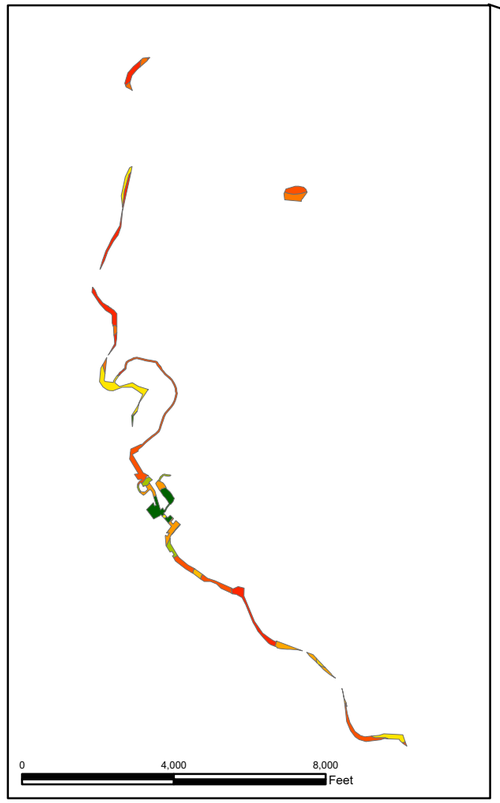
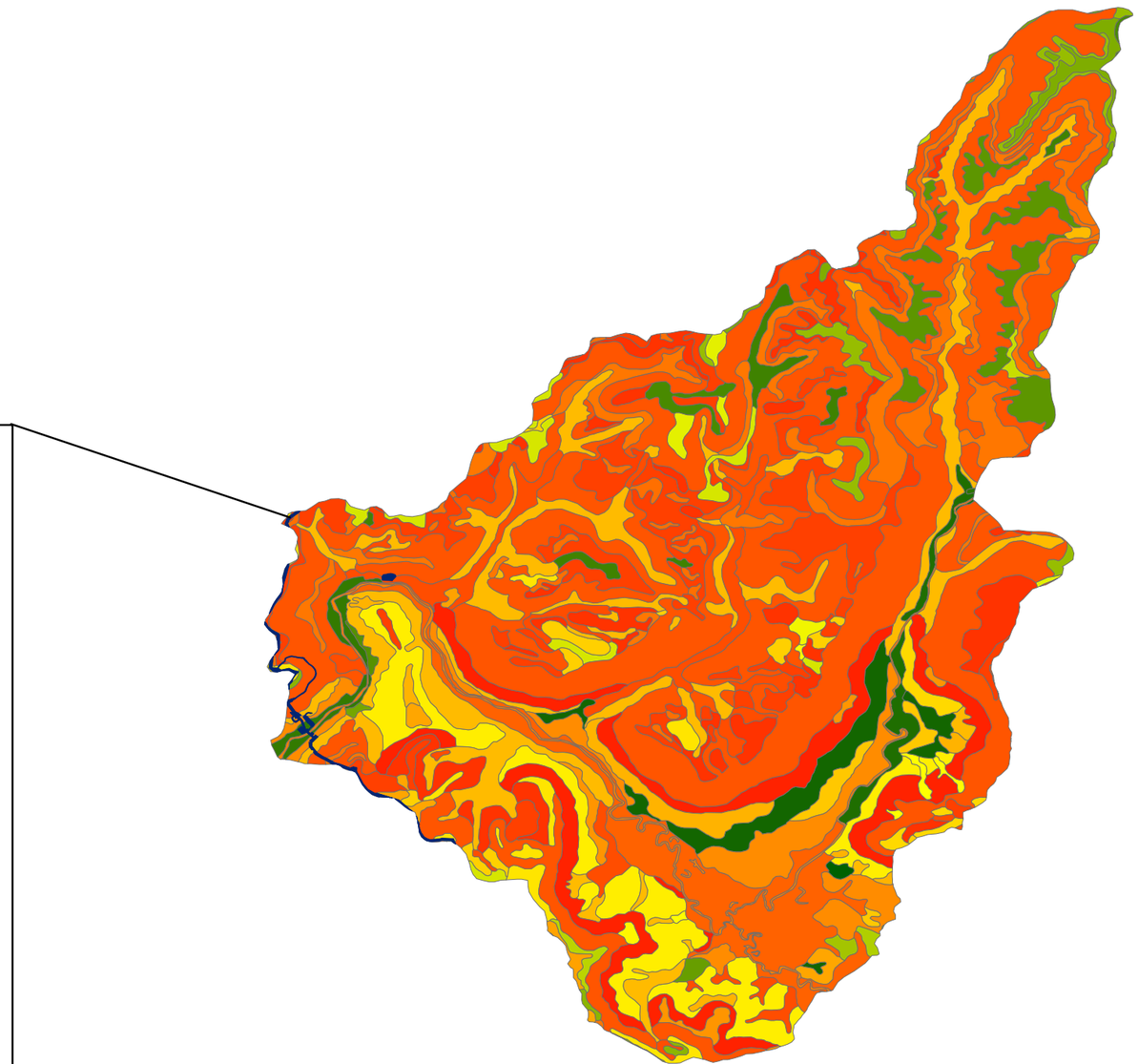
Legend

Mountain Valley Pipeline Mill Creek-Meadow River

Mill Creek-Meadow River Soil

- AlC: Allegheny loam, 8 to 15 percent slopes
- An: Atkins-Philo-Potomac complex
- BlC: Berks-Dekalb complex, 3 to 15 percent slopes, very stony
- BlE: Berks-Dekalb complex, 15 to 35 percent slopes, very stony
- CfC: Cateache silt loam, 8 to 15 percent slopes
- CgC: Cateache silt loam, 3 to 15 percent slopes, very stony
- CgE: Cateache silt loam, 15 to 35 percent slopes, very stony
- CgF: Cateache silt loam, 35 to 55 percent slopes, very stony
- CpB: Cookport loam, warm, 3 to 8 percent slopes
- CuC: Culleoka loam, 8 to 15 percent slopes
- CuD: Culleoka loam, 15 to 25 percent slopes
- CyE: Culleoka loam, 25 to 35 percent slopes, very stony
- CyF: Culleoka loam, 35 to 55 percent slopes, very stony
- 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
- ErB: Ernest silt loam, 3 to 8 percent slopes
- 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
- KxF: Kaymine-rock outcrop complex, very steep
- LgC: Lily sandy loam, warm, 8 to 15 percent slopes
- MaB: Macove channery silt loam, 3 to 8 percent slopes
- MaC: Macove channery silt loam, 8 to 15 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
- MkC: Mandy channery silt loam, 3 to 15 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
- Ml: Melvin-Lindside complex
- No: Nolin silt loam
- Ph: Philo silt loam
- Po: Pope fine sandy loam, warm, 0 to 3 percent slopes, occasionally flooded
- PuA: Purdy silt loam, 0 to 3 percent slopes
- SfC: Shouns channery silt loam, 8 to 15 percent slopes
- ShE: Shouns channery silt loam, 15 to 35 percent slopes, extremely stony
- SvC: Summers very channery sandy loam, 0 to 15 percent slopes, very stony
- Ux: Udorthents, smoothed-rock outcrop complex
- W: Water
- ZoA: Zoar silt loam, 0 to 3 percent slopes





0 1.5 3 6 Miles

SCALE: See Mapping | DRAWN: KBW
DATE: December 2021 | CHECKED: JLY
PN: 010-17-0451.016 | APPROVED: JLY

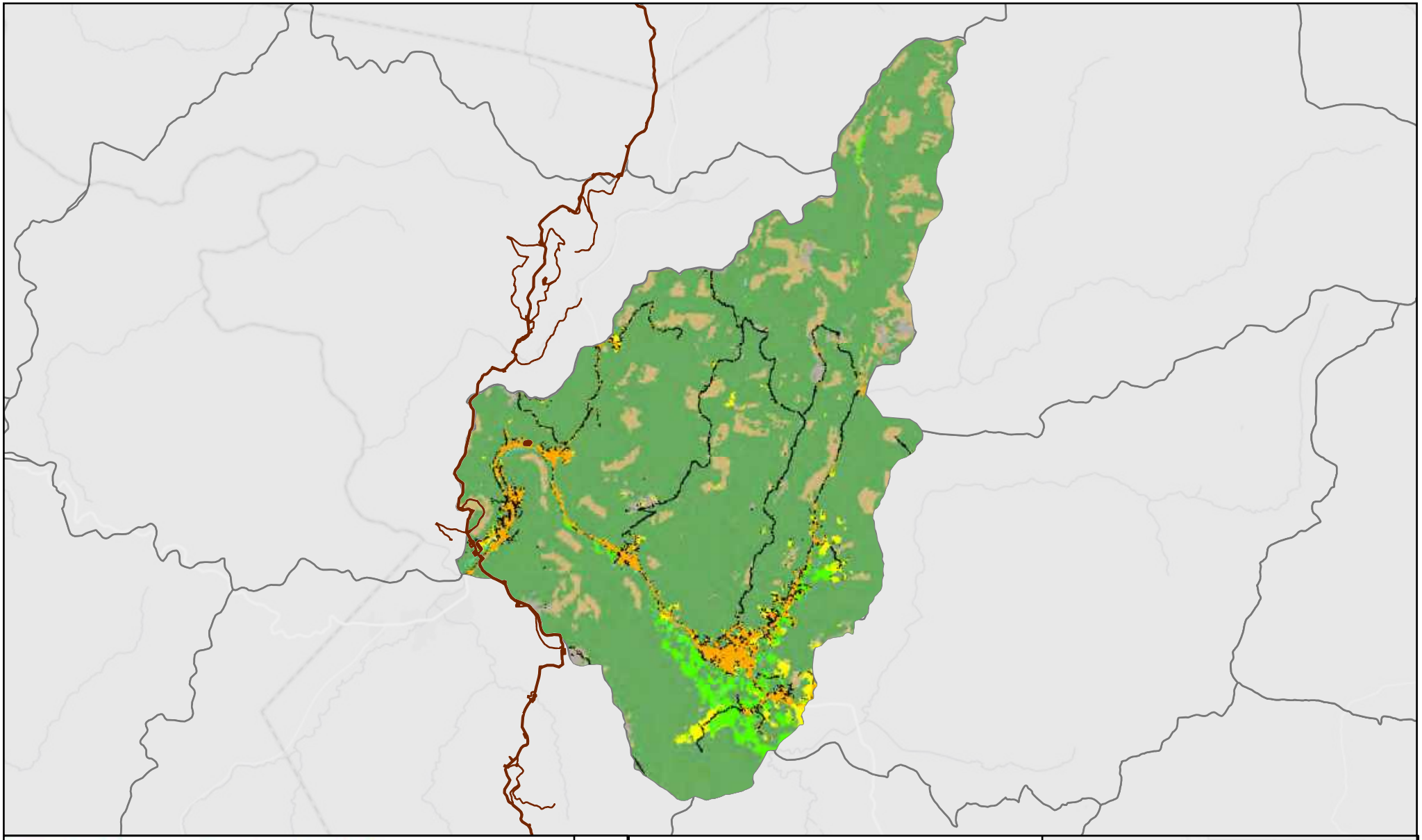
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

MAPPING FOR VISUAL REPRESENTATION ONLY

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

Cumulative Impact Assessment - Soil
Mill Creek- Meadow River (050500050605)
Gauley HUC 8 Watershed
Greenbrier County, West Virginia
For Informational Purposes Only

FIGURE 175



Mountain Valley PIPELINE

Figure: 176

Land Use/Land Cover 2011
Mill Creek-Meadow River
050500050605 HUC12 Watershed

5/26/2022

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

N
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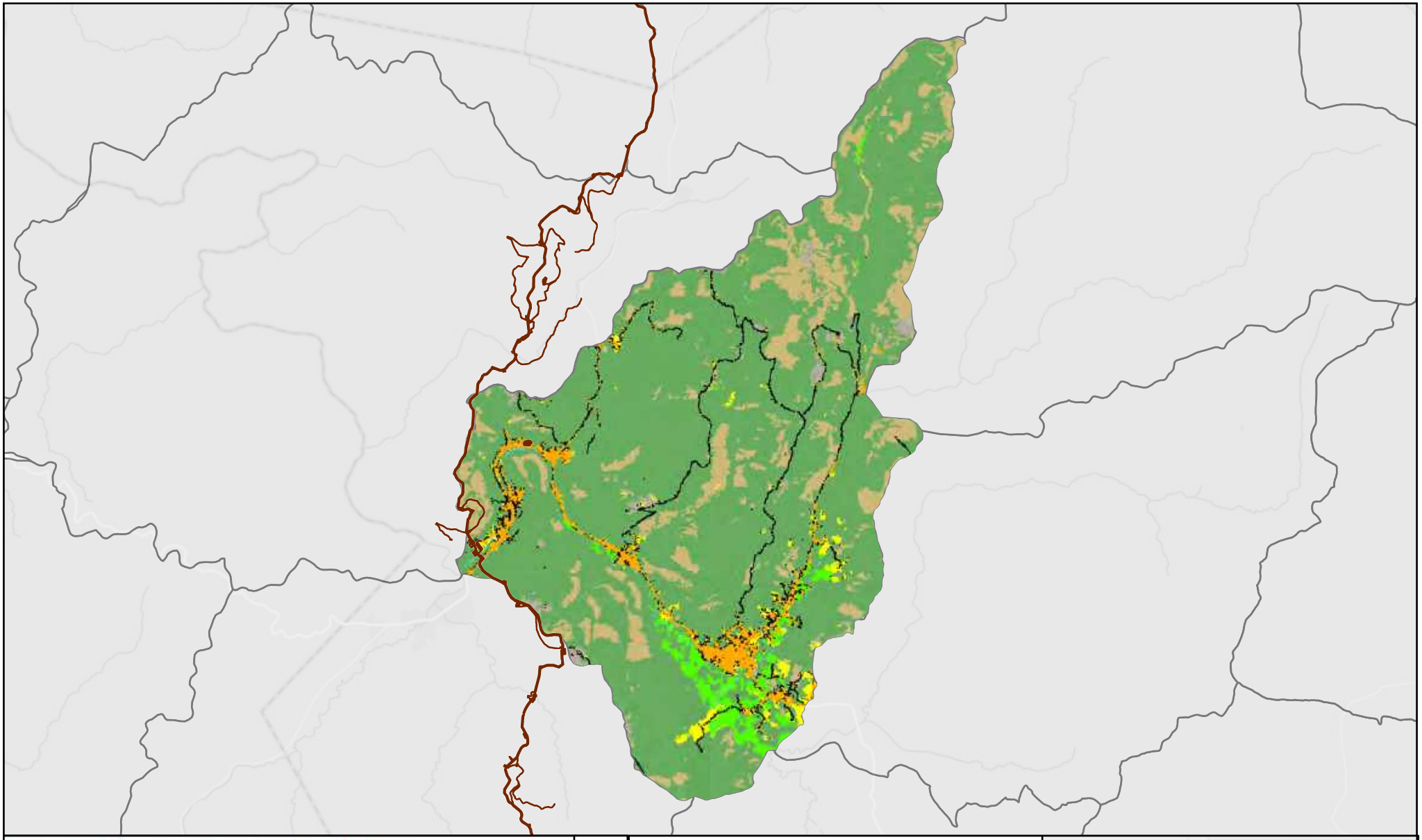
Miles
0 1.5 3

Scale: 1:120,000

Map Extent



Mountain Valley PIPELINE

Figure: 177

Land Use/Land Cover 2016
Mill Creek-Meadow River
050500050605 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2016 Land Use Land Cover

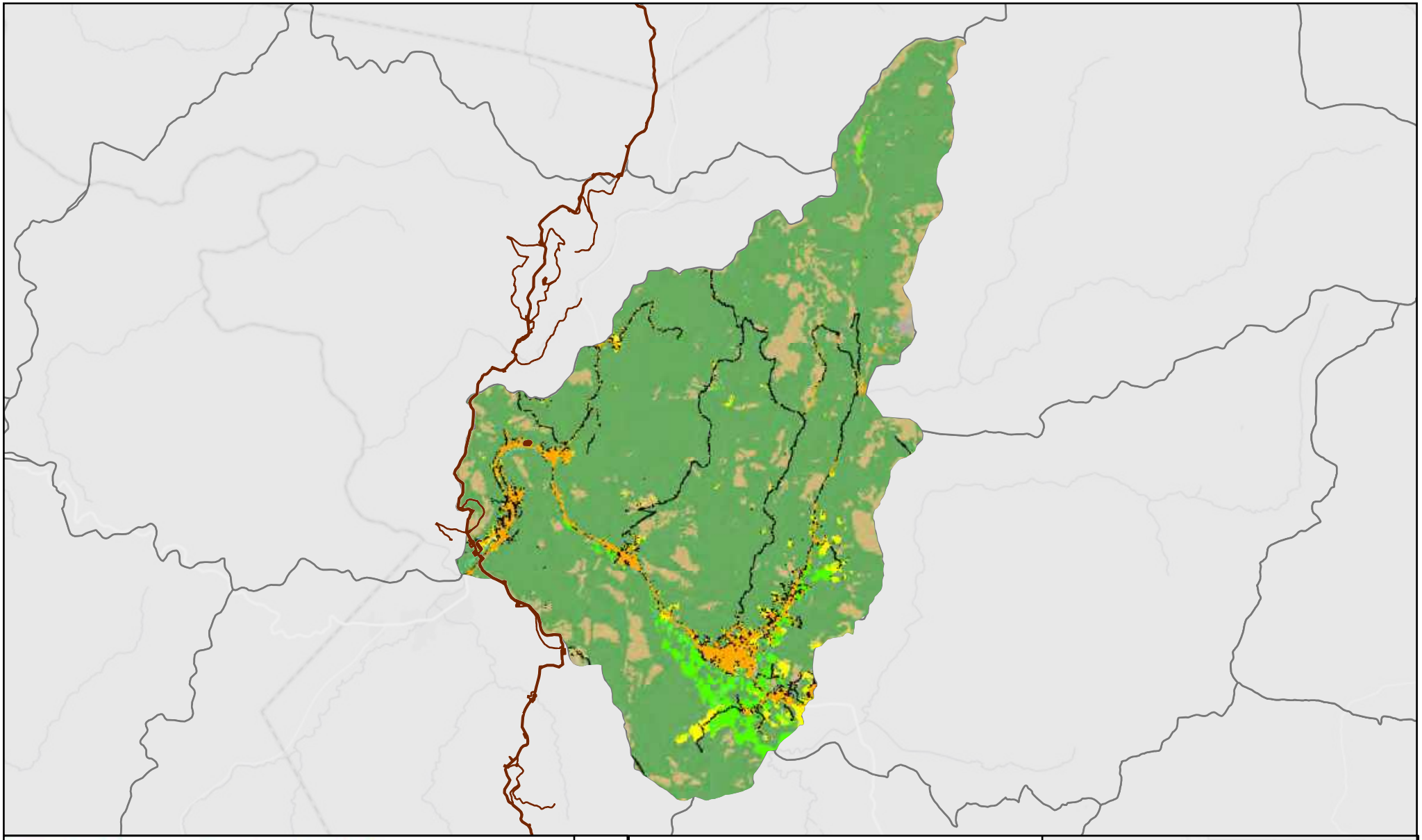
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

Miles
0 1.5 3

Scale: 1:120,000

Map Extent



Mountain Valley PIPELINE

Figure: 177a

Land Use/Land Cover 2019
Mill Creek-Meadow River
050500050605 HUC12 Watershed

5/25/2022

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

N
W E
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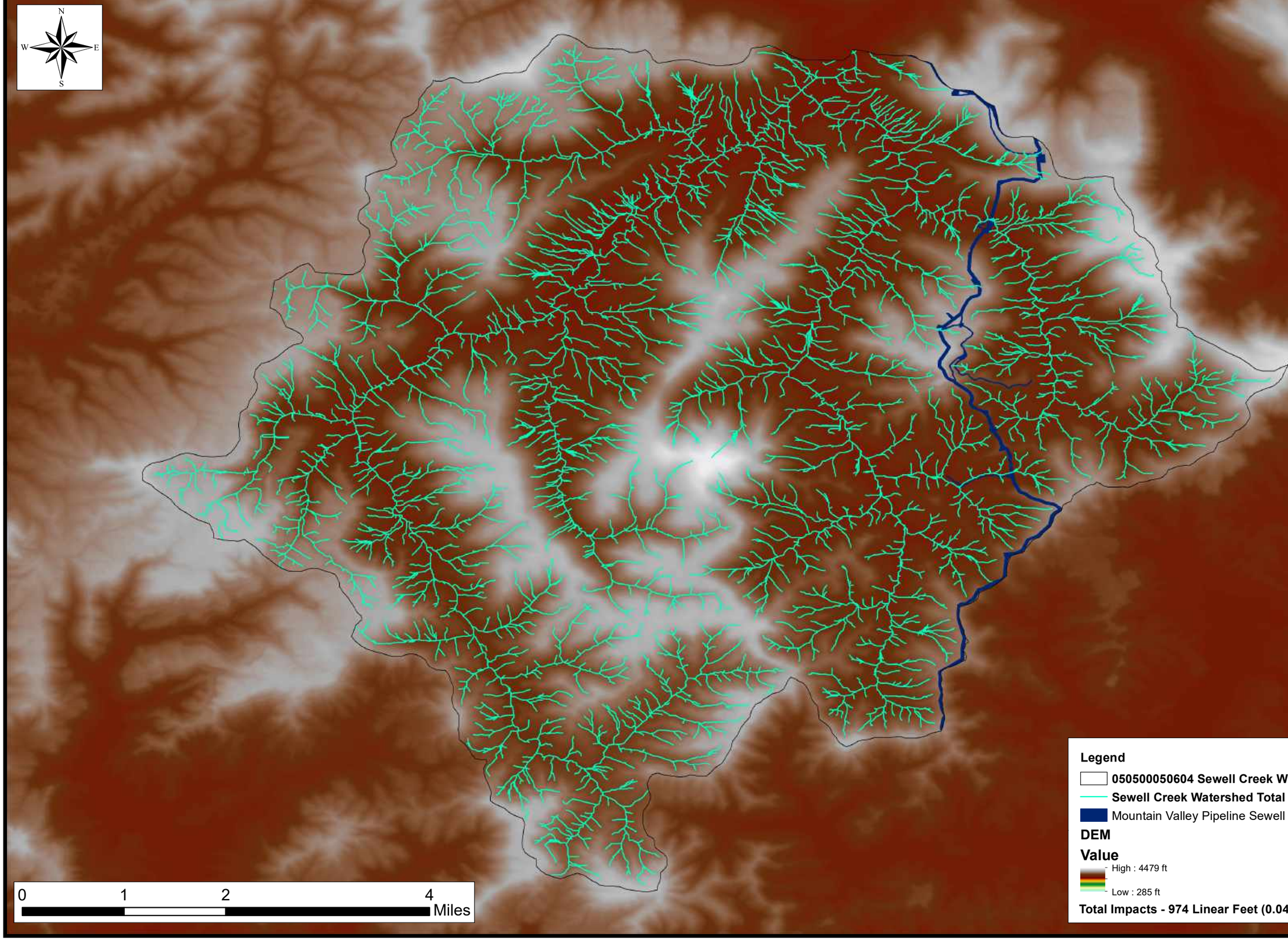
0 1.5 3 Miles

Scale: 1:120,000

Map Extent



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

POTESTA

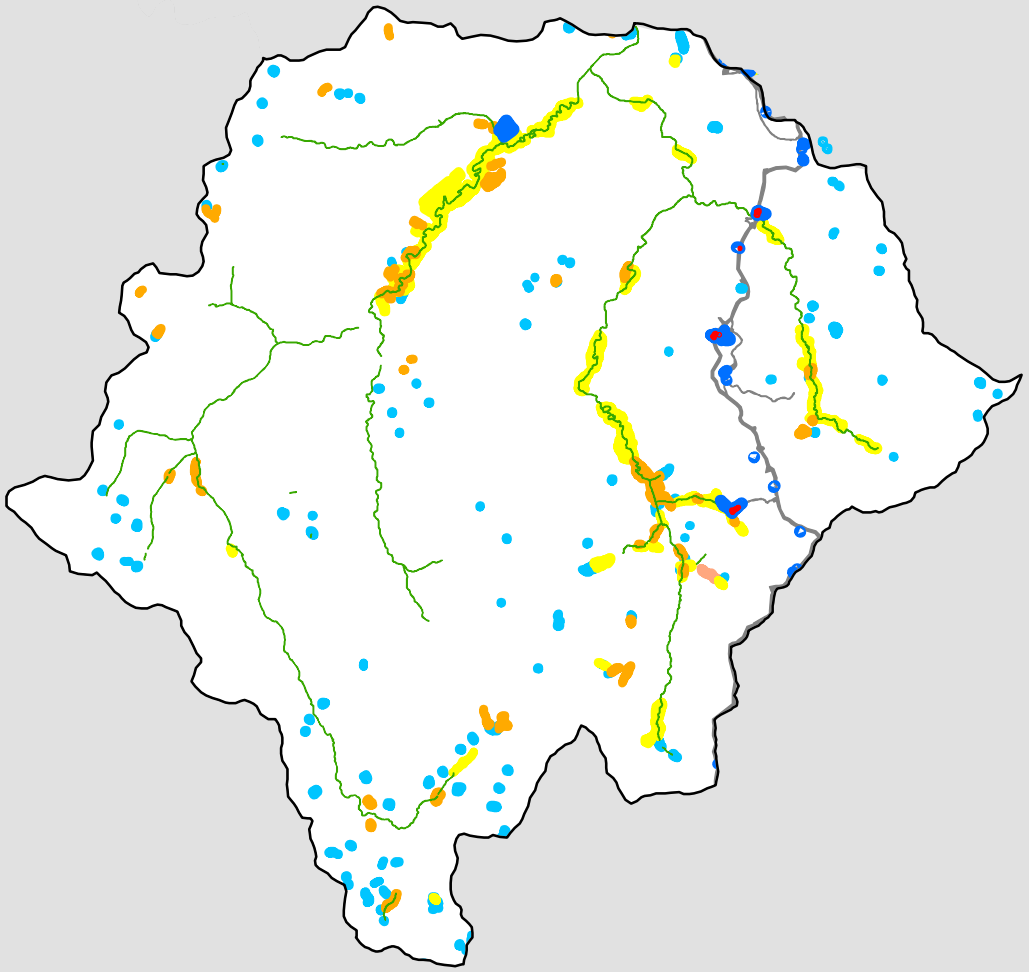
SCALE: 1" = 1 Mile | DRAWN: KBW
DATE: AUGUST 2021 | CHECKED: JLY
PN: **0101-17-0451.016** | APPROVED: JLY

I:\Projects\2017\0451_MVP_EnvCon_Monitoring\Maps\2021 GIS Sent\Figure 178 - Sewell Creek.mxd

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

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Sewell Creek Watershed (050500050604)
Gauley HUC 8 Watershed, West Virginia
For Informational Purposes Only

FIGURE 178



Mountain Valley PIPELINE

Sewell Creek

Figure 179

1:110,000

1/6/2022

LEGEND

- Wetland Impacts - 0.31 acres
- Sewell Creek Delineated Wetland Area - 12.04 acres

NWI Wetlands - 449.62 acres

- Freshwater Emergent Wetland - 53.38 acres
- Freshwater Forested/Shrub Wetland - 222.56 acres
- Freshwater Pond - 56.05 acres
- Other - 2.17 acres
- Riverine - 115.47 acres
- Mountain Valley Pipeline
- 050500050604_Sewell Creek

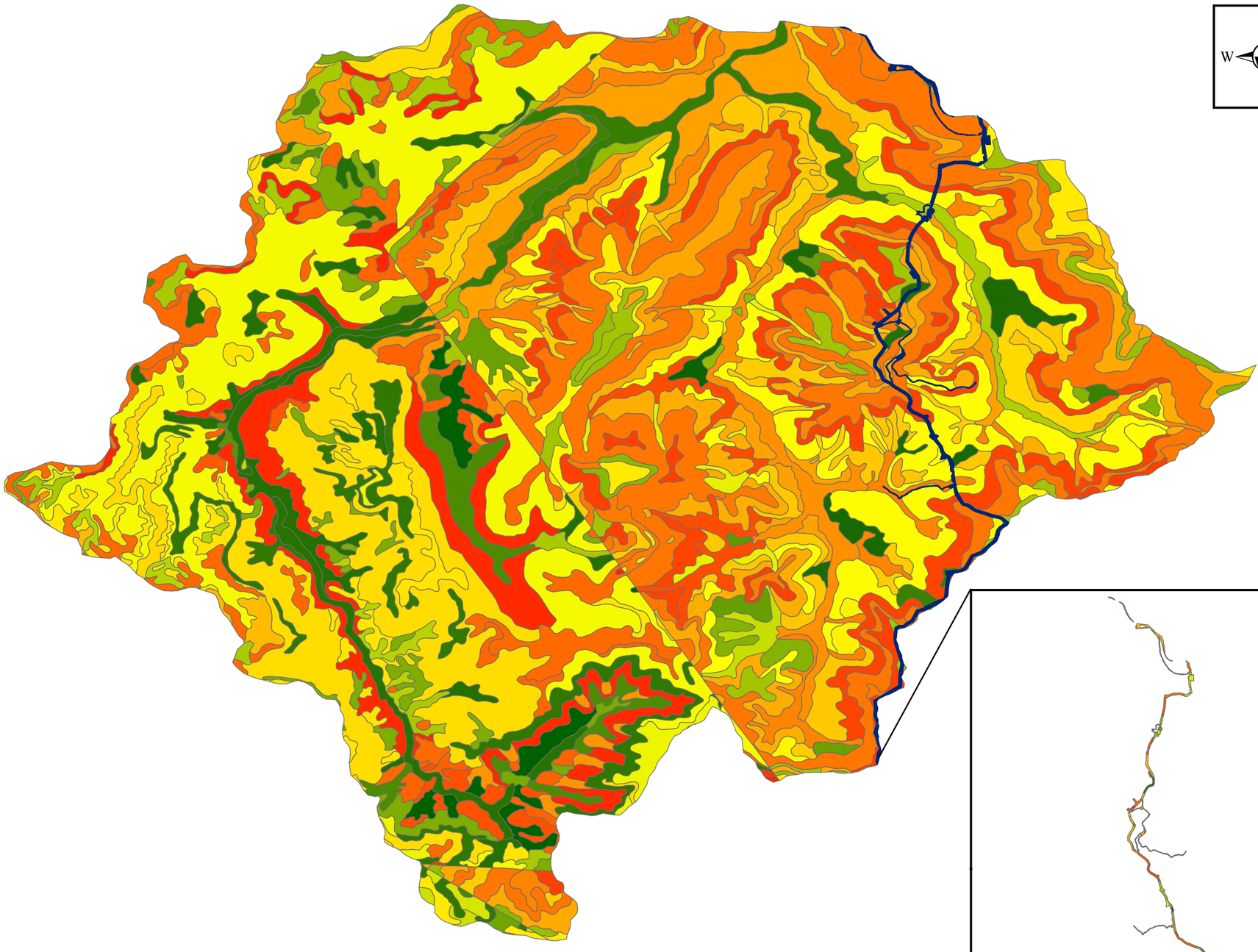
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Sewell Creek

Sewell Creek Soil

- AlB: Allegheny loam, 3 to 8 percent slopes
- An: Atkins-Philo-Potomac complex
- AtA: Atkins loam, warm, 0 to 3 percent slopes, frequently flooded
- CaC: Cateache channery silt loam, 8 to 15 percent slopes
- CaD: Cateache channery silt loam, 15 to 25 percent slopes
- CaE: Cateache channery silt loam, 25 to 35 percent slopes
- CcG: Cateache-Pipestem complex, 35 to 80 percent slopes, very stony
- CeF: Cedarcreek-Rock outcrop complex, very steep, very stony
- CfC: Cateache silt loam, 8 to 15 percent slopes
- CfD: Cateache silt loam, 15 to 25 percent slopes
- CfE: Cateache silt loam, 25 to 35 percent slopes
- CgC: Cateache silt loam, 3 to 15 percent slopes, very stony
- CgE: Cateache silt loam, 15 to 35 percent slopes, very stony
- CgF: Cateache silt loam, 35 to 55 percent slopes, very stony
- ChA: Chavies fine sandy loam, warm, 0 to 3 percent slopes, rarely flooded
- ClE: 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
- CpB: Cookport-Nallen complex, 3 to 8 percent slopes
- CuC: Culleoka loam, 8 to 15 percent slopes
- CuD: Culleoka loam, 15 to 25 percent slopes
- CvA: Craigsville very gravelly sandy loam, 0 to 5 percent slopes, rarely flooded
- CyE: Culleoka loam, 25 to 35 percent slopes, very stony
- CyF: Culleoka loam, 35 to 55 percent slopes, very stony
- DeC: Dekalb channery sandy loam, 3 to 15 percent slopes, very stony
- DeD: Dekalb channery fine sandy loam, 15 to 30 percent slopes
- DeE: Dekalb channery sandy loam, 15 to 35 percent slopes, very stony
- DeF: Dekalb channery sandy loam, 35 to 55 percent slopes, very stony
- DgF: Dekalb-Gilpin-Jefferson complex, 35 to 80 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
- ErB: Ernest silt loam, 3 to 8 percent slopes
- EsC: Ernest silt loam, moist, 3 to 15 percent slopes, extremely stony
- FyE: Frederick-Caneyville complex, karst, 15 to 35 percent slopes, very rocky
- GbF: Gilpin-Berks channery silt loams, warm, 35 to 70 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
- HgC: Highsplint channery loam, 3 to 15 percent slopes, very stony
- HgE: Highsplint channery loam, 15 to 35 percent slopes, very stony
- JsD: Jefferson channery loam, 15 to 35 percent slopes, very stony
- KmC: Kaymine very channery loam, 0 to 15 percent slopes, very stony
- KrF: Kaymine-Rock outcrop complex, very steep, very stony
- KwA: Knowlton silt loam, 0 to 3 percent slopes, rarely flooded
- 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
- 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
- Lo: Lobdell silt loam
- MaC: Macove channery silt loam, 8 to 15 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
- McF: Macove-Clifftop complex, 35 to 55 percent slopes, very stony
- MeF: Macove-Gilpin complex, 35 to 55 percent slopes, very stony
- Ml: Melvin-Lindside complex
- NfC: Nallen-Fenwick complex, 8 to 15 percent slopes, very stony
- Ph: Philo silt loam
- PhA: Philo-Pope complex, warm, 0 to 3 percent slopes, occasionally flooded
- PmC: Pipestem channery silty clay loam, 3 to 15 percent slopes, extremely stony
- PmE: Pipestem channery silty clay loam, 15 to 35 percent slopes, extremely stony
- Po: Pope fine sandy loam, warm, 0 to 3 percent slopes, occasionally flooded
- Se: Sensabaugh loam
- SfC: Shouns channery silt loam, 8 to 15 percent slopes
- ShC: Shouns channery silt loam, 3 to 15 percent slopes, extremely stony
- ShE: Shouns channery silt loam, 15 to 35 percent slopes, extremely stony
- Ud: Udorthents, smoothed
- Ux: Udorthents, smoothed-rock outcrop complex
- W: Water
- ZoA: Zoar silt loam, 0 to 3 percent slopes



MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: See Mapping
DATE: December 2021
PN: **0101-17-0451.016**

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

Projects\2017\17-0451-MVP_ArcGis_Mapping\Maps\2021\CIA Soils\Figure 180 - Sewell Creek Soil.mxd

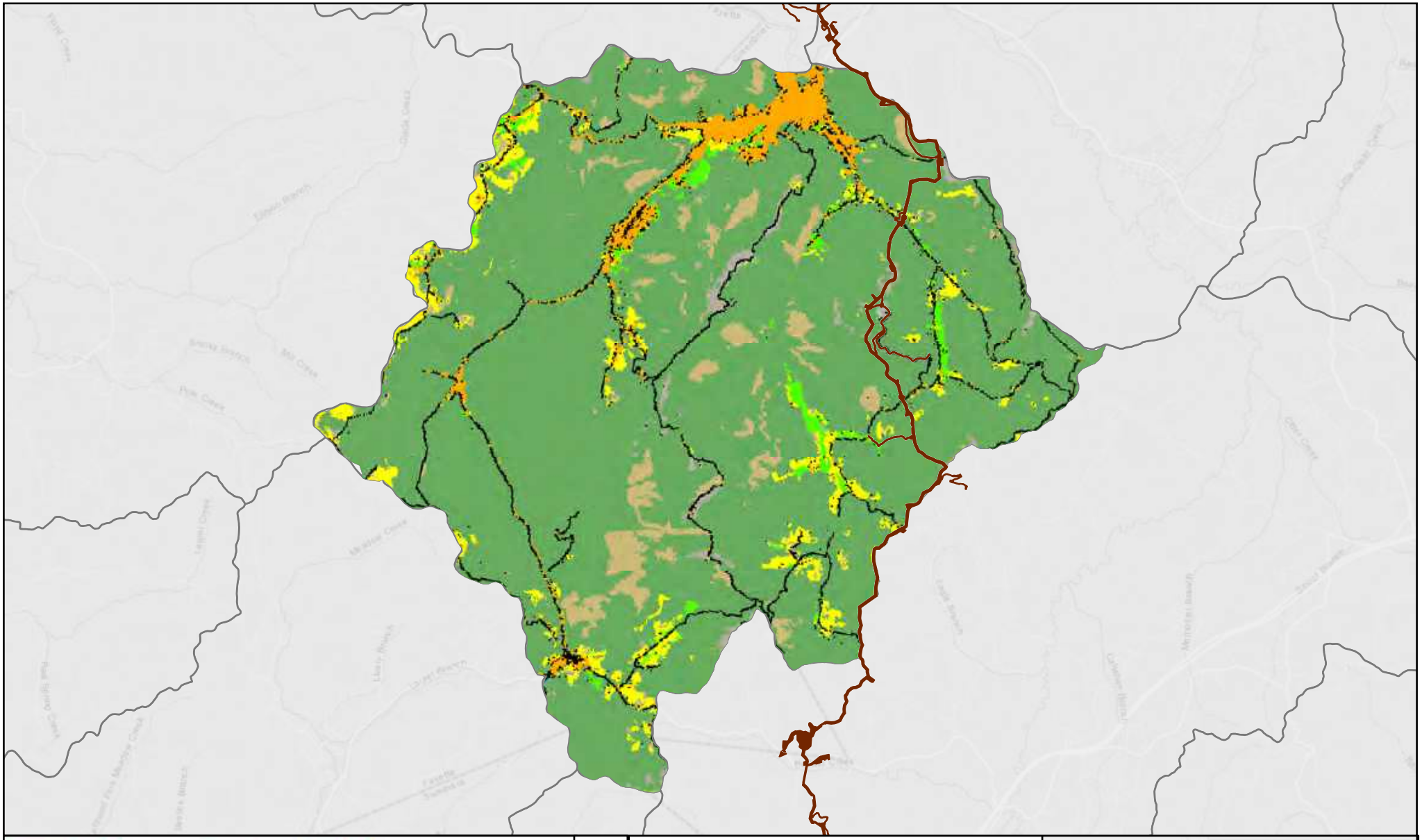
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
Sewell Creek (0505000506040)
Gauley HUC 8 Watershed
Greenbrier, Fayette & Raleigh,
Mercer & Summers Counties, West Virginia
For Informational Purposes Only

FIGURE 180



Mountain Valley PIPELINE

Figure: 181

Land Use/Land Cover 2011
Sewell Creek
050500050604 HUC12 Watershed

5/26/2022

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

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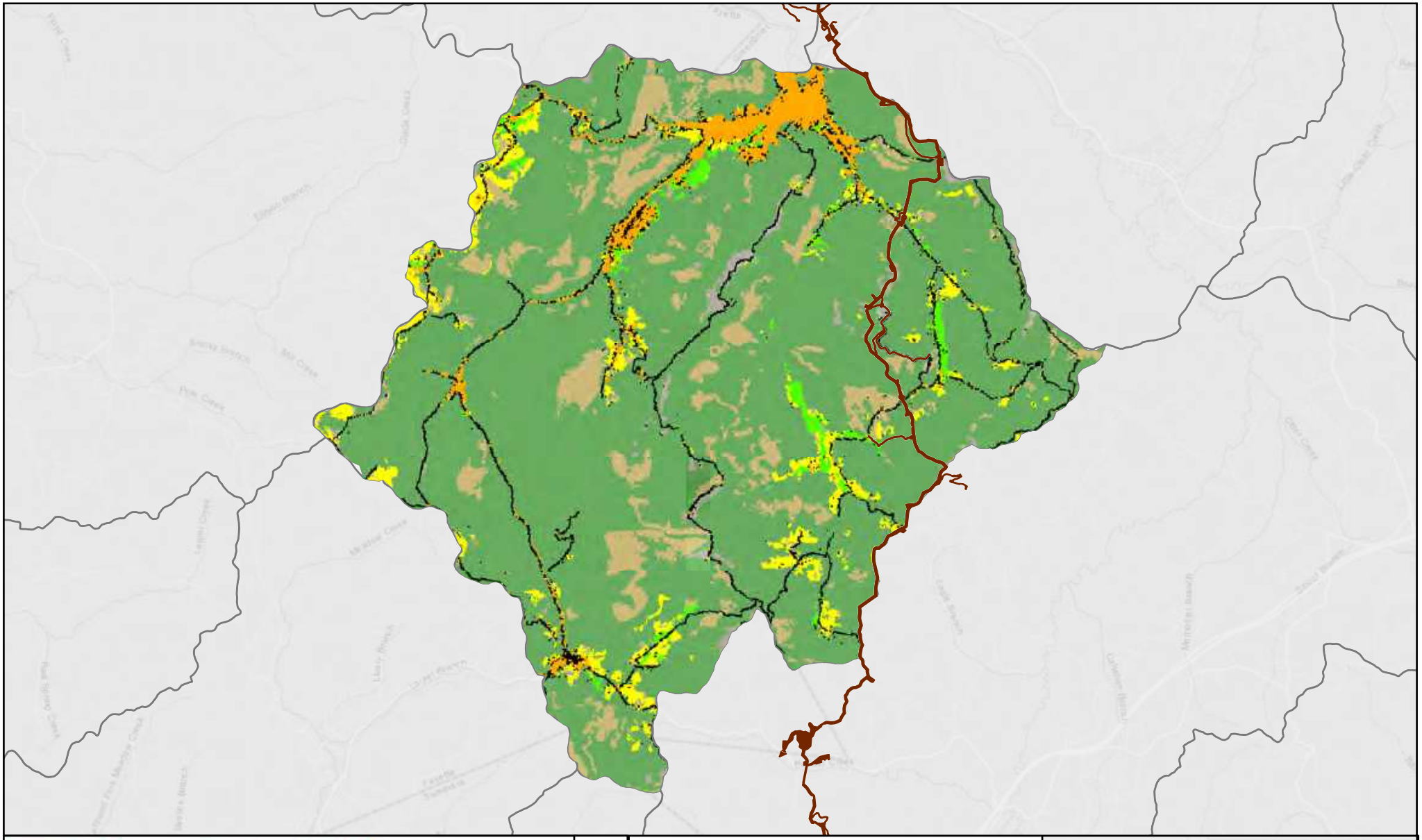
Scale: 1:95,000

Map Extent



Mountain Valley PIPELINE

Figure: 182

Land Use/Land Cover 2016
Sewell Creek
050500050604 HUC12 Watershed

5/26/2022

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

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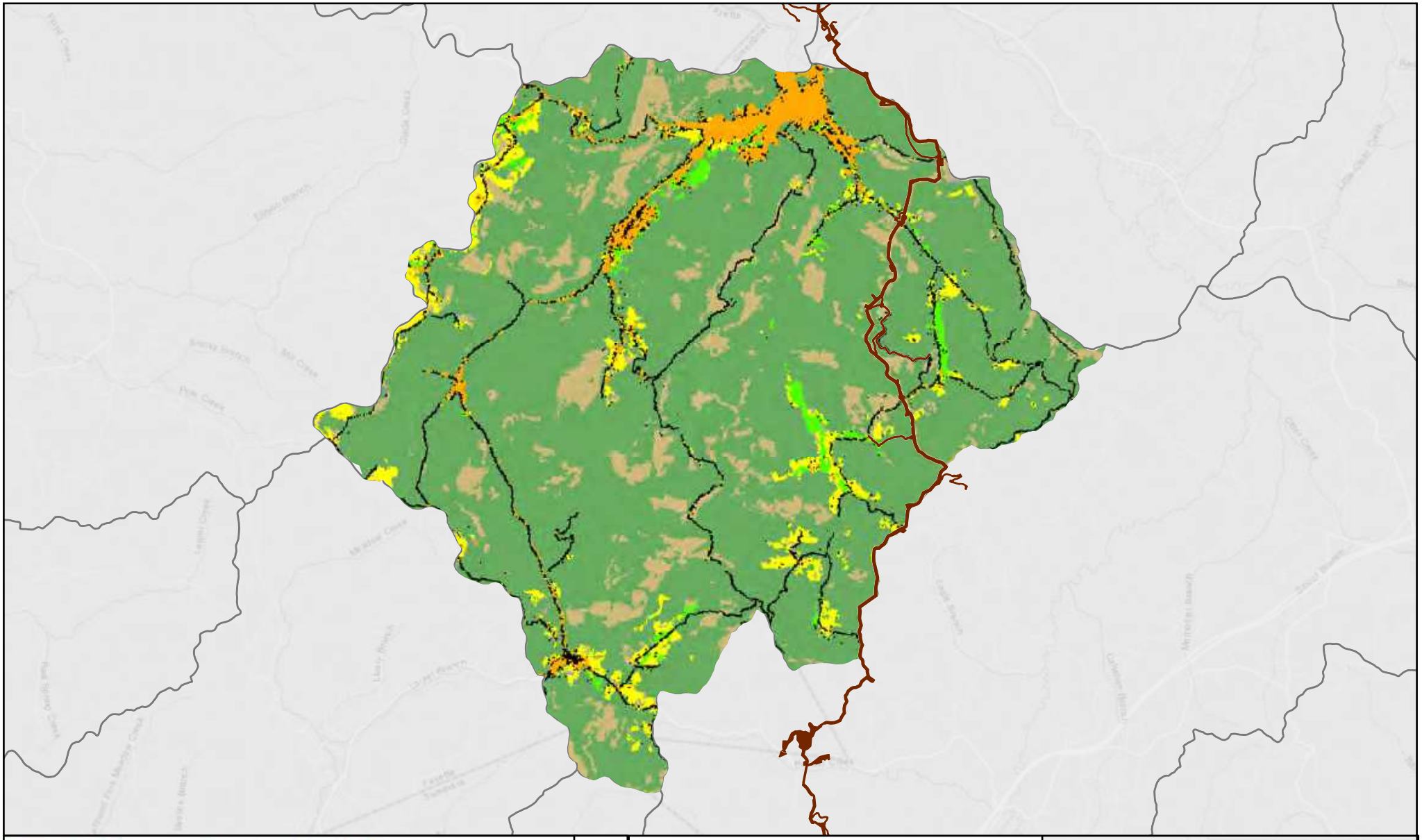
Scale: 1:95,000

Map Extent



Mountain Valley PIPELINE

Figure: 182a

Land Use/Land Cover 2019
Sewell Creek
050500050604 HUC12 Watershed

5/25/2022

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

N
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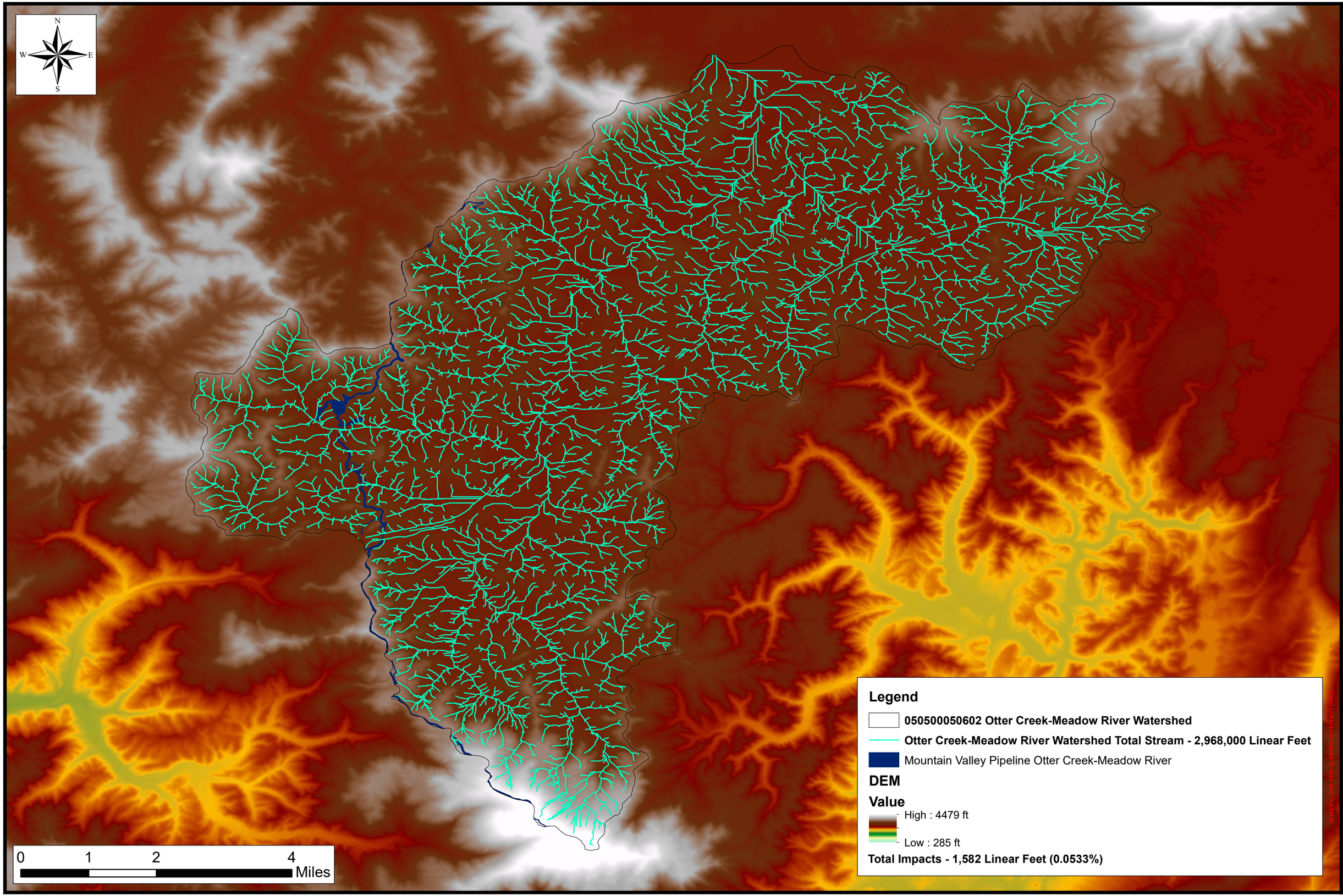
Miles
0 1 2

Scale: 1:95,000

Map Extent



SCALE: 1" = 1 Mile
DATE: AUGUST 2021
PN: **0101-17-0451.016**

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

I:\Projects\2017\17-0451_MVP_EnvCon_Monitoring\Maps\2021 CIA Soils\Figure 183 - Otter Creekmead

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

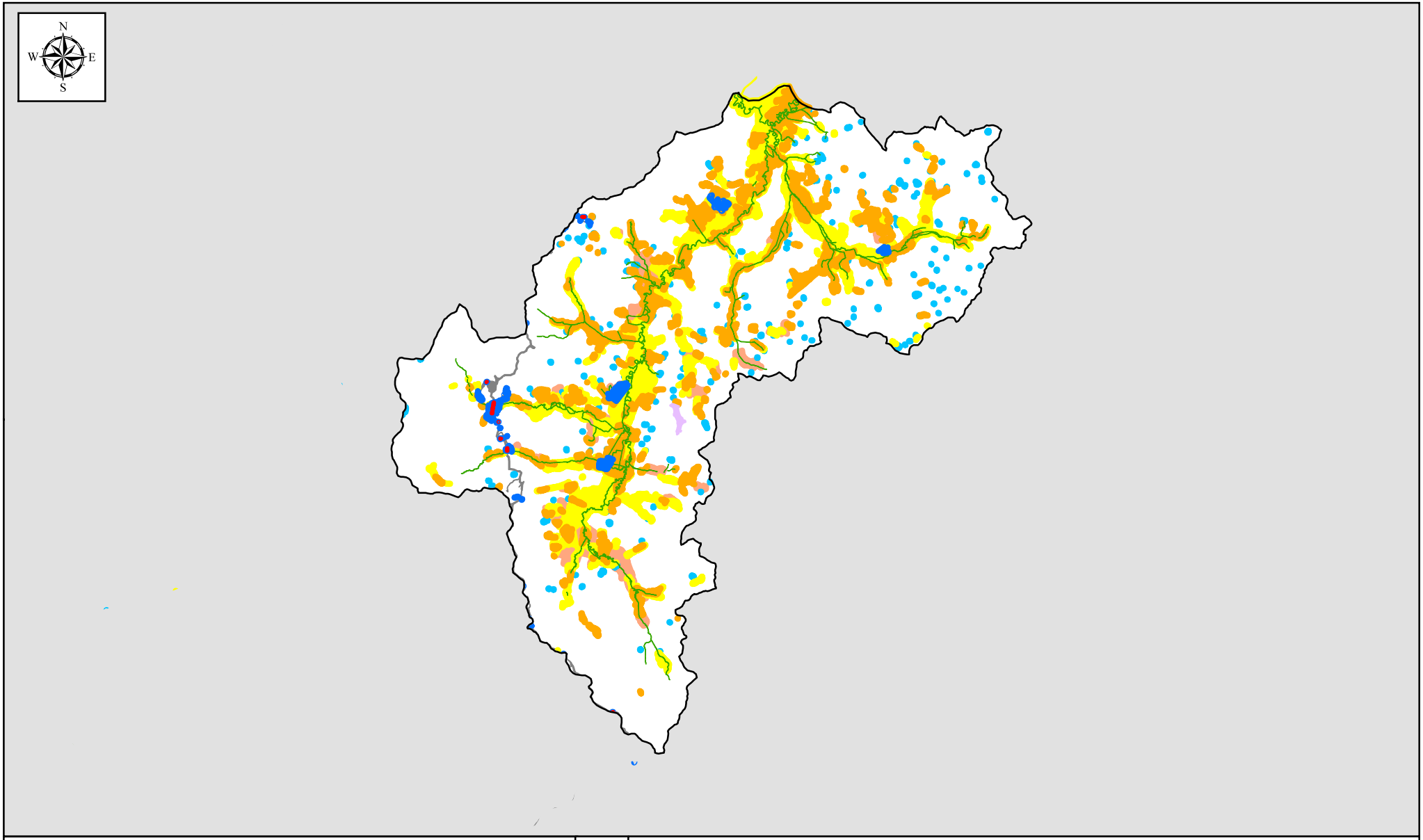
POTESTA

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

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Otter Creek-Meadow River Watershed (050500050602)
Gauley HUC 8 Watershed, West Virginia
For Informational Purposes Only

MAPPING FOR VISUAL REPRESENTATION ONLY

FIGURE 183



Mountain Valley PIPELINE

Otter Creek-Meadow River

Figure 184

1:150,000

1/6/2022

LEGEND

- Wetland Impacts - 1.53 acres
- Otter Creek-Meadow River Delineated Wetland Area - 59.97 acres

NWI Wetlands - 5615.68 acres

- Freshwater Emergent Wetland - 1536.22 acres
- Freshwater Forested/Shrub Wetland - 2956.02 acres
- Freshwater Pond - 74.59 acres
- Lake - 28.79 acres
- Other - 796.55 acres
- Riverine - 223.52 acres
- Mountain Valley Pipeline
- 050500050602_Otter Creek-Meadow River

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

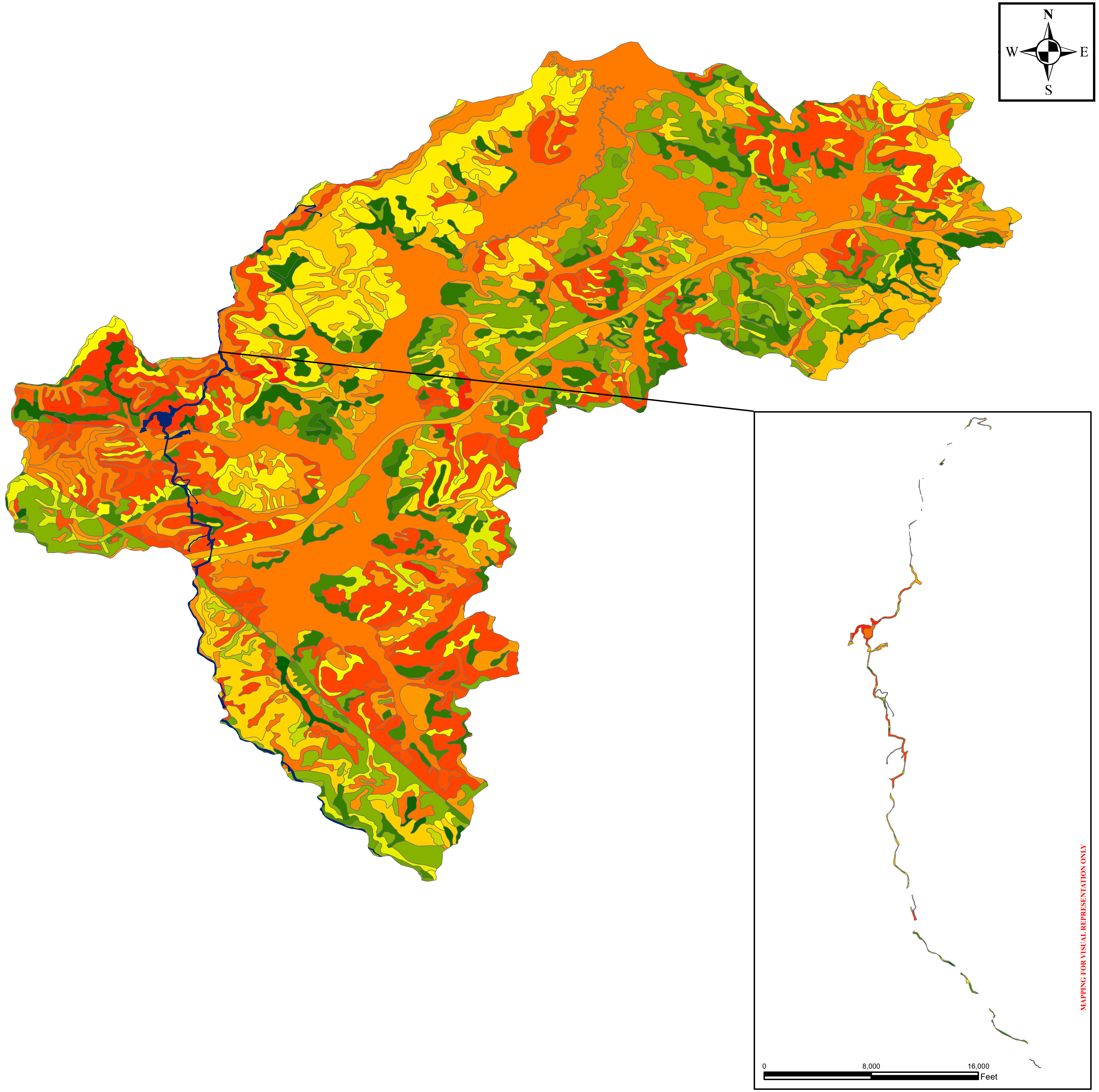
Legend

Mountain Valley Pipeline Otter Creek-Meadow River

Otter Creek-Meadow River Soil

- At: Atkins silt loam
- BlC: Berks-Dekalb complex, 3 to 15 percent slopes, very stony
- BlE: Berks-Dekalb complex, 15 to 35 percent slopes, very stony
- CaC: Cateache channery silt loam, 8 to 15 percent slopes
- CaD: Cateache channery silt loam, 15 to 25 percent slopes
- CaE: Cateache channery silt loam, 25 to 35 percent slopes
- CcC: Cateache silt loam, 3 to 15 percent slopes
- CcD: Cateache silt loam, 15 to 25 percent slopes
- CcG: Cateache-Pipestem complex, 35 to 80 percent slopes, very stony
- CeC: Cateache-Berks channery silt loams, 3 to 15 percent slopes
- CeD: Cateache-Berks channery silt loams, 15 to 30 percent slopes
- CeD3: Cateache-Berks channery silt loams, 15 to 35 percent slopes, severely eroded
- CeF: Cateache-Berks channery silt loams, 30 to 70 percent slopes
- CeF3: Cateache-Berks channery silt loams, 35 to 70 percent slopes, severely eroded
- CfB: Cateache silt loam, 3 to 8 percent slopes
- CfC: Cateache silt loam, 8 to 15 percent slopes
- CfD: Cateache silt loam, 15 to 25 percent slopes
- CfE: Cateache silt loam, 25 to 35 percent slopes
- CfF: Cateache silt loam, 35 to 55 percent slopes
- CgC: Cateache silt loam, 3 to 15 percent slopes, very stony
- CgE: Cateache silt loam, 15 to 35 percent slopes, very stony
- CgF: Cateache silt loam, 35 to 55 percent slopes, very stony
- ChD: Cateache-Berks channery silt loams, 15 to 30 percent slopes, very stony
- ChF: Cateache-Berks channery silt loams, 30 to 70 percent slopes, very stony
- ClE: Clifftop channery silt loam, 25 to 35 percent slopes
- CnC: Clifftop-Nallen complex, 8 to 15 percent slopes
- CtB: Cotaco loam, 3 to 8 percent slopes
- CuB: Culleoka loam, 3 to 8 percent slopes
- CuC: Culleoka loam, 8 to 15 percent slopes
- CuD: Culleoka loam, 15 to 25 percent slopes
- CyE: Culleoka loam, 25 to 35 percent slopes, very stony
- CyF: Culleoka loam, 35 to 55 percent slopes, very stony
- DeC: Dekalb channery sandy loam, 3 to 15 percent slopes, very stony
- DeD: Dekalb channery fine sandy loam, 15 to 30 percent slopes
- DeE: Dekalb channery sandy loam, 15 to 35 percent slopes, very stony
- DeF: Dekalb channery sandy loam, 35 to 55 percent slopes, very stony
- DgD: Dekalb-Gilpin-Jefferson complex, 15 to 35 percent slopes, very stony
- DgF: Dekalb-Gilpin-Jefferson complex, 35 to 80 percent slopes, very stony
- DkC: Dekalb very channery loam, 3 to 15 percent slopes, extremely stony
- EBC: Ernest and Buchanan soils, 3 to 15 percent slopes, very stony
- ErB: Ernest silt loam, 3 to 8 percent slopes
- GaB: Gilpin silt loam, warm, 3 to 8 percent slopes
- GaC: Gilpin silt loam, 8 to 15 percent slopes
- GaD: Gilpin silt loam, 15 to 25 percent slopes
- GbC: Gilpin-Berks channery silt loams, warm, 8 to 15 percent slopes
- GbD: Gilpin-Berks channery silt loams, warm, 15 to 25 percent slopes
- GbF: Gilpin-Berks channery silt loams, warm, 35 to 70 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
- JsD: Jefferson channery loam, 15 to 35 percent slopes, very stony
- KmC: Kaymine very channery loam, 0 to 15 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: Lily sandy loam, warm, 15 to 35 percent slopes, very stony
- LlB: Lily loam, warm, 3 to 8 percent slopes
- LlC: Lily loam, warm, 8 to 15 percent slopes
- LlD: Lily loam, warm, 15 to 25 percent slopes
- Lo: Lobdell silt loam
- MaC: Macove channery silt loam, 8 to 15 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
- McF: Macove-Clifftop complex, 35 to 55 percent slopes, very stony
- Md: Melvin-Lindside complex
- MeF: Macove-Gilpin complex, 35 to 55 percent slopes, very stony
- Ml: Melvin-Lindside complex
- MlA: Melvin-Lindside complex, 0 to 3 percent slopes, frequently flooded
- No: Nolin silt loam
- Oe: Orrville silt loam
- PhA: Philo-Pope complex, warm, 0 to 3 percent slopes, occasionally flooded
- PmC: Pipestem channery silty clay loam, 3 to 15 percent slopes, extremely stony
- PmE: Pipestem channery silty clay loam, 15 to 35 percent slopes, extremely stony
- PuA: Purdy silt loam, 0 to 3 percent slopes
- SfB: Shouns channery silt loam, 3 to 8 percent slopes
- SfC: Shouns channery silt loam, 8 to 15 percent slopes
- ShB: Shouns silt loam, 3 to 8 percent slopes
- ShC: Shouns channery silt loam, 3 to 15 percent slopes, extremely stony
- ShD: Shouns silt loam, 15 to 30 percent slopes
- ShE: Shouns channery silt loam, 15 to 35 percent slopes, extremely stony
- ShF: Shouns channery silt loam, 35 to 55 percent slopes, extremely stony
- StC: Shouns silt loam, 3 to 15 percent slopes, very stony
- StD: Shouns silt loam, 15 to 30 percent slopes, very stony
- Ux: Udorthents, smoothed-rock outcrop complex
- W: Water
- WeC: Weikert channery silt loam, 8 to 15 percent slopes
- ZoA: Zoar silt loam, 0 to 3 percent slopes

0 1.5 3 6 Miles



SCALE: See Mapping | DRAWN: KBW
DATE: December 2021 | CHECKED: JLY
PN: 0101-17-0451.016 | APPROVED: JLY

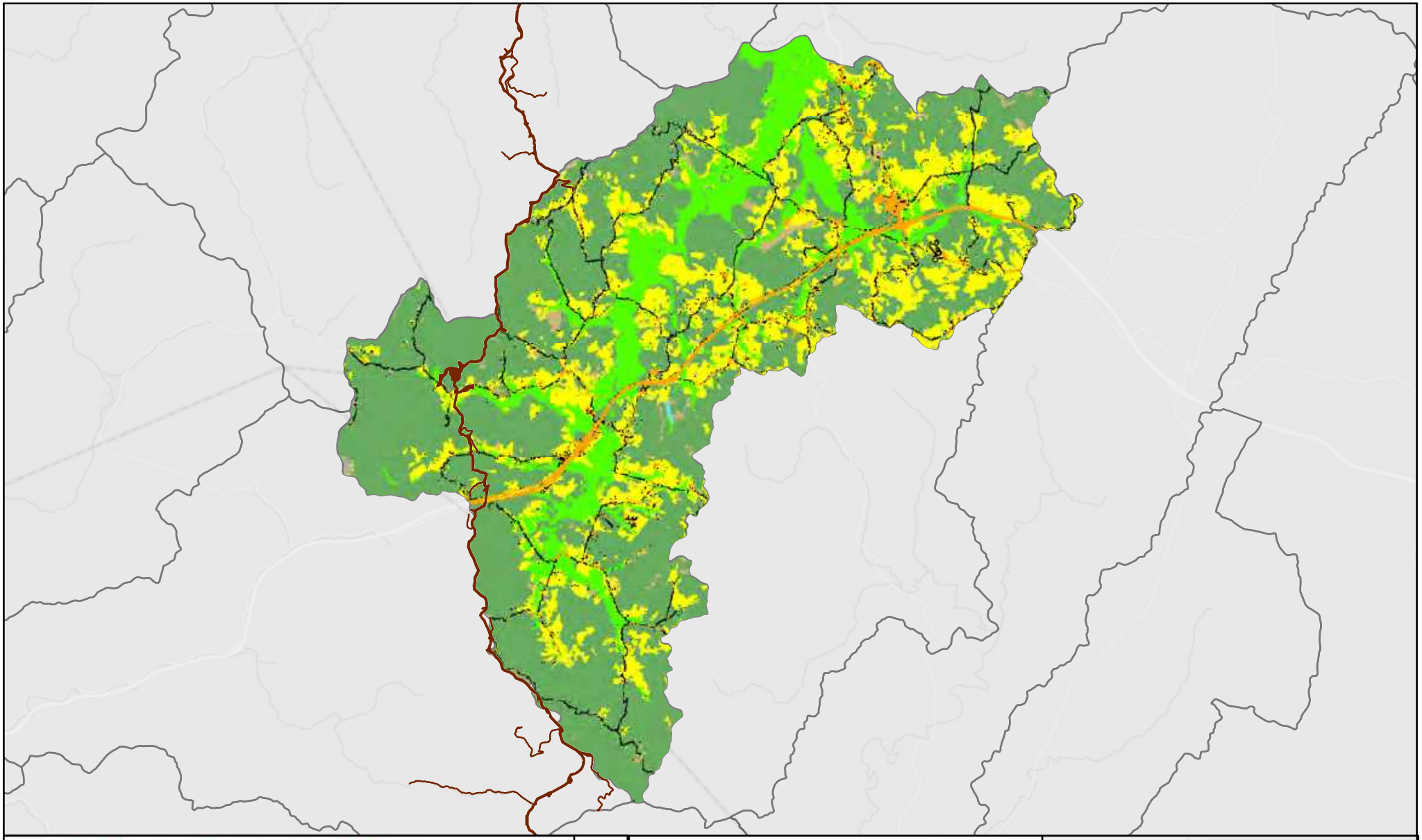
I:\Projects\2017\17_0451_MVP_EnviCon_Monitoring\Maps\2021\CIA Soils\Figure 185 - Otter Creek Meadow River Soil.mxd

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

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

Cumulative Impact Assessment - Soil
Otter Creek-Meadow River (050500050602)
Gauley HUC 8 Watershed
Greenbrier, Fayette & Raleigh,
Mercer & Summer Counties, West Virginia
For Informational Purposes Only

FIGURE 185



Mountain Valley PIPELINE

Figure: 186

Land Use/Land Cover 2011
Otter Creek-Meadow River
050500050602 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2011 Land Use Land Cover

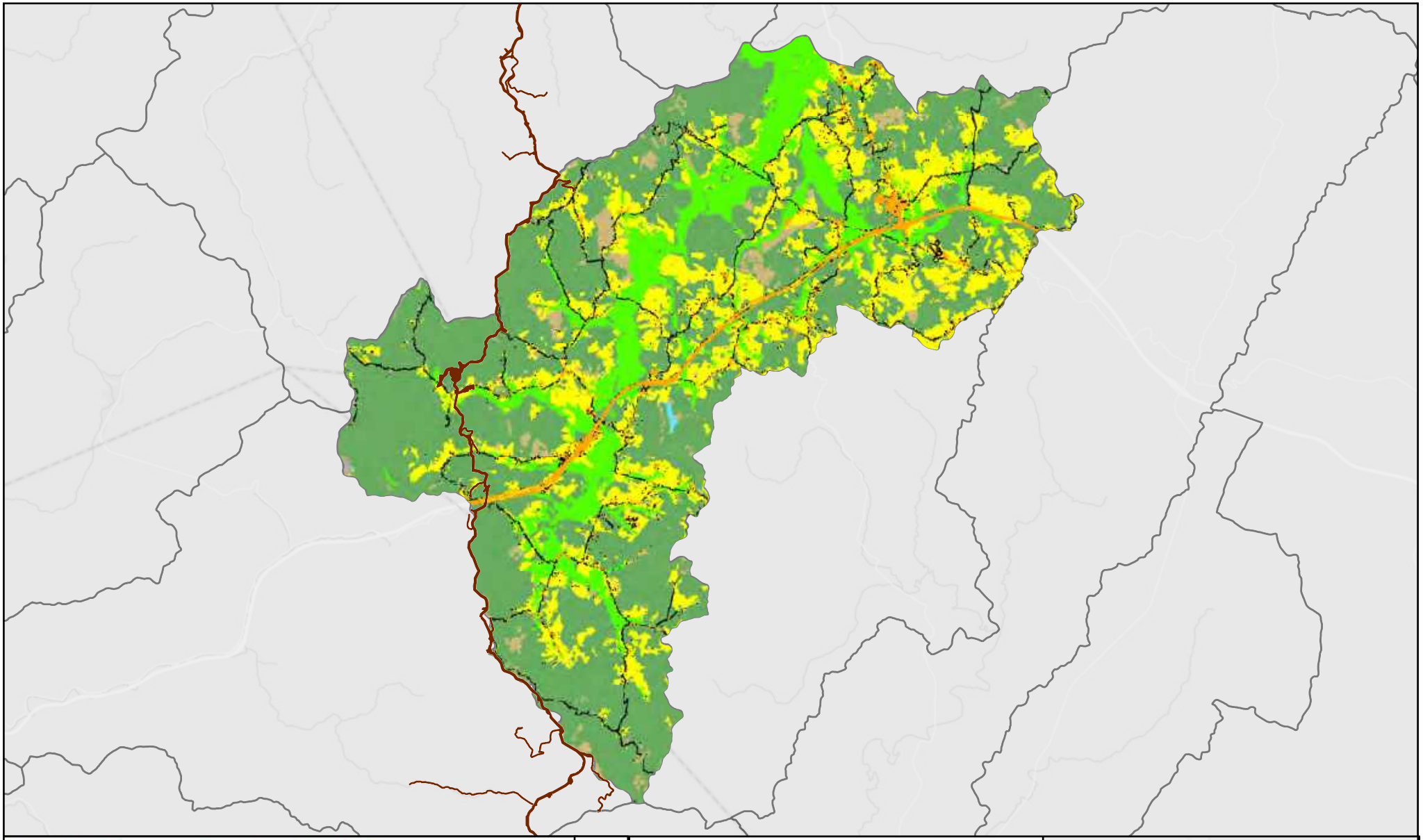
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N W E S

