes, very stony
- MoB: Monongahela silt loam, moist, 3 to 8 percent slopes
- Pr: Pope-Craigsville complex
- W: Water



SCALE: See Mapping	DRAWN: KBW
DATE: December 2021	CHECKED: JLY
PN: 001-17-4451-016	APPROVED: JLY
08/26/2017 04:13 PM Rev. K. Co. Monitoring Maps 2021 CA Soil & Anglins Creek Soil	

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Cumulative Impact Assessment - Soil
Anglins Creek (050500050607)
Gaulley HUC 8 Watershed
Greenbrier, Nicholas, Fayette &
Raleigh Counties, West Virginia
For Informational Purposes Only

FIGURE 165

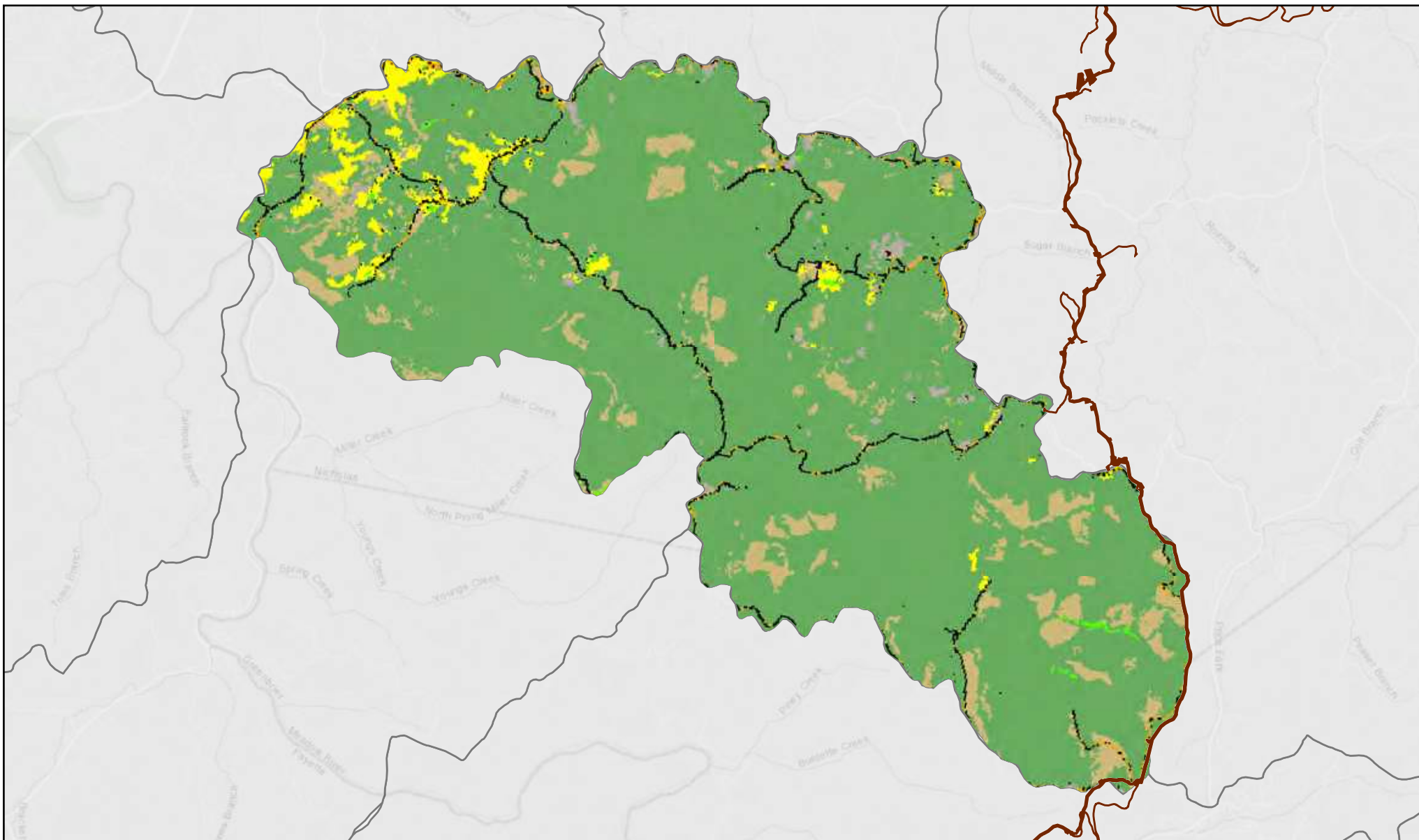


Figure: 166

**Land Use/Land Cover 2011
Anglins Creek
050500050607 HUC12 Watershed**

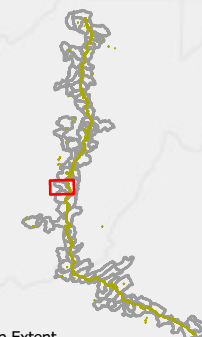
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