Miles
0 1.5 3

Scale: 1:130,000

Map Extent



Mountain Valley PIPELINE

Figure: 187

Land Use/Land Cover 2016
Otter Creek-Meadow River
050500050602 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2016 Land Use Land Cover

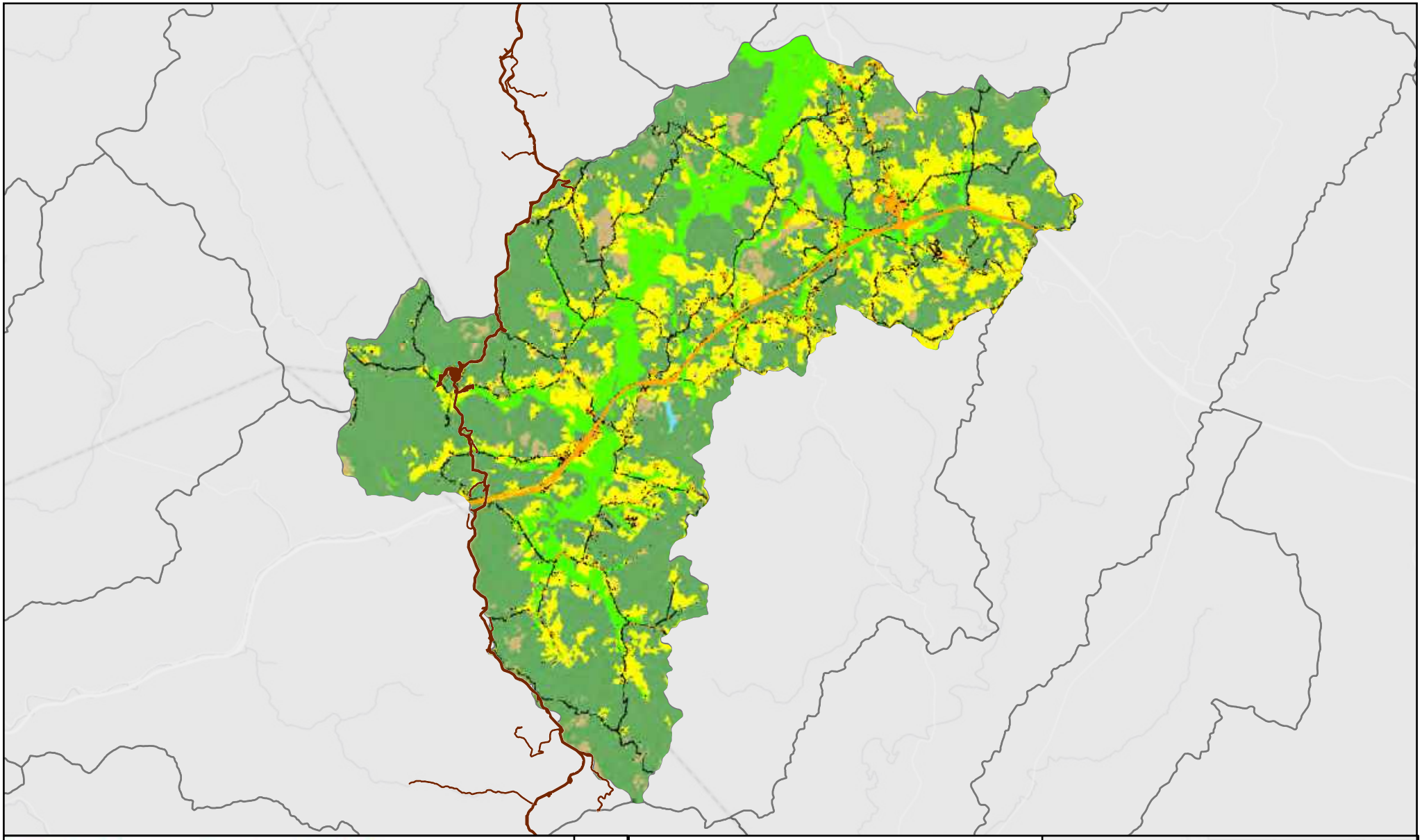
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

Miles
0 1.5 3

Scale: 1:130,000

Map Extent



Mountain Valley PIPELINE

Figure: 187a

Land Use/Land Cover 2019
Otter Creek-Meadow River
050500050602 HUC12 Watershed

5/25/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2019 Land Use Land Cover

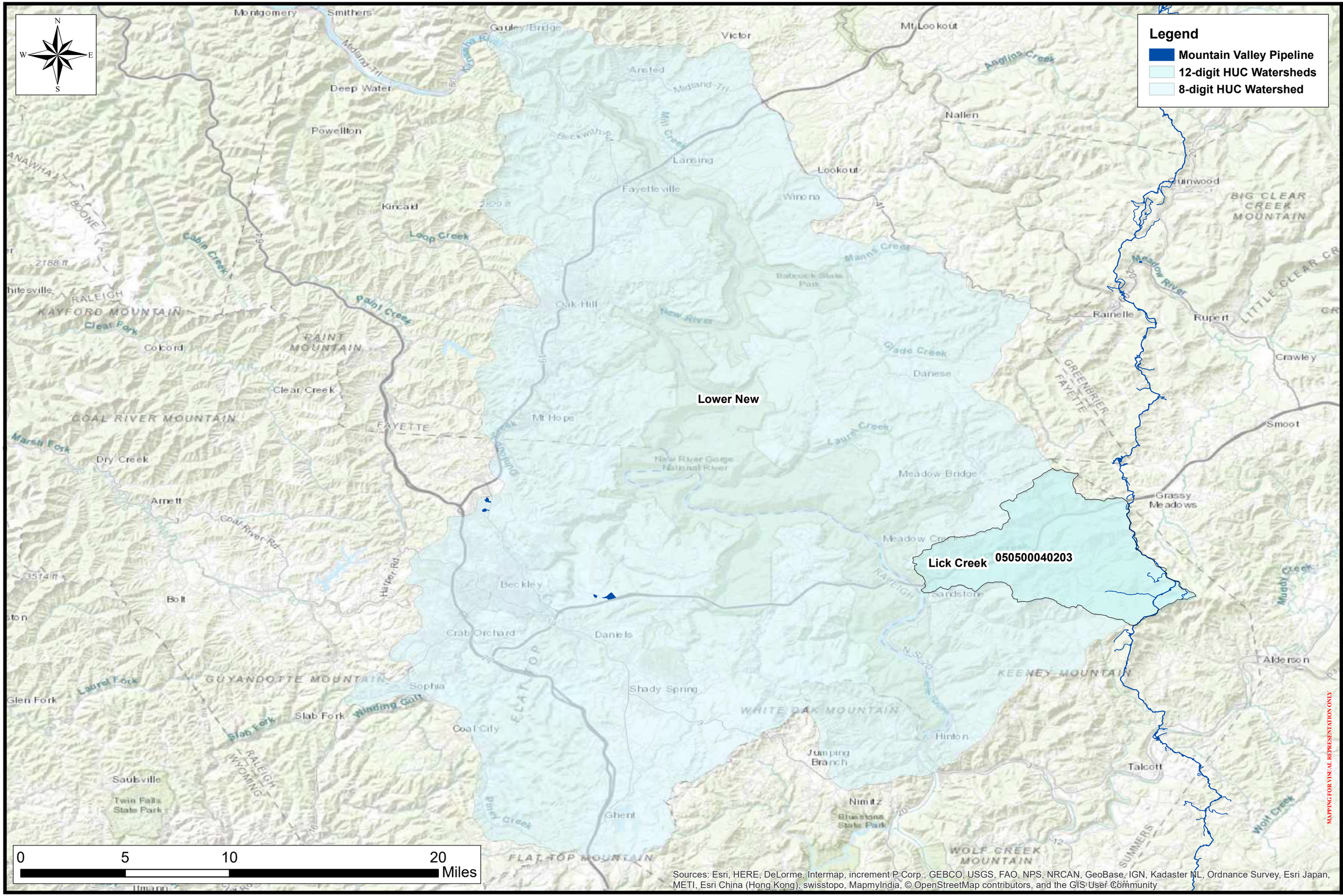
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

Miles
0 1.5 3

Scale: 1:130,000

Map Extent



SCALE: 1" = 4 Mile
DATE: AUGUST 2021
PN: 0101-17-0451.016

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

I:\Projects\2017\17-0451-MVP-EnvCon_Monitoring\Maps\2021 CIA Sctn\Figure 188 - Lower New.mxd

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

POTESTA

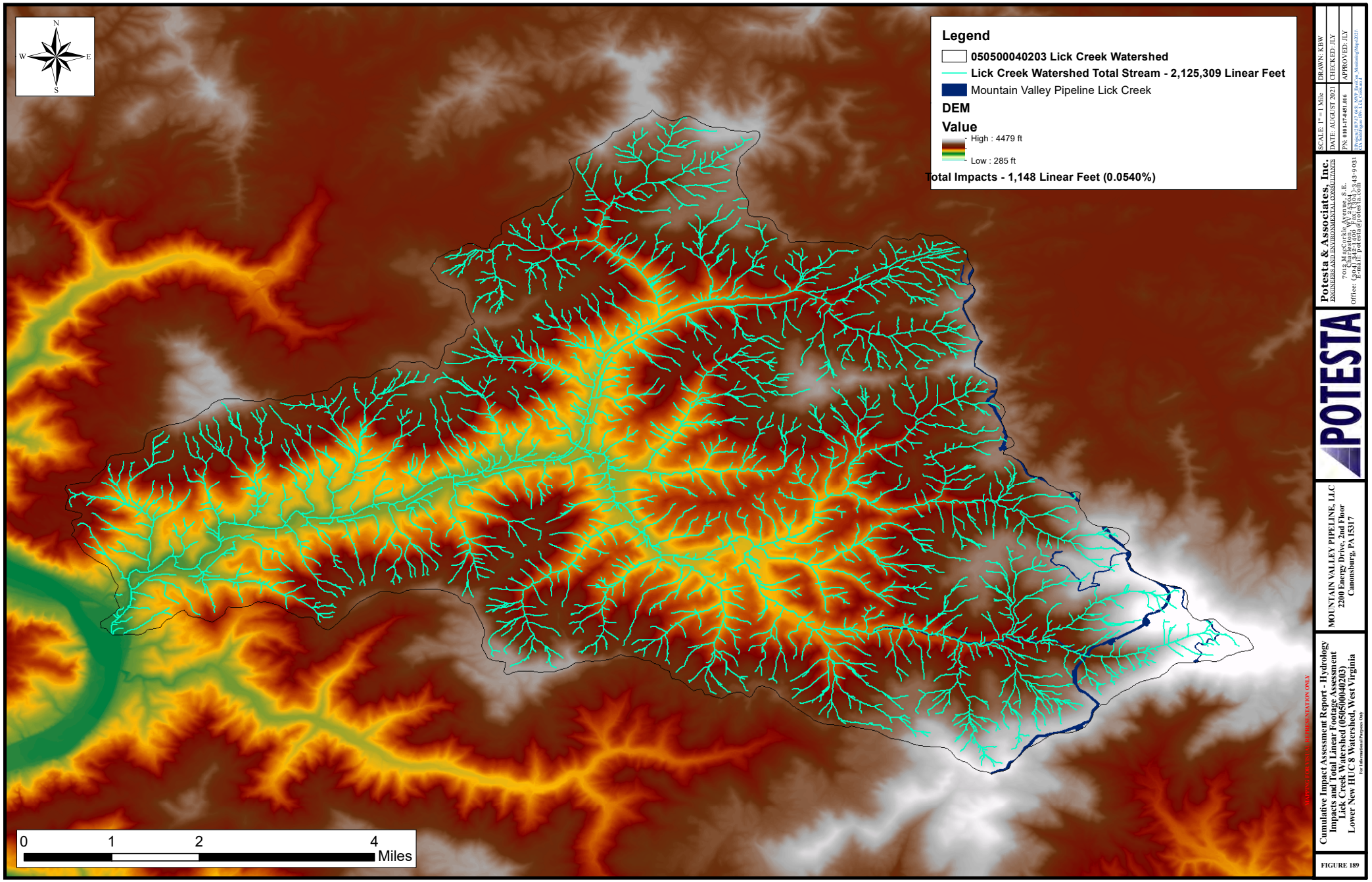
MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317

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

MAPPING FOR VISUAL REPRESENTATION ONLY

FIGURE 188

l miles


N
W
E
S
Legend
050500040203 Lick Creek Watershed
Lick Creek Watershed Total Stream - 2,125,309 Linear Feet
Mountain Valley Pipeline Lick Creek
DEM
Value
High : 4479 ft
Low : 285 ft
Total Impacts - 1,148 Linear Feet (0.0540%)
0
1
2
4
Miles
Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Lick Creek Watershed (050500040203)
Lower New 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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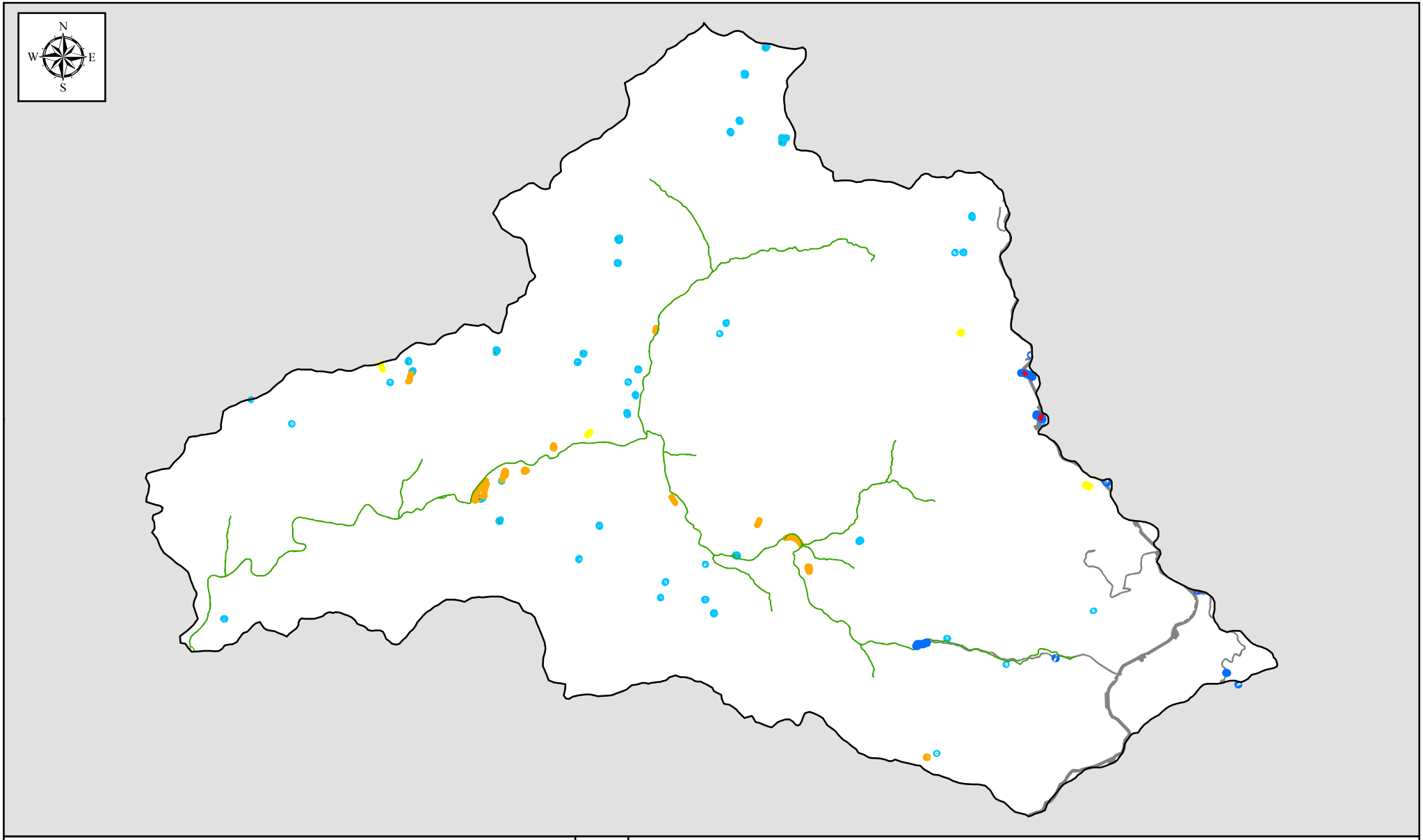
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
e-mail: potesta@potesta.com
SCALE: 1" = 1 Mile
DATE: AUGUST 2021
DRAWN: KBW
CHECKED: JLY
APPROVED: JLY
FIGURE 189



Mountain Valley PIPELINE

Lick Creek

Figure 190

1:80,000

1/6/2022

LEGEND

- Wetland Impacts - 0.15 acres
- Lick Creek Delineated Wetland Area - 1.02 acres

NWI Wetlands - 90.53 acres

- Freshwater Emergent Wetland - 4.82 acres
- Freshwater Forested/Shrub Wetland - 1.18 acres
- Freshwater Pond - 10.46 acres
- Riverine - 74.08 acres
- Mountain Valley Pipeline
- 050500040203_Lick Creek

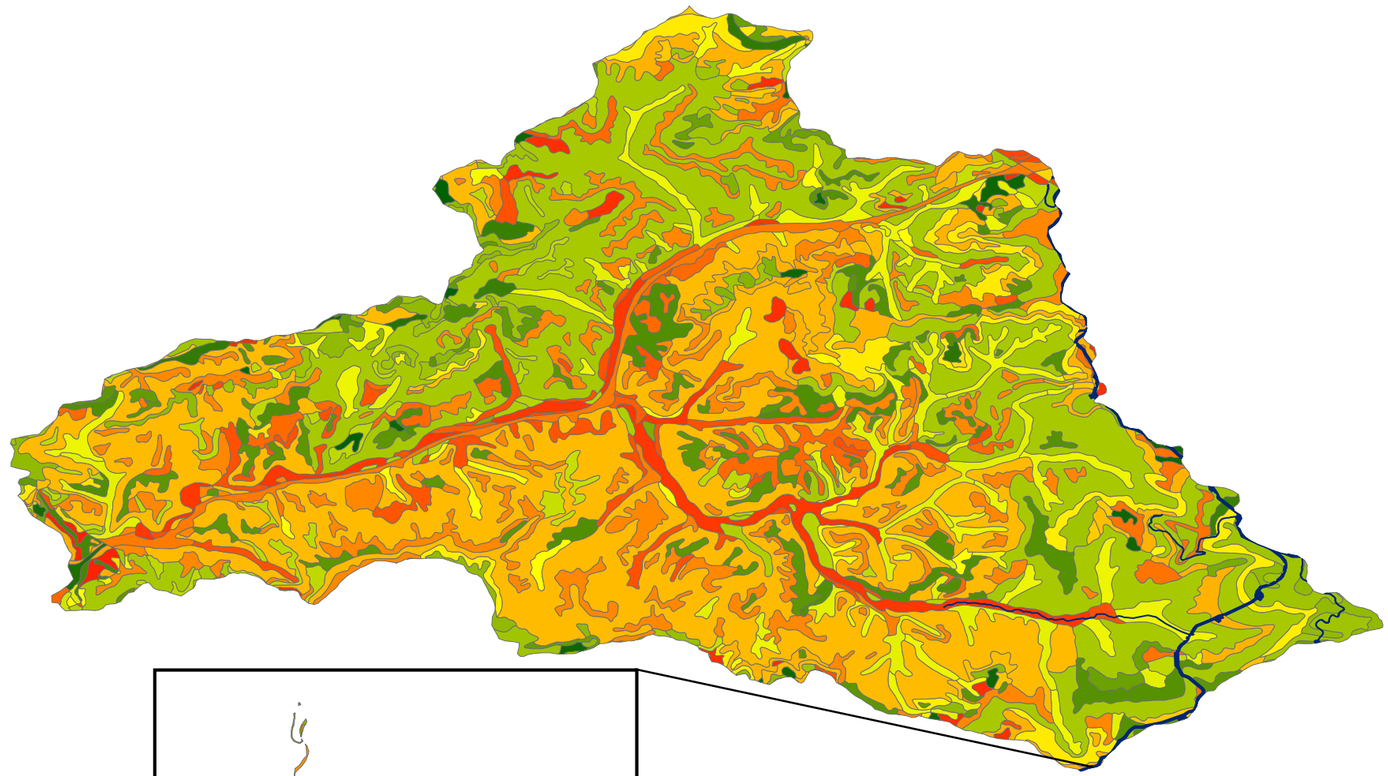
Note: Shapes are not to scale, enlarged to improve visibility.

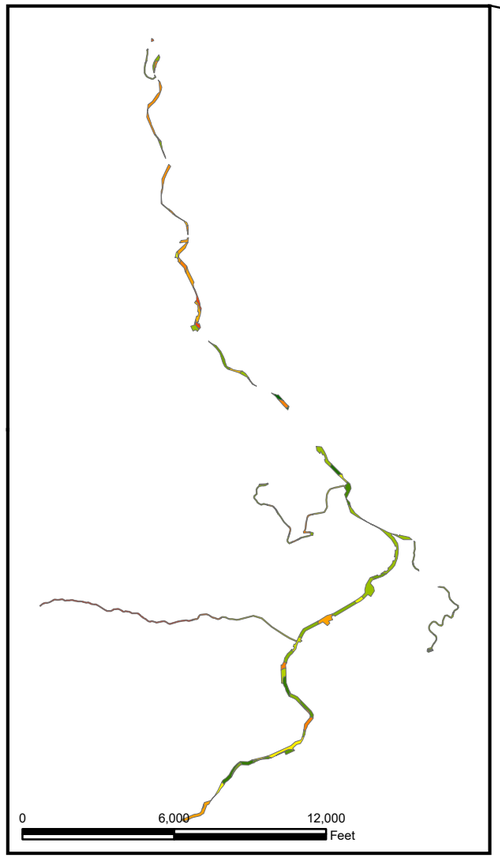
Legend

Mountain Valley Pipeline Lick Creek

Lick Creek Soil

- CTC: Coolville and Latham silt loams, 3 to 15 percent slopes
- CTD: Coolville and Latham silt loams, 15 to 25 percent slopes
- CbD: Cateache channery silt loam, 15 to 25 percent slopes, very stony
- CbE: Cateache channery silt loam, 25 to 35 percent slopes, very stony
- CcC: Cateache silt loam, 3 to 15 percent slopes
- CcD: Cateache silt loam, 15 to 25 percent slopes
- CcG: Cateache-Pipestem complex, 35 to 80 percent slopes, very stony
- CdC: Cateache silt loam, 3 to 15 percent slopes, very stony
- CeC: Cateache-Berks channery silt loams, 3 to 15 percent slopes
- CeC3: Cateache-Berks channery silt loams, 8 to 15 percent slopes, severely eroded
- CeD: Cateache-Berks channery silt loams, 15 to 30 percent slopes
- CeD3: Cateache-Berks channery silt loams, 15 to 35 percent slopes, severely eroded
- CeF: Cateache-Berks channery silt loams, 30 to 70 percent slopes
- CeF3: Cateache-Berks channery silt loams, 35 to 70 percent slopes, severely eroded
- CgC: Cateache silt loam, 3 to 15 percent slopes, very stony
- CgF: Cateache silt loam, 35 to 55 percent slopes, very stony
- ChA: Chavies fine sandy loam, 0 to 3 percent slopes, rarely flooded
- ChD: Cateache-Berks channery silt loams, 15 to 30 percent slopes, very stony
- ChF: Cateache-Berks channery silt loams, 30 to 70 percent slopes, very stony
- Cm: Chagrin loam
- DeC: Dekalb channery sandy loam, 3 to 15 percent slopes, very stony
- DeD: Dekalb channery fine sandy loam, 15 to 30 percent slopes
- DgD: Dekalb-Gilpin-Jefferson complex, 15 to 35 percent slopes, very stony
- DgF: Dekalb-Gilpin-Jefferson complex, 35 to 80 percent slopes, very stony
- EBC: Ernest and Buchanan soils, 3 to 15 percent slopes, very stony
- EBD: Ernest and Buchanan soils, 15 to 30 percent slopes, very stony
- ErB: Ernest silt loam, warm, 3 to 8 percent slopes
- ErC: Ernest silt loam, warm, 8 to 15 percent slopes
- GaB: Gilpin silt loam, warm, 3 to 8 percent slopes
- GaC: Gilpin silt loam, 8 to 15 percent slopes
- GaD: Gilpin silt loam, 15 to 25 percent slopes
- GbC: Gilpin-Berks channery silt loams, warm, 8 to 15 percent slopes
- GbD: Gilpin-Berks channery silt loams, warm, 15 to 25 percent slopes
- GbD3: Gilpin-Berks channery silt loams, warm, 15 to 25 percent slopes, severely eroded
- GbE: Gilpin-Berks complex, 25 to 35 percent slopes, very stony
- GbF: Gilpin-Berks channery silt loams, warm, 35 to 70 percent slopes
- GbF3: Gilpin-Berks channery silt loams, warm, 35 to 70 percent slopes, severely eroded
- GhG: Gilpin-Highsplint-Berks complex, 35 to 90 percent slopes, extremely stony
- JsD: Jefferson channery loam, 15 to 35 percent slopes, very stony
- JsF: Jefferson channery loam, 35 to 60 percent slopes, very stony
- Ka: Kanawha fine sandy loam
- KrF: Kaymine-Rock outcrop complex, very steep, extremely stony
- KxF: Kaymine-rock outcrop complex, very steep
- LhE: Layland-Laidig complex, 15 to 35 percent slopes, rubbly
- LlB: Lily loam, warm, 3 to 8 percent slopes
- LlC: Lily loam, warm, 8 to 15 percent slopes
- LlD: Lily loam, warm, 15 to 25 percent slopes
- Lo: Lobdell loam
- LxG: Lithic Udorthents-Rock outcrop complex, cut land, 5 to 100 percent slopes
- MgB: Monongahela silt loam, warm, 3 to 8 percent slopes
- PkC: Pipestem channery silty clay loam, 3 to 15 percent slopes, very stony
- PmE: Pipestem channery silty clay loam, 15 to 35 percent slopes, extremely stony
- PxA: Potomac-Nelse complex, 0 to 5 percent slopes, extremely stony, frequently flooded
- ShB: Shouns silt loam, 3 to 8 percent slopes
- ShC: Shouns channery silt loam, 3 to 15 percent slopes, extremely stony
- ShD: Shouns silt loam, 15 to 30 percent slopes
- StC: Shouns silt loam, 3 to 15 percent slopes, very stony
- StD: Shouns silt loam, 15 to 30 percent slopes, very stony
- TtB: Tilsit silt loam, 3 to 8 percent slopes
- U2: Udorthents, smoothed
- Ud: Udifluvents and Psamments, frequently flooded
- UgC: Udorthents, graded, 0 to 15 percent slopes
- UgF: Udorthents, graded, 15 to 55 percent slopes
- Uu: Udorthents-Urban land complex, highways
- Ux: Udorthents, smoothed-rock outcrop complex





0 1.5 3 6 Miles

MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: See Mapping | DRAWN: KBW
DATE: December 2021 | CHECKED: JLY
PN: 0101-17-0451.016 | APPROVED: JLY

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

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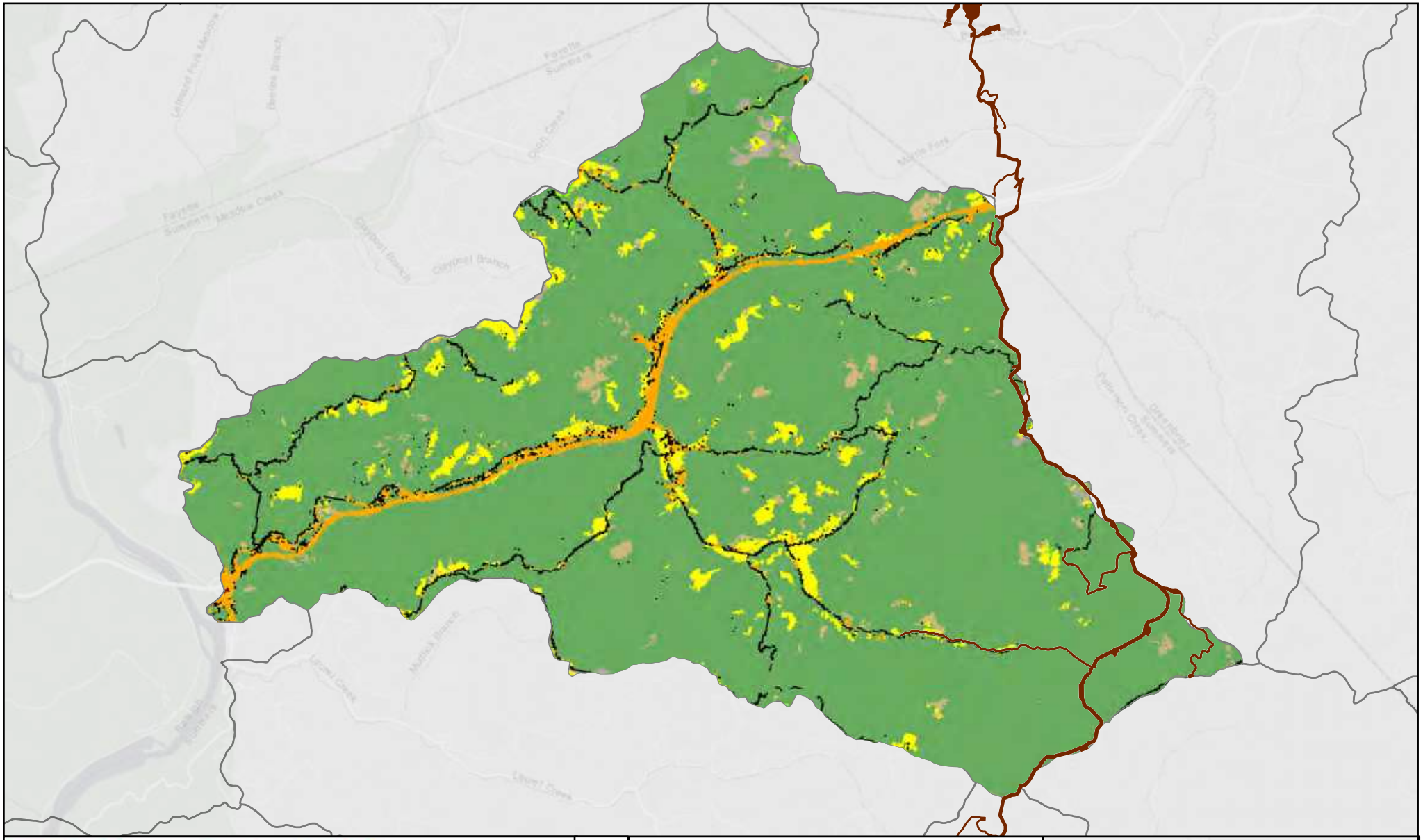
MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317

Cumulative Impact Assessment - Soil
Lick Creek (05050004203)
Lower New HUC 8 Watershed
Greenbrier, Mercer & Summers Counties, West Virginia
New River Gorge
For Informational Purposes Only

FIGURE 191



Mountain Valley PIPELINE

Figure: 192

Land Use/Land Cover 2011
Lick Creek
050500040204 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2011 Land Use Land Cover

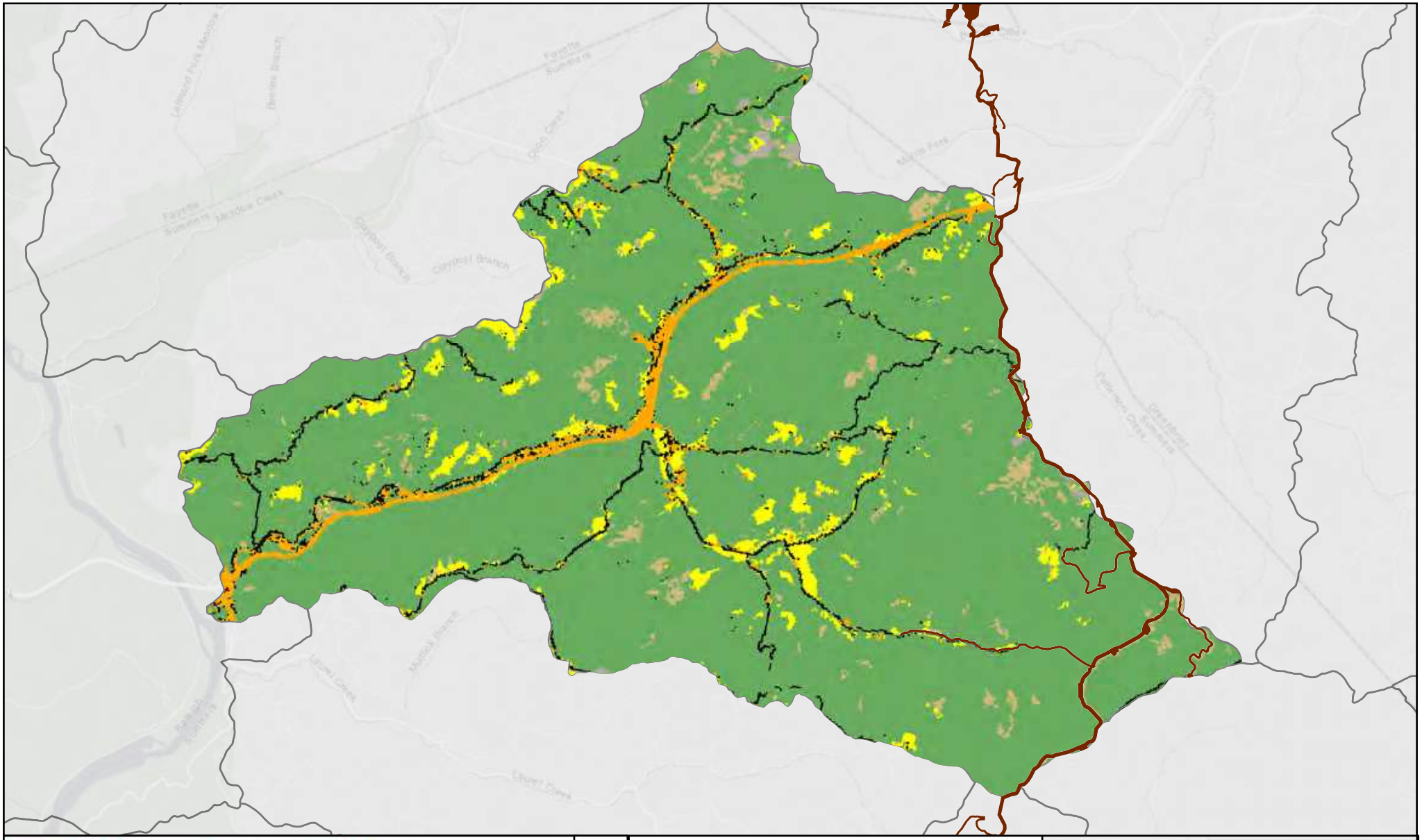
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N W E S

0 1 2 Miles

Scale: 1:85,000

Map Extent



Mountain Valley PIPELINE

Figure: 193

Land Use/Land Cover 2016
Lick Creek
050500040204 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2016 Land Use Land Cover

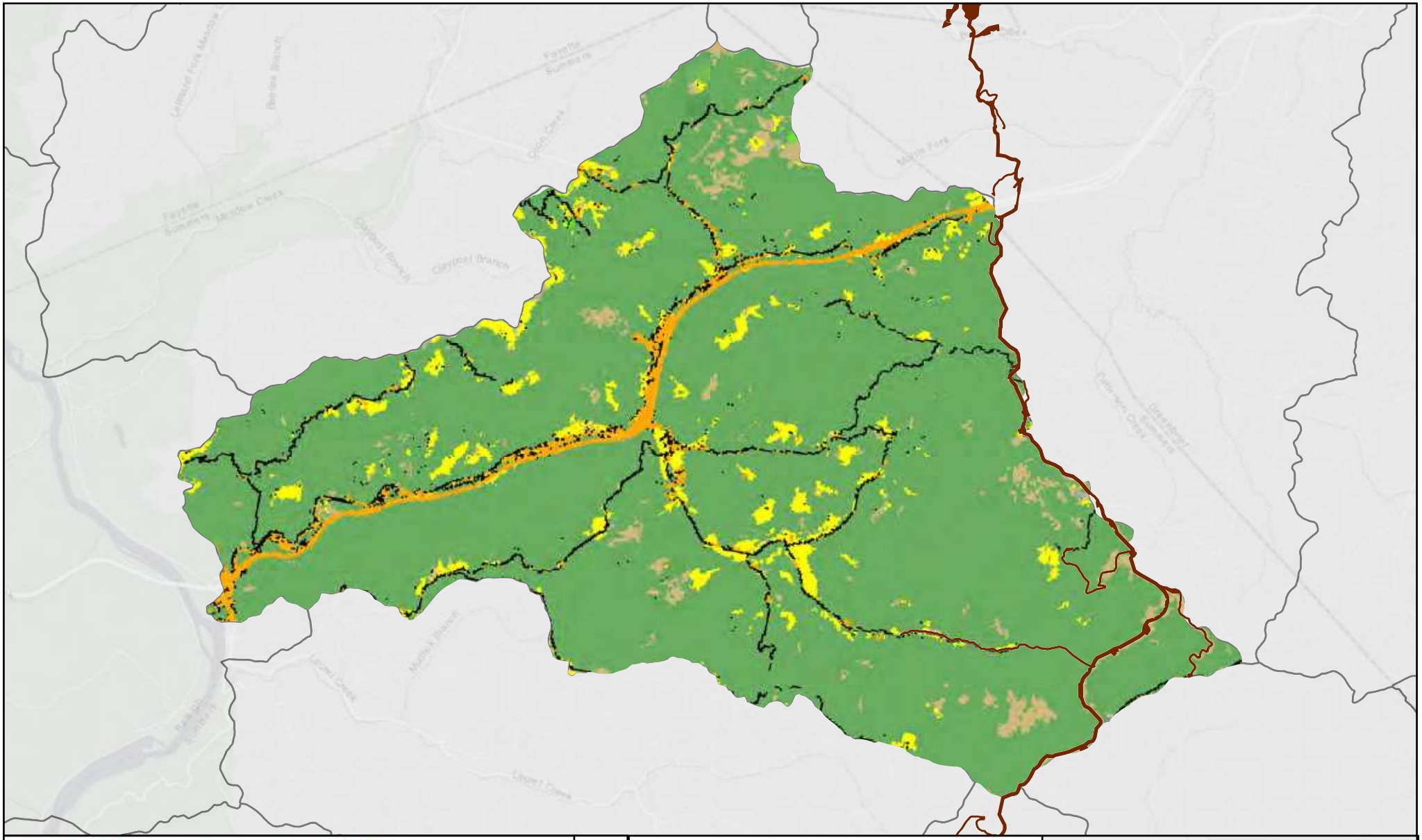
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 1 2 Miles

Scale: 1:85,000

Map Extent



Mountain Valley PIPELINE

Figure: 193a

Land Use/Land Cover 2019
Lick Creek
050500040204 HUC12 Watershed

5/25/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2019 Land Use Land Cover

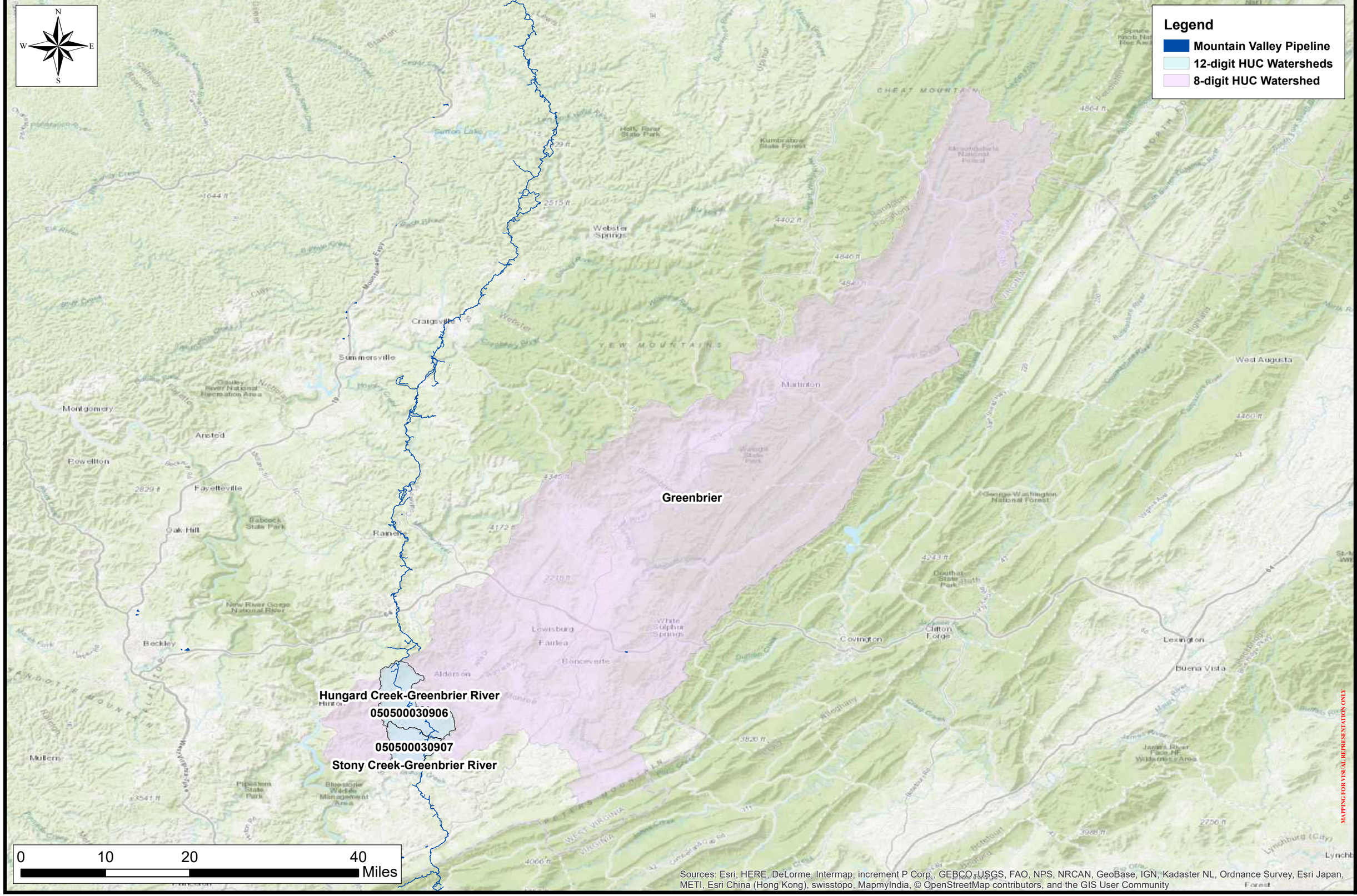
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N W E S

0 1 2 Miles

Scale: 1:85,000

Map Extent



MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: 1" = 10 Mile
DATE: AUGUST 2021
PN: **0101-17-0451.016**

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

I:\Projects\2017\17-0451_MVP_Environ_Monitoring\Maps\2021\CIA Soils\Figure 194 - Greenbrier.mxd

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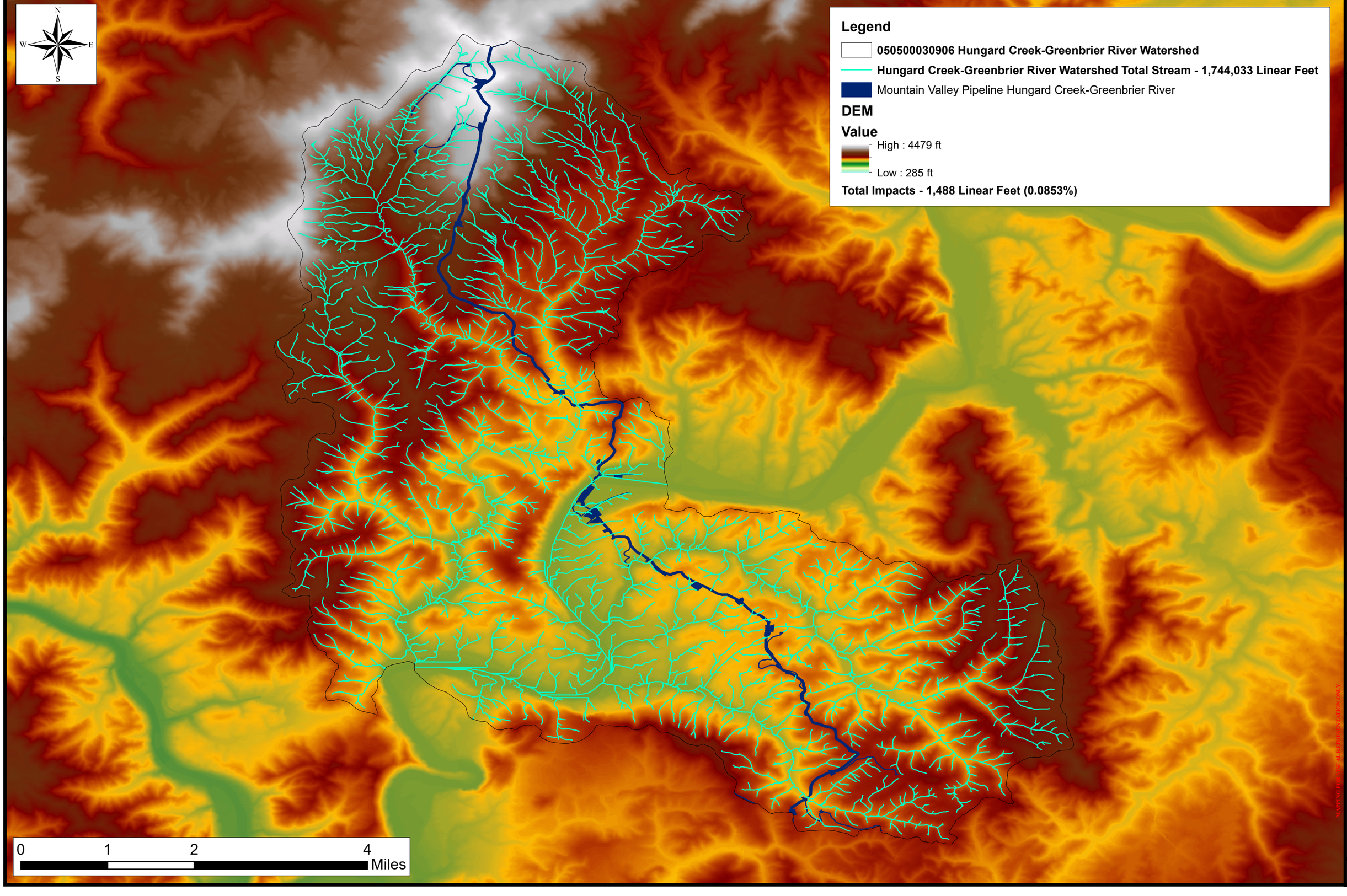
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

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

FIGURE 194



SCALE: 1" = 1 Mile
DATE: AUGUST 2021
PN: 0101-17-0451.016
I:\Projects\2017\7-0451-MVP-EnvCon_Monitoring\Maps\2021\CIA\Sctlr\Figure 195 - Hungard_Creek.mxd

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Post Office Box 1600
Charleston, WV 25326
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

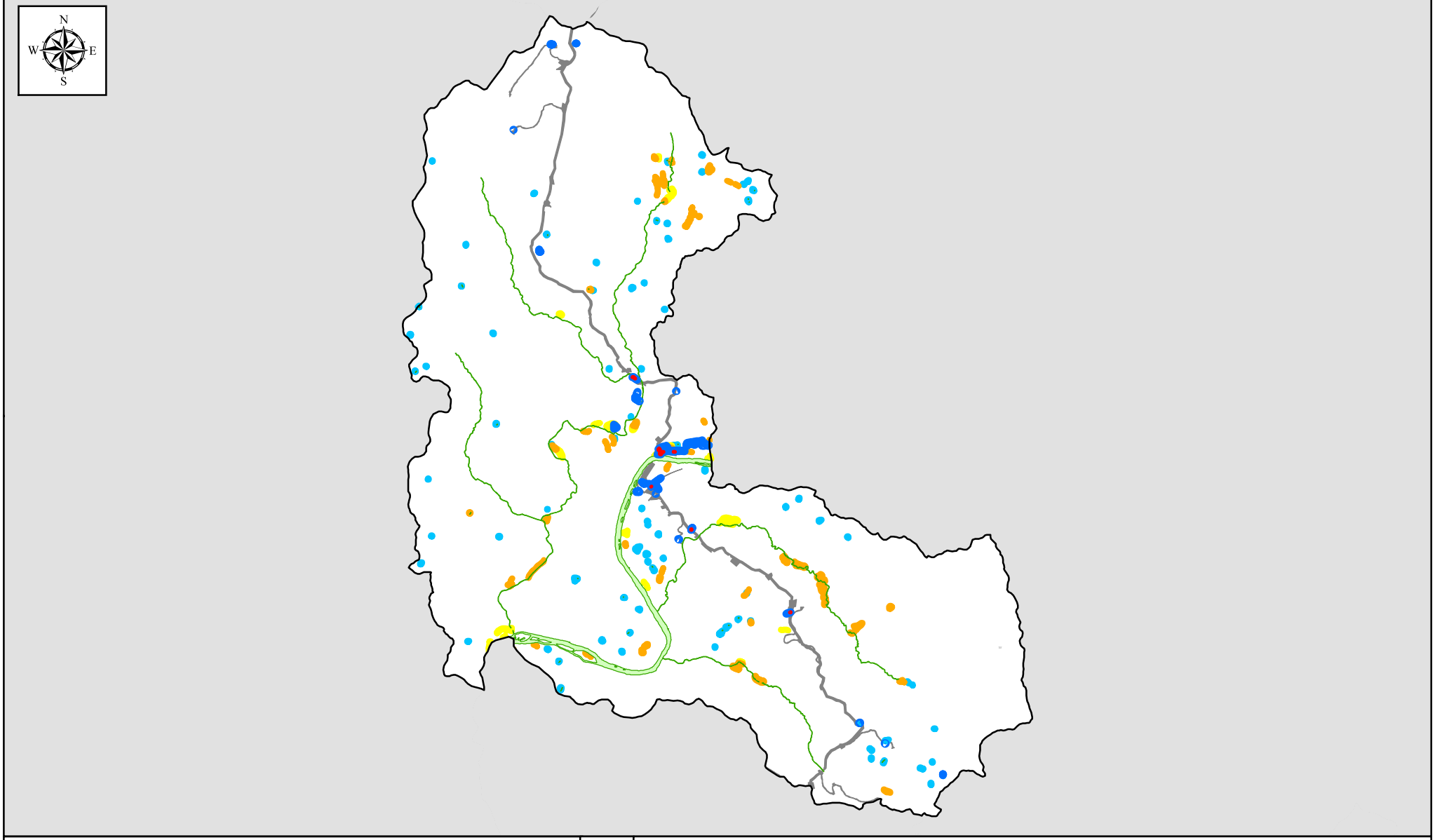
POTESTA

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

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Hungard Creek-Greenbrier River
Watershed (050500030906)
Greenbrier River HUC 8 Watershed, West Virginia
For Informational Purposes Only

MAPPING FOR GENERAL REPRESENTATION ONLY

FIGURE 195



Mountain Valley PIPELINE

Hungard Creek-Greenbrier River

Figure 196

1:99,000

1/6/2022

LEGEND

- Wetland Impacts - 0.44 acres
- Hungard Creek-Greenbrier River Delineated Wetland Area - 11.53 acres

NWI Wetlands - 344.48 acres

- Freshwater Emergent Wetland - 33.9 acres
- Freshwater Forested/Shrub Wetland - 25.83 acres
- Freshwater Pond - 23 acres
- Riverine - 261.75 acres
- Mountain Valley Pipeline
- 050500030906_Hungard Creek-Greenbrier River

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

Legend

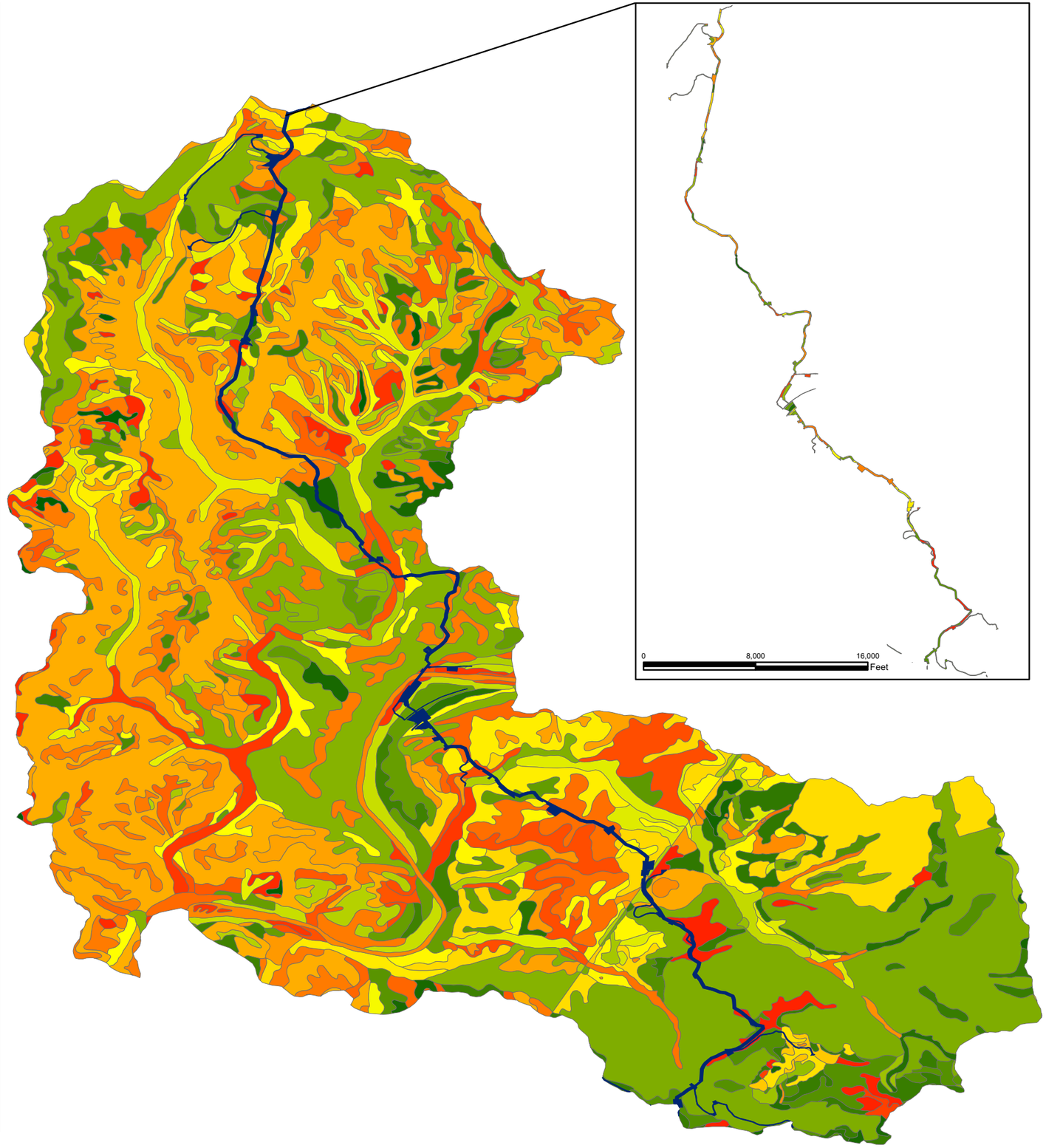
Mountain Valley Pipeline Hungard Creek-Greenbrier River

Hungard Creek-Greenbrier River Soil

- At: Atkins silt loam
- BtC: Blackthorn very channery loam, 3 to 15 percent slopes, extremely stony
- CTC: Coolville and Latham silt loams, 3 to 15 percent slopes
- CcC: Cateache silt loam, 3 to 15 percent slopes
- CcD: Cateache silt loam, 15 to 25 percent slopes
- CeC: Cateache-Berks channery silt loams, 3 to 15 percent slopes
- CeC3: Cateache-Berks channery silt loams, 8 to 15 percent slopes, severely eroded
- CeD: Cateache-Berks channery silt loams, 15 to 30 percent slopes
- CeD3: Cateache-Berks channery silt loams, 15 to 35 percent slopes, severely eroded
- CeF: Cateache-Berks channery silt loams, 30 to 70 percent slopes
- CeF3: Cateache-Berks channery silt loams, 35 to 70 percent slopes, severely eroded
- CfC: Cateache silt loam, 8 to 15 percent slopes
- ChD: Cateache-Berks channery silt loams, 15 to 30 percent slopes, very stony
- ChF: Cateache-Berks channery silt loams, 30 to 70 percent slopes, very stony
- CID: Cateache-Litz complex, 15 to 25 perecnt slopes
- CIE: Cateache-Litz complex, 25 to 35 percent slopes
- CIF: Cateache-Litz complex, 35 to 55 percent slopes
- Cm: Chagrin loam
- CnD: Clymer-Gilpin complex, 15 to 30 percent slopes
- CnE: Cateache-Litz complex, 15 to 35 percent slopes, very stony
- CnF: Cateache-Litz complex, 35 to 60 percent slopes, very stony
- CsB: Clarksburg silt loam, 3 to 8 percent slopes
- CuF: Culleoka silt loam, 30 to 65 percent slopes
- CyF: Culleoka loam, 35 to 55 percent slopes, very stony
- DeC: Dekalb channery fine sandy loam, 3 to 15 percent slopes
- DeD: Dekalb channery fine sandy loam, 15 to 30 percent slopes
- DeE: Dekalb channery loam, 25 to 35 percent slopes, very stony
- DeF: Dekalb channery loam, 35 to 55 percent slopes, very stony
- DeG: Dekalb channery loam, 55 to 70 percent slopes, very stony
- DgD: Dekalb-Gilpin-Jefferson complex, 15 to 35 percent slopes, very stony
- DgF: Dekalb-Gilpin-Jefferson complex, 35 to 80 percent slopes, very stony
- EBC: Ernest and Buchanan soils, 3 to 15 percent slopes, very stony
- ErB: Ernest silt loam, warm, 3 to 8 percent slopes
- ErC: Ernest silt loam, warm, 8 to 15 percent slopes
- ErD: Ernest silt loam, warm, 15 to 25 percent slopes
- FaC: Frankstown silt loam, 8 to 15 percent slopes
- FaD: Frankstown silt loam, 15 to 25 percent slopes
- FaE: Frankstown silt loam, 25 to 35 percent slopes
- FkC: Frederick silt loam, 3 to 15 percent slopes
- GLB: Gilpin and Lily soils, 3 to 8 percent slopes
- GLC: Gilpin and Lily soils, 8 to 15 percent slopes
- GaB: Gilpin silt loam, warm, 3 to 8 percent slopes
- GaC: Gilpin silt loam, 8 to 15 percent slopes
- GaD: Gilpin silt loam, 15 to 25 percent slopes
- GbC: Gilpin-Berks channery silt loams, warm, 8 to 15 percent slopes
- GbD: Gilpin-Berks channery silt loams, warm, 15 to 25 percent slopes
- GbF: Gilpin-Berks channery silt loams, warm, 35 to 70 percent slopes
- GbF3: Gilpin-Berks channery silt loams, warm, 35 to 70 percent slopes, severely eroded
- Ka: Kanawha fine sandy loam
- LaB: Laidig channery loam, 3 to 8 percent slopes
- LaC: Laidig channery loam, 8 to 15 percent slopes
- LbC: Laidig channery loam, 3 to 15 percent slopes, very stony
- LfC: Lily channery loam, warm, 8 to 15 percent slopes
- LfD: Lily channery loam, warm, 15 to 25 percent slopes
- LgC: Lily sandy loam, warm, 8 to 15 percent slopes
- LgD: Lily sandy loam, warm, 15 to 25 percent slopes
- LgE: Lily sandy loam, warm, 25 to 35 percent slopes
- LlB: Lily loam, warm, 3 to 8 percent slopes
- LlC: Lily loam, warm, 8 to 15 percent slopes
- LlD: Lily loam, warm, 15 to 25 percent slopes
- Ln: Lindside silt loam
- Lo: Lobdell loam
- LsB: Litz channery silt loam, 3 to 8 percent slopes
- LsD: Litz channery silt loam, 15 to 25 percent slopes
- LsF: Litz channery silt loam, 35 to 60 percent slopes
- LtB: Litz silt loam, 3 to 8 percent slopes
- LtD: Litz silt loam, 15 to 25 percent slopes
- LwB: Litz-Cateache complex, 3 to 8 percent slopes
- LwC: Litz-Cateache complex, 8 to 15 percent slopes
- Me: Melvin silt loam
- MgB: Monongahela silt loam, warm, 3 to 8 percent slopes
- MgC: Monongahela silt loam, warm, 8 to 15 percent slopes
- Ol: Orrville-Lobdell complex
- RgD: Rough very channery silt loam, 15 to 25 percent slopes
- RgE: Rough very channery silt loam, 25 to 35 percent slopes
- ShB: Shouns silt loam, 3 to 8 percent slopes
- ShC: Shouns silt loam, 8 to 15 percent slopes
- ShD: Shouns silt loam, 15 to 30 percent slopes
- StC: Shouns silt loam, 3 to 15 percent slopes, very stony
- StD: Shouns silt loam, 15 to 30 percent slopes, very stony
- TtB: Tilsit silt loam, 3 to 8 percent slopes
- TtC: Tilsit silt loam, 8 to 15 percent slopes
- TvA: Tygart silt loam, 0 to 3 percent slopes
- U2: Udorthents, smoothed
- Ud: Udifluvents and Psamments, frequently flooded
- Uf: Udifluvents-Fluvaquents complex
- W:Water
- WeC: Westmoreland silt loam, 3 to 15 percent slopes
- WeD: Westmoreland silt loam, 15 to 35 percent slopes
- WeF: Westmoreland silt loam, 30 to 65 percent slopes

0 1 2 4

Miles



0 8,000 16,000

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MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: See Mapping
DATE: AUGUST 2021
PN: 010-17-0451.016

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

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

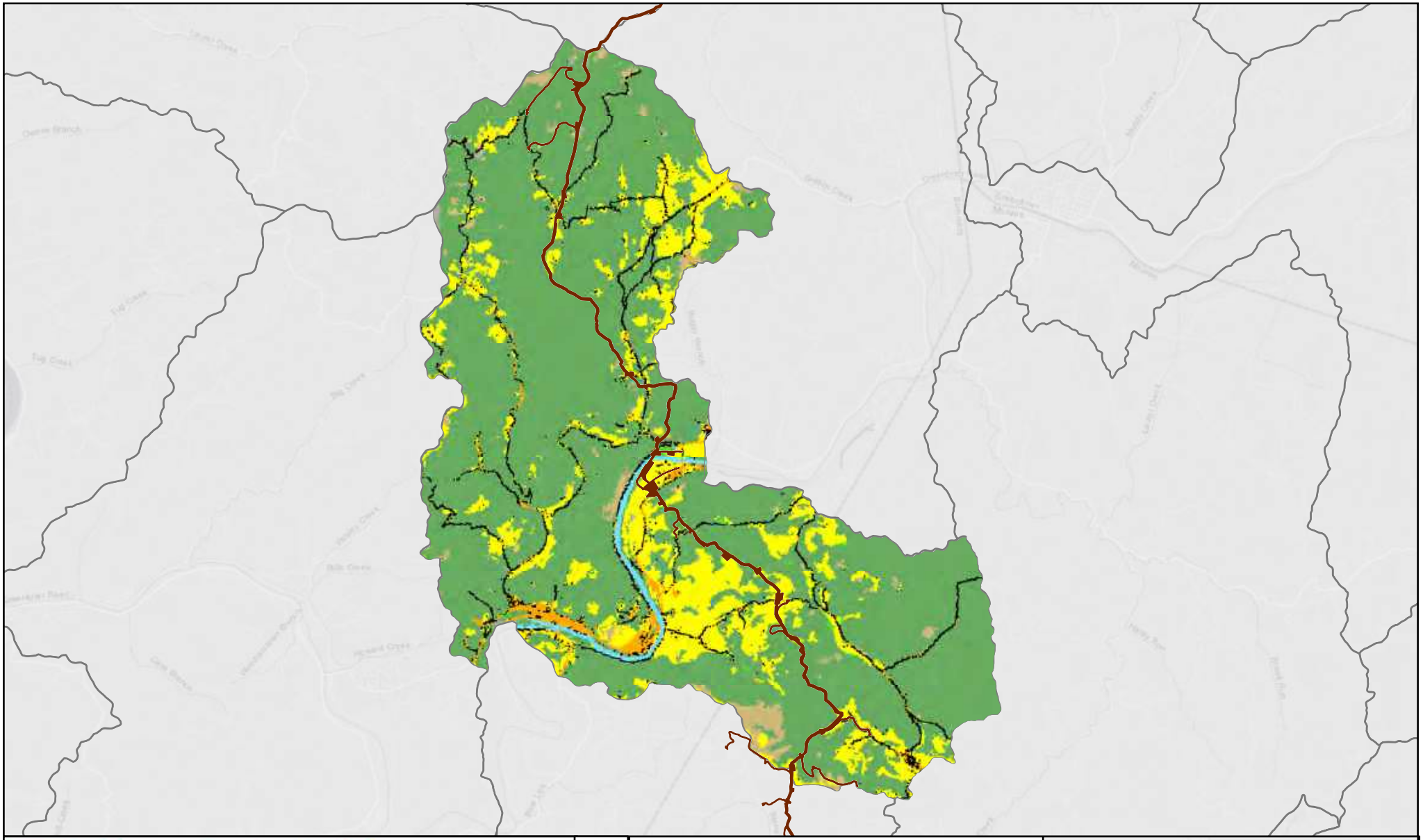
POTESTA

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

Cumulative Impact Assessment - Soil
Hungard Creek-Greenbrier River (050500030906)
Greenbrier HUC 8 Watershed
Mercer & Summers, & Monroe Counties, West Virginia

For Informational Purposes Only

FIGURE 197



Mountain Valley PIPELINE

Figure: 198

Land Use/Land Cover 2011
Hungard Creek-Greenbrier River
050500030906 HUC12 Watershed

5/26/2022

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

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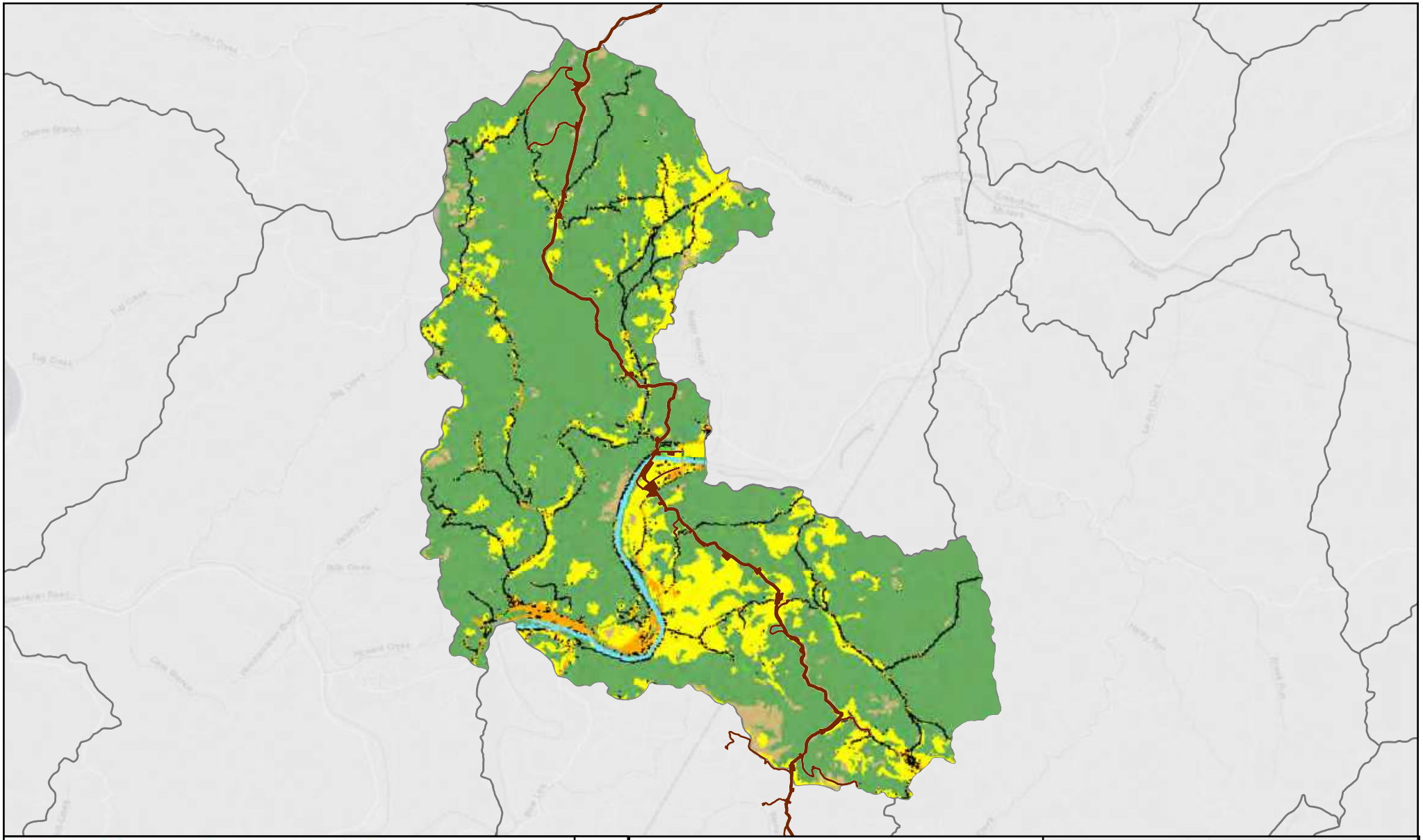
Miles
0 1.5 3

Scale: 1:105,000

Map Extent



Mountain Valley PIPELINE

Figure: 199

Land Use/Land Cover 2016
Hungard Creek-Greenbrier River
050500030906 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2016 Land Use Land Cover

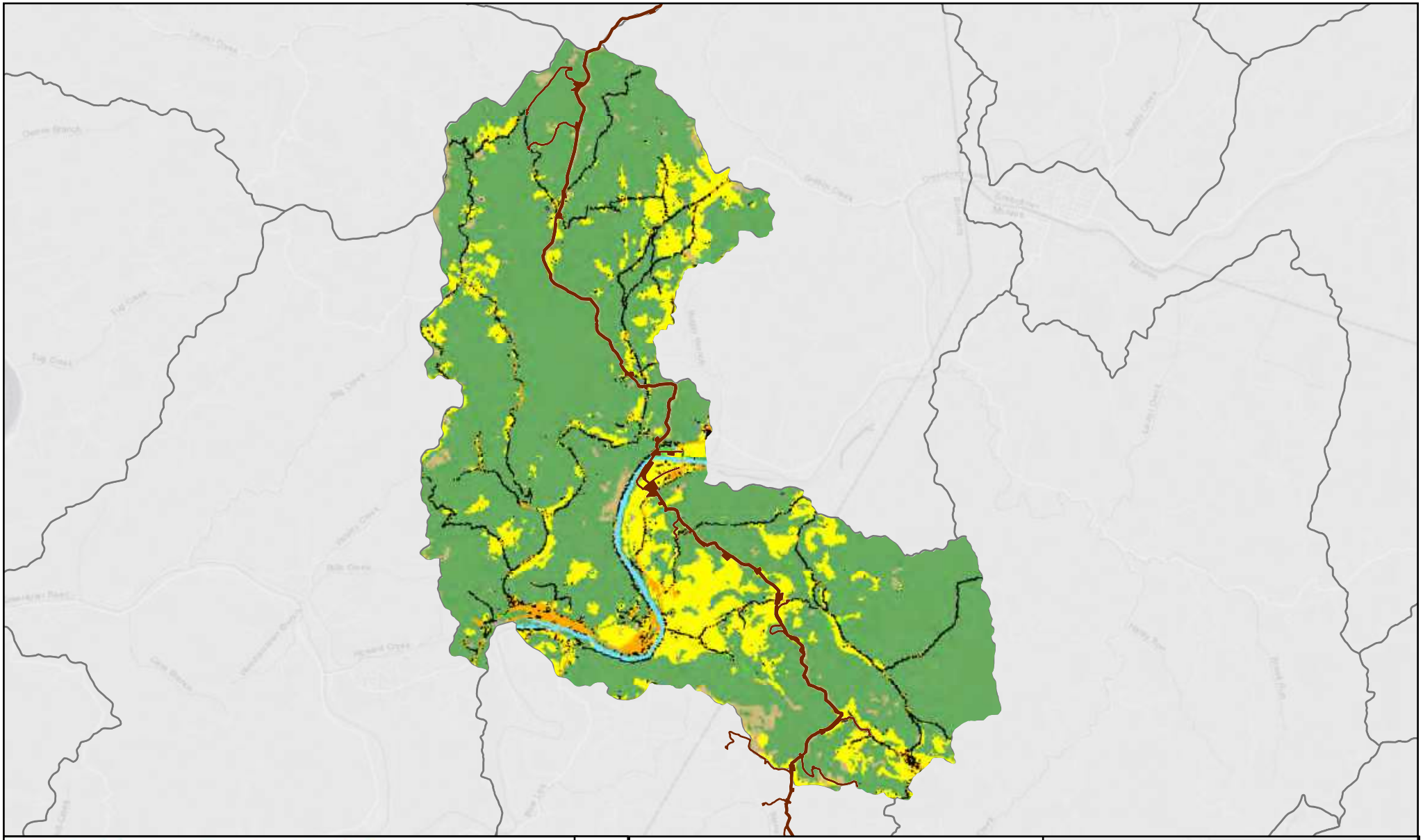
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 1.5 3 Miles

Scale: 1:105,000

Map Extent



Mountain Valley PIPELINE

Figure: 199a

Land Use/Land Cover 2019
Hungard Creek-Greenbrier River
050500030906 HUC12 Watershed

5/25/2022

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

N
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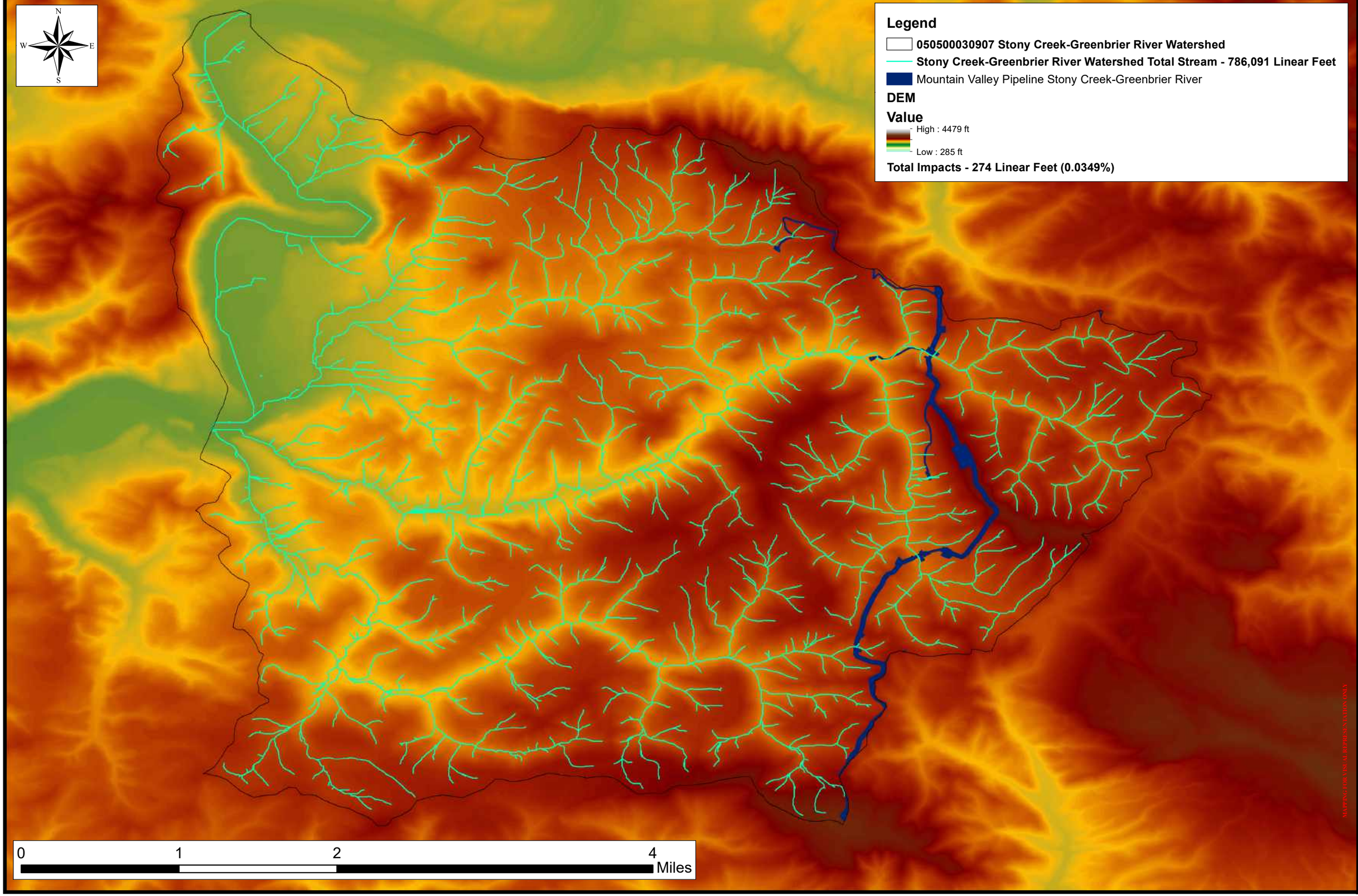
S

0 1.5 3 Miles

Scale: 1:105,000

Map Extent



SCALE: 1" = 1 Mile
DATE: AUGUST 2021
PN: 0101-17-0451.016
DRAWN: KBW
CHECKED: JLY
APPROVED: JLY
I:\Projects\2017\0451.MVP.InvCon.Monitoring\Maps\2021 CIA Suite\Figure 200 - Stony Creek Greenbrier River.mxd

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

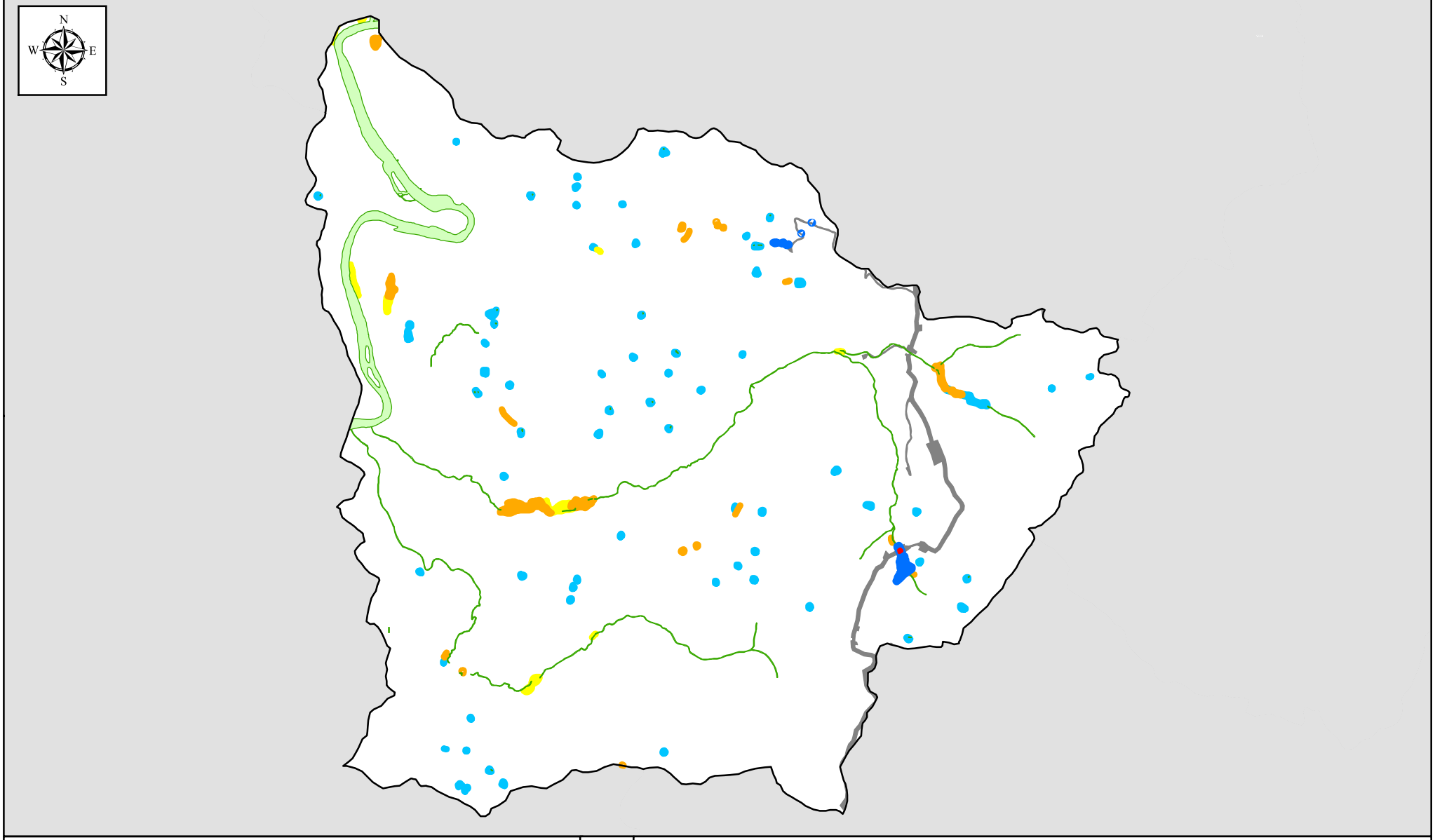
POTESTA

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

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Stony Creek-Greenbrier River
Watershed (0505000030907)
Greenbrier HUC 8 Watershed, West Virginia
For Informational Purposes Only

MAPPING FOR VISUAL REPRESENTATION ONLY

FIGURE 200



Mountain Valley PIPELINE

Stony Creek-Greenbrier River

Figure 201

1:55,000

1/6/2022

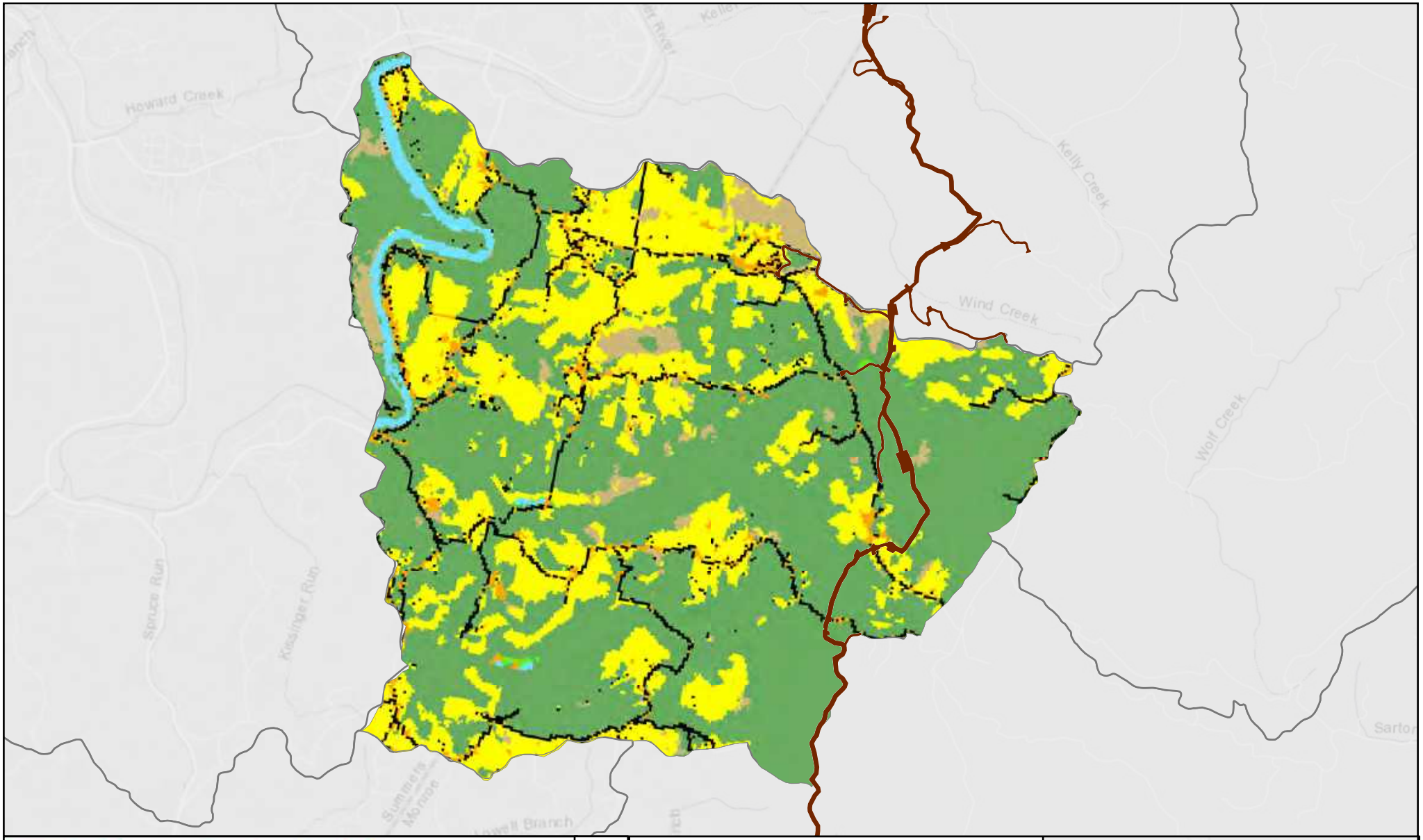
LEGEND

- Wetland Impacts - 0.14 acres
- Stony Creek-Greenbrier River Delineated Wetland Area - 3.96 acres

NWI Wetlands - 261.4 acres

- Freshwater Emergent Wetland - 22.89 acres
- Freshwater Forested/Shrub Wetland - 8.79 acres
- Freshwater Pond - 21.14 acres
- Riverine - 208.58 acres
- Mountain Valley Pipeline
- 050500030907_Stony Creek-Greenbrier River

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



Mountain Valley PIPELINE

Figure: 202

Land Use/Land Cover 2011
Stony Creek-Greenbrier River
050500030907 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

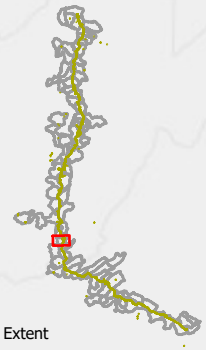
2011 Land Use Land Cover

- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

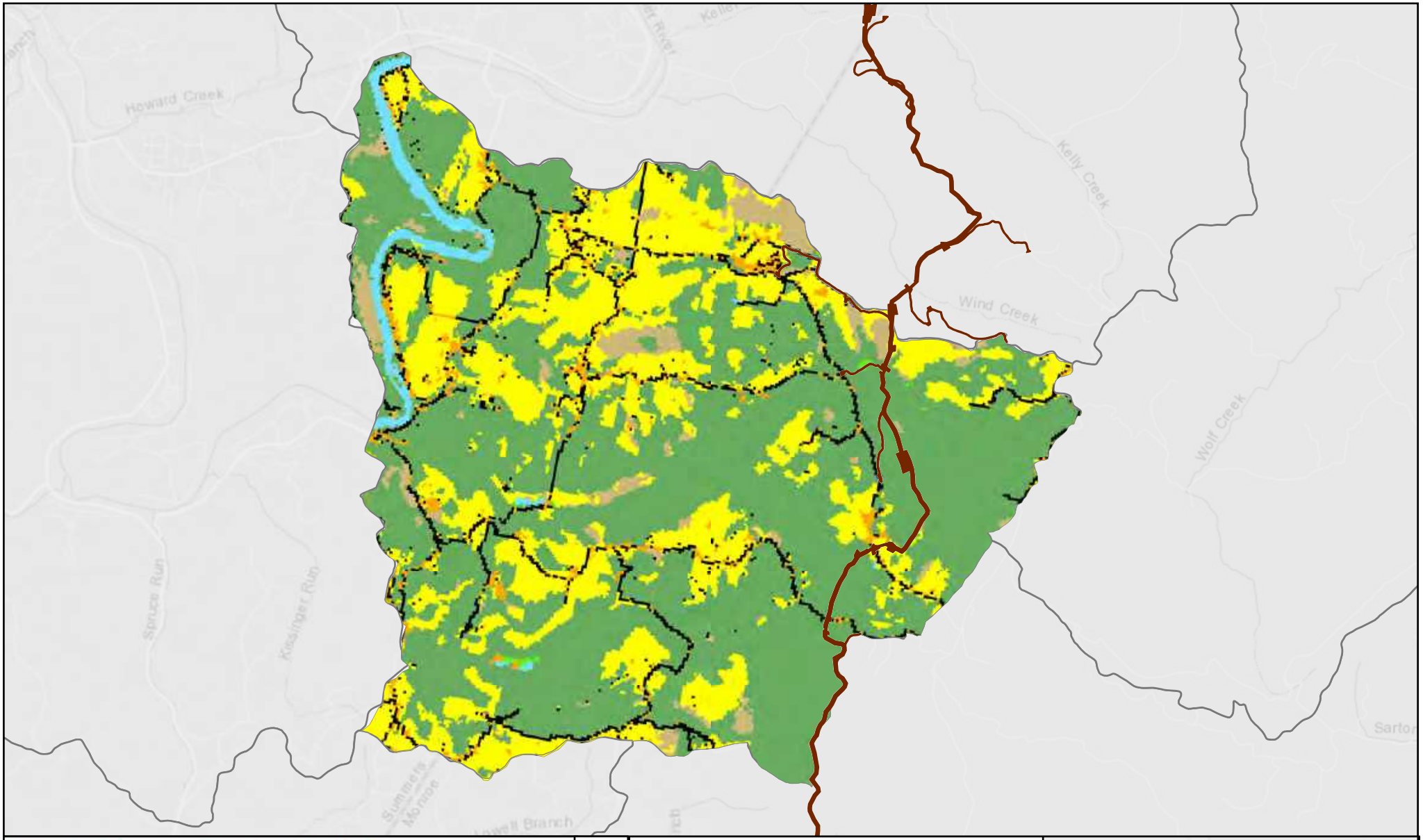
N W E S

0 0.9 1.8 Miles

Scale: 1:60,000



Map Extent



Mountain Valley PIPELINE

Figure: 203

Land Use/Land Cover 2016
Stony Creek-Greenbrier River
050500030907 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

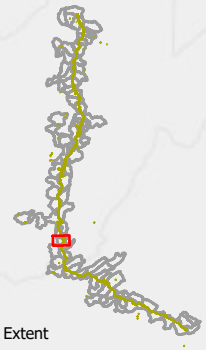
2016 Land Use Land Cover

- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

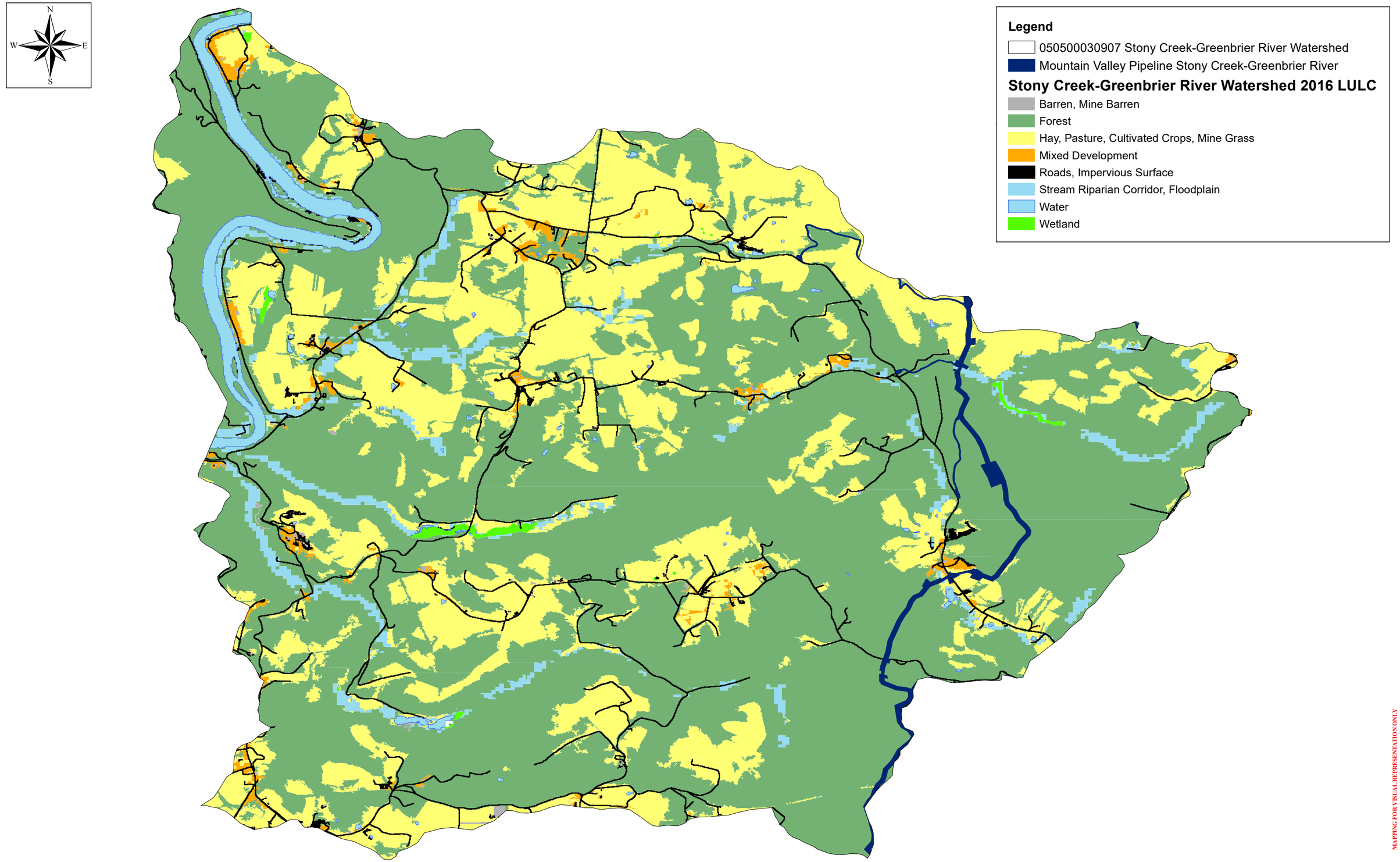
N
W E
S

0 0.9 1.8 Miles

Scale: 1:60,000



Map Extent



MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: 1" = 1 Mile
DATE: JUNE 2022
PN: 000-17-0451.006

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

P:\Projects\2017\17-0451_MVP_EnvCon_Monitoring\Maps\2021\LLC

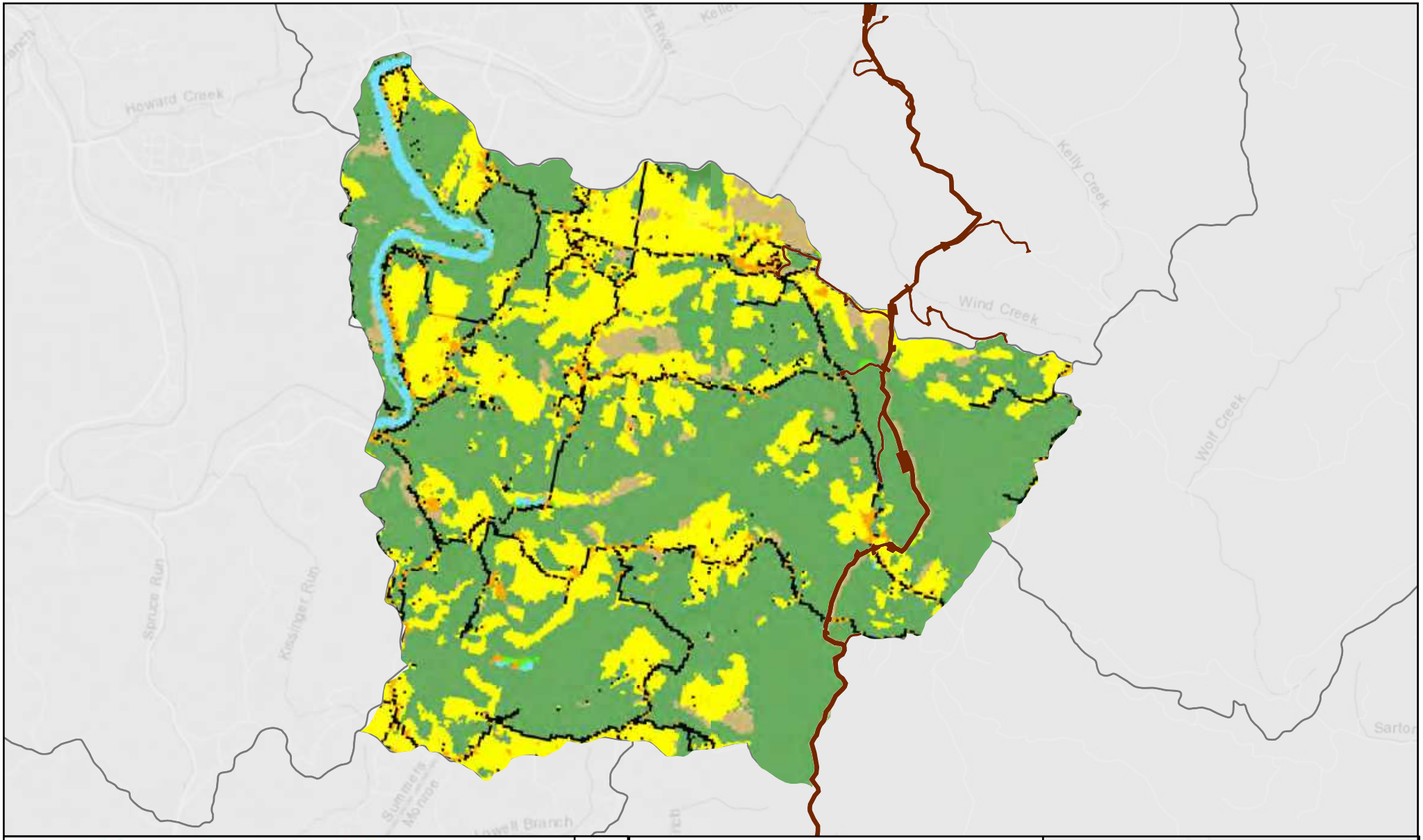
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment
Land Use/Land Cover 2016
Stony Creek-Greenbrier River Watershed (050500030907)
Greenbrier HUC 8 Watershed
Mercer & Summers, and Monroe, West Virginia
For Informational Purposes Only

FIGURE 203a



Mountain Valley PIPELINE

Figure: 203b

Land Use/Land Cover 2019
Stony Creek-Greenbrier River
050500030907 HUC12 Watershed

5/25/2022

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

N
W E
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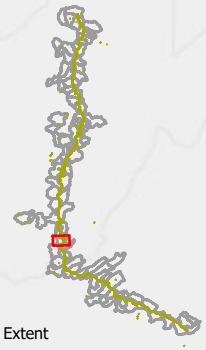
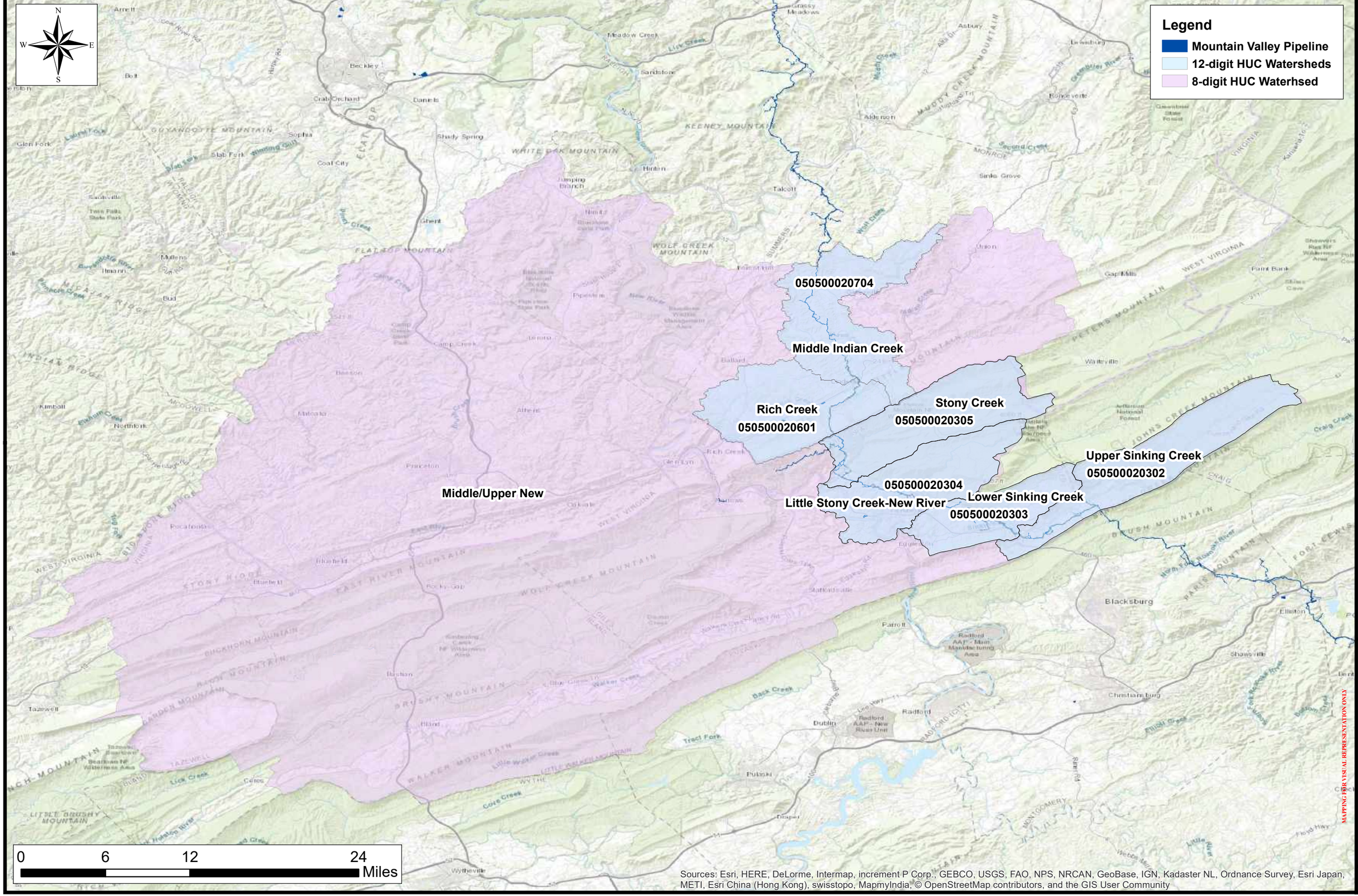
0 0.9 1.8 Miles

Scale: 1:60,000



Map Extent



DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

SCALE: 1" = 6 Mile
DATE: AUGUST 2021
PN: 0101-17-0451.016

I:\Projects\2017\17-0451.MVP.EnvCon_Monitoring\Maps\2021 CIA Soils\Figure 204 - Middle Upper New.mxd

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

POTESTA

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

Cumulative Impact Assessment Report - Hydrology
Middle/Upper New Watershed
12-Digit HUC Watersheds
Multiple Counties, Virginia and West Virginia
For Informational Purposes Only

MAPPING FOR VISUAL REPRESENTATION ONLY

FIGURE 204

Legend

050500020704 Middle Indian Creek Watershed

Middle Indian Creek Watershed Total Stream - 2,777,615 Linear Feet

Mountain Valley Pipeline Middle Indian Creek

DEM

Value

High : 4479 ft

Low : 285 ft

Total Impacts - 1,455 Linear Feet (0.0524%)

N

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0 1 2 4 Miles

SCALE: 1" = 1 Mile

DATE: AUGUST 2021

PN: **0101-17-0451.016**

DRAWN: KBW

CHECKED: JLY

APPROVED: JLY

I:\Projects\2017\17-0451_MVP_EnvCon_Monitoring\Maps\2021\CIA Soft\Figure 205 - East River\Middle_Indian_Creek.mxd

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

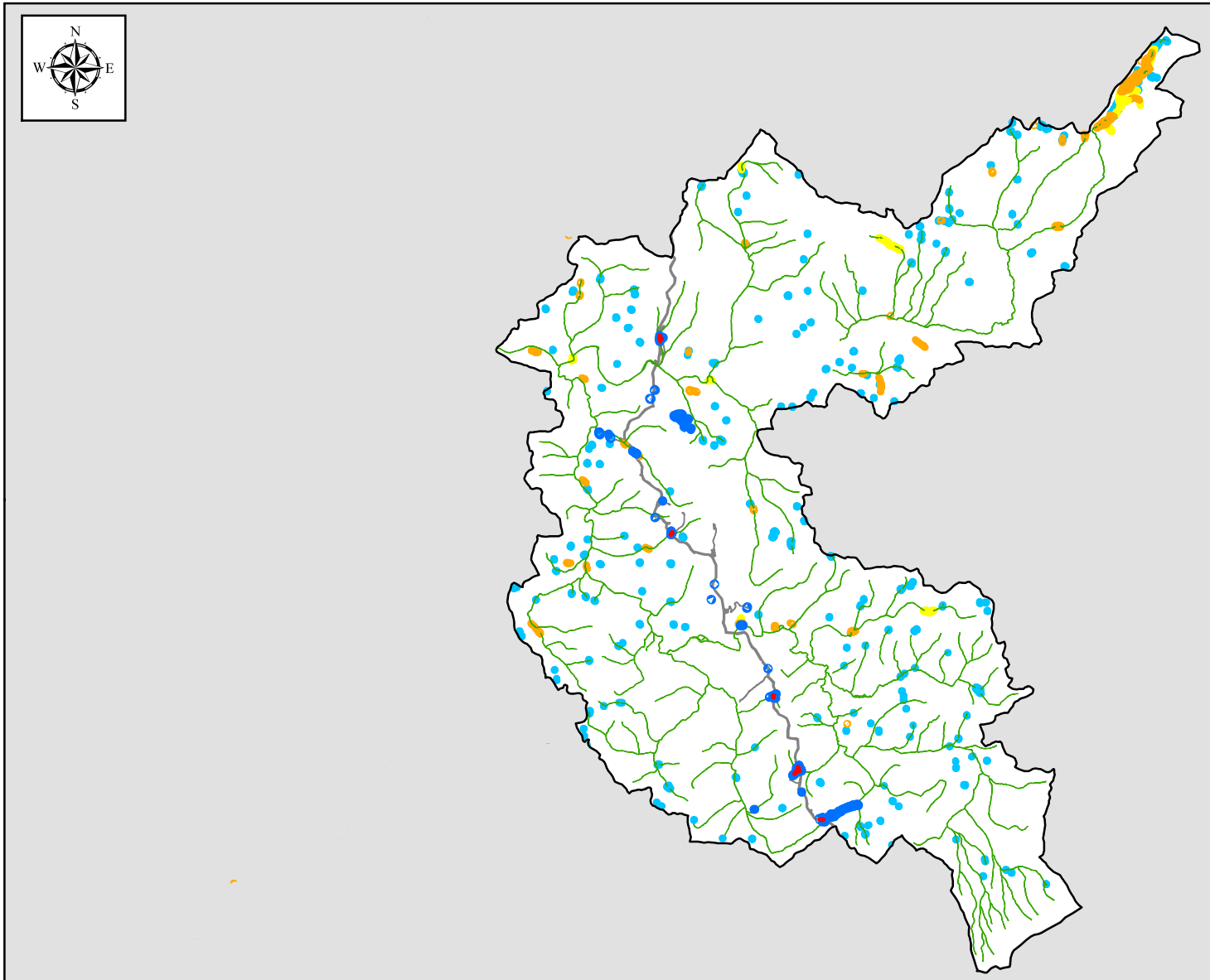
POTESTA

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

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Middle Indian Creek Watershed (050500020704)
Middle/Upper New HUC 8 Watershed, West Virginia
For Informational Purposes Only

MAPPING FOR USGS REPRESENTATION ONLY

FIGURE 205



Mountain Valley PIPELINE

Middle Indian Creek

Figure 206

1:140,000

1/6/2022

LEGEND

- Wetland Impacts - 0.74 acres
- Middle Indian Creek Delineated Wetland Area - 14.64 acres

NWI Wetlands - 547.83 acres

- Freshwater Emergent Wetland - 37.38 acres
- Freshwater Forested/Shrub Wetland - 25.35 acres
- Freshwater Pond - 63 acres
- Riverine - 422.1 acres
- Mountain Valley Pipeline
- 050500020704_Middle Indian Creek

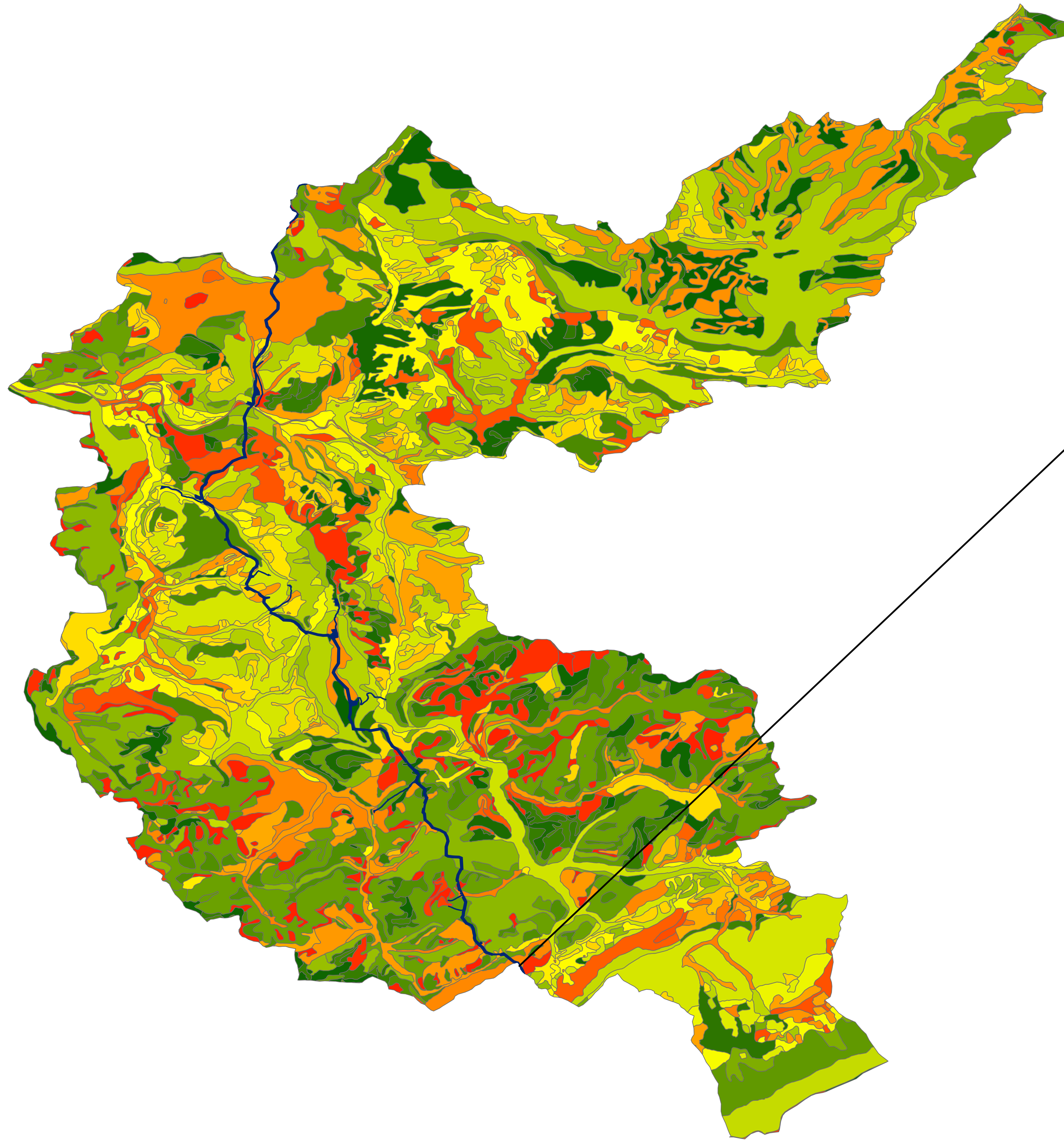
Note: Shapes are not to scale, enlarged to improve visibility.

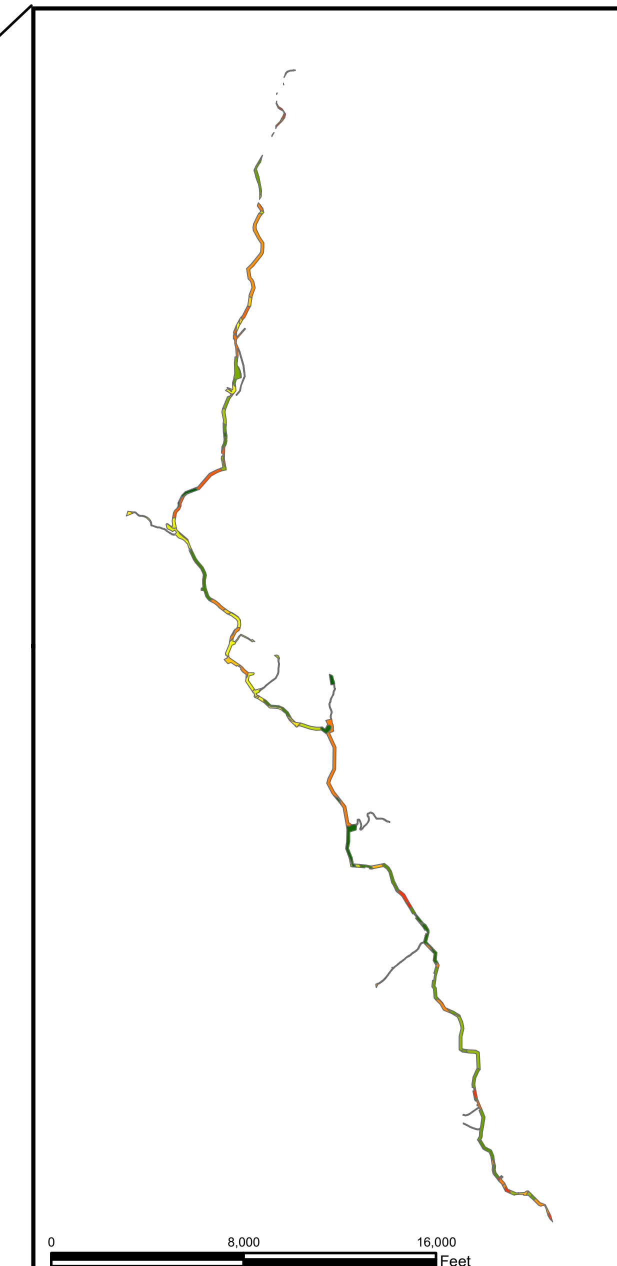
Legend

Mountain Valley Pipeline Middle Indian Creek

Middle Indian Creek Soil

- 48D: Calvin very channery loam, 15 to 35 percent slopes, extremely stony
- 48ER: Calvin-Rock outcrop complex, 35 to 60 percent slopes, extremely stony
- 75D: Lily gravelly sandy loam, 15 to 35 percent slopes
- At: Atkins silt loam, warm, 0 to 3 percent slopes, frequently flooded
- BtC: Blackthorn very channery loam, 3 to 15 percent slopes, extremely stony
- BtE: Blackthorn very channery loam, 15 to 35 percent slopes, extremely stony
- CeA: Captina silt loam, 0 to 3 percent slopes
- CeB: Captina silt loam, 3 to 8 percent slopes
- CeC: Captina silt loam, 8 to 15 percent slopes
- CfC: Cateache silt loam, 8 to 15 percent slopes
- CfD: Cateache silt loam, 15 to 25 percent slopes
- CfE: Cateache silt loam, 25 to 35 percent slopes
- ClD: Cateache-Litz complex, 15 to 25 perecnt slopes
- ClE: Cateache-Litz complex, 25 to 35 percent slopes
- ClF: Cateache-Litz complex, 35 to 55 percent slopes
- CnC: Cateache-Litz complex, 8 to 15 percent slopes, very stony
- CnE: Cateache-Litz complex, 15 to 35 percent slopes, very stony
- CnF: Cateache-Litz complex, 35 to 60 percent slopes, very stony
- CoD: Chilhowie-Opequon-Rock outcrop complex, 15 to 25 percent slopes
- CsB: Clarksburg silt loam, 3 to 8 percent slopes
- CsC: Clarksburg silt loam, 8 to 15 percent slopes
- CtB: Cookport loam, warm, 3 to 8 percent slopes
- DeD: Dekalb channery loam, 15 to 25 percent slopes, very stony
- DeE: Dekalb channery loam, 25 to 35 percent slopes, very stony
- DeF: Dekalb channery loam, 35 to 55 percent slopes, very stony
- DeG: Dekalb channery loam, 55 to 70 percent slopes, very stony
- DtB: Dunmore channery silt loam, 3 to 8 percent slopes
- DtC: Dunmore channery silt loam, 8 to 15 percent slopes
- DtD: Dunmore channery silt loam, 15 to 25 percent slopes
- Dz: Dunning silty clay loam, karst
- ElD: Elliber very channery silt loam, 15 to 25 percent slopes
- EnE: Elliber very channery silt loam, 25 to 35 percent slopes, very stony
- ErB: Ernest silt loam, warm, 3 to 8 percent slopes
- FFC: Frederick and Dunmore soils, 3 to 15 percent slopes, very rocky
- FFD: Frederick and Dunmore soils, 15 to 25 percent slopes, very rocky
- FFE: Frederick and Dunmore soils, 25 to 45 percent slopes, very rocky
- FGF: Frederick and Elliber soils, 35 to 60 percent slopes, very rocky
- FaB: Frankstown silt loam, 3 to 8 percent slopes
- FaC: Frankstown silt loam, 8 to 15 percent slopes
- FaD: Frankstown silt loam, 15 to 25 percent slopes
- FaE: Frankstown silt loam, 25 to 35 percent slopes
- FeC: Frankstown-Rock outcrop complex, 8 to 15 percent slopes
- FeD: Frankstown-Rock outcrop complex, 15 to 25 percent slopes
- FeE: Frankstown-Rock outcrop complex, 25 to 35 percent slopes
- FhC: Frederick channery silt loam, 8 to 15 percent slopes
- FmB: Frederick silt loam, 3 to 8 percent slopes
- FmC: Frederick silt loam, 8 to 15 percent slopes
- FmD: Frederick silt loam, 15 to 25 percent slopes
- FrB: Frederick silt loam, karst, 3 to 8 percent slopes
- GLB: Gilpin and Lily soils, 3 to 8 percent slopes
- GLC: Gilpin and Lily soils, 8 to 15 percent slopes
- Hu: Huntington silt loam
- LaB: Laidig channery loam, 3 to 8 percent slopes
- LaC: Laidig channery loam, 8 to 15 percent slopes
- LaD: Laidig channery loam, 15 to 25 percent slopes
- LbC: Laidig channery loam, 3 to 15 percent slopes, very stony
- LbD: Laidig channery loam, 15 to 25 percent slopes, very stony
- LbE: Laidig channery loam, 25 to 45 percent slopes, very stony
- LfC: Lily channery loam, warm, 8 to 15 percent slopes
- LfD: Lily channery loam, warm, 15 to 25 percent slopes
- LfE: Lily channery loam, warm, 25 to 35 percent slopes
- LgC: Lily sandy loam, warm, 8 to 15 percent slopes
- LgD: Lily sandy loam, warm, 15 to 25 percent slopes
- LgE: Lily sandy loam, warm, 25 to 35 percent slopes
- Ln: Lindside silt loam
- LsB: Litz channery silt loam, 3 to 8 percent slopes
- LsC: Litz channery silt loam, 8 to 15 percent slopes
- LsD: Litz channery silt loam, 15 to 25 percent slopes
- LsE: Litz channery silt loam, 25 to 35 percent slopes
- LsF: Litz channery silt loam, 35 to 60 percent slopes
- LtB: Litz silt loam, 3 to 8 percent slopes
- LtC: Litz silt loam, 8 to 15 percent slopes
- LtD: Litz silt loam, 15 to 25 percent slopes
- LtE: Litz silt loam, 25 to 35 percent slopes
- LtF: Litz silt loam, 35 to 60 percent slopes
- LvD: Litz very channery silt loam, 15 to 35 percent slopes, very rocky
- LvE: Litz very channery silt loam, 35 to 45 percent slopes, very rocky
- LwB: Litz-Cateache complex, 3 to 8 percent slopes
- LwC: Litz-Cateache complex, 8 to 15 percent slopes
- LxF: Litz-Rock outcrop complex, 45 to 60 percent slopes
- MaA: Maurertown silt loam, 0 to 3 percent slopes
- Me: Melvin silt loam
- MgA: Monongahela silt loam, 0 to 3 percent slopes
- MgB: Monongahela silt loam, 3 to 8 percent slopes
- MgC: Monongahela silt loam, warm, 8 to 15 percent slopes
- MuB: Murrill channery loam, 3 to 8 percent slopes
- MuC: Murrill channery loam, 8 to 15 percent slopes
- MuD: Murrill channery loam, 15 to 25 percent slopes
- MuE: Murrill channery loam, 25 to 45 percent slopes
- NcB: Nicholson silt loam, 3 to 8 percent slopes
- Ph: Philo silt loam, warm, 0 to 3 percent slopes, occasionally flooded
- Po: Pope fine sandy loam, warm, 0 to 3 percent slopes, occasionally flooded
- RgD: Rough very channery silt loam, 15 to 25 percent slopes
- RgE: Rough very channery silt loam, 25 to 35 percent slopes
- RrF: Rubble land-Rock outcrop complex, 45 to 100 percent slopes
- TtB: Tilsit silt loam, 3 to 8 percent slopes
- TtC: Tilsit silt loam, 8 to 15 percent slopes
- Uf: Udifluvents-Fluvaquents complex
- W: Water
- WeB: Weikert channery silt loam, 3 to 8 percent slopes
- WeC: Weikert channery silt loam, 8 to 15 percent slopes
- WeD: Weikert channery silt loam, 15 to 25 percent slopes
- WeF: Weikert channery silt loam, 25 to 55 percent slopes





MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: See Mapping
DATE: AUGUST 2021
PN: 0101-17-0451-016
DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

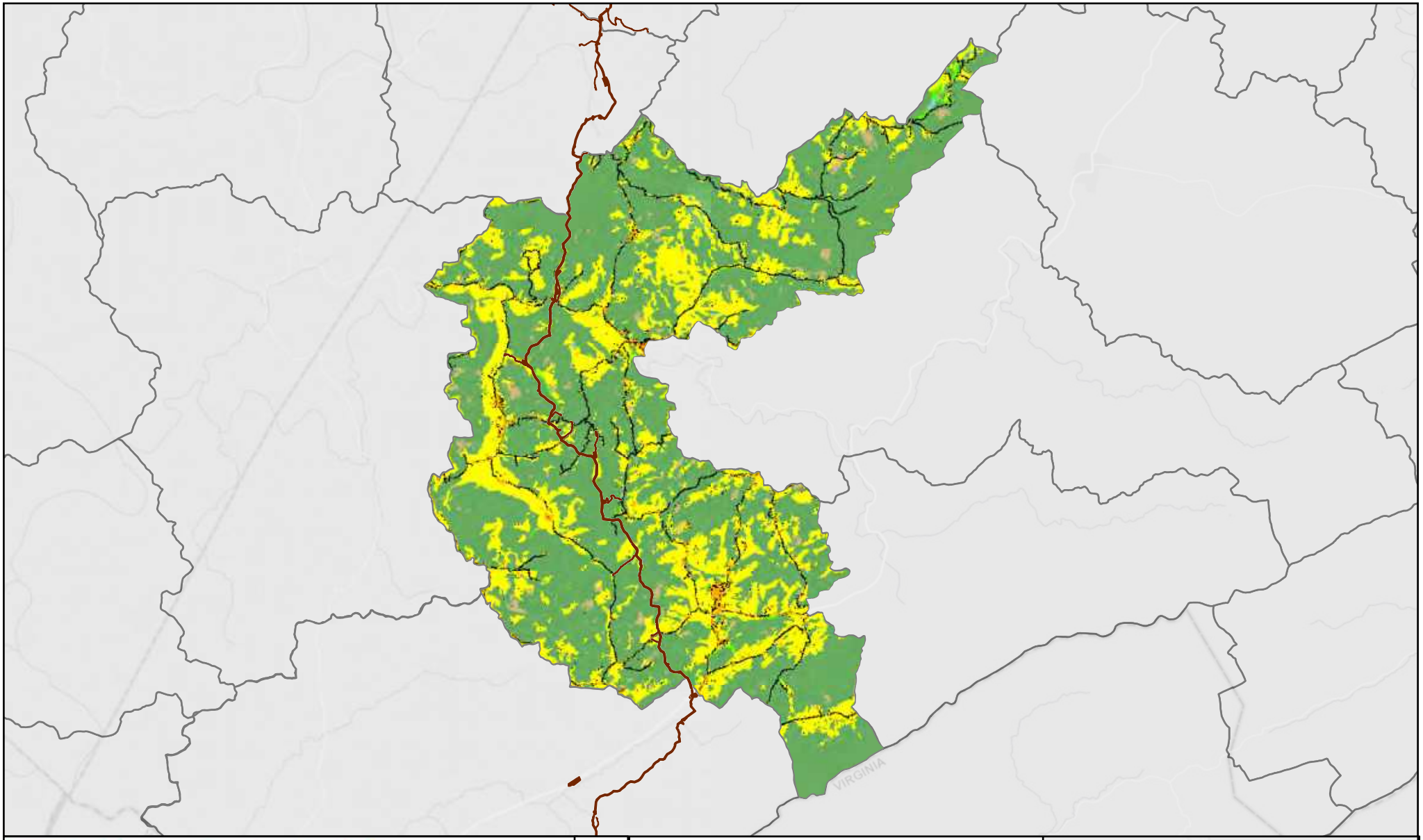
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
Middle Indian Creek (050500020704)
Middle/Upper HUC 8 Watershed
Monroe County, West Virginia &
Jefferson National Forest, Virginia
For Informational Purposes Only

FIGURE 207



Mountain Valley PIPELINE

Figure: 208

Land Use/Land Cover 2011
Middle Indian Creek
050500020604 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

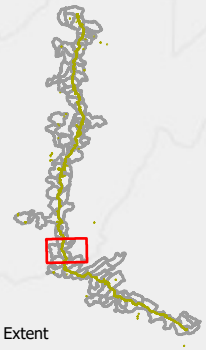
2011 Land Use Land Cover

- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 2 4 Miles

Scale: 1:145,000



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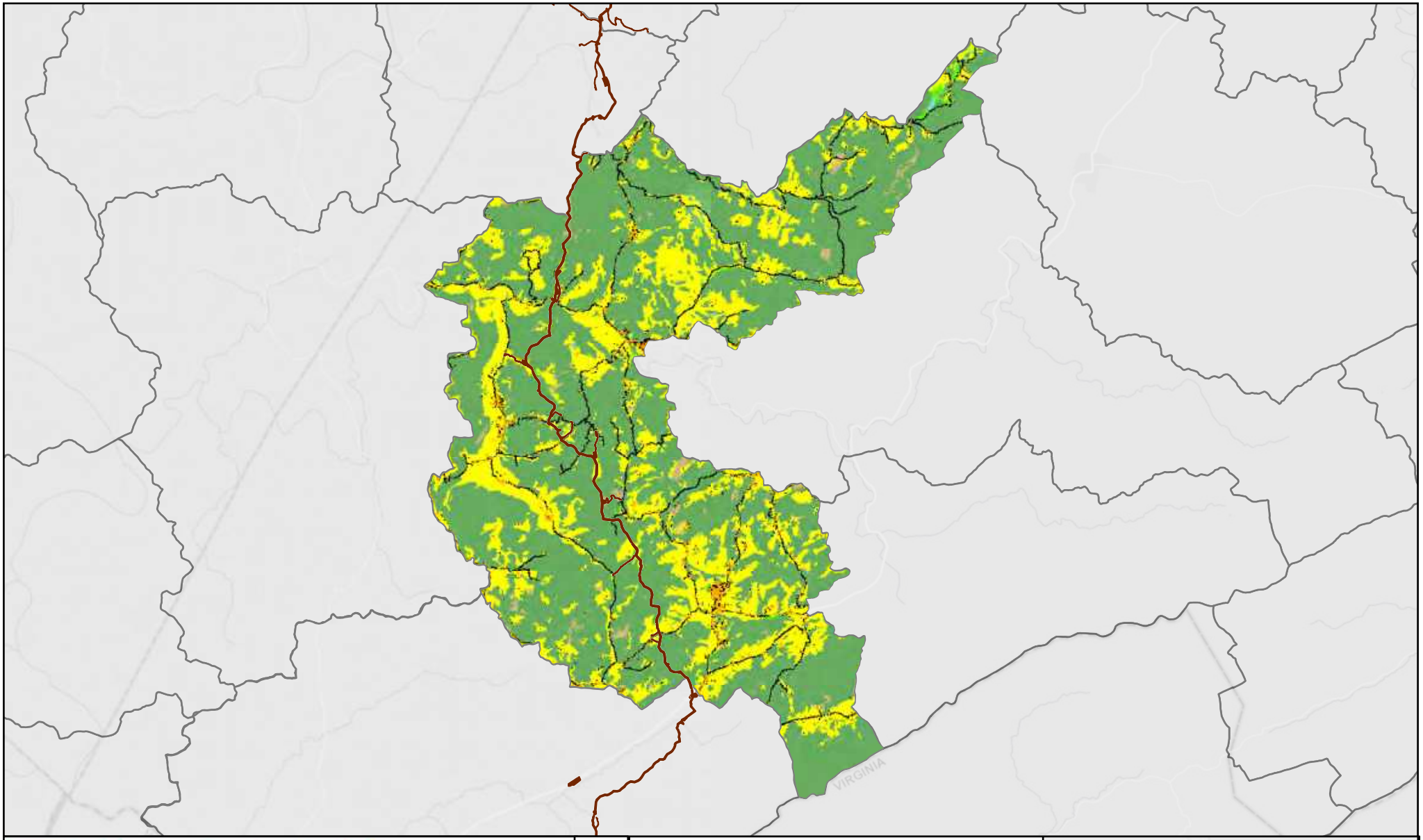

Mountain Valley PIPELINE

Figure: 209

Land Use/Land Cover 2016
Middle Indian Creek
050500020604 HUC12 Watershed

5/26/2022

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

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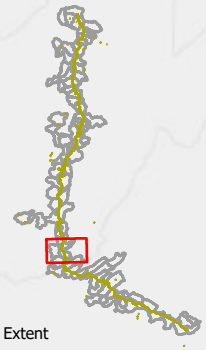
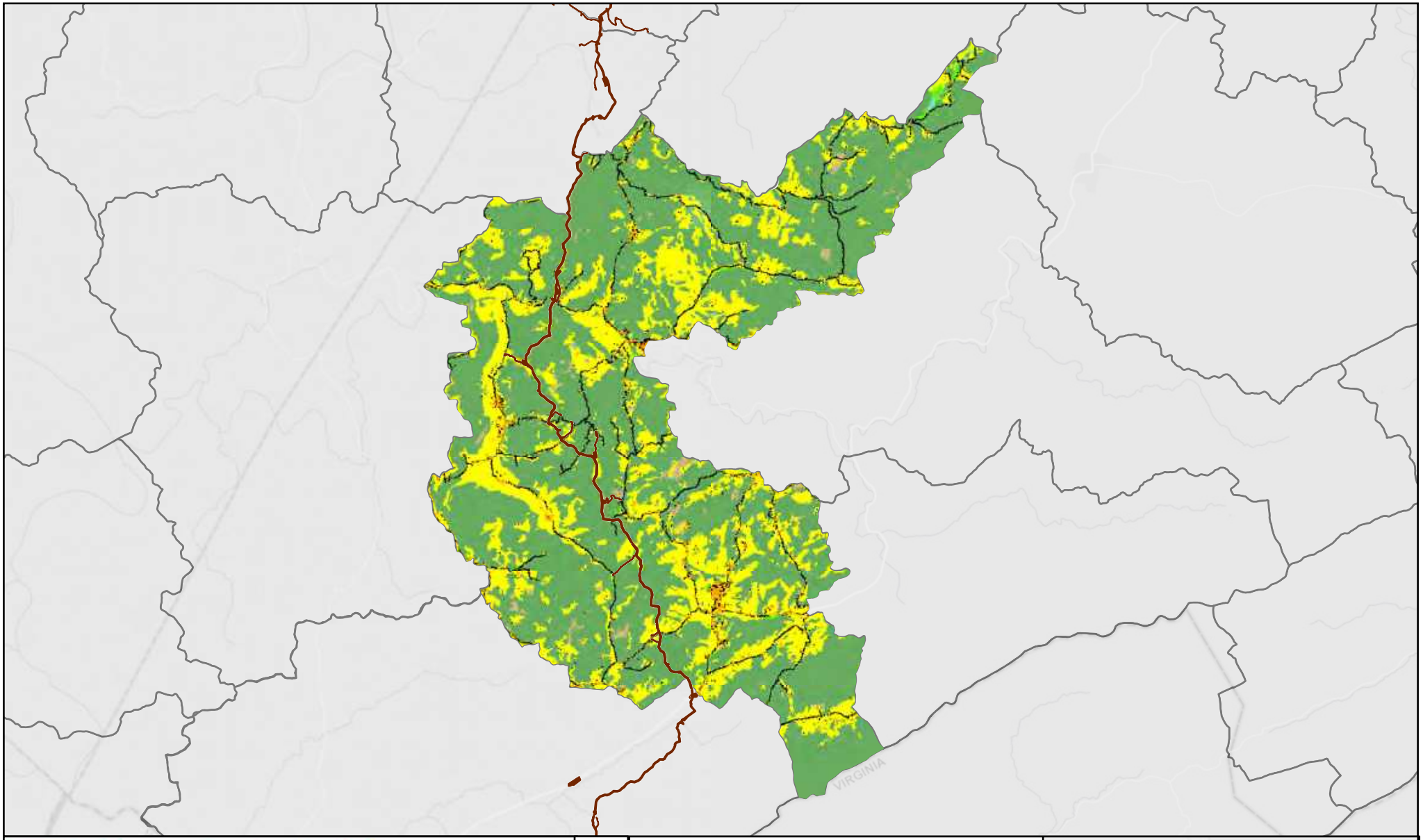
0 2 4 Miles

Scale: 1:145,000



Map Extent



Mountain Valley PIPELINE

Figure: 209a

Land Use/Land Cover 2019
Middle Indian Creek
050500020604 HUC12 Watershed

5/25/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

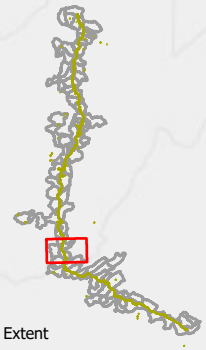
2019 Land Use Land Cover

- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

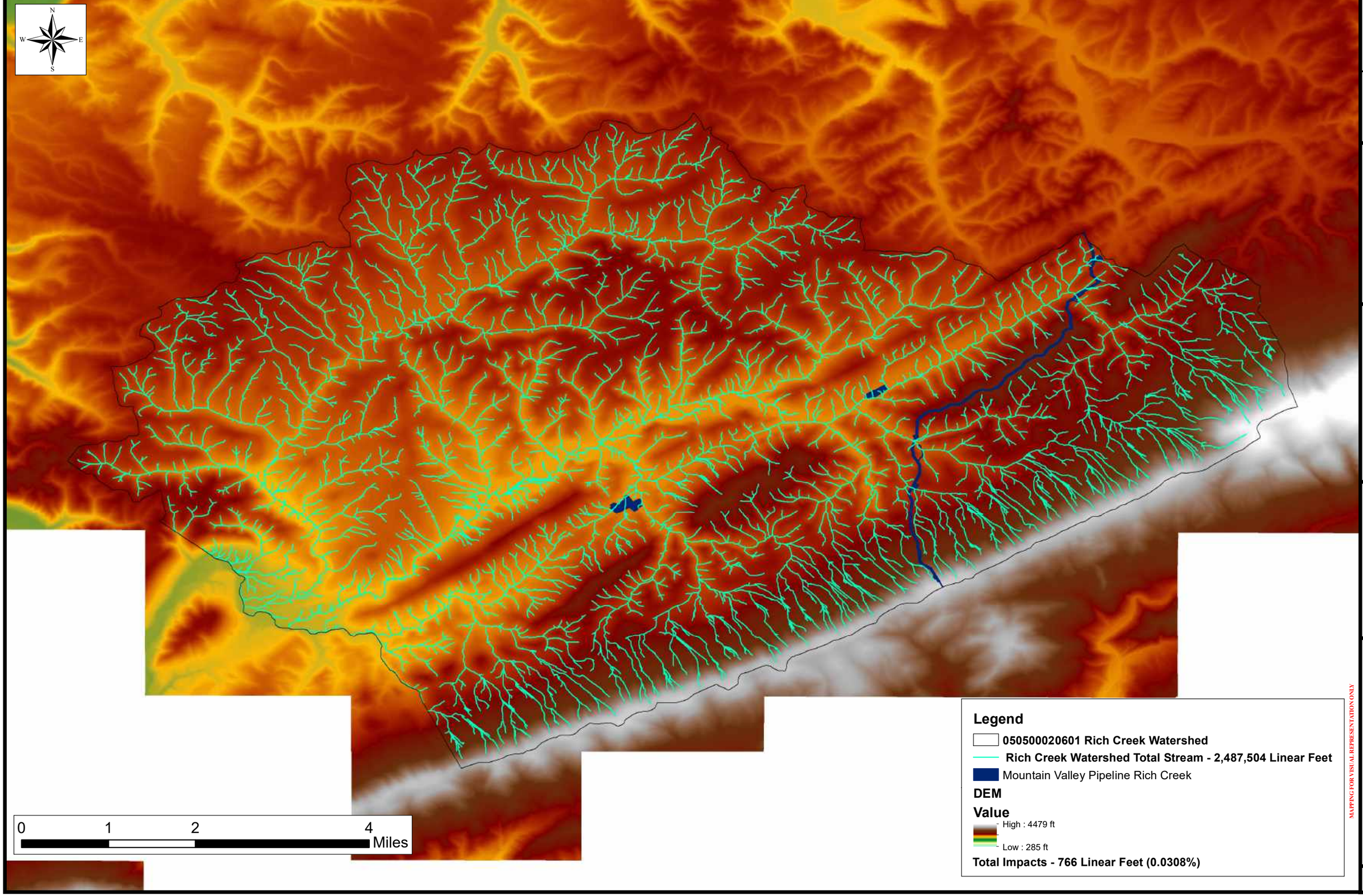
N
W E
S

Miles
0 2 4

Scale: 1:145,000



Map Extent



MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Rich Creek Watershed (0505000020601)
Middle/Upper New HUC 8 Watershed, West Virginia

For Informational Purposes Only

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

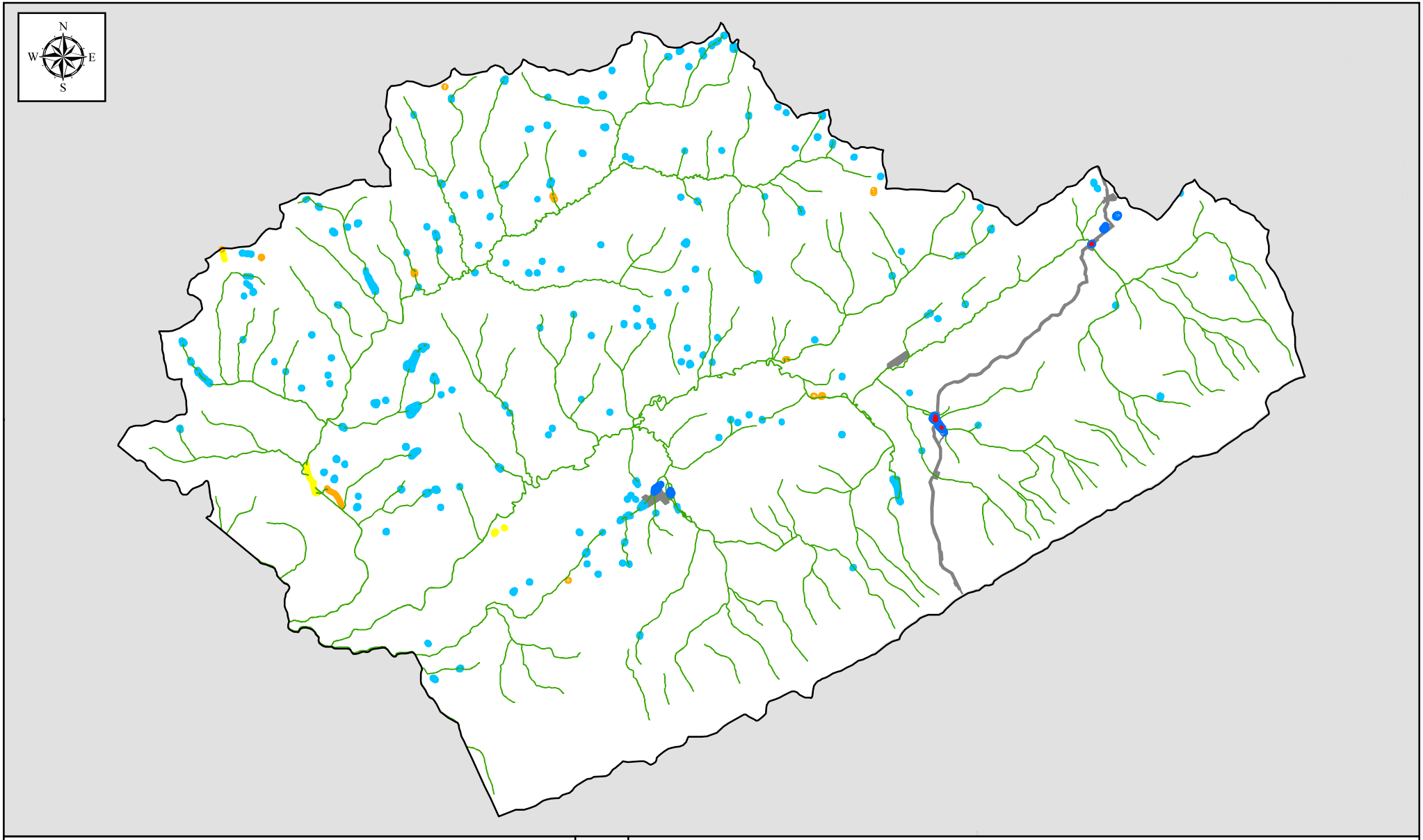
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
Email: potesta@potesta.com

POTESTA

SCALE: 1" = 1 Mile	DRAWN: KBW
DATE: AUGUST 2021	CHECKED: JLY
PN: **0101-17-0451.016**	APPROVED: JLY

J:\Projects\2017\1-0451.MVP_EnvCon_Monitoring\Maps\2021 CIA Gold Figure 210 - Rich_Creek.mxd

FIGURE 210



Mountain Valley PIPELINE

Rich Creek

Figure 211

1:80,000

1/6/2022

LEGEND

- Wetland Impacts - 0.26 acres
- Rich Creek Delineated Wetland Area - 2.04 acres

NWI Wetlands - 428.33 acres

- Freshwater Emergent Wetland - 2.01 acres
- Freshwater Forested/Shrub Wetland - 1.31 acres
- Freshwater Pond - 50.88 acres
- Riverine - 374.12 acres
- Mountain Valley Pipeline
- 050500020601_Rich Creek

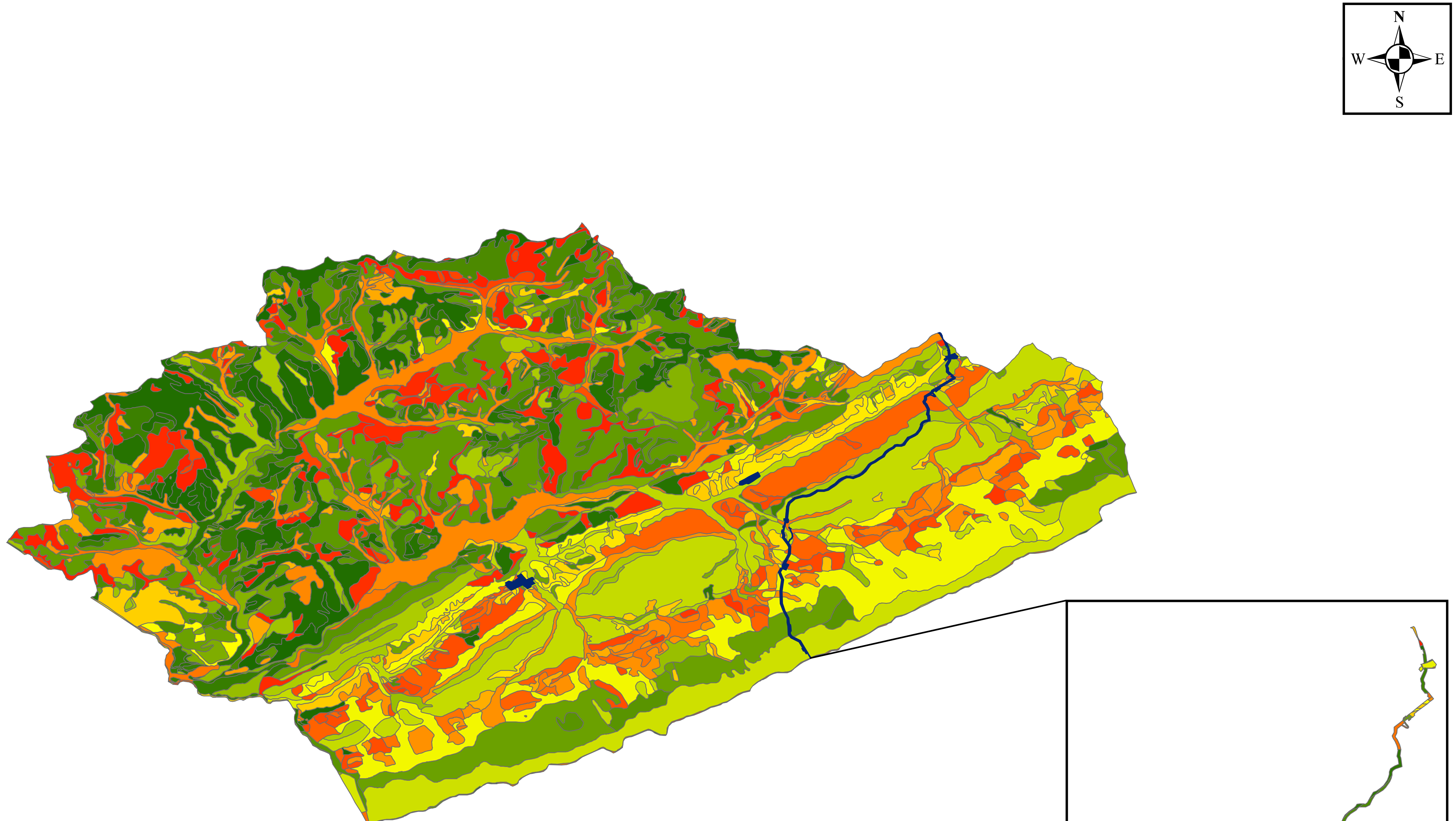
Note: Shapes are not to scale, enlarged to improve visibility.