0 1 2 Miles



Scale: 1:85,000



Map Extent

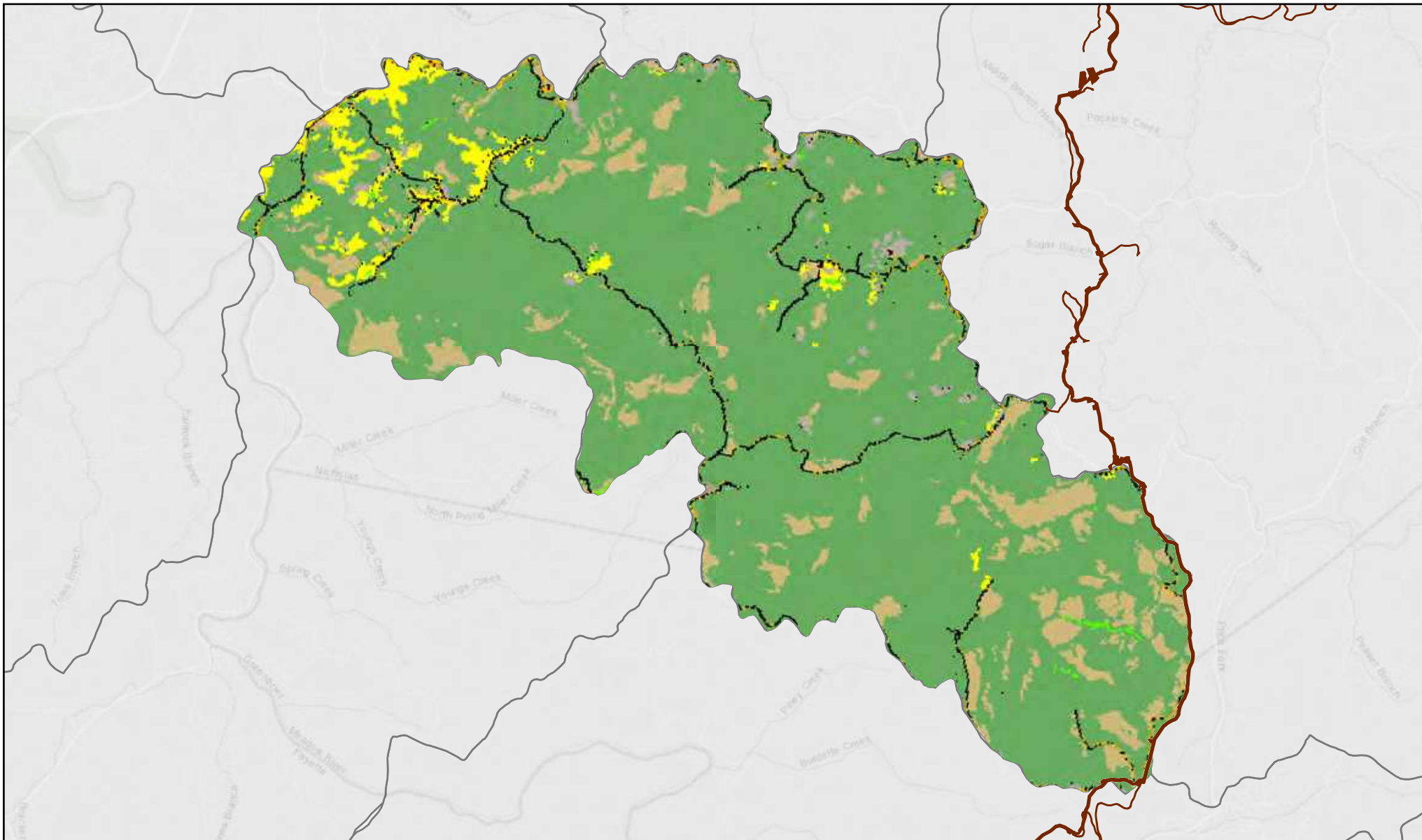
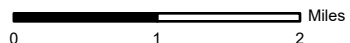


Figure: 167

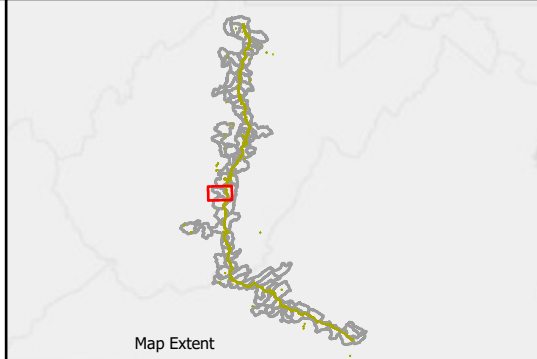
**Land Use/Land Cover 2016
Anglins Creek
050500050607 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:85,000



Map Extent

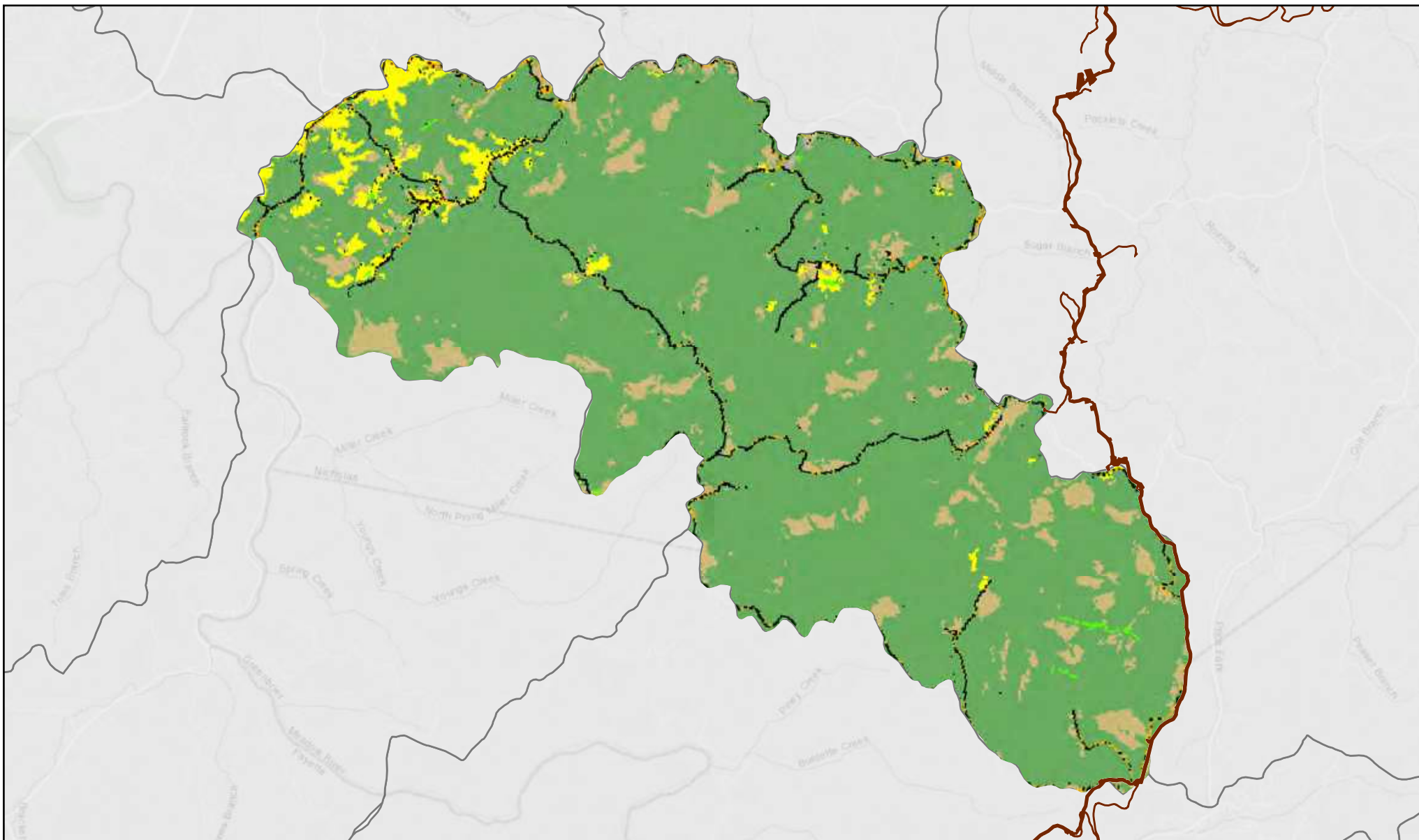
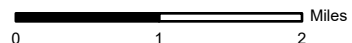