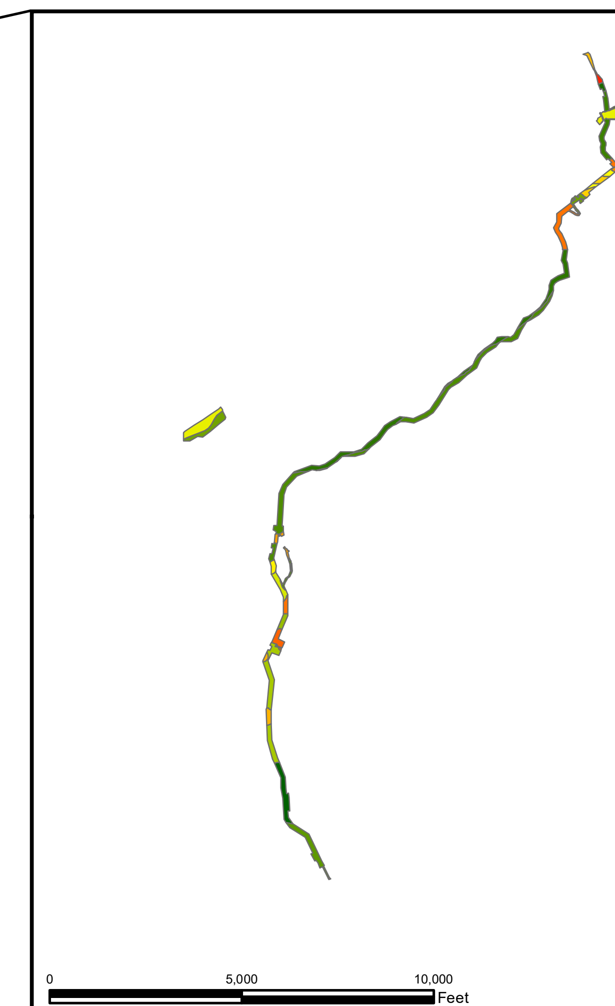
Legend

Mountain Valley Pipeline Rich Creek

Rich Creek Soil

- 10B: Cotaco loam, 2 to 7 percent slopes
- 10C: Cotaco loam, 7 to 15 percent slopes
- 17C: Gilpin silt loam, 7 to 15 percent slopes
- 17F: Gilpin silt loam, 30 to 65 percent slopes
- 18F: Gilpin very stony silt loam, 30 to 65 percent slopes
- 1B: Allegheny loam, 2 to 7 percent slopes
- 1C: Allegheny loam, 7 to 15 percent slopes
- 23F: Lehew and Wallen soils, very stony, 35 to 65 percent slopes
- 29B: Nolichucky loam, 2 to 7 percent slopes
- 30C: Nolichucky very stony sandy loam, 7 to 15 percent slopes
- 30D: Nolichucky very stony sandy loam, 15 to 30 percent slopes
- 30F: Nolichucky very stony sandy loam, 30 to 65 percent slopes
- 46E: Dekalb cobbly sandy loam, 35 to 60 percent slopes, very stony
- 46ES: Dekalb cobbly sandy loam, 35 to 60 percent slopes, rubbly
- 48D: Calvin very channery loam, 15 to 35 percent slopes, extremely stony
- 48ER: Calvin-Rock outcrop complex, 35 to 60 percent slopes, extremely stony
- 75C: Lily gravelly sandy loam, 3 to 15 percent slopes
- 75D: Lily gravelly sandy loam, 15 to 35 percent slopes
- 75DR: Lily-Rock outcrop complex, 15 to 35 percent slopes
- 75E: Lily gravelly sandy loam, 35 to 60 percent slopes
- At: Atkins silt loam, warm, 0 to 3 percent slopes, frequently flooded
- BtC: Blackthorn very channery loam, 3 to 15 percent slopes, extremely stony
- BtE: Blackthorn very channery loam, 15 to 35 percent slopes, extremely stony
- CeA: Captina silt loam, 0 to 3 percent slopes
- CeB: Captina silt loam, 3 to 8 percent slopes
- CeC: Captina silt loam, 8 to 15 percent slopes
- CfB: Cateache silt loam, 3 to 8 percent slopes
- CfC: Cateache silt loam, 8 to 15 percent slopes
- CfD: Cateache silt loam, 15 to 25 percent slopes
- CfE: Cateache silt loam, 25 to 35 percent slopes
- ClD: Cateache-Litz complex, 15 to 25 percent slopes
- ClE: Cateache-Litz complex, 25 to 35 percent slopes
- ClF: Cateache-Litz complex, 35 to 55 percent slopes
- CnC: Cateache-Litz complex, 8 to 15 percent slopes, very stony
- CnE: Cateache-Litz complex, 15 to 35 percent slopes, very stony
- CnF: Cateache-Litz complex, 35 to 60 percent slopes, very stony
- CsB: Clarksburg silt loam, 3 to 8 percent slopes
- CsC: Clarksburg silt loam, 8 to 15 percent slopes
- CtB: Cookport loam, warm, 3 to 8 percent slopes
- DeD: Dekalb channery loam, 15 to 25 percent slopes, very stony
- DeE: Dekalb channery loam, 25 to 35 percent slopes, very stony
- DeF: Dekalb channery loam, 35 to 55 percent slopes, very stony
- DeG: Dekalb channery loam, 55 to 70 percent slopes, very stony
- DtB: Dunmore channery silt loam, 3 to 8 percent slopes
- DtC: Dunmore channery silt loam, 8 to 15 percent slopes
- DtD: Dunmore channery silt loam, 15 to 25 percent slopes
- DvC: Dunmore silt loam, 8 to 15 percent slopes
- DvD: Dunmore silt loam, 15 to 25 percent slopes
- ElC: Elliber very channery silt loam, 3 to 15 percent slopes
- ElD: Elliber very channery silt loam, 15 to 25 percent slopes
- ElE: Elliber very channery silt loam, 25 to 35 percent slopes
- EnD: Elliber very channery silt loam, 15 to 25 percent slopes, very stony
- EnE: Elliber very channery silt loam, 25 to 35 percent slopes, very stony
- ErB: Ernest silt loam, warm, 3 to 8 percent slopes
- FFC: Frederick and Dunmore soils, 3 to 15 percent slopes, very rocky
- FFD: Frederick and Dunmore soils, 15 to 25 percent slopes, very rocky
- FFE: Frederick and Dunmore soils, 25 to 45 percent slopes, very rocky
- FGF: Frederick and Elliber soils, 35 to 60 percent slopes, very rocky
- FaC: Frankstown silt loam, 8 to 15 percent slopes
- FaD: Frankstown silt loam, 15 to 25 percent slopes
- FmC: Frederick silt loam, 8 to 15 percent slopes
- FmD: Frederick silt loam, 15 to 25 percent slopes
- FmE: Frederick silt loam, 25 to 35 percent slopes
- GLB: Gilpin and Lily soils, 3 to 8 percent slopes
- GLC: Gilpin and Lily soils, 8 to 15 percent slopes
- LaB: Laidig channery loam, 3 to 8 percent slopes
- LaC: Laidig channery loam, 8 to 15 percent slopes
- LaD: Laidig channery loam, 15 to 25 percent slopes
- LaE: Laidig channery loam, 25 to 45 percent slopes
- LbC: Laidig channery loam, 3 to 15 percent slopes, very stony
- LbD: Laidig channery loam, 15 to 25 percent slopes, very stony
- LbE: Laidig channery loam, 25 to 45 percent slopes, very stony
- LfC: Lily channery loam, warm, 8 to 15 percent slopes
- LfD: Lily channery loam, warm, 15 to 25 percent slopes
- LfE: Lily channery loam, warm, 25 to 35 percent slopes
- LgC: Lily sandy loam, warm, 8 to 15 percent slopes
- LgD: Lily sandy loam, warm, 15 to 25 percent slopes
- LgE: Lily sandy loam, warm, 25 to 35 percent slopes
- Ln: Lindside silt loam
- LsB: Litz channery silt loam, 3 to 8 percent slopes
- LsC: Litz channery silt loam, 8 to 15 percent slopes
- LsD: Litz channery silt loam, 15 to 25 percent slopes
- LsE: Litz channery silt loam, 25 to 35 percent slopes
- LtB: Litz silt loam, 3 to 8 percent slopes
- LtC: Litz silt loam, 8 to 15 percent slopes
- LtD: Litz silt loam, 15 to 25 percent slopes
- LtE: Litz silt loam, 25 to 35 percent slopes
- LtF: Litz silt loam, 35 to 60 percent slopes
- LvD: Litz very channery silt loam, 15 to 35 percent slopes, very rocky
- LvE: Litz very channery silt loam, 35 to 45 percent slopes, very rocky
- LwB: Litz-Cateache complex, 3 to 8 percent slopes
- LwC: Litz-Cateache complex, 8 to 15 percent slopes
- LxF: Litz-Rock outcrop complex, 45 to 60 percent slopes
- MaA: Maurertown silt loam, 0 to 3 percent slopes
- Me: Melvin silt loam
- MgA: Monongahela silt loam, 0 to 3 percent slopes
- MgB: Monongahela silt loam, 3 to 8 percent slopes
- MgC: Monongahela silt loam, warm, 8 to 15 percent slopes
- MuB: Murrill channery loam, 3 to 8 percent slopes
- MuC: Murrill channery loam, 8 to 15 percent slopes
- MuD: Murrill channery loam, 15 to 25 percent slopes
- MuE: Murrill channery loam, 25 to 45 percent slopes
- Ph: Philo silt loam, warm, 0 to 3 percent slopes, occasionally flooded
- Po: Pope fine sandy loam, warm, 0 to 3 percent slopes, occasionally flooded
- RgD: Rough very channery silt loam, 15 to 25 percent slopes
- RgE: Rough very channery silt loam, 25 to 35 percent slopes
- TtB: Tilsit silt loam, 3 to 8 percent slopes
- TtC: Tilsit silt loam, 8 to 15 percent slopes
- Uf: Udifluvents-Fluvaquents complex
- W: Water
- WeB: Weikert channery silt loam, 3 to 8 percent slopes
- WeC: Weikert channery silt loam, 8 to 15 percent slopes
- WeD: Weikert channery silt loam, 15 to 25 percent slopes
- WeF: Weikert channery silt loam, 25 to 55 percent slopes





0 1.5 3 6 Miles

MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: See Mapping | DATE: AUGUST 2021 | PN: 0101-17-0451.016

DRAWN: KBW | CHECKED: JLY | APPROVED: JLY

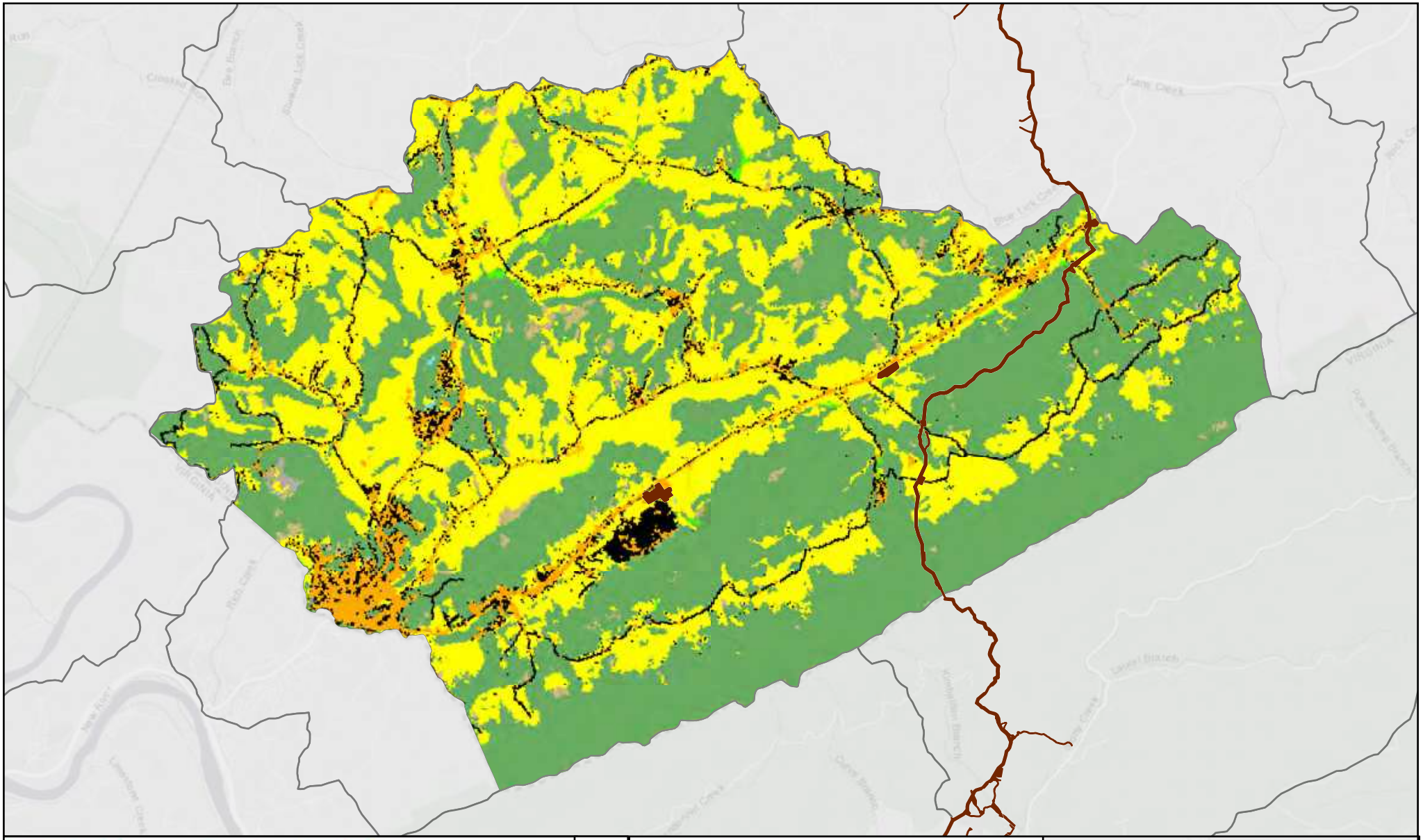
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
Rich Creek (050500020601)
Middle/Upper New HUC 8 Watershed
Monroe County, West Virginia &
Jefferson National Forest, Virginia
For Informational Purposes Only

FIGURE 212



Mountain Valley PIPELINE

Figure: 213

Land Use/Land Cover 2011
Rich Creek
050500020404 HUC12 Watershed

5/26/2022

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

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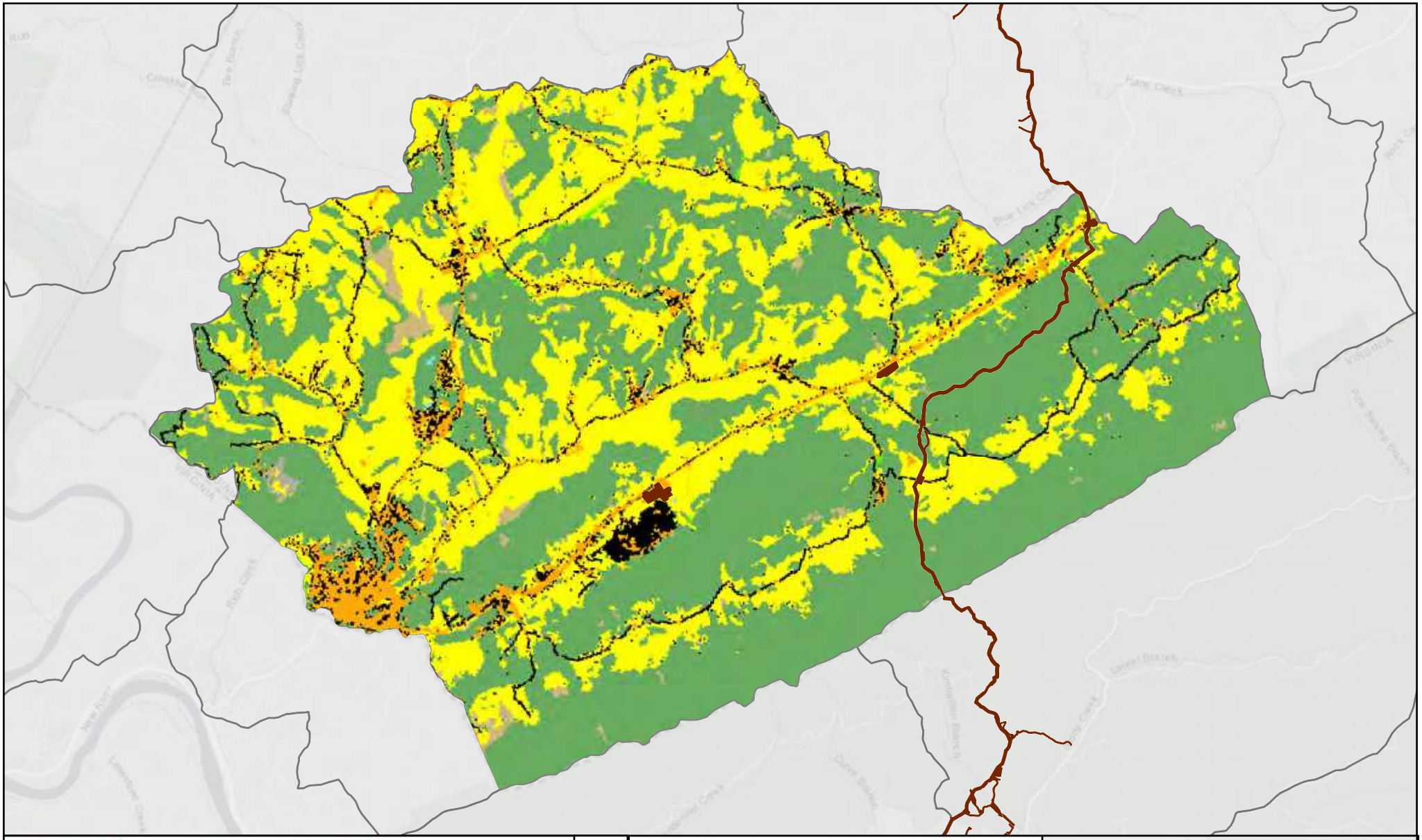
Scale: 1:85,000

Map Extent



Mountain Valley PIPELINE

Figure: 214

Land Use/Land Cover 2016
Rich Creek
050500020404 HUC12 Watershed

5/26/2022

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

N
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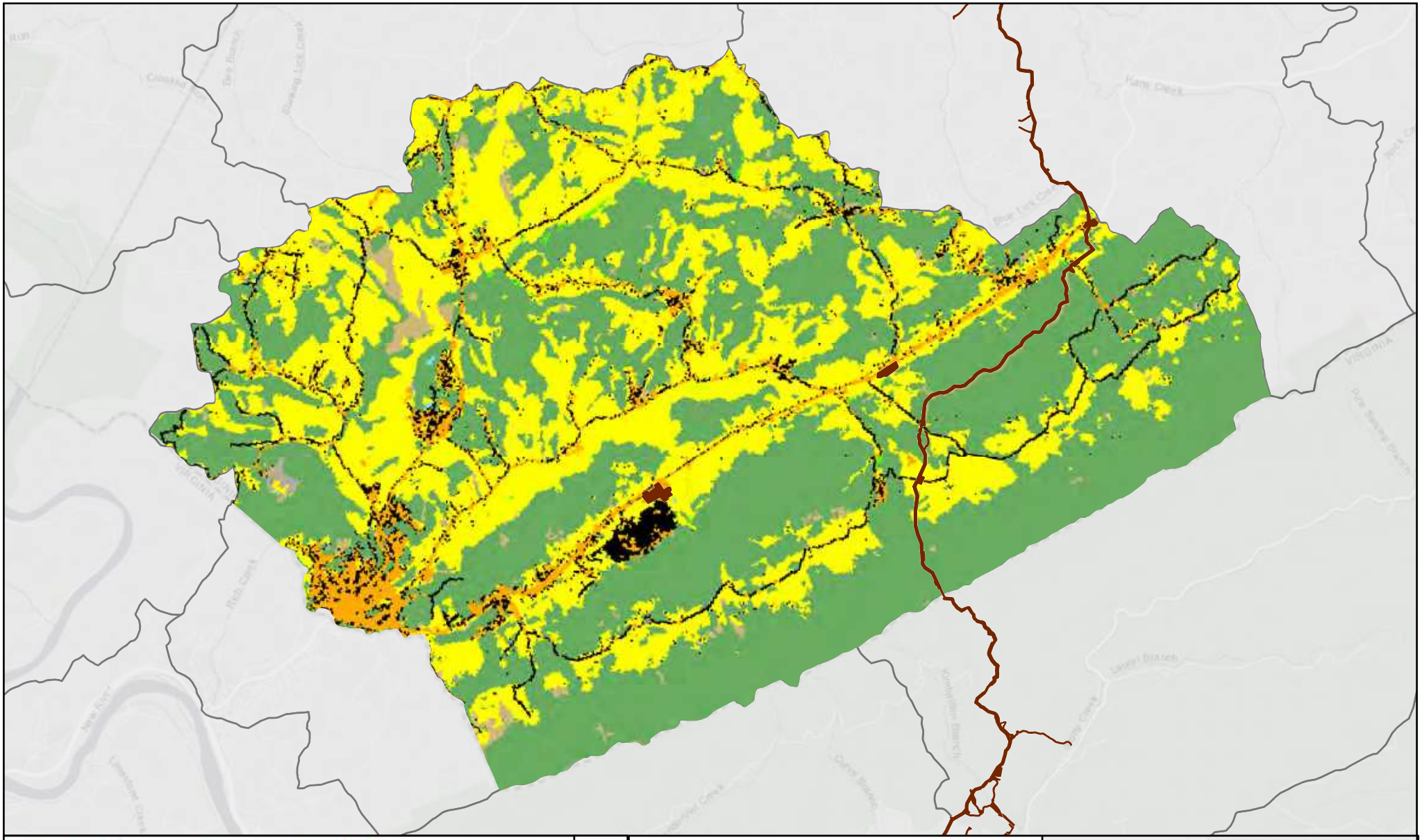
Miles
0 1 2

Scale: 1:85,000

Map Extent



Mountain Valley PIPELINE

Figure: 214a

Land Use/Land Cover 2019
Rich Creek
050500020404 HUC12 Watershed

5/25/2022

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

N
W E
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Miles
0 1 2

Scale: 1:85,000

Map Extent

Legend

050500020305 Stony Creek Watershed

Stony Creek Watershed Total Stream - 1,392,380 Linear Feet

Mountain Valley Pipeline Stony Creek

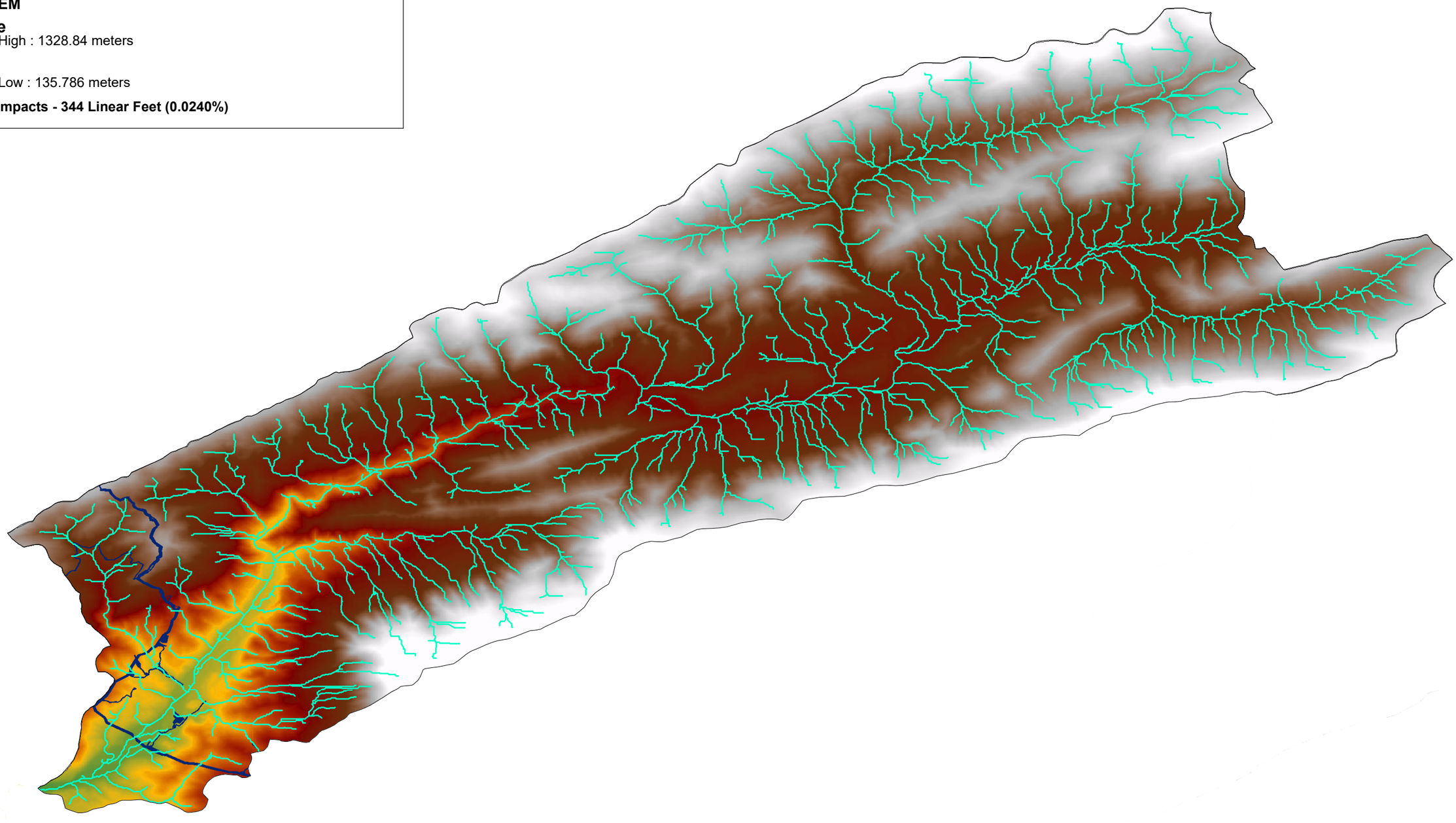
VA DEM

Value

High : 1328.84 meters

Low : 135.786 meters

Total Impacts - 344 Linear Feet (0.0240%)



0 1 2 4 Miles

MAPPING FOR VISUAL REPRESENTATION ONLY

DRAWN: KBW

CHECKED: JLY

APPROVED: JLY

SCALE: 1" = 1 Mile

DATE: SEPT 2021

PN: **0101-17-0451.016**

I:\Projects\2017\17-0451_MVP_EnvCon_Monitoring\Maps\2021 CIA Soils\Figure 215 - Stony_Creek_Watershed.mxd

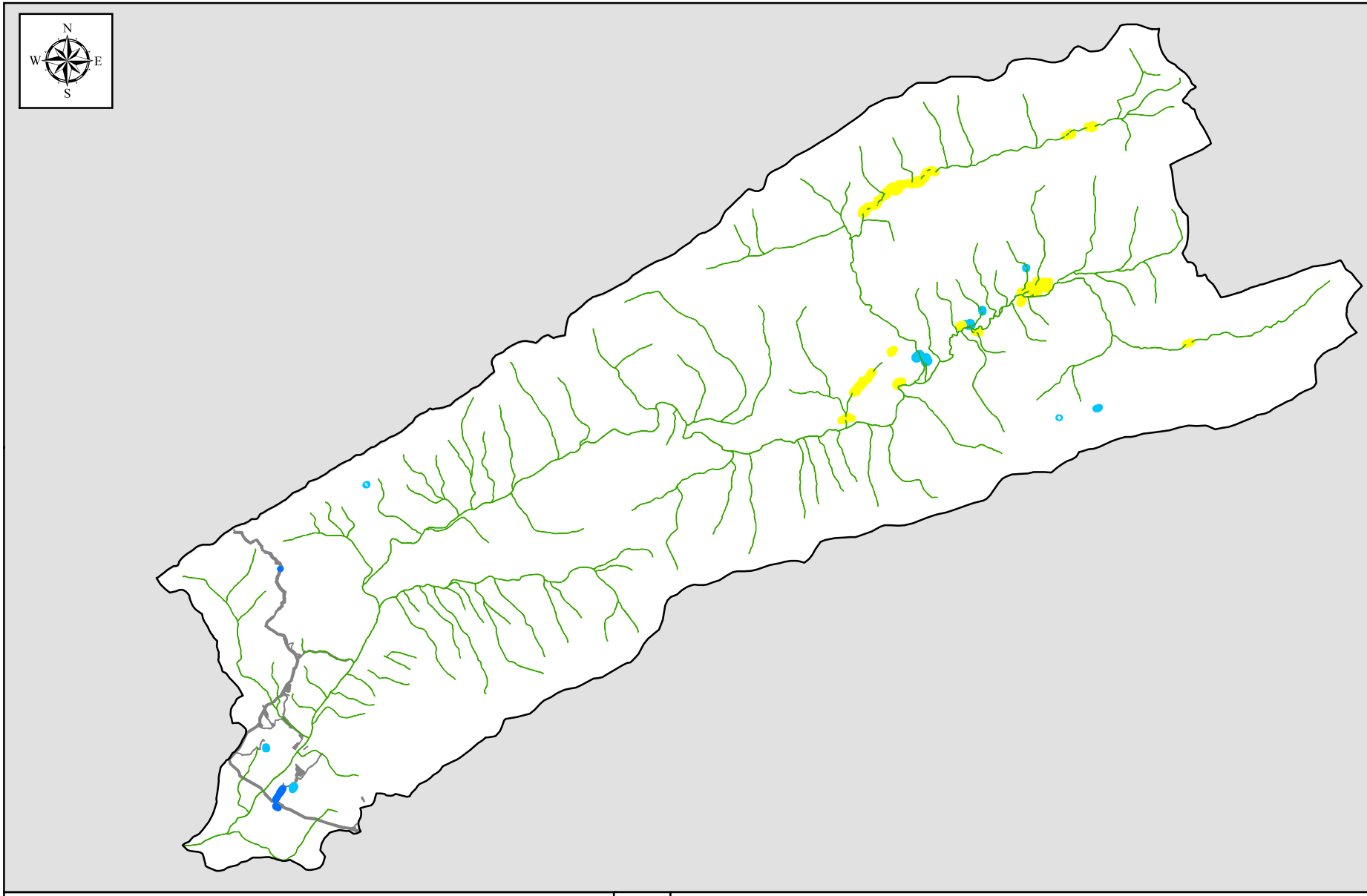
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, West Virginia 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Stony Creek Creek Watershed (050500020305)
Middle/Upper New HUC 8 Watershed, VA and WV
For Informational Purposes Only

FIGURE 215



Mountain Valley PIPELINE

Stony Creek

Figure 216

1:100,000

1/6/2022

LEGEND

- Wetland Impacts - 0 acres
- Stony Creek Delineated Wetland Area - 1.33 acres

NWI Wetlands - 344.3 acres

- Freshwater Forested/Shrub Wetland - 54.46 acres
- Freshwater Pond - 7.73 acres
- Riverine - 282.11 acres
- Mountain Valley Pipeline
- 050500020305_Stony Creek

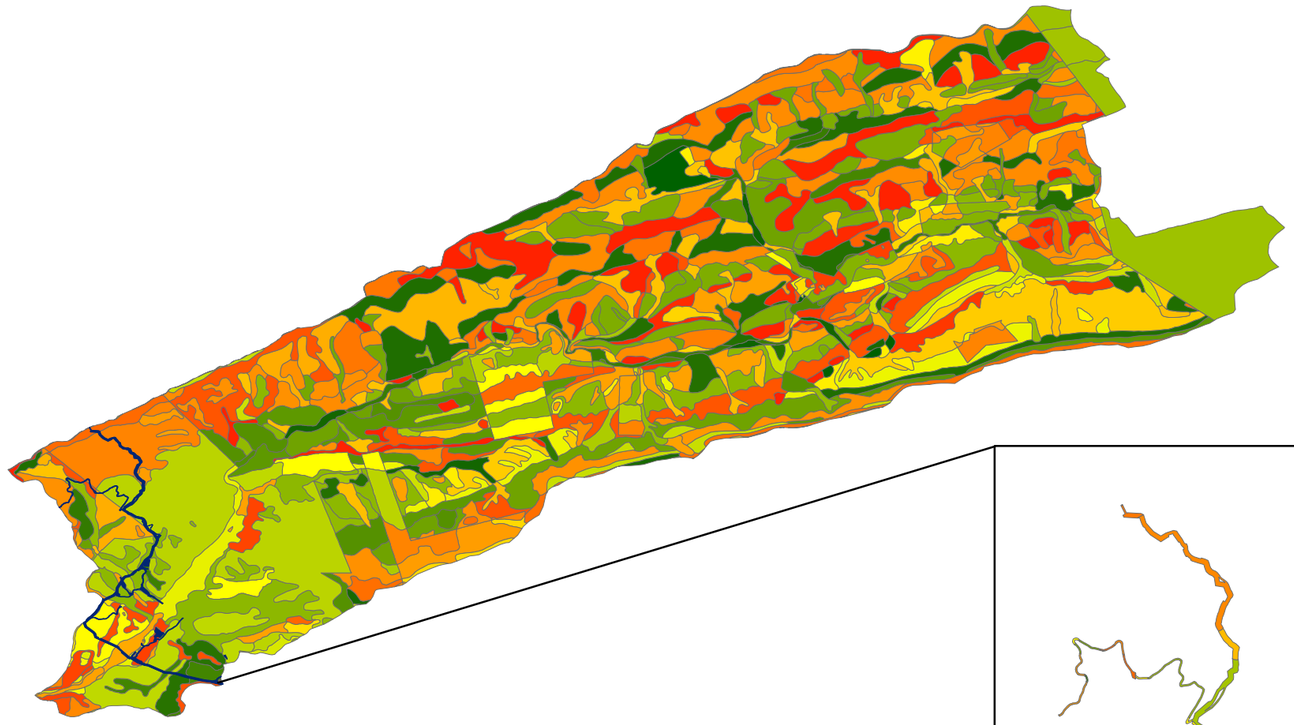
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

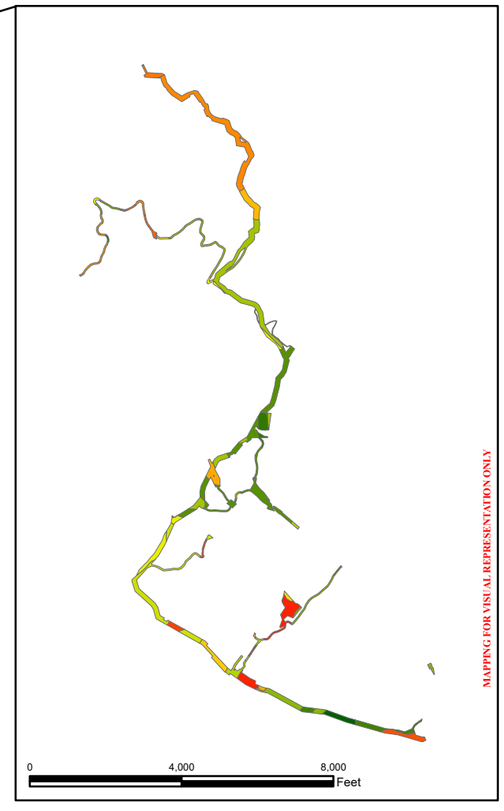
Mountain Valley Pipeline Stony Creek

Stony Creek Soil

- 1: Atkins loam, 0 to 3 percent slopes, frequently flooded1
- 1: Atkins loam, 0 to 3 percent slopes, frequently flooded
- 110: Haplosaprists, high elevation bog, 0 to 3 percent slopes
- 11D: Faywood silt loam, 10 to 30
- 11F: Faywood silt loam, 30 to 65
- 12: Fluvaquents, nearly level
- 138C: Oriskany very cobbly sandy loam, 3 to 15 percent slopes, very stony
- 138CS: Oriskany very cobbly sandy loam, 3 to 15 percent slopes, rubbly
- 138D: Oriskany very cobbly sandy loam, 15 to 35 percent slopes, very stony
- 138DS: Oriskany very cobbly sandy loam, 15 to 35 percent slopes, rubbly
- 138E: Oriskany very cobbly sandy loam, 35 to 60 percent slopes, very stony
- 138ES: Oriskany very cobbly sandy loam, 35 to 60 percent slopes, rubbly
- 13D: Frederick silt loam, 15 to 25
- 14: Botetourt loam, 0 to 5 percent slopes, rarely flooded
- 15C: Frederick very stony silt
- 15D: Frederick very stony silt
- 15E: Frederick very stony silt
- 16D: Frederick-Rock outcrop
- 16F: Frederick-Rock outcrop
- 17C: Gilpin silt loam, 7 to 15
- 17D: Gilpin silt loam, 15 to 30
- 17DS: Sherando very cobbly sandy loam, 15 to 35 percent slopes, rubbly
- 18: Tygart silt loam, 0 to 5 percent slopes
- 18D: Gilpin very stony silt loam,
- 18F: Gilpin very stony silt loam,
- 1B: Allegheny loam, 2 to 7
- 1C: Allegheny loam, 7 to 15
- 2: Philo fine sandy loam, 0 to 3 percent slopes, occasionally flooded
- 23C: Moomaw fine sandy loam, 3 to 15 percent slopes
- 23F: Lehew and Wallen soils, very
- 24C: Alonzville fine sandy loam, 0 to 8 percent slopes, rarely flooded
- 26C: Jefferson loam, 3 to 15 percent slopes
- 26D: Jefferson loam, 15 to 35 percent slopes
- 26E: Jefferson loam, 35 to 60 percent slopes
- 27C: Lily-Bailegap complex, very
- 27E: Lily-Bailegap complex, very
- 27F: Lily-Bailegap complex, very
- 28C: Shelocta channery silt loam, 3 to 15 percent slopes
- 28D: Shelocta channery silt loam, 15 to 35 percent slopes
- 28E: Shelocta channery silt loam, 35 to 60 percent slopes
- 29C: Nolichucky loam, 7 to 15
- 2F: Berks channery silt loam, 30
- 3: Craigsville cobbly sandy loam, 0 to 5 percent slopes, frequently flooded
- 30C: Nolichucky very stony sandy - Giles; 30C: Laidig cobbly fine sandy loam, 3 to 15 percent slopes- Jefferson National Forest
- 30D: Nolichucky very stony sandy - Giles; 30D: Laidig cobbly fine sandy loam, 15 to 35 percent slopes - Jefferson National Forest
- 30DS: Laidig cobbly fine sandy loam, 15 to 35 percent slopes, extremely stony
- 30F: Nolichucky very stony sandy
- 4: Pope fine sandy loam, 0 to 3 percent slopes, occasionally flooded
- 41C: Berks-Weikert complex, 3 to 15 percent slopes
- 41D: Berks-Weikert complex, 15 to 35 percent slopes
- 41E: Berks-Weikert complex, 35 to 60 percent slopes
- 41F: Berks-Weikert complex, 60 to 80 percent slopes
- 45F: Dekalb, shallow-Rock outcrop complex, 60 to 80 percent slopes, extremely stony
- 46D: Dekalb cobbly sandy loam, 15 to 35 percent slopes, very stony
- 46D: Dekalb cobbly sandy loam, 15 to 35 percent slopes, very stony
- 46E: Dekalb cobbly sandy loam, 35 to 60 percent slopes, very stony
- 46ER: Dekalb-Rock outcrop complex, 35 to 60 percent slopes, extremely stony
- 46ES: Dekalb cobbly sandy loam, 35 to 60 percent slopes, rubbly
- 48C: Calvin very channery loam, 3 to 15 percent slopes, extremely stony
- 48D: Calvin very channery loam, 15 to 35 percent slopes, extremely stony
- 48ER: Calvin-Rock outcrop complex, 35 to 60 percent slopes, extremely stony
- 4C: Braddock sandy loam, 7 to 15
- 4D: Braddock sandy loam, 15 to
- 4E: Braddock sandy loam, 25 to
- 50: Rubble land, 35 to 60 percent slopes
- 57C: Clymer sandy loam, 3 to 15 percent slopes
- 57D: Clymer sandy loam, 15 to 35 percent slopes
- 57E: Clymer sandy loam, 35 to 60 percent slopes
- 59C: Gilpin channery silt loam, 3 to 15 percent slopes
- 59D: Gilpin channery silt loam, 15 to 35 percent slopes
- 59E: Gilpin channery silt loam, 35 to 60 percent slopes
- 5D: Carbo silty clay loam, very
- 64D: Brushy extremely gravelly loam, 15 to 35 percent slopes
- 64E: Brushy extremely gravelly loam, 35 to 60 percent slopes
- 66C: Bailegap sandy loam, 3 to 15 percent slopes
- 66D: Bailegap sandy loam, 15 to 35 percent slopes
- 66E: Bailegap sandy loam, 35 to 60 percent slopes
- 6F: Carbo-Rock outcrop complex,
- 75C: Lily gravelly sandy loam, 3 to 15 percent slopes
- 75D: Lily gravelly sandy loam, 15 to 35 percent slopes
- 75DR: Lily-Rock outcrop complex, 15 to 35 percent slopes
- 75E: Lily gravelly sandy loam, 35 to 60 percent slopes
- 9: Chavies variant, sandy loam
- 96D: Dekalb-Dekalb, shallow complex, 15 to 35 percent slopes, very stony
- 96E: Dekalb-Dekalb, shallow complex, 35 to 60 percent slopes, very stony
- DeG: Dekalb channery loam, 55 to 70 percent slopes, very stony
- W: Water
- WeF: Weikert channery silt loam, 25 to 55 percent slopes



0 1 2 4 Miles



MAPPING FOR VISUAL REPRESENTATION ONLY

N W E S

SCALE: See Mapping | DRAWN: KBW
DATE: AUGUST 2021 | CHECKED: JLY
PN: 010-17-0451.016 | APPROVED: JLY
(T:\Projects\2017\17-0451_MVP_Tier4\in_Monitoring\Maps\2021\Cumulative Impact Assessment - Soil - Stony Creek_Monitoring.mxd)

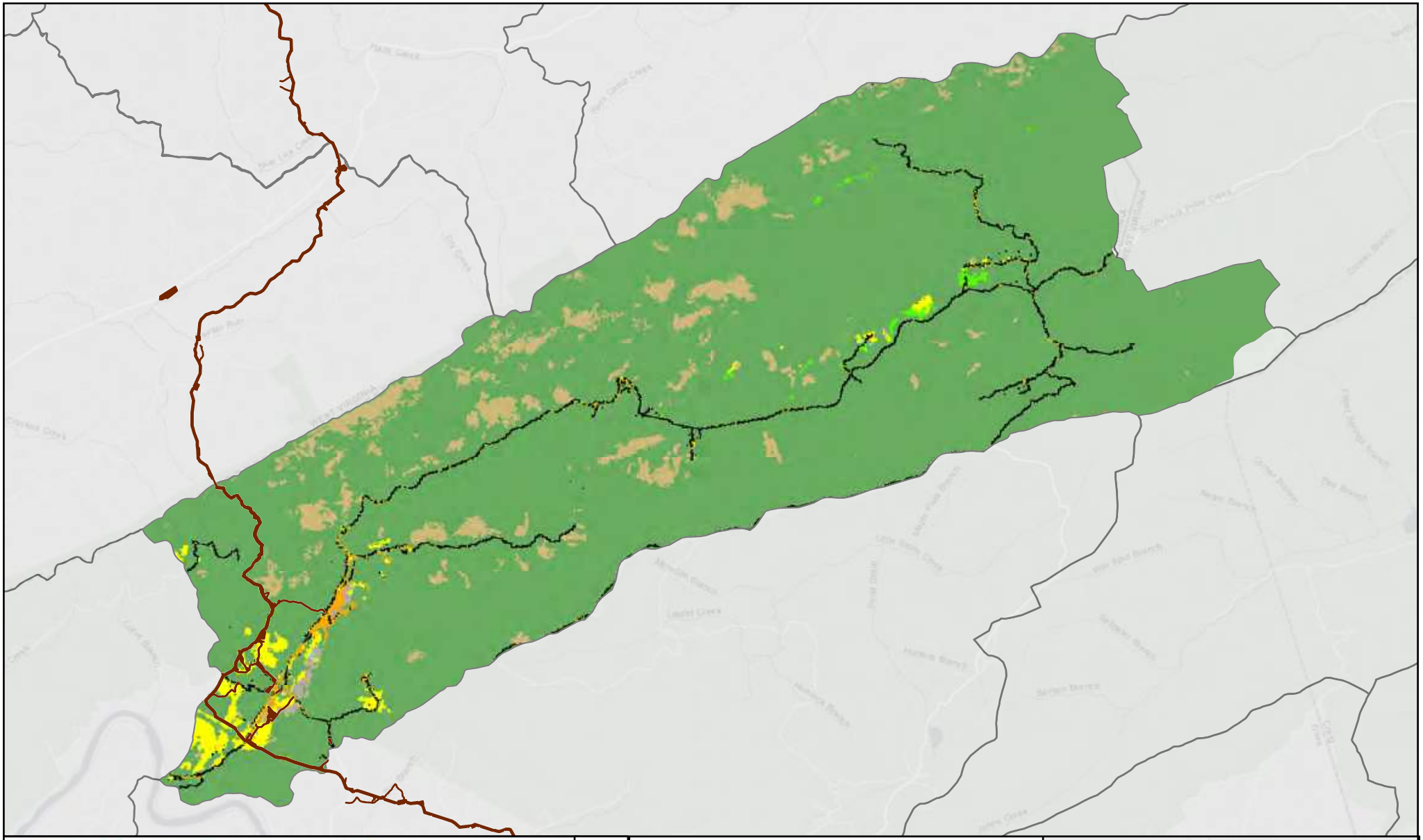
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
Stony Creek (05050002030S)
Middle/Upper New HUC 8 Watershed
Monroe County, West Virginia &
Giles and Jefferson National Forest, Virginia
For Informational Purposes Only

FIGURE 217



Mountain Valley PIPELINE

Figure: 218

Land Use/Land Cover 2011
Stony Creek
050500020305 HUC12 Watershed

5/26/2022

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

N
W E
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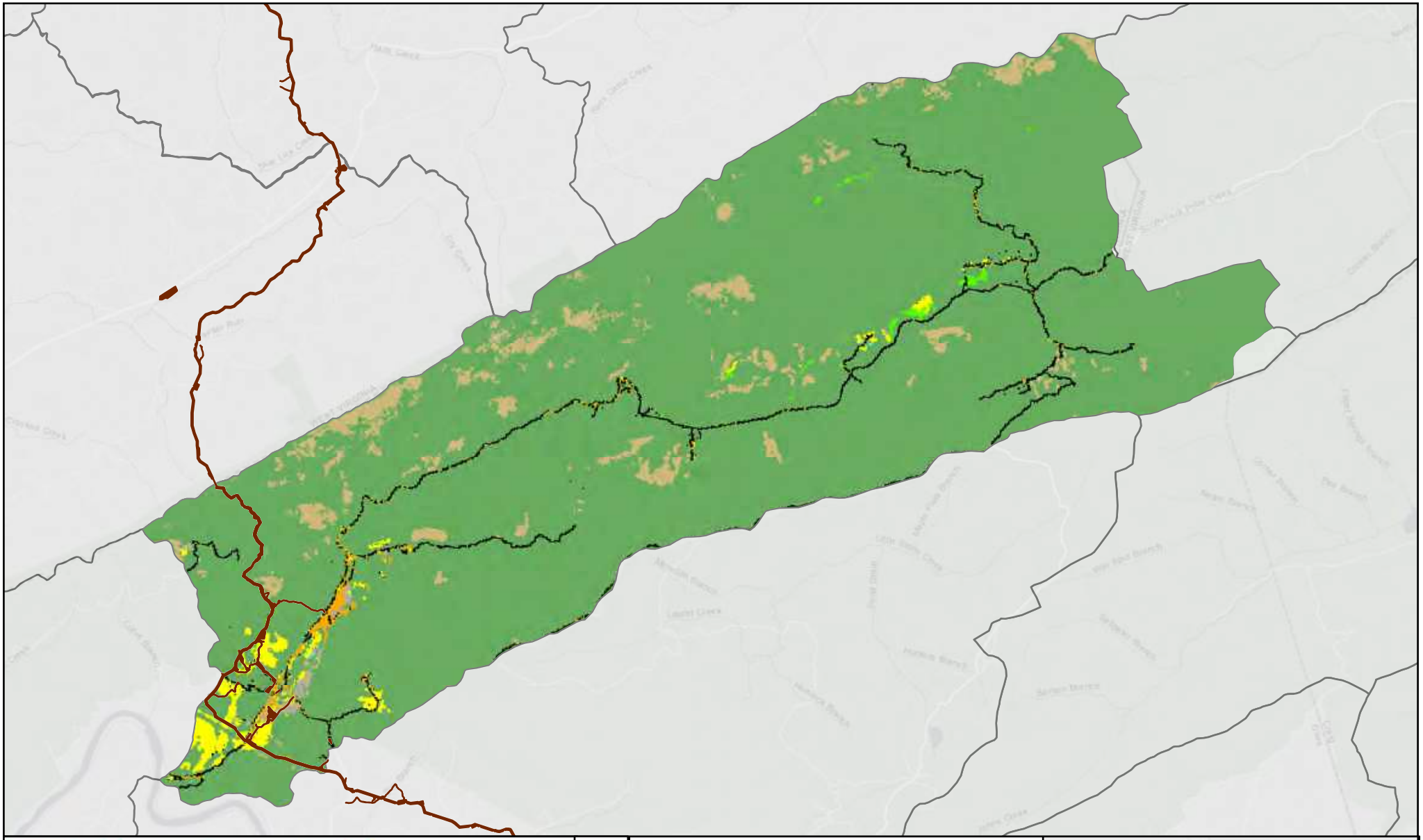
0 1.5 3 Miles

Scale: 1:100,000

Map Extent



Mountain Valley PIPELINE

Figure: 219

Land Use/Land Cover 2016
Stony Creek
050500020305 HUC12 Watershed

5/26/2022

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

N
W E
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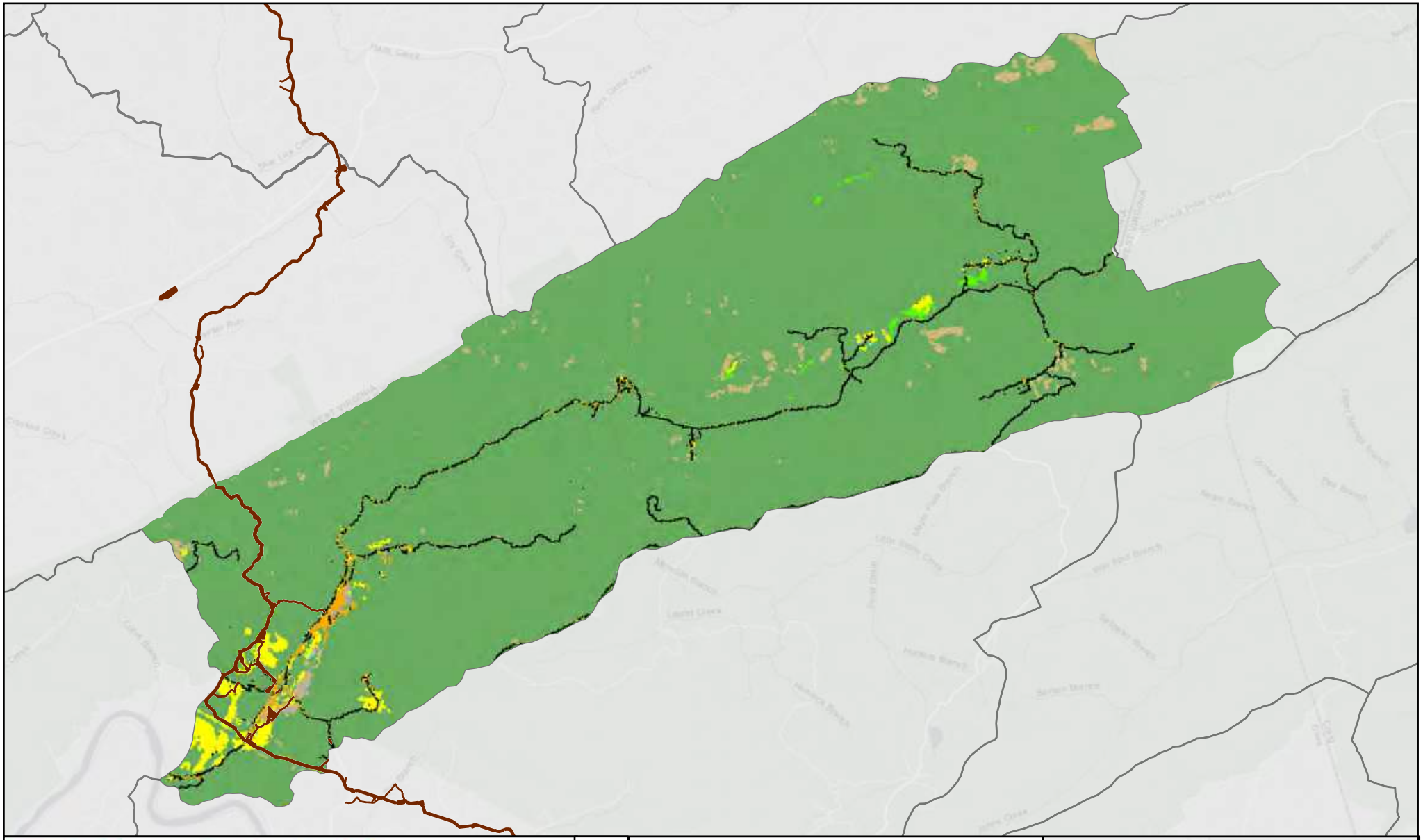
Miles
0 1.5 3

Scale: 1:100,000

Map Extent



Mountain Valley PIPELINE

Figure: 219a

Land Use/Land Cover 2019
Stony Creek
050500020305 HUC12 Watershed

5/25/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2019 Land Use Land Cover

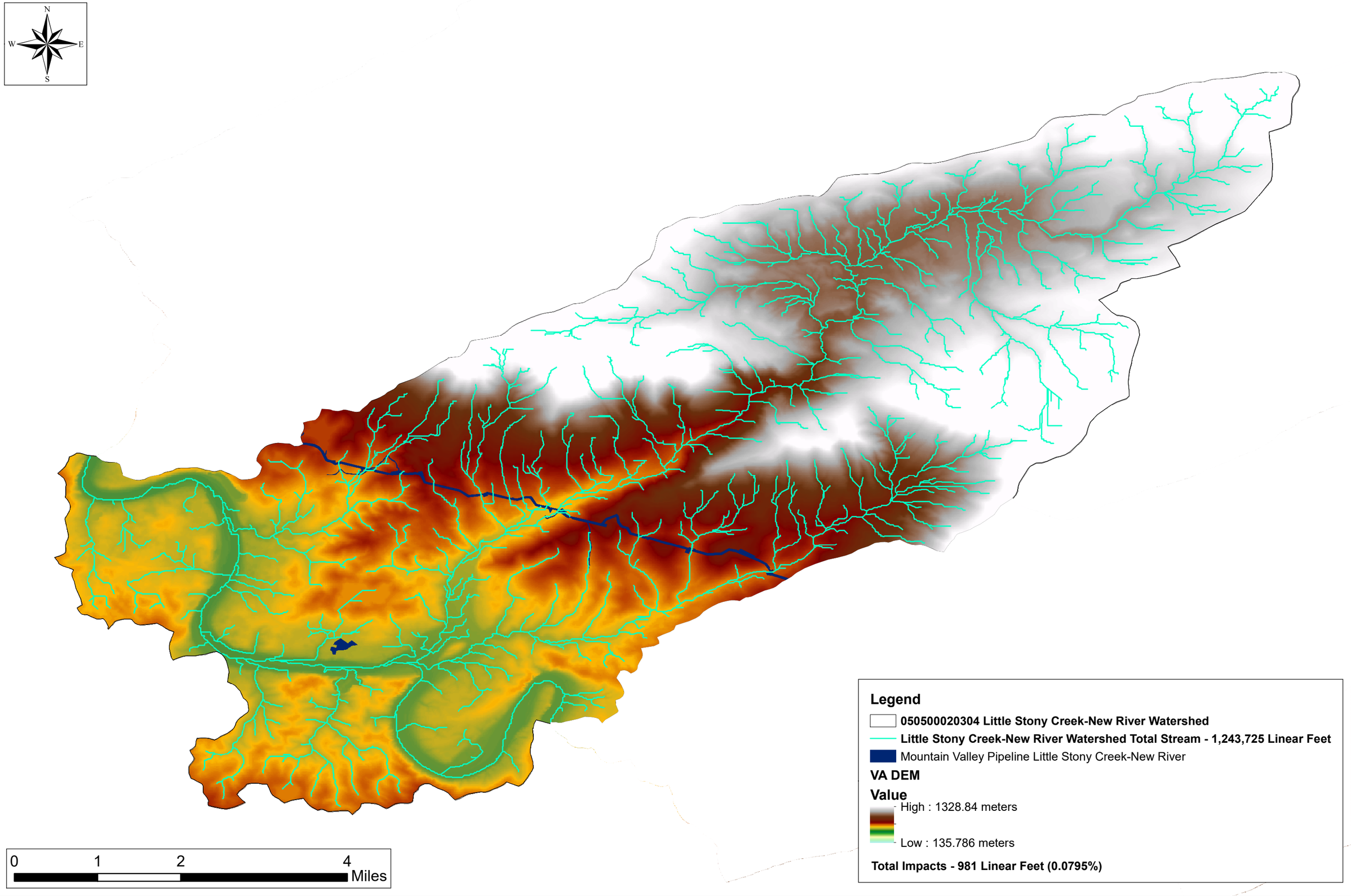
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

Miles
0 1.5 3

Scale: 1:100,000

Map Extent



MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: 1" = 1 Mile
DATE: SEPT 2021
PN: **0101-17-0451.016**

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

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Cumulative Impact Assessment Report - Hydrology Impacts and Total Linear Footage Assessment Little Stoney Creek-New River Watershed (050500020304) Middle/Upper New HUC 8 Watershed, Virginia.mxd

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

POTESTA

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

Cumulative Impact Assessment Report - Hydrology Impacts and Total Linear Footage Assessment Little Stoney Creek-New River Watershed (050500020304) Middle/Upper New HUC 8 Watershed, Virginia

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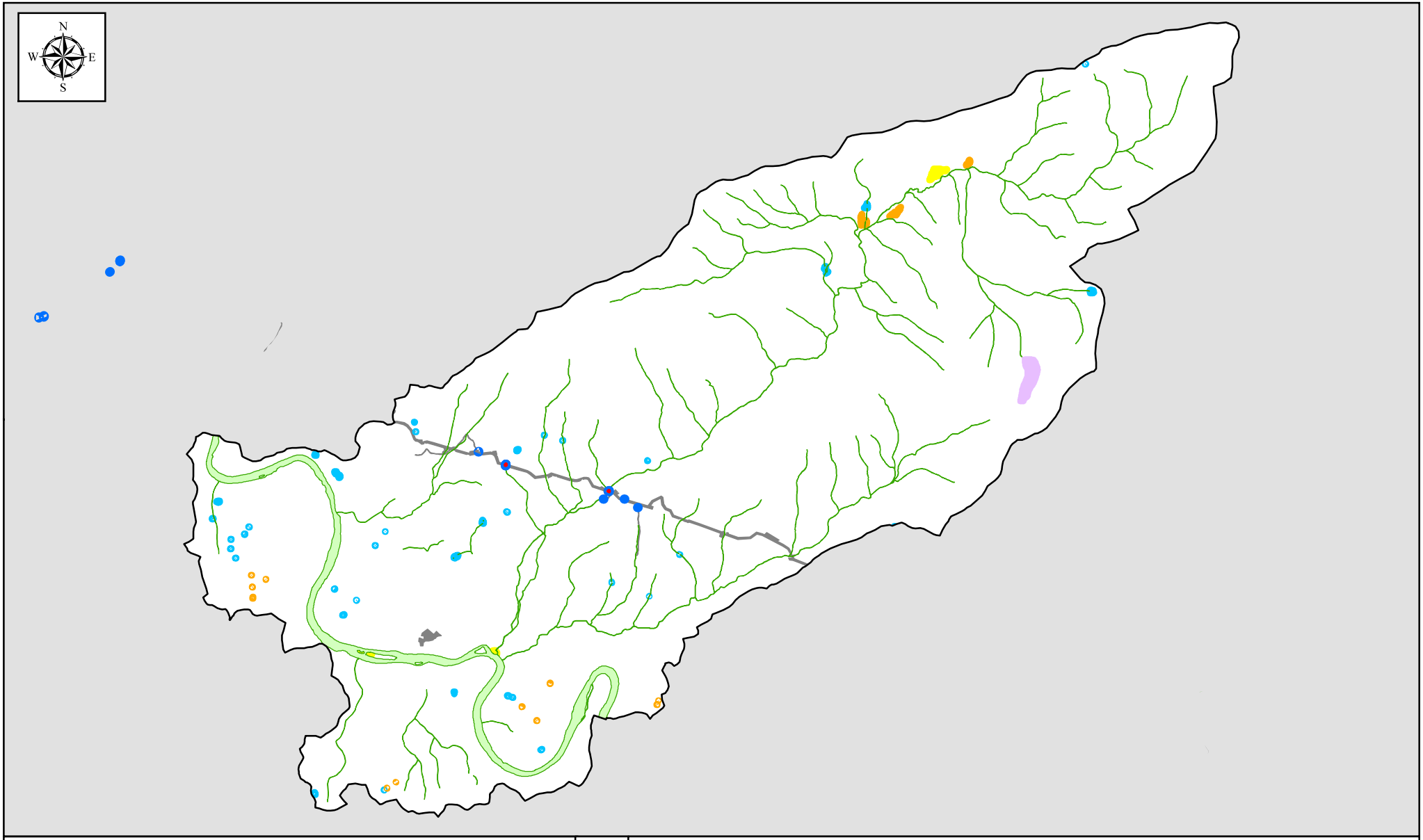
FIGURE 220



Mountain Valley PIPELINE

Little Stony Creek-New River

Figure 221

1:95,000

1/6/2022

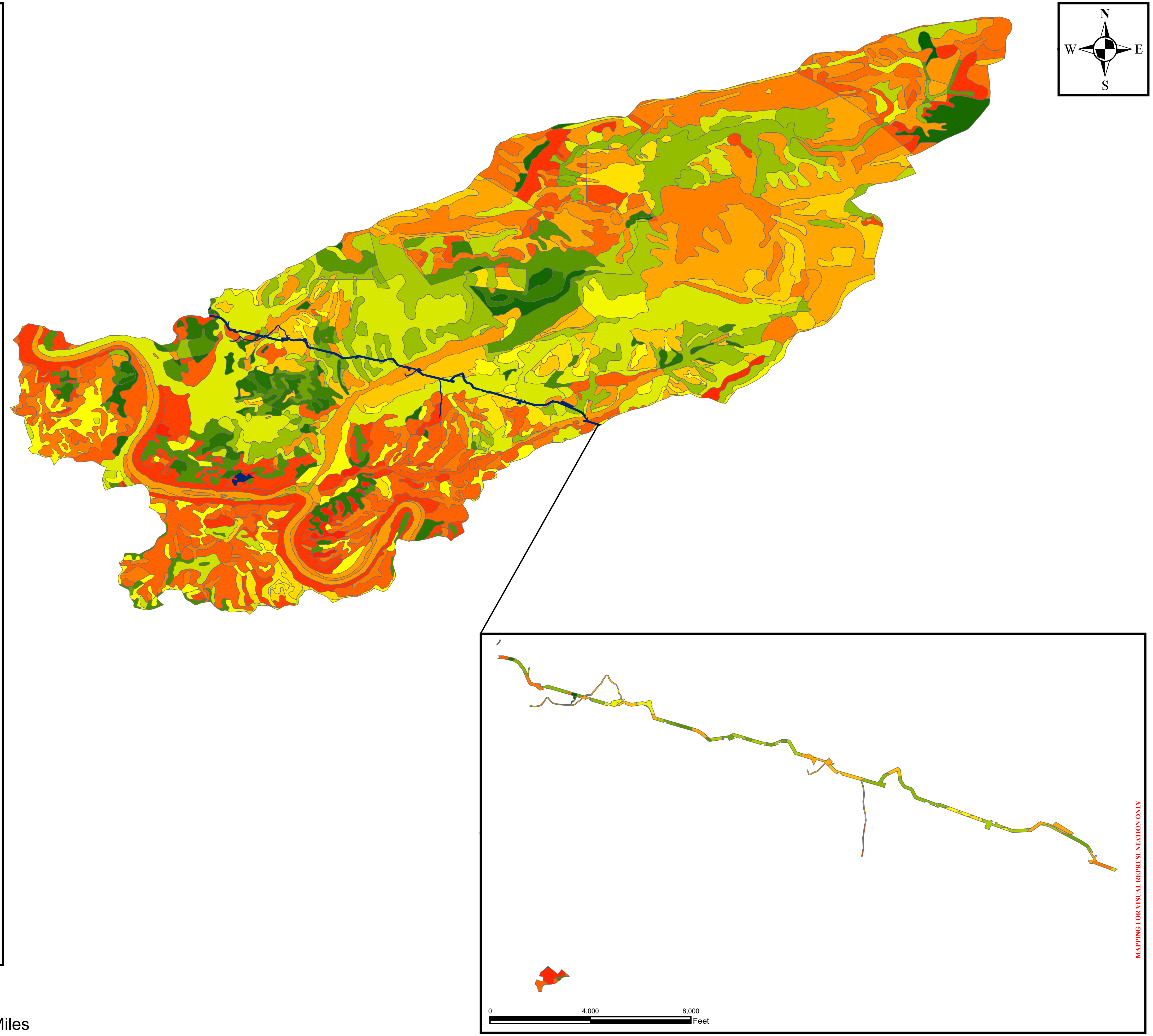
LEGEND

- Wetland Impacts - 0.04 acres
- Little Stony Creek-New River Delineated Wetland Area - 0.09 acres

NWI Wetlands - 787.88 acres

- Freshwater Emergent Wetland - 7.32 acres
- Freshwater Forested/Shrub Wetland - 9.96 acres
- Freshwater Pond - 11.77 acres
- Lake - 47.63 acres
- Riverine - 711.2 acres
- Mountain Valley Pipeline
- 050500020304_Little Stony Creek-New River