Figure: 167a

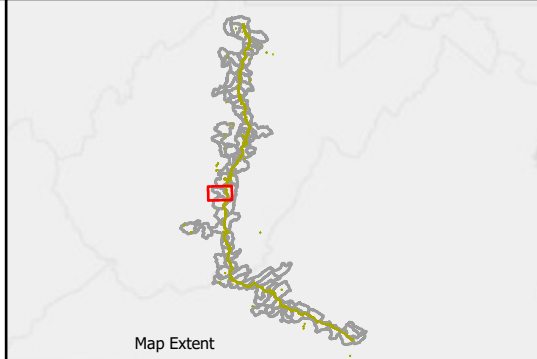
**Land Use/Land Cover 2019
Anglins Creek
050500050607 HUC12 Watershed**

LEGEND

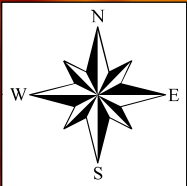
- Mountain Valley Pipeline LOD & Laydown Yards
- 2019 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:85,000



Map Extent



Legend

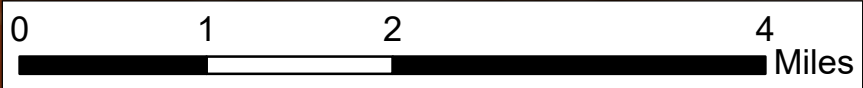
- 050500050606 Meadow Creek-Meadow River Watershed
- Meadow Creek-Meadow River Watershed Total Stream - 2,483,496 Linear Feet
- Mountain Valley Pipeline Meadow Creek-Meadow River

DEM

Value

- High : 4479 ft
- Low : 285 ft

Total Impacts - 315 Linear Feet (0.0127%)



MAPPING FOR VISUAL REPRESENTATION ONLY

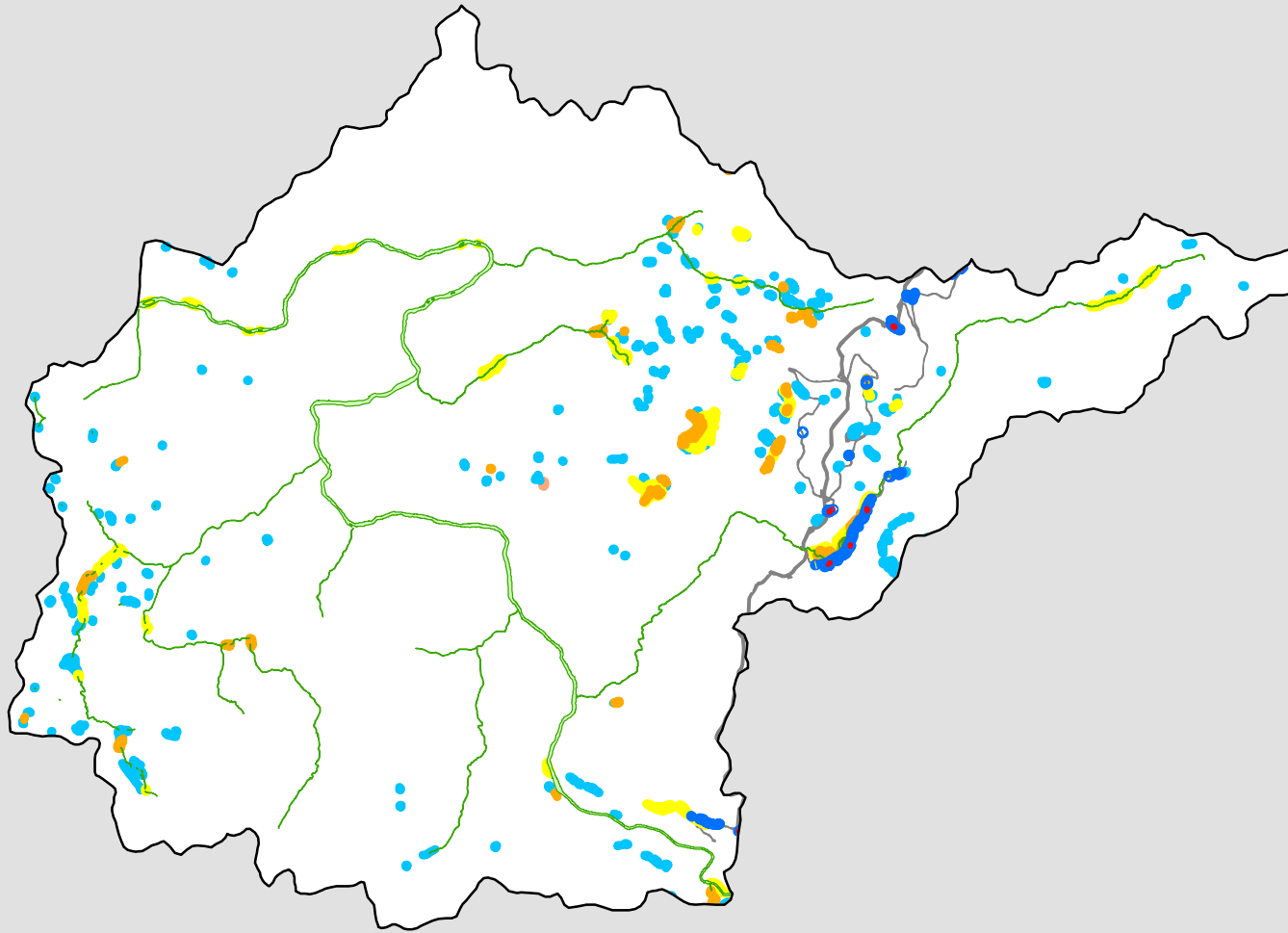
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Meadow Creek-Meadow River
Watershed (050500050606)
Gauley HUC 8 Watershed, West Virginia
For Informational Purposes Only