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



Legend

Mountain Valley Pipeline Little Stony Creek-New River

Little Stony Creek-New River

- 1: Atkins loam, 0 to 3 percent slopes, frequently flooded
- 10B: Cotaco loam, 2 to 7 percent
- 110: Haplosaprists, high elevation bog, 0 to 3 percent slopes
- 11D: Faywood silt loam, 10 to 30 percent slopes
- 11F: Faywood silt loam, 30 to 65 percent slopes
- 12: Fluvaquents, nearly level
- 138C: Oriskany very cobbly sandy loam, 3 to 15 percent slopes, very stony
- 138D: Oriskany very cobbly sandy loam, 15 to 35 percent slopes, very stony
- 138DS: Oriskany very cobbly sandy loam, 15 to 35 percent slopes, rubbly
- 138ES: Oriskany very cobbly sandy loam, 35 to 60 percent slopes, rubbly
- 13B: Frederick silt loam, 2 to 8 percent slopes
- 13C: Frederick silt loam, 8 to 15 percent slopes
- 13D: Frederick silt loam, 15 to 25 percent slopes
- 13E: Frederick silt loam, 25 to 35 percent slopes
- 14B: Frederick gravelly silt loam, 2 to 7 percent slopes
- 14C: Frederick gravelly silt loam, 7 to 15 percent slopes
- 14D: Frederick gravelly silt loam, 15 to 25 percent slopes
- 14E: Frederick gravelly silt loam, 25 to 35 percent slopes
- 15C: Frederick very stony silt loam, 7 to 15 percent slopes
- 15D: Frederick very stony silt loam, 15 to 25 percent slopes
- 15E: Frederick very stony silt loam, 25 to 35 percent slopes
- 16D: Frederick-Rock outcrop complex, 10 to 30 percent slopes
- 16F: Frederick-Rock outcrop complex, 30 to 60 percent slopes
- 17D: Gilpin silt loam, 15 to 30 percent slopes
- 17DS: Sherando very cobbly sandy loam, 15 to 35 percent slopes, rubbly
- 17F: Gilpin silt loam, 30 to 65
- 18D: Gilpin very stony silt loam,
- 18F: Gilpin very stony silt loam, 30 to 65 percent slopes
- 1B: Allegheny loam, 2 to 7 percent slopes
- 2: Philo fine sandy loam, 0 to 3 percent slopes, occasionally flooded
- 22D: Jefferson variant and Drall soils, very stony, 10 to 30 percent slopes
- 22F: Jefferson variant and Drall soils, very stony, 30 to 65 percent slopes
- 24C: Lily gravelly sandy loam, 0 to 15 percent slopes
- 26C: Jefferson loam, 3 to 15 percent slopes
- 26E: Jefferson loam, 35 to 60 percent slopes
- 27C: Lily-Bailegap complex, very stony, 2 to 15 percent slopes
- 27E: Lily-Bailegap complex, very stony, 15 to 35 percent slopes
- 27F: Lily-Bailegap complex, very stony, 35 to 65 percent slopes
- 28E: Lily-Bailegap complex, extremely stony, 15 to 35 percent slopes
- 29B: Nolichucky loam, 2 to 7 percent slopes
- 29C: Nolichucky loam, 7 to 15 percent slopes
- 29D: Nolichucky loam, 15 to 25 percent slopes
- 3: Craigsville cobbly sandy loam, 0 to 5 percent slopes, frequently flooded
- 30C: Nolichucky very stony sandy loam, 7 to 15 percent slopes
- 30D: Nolichucky very stony sandy loam, 15 to 30 percent slopes - Giles; 30D: Laidig cobbly fine sandy loam, 15 to 35 percent slopes - Jefferson National Forest
- 30DS: Laidig cobbly fine sandy loam, 15 to 35 percent slopes, extremely stony
- 30F: Nolichucky very stony sandy loam, 30 to 65 percent slopes
- 31C: Poplimento silt loam, 7 to 15 percent slopes
- 31D: Poplimento silt loam, 15 to 25 percent slopes
- 31E: Poplimento silt loam, 25 to 35 percent slopes
- 33D: Sequoia silt loam, 10 to 30 percent slopes
- 33F: Sequoia silt loam, 30 to 65 percent slopes
- 35B: Timberville variant loam, 2 to 7 percent slopes
- 35C: Timberville variant, loam, 7 to 15 percent slopes
- 3F: Berks very stony silt loam, 30 to 65 percent slopes
- 41E: Berks-Weikert complex, 35 to 60 percent slopes
- 41F: Berks-Weikert complex, 60 to 80 percent slopes
- 45F: Dekalb, shallow-Rock outcrop complex, 60 to 80 percent slopes, extremely stony
- 46C: Dekalb cobbly sandy loam, 3 to 15 percent slopes, very stony
- 46D: Dekalb cobbly sandy loam, 15 to 35 percent slopes, very stony
- 46E: Dekalb cobbly sandy loam, 35 to 60 percent slopes, very stony
- 48C: Calvin very channery loam, 3 to 15 percent slopes, extremely stony
- 48D: Calvin very channery loam, 15 to 35 percent slopes, extremely stony
- 48ER: Calvin-Rock outcrop complex, 35 to 60 percent slopes, extremely stony
- 4B: Braddock sandy loam, 2 to 7 percent slopes
- 4C: Braddock sandy loam, 7 to 15 percent slopes
- 4D: Braddock sandy loam, 15 to 25 percent slopes
- 4E: Braddock sandy loam, 25 to 35 percent slopes
- 57C: Clymer sandy loam, 3 to 15 percent slopes
- 57D: Clymer sandy loam, 15 to 35 percent slopes
- 59C: Gilpin channery silt loam, 3 to 15 percent slopes
- 59D: Gilpin channery silt loam, 15 to 35 percent slopes
- 59E: Gilpin channery silt loam, 35 to 60 percent slopes
- 5C: Carbo silty clay loam, very rocky, 2 to 15 percent slopes
- 5D: Carbo silty clay loam, very rocky, 15 to 45 percent slopes
- 64D: Brushy extremely gravelly loam, 15 to 35 percent slopes
- 64E: Brushy extremely gravelly loam, 35 to 60 percent slopes
- 66C: Bailegap sandy loam, 3 to 15 percent slopes
- 66D: Bailegap sandy loam, 15 to 35 percent slopes
- 6F: Carbo-Rock outcrop complex, 25 to 65 percent slopes
- 7: Chagrin silt loam
- 75C: Lily gravelly sandy loam, 3 to 15 percent slopes
- 75D: Lily gravelly sandy loam, 15 to 35 percent slopes
- 75DR: Lily-Rock outcrop complex, 15 to 35 percent slopes
- 75E: Lily gravelly sandy loam, 35 to 60 percent slopes
- 8: Chagrin variant, loamy sand
- 9: Chavies variant, sandy loam
- 96C: Dekalb-Dekalb, shallow complex, 3 to 15 percent slopes, very stony
- 96D: Dekalb-Dekalb, shallow complex, 15 to 35 percent slopes, very stony
- 96E: Dekalb-Dekalb, shallow complex, 35 to 60 percent slopes, very stony
- 96ES: Dekalb-Dekalb, shallow complex, 35 to 60 percent slopes, rubbly
- 96F: Dekalb, shallow-Dekalb complex, 60 to 80 percent slopes, very stony
- W: Water

0 1.5 3 6 Miles

SCALE: See Mapping | DRAWN: KBW
DATE: AUGUST 2021 | CHECKED: JLY
PN: 0101-17-0451.016 | APPROVED: JLY

I:\Projects\2017\17_0451_MVP_EnviCon_Monitoring\Maps\2021\CIA Soils\Figure 222 - Little Stony Creek New River Soil.mxd

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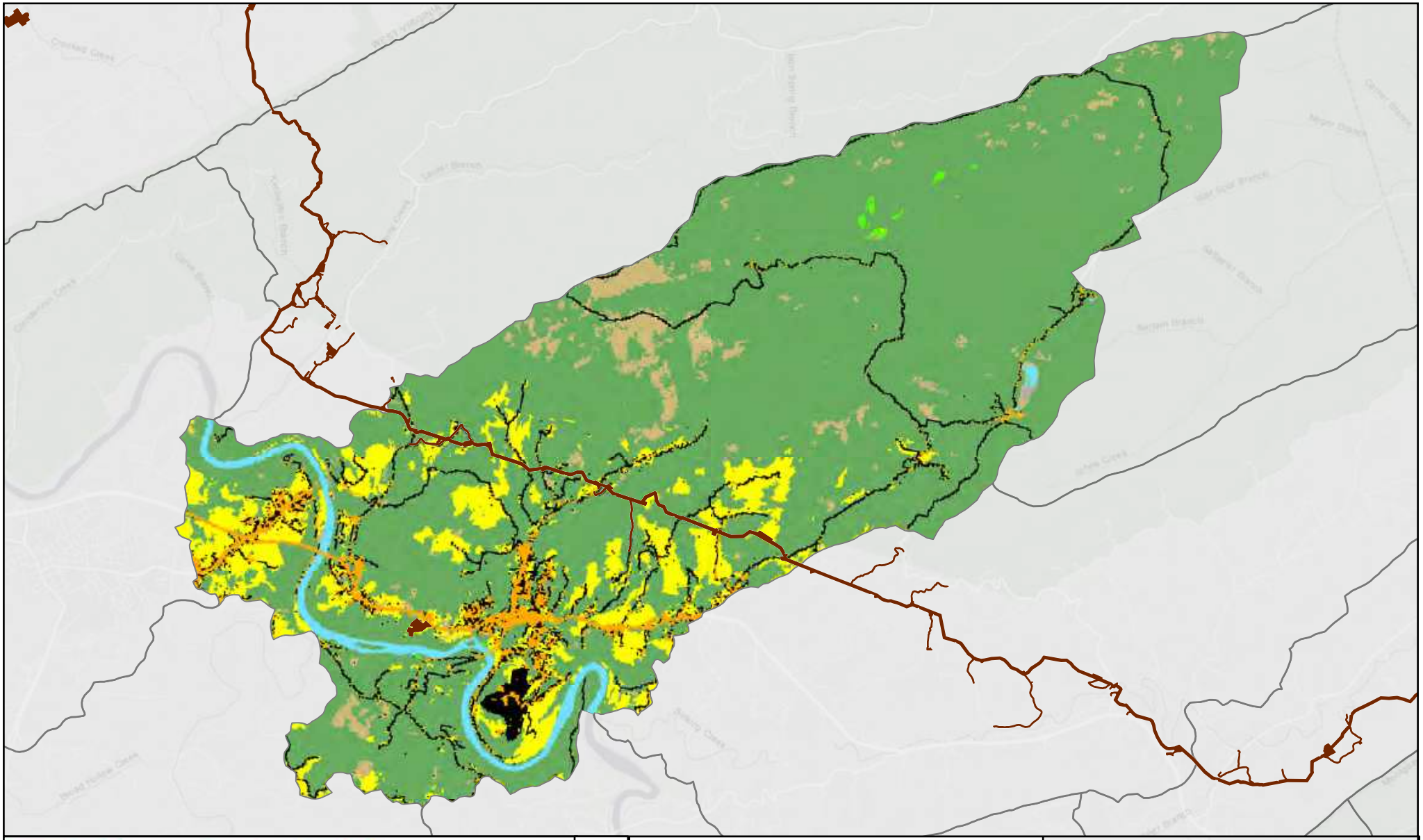
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304)-343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
Little Stony Creek-New River(050500020304)
Middle/Upper New HUC 8 Watershed
Jefferson National Forest &
Giles County, Virginia
For Informational Purposes Only

FIGURE 222



Mountain Valley PIPELINE

Figure: 223

Land Use/Land Cover 2011
Little Stony Creek-New River
050500020304 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2011 Land Use Land Cover

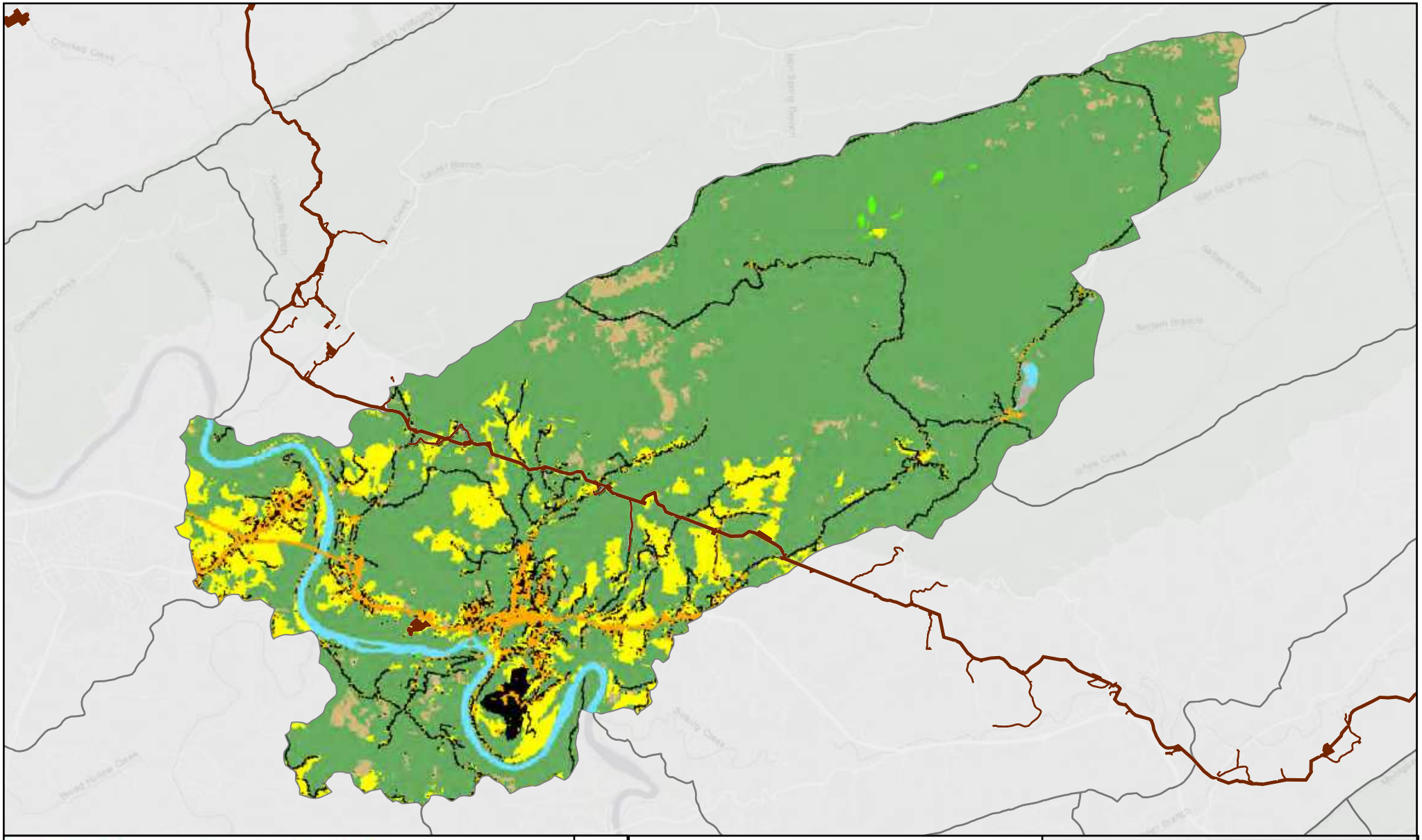
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 1 2 Miles

Scale: 1:95,000

Map Extent



Mountain Valley PIPELINE

Figure: 224

Land Use/Land Cover 2016
Little Stony Creek-New River
050500020304 HUC12 Watershed

5/26/2022

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

N
W E
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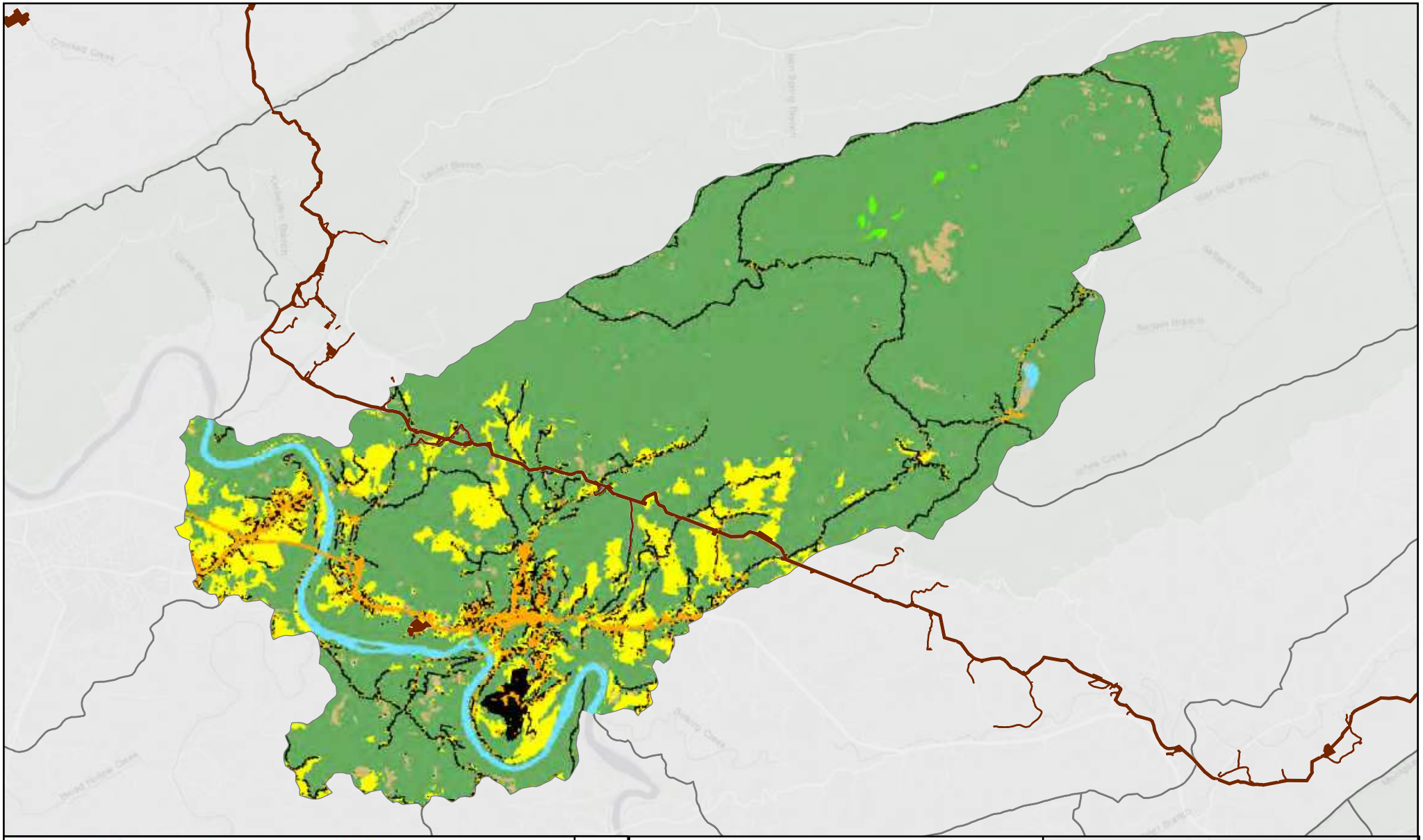
0 1 2 Miles

Scale: 1:95,000

Map Extent



Mountain Valley PIPELINE

Figure: 224a

Land Use/Land Cover 2019
Little Stony Creek-New River
050500020304 HUC12 Watershed

5/25/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2019 Land Use Land Cover

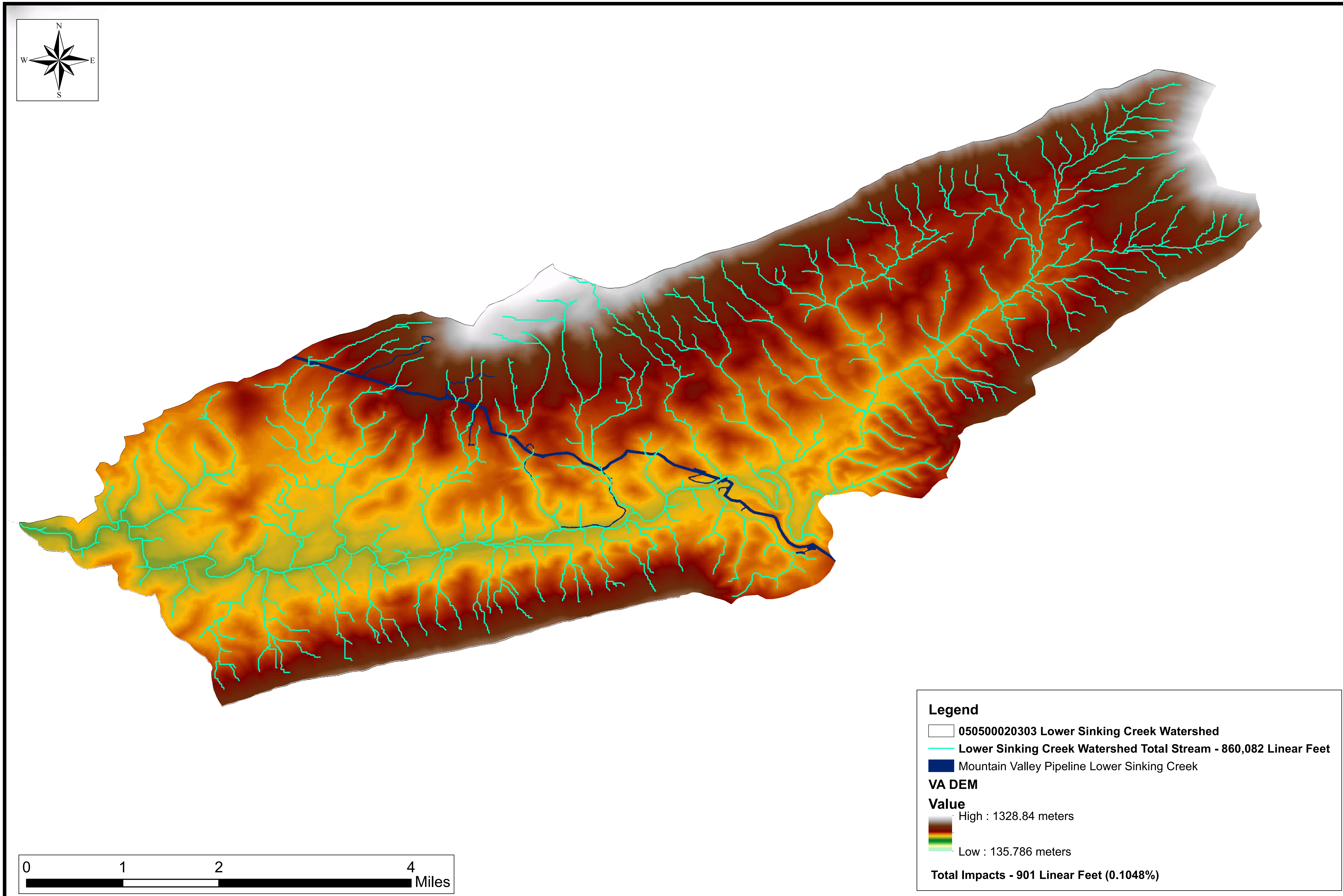
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 1 2 Miles

Scale: 1:95,000

Map Extent



MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: 1" = 1 Mile | DRAWN: KBW
DATE: SEPT 2021 | CHECKED: JLY
PN: 0101-17-0451.016 | APPROVED: JLY

I:\Projects\2017\17_0451_MVP_EnviCon_Monitoring\Maps\2021\CIA Soils\Figure 225 - Lower_Sinking_Creek_Watershed.mxd

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

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

Cumulative Impact Assessment Report - Hydrology Impacts and Total Linear Footage Assessment Lower Sinking Creek Watershed (050500020303) Middle/Upper New HUC 8 Watershed, Virginia

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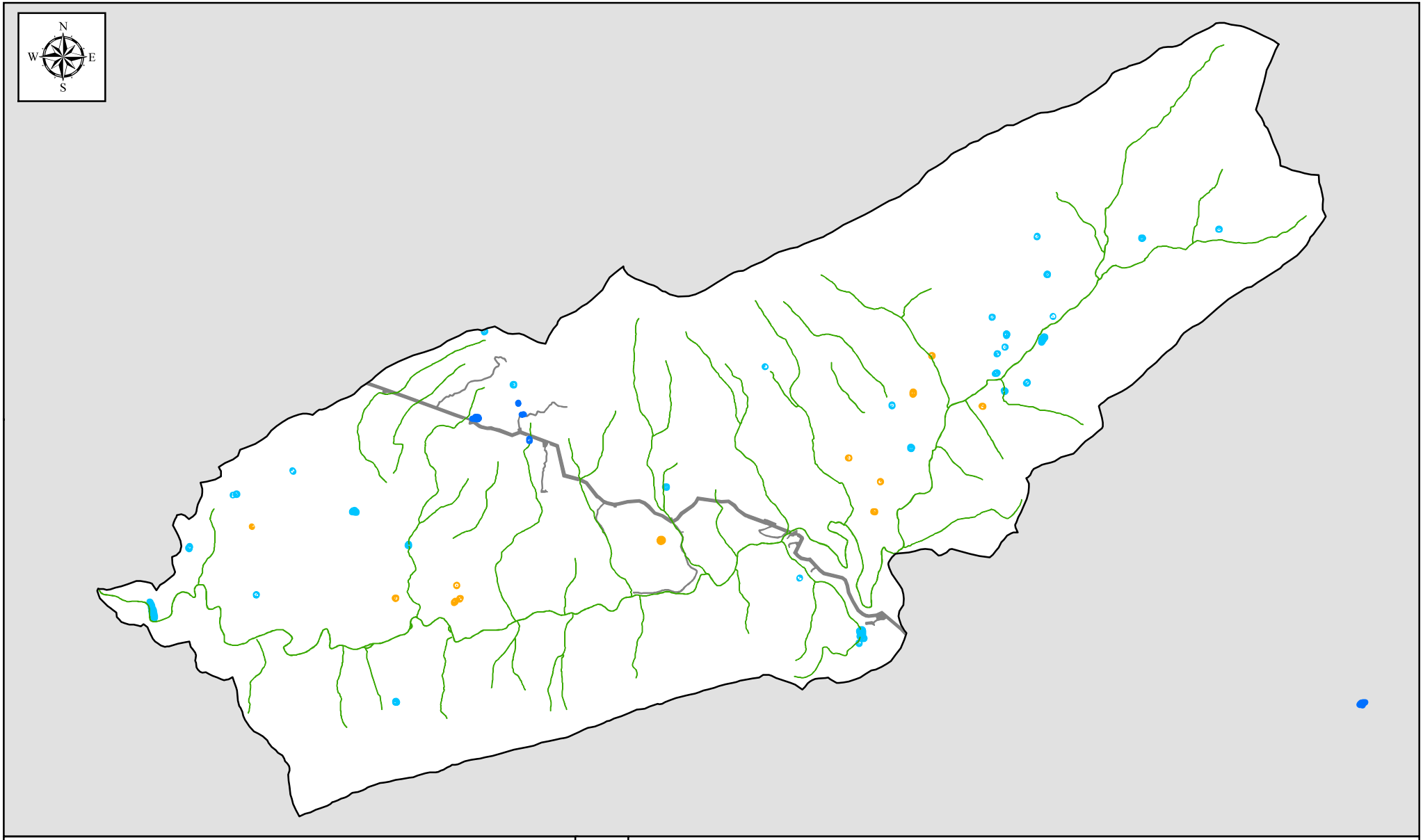
FIGURE 225



Mountain Valley PIPELINE

Lower Sinking Creek

Figure 226

1:71,000

1/10/2022

LEGEND

- Wetland Impacts - 0 acres
- Lower Sinking Creek Delineated Wetland Area - 0.53 acres

NWI Wetlands - 160.15 acres

- Freshwater Emergent Wetland - 1.6 acres
- Freshwater Pond - 7.31 acres
- Riverine - 151.25 acres
- Mountain Valley Pipeline
- 0050500020303_Lower Sinking Creek

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

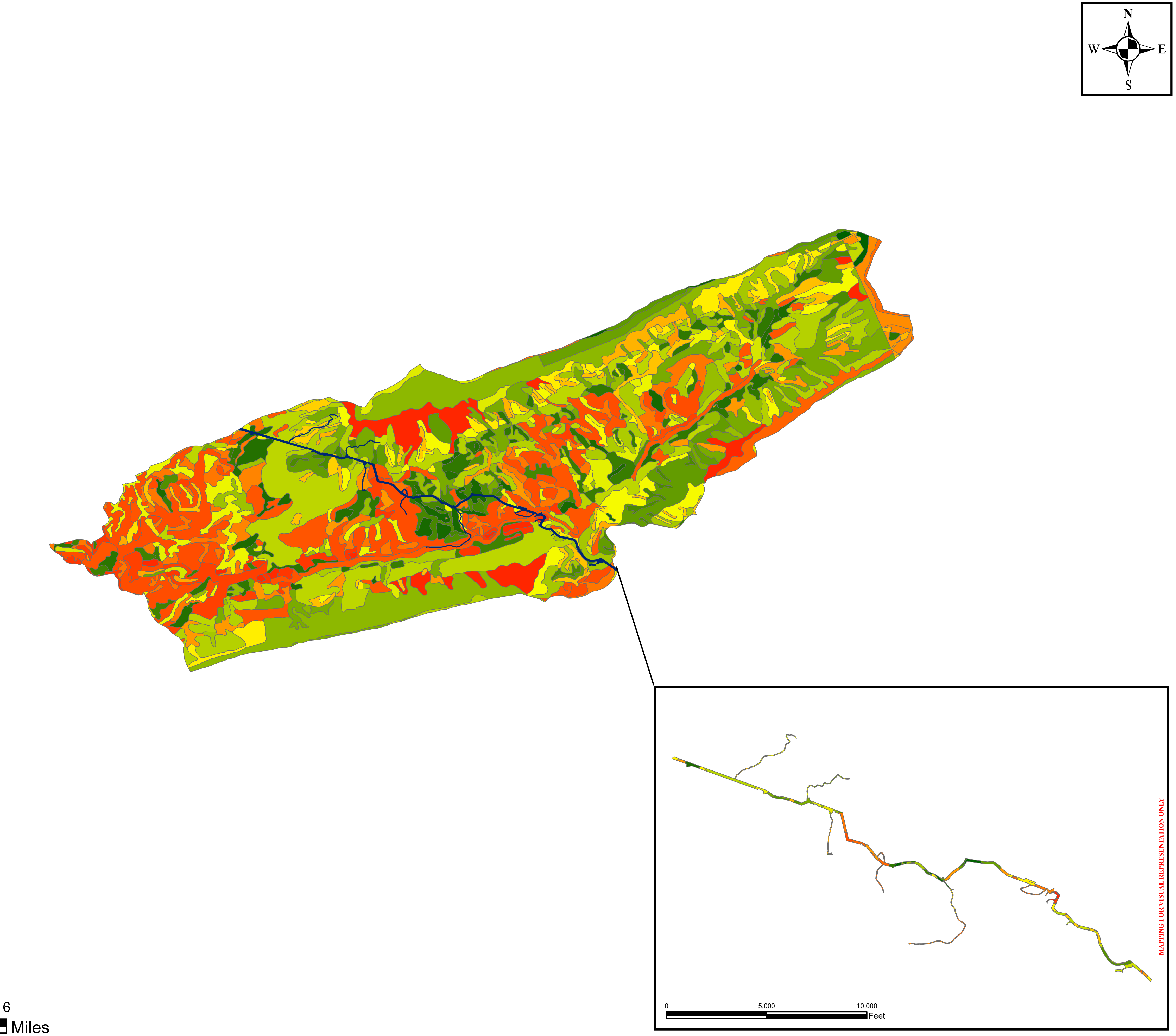
Legend

Mountain Valley Pipeline Lower Sinking Creek

Lower Sinking Creek Soil

- 11D: Faywood silt loam, 10 to 30 percent slopes
- 11F: Faywood silt loam, 30 to 65 percent slopes
- 12: Fluvaquents, nearly level
- 138D: Oriskany very cobbly sandy loam, 15 to 35 percent slopes, very stony
- 138ES: Oriskany very cobbly sandy loam, 35 to 60 percent slopes, rubbly
- 13B: Frederick silt loam, 2 to 8 percent slopes
- 13C: Frederick silt loam, 8 to 15 percent slopes
- 13D: Frederick silt loam, 15 to 25 percent slopes
- 13E: Frederick silt loam, 25 to 35 percent slopes
- 14B: Frederick gravelly silt loam, 2 to 7 percent slopes
- 14C: Frederick gravelly silt loam, 7 to 15 percent slopes
- 14D: Frederick gravelly silt loam, 15 to 25 percent slopes
- 14E: Frederick gravelly silt loam, 25 to 35 percent slopes
- 15C: Frederick very stony silt loam, 7 to 15 percent slopes
- 15E: Dekalb channery sandy loam, 8 to 35 percent slopes, extremely stony - Craig; 15E: Frederick very stony silt loam, 25 to 35 percent slopes - Giles
- 15F: Dekalb channery sandy loam, 35 to 55 percent slopes, extremely stony
- 16D: Frederick-Rock outcrop complex, 10 to 30 percent slopes
- 16F: Frederick-Rock outcrop complex, 30 to 60 percent slopes
- 17C: Gilpin silt loam, 7 to 15 percent slopes
- 17D: Gilpin silt loam, 15 to 30 percent slopes
- 17F: Gilpin silt loam, 30 to 65 percent slopes
- 17F: Gilpin silt loam, 30 to 65 percent slopes
- 18F: Gilpin very stony silt loam, 30 to 65 percent slopes
- 1B: Allegheny loam, 2 to 7 percent slopes
- 1C: Allegheny loam, 7 to 15 percent slopes
- 22D: Jefferson variant and Drall soils, very stony, 10 to 30 percent slopes
- 22F: Jefferson variant and Drall soils, very stony, 30 to 65 percent slopes
- 23F: Lehew and Wallen soils, very stony, 35 to 65 percent slopes
- 27E: Oriskany gravelly fine sandy loam, 15 to 35 percent slopes, extremely stony
- 28E: Shelocta channery silt loam, 35 to 60 percent slopes
- 29B: Nolichucky loam, 2 to 7 percent slopes
- 29C: Nolichucky loam, 7 to 15 percent slopes
- 29D: Nolichucky loam, 15 to 25 percent slopes
- 2D: Berks channery silt loam, 10 to 30 percent slopes
- 2F: Berks channery silt loam, 30 to 65 percent slopes
- 30C: Nolichucky very stony sandy loam, 7 to 15 percent slopes
- 30D: Nolichucky very stony sandy loam, 15 to 30 percent slopes
- 30F: Nolichucky very stony sandy loam, 30 to 65 percent slopes
- 31C: Poplimento silt loam, 7 to 15 percent slopes
- 31D: Poplimento silt loam, 15 to 25 percent slopes
- 31E: Poplimento silt loam, 25 to 35 percent slopes
- 33D: Sequoia silt loam, 10 to 30 percent slopes
- 33F: Sequoia silt loam, 30 to 65 percent slopes
- 35B: Timberville variant loam, 2 to 7 percent slopes
- 35C: Timberville variant, loam, 7 to 15 percent slopes
- 3F: Berks very stony silt loam, 30 to 65 percent slopes
- 41E: Berks-Weikert complex, 35 to 60 percent slopes
- 46D: Dekalb cobbly sandy loam, 15 to 35 percent slopes, very stony
- 46E: Dekalb cobbly sandy loam, 35 to 60 percent slopes, very stony
- 46ER: Dekalb-Rock outcrop complex, 35 to 60 percent slopes, extremely stony
- 46ES: Dekalb cobbly sandy loam, 35 to 60 percent slopes, rubbly
- 48D: Calvin very channery loam, 15 to 35 percent slopes, extremely stony
- 48ER: Calvin-Rock outcrop complex, 35 to 60 percent slopes, extremely stony
- 4B: Braddock sandy loam, 2 to 7 percent slopes
- 4C: Braddock sandy loam, 7 to 15 percent slopes
- 4D: Braddock sandy loam, 15 to 25 percent slopes
- 4E: Bailegap fine sandy loam, 15 to 35 percent slopes, very stony - Craig; 4E: Braddock sandy loam, 25 to 35 percent slopes - Giles
- 59D: Gilpin channery silt loam, 15 to 35 percent slopes
- 59E: Gilpin channery silt loam, 35 to 60 percent slopes
- 5C: Carbo silty clay loam, very rocky, 2 to 15 percent slopes
- 5D: Carbo silty clay loam, very rocky, 15 to 45 percent slopes
- 66D: Bailegap sandy loam, 15 to 35 percent slopes
- 6F: Carbo-Rock outcrop complex, 25 to 65 percent slopes
- 7: Chagrin silt loam
- 7E: Berks-Weikert complex, 15 to 35 percent slopes
- 7G: Berks-Weikert complex, 35 to 70 percent slopes
- 8: Chagrin variant, loamy sand
- 9: Chavies variant, sandy loam
- W: Water

0 1.5 3 6 Miles



SCALE: See Mapping | DRAWN: KBW
DATE: AUGUST 2021 | CHECKED: JLY
PN: 0101-17-0451.016 | APPROVED: JLY

I:\Projects\2017\17_0451_MVP_EnviCon_Monitoring\Maps\2021\CIA Soils\Figure 227 - Lower Sinking Creek Soil.mxd

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

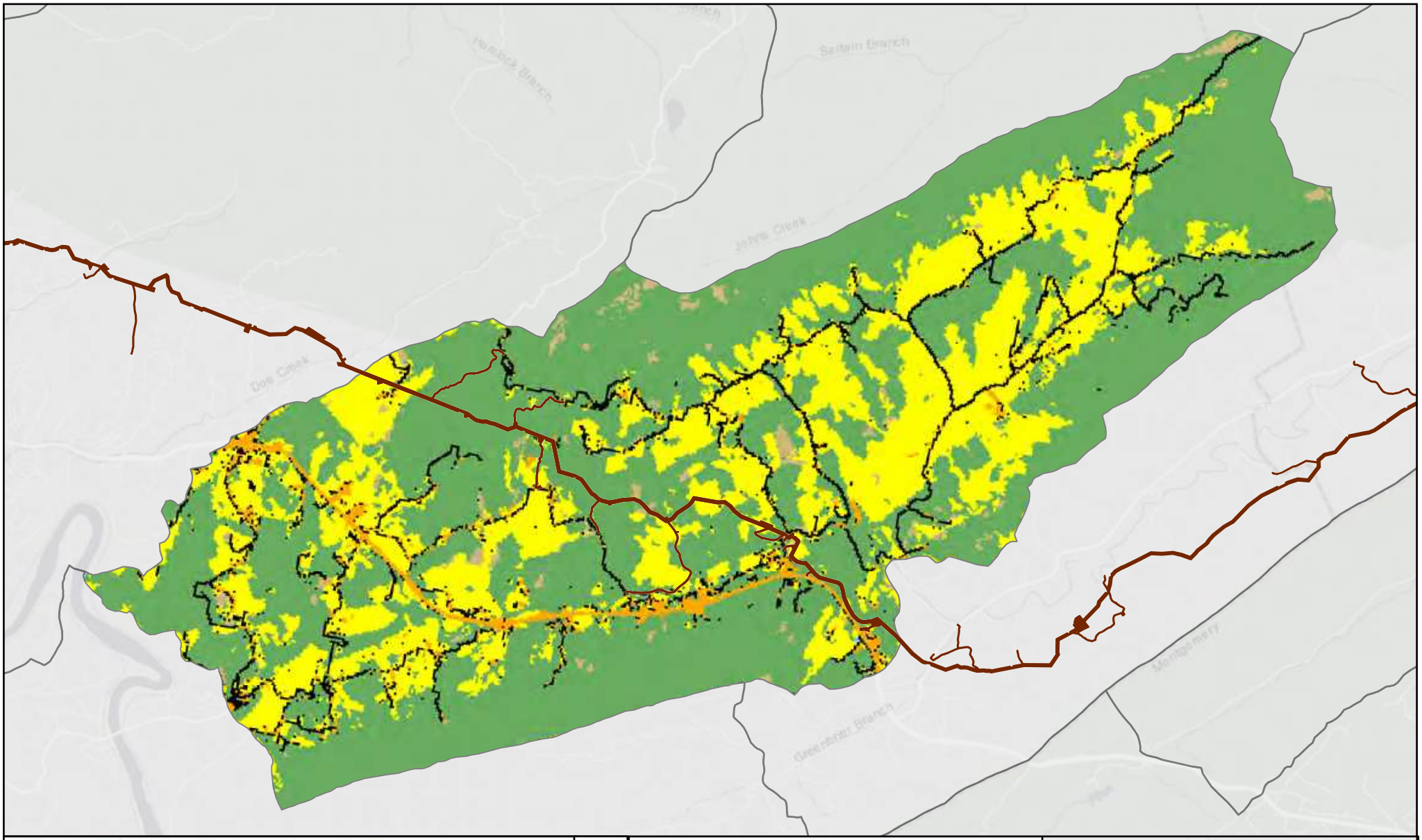
POTESTA

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

Cumulative Impact Assessment - Soil
Lower Sinking Creek - New River (0505000020303)
Middle/Upper New HUC 8 Watershed
Jefferson National Forest &
Craig and Giles Counties, Virginia

For Informational Purposes Only

FIGURE 227



Mountain Valley PIPELINE

Figure: 228

Land Use/Land Cover 2011
Lower Sinking Creek
050500020302 HUC12 Watershed

5/26/2022

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

N
W E
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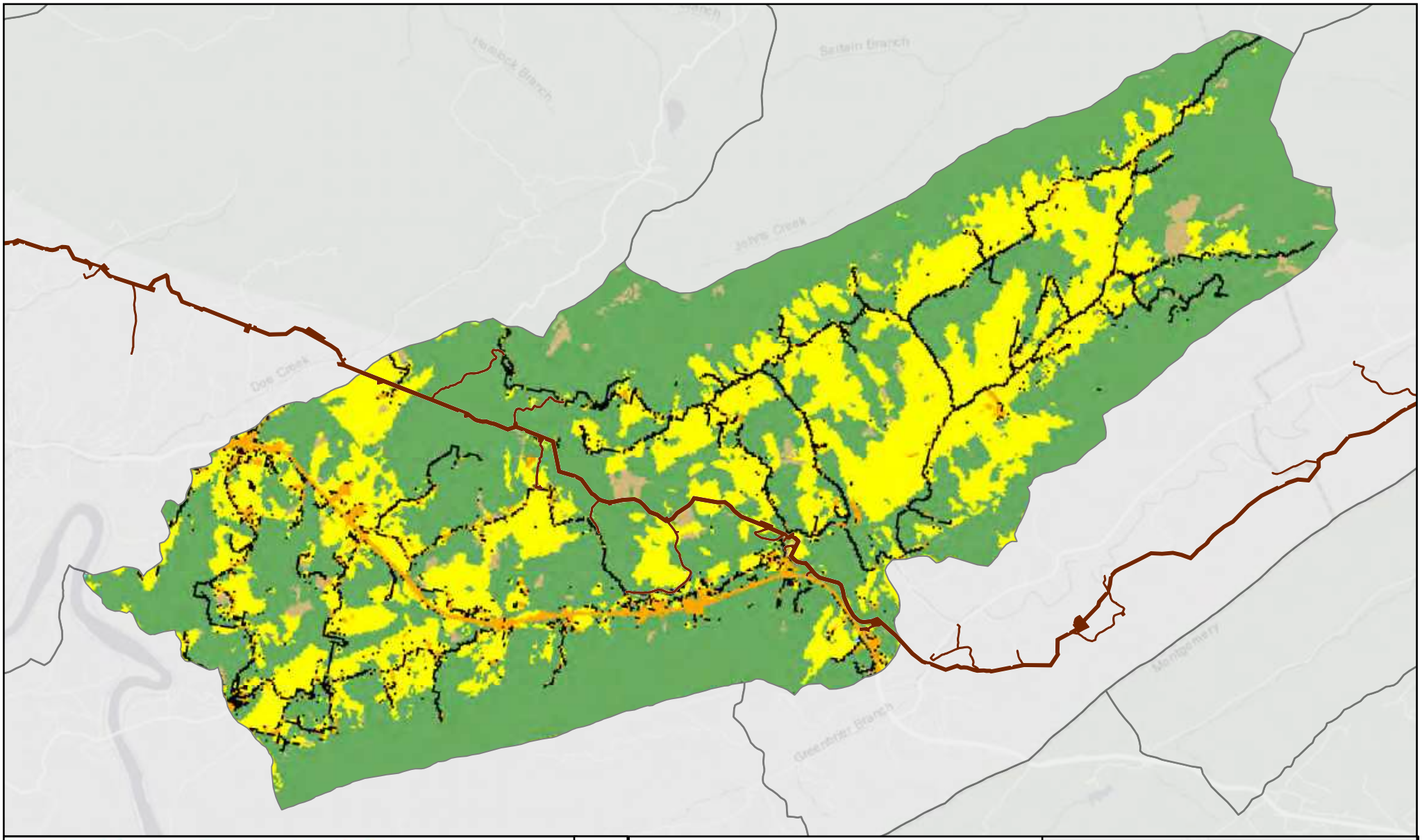
0 1 2 Miles

Scale: 1:70,000

Map Extent



Mountain Valley PIPELINE

Figure: 229

Land Use/Land Cover 2016
Lower Sinking Creek
050500020302 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2016 Land Use Land Cover

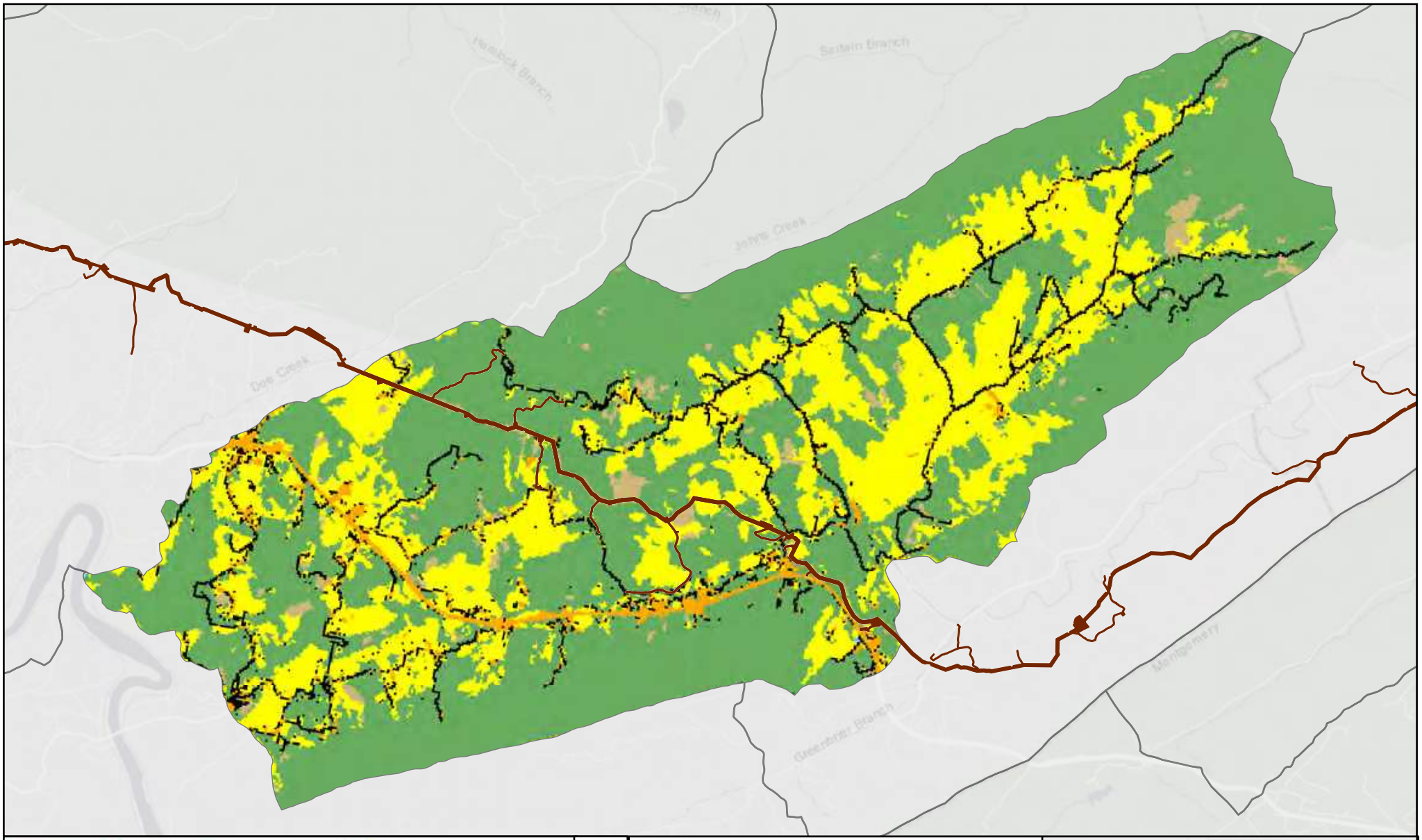
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N W E S

0 1 2 Miles

Scale: 1:70,000

Map Extent



Mountain Valley PIPELINE

Figure: 229a

Land Use/Land Cover 2019
Lower Sinking Creek
050500020302 HUC12 Watershed

5/25/2022

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

N
W E
S

0 1 2 Miles

Scale: 1:70,000

Map Extent

Legend

050500020302 Upper Sinking Creek Watershed

Upper Sinking Creek Watershed Total Stream - 1,509,862 Linear Feet

Mountain Valley Pipeline Upper Sinking Creek Soil

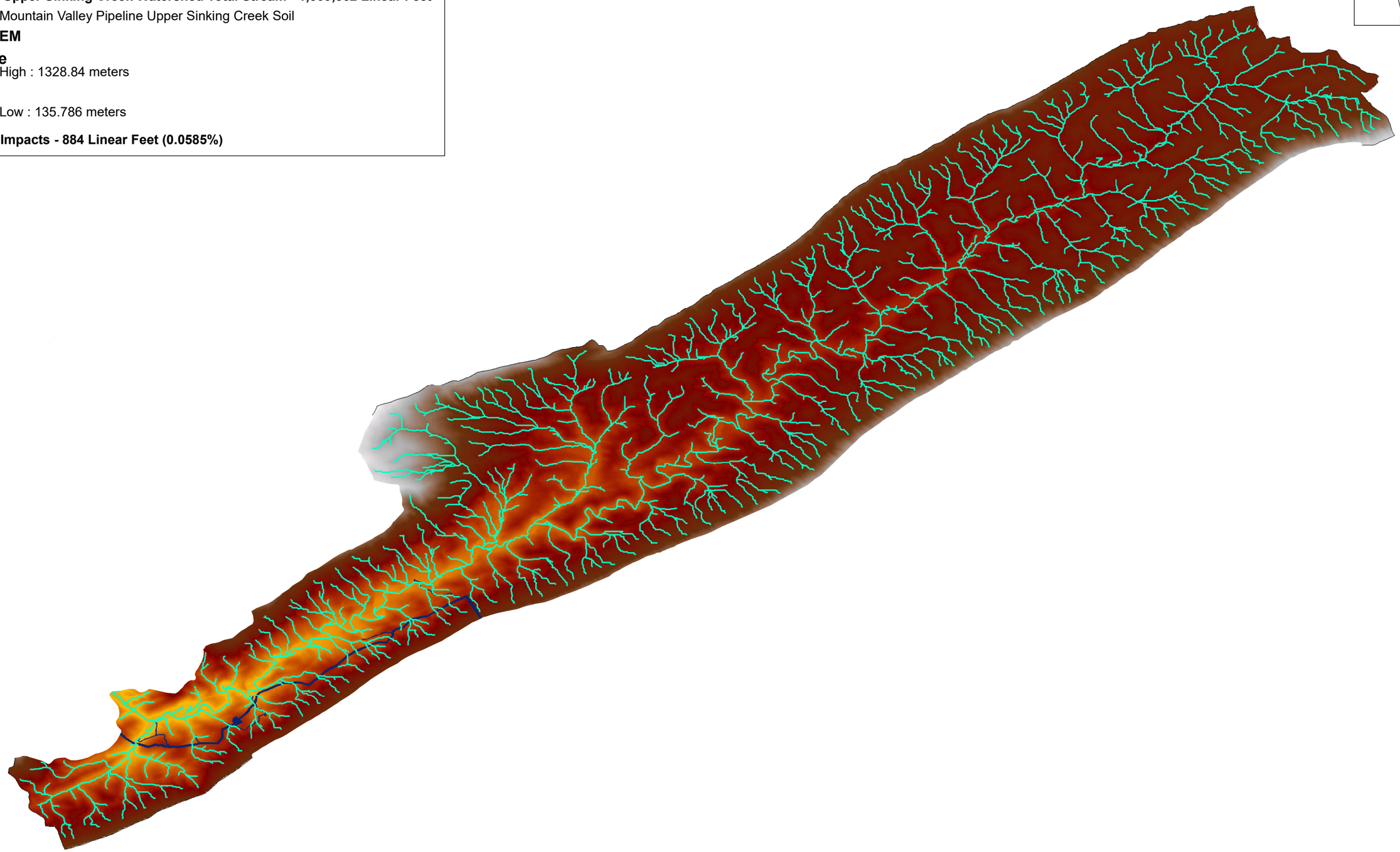
VA DEM

Value

High : 1328.84 meters

Low : 135.786 meters

Total Impacts - 884 Linear Feet (0.0585%)



0 1 2 4 Miles

MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: 1" = 1 Mile
DATE: SEPT 2021
PN: **0101-17-0451.016**

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

Projects/2017/17-0451_MVP_FontCon_Monitoring/Maps/2021/JA Soils/Figure 230 - Upper_Sinking_Creek_Watershed.mxd

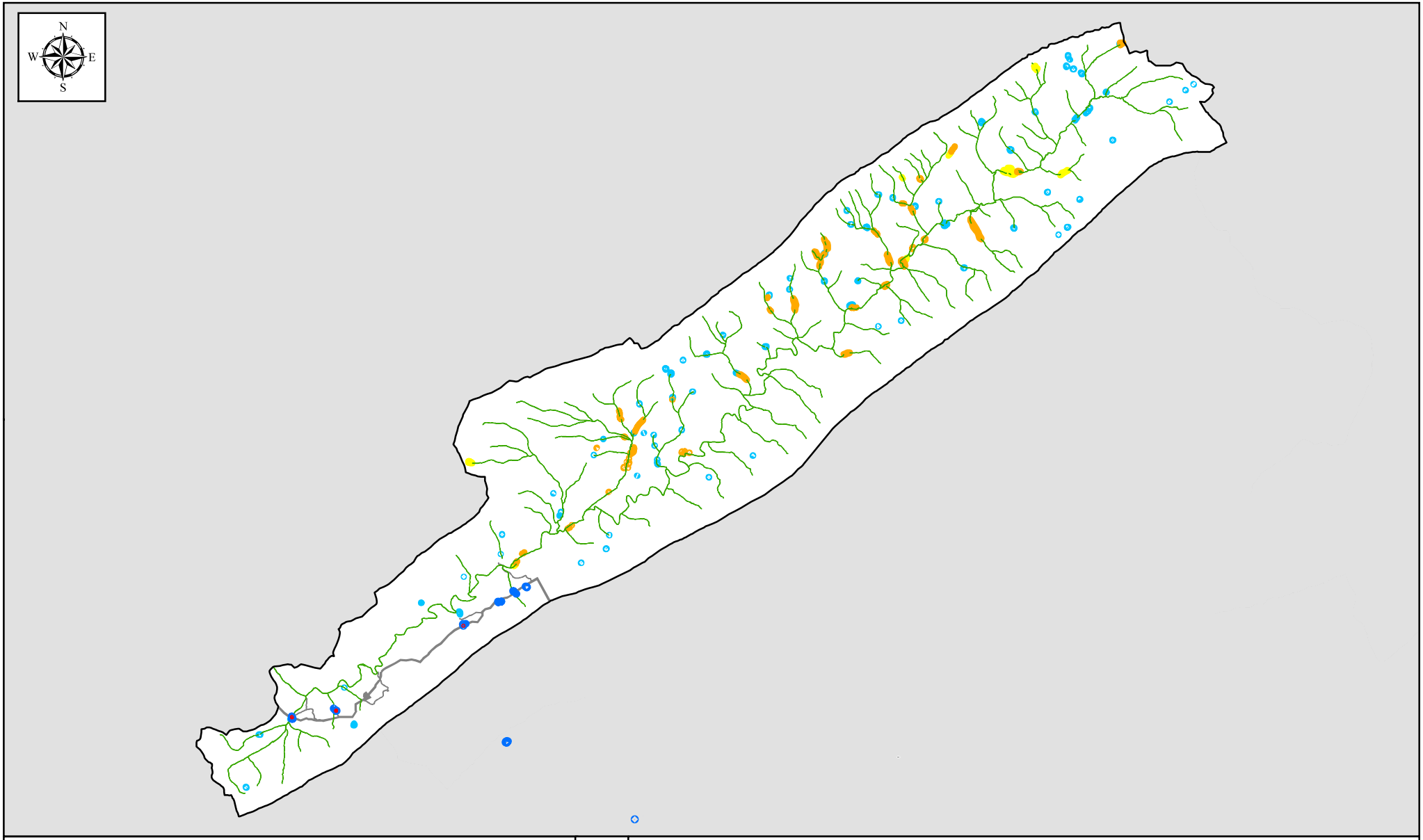
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment Report - Hydrology Impacts and Total Linear Footage Assessment
Upper Sinking Creek Watershed (050500020302)
Middle/Upper New HUC 8 Watershed, Virginia
For Informational Purposes Only

FIGURE 230



Mountain Valley PIPELINE

Upper Sinking Creek

Figure 231

1:140,000

1/10/2022

LEGEND

- Wetland Impacts - 0.05 acres
- Upper Sinking Creek Delineated Wetland Area - 0.36 acres

NWI Wetlands - 374.44 acres

- Freshwater Emergent Wetland - 35.13 acres
- Freshwater Forested/Shrub Wetland - 14.2 acres
- Freshwater Pond - 22.01 acres
- Riverine - 303.1 acres
- Mountain Valley Pipeline
- 050500020302_Upper Sinking Creek

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

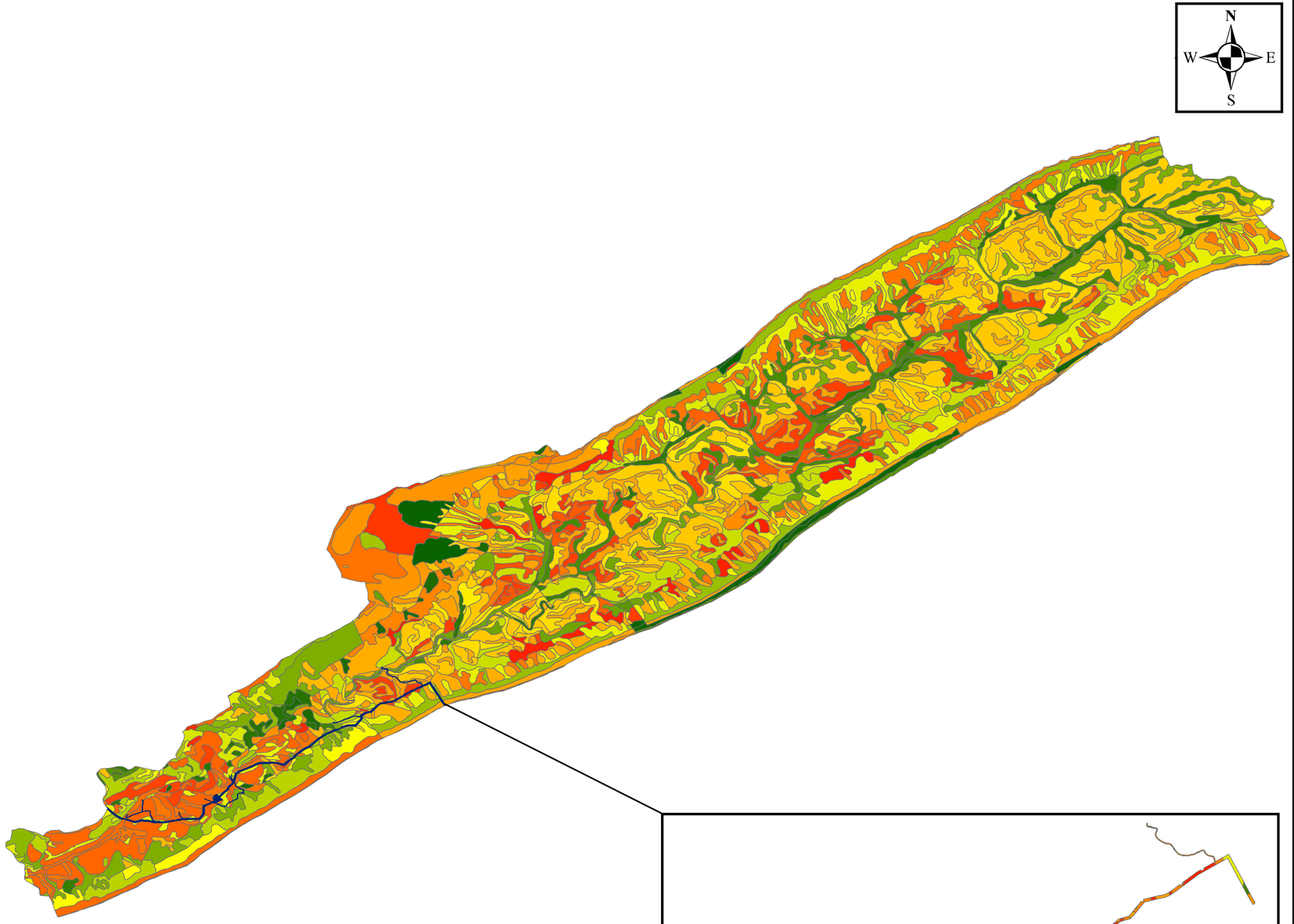
Legend

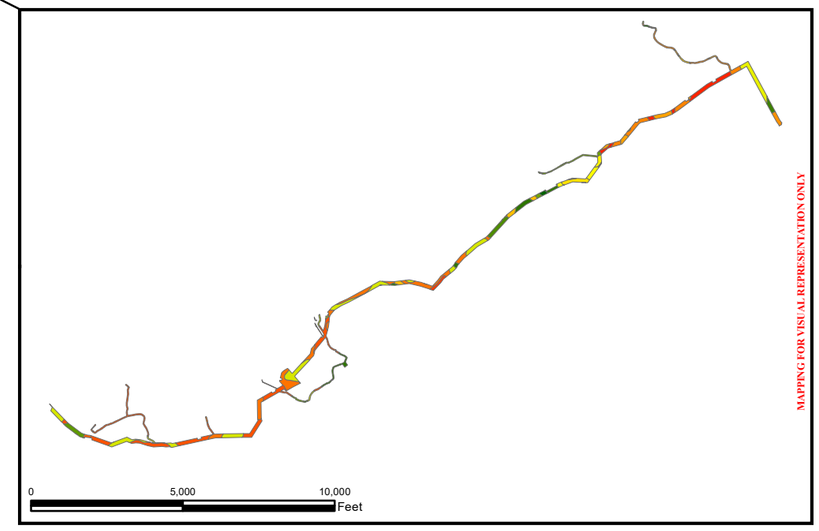
Mountain Valley Pipeline Upper Sinking Creek Soil

Upper Sinking Creek Soil

- 10B: Cotaco loam, 2 to 7 percent slopes
- 10G: Calvin-Rough complex, 35 to 70 percent slopes, very stony
- 11E: Carbo-Rock outcrop complex, 8 to 35 percent slopes, eroded
- 11F: Carbo-Rock outcrop complex, 35 to 55 percent slopes, eroded
- 12E: Carbo-Rock outcrop complex, karst, 8 to 35 percent slopes, eroded
- 13BD: Oriskany very cobbly sandy loam, 15 to 35 percent slopes, very stony
- 13BES: Oriskany very cobbly sandy loam, 35 to 60 percent slopes, rubbly
- 13A: Coursey loam, 0 to 3 percent slopes, rarely flooded
- 13B: Frederick silt loam, 2 to 8 percent slopes - Giles; 13B: Coursey loam, 3 to 8 percent slopes, rarely flooded - Craig
- 13C: Frederick silt loam, 8 to 15 percent slopes
- 13D: Frederick silt loam, 15 to 25 percent slopes
- 13E: Frederick silt loam, 25 to 35 percent slopes
- 14B: Frederick gravelly silt loam, 2 to 7 percent slopes
- 14C: Culleoka-Berks complex, 8 to 15 percent slopes - Craig; 14C: Frederick gravelly silt loam, 7 to 15 percent slopes - Giles
- 14D: Culleoka-Berks complex, 15 to 25 percent slopes - Craig; 14D: Frederick gravelly silt loam, 15 to 25 percent slopes - Giles
- 14E: Frederick gravelly silt loam, 25 to 35 percent slopes
- 15E: Dekalb channery sandy loam, 8 to 35 percent slopes, extremely stony
- 15F: Dekalb channery sandy loam, 35 to 55 percent slopes, extremely stony
- 16D: Frederick-Rock outcrop complex, 10 to 30 percent slopes
- 16E: Dekalb-Rock outcrop complex, 8 to 35 percent slopes, extremely stony
- 16F: Frederick-Rock outcrop complex, 30 to 60 percent slopes
- 17C: Gilpin silt loam, 7 to 15 percent slopes
- 17D: Gilpin silt loam, 15 to 30 percent slopes
- 17DS: Sherando very cobbly sandy loam, 15 to 35 percent slopes, rubbly
- 17F: Gilpin silt loam, 30 to 65 percent slopes
- 18D: Gilpin very stony silt loam, 10 to 30 percent slopes
- 18E: Escatawba loam, 15 to 35 percent slopes, very stony
- 18F: Gilpin very stony silt loam, 30 to 65 percent slopes
- 19B: Frederick silt loam, 2 to 8 percent slopes
- 19C: Frederick silt loam, 8 to 15 percent slopes
- 19D: Frederick silt loam, 15 to 25 percent slopes
- 19E: Frederick silt loam, 25 to 35 percent slopes
- 1A: Alonzville loam, 0 to 3 percent slopes, rarely flooded
- 1B: Alonzville loam, 3 to 8 percent slopes, rarely flooded - Craig: 1B: Allegheny loam, 2 to 7 percent slopes - Giles
- 2: Philo fine sandy loam, 0 to 3 percent slopes, occasionally flooded
- 20D: Frederick and Watahala soils, karst, 15 to 25 percent slopes
- 22D: Jefferson cobbly loam, 15 to 25 percent slopes, cool - Craig; 22D: Jefferson variant and Drall soils, very stony, 10 to 30 percent slopes - Giles
- 22F: Jefferson variant and Drall soils, very stony, 30 to 65 percent slopes
- 23E: Lily sandy loam, 15 to 35 percent slopes, very stony
- 23F: Lehew and Wallen soils, very stony, 35 to 65 percent slopes
- 24A: Maurertown silt loam, 0 to 3 percent slopes, rarely flooded
- 25C: Tumbling fine sandy loam, 3 to 15 percent slopes
- 25D: Tumbling fine sandy loam, 15 to 35 percent slopes
- 26B: Ogles very stony loam, 0 to 5 percent slopes, frequently flooded
- 27C: Oriskany gravelly fine sandy loam, 8 to 15 percent slopes, extremely stony
- 27E: Oriskany gravelly fine sandy loam, 15 to 35 percent slopes, extremely stony
- 29A: Philo fine sandy loam, 0 to 3 percent slopes, occasionally flooded
- 29B: Nolichucky loam, 2 to 7 percent slopes
- 29C: Nolichucky loam, 7 to 15 percent slopes
- 29D: Nolichucky loam, 15 to 25 percent slopes
- 2B: Alonzville loam, 3 to 8 percent slopes
- 2F: Berks channery silt loam, 30 to 65 percent slopes
- 30C: Nolichucky very stony sandy loam, 7 to 15 percent slopes - Giles; 30C: Laidig cobbly fine sandy loam, 3 to 15 percent slopes - Jefferson National Forest
- 30D: Nolichucky very stony sandy loam, 15 to 30 percent slopes
- 30F: Nolichucky very stony sandy loam, 30 to 65 percent slopes
- 31A: Pope fine sandy loam, 0 to 3 percent slopes, frequently flooded
- 31C: Poplimento silt loam, 7 to 15 percent slopes
- 33B: Sholocta silt loam, 3 to 8 percent slopes
- 33C: Sholocta silt loam, 8 to 15 percent slopes
- 33D: Sholocta silt loam, 15 to 25 percent slopes - Craig; 33D: Sequoia silt loam, 10 to 30 percent slopes - Giles
- 33F: Sequoia silt loam, 30 to 65 percent slopes
- 34B: Slabtown silt loam, 3 to 8 percent slopes
- 34C: Slabtown silt loam, 8 to 15 percent slopes
- 35B: Sugarhol silt loam, 3 to 8 percent slopes - Craig: 35B: Timberville variant loam, 2 to 7 percent slopes - Giles
- 35C: Sugarhol silt loam, 8 to 15 percent slopes - Craig: 35C: Timberville variant, loam, 7 to 15 percent slopes - Giles
- 36B: Tumbling loam, 2 to 7 percent slopes
- 36C: Tumbling loam, 7 to 15 percent slopes
- 36D: Tumbling loam, 15 to 25 percent slopes
- 37C: Tumbling loam, 8 to 15 percent slopes, very stony
- 37E: Tumbling loam, 15 to 35 percent slopes, very stony
- 39C: Watahala gravelly silt loam, 8 to 15 percent slopes
- 39D: Watahala gravelly silt loam, 15 to 25 percent slopes
- 39E: Watahala gravelly silt loam, 25 to 35 percent slopes
- 3A: Atkins fine sandy loam, 0 to 3 percent slopes, frequently flooded
- 3F: Berks very stony silt loam, 30 to 65 percent slopes
- 40C: Watahala gravelly silt loam, 8 to 15 percent slopes, extremely stony
- 40E: Watahala gravelly silt loam, 15 to 35 percent slopes, extremely stony
- 40F: Watahala gravelly silt loam, 35 to 55 percent slopes, extremely stony
- 41D: Berks-Weikert complex, 15 to 35 percent slopes
- 41E: Berks-Weikert complex, 35 to 60 percent slopes
- 45D: Dekalb, shallow-Rock outcrop complex, 15 to 35 percent slopes, extremely stony
- 46DS: Dekalb cobbly sandy loam, 15 to 35 percent slopes, rubbly
- 46E: Dekalb cobbly sandy loam, 35 to 60 percent slopes, very stony
- 46ER: Dekalb-Rock outcrop complex, 35 to 60 percent slopes, extremely stony
- 48C: Calvin very channery loam, 3 to 15 percent slopes, extremely stony
- 48D: Calvin very channery loam, 15 to 35 percent slopes, extremely stony
- 48ER: Calvin-Rock outcrop complex, 35 to 60 percent slopes, extremely stony
- 49E: Carbo-Rock outcrop complex, 35 to 60 percent slopes
- 4B: Braddock sandy loam, 2 to 7 percent slopes
- 4C: Braddock sandy loam, 7 to 15 percent slopes
- 4D: Braddock sandy loam, 15 to 25 percent slopes
- 4E: Bailegap fine sandy loam, 15 to 35 percent slopes, very stony - Craig; 4E: Berks-Rock outcrop complex, 25 to 70 percent slopes - Montgomery
- 59D: Gilpin channery silt loam, 15 to 35 percent slopes
- 5C: Carbo silty clay loam, very rocky, 2 to 15 percent slopes
- 5D: Carbo silty clay loam, very rocky, 15 to 45 percent slopes
- 5G: Bailegap-Lily-Dekalb complex, 35 to 70 percent slopes, very stony
- 64D: Brushy extremely gravelly loam, 15 to 35 percent slopes
- 66D: Bailegap sandy loam, 15 to 35 percent slopes
- 66E: Bailegap sandy loam, 35 to 60 percent slopes
- 67C: Frederick gravelly loam, 3 to 15 percent slopes
- 67D: Frederick gravelly loam, 15 to 35 percent slopes
- 67E: Frederick gravelly loam, 35 to 60 percent slopes
- 6E: Berks-Culleoka complex, 25 to 35 percent slopes
- 6F: Carbo-Rock outcrop complex, 25 to 65 percent slopes
- 6G: Berks-Culleoka complex, 35 to 70 percent slopes
- 7: Chagrin silt loam
- 75D: Lily gravelly sandy loam, 15 to 35 percent slopes
- 75E: Lily gravelly sandy loam, 35 to 60 percent slopes
- 7D: Berks and Weikert very stony soils, 15 to 35 percent slopes
- 8: Chagrin variant, loamy sand
- 9: Chavies variant, sandy loam
- 96D: Dekalb-Dekalb, shallow complex, 15 to 35 percent slopes, very stony
- 9E: Calvin channery silt loam, 15 to 35 percent slopes, very stony
- W: Water

0 2 4 8 Miles





MAPPING FOR VISUAL REPRESENTATION ONLY

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

POTESTA

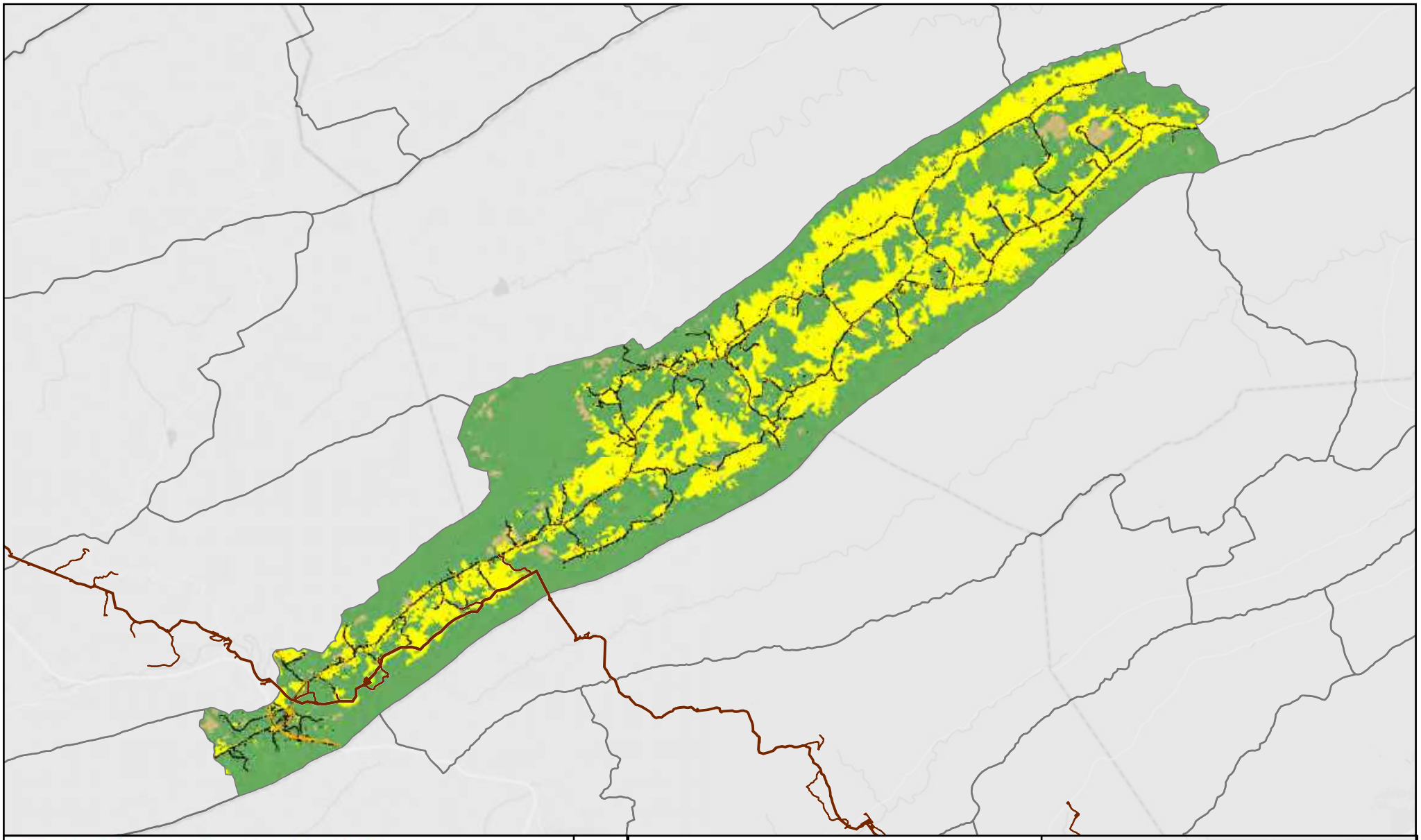
SCALE: See Mapping | DRAWN: KBW
DATE: AUGUST 2021 | CHECKED: JLY
PN: **010-17-0451.016** | APPROVED: JLY

I:\Projects\2017\17-0451.016_MVP_Jim Crow_Monitoring\May2021\GIS\mxd\Figure 232_Upper Sinking Creek_Watershed.mxd

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

Cumulative Impact Assessment - Soil
Upper Sinking Creek (0505000203020)
Middle/Upper New HUC 8 Watershed
Jefferson National Forest &
Craig, Giles, Montgomery Counties, Virginia
For reference purposes only

FIGURE 232



Mountain Valley PIPELINE

Figure: 233

Land Use/Land Cover 2011
Upper Sinking Creek
050500020303 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2011 Land Use Land Cover

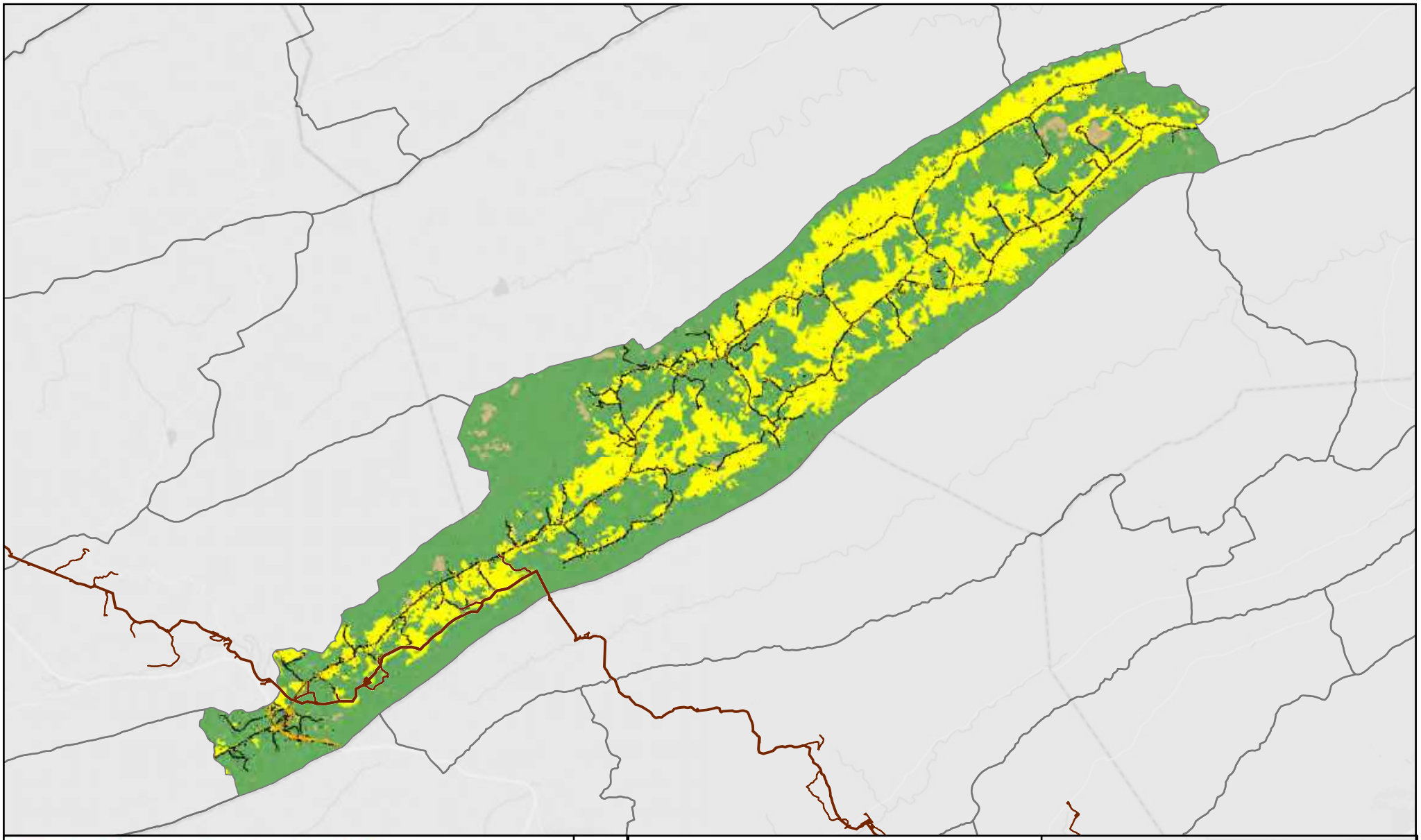
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 2 4 Miles

Scale: 1:145,000

Map Extent



Mountain Valley PIPELINE

Figure: 234

Land Use/Land Cover 2016
Upper Sinking Creek
050500020303 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2016 Land Use Land Cover

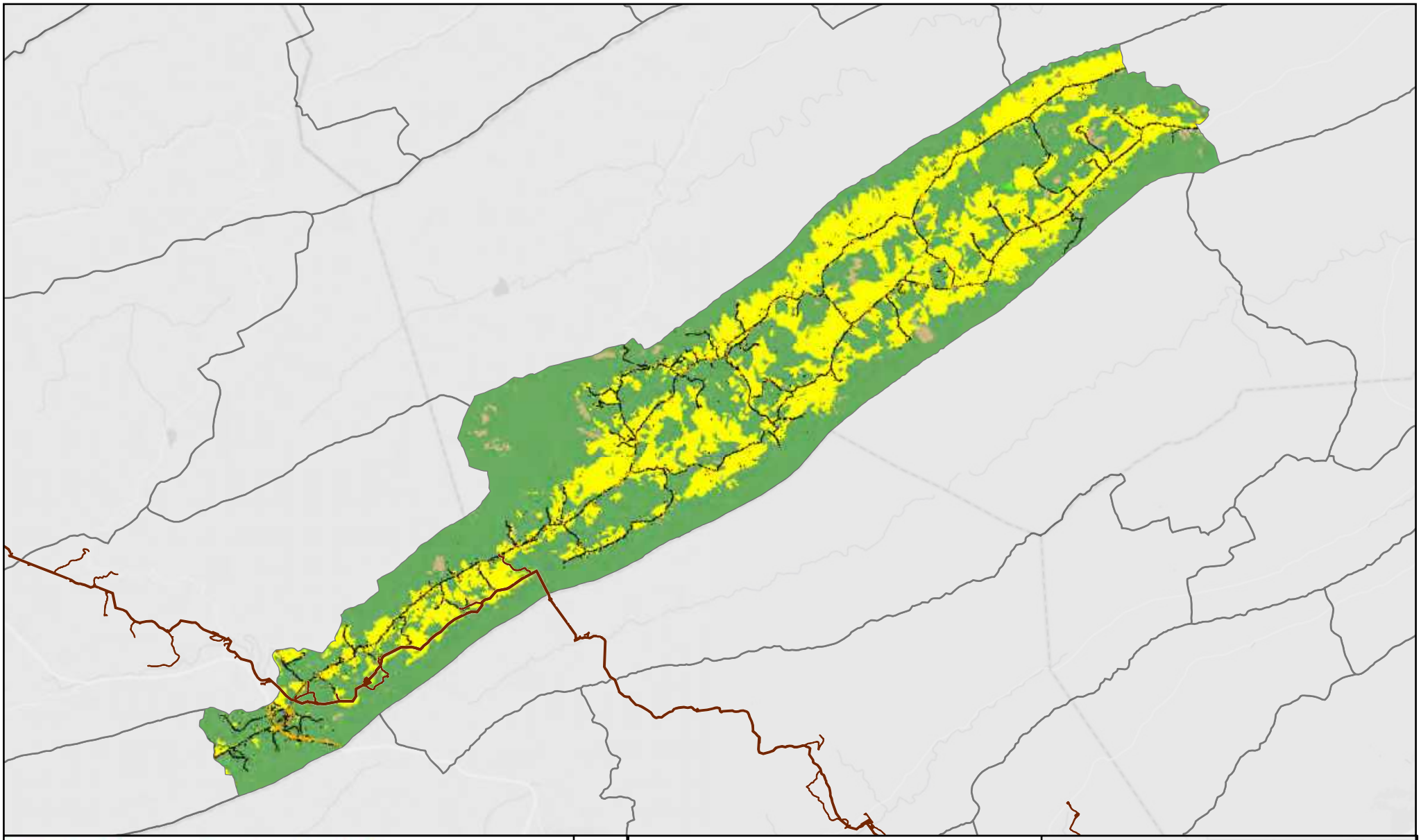
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 2 4 Miles

Scale: 1:145,000

Map Extent



Mountain Valley PIPELINE

Figure: 234a

Land Use/Land Cover 2019
Upper Sinking Creek
050500020303 HUC12 Watershed

5/25/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2019 Land Use Land Cover

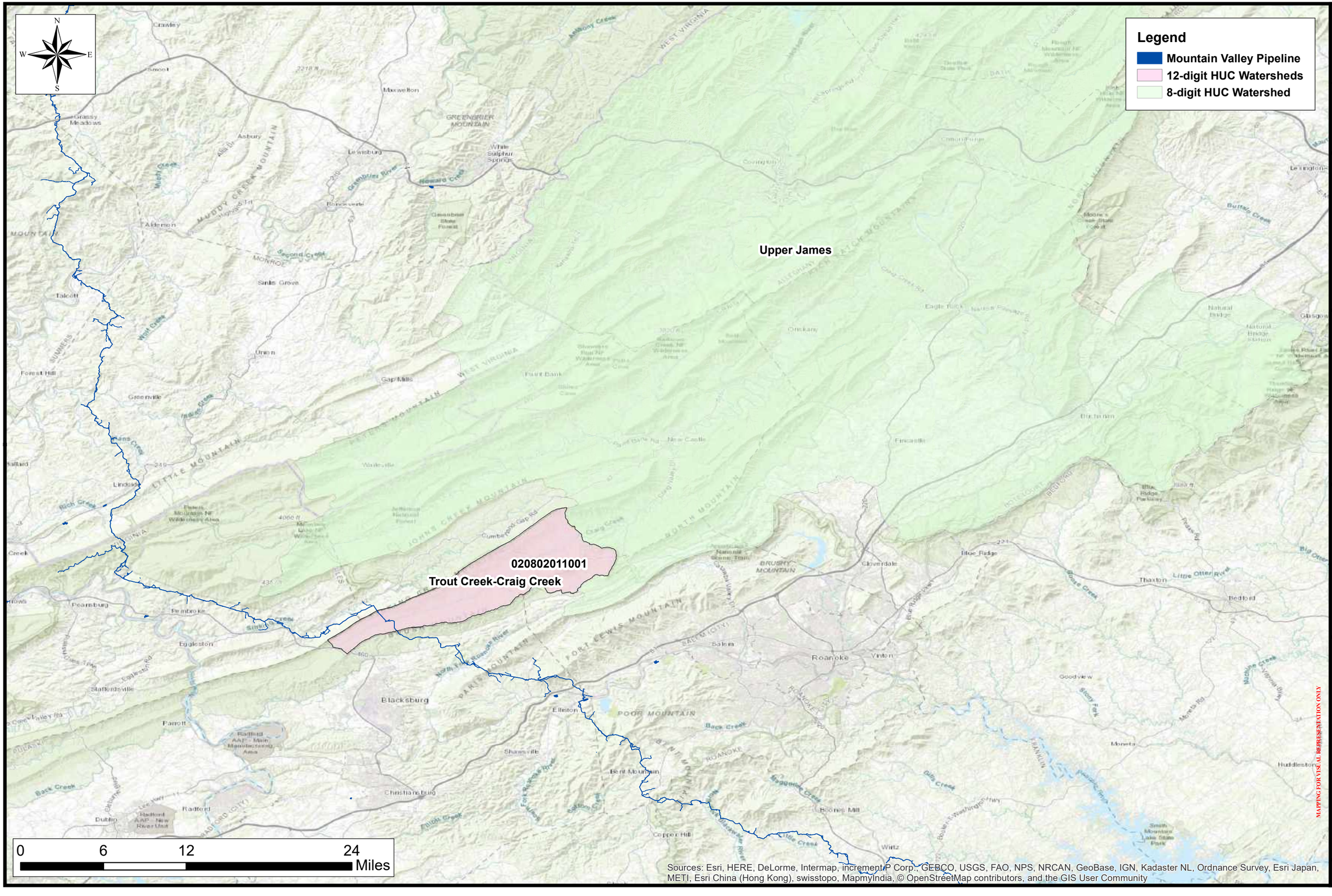
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 2 4 Miles

Scale: 1:145,000

Map Extent



SCALE: 1" = 6 Mile
DATE: AUGUST 2021
PN: 0101-17-0451.016

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

I:\Projects\2017\17-0451_MVP_EnvCon_Monitoring\Maps\2021 CIA Soils\Figure 235 - Upper James.mxd

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

POTESTA

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

Cumulative Impact Assessment Report - Hydrology
Upper James Watershed
12-Digit HUC Watersheds
Multiple Counties, Virginia

MAPPING FOR VISUAL REPRESENTATION ONLY
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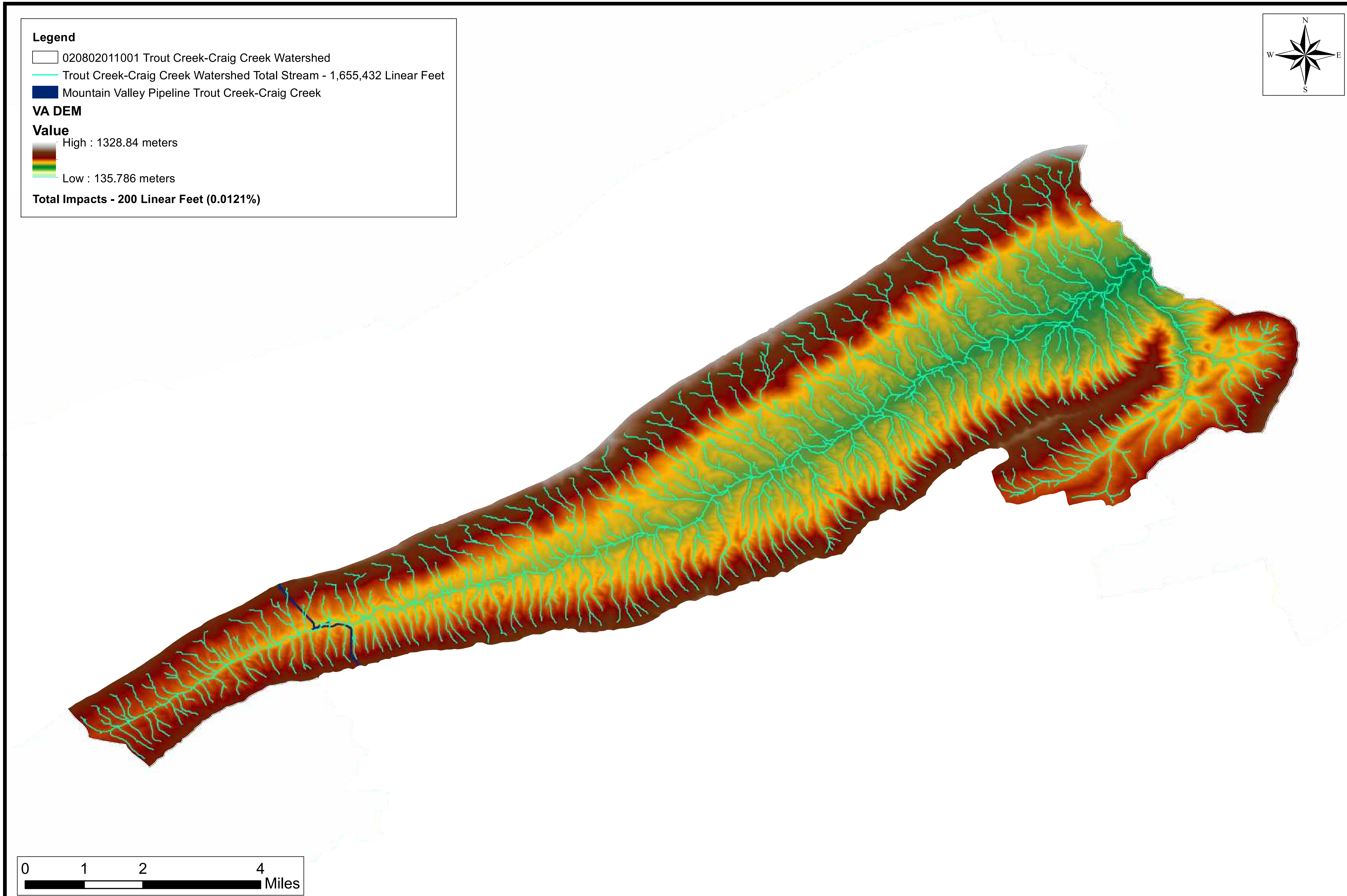
FIGURE 235



MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment Report - Hydrology Impacts and Total Linear Footage Assessment Trout Creek-Craig Creek Watershed (020802011001) Upper James HUC 8 Watershed, Virginia

For Informational Purposes Only

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

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Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle 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: SEPT 2021	CHECKED: JLY
PN: 0101-17-0451.016	APPROVED: JLY

I:\Projects\2017\17_0451_MVP_EnviCon_Monitoring\Maps\2021\CIA Soils\Figure 236 - Trout Creek Watershed.mxd

FIGURE 236

Mountain Valley PIPELINE

Trout Creek-Craig Creek

Figure 237

1:110,000

1/6/2022

LEGEND

- Wetland Impacts - 0 acres
- Trout Creek-Craig Creek Delineated Wetland Area - 0.04 acres

NWI Wetlands - 478.39 acres

- Freshwater Emergent Wetland - 0.2 acres
- Freshwater Forested/Shrub Wetland - 2.02 acres
- Freshwater Pond - 4.51 acres
- Riverine - 471.66 acres
- Mountain Valley Pipeline
- 020802011001_Trout Creek-Craig Creek

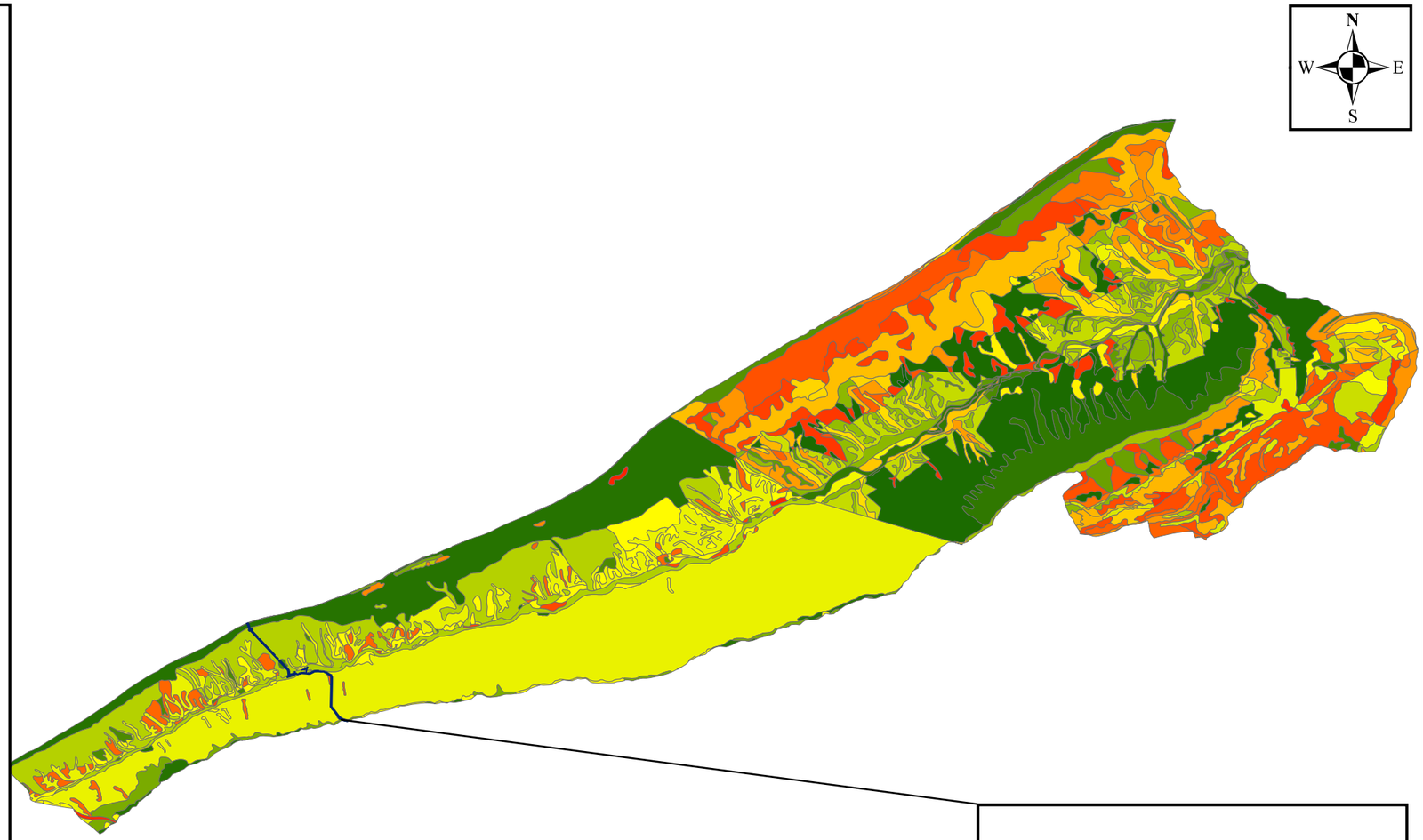
Note: Shapes are not to scale, enlarged to improve visibility.

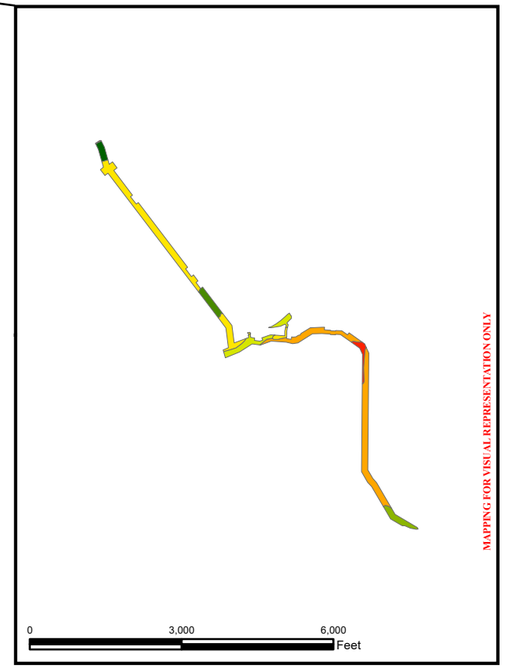
Legend

Mountain Valley Pipeline Trout Creek-Craig Creek

Trout Creek-Craig Creek Soil

- 10: Craigsville soils
- 10D: Dekalb channery sandy loam, 15 to 35 percent slopes
- 10G: Calvin-Rough complex, 35 to 70 percent slopes, very stony
- 11D: Dekalb channery sandy loam, 15 to 35 percent slopes, very stony
- 11E: Dekalb channery sandy loam, 35 to 60 percent slopes, very stony
- 11F: Dekalb channery sandy loam, 60 to 80 percent slopes, very stony
- 138C: Oriskany very cobbly sandy loam, 3 to 15 percent slopes, very stony
- 138CS: Oriskany very cobbly sandy loam, 3 to 15 percent slopes, rubbly
- 138D: Oriskany very cobbly sandy loam, 15 to 35 percent slopes, very stony
- 13A: Coursey loam, 0 to 3 percent slopes, rarely flooded
- 13B: Coursey loam, 3 to 8 percent slopes, rarely flooded
- 14D: Culleoka-Berks complex, 15 to 25 percent slopes
- 15E: Dekalb channery sandy loam, 8 to 35 percent slopes, extremely stony
- 15F: Dekalb channery sandy loam, 35 to 55 percent slopes, extremely stony
- 16C: Groseclose and Poplimento soils, 7 to 15 percent slopes
- 16D: Groseclose and Poplimento soils, 15 to 25 percent slopes
- 16E: Dekalb-Rock outcrop complex, 8 to 35 percent slopes, extremely stony
- 17C: Escatawba loam, 8 to 15 percent slopes
- 17DS: Sherando very cobbly sandy loam, 15 to 35 percent slopes, rubbly
- 18C: Escatawba loam, 8 to 15 percent slopes, very stony - Craig; 18C: Frederick silt loam, 8 to 15 percent slopes - Roanoke
- 18D: Frederick silt loam, 15 to 25 percent slopes
- 18E: Escatawba loam, 15 to 35 percent slopes, very stony
- 19B: Guernsey silt loam, 2 to 7 percent slopes
- 19C: Frederick very gravelly silt loam, 7 to 15 percent slopes
- 19D: Frederick very gravelly silt loam, 15 to 25 percent slopes
- 19E: Frederick very gravelly silt loam, 25 to 40 percent slopes
- 1A: Alonzville loam, 0 to 3 percent slopes, rarely flooded
- 1B: Alonzville loam, 3 to 8 percent slopes, rarely flooded
- 1C: Berks-Clymer complex, 7 to 15 percent slopes
- 2: Philo fine sandy loam, 0 to 3 percent slopes, occasionally flooded
- 20B: Hayter loam, 2 to 7 percent slopes
- 20C: Frederick silt loam, 2 to 15 percent slopes, very rocky
- 20E: Frederick silt loam, 15 to 45 percent slopes, very rocky
- 21C: Hayter soils, 7 to 15 percent slopes
- 21D: Gilpin silt loam, 15 to 25 percent slopes
- 22B: Jefferson cobbly loam, 3 to 8 percent slopes
- 22C: Jefferson cobbly loam, 8 to 15 percent slopes, cool - Craig; 22C: Jefferson soils, 7 to 15 percent slopes - Montgomery
- 22D: Jefferson cobbly loam, 15 to 25 percent slopes, cool - Craig; 22D: Gilpin loam, 15 to 25 percent slopes - Montgomery
- 23C: Moomaw fine sandy loam, 3 to 15 percent slopes - Jefferson National Forest; 23C: Jefferson very stony soils, 7 to 15 percent slopes - Montgomery; 23C: Grimsley cobbly loam, 7 to 15 percent slopes - Roanoke
- 24C: Alonzville fine sandy loam, 0 to 8 percent slopes, rarely flooded
- 24D: Jefferson extremely stony soils, 7 to 25 percent slopes
- 25: McGary and Purdy soils
- 25B: Nicelytown silt loam, 3 to 8 percent slopes
- 25C: Nicelytown silt loam, 8 to 15 percent slopes
- 26B: Ogles very stony loam, 0 to 5 percent slopes, frequently flooded
- 26C: Jefferson loam, 3 to 15 percent slopes
- 26D: Jefferson loam, 15 to 35 percent slopes
- 27C: Oriskany gravelly fine sandy loam, 8 to 15 percent slopes, extremely stony
- 27E: Oriskany gravelly fine sandy loam, 15 to 35 percent slopes, extremely stony
- 28C: Shelocta channery silt loam, 3 to 15 percent slopes
- 28D: Shelocta channery silt loam, 15 to 35 percent slopes
- 29: Udorthents and Urban land
- 29A: Philo fine sandy loam, 0 to 3 percent slopes, occasionally flooded
- 3: Craigsville cobbly sandy loam, 0 to 5 percent slopes, frequently flooded
- 30C: Laidig cobbly fine sandy loam, 3 to 15 percent slopes - Jefferson National Forest; 30C: Laidig fine sandy loam, 7 to 15 percent slopes - Roanoke
- 30D: Laidig fine sandy loam, 15 to 25 percent slopes
- 31A: Pope fine sandy loam, 0 to 3 percent slopes, frequently flooded
- 33B: Shelocta silt loam, 3 to 8 percent slopes
- 33C: Shelocta silt loam, 8 to 15 percent slopes
- 33D: Shelocta silt loam, 15 to 25 percent slopes
- 33E: Opequon-Rock outcrop complex, 15 to 35 percent slopes
- 35B: Sugarhol silt loam, 3 to 8 percent slopes
- 36C: Tumbling loam, 7 to 15 percent slopes
- 36D: Tumbling loam, 15 to 25 percent slopes
- 39C: Watahala gravelly silt loam, 8 to 15 percent slopes
- 39D: Watahala gravelly silt loam, 15 to 25 percent slopes
- 3D3: Chilhowie silty clay loam, 15 to 25 percent slopes, severely eroded
- 4: Pope fine sandy loam, 0 to 3 percent slopes, occasionally flooded
- 40E: Watahala gravelly silt loam, 15 to 35 percent slopes, extremely stony
- 41C: Berks-Weikert complex, 3 to 15 percent slopes
- 41D: Berks-Weikert complex, 15 to 35 percent slopes
- 41E: Berks-Weikert complex, 35 to 60 percent slopes
- 41F: Berks-Weikert complex, 60 to 80 percent slopes
- 42A: Sindion loam, 0 to 2 percent slopes, occasionally flooded
- 45D: Dekalb, shallow-Rock outcrop complex, 15 to 35 percent slopes, extremely stony
- 45F: Dekalb, shallow-Rock outcrop complex, 60 to 80 percent slopes, extremely stony
- 46D: Dekalb cobbly sandy loam, 15 to 35 percent slopes, very stony
- 46E: Dekalb cobbly sandy loam, 35 to 60 percent slopes, very stony
- 46ER: Dekalb-Rock outcrop complex, 35 to 60 percent slopes, extremely stony
- 46ES: Dekalb cobbly sandy loam, 35 to 60 percent slopes, rubbly
- 46F: Dekalb cobbly sandy loam, 60 to 80 percent slopes, very stony
- 48B: Timberville silt loam, 2 to 7 percent slopes, occassionally flooded
- 48D: Calvin very channery loam, 15 to 35 percent slopes, extremely stony
- 48ER: Calvin-Rock outcrop complex, 35 to 60 percent slopes, extremely stony
- 49E: Carbo-Rock outcrop complex, 35 to 60 percent slopes
- 4E: Bailegap fine sandy loam, 15 to 35 percent slopes, very stony - Craig; 4E: Berks-Rock outcrop complex, 25 to 70 percent slopes - Montgomery
- 54E: Weikert-Berks complex, 15 to 45 percent slopes
- 59D: Gilpin channery silt loam, 15 to 35 percent slopes
- 59E: Gilpin channery silt loam, 35 to 60 percent slopes
- 5D: Berks-Weikert complex, 15 to 25 percent slopes
- 5G: Bailegap-Lily-Dekalb complex, 35 to 70 percent slopes, very stony
- 66D: Bailegap sandy loam, 15 to 35 percent slopes
- 66E66E: Bailegap sandy loam, 35 to 60 percent slopes
- 67C: Frederick gravelly loam, 3 to 15 percent slopes
- 67D: Frederick gravelly loam, 15 to 35 percent slopes
- 67E: Frederick gravelly loam, 35 to 60 percent slopes
- 6E: Berks-Culleoka complex, 25 to 35 percent slopes - Craig; 6E: Berks and Weikert soils, 25 to 65 percent slopes - Montgomery
- 75D: Lily gravelly sandy loam, 15 to 35 percent slopes
- 75E: Lily gravelly sandy loam, 35 to 60 percent slopes
- 7C: Berks-Weikert complex, 8 to 15 percent slopes
- 7D: Berks and Weikert very stony soils, 15 to 35 percent slopes
- 7E: Berks-Weikert complex, 15 to 35 percent slopes
- 7G: Berks-Weikert complex, 35 to 70 percent slopes
- 96D: Dekalb-Dekalb, shallow complex, 15 to 35 percent slopes, very stony
- 96E: Dekalb-Dekalb, shallow complex, 35 to 60 percent slopes, very stony
- 96ES: Dekalb-Dekalb, shallow complex, 35 to 60 percent slopes, rubbly
- 96F: Dekalb, shallow-Dekalb complex, 60 to 80 percent slopes, very stony
- 9E: Calvin channery silt loam, 15 to 35 percent slopes, very stony
- W: Water





MAPPING FOR VISUAL REPRESENTATION ONLY

0 2 4 8 Miles

N W E S

SCALE: See Mapping | DRAWN: KBW
DATE: AUGUST 2021 | CHECKED: JLY
PN: **010-17-0451.016** | APPROVED: JLY

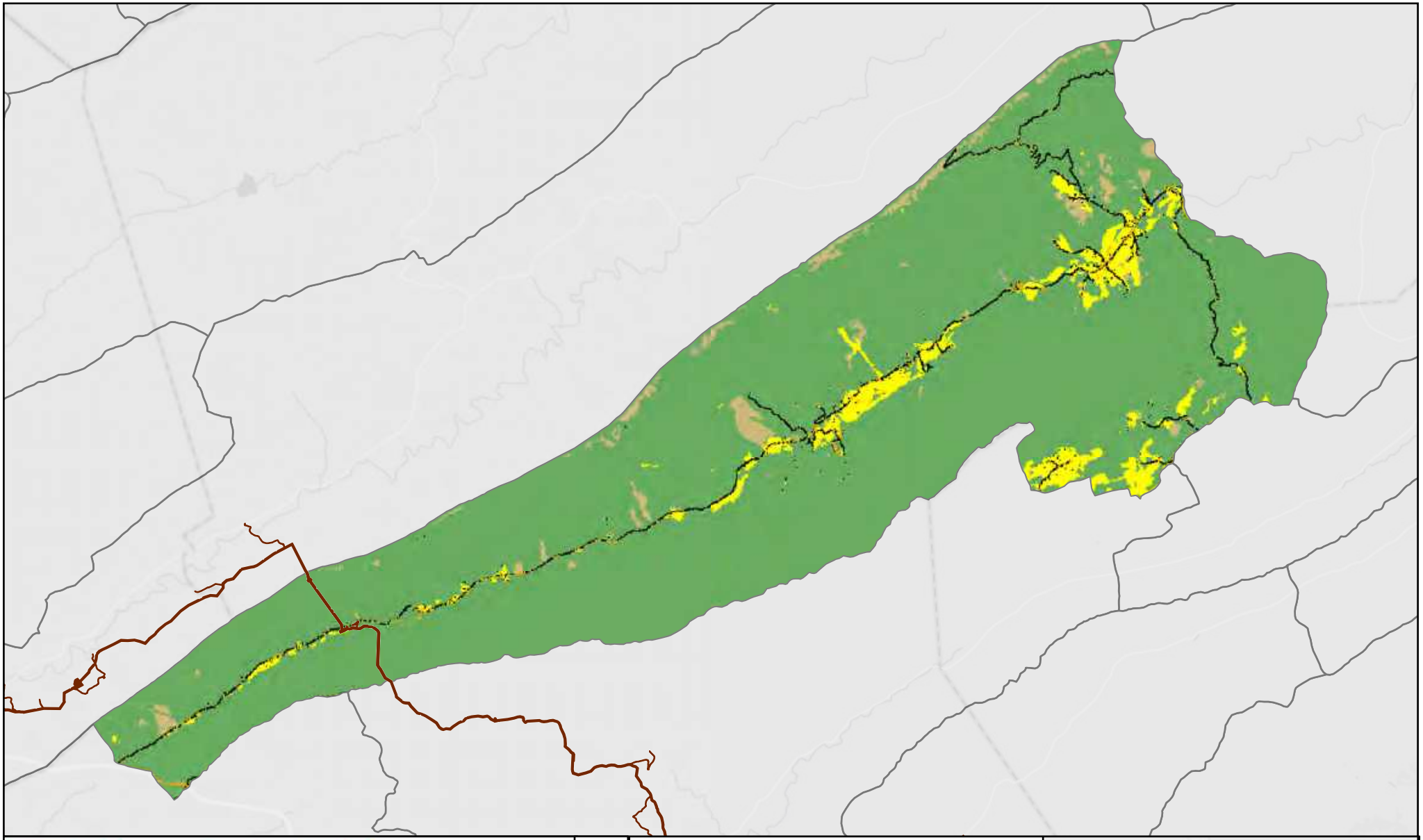
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
Trout Creek-Craig Creek (020802011001)
Upper James HUC 8 Watershed
Jefferson National Forest & Craig,
Giles, Montgomery, and Roanoke Counties, Virginia
For discussion Purposes Only

FIGURE 238



Mountain Valley PIPELINE

Figure: 239

Land Use/Land Cover 2011
Trout Creek-Craig Creek
20802011001 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2011 Land Use Land Cover

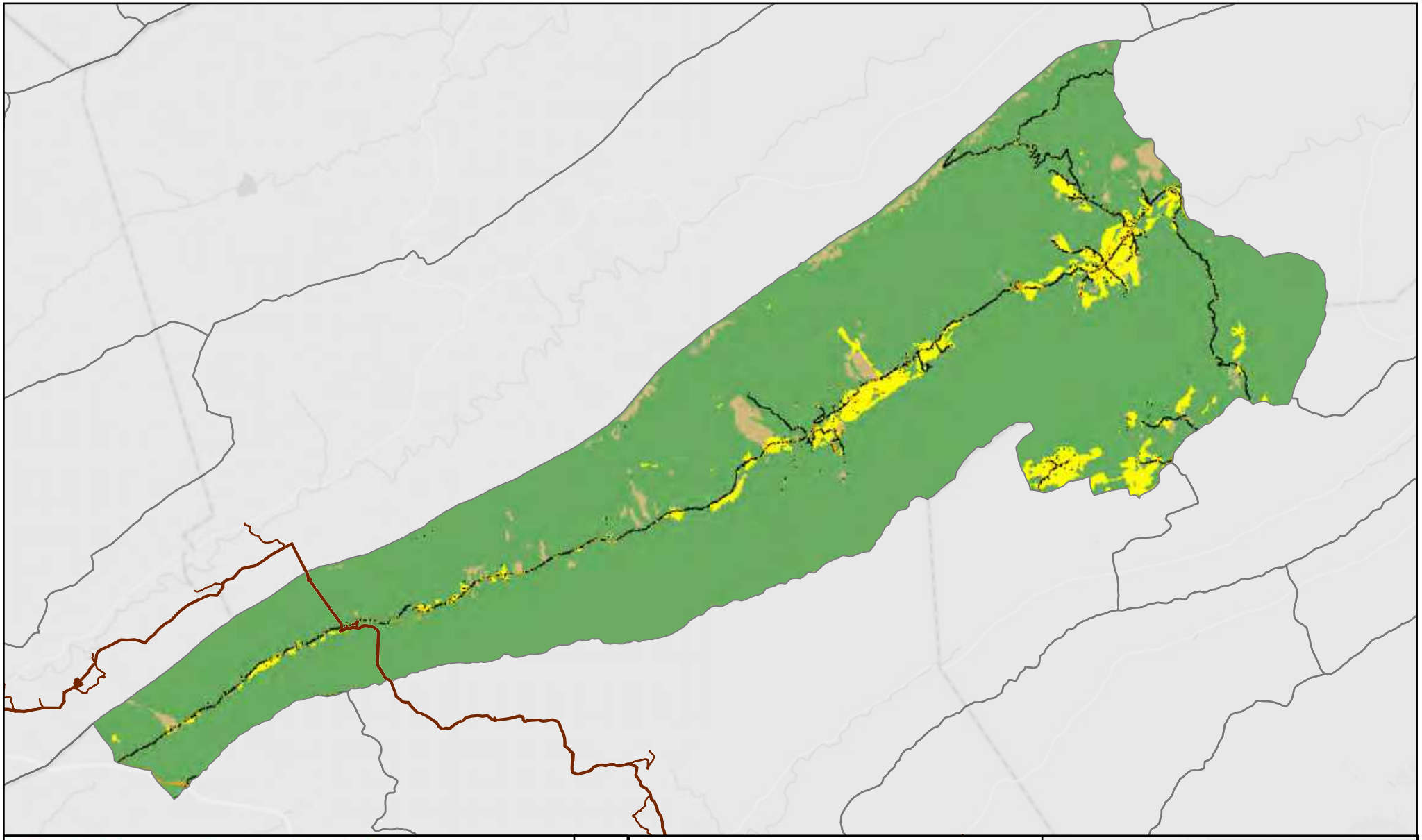
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 1.5 3 Miles

Scale: 1:115,000

Map Extent



Mountain Valley PIPELINE

Figure: 240

Land Use/Land Cover 2016
Trout Creek-Craig Creek
20802011001 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2016 Land Use Land Cover

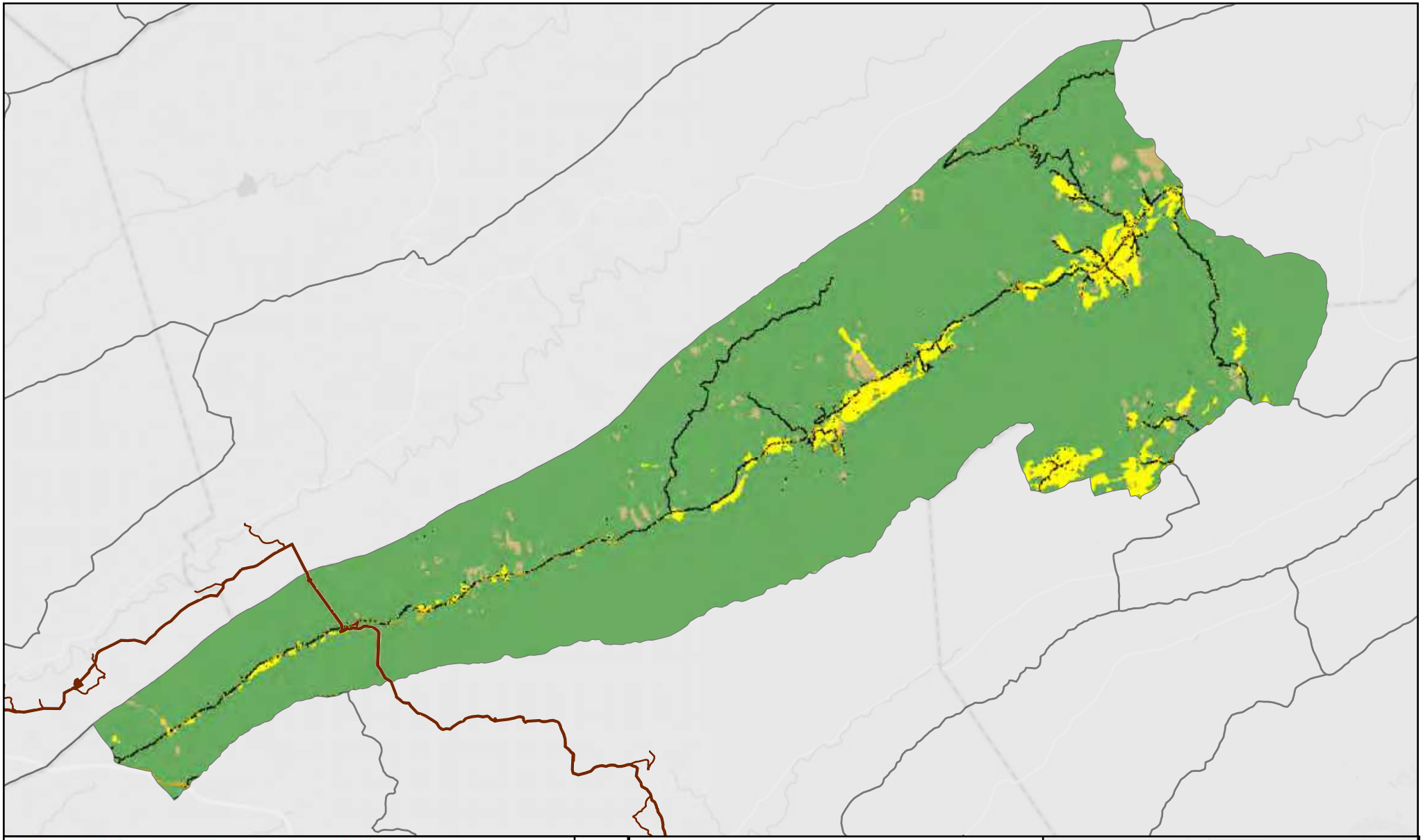
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 1.5 3 Miles

Scale: 1:115,000

Map Extent



Mountain Valley PIPELINE

Figure: 240a

Land Use/Land Cover 2019
Trout Creek-Craig Creek
20802011001 HUC12 Watershed

5/25/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2019 Land Use Land Cover

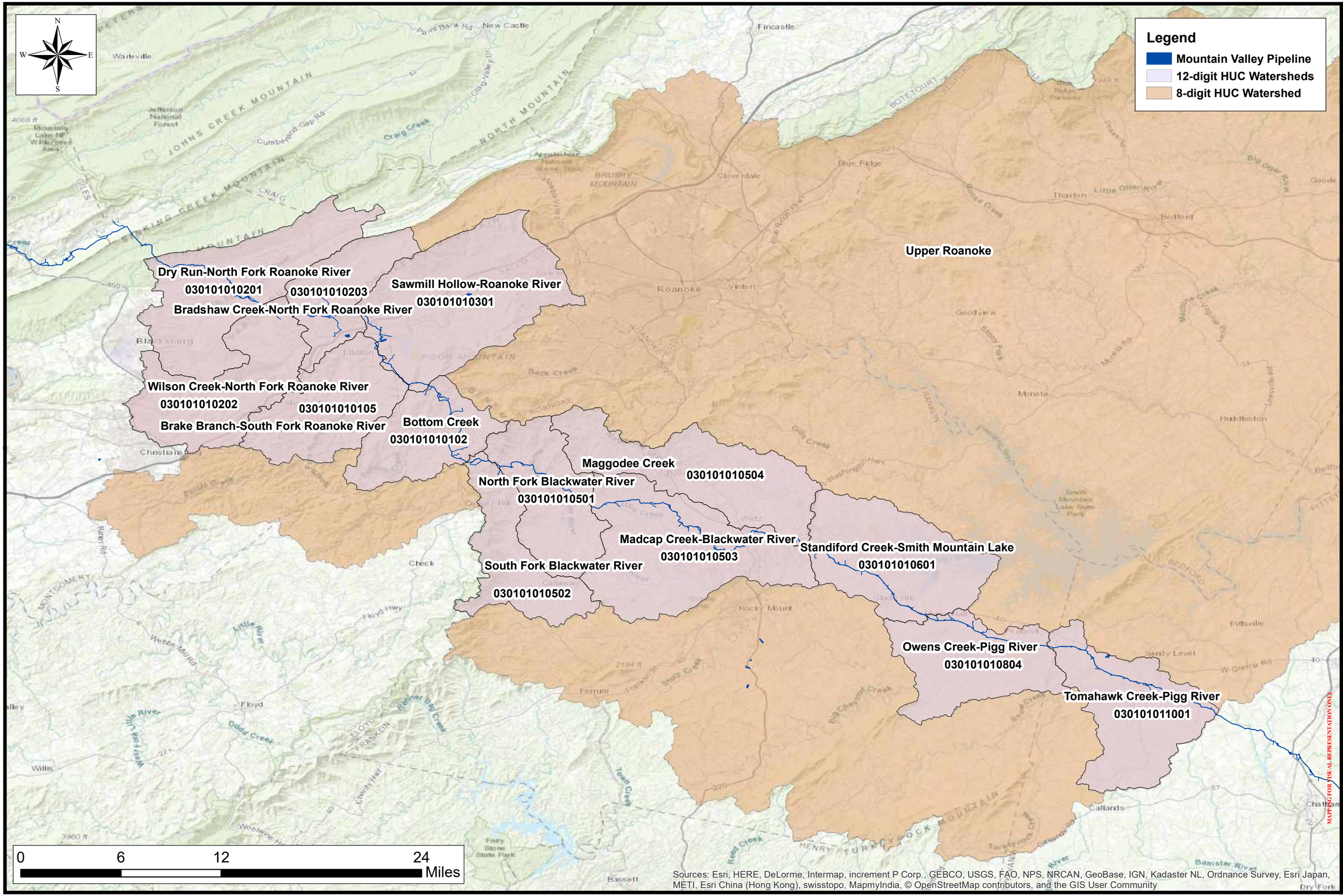
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 1.5 3 Miles

Scale: 1:115,000

Map Extent



SCALE: 1" = 5 Mile
DATE: AUGUST 2021
PN: 0101-17-0451.016
I:\Projects\2017\17-0451_MVP_EnvCon_Monitoring\Maps\2021 CIA Soils\Figure 241 - Upper Roanoke.mxd

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

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

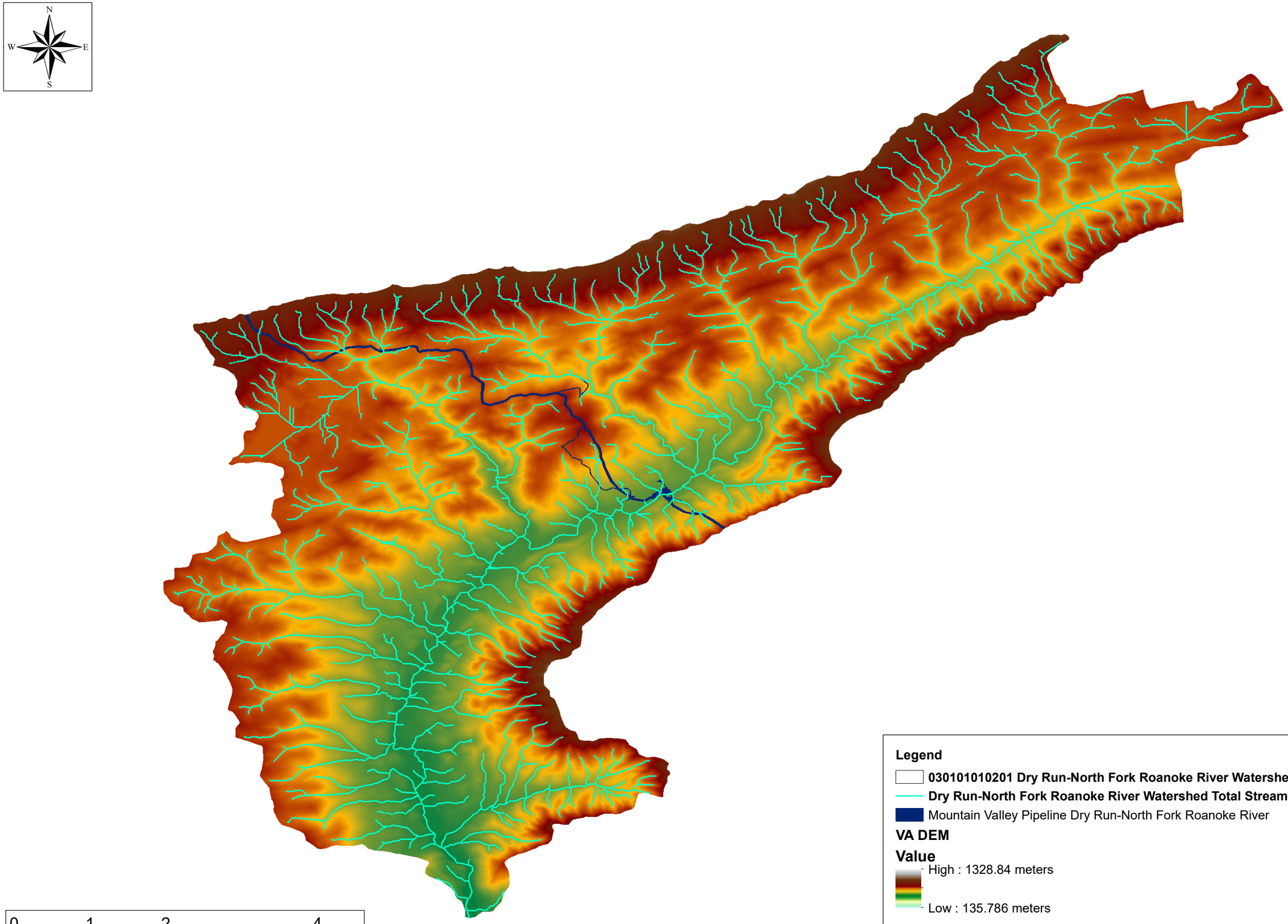
POTESTA

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

Cumulative Impact Assessment Report - Hydrology
Upper Roanoke Watershed
12-Digit HUC Watersheds
Multiple Counties, Virginia
For Informational Purposes Only

MAPPING FOR VISUAL REPRESENTATION ONLY

FIGURE 241



Legend

- **030101010201 Dry Run-North Fork Roanoke River Watershed**
- **Dry Run-North Fork Roanoke River Watershed Total Stream - 1,350,145 Linear Feet**
- Mountain Valley Pipeline Dry Run-North Fork Roanoke River

VA DEM

Value

High : 1328.84 meters

Low : 135.786 meters

Total Impacts - 1,041 Linear Feet (0.0771%)

MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: 1" = 1 Mile
DATE: SEPT 2021
PN: **0101-17-0451.016**
P:\Projects\2017\17-0451.MVP.EnvCon.Monitoring\Maps\2021 CIA Sub\Figure 242 - Dry_Run_Watershed.mxd

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

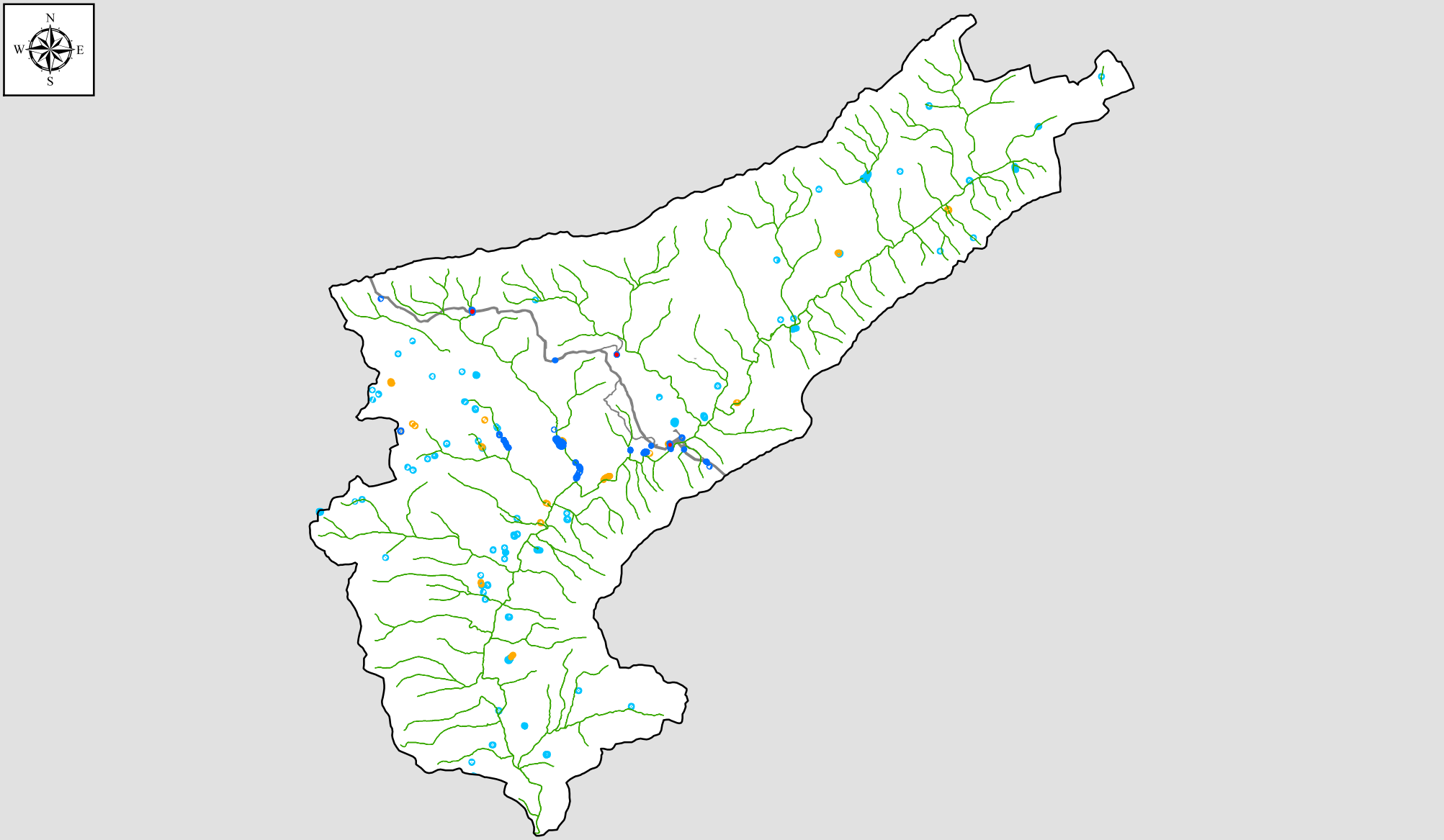
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Dry Run-North Fork Roanoke River
Watershed (030101010201)
Upper Roanoke HUC 8 Watershed, Virginia
For Informational Purposes Only

FIGURE 242



Mountain Valley PIPELINE

Dry Run-North Fork Roanoke River

Figure 243

1:130,000

1/6/2022

LEGEND

- Wetland Impacts - 0.05 acres
- Dry Run-North Fork Roanoke River Delineated Wetland Area - 4.48 acres

NWI Wetlands - 362.09 acres

- Freshwater Emergent Wetland - 2.85 acres
- Freshwater Pond - 16.34 acres
- Riverine - 342.9 acres
- Mountain Valley Pipeline
- 030101010201_Dry Run-North Fork Roanoke River

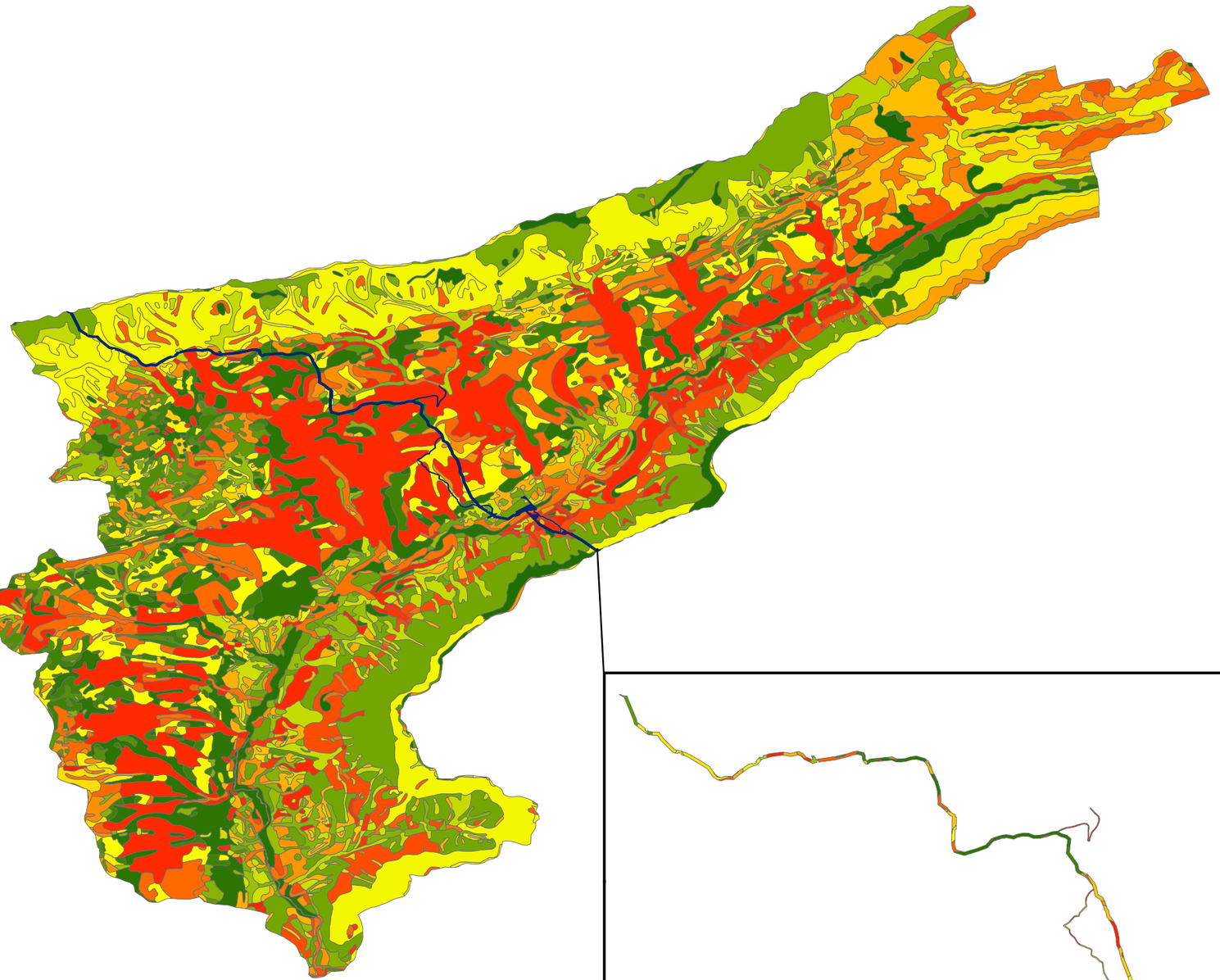
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Dry Run-North Fork Roanoke River

Dry Run-North Fork Roanoke River Soil

- 10: Craigsville soils
- 10D: Dekalb channery sandy loam, 15 to 35 percent slopes
- 11B: Duffield-Ernest complex, 2 to 7 percent slopes
- 11C: Duffield-Ernest complex, 7 to 15 percent slopes
- 11D: Dekalb channery sandy loam, 15 to 35 percent slopes, very stony
- 11E: Dekalb channery sandy loam, 35 to 60 percent slopes, very stony
- 12B: Frederick and Vertrees silt loams, 2 to 7 percent slopes
- 12C: Frederick and Vertrees silt loams, 7 to 15 percent slopes
- 12F: Dekalb-Rock outcrop complex, 25 to 80 percent slopes
- 13B: Frederick and Vertrees gravelly silt loams, 2 to 7 percent slopes
- 13C: Frederick and Vertrees gravelly silt loams, 7 to 15 percent slopes
- 13D: Frederick and Vertrees gravelly silt loams, 15 to 25 percent slopes
- 16B: Groseclose and Poplimento soils, 2 to 7 percent slopes
- 16C: Groseclose and Poplimento soils, 7 to 15 percent slopes
- 16D: Groseclose and Poplimento soils, 15 to 25 percent slopes
- 16E: Groseclose and Poplimento soils, 25 to 60 percent slopes
- 17C: Groseclose and Poplimento gravelly soils, 7 to 15 percent slopes
- 18B: Groseclose-Urban land complex, 2 to 7 percent slopes - Montgomery: 18B: Frederick silt loam, 2 to 8 percent slopes - Roanoke
- 18C: Groseclose-Urban land complex, 7 to 15 percent slopes - Montgomery: 18C: Frederick silt loam, 8 to 15 percent slopes - Roanoke
- 18D: Groseclose-Urban land complex, 15 to 25 percent slopes - Montgomery; 18D: Frederick silt loam, 15 to 25 percent slopes - Roanoke
- 19B: Guernsey silt loam, 2 to 7 percent slopes
- 19C: Frederick very gravelly silt loam, 7 to 15 percent slopes
- 19D: Frederick very gravelly silt loam, 15 to 25 percent slopes
- 19E: Frederick very gravelly silt loam, 25 to 40 percent slopes
- 1C: Berks-Clymer complex, 7 to 15 percent slopes
- 20B: Hayter loam, 2 to 7 percent slopes
- 20C: Frederick silt loam, 2 to 15 percent slopes, very rocky
- 20E: Frederick silt loam, 15 to 45 percent slopes, very rocky
- 21C: Hayter soils, 7 to 15 percent slopes
- 22C: Jefferson soils, 7 to 15 percent slopes
- 23C: Jefferson very stony soils, 7 to 15 percent slopes
- 24D: Jefferson extremely stony soils, 7 to 25 percent slopes
- 25: McGary and Purdy soils
- 28: Ross soils
- 29: Udorthents and Urban land
- 2B: Berks-Groseclose complex, 2 to 7 percent slopes
- 2C: Berks-Groseclose complex, 7 to 15 percent slopes
- 30B: Unison and Braddock soils, 2 to 7 percent slopes
- 30C: Unison and Braddock soils, 7 to 15 percent slopes - Montgomery; 30C: Laidig cobbly fine sandy loam, 3 to 15 percent slopes - Jefferson National Forest; 30C: Laidig fine sandy loam, 7 to 15 percent slopes - Roanoke
- 30D: Laidig fine sandy loam, 15 to 25 percent slopes
- 33: Weaver soils
- 33E: Opequon-Rock outcrop complex, 15 to 35 percent slopes
- 34E: Wurno-Caneyville complex, 25 to 45 percent slopes
- 3C3: Chilhowie silty clay loam, 7 to 15 percent slopes, severely eroded
- 3D: Berks-Lowell-Rayne complex, 15 to 25 percent slopes
- 3D3: Chilhowie silty clay loam, 15 to 25 percent slopes, severely eroded
- 3E: Berks-Lowell-Rayne complex, 25 to 65 percent slopes
- 3E3: Chilhowie silty clay loam, 25 to 60 percent slopes, severely eroded
- 41E: Berks-Weikert complex, 35 to 60 percent slopes
- 42A: Sindion loam, 0 to 2 percent slopes, occasionally flooded
- 45C: Spessard loamy sand, 7 to 15 percent slopes
- 45D: Spessard loamy sand, 15 to 25 percent slopes
- 46E: Dekalb cobbly sandy loam, 35 to 60 percent slopes, very stony
- 46ES: Dekalb cobbly sandy loam, 35 to 60 percent slopes, rubbly
- 48B: Timberville silt loam, 2 to 7 percent slopes, occassionally flooded
- 49C: Tumbling loam, 7 to 15 percent slopes
- 49D: Tumbling loam, 15 to 25 percent slopes
- 4E: Berks-Rock outcrop complex, 25 to 70 percent slopes - Montgomery; 4E: Chilhowie silty clay loam, 25 to 60 percent slopes, very rocky - Roanoke
- 50C: Tumbling loam, 7 to 15 percent slopes, very stony
- 50D: Tumbling loam, 15 to 25 percent slopes, very stony
- 54E: Weikert-Berks complex, 15 to 45 percent slopes
- 55F: Weikert-Rock outcrop complex, 45 to 70 percent slopes
- 5D: Berks-Weikert complex, 15 to 25 percent slopes
- 6E: Berks and Weikert soils, 25 to 65 percent slopes
- 75D: Lily gravelly sandy loam, 15 to 35 percent slopes
- 75E: Lily gravelly sandy loam, 35 to 60 percent slopes
- 7A: Clubcaf silt loam, 0 to 2 percent slopes, occasionally flooded
- 7D: Berks and Weikert very stony soils, 15 to 35 percent slopes
- 8D: Caneyville-Opequon-Rock outcrop complex, 7 to 25 percent slopes
- 8E: Caneyville-Opequon-Rock outcrop complex, 25 to 60 percent slopes
- 96D: Dekalb-Dekalb, shallow complex, 15 to 35 percent slopes, very stony
- 96ES: Dekalb-Dekalb, shallow complex, 35 to 60 percent slopes, rubbly
- 9B: Cotaco loam, 2 to 7 percent slopes
- 9C: Carbo and Chilhowie soils, 7 to 15 percent slopes
- 9D: Carbo and Chilhowie soils, 15 to 25 percent slopes
- W: Water



0 1.5 3 6 Miles

0 5,000 10,000 Feet

MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: See Mapping | DRAWN: KBW
DATE: AUGUST 2021 | CHECKED: JLY
PN: 010-17-0451.016 | APPROVED: JLY

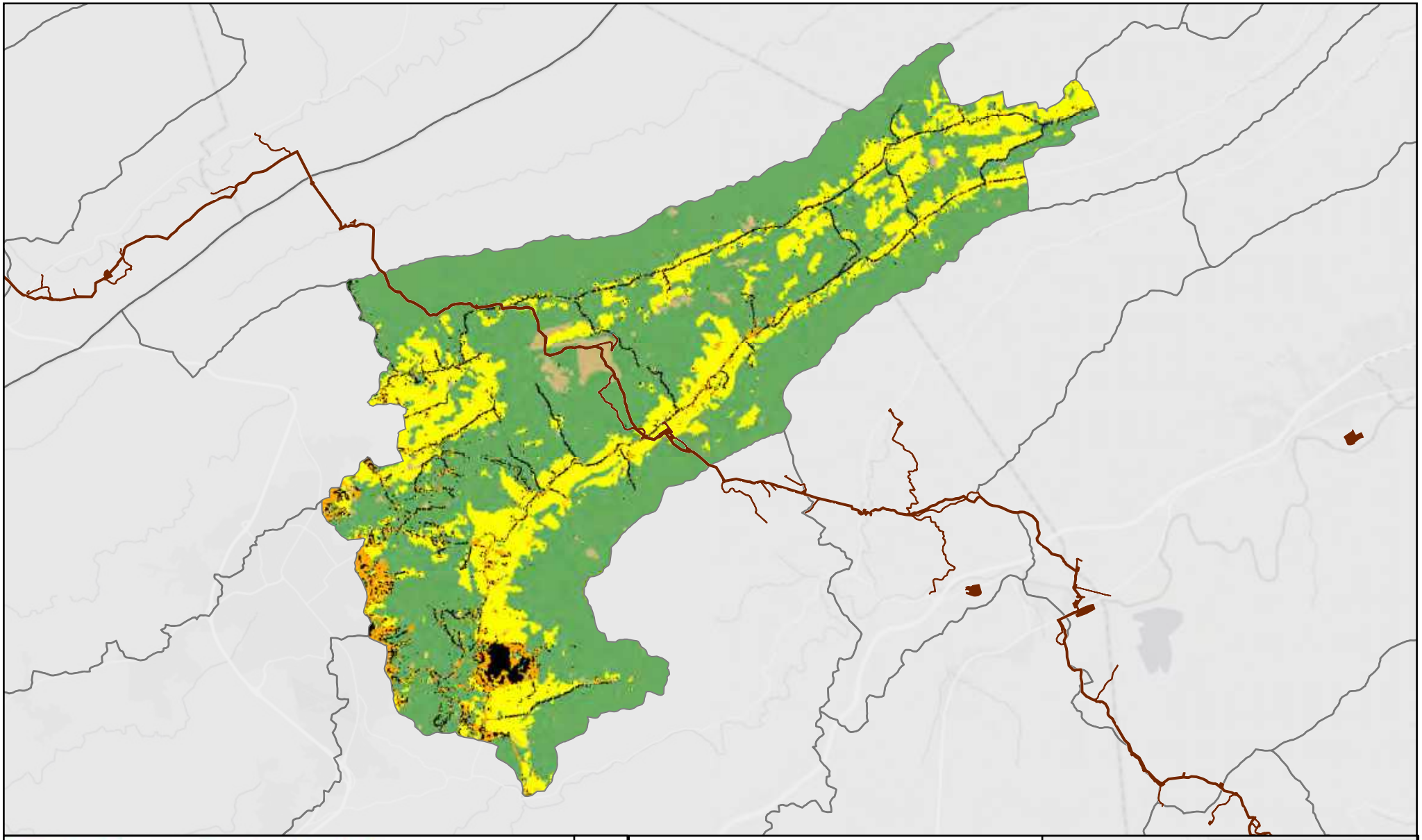
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
Dry Run-North Fork Roanoke River (0301010102011))
Upper Roanoke HUC 8 Watershed
Jefferson National Forest &
Montgomery and Roanoke Counties, Virginia
For reference purposes only