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Email: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-17-0451.016	APPROVED: JLY
E:\Projects\201717_0451_MVP_EncCon_Monitoring\Map\2021_CUM_Summary_Fig168_Meadow_Creek.mxd	



Meadow Creek-Meadow River

Figure 169

1:110,000

LEGEND

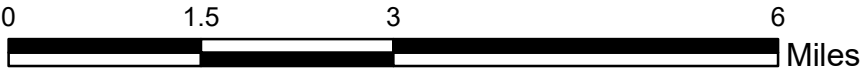
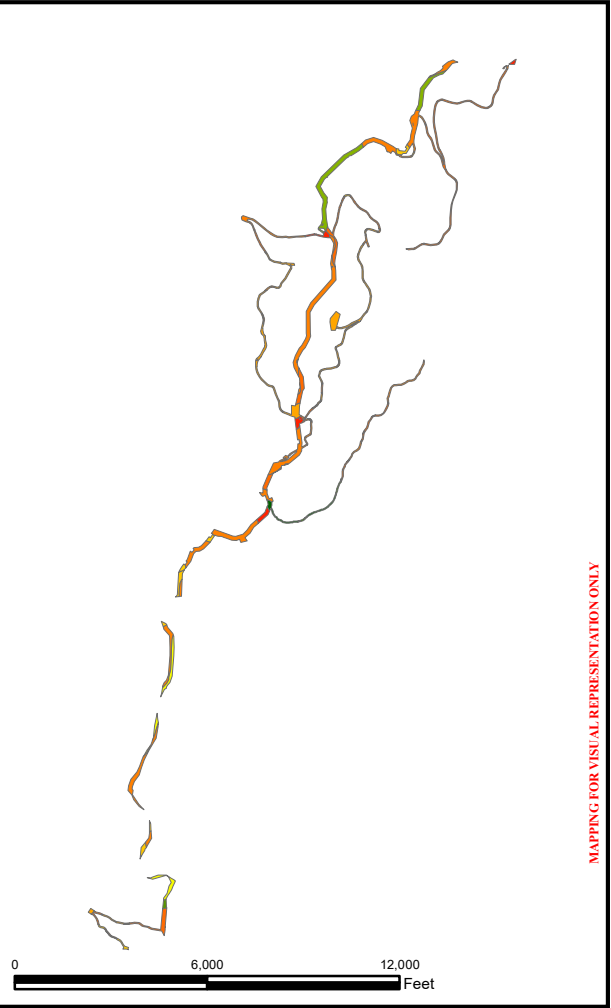
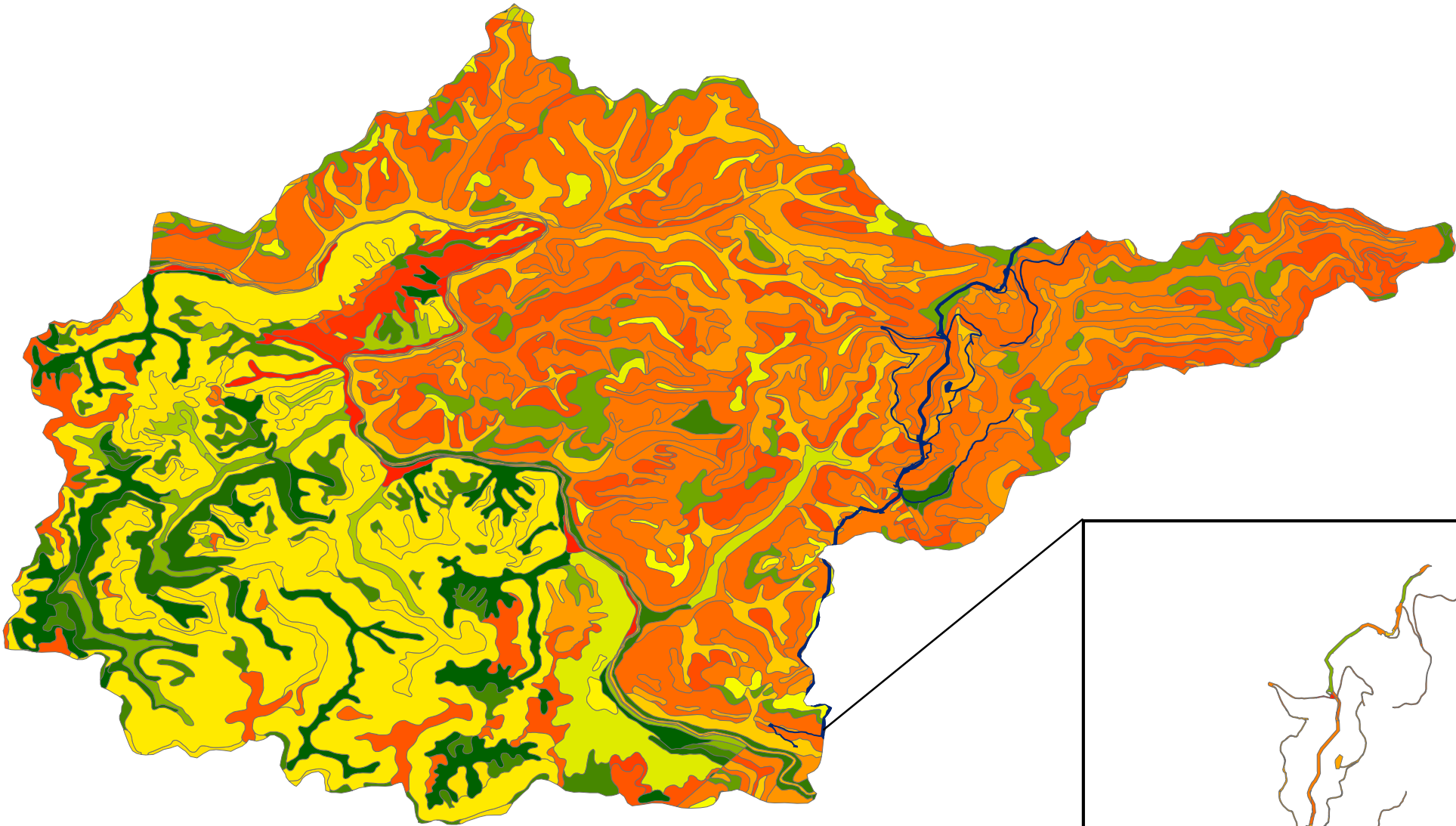
- Wetland Impacts - 0.17 acres
- Meadow Creek-Meadow River Delineated Wetland Area - 6.69 acres
- NWI Wetlands - 605.37 acres
 - Freshwater Emergent Wetland - 49.84 acres
 - Freshwater Forested/Shrub Wetland - 116.48 acres
 - Freshwater Pond - 92.37 acres
 - Other - 0.75 acres
 - Riverine - 345.93 acres
- Mountain Valley Pipeline
- 050500050606_Meadow Creek-Meadow River

Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Meadow Creek-Meadow River
Meadow Creek-Meadow River Soil

- An: Atkins-Philo-Potomac
- CeF: Cedarcreek-Rock outcrop complex, very steep, very stony
- CIC: Clifftop channery silt loam, 8 to 15 percent slopes
- CIE: Clifftop channery silt loam, 25 to 35 percent slopes
- CnB: Clifftop-Nallen complex, 3 to 8 percent slopes
- CnC: Clifftop-Nallen complex, 8 to 15 percent slopes
- CnD: Clifftop-Nallen complex, 15 to 25 percent slopes
- CnE: Clifftop channery silt loam, 15 to 35 percent slopes, very stony
- CnF: Clifftop channery silt loam, 35 to 70 percent slopes, very stony
- CpB: Cookport-Nallen complex, 3 to 8 percent slopes
- DeC: Dekalb channery sandy loam, 3 to 15 percent slopes, very stony
- DeE: Dekalb channery sandy loam, 15 to 35 percent slopes, very stony
- DeF: Dekalb channery sandy loam, 35 to 55 percent slopes, very stony
- DkC: Dekalb very channery loam, 3 to 15 percent slopes, extremely stony
- DkE: Dekalb-Rock outcrop complex, 15 to 35 percent slopes, extremely stony
- EsC: Ernest silt loam, moist, 3 to 15 percent slopes, extremely stony
- GnC: Gilpin channery silt loam, moist, 8 to 15 percent slopes
- GnD: Gilpin channery silt loam, moist, 15 to 25 percent slopes
- GpC: Gilpin channery silt loam, moist, 3 to 15 percent slopes, very stony
- GpE: Gilpin channery silt loam, moist, 15 to 35 percent slopes, very stony
- HgC: Highsplint channery loam, 3 to 15 percent slopes, very stony
- HgE: Highsplint channery loam, 15 to 35 percent slopes, very stony
- KrF: Kaymine-Rock outcrop complex, very steep, very stony
- KxF: Kaymine-rock outcrop complex, very steep
- LaC: Laidig channery loam, 3 to 15 percent slopes, rubbly
- LeF: Layland-Dekalb-Guyandotte complex, 35 to 70 percent slopes, extremely stony
- LgB: Lily sandy loam, warm, 3 to 8 percent slopes
- LgC: Lily sandy loam, warm, 8 to 15 percent slopes
- LgG: Layland-Dekalb-Rock outcrop complex, 55 to 80 percent slopes, extremely stony
- LhE: Layland-Laidig complex, 15 to 35 percent slopes, rubbly
- McC: Macove channery silt loam, 3 to 15 percent slopes, very stony
- McE: Macove channery silt loam, 15 to 35 percent slopes, very stony
- McF: Macove-Clifftop complex, 35 to 55 percent slopes, very stony
- MeF: Macove-Gilpin complex, 35 to 55 percent slopes, very stony
- MkC: Mandy channery silt loam, 3 to 15 percent slopes, very stony
- MkE: Mandy channery silt loam, 15 to 35 percent slopes, very stony
- Po: Pope fine sandy loam, warm, 0 to 3 percent slopes, occasionally flooded
- PoA: Pope fine sandy loam, warm, 0 to 3 percent slopes, occasionally flooded
- Pt: Potomac very gravelly fine sandy loam
- PvA: Pope-Craigsville complex, 0 to 3 percent slopes, occasionally flooded
- SvC: Summers very channery sandy loam, 0 to 15 percent slopes, very stony
- W: Water
- YeA: Yeager fine sandy loam, 0 to 3 percent slopes, frequently flooded
- ZoA: Zoar silt loam, 0 to 3 percent slopes



SCALE: See Mapping	DRAWN: KBW
DATE: December 2021	CHECKED: JLY
PN: 001-17-4451016	APPROVED: JLY
PROJECT: 2017-17-4451 M.V.P. Baseline Mapping (May 2021) C:\S\17\Figure 170 - Meadow Creek Meadow River Soil.mxd	