FIGURE 244



Mountain Valley PIPELINE

Figure: 245

Land Use/Land Cover 2011
Dry Run-North Fork Roanoke River
30101010201 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2011 Land Use Land Cover

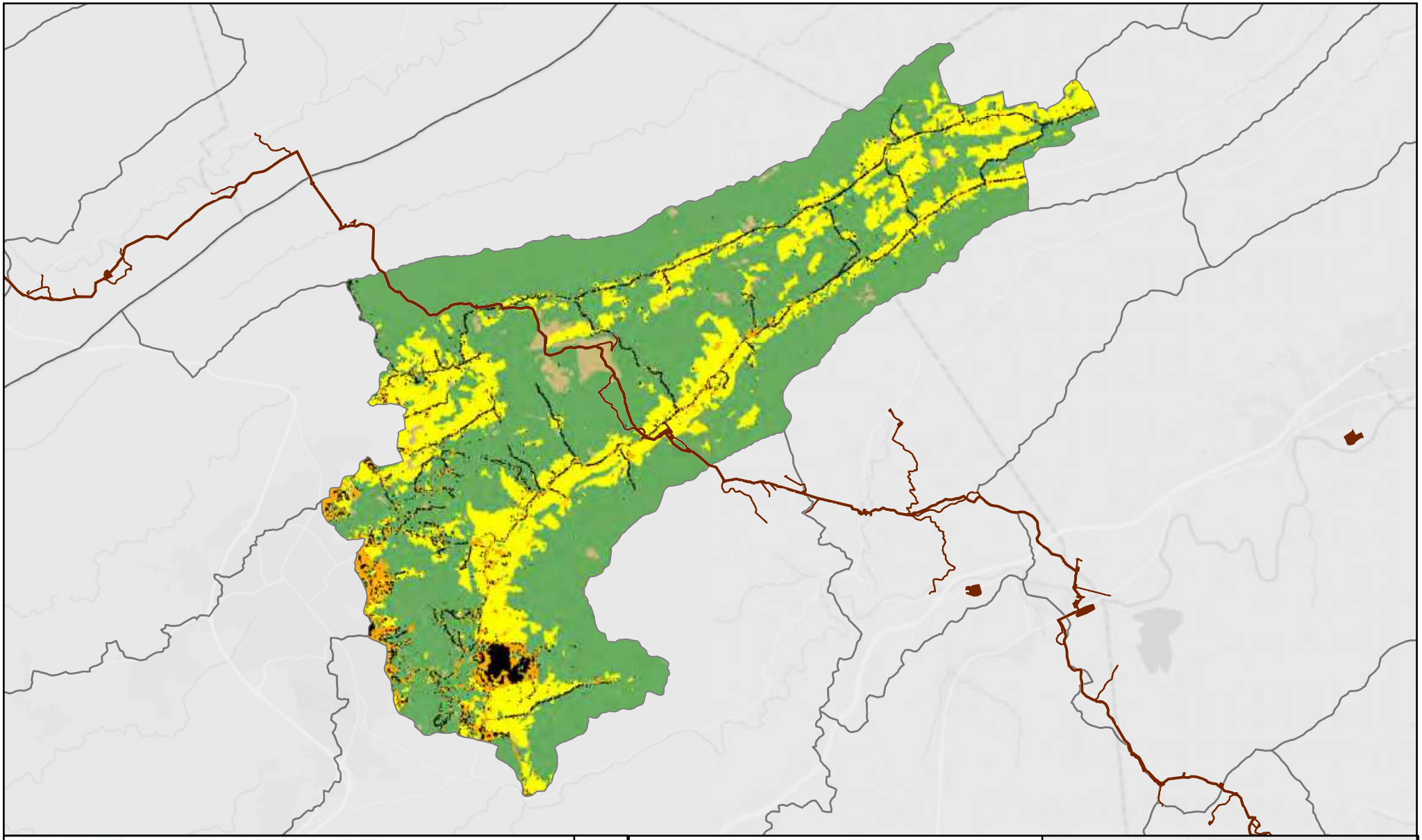
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

Miles
0 1.5 3

Scale: 1:130,000

Map Extent



Mountain Valley PIPELINE

Figure: 246

Land Use/Land Cover 2016
Dry Run-North Fork Roanoke River
30101010201 HUC12 Watershed

5/26/2022

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

N
W E
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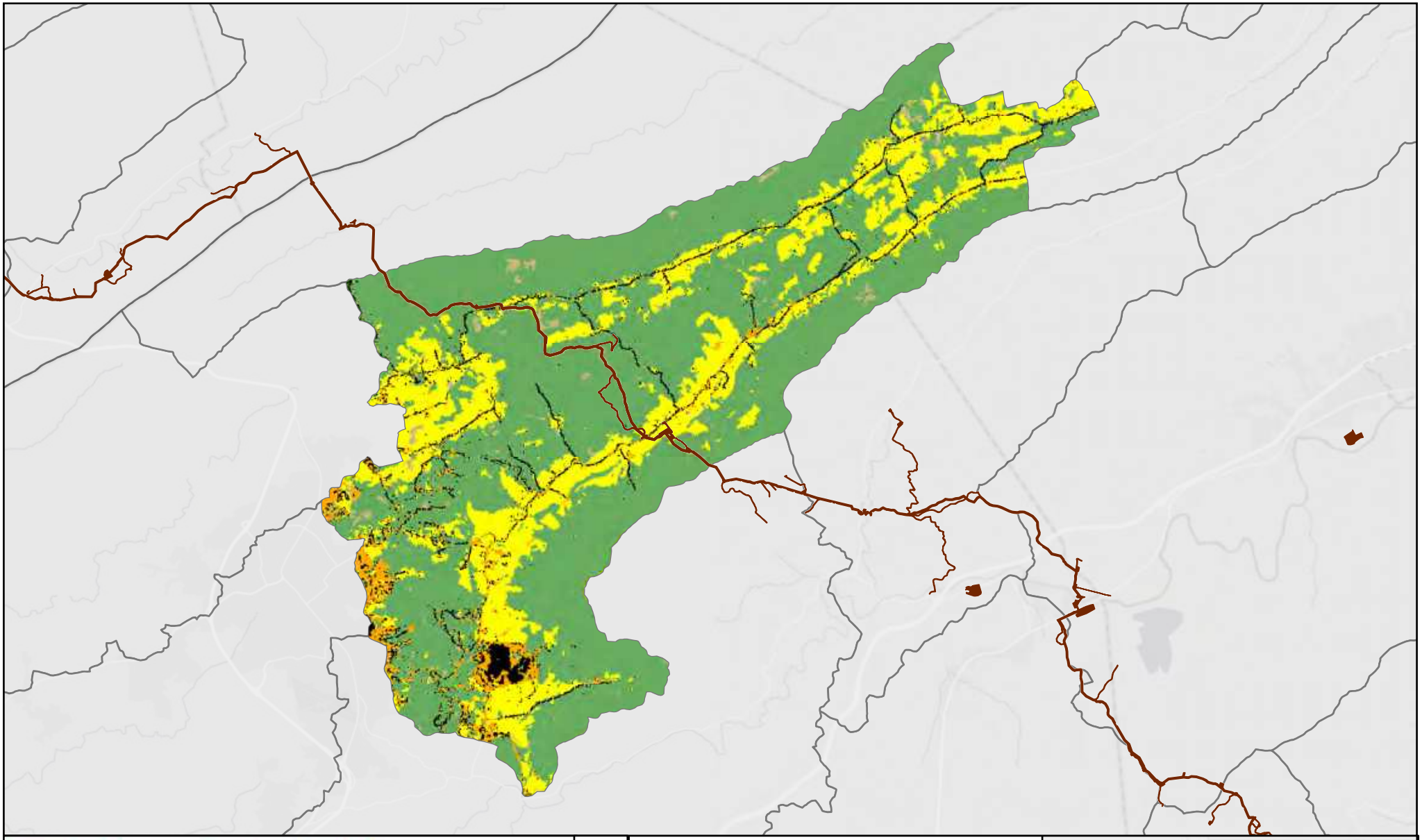
Miles
0 1.5 3

Scale: 1:130,000

Map Extent



Mountain Valley PIPELINE

Figure: 246a

Land Use/Land Cover 2019
Dry Run-North Fork Roanoke River
30101010201 HUC12 Watershed

5/25/2022

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

N
W E
S

Miles
0 1.5 3

Scale: 1:130,000

Map Extent

Legend

030101010202 Wilson Creek-North Fork Roanoke River Watershed

Wilson Creek-North Fork Roanoke River Total Stream - 1,012,489 Linear Feet

Mountain Valley Pipeline Wilson Creek-North Fork Roanoke River

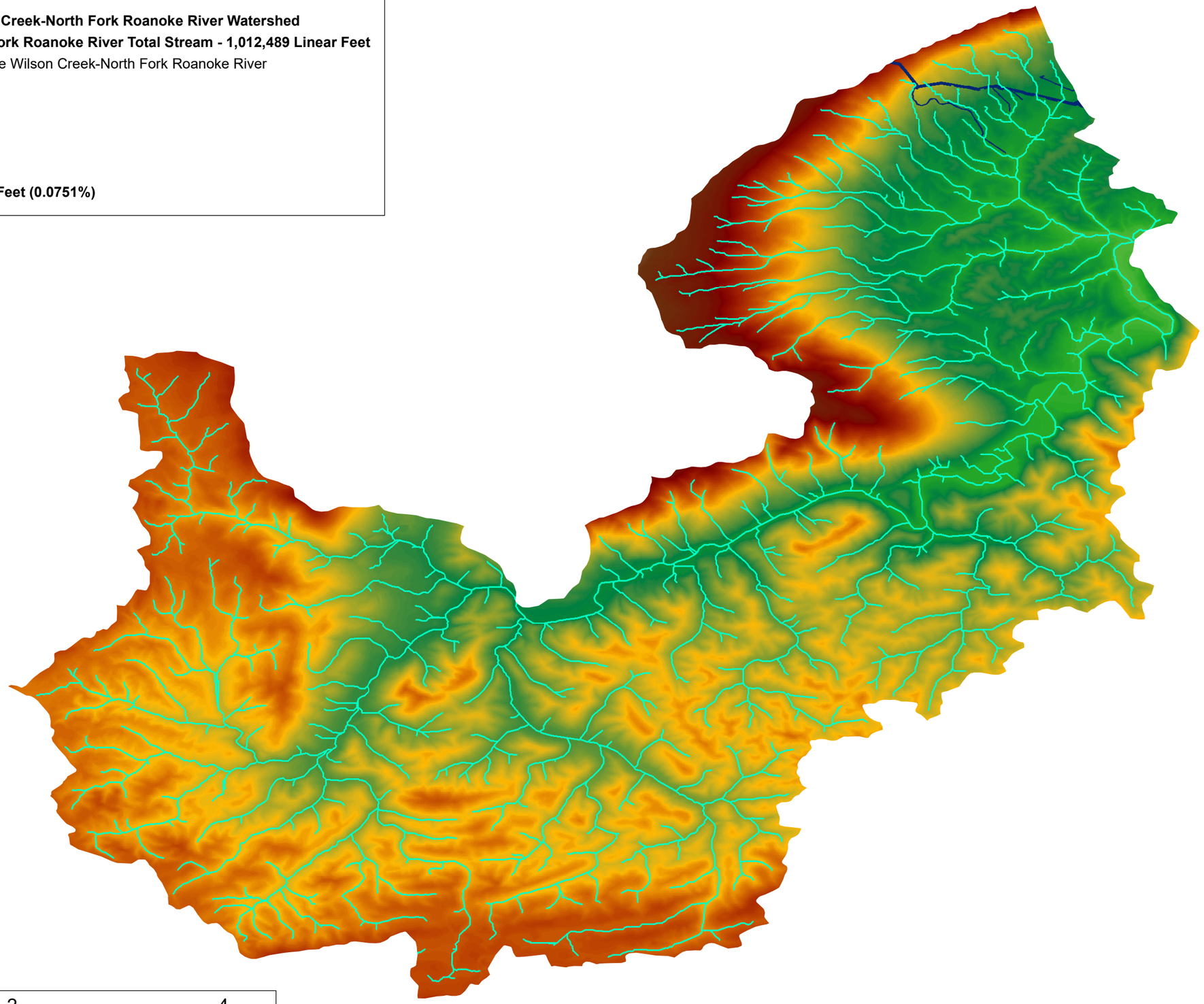
VA DEM

Value

High : 1328.84 meters

Low : 135.786 meters

Total Impacts - 760 Linear Feet (0.0751%)



0 1 2 4 Miles

MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: 1" = 1 Mile
DATE: SEPT 2021
PN: **0101-17-0451.016**

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

I:\Projects\2017\17-0451-MVP_ProjCon_Monitoring\Maps\2021\CIA Scale\Figure 247 - Wilson_Creek_W_watershed.mxd

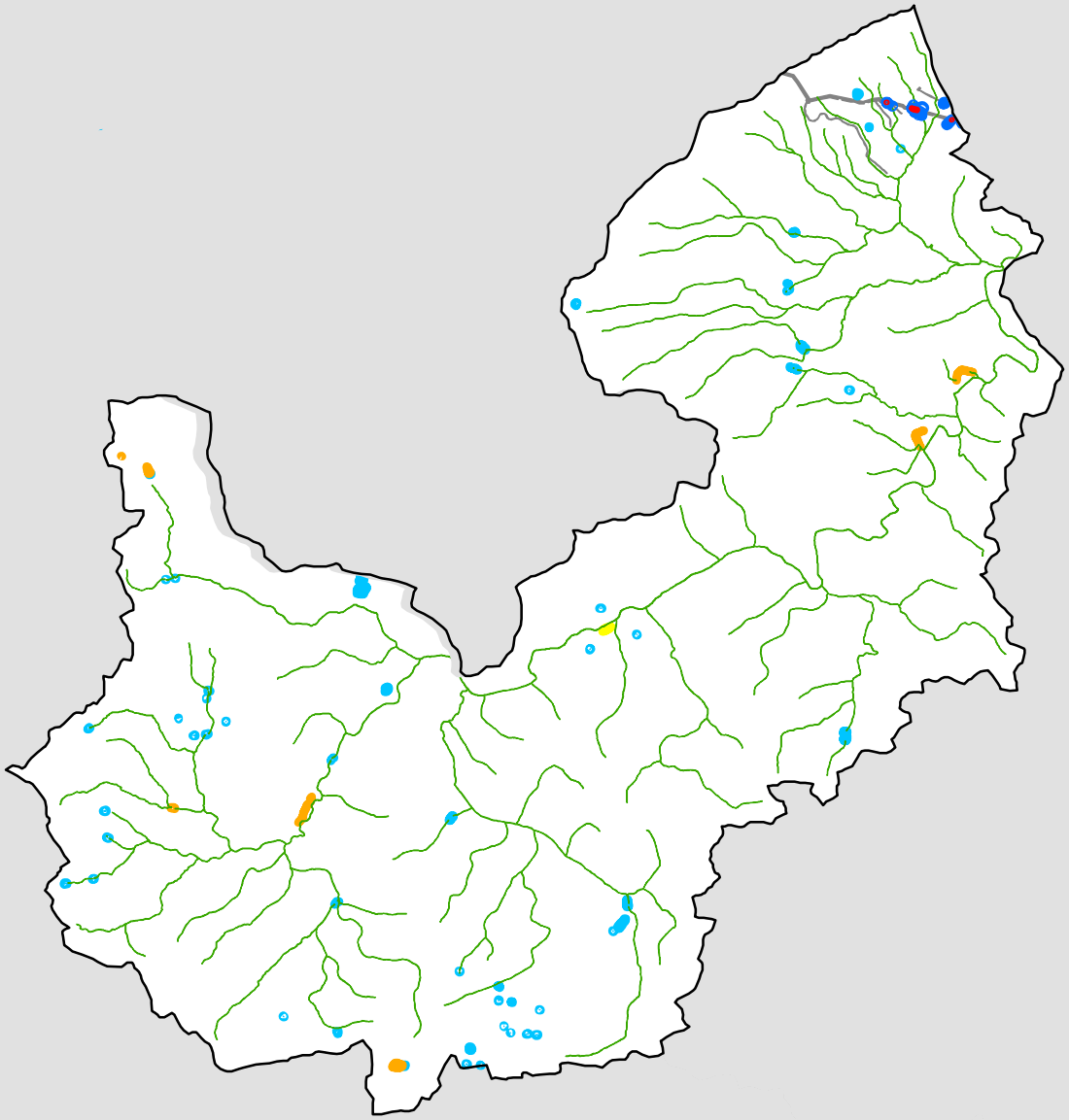
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, West Virginia 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Wilson Creek-North Fork Roanoke River
Watershed (030101010202)
Upper Roanoke HUC 8 Watershed, Virginia
For Informational Purposes Only

FIGURE 247



Mountain Valley PIPELINE

Wilson Creek-North Fork Roanoke River

Figure 248

1:100,000

1/6/2022

LEGEND

- Wetland Impacts - 0.34 acres
- Wilson Creek-North Fork Roanoke River Delineated Wetland Area - 1.61 acres

NWI Wetlands - 289.28 acres

- Freshwater Emergent Wetland - 4.61 acres
- Freshwater Forested/Shrub Wetland - 0.98 acres
- Freshwater Pond - 19.66 acres
- Riverine - 264.03 acres
- Mountain Valley Pipeline
- 030101010202_Wilson Creek-North Fork Roanoke River

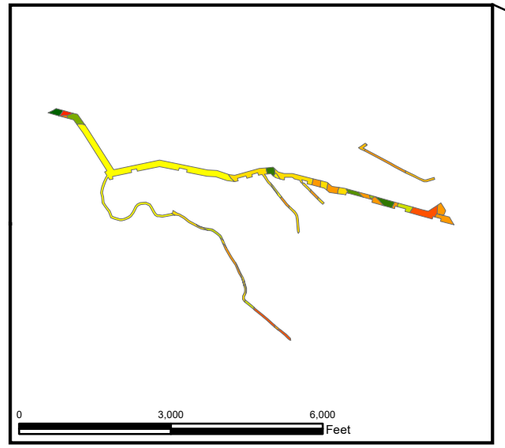
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Wilson Creek-North Fork Roanoke River

Wilson Creek-North Fork Roanoke River Soil

- 10: Craigsville soils
- 11B: Duffield-Ernest complex, 2 to 7 percent slopes
- 11C: Duffield-Ernest complex, 7 to 15 percent slopes
- 12B: Frederick and Vertrees silt loams, 2 to 7 percent slopes
- 12C: Frederick and Vertrees silt loams, 7 to 15 percent slopes
- 13B: Frederick and Vertrees gravelly silt loams, 2 to 7 percent slopes
- 13C: Frederick and Vertrees gravelly silt loams, 7 to 15 percent slopes
- 13D: Frederick and Vertrees gravelly silt loams, 15 to 25 percent slopes
- 16B: Groseclose and Poplimento soils, 2 to 7 percent slopes
- 16C: Groseclose and Poplimento soils, 7 to 15 percent slopes
- 16D: Groseclose and Poplimento soils, 15 to 25 percent slopes
- 16E: Groseclose and Poplimento soils, 25 to 60 percent slopes
- 17C: Groseclose and Poplimento gravelly soils, 7 to 15 percent slopes
- 18B: Groseclose-Urban land complex, 2 to 7 percent slopes
- 18C: Groseclose-Urban land complex, 7 to 15 percent slopes
- 18D: Groseclose-Urban land complex, 15 to 25 percent slopes
- 19B: Guernsey silt loam, 2 to 7 percent slopes
- 1C: Berks-Clymer complex, 7 to 15 percent slopes
- 20B: Hayter loam, 2 to 7 percent slopes
- 21C: Hayter soils, 7 to 15 percent slopes
- 22C: Jefferson soils, 7 to 15 percent slopes
- 23C: Jefferson very stony soils, 7 to 15 percent slopes
- 24D: Jefferson extremely stony soils, 7 to 25 percent slopes
- 25: McGary and Purdy soils
- 28: Ross soils
- 29: Udorthents and Urban land
- 2B: Berks-Groseclose complex, 2 to 7 percent slopes
- 2C: Berks-Groseclose complex, 7 to 15 percent slopes
- 30B: Unison and Braddock soils, 2 to 7 percent slopes
- 33: Weaver soils
- 34E: Wurno-Caneyville complex, 25 to 45 percent slopes
- 3D: Berks-Lowell-Rayne complex, 15 to 25 percent slopes
- 3E: Berks-Lowell-Rayne complex, 25 to 65 percent slopes
- 4E: Berks-Rock outcrop complex, 25 to 70 percent slopes
- 5D: Berks-Weikert complex, 15 to 25 percent slopes
- 6E: Berks and Weikert soils, 25 to 65 percent slopes
- 7D: Berks and Weikert very stony soils, 15 to 35 percent slopes
- 8D: Caneyville-Opequon-Rock outcrop complex, 7 to 25 percent slopes
- 8E: Caneyville-Opequon-Rock outcrop complex, 25 to 60 percent slopes
- 9C: Carbo and Chilhowie soils, 7 to 15 percent slopes
- 9D: Carbo and Chilhowie soils, 15 to 25 percent slopes
- W: Water



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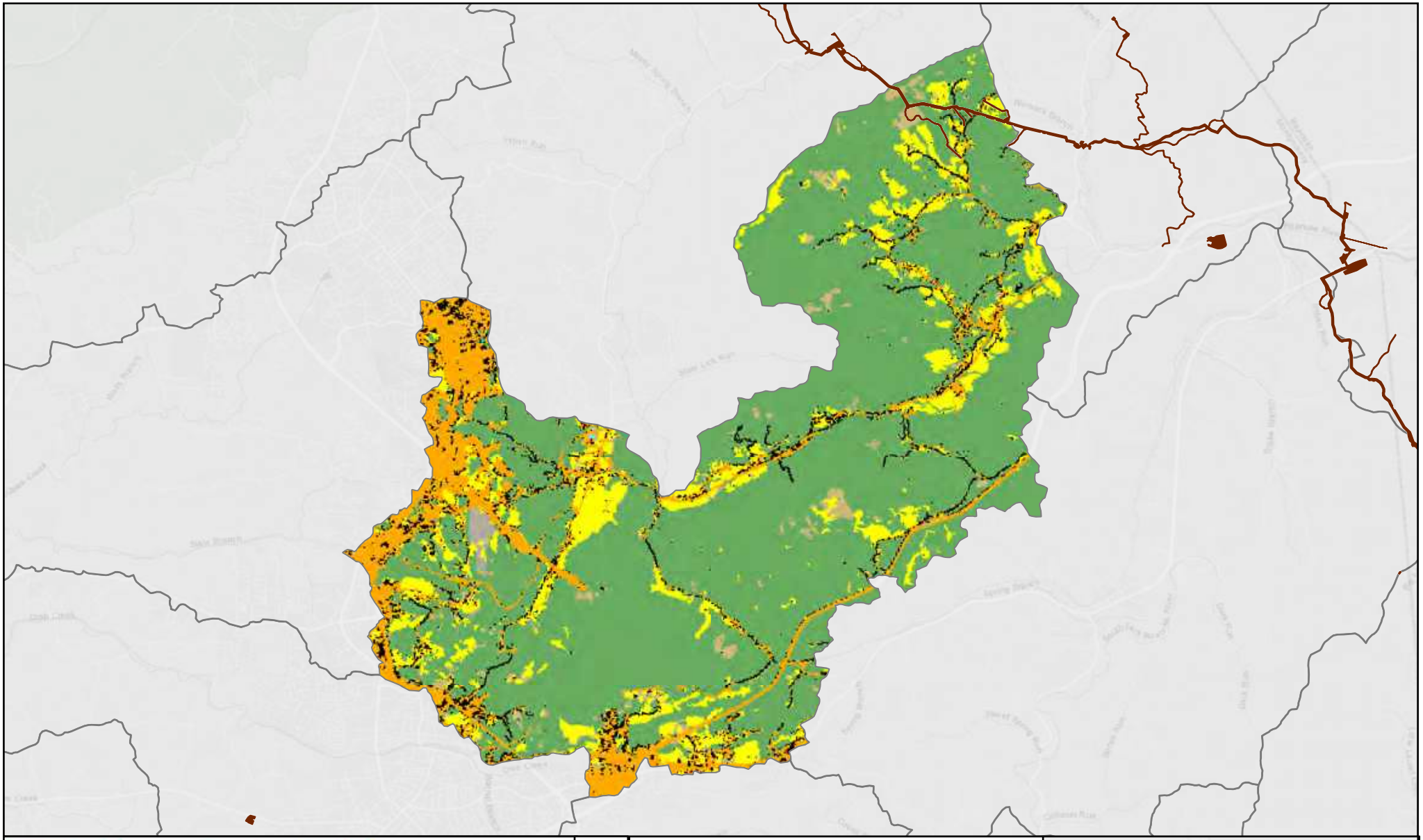
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 FAX: 343-9031
E-mail: potesta@potesta.com

SCALE: See Mapping
DATE: AUGUST 2021
PN: **010-17-0451.016**
DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

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

Cumulative Impact Assessment - Soil
Wilson Creek-North Fork Roanoke River (0301010202) Upper Roanoke HUC 8 Watershed
Montgomery County, Virginia
NAD 83 UTM Zone 17N

FIGURE 249



Mountain Valley PIPELINE

Figure: 250

Land Use/Land Cover 2011
Wilson Creek-North Fork Roanoke River
30101010202 HUC12 Watershed

5/26/2022

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

N
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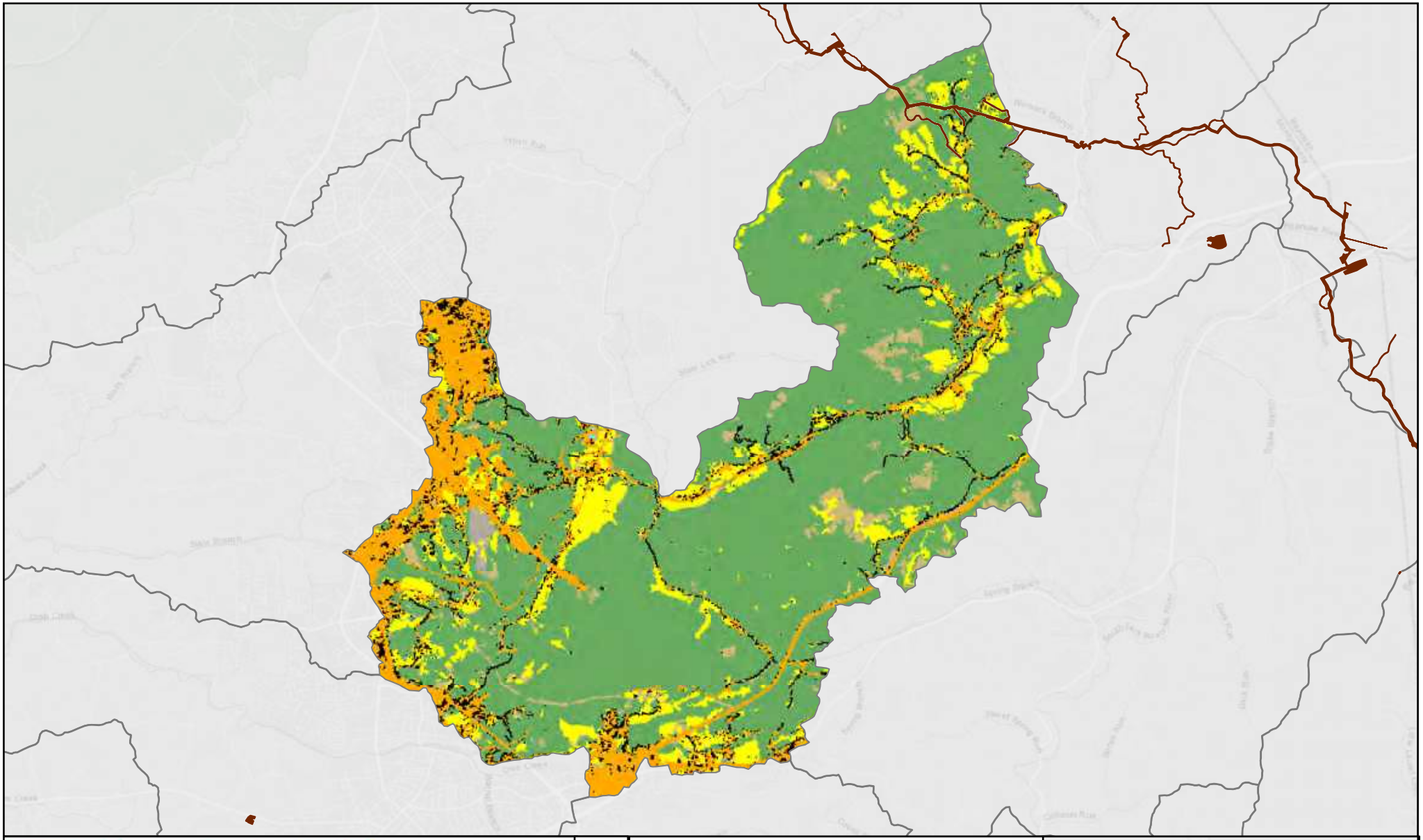
Miles
0 1.5 3

Scale: 1:105,000

Map Extent



Mountain Valley PIPELINE

Figure: 251

Land Use/Land Cover 2016
Wilson Creek-North Fork Roanoke River
30101010202 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2016 Land Use Land Cover

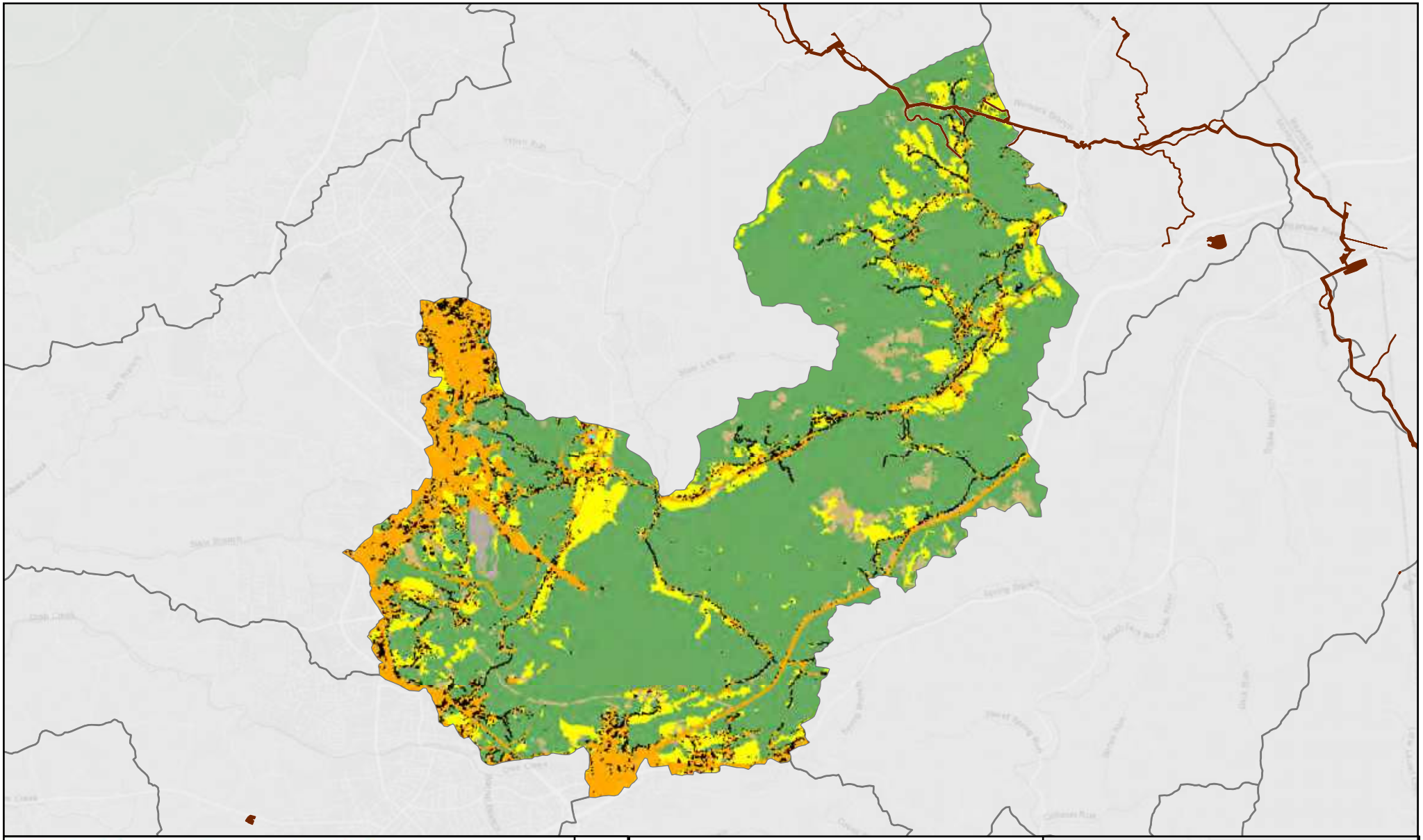
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 1.5 3 Miles

Scale: 1:105,000

Map Extent



Mountain Valley PIPELINE

Figure: 251a

Land Use/Land Cover 2019
Wilson Creek-North Fork Roanoke River
30101010202 HUC12 Watershed

5/25/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2019 Land Use Land Cover

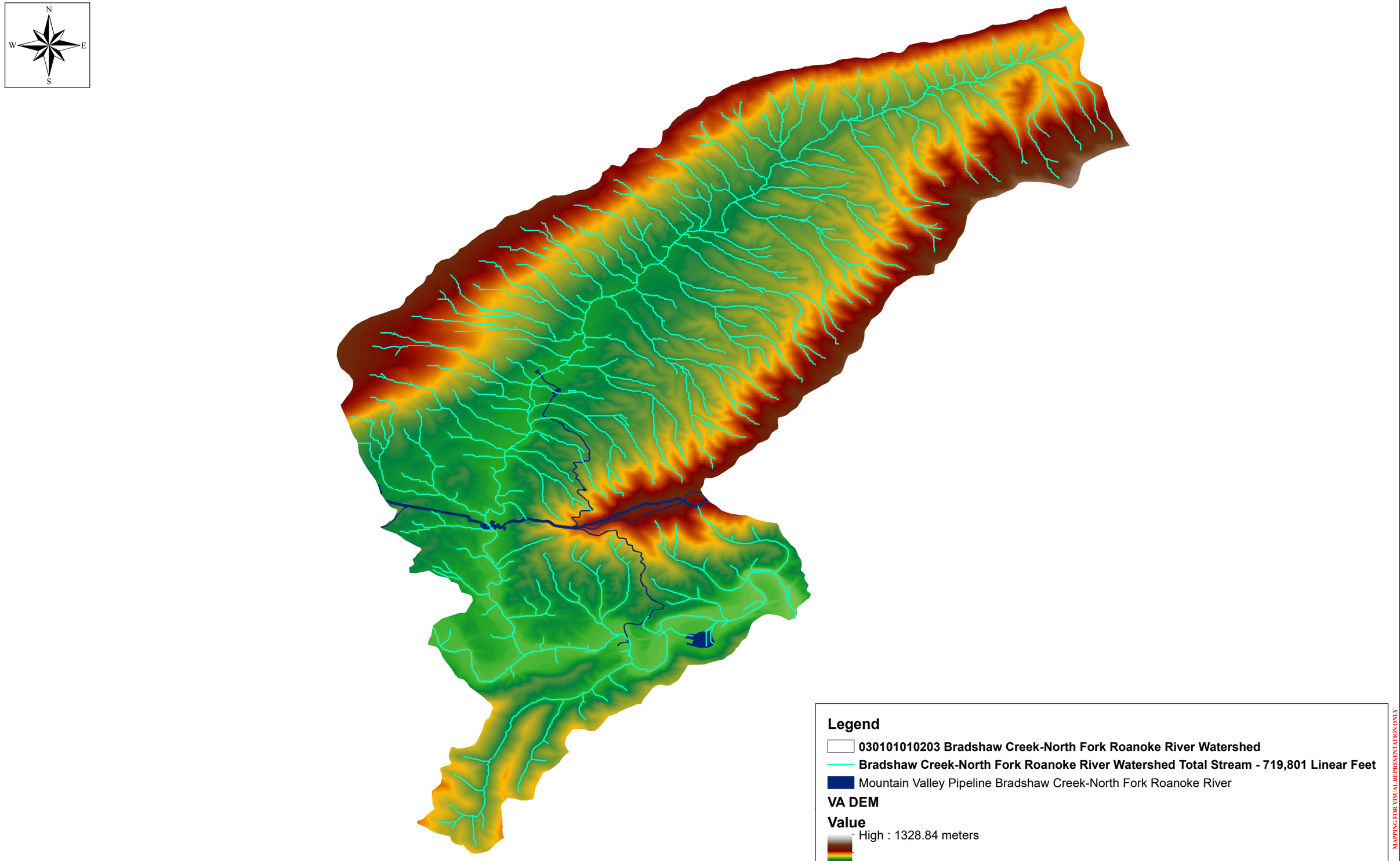
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 1.5 3 Miles

Scale: 1:105,000

Map Extent



Legend

- 030101010203 Bradshaw Creek-North Fork Roanoke River Watershed
- Bradshaw Creek-North Fork Roanoke River Watershed Total Stream - 719,801 Linear Feet
- Mountain Valley Pipeline Bradshaw Creek-North Fork Roanoke River

VA DEM

Value

High : 1328.84 meters

Low : 135.786 meters

Total Impacts - 248 Linear Feet (0.0345%)

MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: 1" = 1 Mile
DATE: SEPT 2021
PN: **0101-17-0451.016**

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

I:\Projects\2017\17-0451.MVP.EnvCon.Monitoring\Maps\2021\CIA Soft\Figure 252 - Bradshaw Creek Watershed.mxd

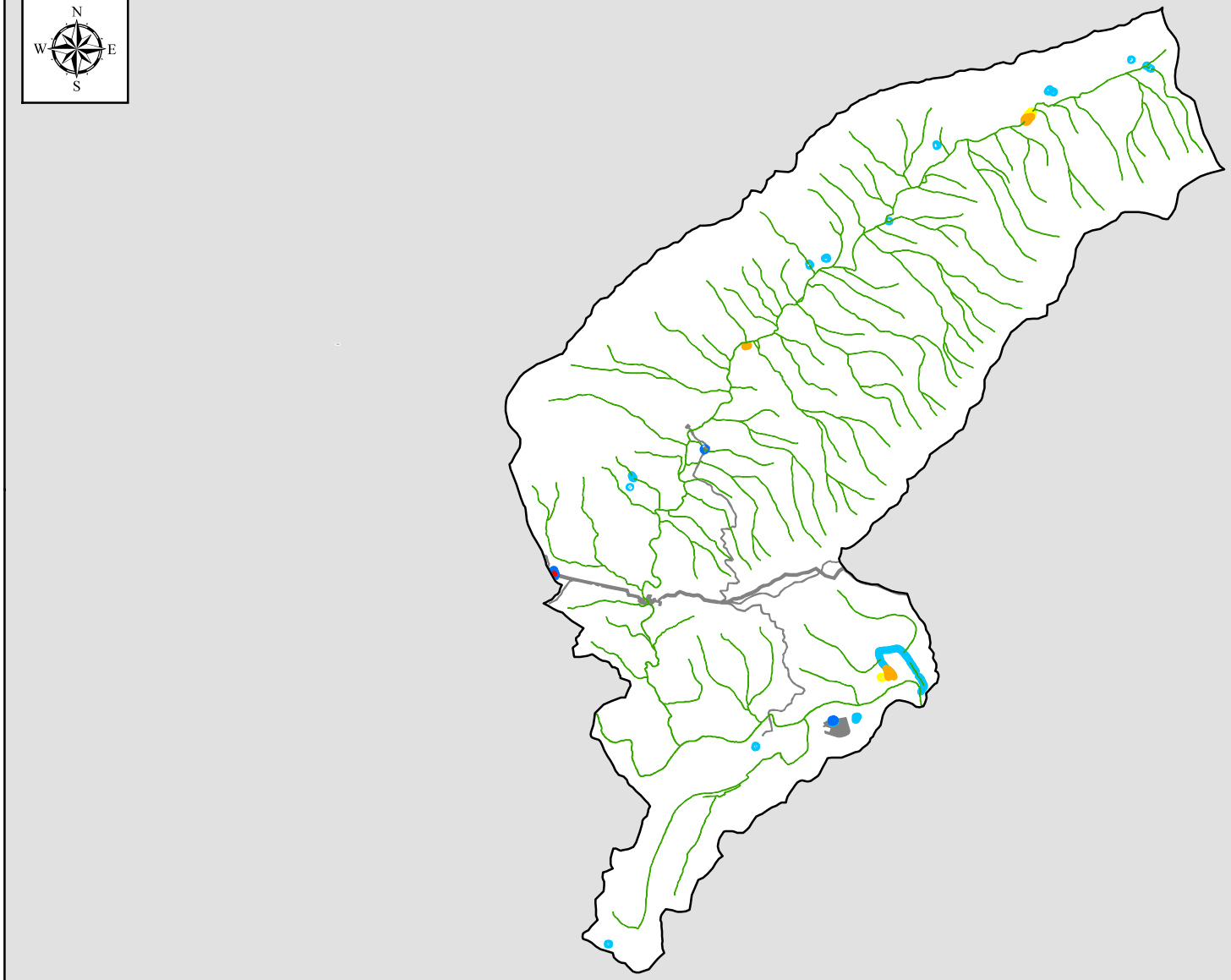
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Bradshaw Creek-North Fork Roanoke River Watershed (030101010203)
Upper Roanoke HUC 8 Watershed, Virginia
For Informational Purposes Only

FIGURE 252



Mountain Valley PIPELINE

Bradshaw Creek-North Fork Roanoke River

Figure 253

1:94,000

1/6/2022

LEGEND

- Wetland Impacts - 0.05 acres
- Bradshaw Creek-North Fork Roanoke River Delineated Wetland Area - 0.26 acres

NWI Wetlands - 233.62 acres

- Freshwater Emergent Wetland - 2.13 acres
- Freshwater Forested/Shrub Wetland - 1.61 acres
- Freshwater Pond - 4.88 acres
- Riverine - 225.01 acres
- Mountain Valley Pipeline
- 030101010203_Bradshaw Creek-North Fork Roanoke River

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

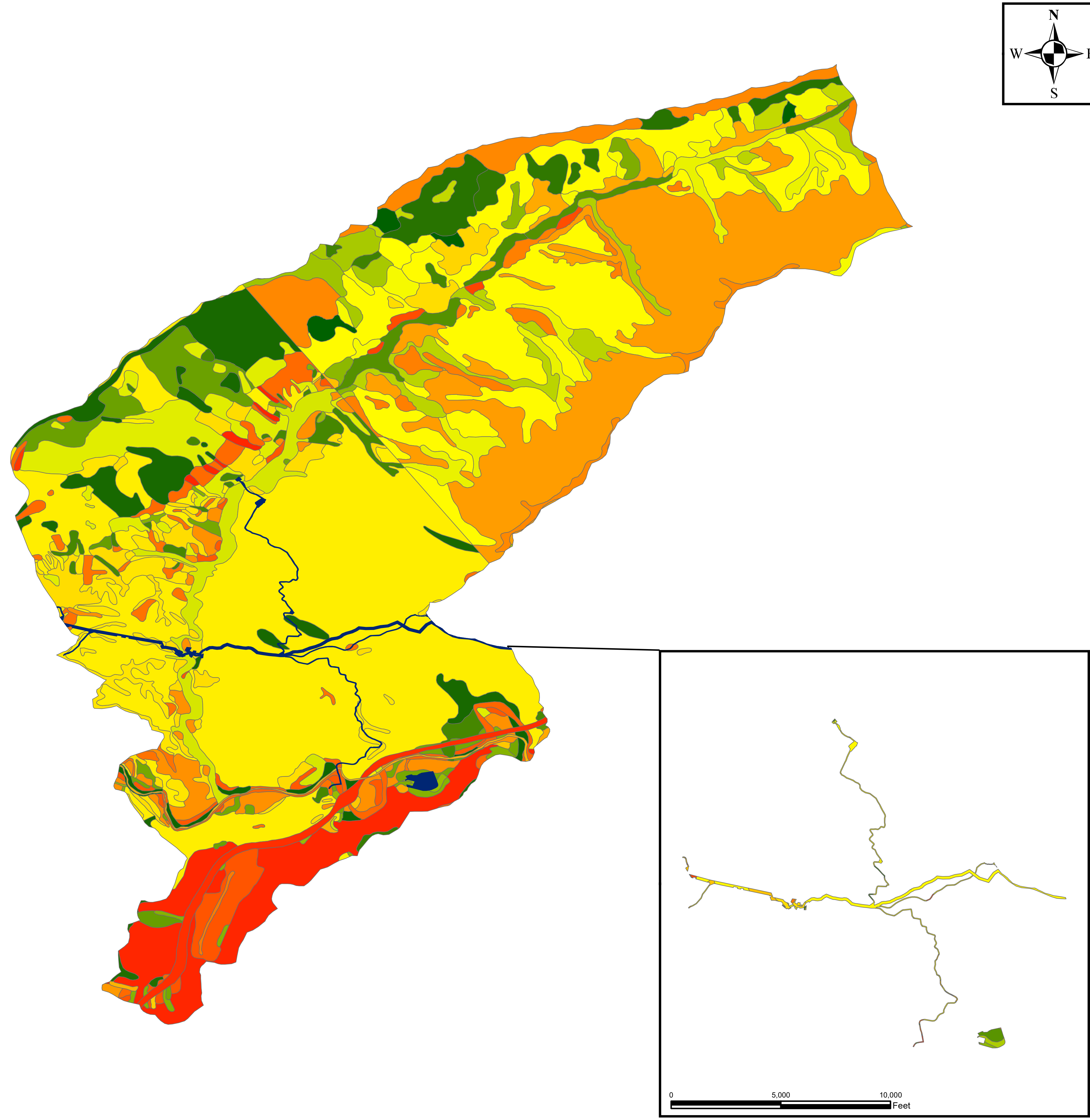
Legend

Mountain Valley Pipeline Bradshaw Creek-North Fork Roanoke River

Bradshaw Creek-North Fork Roanoke River

- 10: Craigsville soils
- 11B: Duffield-Ernest complex, 2 to 7 percent slopes
- 11C: Duffield-Ernest complex, 7 to 15 percent slopes
- 11D: Dekalb channery sandy loam, 15 to 35 percent slopes, very stony
- 11E: Dekalb channery sandy loam, 35 to 60 percent slopes, very stony
- 12F: Dekalb-Rock outcrop complex, 25 to 80 percent slopes
- 13A: Derroc cobbly sandy loam, 0 to 4 percent slopes, occasionally flooded
- 13C: Frederick and Vertrees gravelly silt loams, 7 to 15 percent slopes
- 13D: Frederick and Vertrees gravelly silt loams, 15 to 25 percent slopes
- 16C: Groseclose and Poplimento soils, 7 to 15 percent slopes
- 16D: Groseclose and Poplimento soils, 15 to 25 percent slopes
- 16E: Groseclose and Poplimento soils, 25 to 60 percent slopes
- 19B: Guernsey silt loam, 2 to 7 percent slopes
- 1C: Berks-Clymer complex, 7 to 15 percent slopes
- 20B: Hayter loam, 2 to 7 percent slopes
- 21C: Hayter soils, 7 to 15 percent slopes
- 22C: Jefferson soils, 7 to 15 percent slopes - Montgomery; 22C: Gilpin loam, 7 to 15 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 22D: Gilpin loam, 15 to 25 percent slopes
- 23C: Jefferson very stony soils, 7 to 15 percent slopes - Montgomery; 23C: Grimsley cobbly loam, 7 to 15 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 24D: Jefferson extremely stony soils, 7 to 25 percent slopes
- 25: McGary and Purdy soils
- 28: Ross soils
- 29: Udorthents and Urban land
- 2B: Allegheny loam, 2 to 7 percent slopes
- 2C: Berks-Groseclose complex, 7 to 15 percent slopes
- 30B: Unison and Braddock soils, 2 to 7 percent slopes
- 30C: Unison and Braddock soils, 7 to 15 percent slopes - Montgomery; 30C: Laidig fine sandy loam, 7 to 15 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 30D: Unison and Braddock soils, 15 to 25 percent slopes - Montgomery; 30D: Laidig fine sandy loam, 15 to 25 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 31D: Laidig fine sandy loam, 15 to 25 percent slopes, very stony
- 32B: Macove gravelly silt loam, 2 to 7 percent slopes
- 32C: Macove gravelly silt loam, 7 to 15 percent slopes
- 33: Weaver soils
- 34E: Wurno-Caneyville complex, 25 to 45 percent slopes
- 38B: Shelocta silt loam, 2 to 7 percent slopes
- 38C: Shelocta silt loam, 7 to 15 percent slopes
- 38D: Shelocta silt loam, 15 to 25 percent slopes
- 3D: Berks-Lowell-Rayne complex, 15 to 25 percent slopes
- 3E: Berks-Lowell-Rayne complex, 25 to 65 percent slopes
- 42A: Sindion loam, 0 to 2 percent slopes, occasionally flooded
- 45C: Spessard loamy sand, 7 to 15 percent slopes
- 45D: Spessard loamy sand, 15 to 25 percent slopes
- 45E: Spessard loamy sand, 25 to 40 percent slopes
- 4E: Berks-Rock outcrop complex, 25 to 70 percent slopes
- 50C: Tumbling loam, 7 to 15 percent slopes, very stony
- 50D: Tumbling loam, 15 to 25 percent slopes, very stony
- 54C: Weikert-Berks complex, 7 to 15 percent slopes
- 54E: Weikert-Berks complex, 15 to 45 percent slopes
- 55F: Weikert-Rock outcrop complex, 45 to 70 percent slopes
- 58B: Zoar silt loam, 2 to 7 percent slopes
- 5D: Berks-Weikert complex, 15 to 25 percent slopes
- 6E: Berks and Weikert soils, 25 to 65 percent slopes
- 7D: Berks and Weikert very stony soils, 15 to 35 percent slopes
- 8A: Combs loam, 0 to 2 percent slopes, occasionally flooded
- 8D: Caneyville-Opequon-Rock outcrop complex, 7 to 25 percent slopes
- 8E: Caneyville-Opequon-Rock outcrop complex, 25 to 60 percent slopes
- 9B: Cotaco loam, 2 to 7 percent slopes
- 9C: Carbo and Chilhowie soils, 7 to 15 percent slopes
- 9D: Carbo and Chilhowie soils, 15 to 25 percent slopes
- W: Water

0 1 2 4 Miles



MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment - Soil
Bradshaw Creek - North Fork Roanoke River (030101010203)
Upper Roanoke HUC 8 Watershed
Mongomery and Roanoke Counties &
Cities of Roanoke and Salem, Virginia
For Informational Purposes Only

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

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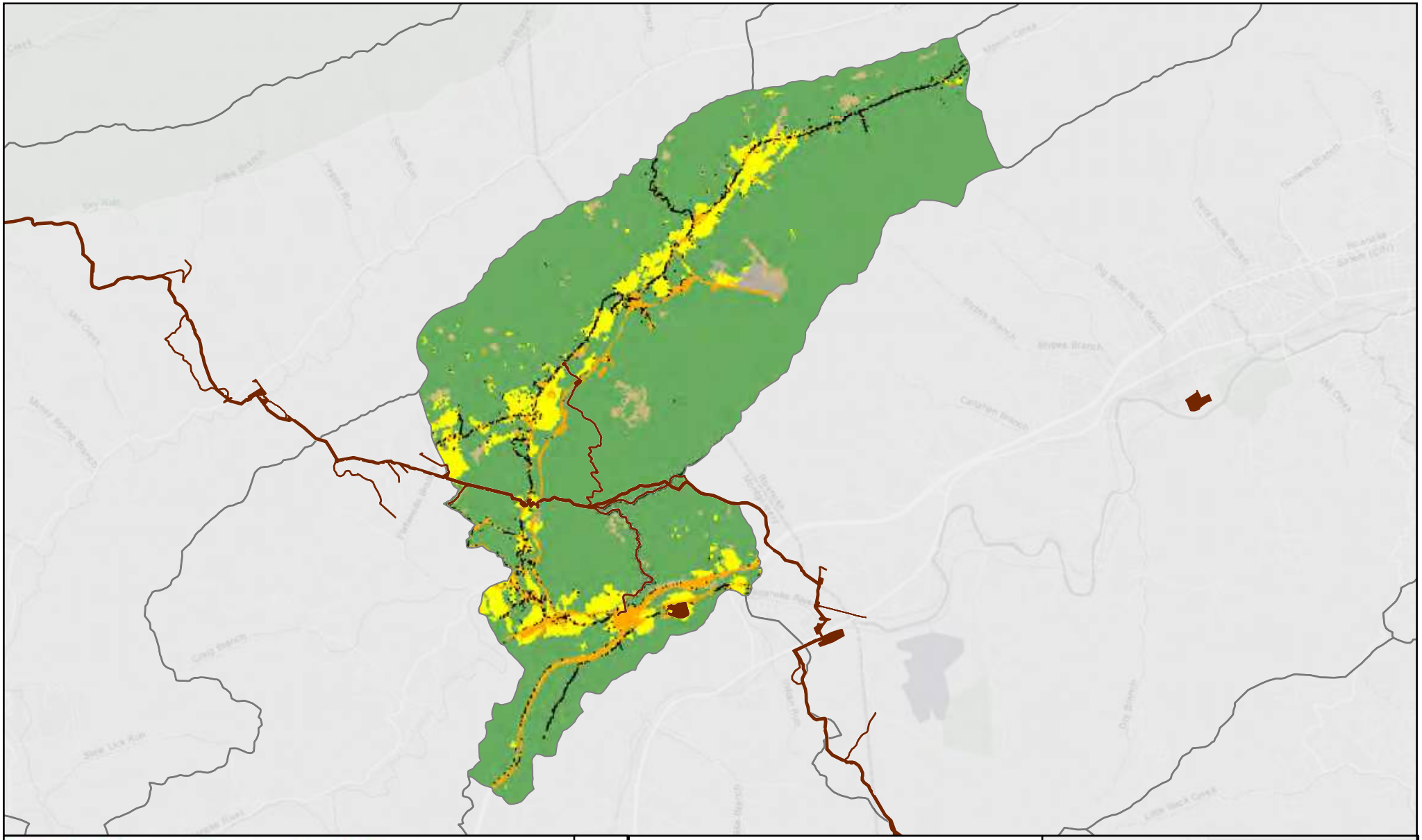
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304)-343-9031
E-mail: potesta@potesta.com

SCALE: See Mapping | DRAWN: KBW
DATE: AUGUST 2021 | CHECKED: JLY
PN: 0101-17-0451.016 | APPROVED: JLY

I:\Projects\2017\17_0451_MVP_EnviCon_Monitoring\Maps\2021\CIA Soils\Figure 254 - Bradshaw Creek North Fork Roanoke River Soil.mxd

FIGURE 254



Mountain Valley PIPELINE

Figure: 255

Land Use/Land Cover 2011
Bradshaw Creek-North Fork Roanoke River
30101010203 HUC12 Watershed

5/26/2022

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

N
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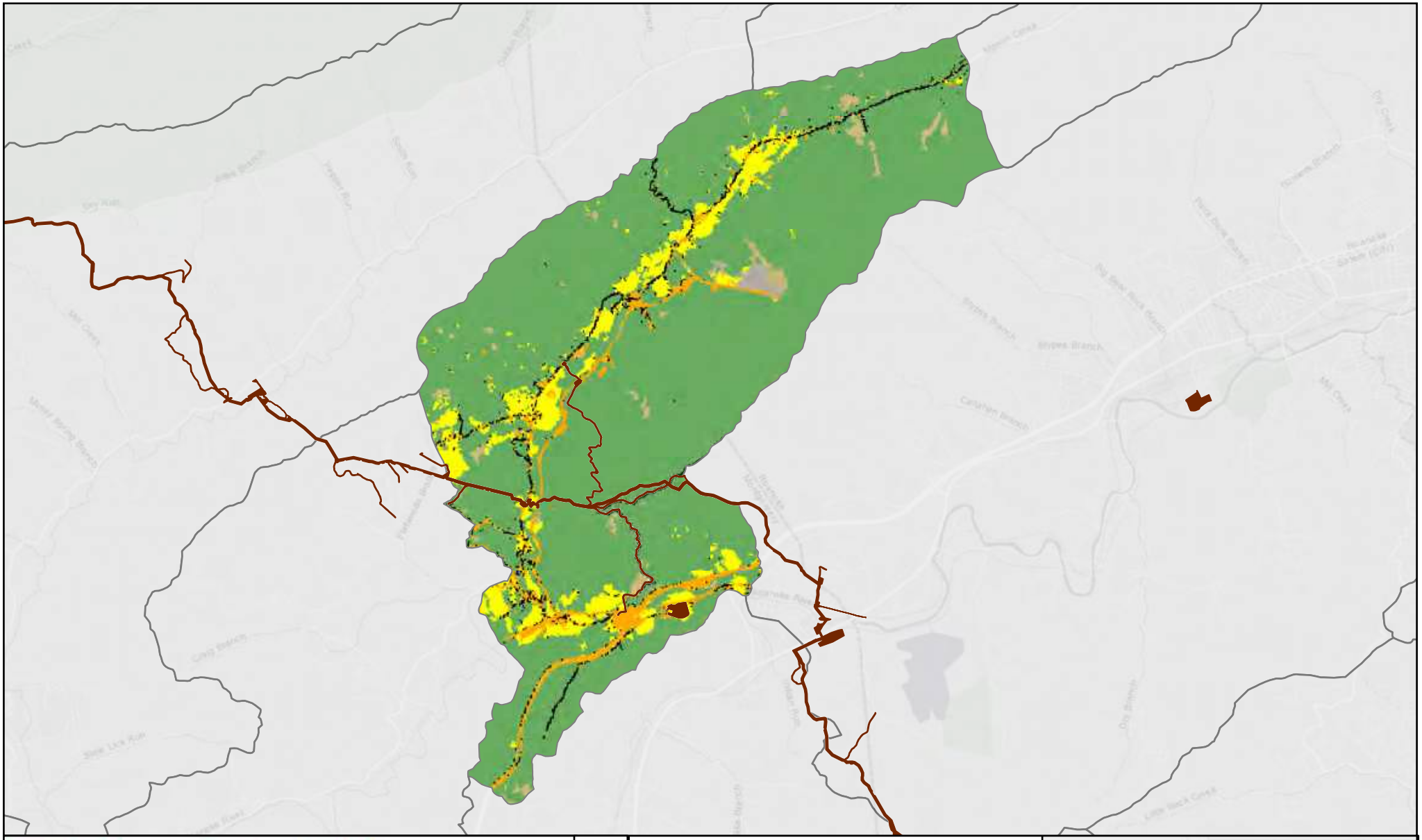
0 1 2 Miles

Scale: 1:95,000

Map Extent



Mountain Valley PIPELINE

Figure: 256

Land Use/Land Cover 2016
Bradshaw Creek-North Fork Roanoke River
30101010203 HUC12 Watershed

5/26/2022

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

N
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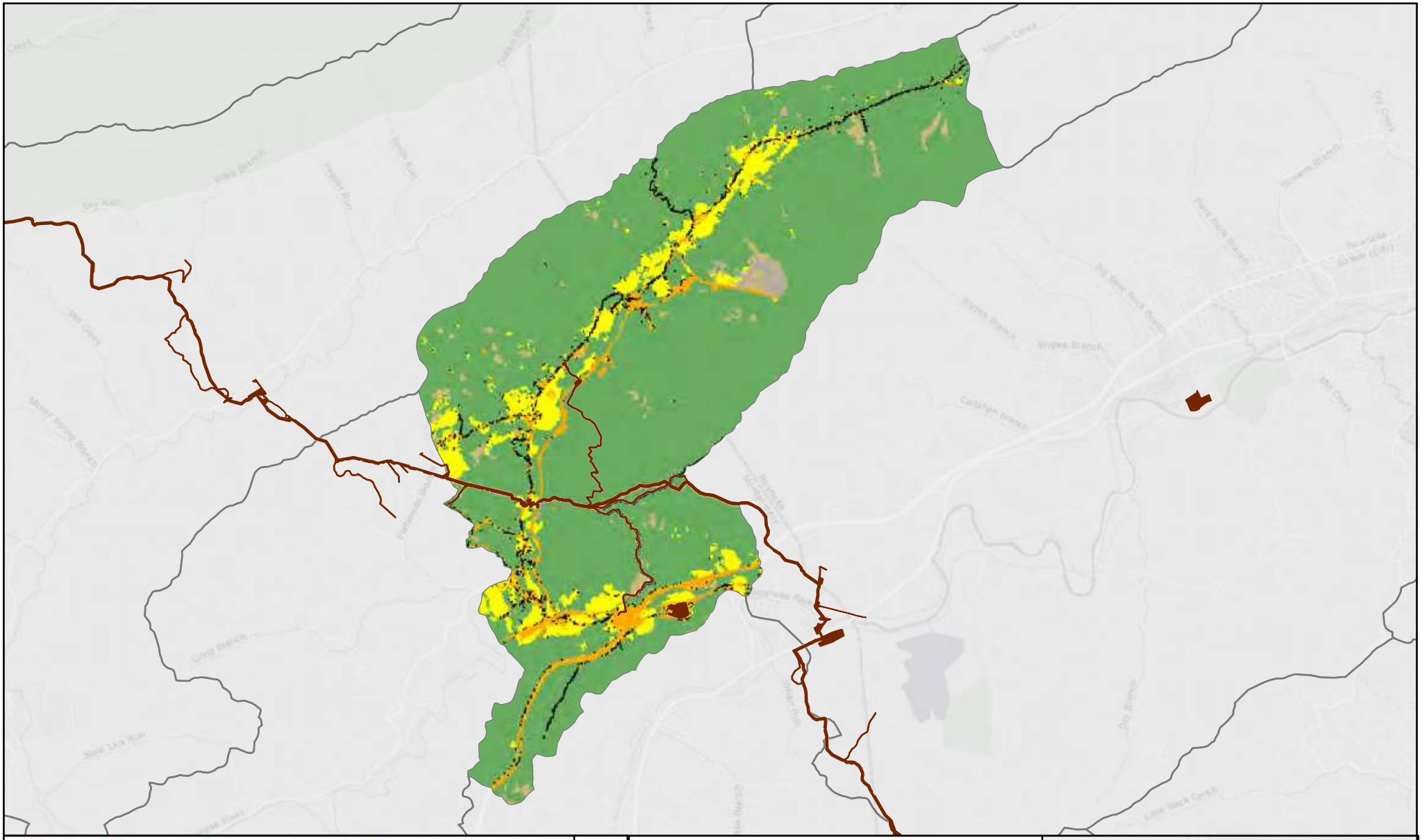
Scale: 1:95,000

Map Extent



Mountain Valley PIPELINE

Figure: 256a

Land Use/Land Cover 2019
Bradshaw Creek-North Fork Roanoke River
30101010203 HUC12 Watershed

5/25/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2019 Land Use Land Cover

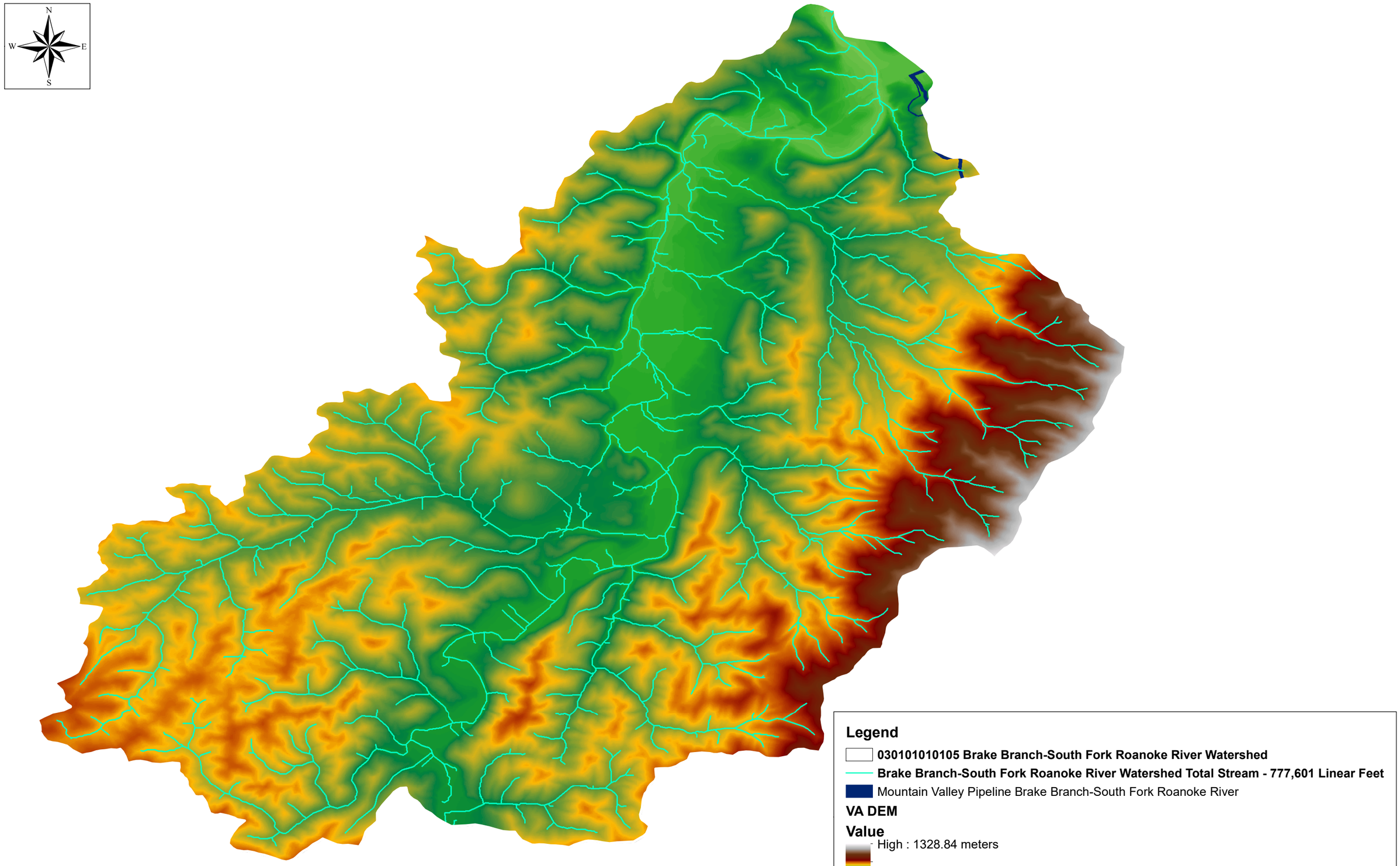
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 1 2 Miles

Scale: 1:95,000

Map Extent



Legend

030101010105 Brake Branch-South Fork Roanoke River Watershed

Brake Branch-South Fork Roanoke River Watershed Total Stream - 777,601 Linear Feet

Mountain Valley Pipeline Brake Branch-South Fork Roanoke River

VA DEM

Value

High : 1328.84 meters

Low : 135.786 meters

Total Impacts - 79 Linear Feet (0.0102%)

MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: 1" = 1 Mile
DATE: SEPT 2021
PN: **0101-17-0451.016**
P:\Projects\2017\17-0451.MVP.EnvCon.Monitoring\Maps\2021 CIA Soils\Figure 257 - Blake Branch Watershed.mxd

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

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

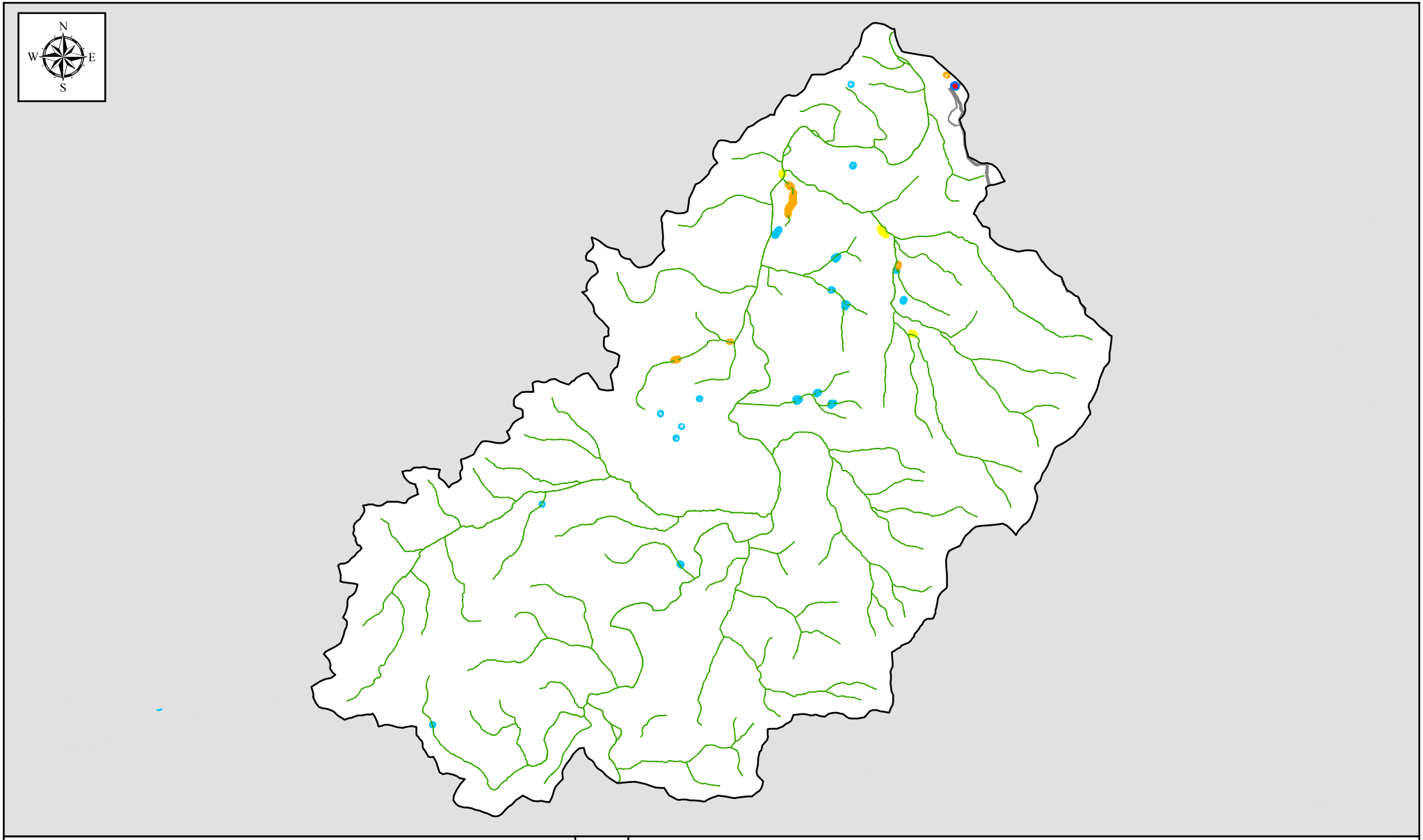
POTESTA

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

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Brake Branch-South Fork Roanoke River Watershed (030101010105)
Upper Roanoke HUC 8 Watershed, Virginia