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Cumulative Impact Assessment - Soil
Meadow Creek-Meadow River (050500050501)
Gauley HUC 8 Watershed
Nicholas, Greenbrier, Fayette
& Raleigh Counties, West Virginia
For Informational Purposes Only

FIGURE 170

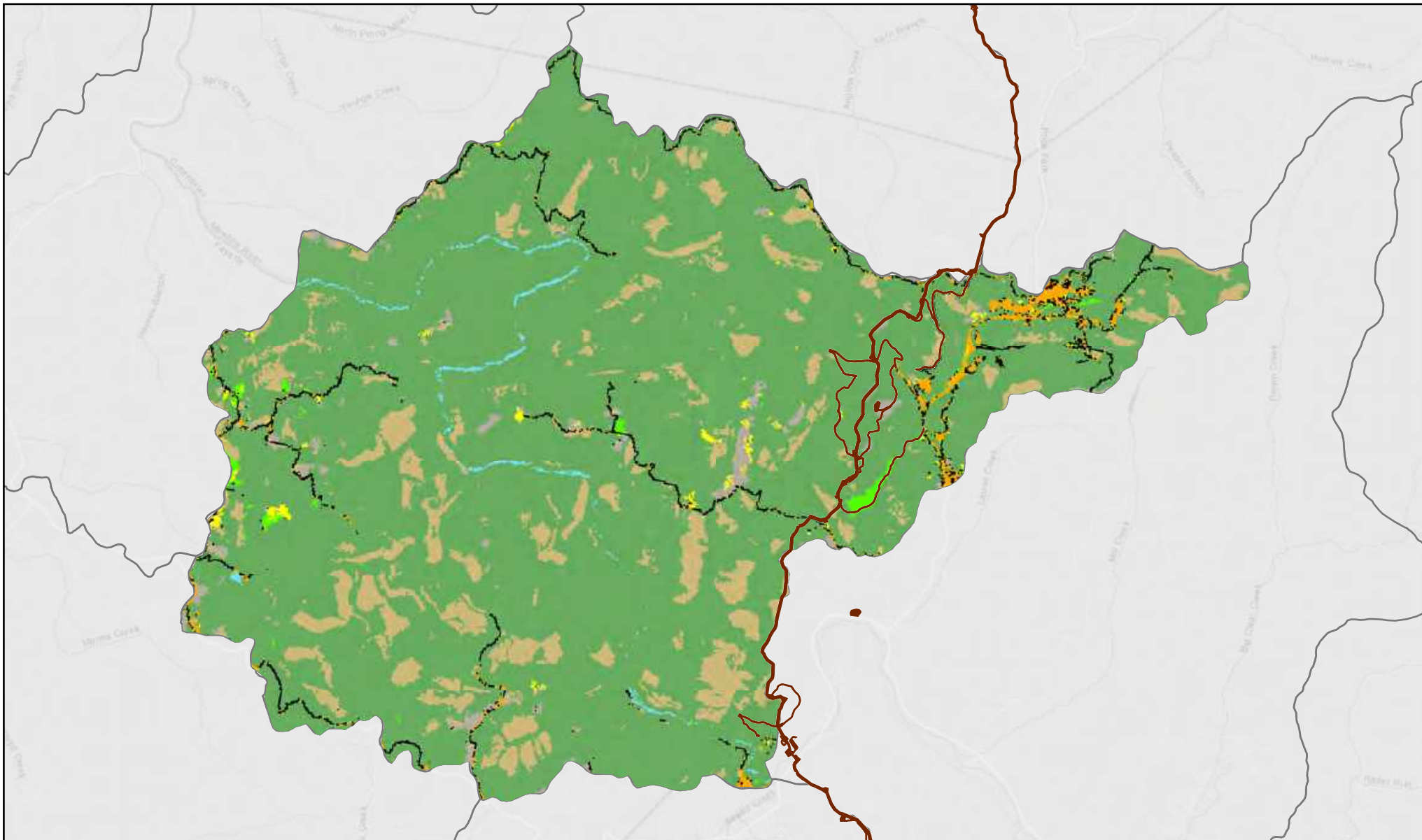


Figure: 171

**Land Use/Land Cover 2011
Meadow Creek-Meadow River
050500050606 HUC12 Watershed**

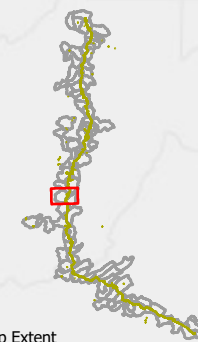
LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2011 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



0 1 2 Miles

Scale: 1:95,000



Map Extent

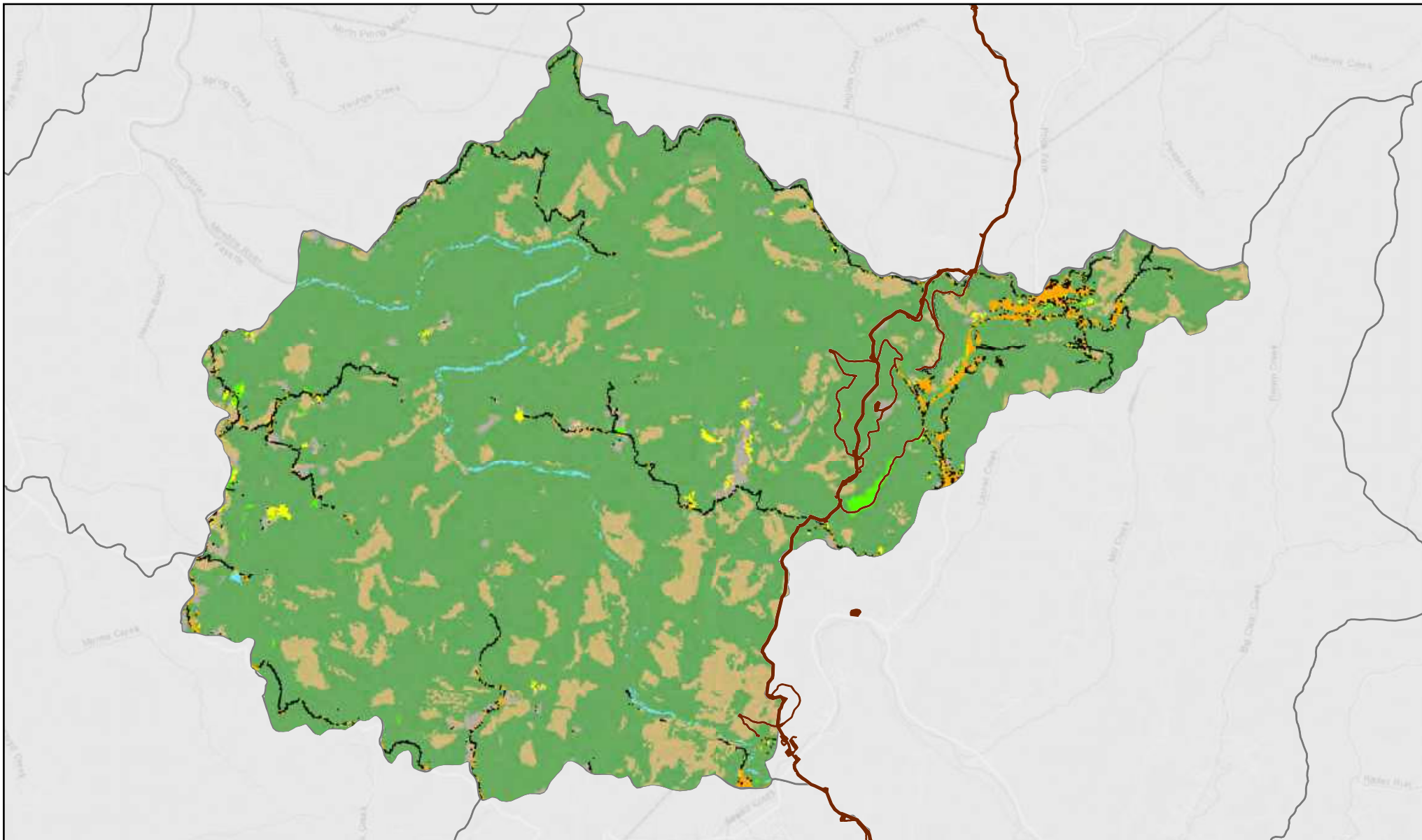
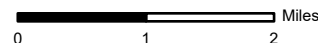


Figure: 172

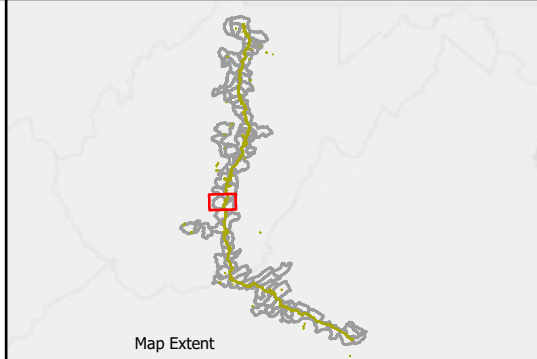
**Land Use/Land Cover 2016
Meadow Creek-Meadow River
050500050606 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2016 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands



Scale: 1:95,000



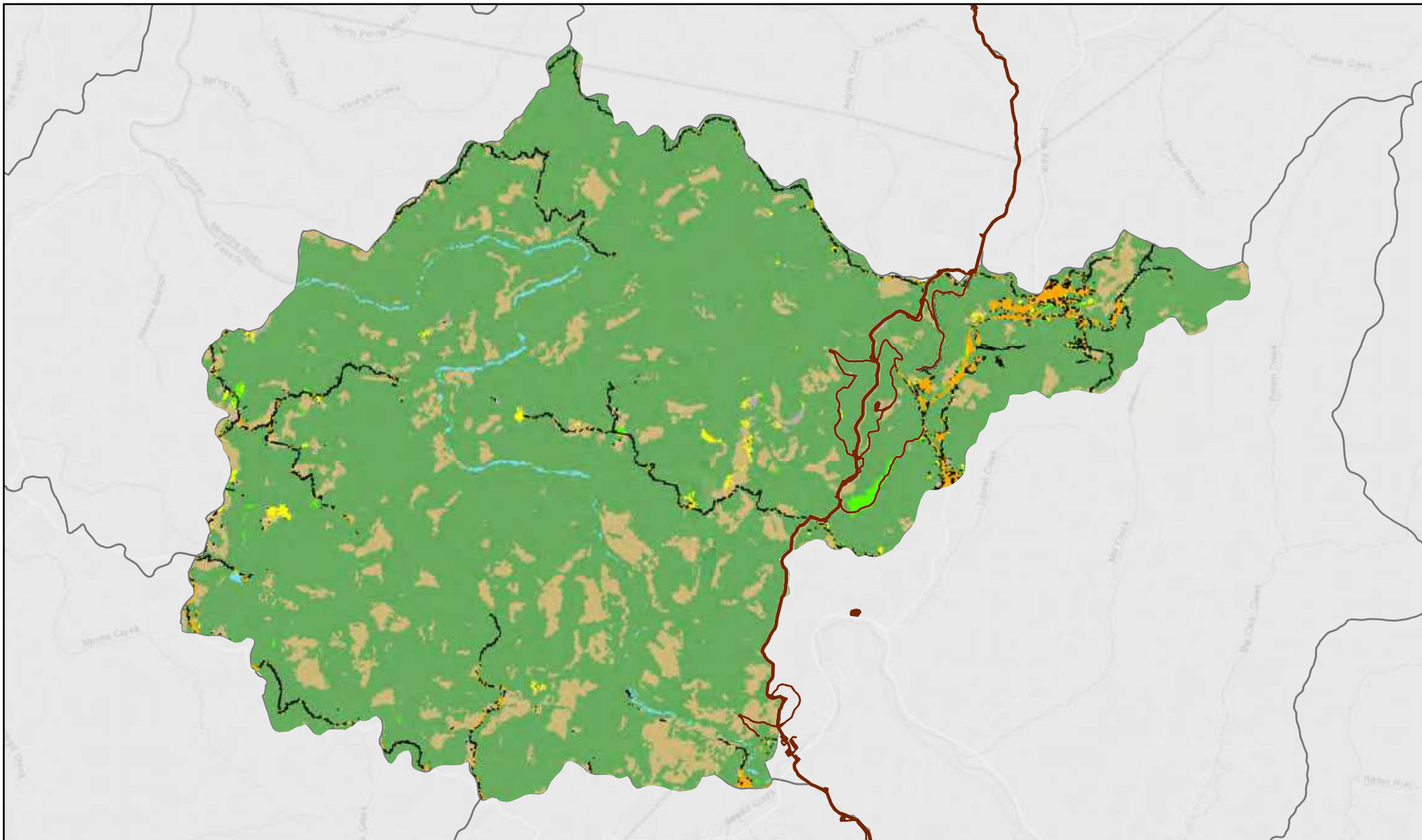


Figure: 172a

**Land Use/Land Cover 2019
Meadow Creek-Meadow River
050500050606 HUC12 Watershed**

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards
- 2019 Land Use Land Cover
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

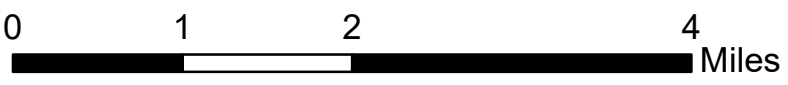
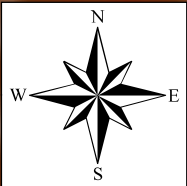


0 1 2 Miles

Scale: 1:95,000



Map Extent



Legend

050500050605 Mill Creek-Meadow River Watershed

Mill Creek-Meadow River Watershed Total Stream - 2,160,428 Linear Feet

Mountain Valley Pipeline Mill Creek-Meadow River

DEM

Value

High : 4479 ft

Low : 285 ft

Total Impacts - 496 linear Feet (0.0230%)

MAPPING FOR VISUAL REPRESENTATION ONLY

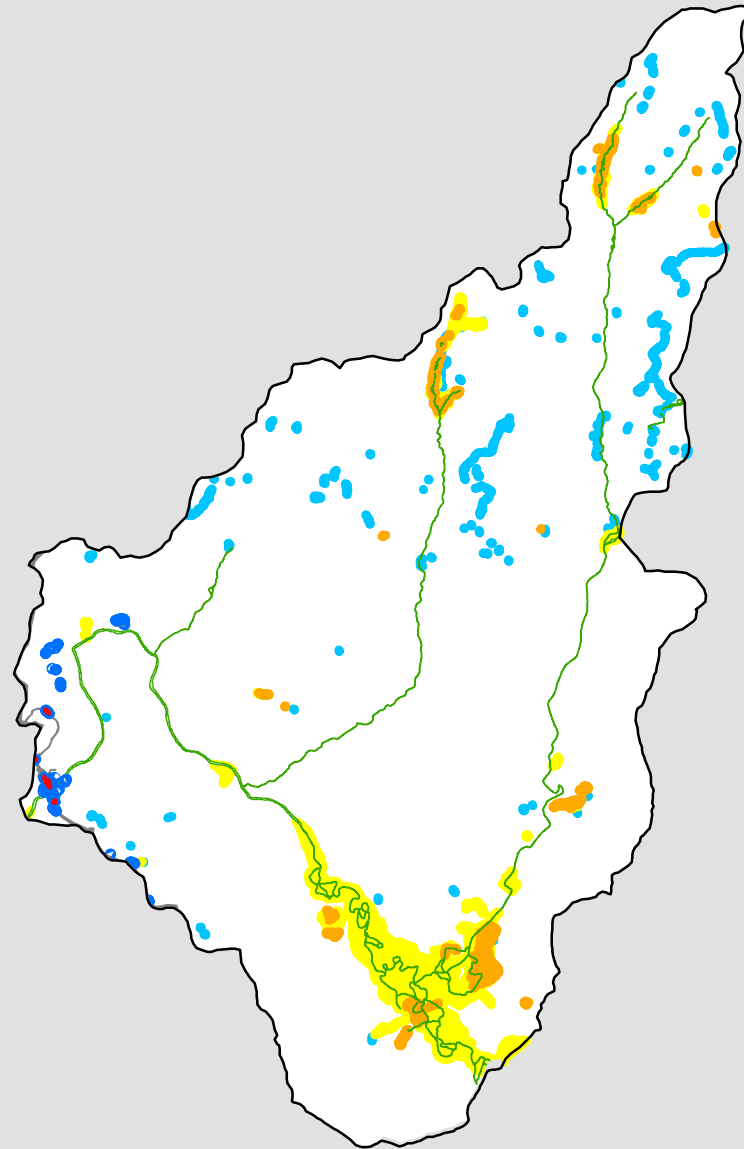
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Mill Creek-Meadow River
Watershed (050500050605)
Gauley HUC 8 Watershed, West Virginia
For Informational Purpose Only

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E-mail: potesta@potesta.com

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: 001-174451.016	APPROVED: JLY
E:\Projects\201717_081_MVP_EnvCon_Monitoring\Map\2021\CIA SubFigure 173 - Big Clear Creek.mxd	



Mill Creek-Meadow River

Figure 174

1:120,000

LEGEND

- Wetland Impacts - 0.35 acres
- Mill Creek-Meadow River Delineated Wetland Area - 2.09 acres
- NWI Wetlands - 979.05 acres
- Freshwater Emergent Wetland - 91.83 acres
- Freshwater Forested/Shrub Wetland - 662.42 acres
- Freshwater Pond - 62.51 acres
- Riverine - 162.28 acres
- Mountain Valley Pipeline
- 050500050605_Mill Creek-Meadow River

Note: Shapes are not to scale, enlarged to improve visibility.