For Informational Purposes Only

FIGURE 257



Mountain Valley PIPELINE

Brake Branch-South Fork Roanoke River

Figure 258

1:86,000

1/6/2022

LEGEND

- Wetland Impacts - 0.04 acres
- Brake Branch-South Fork Roanoke River Delineated Wetland Area - 0.2 acres

NWI Wetlands - 253.17 acres

- Freshwater Emergent Wetland - 4.42 acres
- Freshwater Forested/Shrub Wetland - 1.96 acres
- Freshwater Pond - 6.07 acres
- Riverine - 240.71 acres
- Mountain Valley Pipeline
- 030101010105_Brake Branch-South Fork Roanoke River

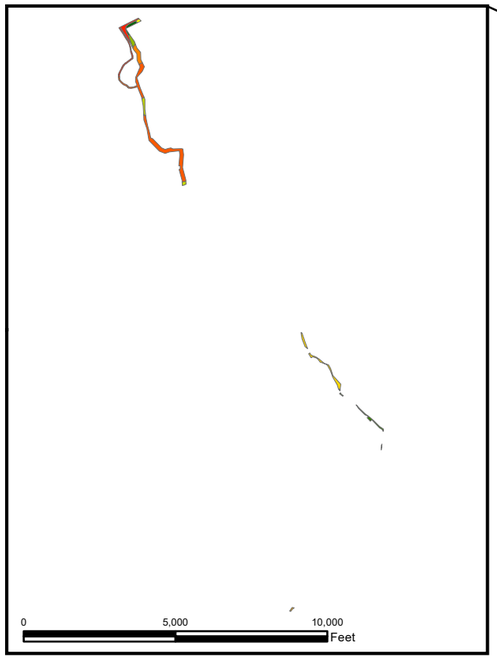
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Brake Branch-South Fork Roanoke River

Brake Branch-South Fork Roanoke River

- 10: Craigsville soils
- 11B: Duffield-Ernest complex, 2 to 7 percent slopes
- 11C: Duffield-Ernest complex, 7 to 15 percent slopes
- 11D: Dekalb channery sandy loam, 15 to 35 percent slopes, very stony
- 11E: Dekalb channery sandy loam, 35 to 60 percent slopes, very stony
- 11F: Dekalb channery sandy loam, 60 to 80 percent slopes, very stony
- 12B: Frederick and Vertrees silt loams, 2 to 7 percent slopes
- 12C: Frederick and Vertrees silt loams, 7 to 15 percent slopes
- 12F: Dekalb-Rock outcrop complex, 25 to 80 percent slopes
- 13C: Frederick and Vertrees gravelly silt loams, 7 to 15 percent slopes
- 13D: Frederick and Vertrees gravelly silt loams, 15 to 25 percent slopes
- 16C: Groseclose and Poplimento soils, 7 to 15 percent slopes
- 16D: Groseclose and Poplimento soils, 15 to 25 percent slopes
- 16E: Groseclose and Poplimento soils, 25 to 60 percent slopes
- 17C: Groseclose and Poplimento gravelly soils, 7 to 15 percent slopes
- 18B: Groseclose-Urban land complex, 2 to 7 percent slopes
- 18C: Groseclose-Urban land complex, 7 to 15 percent slopes
- 19B: Guernsey silt loam, 2 to 7 percent slopes
- 1C: Berks-Clymer complex, 7 to 15 percent slopes
- 20B: Hayter loam, 2 to 7 percent slopes
- 22C: Jefferson soils, 7 to 15 percent slopes
- 23C: Jefferson very stony soils, 7 to 15 percent slopes
- 24D: Jefferson extremely stony soils, 7 to 25 percent slopes
- 25: McGary and Purdy soils
- 28: Ross soils
- 29: Udorthents and Urban land
- 2B: Berks-Groseclose complex, 2 to 7 percent slopes
- 2C: Berks-Groseclose complex, 7 to 15 percent slopes
- 30B: Unison and Braddock soils, 2 to 7 percent slopes
- 30C: Unison and Braddock soils, 7 to 15 percent slopes
- 30D: Unison and Braddock soils, 15 to 25 percent slopes
- 31C: Unison and Braddock cobbly soils, 7 to 15 percent slopes
- 33: Weaver soils
- 3D: Berks-Lowell-Rayne complex, 15 to 25 percent slopes
- 3E: Berks-Lowell-Rayne complex, 25 to 65 percent slopes
- 46F: Sylvatus very channery silt loam, 55 to 75 percent slopes
- 4E: Berks-Rock outcrop complex, 25 to 70 percent slopes
- 5D: Berks-Weikert complex, 15 to 25 percent slopes
- 6E: Berks and Weikert soils, 25 to 65 percent slopes
- 7D: Berks and Weikert very stony soils, 15 to 35 percent slopes
- 8D: Caneyville-Opequon-Rock outcrop complex, 7 to 25 percent slopes
- 8E: Caneyville-Opequon-Rock outcrop complex, 25 to 60 percent slopes
- 9C: Carbo and Chilhowie soils, 7 to 15 percent slopes
- 9D: Carbo and Chilhowie soils, 15 to 25 percent slopes
- W: Water



0 1 2 4 Miles

MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: See Mapping | DRAWN: KBW
DATE: AUGUST 2021 | CHECKED: JLY
PN: 010-17-0451.016 | APPROVED: JLY

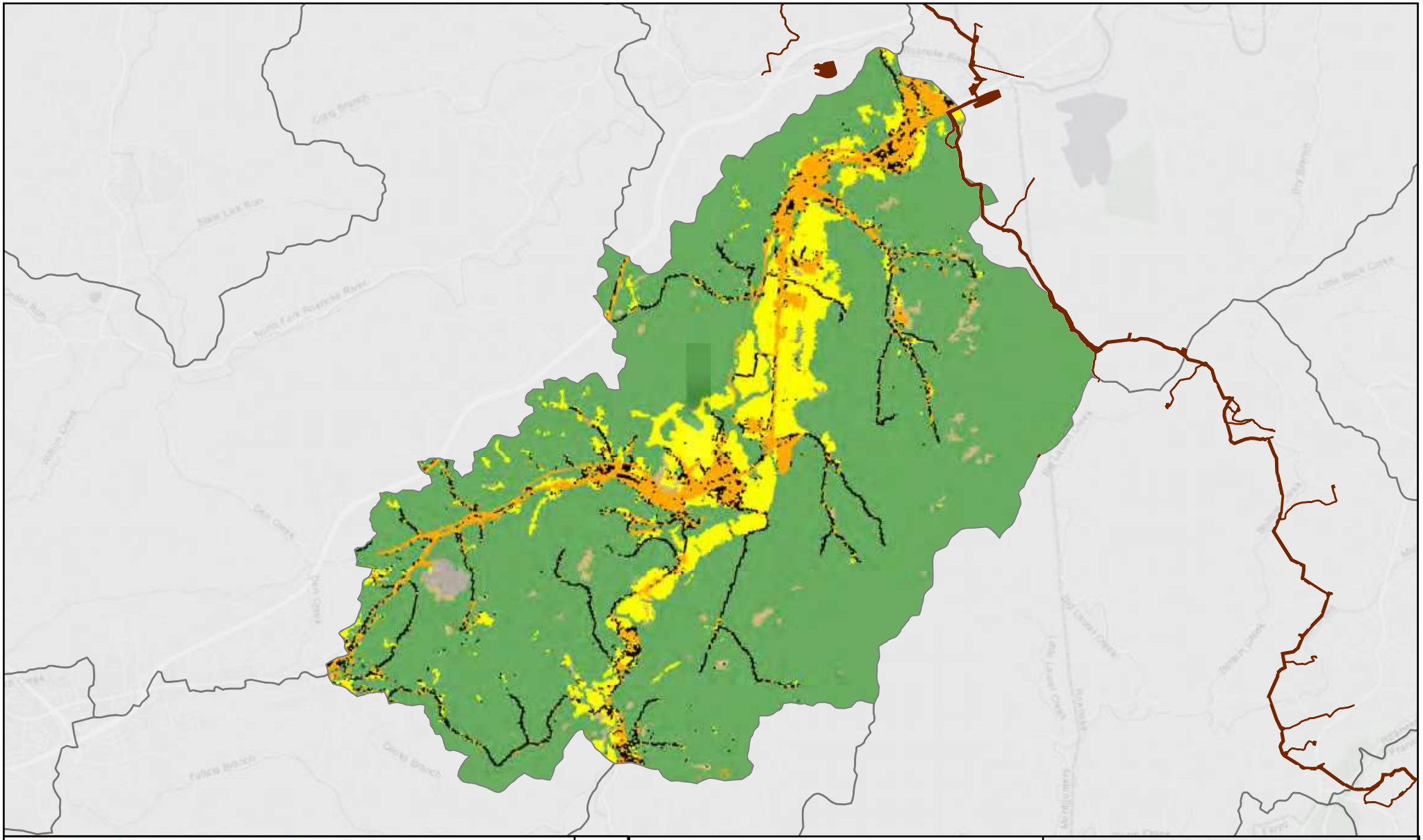
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
Brake Branch-South Fork Roanoke River (0301010105)
Upper Roanoke HUC 8 Watershed
Montgomery and Roanoke Counties &
Cities of Roanoke and Salem, Virginia
For Informational Purposes Only

FIGURE 259



Mountain Valley PIPELINE

Figure: 260

Land Use/Land Cover 2011
Brake Branch-South Fork Roanoke River
30101010105 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2011 Land Use Land Cover

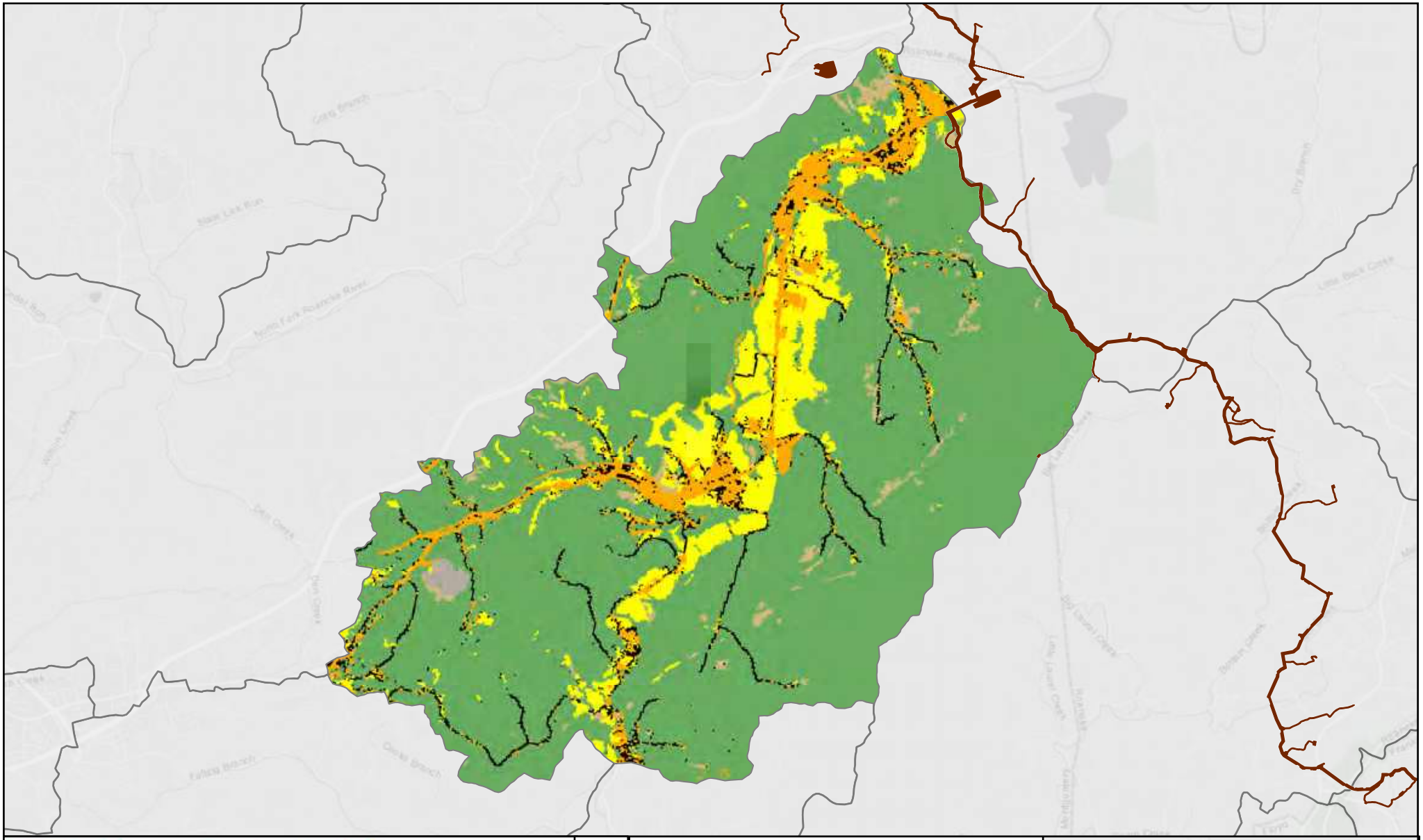
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 1 2 Miles

Scale: 1:90,000

Map Extent



Mountain Valley PIPELINE

Figure: 261

Land Use/Land Cover 2016
Brake Branch-South Fork Roanoke River
30101010105 HUC12 Watershed

5/26/2022

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

N
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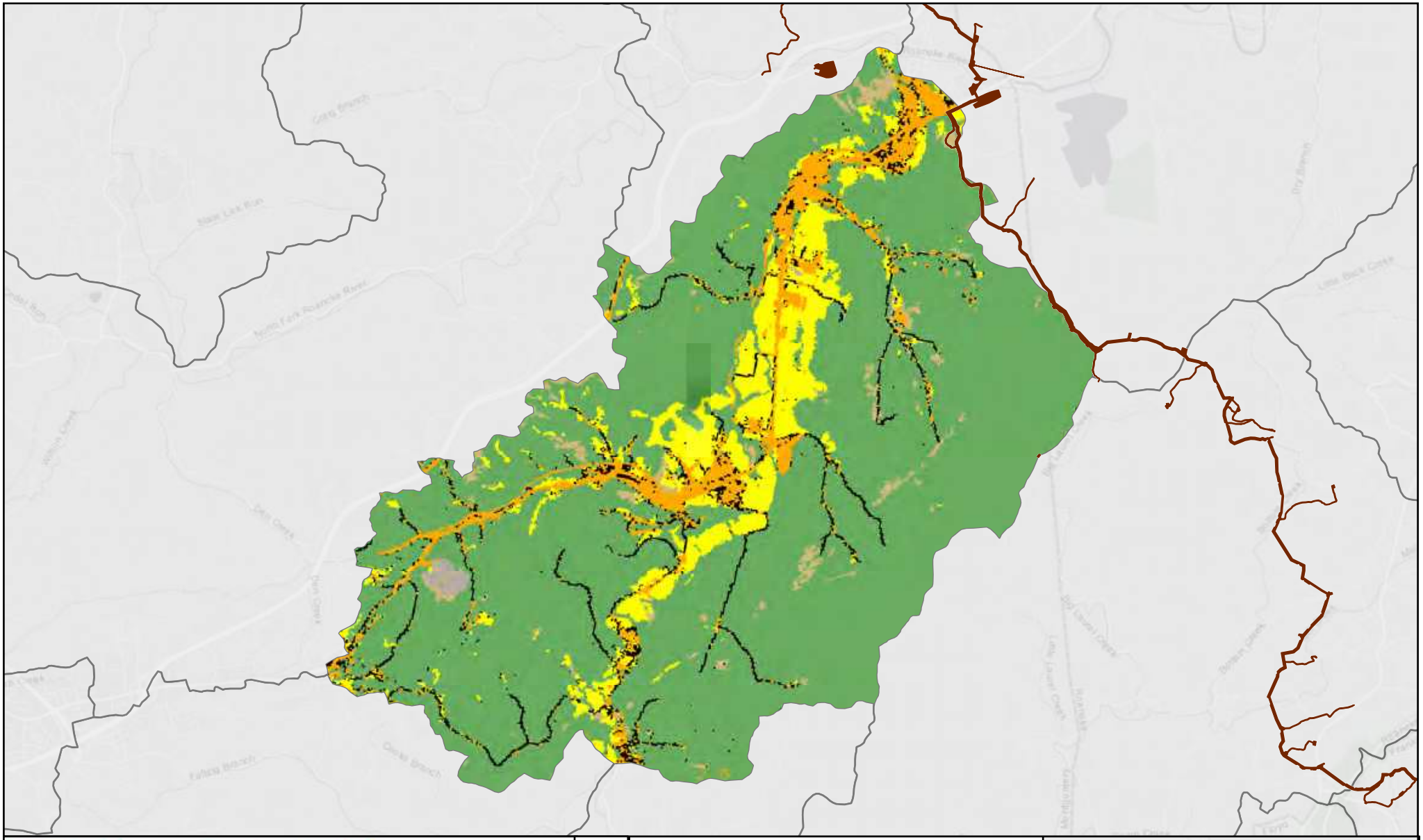
0 1 2 Miles

Scale: 1:90,000

Map Extent



Mountain Valley PIPELINE

Figure: 261a

Land Use/Land Cover 2019
Brake Branch-South Fork Roanoke River
30101010105 HUC12 Watershed

5/25/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2019 Land Use Land Cover

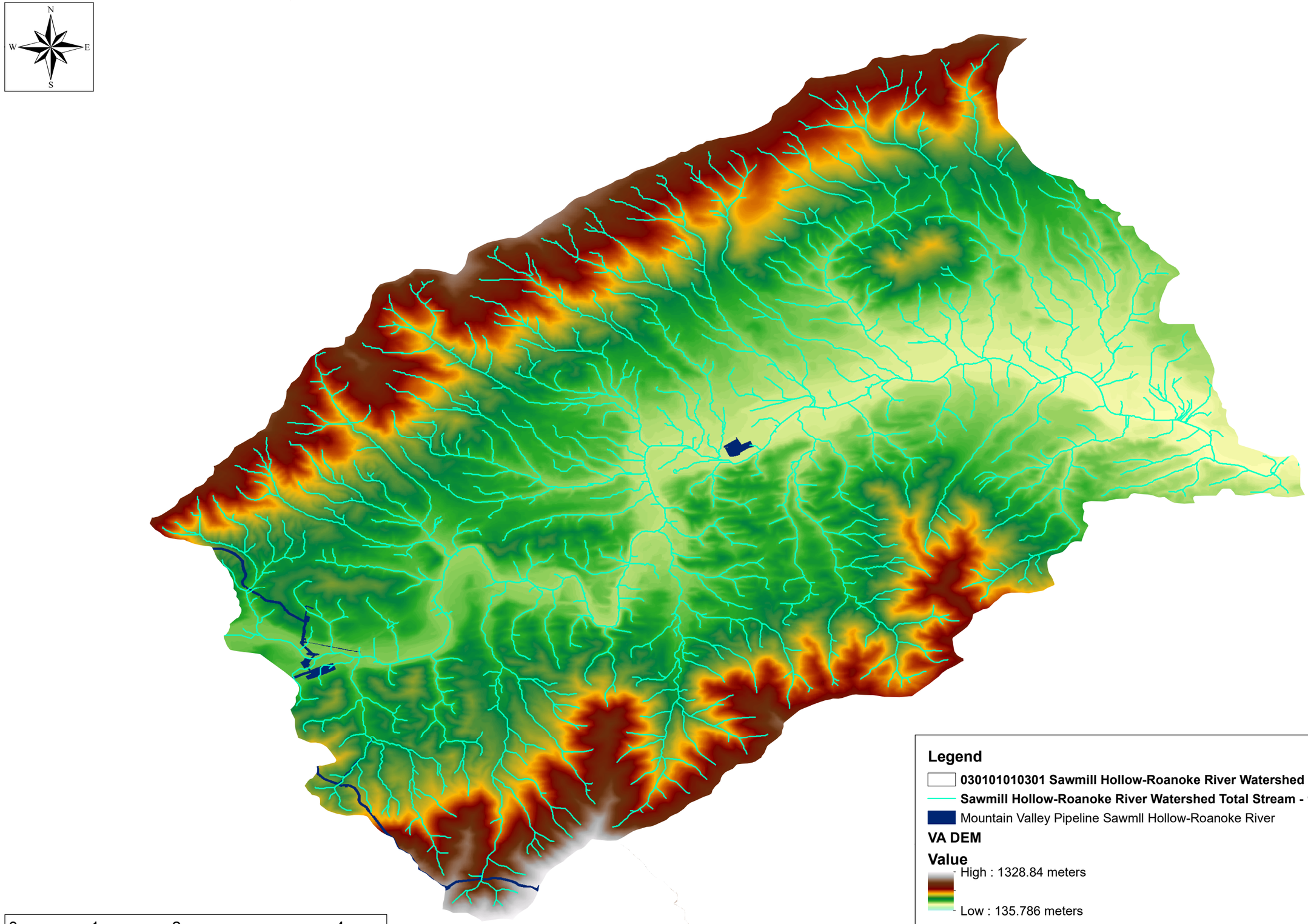
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 1 2 Miles

Scale: 1:90,000

Map Extent



MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: 1" = 1 Mile
DATE: SEPT 2021
PN: **0101-17-0451.016**

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

[Project:20171704510 MVP EnvCon Monitoring Maps\2021 GIA Soil\Figure_262 - Sawmill_Hollow_Watershed.mxd

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

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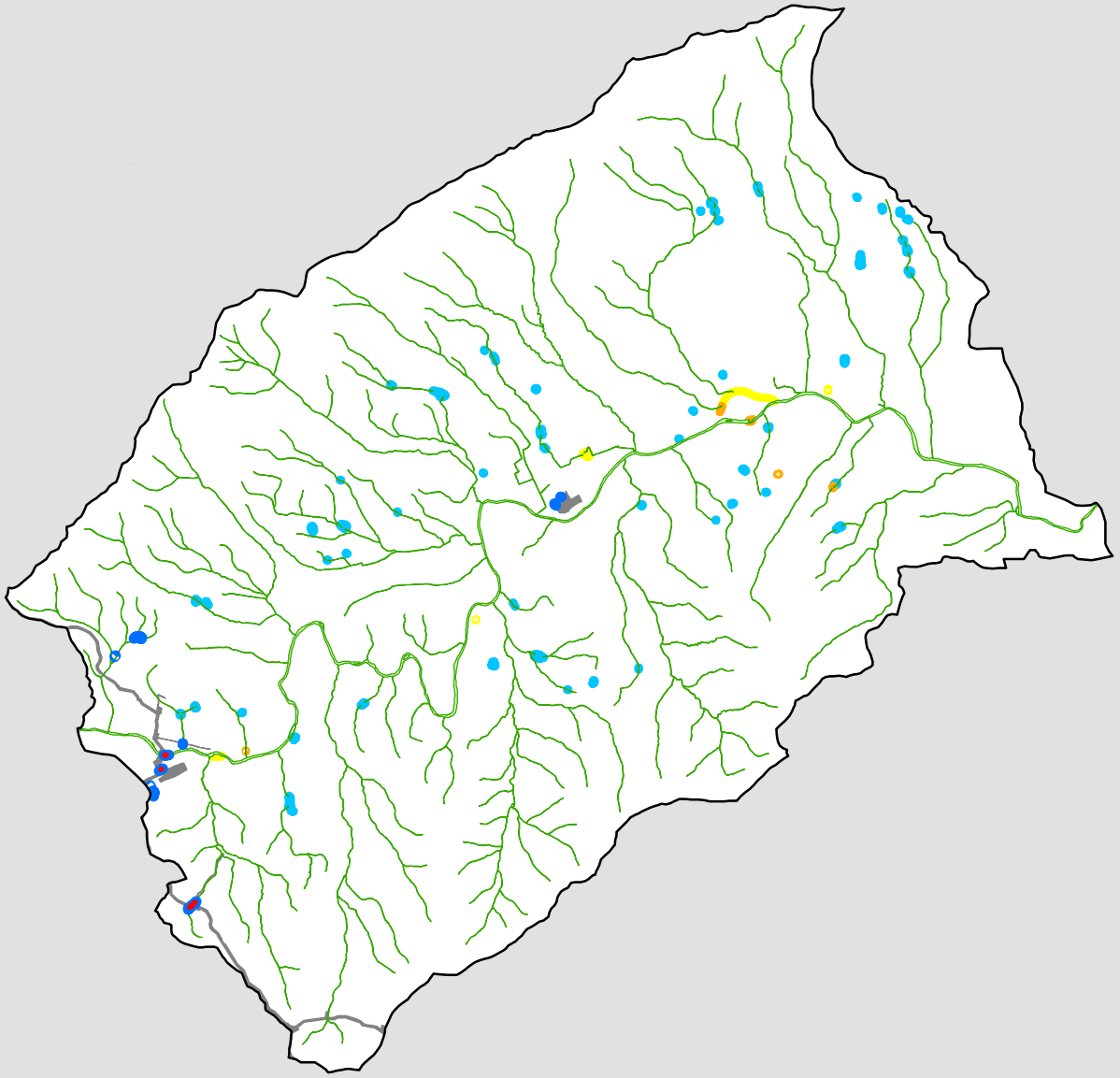
MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Sawmill Hollow-Roanoke River Watershed (030101010301)
Upper Roanoke HUC 8 Watershed, Virginia

For Informational Purposes Only

FIGURE 262



Mountain Valley PIPELINE

Sawmill Hollow-Roanoke River

Figure 263

1:120,000

1/6/2022

LEGEND

- Wetland Impacts - 0.09 acres
- Sawmill Hollow-Roanoke River Delineated Wetland Area - 1.97 acres

NWI Wetlands - 646.93 acres

- Freshwater Emergent Wetland - 1.18 acres
- Freshwater Forested/Shrub Wetland - 3.47 acres
- Freshwater Pond - 32 acres
- Riverine - 610.28 acres
- Mountain Valley Pipeline
- 030101010301_Sawmill Hollow-Roanoke River

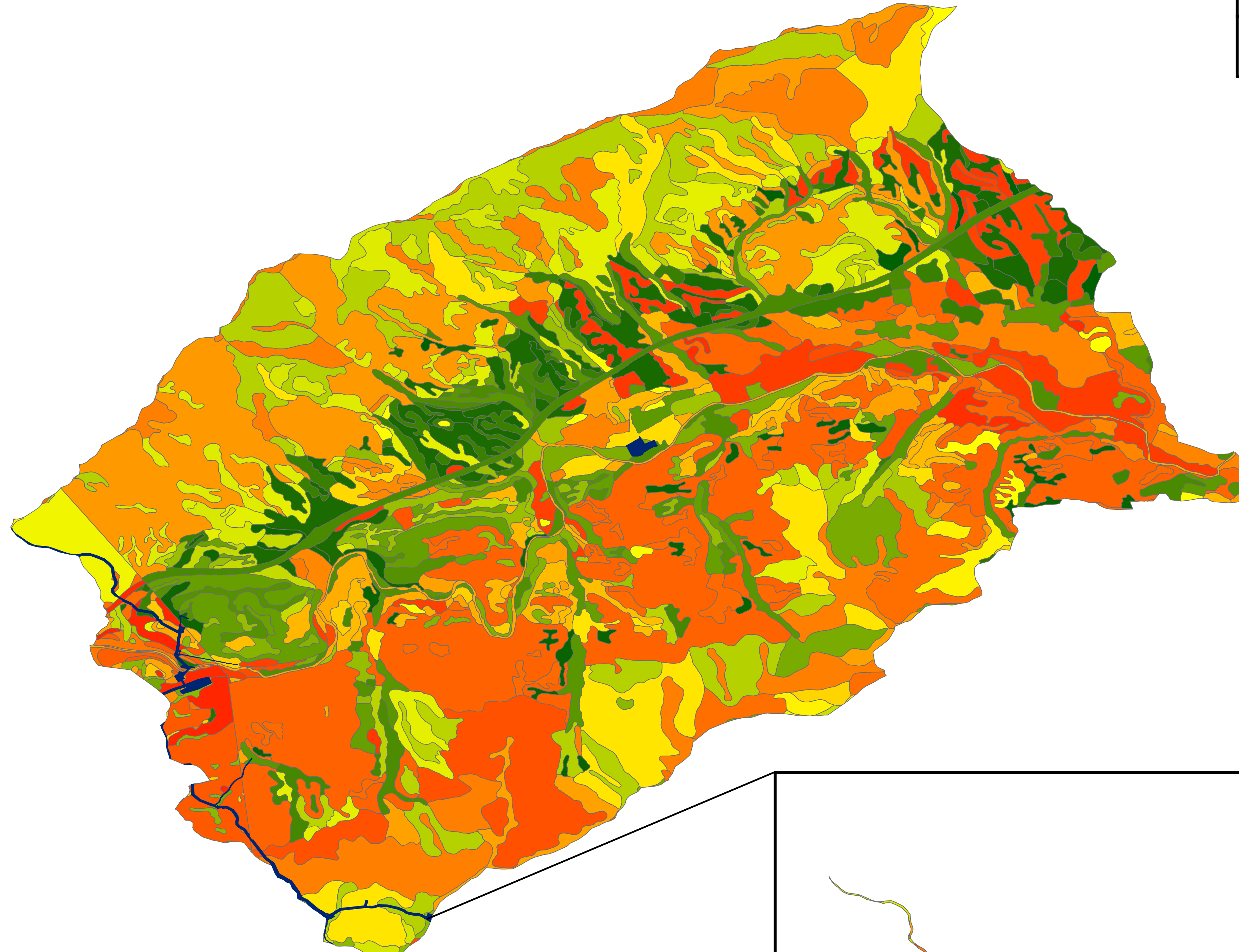
Note: Shapes are not to scale, enlarged to improve visibility.

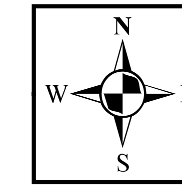
Legend

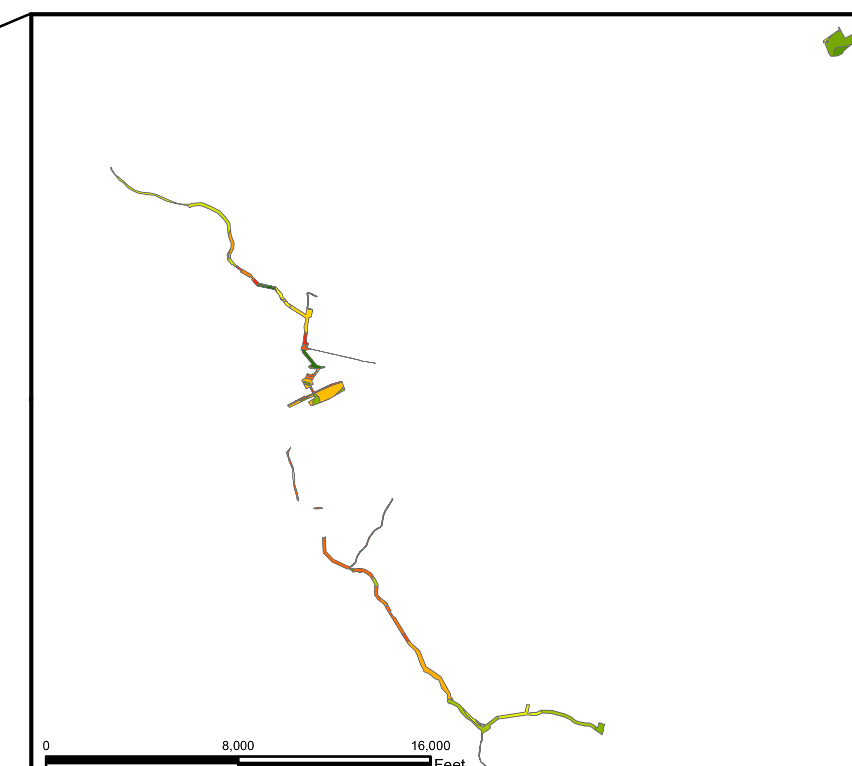
Mountain Valley Pipeline Sawmll Hollow-Roanoke River

Sawmill Hollow-Roanoke River Soil

- 10: Craigsville soils
- 10D: Dekalb channery sandy loam, 15 to 35 percent slopes
- 11B: Duffield-Ernest complex, 2 to 7 percent slopes
- 11C: Duffield-Ernest complex, 7 to 15 percent slopes - Montgomery; 11C: Dekalb channery sandy loam, 7 to 15 percent slopes, very stony - Roanoke County & Cities of Roanoke and Salem, Va.
- 11D: Dekalb channery sandy loam, 15 to 35 percent slopes, very stony
- 11E: Dekalb channery sandy loam, 35 to 60 percent slopes, very stony
- 11F: Dekalb channery sandy loam, 60 to 80 percent slopes, very stony
- 12C: Frederick and Vertrees silt loams, 7 to 15 percent slopes
- 12F: Dekalb-Rock outcrop complex, 25 to 80 percent slopes
- 13A: Derroc cobbly sandy loam, 0 to 4 percent slopes, occasionally flooded
- 13C: Frederick and Vertrees gravelly silt loams, 7 to 15 percent slopes
- 13D: Frederick and Vertrees gravelly silt loams, 15 to 25 percent slopes
- 14: Dumps
- 16C: Groseclose and Poplimento soils, 7 to 15 percent slopes
- 16D: Groseclose and Poplimento soils, 15 to 25 percent slopes - Montgomery: 16D: Edneyville fine sandy loam, 15 to 25 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 16E: Groseclose and Poplimento soils, 25 to 60 percent slopes - Montgomery; 16E: Edneyville fine sandy loam, 25 to 55 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 17C: Evard fine sandy loam, 7 to 15 percent slopes
- 17D: Evard fine sandy loam, 15 to 25 percent slopes
- 17E: Evard fine sandy loam, 25 to 55 percent slopes
- 18C: Frederick silt loam, 8 to 15 percent slopes
- 18D: Frederick silt loam, 15 to 25 percent slopes
- 19B: Guernsey silt loam, 2 to 7 percent slopes
- 19C: Frederick very gravelly silt loam, 7 to 15 percent slopes
- 19E: Frederick very gravelly silt loam, 25 to 40 percent slopes
- 1C: Berks-Clymer complex, 7 to 15 percent slopes
- 20B: Hayter loam, 2 to 7 percent slopes
- 21C: Frederick-Urban land complex, 2 to 15 percent slopes
- 22C: Gilpin loam, 7 to 15 percent slopes
- 22D: Gilpin loam, 15 to 25 percent slopes
- 23C: Jefferson very stony soils, 7 to 15 percent slopes - Montgomery; 23C: Grimsley cobbly loam, 7 to 15 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 24C: Groseclose silt loam, 7 to 15 percent slopes
- 24C: Groseclose silt loam, 7 to 15 percent slopes- Montgomery; 24D: Groseclose silt loam, 15 to 25 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 24E: Groseclose silt loam, 25 to 35 percent slopes
- 25: McGary and Purdy soils
- 25C: Groseclose-Litz complex, 2 to 15 percent slopes
- 25D: Groseclose-Litz complex, 15 to 25 percent slopes
- 25E: Groseclose-Litz complex, 25 to 35 percent slopes
- 26B: Hayesville fine sandy loam, 2 to 7 percent slopes
- 26D: Hayesville fine sandy loam, 15 to 25 percent slopes
- 27D: Hayesville gravelly fine sandy loam, 15 to 25 percent slopes
- 28: Ross soils
- 28E: Hayesville channery fine sandy loam, 25 to 50 percent slopes, very stony
- 29: Udorthents and Urban land
- 29C: Hayesville-Urban land complex, 2 to 15 percent slopes
- 2B: Allegheny loam, 2 to 7 percent slopes
- 2C: Berks-Groseclose complex, 7 to 15 percent slopes
- 30B: Unison and Braddock soils, 2 to 7 percent slopes
- 30C: Unison and Braddock soils, 7 to 15 percent slopes - Montgomery; 30C: Laidig fine sandy loam, 7 to 15 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 30D: Unison and Braddock soils, 15 to 25 percent slopes
- 33: Weaver soils
- 33E: Opequon-Rock outcrop complex, 15 to 35 percent slopes
- 34E: Peaks gravelly loam, 35 to 60 percent slopes, very stony
- 34F: Peaks gravelly loam, 60 to 75 percent slopes, very stony
- 35: Pits, quarries
- 36A: Purdy silt loam, 0 to 4 percent slopes
- 37C: Sequoia silt loam, 7 to 15 percent slopes
- 37D: Sequoia silt loam, 15 to 25 percent slopes
- 37E: Sequoia silt loam, 25 to 40 percent slopes
- 39B: Shottower loam, 2 to 7 percent slopes
- 39C: Shottower loam, 7 to 15 percent slopes
- 3C3: Chilhowie silty clay loam, 7 to 15 percent slopes, severely eroded
- 3D: Berks-Lowell-Rayne complex, 15 to 25 percent slopes
- 3E: Berks-Lowell-Rayne complex, 25 to 65 percent slopes
- 40C: Shottower cobbly loam, 7 to 15 percent slopes
- 40D: Shottower cobbly loam, 15 to 30 percent slopes
- 41C: Shottower-Urban land complex, 2 to 15 percent slopes
- 41D: Shottower-Urban land complex, 15 to 25 percent slopes
- 42A: Sindion loam, 0 to 2 percent slopes, occasionally flooded
- 43A: Speedwell loam, 0 to 2 percent slopes, occassionally flooded
- 44A: Speedwell-Urban land complex, 0 to 2 percent slopes, occasionally flooded
- 46E: Sylvatus very channery silt loam, 35 to 55 percent slopes
- 46F: Sylvatus very channery silt loam, 55 to 75 percent slopes
- 47B: Thurmont sandy loam, 2 to 7 percent slopes
- 47C: Thurmont sandy loam, 7 to 15 percent slopes
- 49B: Tumbling loam, 2 to 7 percent slopes
- 49C: Tumbling loam, 7 to 15 percent slopes
- 49D: Tumbling loam, 15 to 25 percent slopes
- 4E: Berks-Rock outcrop complex, 25 to 70 percent slopes
- 50C: Tumbling loam, 7 to 15 percent slopes, very stony
- 50D: Tumbling loam, 15 to 25 percent slopes, very stony
- 50E: Tumbling loam, 25 to 45 percent slopes, very stony
- 51C: Tumbling-Urban land complex, 2 to 15 percent slopes
- 52: Udorthents-Urban land complex
- 53: Urban land
- 54C: Weikert-Berks complex, 7 to 15 percent slopes
- 54E: Weikert-Berks complex, 15 to 45 percent slopes
- 54E: Weikert-Berks complex, 15 to 45 percent slopes
- 56A: Wheeling loam, 0 to 2 percent slopes, rarely flooded
- 56B: Wheeling loam, 2 to 7 percent slopes, rarely flooded
- 57A: Wheeling-Urban land complex, 0 to 2 percent slopes, rarely flooded
- 58B: Zoar silt loam, 2 to 7 percent slopes
- 5C: Chiswell-Litz complex, 7 to 15 percent slopes
- 5D: Berks-Weikert complex, 15 to 25 percent slopes - Montgomery; 5D: Chiswell-Litz complex, 15 to 25 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 5E: Chiswell-Litz complex, 25 to 50 percent slopes
- 6C: Chiswell-Litz-Urban land complex, 2 to 15 percent slopes
- 6D: Chiswell-Litz-Urban land complex, 15 to 35 percent slopes
- 6E: Berks and Weikert soils, 25 to 65 percent slopes
- 7A: Clubcaf silt loam, 0 to 2 percent slopes, occasionally flooded
- 8A: Combs loam, 0 to 2 percent slopes, occasionally flooded
- 8D: Caneyville-Opequon-Rock outcrop complex, 7 to 25 percent slopes
- 8E: Caneyville-Opequon-Rock outcrop complex, 25 to 60 percent slopes
- 9B: Cotaco loam, 2 to 7 percent slopes
- 9C: Cotaco loam, 7 to 15 percent slopes
- W: Water







MAPPING FOR VISUAL REPRESENTATION ONLY

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

SCALE: See Mapping
DATE: AUGUST 2021
PN: 0101-17-0451.016

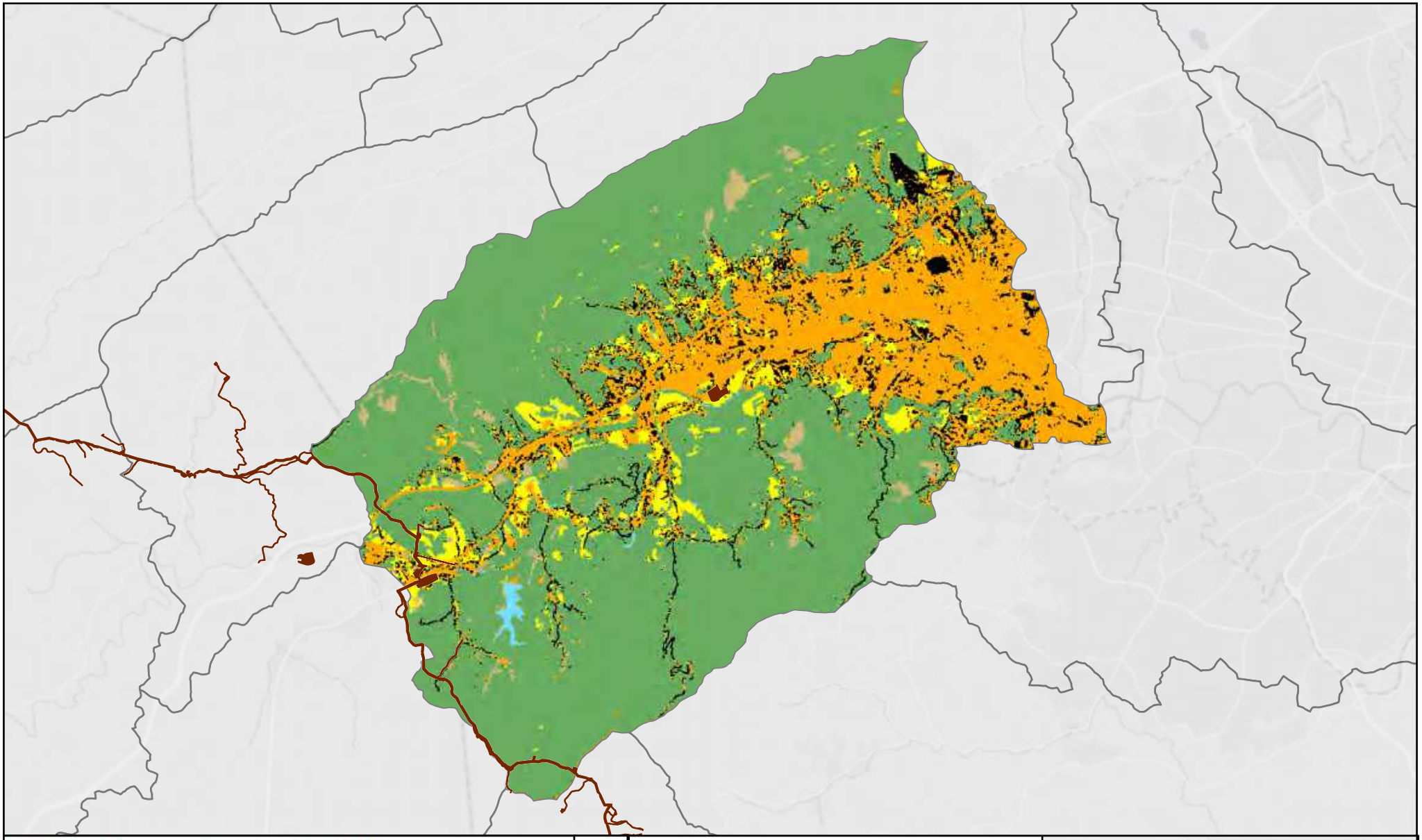
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
Sawmill Hollow-Roanoke River (030101010301)
Upper Roanoke HUC 8 Watershed
Montgomery and Roanoke Counties, &
Cities of Roanoke and Salem, Virginia
For Informational Purposes Only

FIGURE 264



Mountain Valley PIPELINE

Figure: 265

Land Use/Land Cover 2011
Sawmill Hallow-Roanoke River
30101010301 HUC12 Watershed

5/26/2022

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

N
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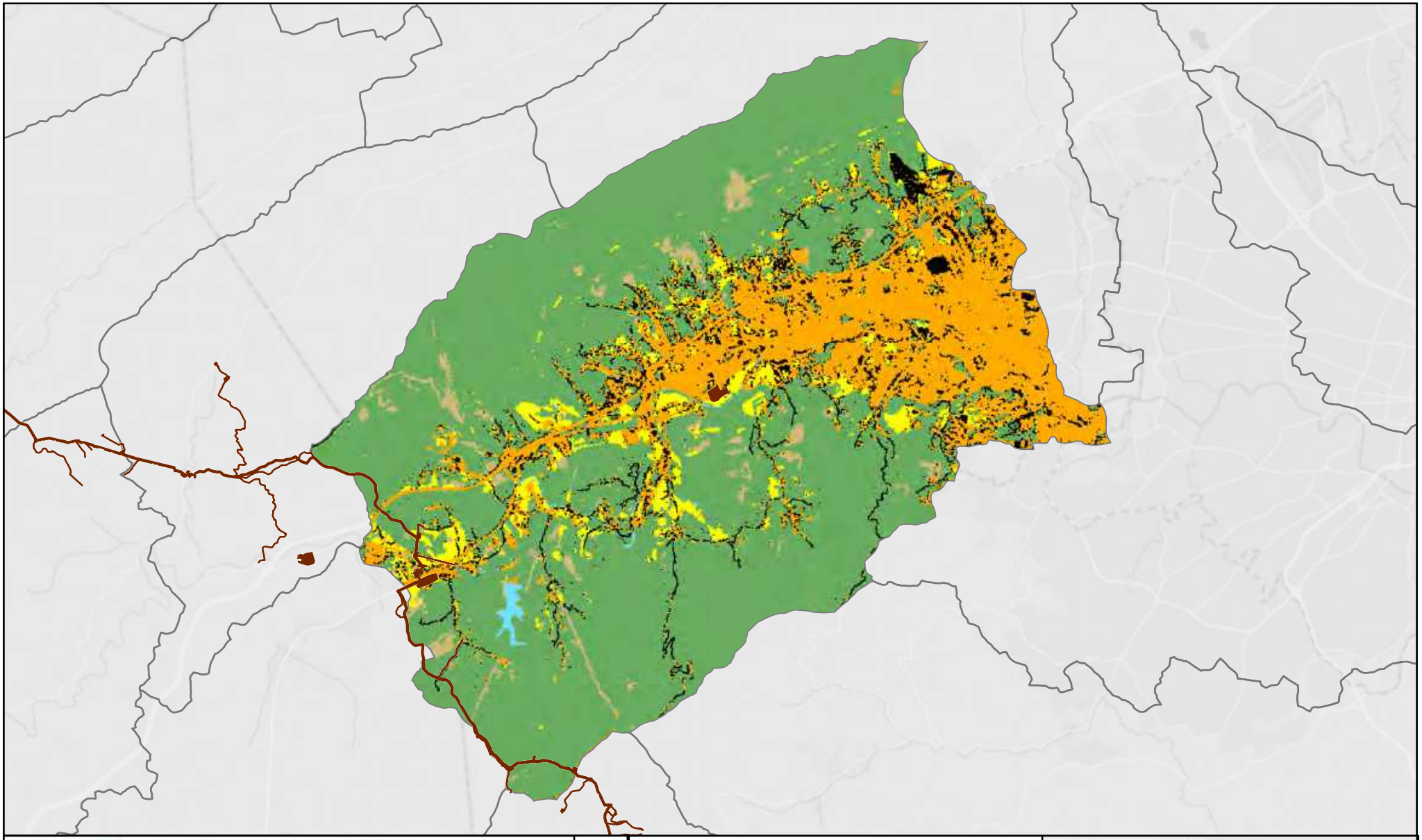
Scale: 1:120,000

Map Extent



Mountain Valley PIPELINE

Figure: 266

Land Use/Land Cover 2016
Sawmill Hallow-Roanoke River
30101010301 HUC12 Watershed

5/26/2022

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

N
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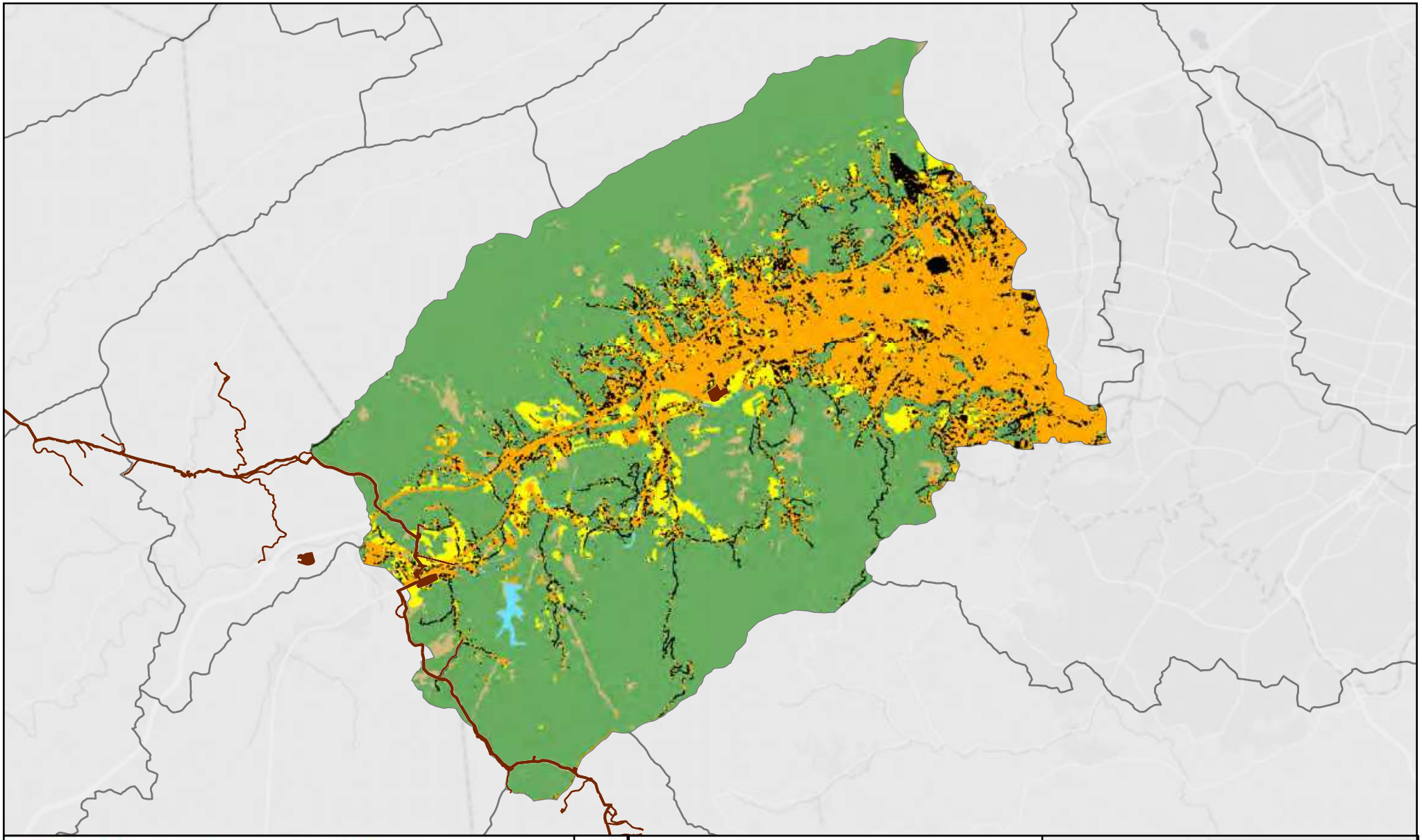
Miles
0 1.5 3

Scale: 1:120,000

Map Extent



Mountain Valley PIPELINE

Figure: 266a

Land Use/Land Cover 2019
Sawmill Hallow-Roanoke River
30101010301 HUC12 Watershed

5/25/2022

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

N
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0 1.5 3 Miles

Scale: 1:120,000

Map Extent

N
W E
S

Legend

030101010102 Bottom Creek Watershed

Bottom Creek Watershed Total Stream - 654,699 Linear Feet

Mountain Valley Pipeline Bottom Creek

VA DEM

Value

High : 1328.84 meters

Low : 135.786 meters

Total Impacts - 1,225 Linear Feet (0.1871%)

0 1 2 4
Miles

SCALE: 1" = 1 Mile
DATE: SEPT 2021
PN: **0101-17-0451.016**
I:\Projects\2017\17-0451-MVP Env Con Monitoring\Maps\2021\CIA Report\Figure 64 - Bottom Creek Watershed.mxd

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

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

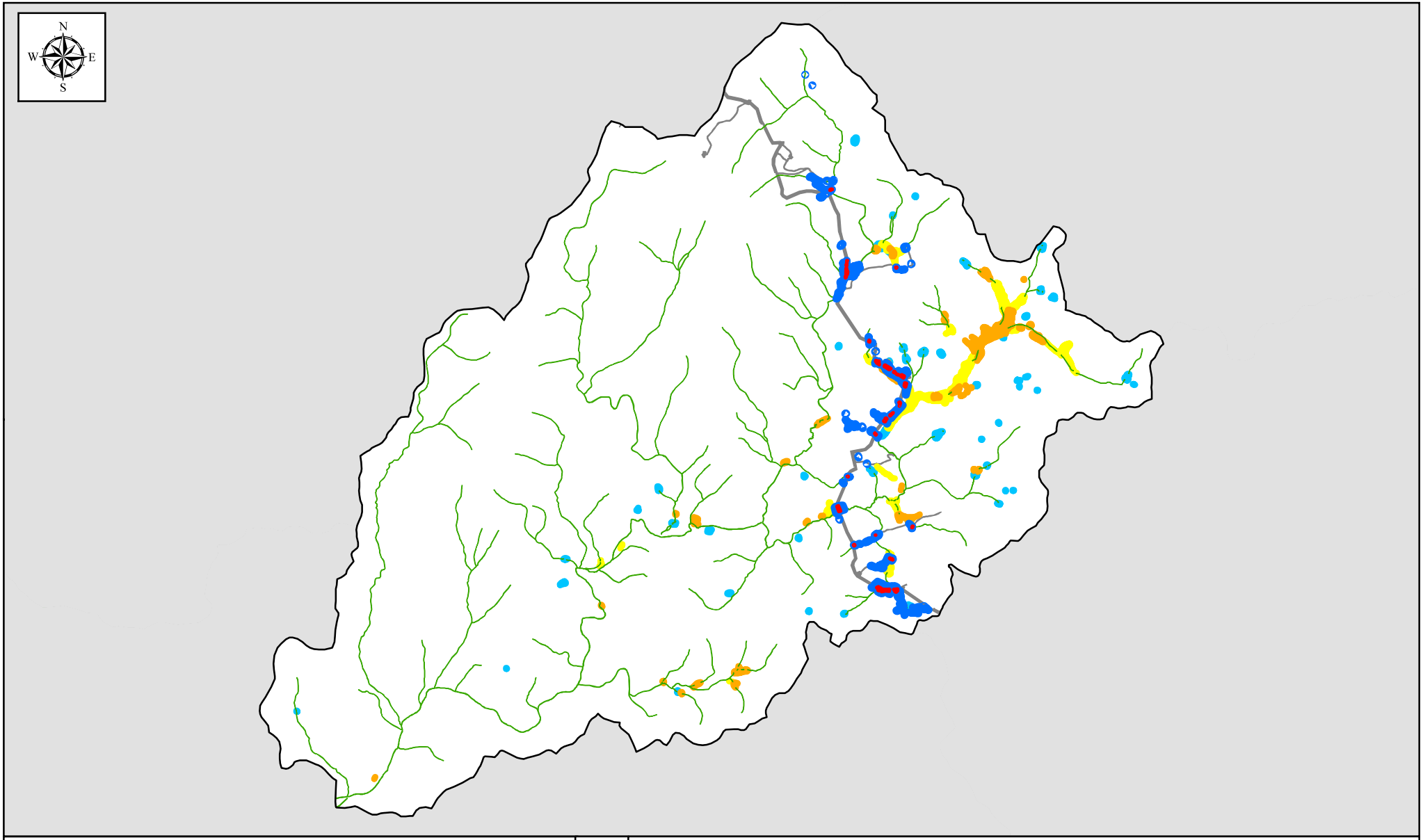
POTESTA

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

MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Bottom Creek Watershed (030101010102)
Upper Roanoke HUC 8 Watershed, Virginia
For Informational Purposes Only

FIGURE 267



Mountain Valley PIPELINE

Bottom Creek

Figure 268

1:74,000

1/6/2022

LEGEND

- Wetland Impacts - 2.03 acres
- Bottom Creek Delineated Wetland Area - 28.38 acres

NWI Wetlands - 315.66 acres

- Freshwater Emergent Wetland - 45.12 acres
- Freshwater Forested/Shrub Wetland - 60.81 acres
- Freshwater Pond - 25.95 acres
- Riverine - 183.79 acres
- Mountain Valley Pipeline
- 030101010102_Bottom Creek

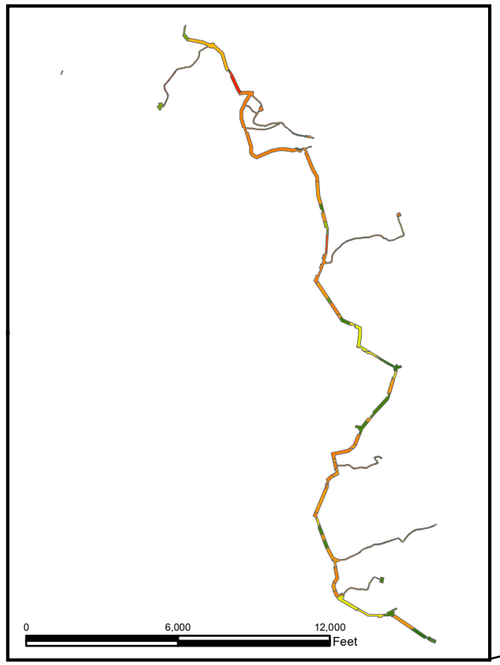
Note: Shapes are not to scale, enlarged to improve visibility.

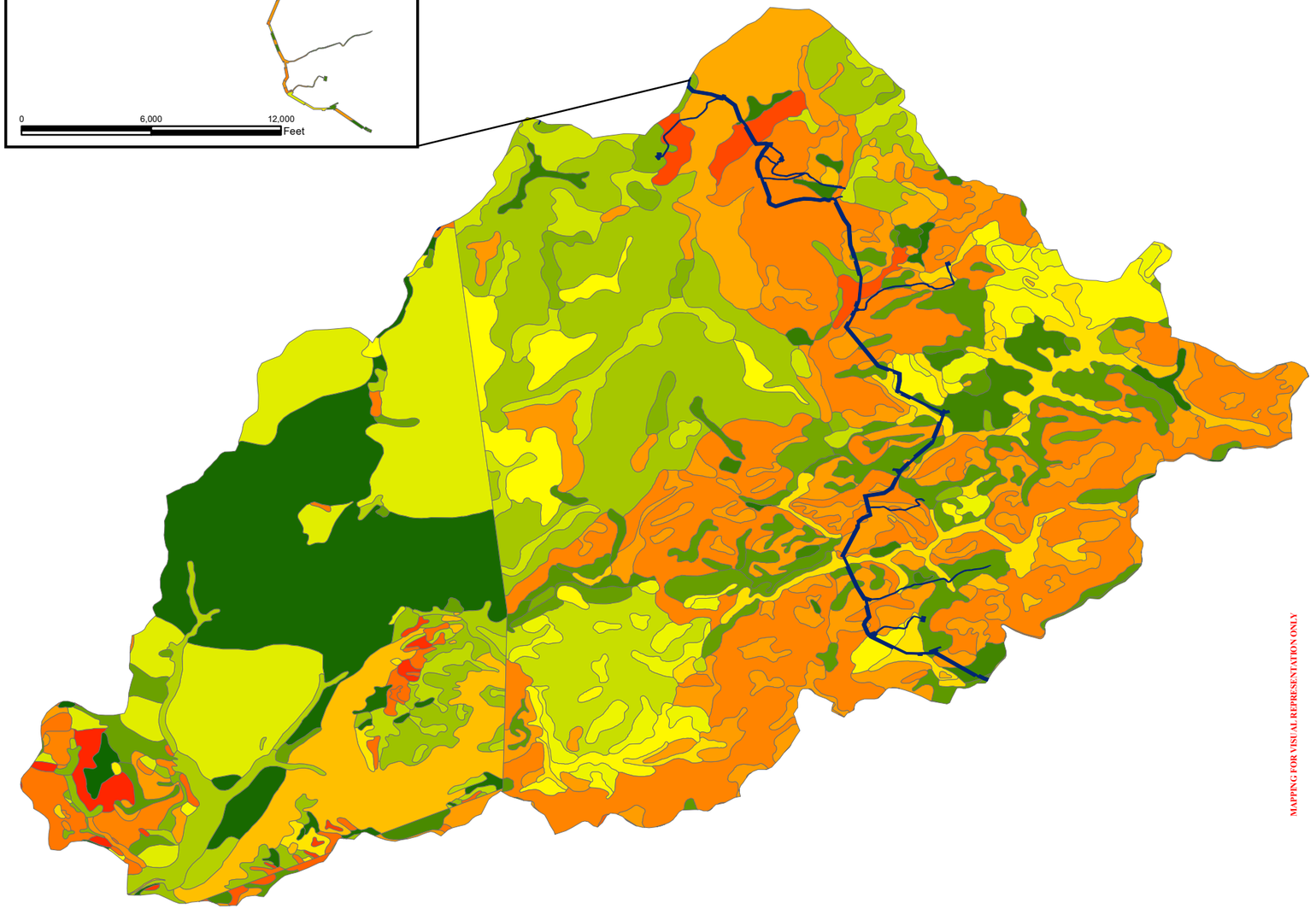
Legend

Mountain Valley Pipeline Bottom Creek

Bottom Creek Soil

- 10: Craigsville soils
- 10D: Dekalb channery sandy loam, 15 to 35 percent slopes
- 11B: Duffield-Ernest complex, 2 to 7 percent slopes
- 11C: Duffield-Ernest complex, 7 to 15 percent slopes - Montgomery; 11C: Dekalb channery sandy loam, 7 to 15 percent slopes, very stony - Roanoke Co. & Cities of Roanoke and Salem, Va
- 11D: Dekalb channery sandy loam, 15 to 35 percent slopes, very stony
- 11E: Dekalb channery sandy loam, 35 to 60 percent slopes, very stony
- 11F: Dekalb channery sandy loam, 60 to 80 percent slopes, very stony
- 12B: Frederick and Vertrees silt loams, 2 to 7 percent slopes
- 12F: Dekalb-Rock outcrop complex, 25 to 80 percent slopes
- 13A: Derroc cobbly sandy loam, 0 to 4 percent slopes, occasionally flooded
- 13D: Frederick and Vertrees gravelly silt loams, 15 to 25 percent slopes
- 15B: Glenelg loam, 2 to 7 percent slopes
- 15C: Glenelg loam, 7 to 15 percent slopes
- 15D: Glenelg loam, 15 to 25 percent slopes
- 16B: Edneyville fine sandy loam, 2 to 7 percent slopes
- 16C: Edneytown-Ashe complex, 8 to 15 percent slopes - Floyd; 16C: Edneytown-Ashe complex, 8 to 15 percent slopes - Franklin: 16C: Groseclose and Poplimento soils, 7 to 15 percent slopes - Montgomery; 16C: Edneyville fine sandy loam, 7 to 15 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 16D: Edneytown-Ashe complex, 15 to 25 percent slopes - Floyd; 16D: Edneytown-Sauratown complex, 15 to 25 percent slopes, very stony - Franklin: 16D: Groseclose and Poplimento soils, 15 to 25 percent slopes - Montgomery; 16D: Edneyville fine sandy loam, 15 to 25 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 16E: Edneytown-Sauratown complex, 25 to 45 percent slopes, very stony - Franklin: 16E: Groseclose and Poplimento soils, 25 to 60 percent slopes - Floyd; 16E: Edneyville fine sandy loam, 25 to 55 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 17C: Evard fine sandy loam, 7 to 15 percent slopes
- 17D: Evard fine sandy loam, 15 to 25 percent slopes
- 17E: Evard fine sandy loam, 25 to 55 percent slopes
- 19B: Guernsey silt loam, 2 to 7 percent slopes
- 19D: Edneyville-Ashe complex, 8 to 35 percent slopes, very stony
- 1A: Alderflats silt loam, 0 to 4 percent slopes
- 1A: Alderflats silt loam, 0 to 4 percent slopes - Franklin; 1C: Berks-Clymer complex, 7 to 15 percent slopes - Montgomery
- 1E: Ashe-Edneytown complex, 25 to 35 percent slopes
- 20B: Hayter loam, 2 to 7 percent slopes
- 21C: Hayter soils, 7 to 15 percent slopes
- 22C: Jefferson soils, 7 to 15 percent slopes
- 23C: Grimsley cobbly loam, 7 to 15 percent slopes
- 24D: Jefferson extremely stony soils, 7 to 25 percent slopes
- 26C: Parker-Glenelg complex, 7 to 15 percent slopes
- 26D: Parker-Glenelg complex, 15 to 25 percent slopes
- 26E: Parker-Glenelg complex, 25 to 50 percent slopes
- 27E: Parker-Rock outcrop complex, 25 to 50 percent slopes
- 29: Udorthents and Urban land
- 2B: Allegheny loam, 2 to 7 percent slopes
- 2C: Berks-Groseclose complex, 7 to 15 percent slopes
- 33: Weaver soils
- 33E: Peaks-Ashe-Edneyville complex, 25 to 45 percent slopes, very stony
- 34E: Peaks gravelly loam, 35 to 60 percent slopes, very stony
- 34F: Peaks gravelly loam, 60 to 75 percent slopes, very stony
- 37F: Peaks-Rock outcrop complex, 25 to 90 percent slopes, extremely stony
- 3D: Berks-Lowell-Rayne complex, 15 to 25 percent slopes
- 3E: Ashe-Edneyville complex, 35 to 55 percent slopes, very stony - Floyd;3E: Berks-Lowell-Rayne complex, 25 to 65 percent slopes - Montgomery
- 42A: Sindion loam, 0 to 2 percent slopes, occasionally flooded
- 42C: Tate loam, 8 to 15 percent slopes, stony
- 43A: Speedwell loam, 0 to 2 percent slopes, occassionally flooded
- 46E: Sylvatus very channery silt loam, 35 to 55 percent slopes
- 46F: Sylvatus very channery silt loam, 55 to 75 percent slopes
- 47B: Thurmont sandy loam, 2 to 7 percent slopes
- 47C: Thurmont sandy loam, 7 to 15 percent slopes
- 4E: Berks-Rock outcrop complex, 25 to 70 percent slopes
- 52: Udorthents-Urban land complex
- 5D: Berks-Weikert complex, 15 to 25 percent slopes
- 6E: Berks and Weikert soils, 25 to 65 percent slopes
- 7A: Clubcaf silt loam, 0 to 2 percent slopes, occasionally flooded
- 7D: Berks and Weikert very stony soils, 15 to 35 percent slopes
- 8A: Combs loam, 0 to 2 percent slopes, occasionally flooded
- 8D: Caneyville-Opequon-Rock outcrop complex, 7 to 25 percent slopes
- 8E: Caneyville-Opequon-Rock outcrop complex, 25 to 60 percent slopes
- 9B: Cotaco loam, 2 to 7 percent slopes
- W: Water





0 1 2 4 Miles

MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: See Mapping
DATE: AUGUST 2021
PN: **010-17-0451.016**
G:\Projects\2017\17-0451_MVP_Env_Cons_Monitoring\Maps\2021\CIA\Soil\Figure_269_Bottom_Creek_Soil.mxd

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

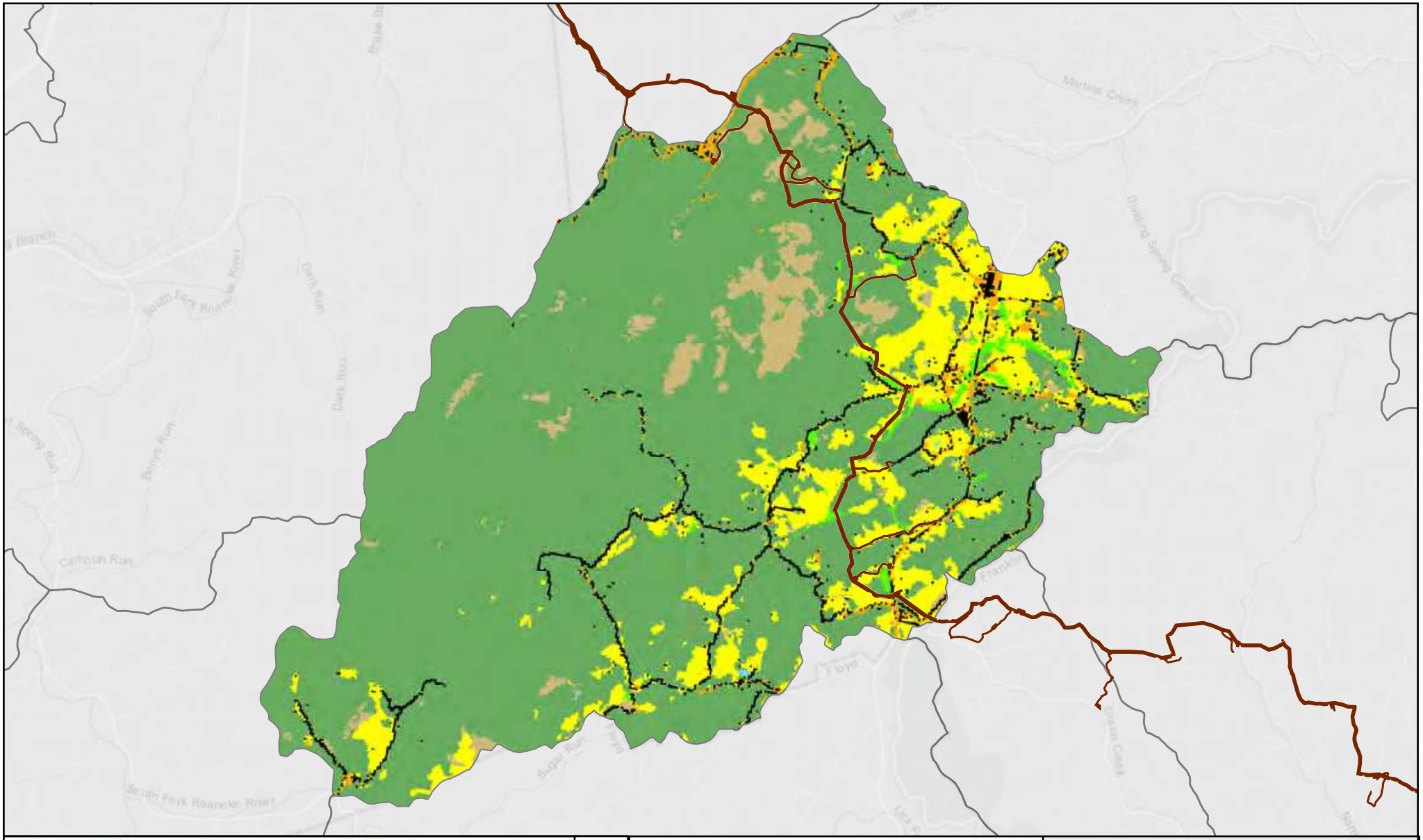
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
Bottom Creek (030101010102)
Upper Roanoke HUC 8 Watershed
Franklin, Floyd, Montgomery, and Roanoke Counties, & Cities of Roanoke and Salem, Virginia
For Informational Purposes Only

FIGURE 269



Mountain Valley PIPELINE

Figure: 270

Land Use/Land Cover 2011
Bottom Creek
30101010102 HUC12 Watershed

5/26/2022

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

N
W E
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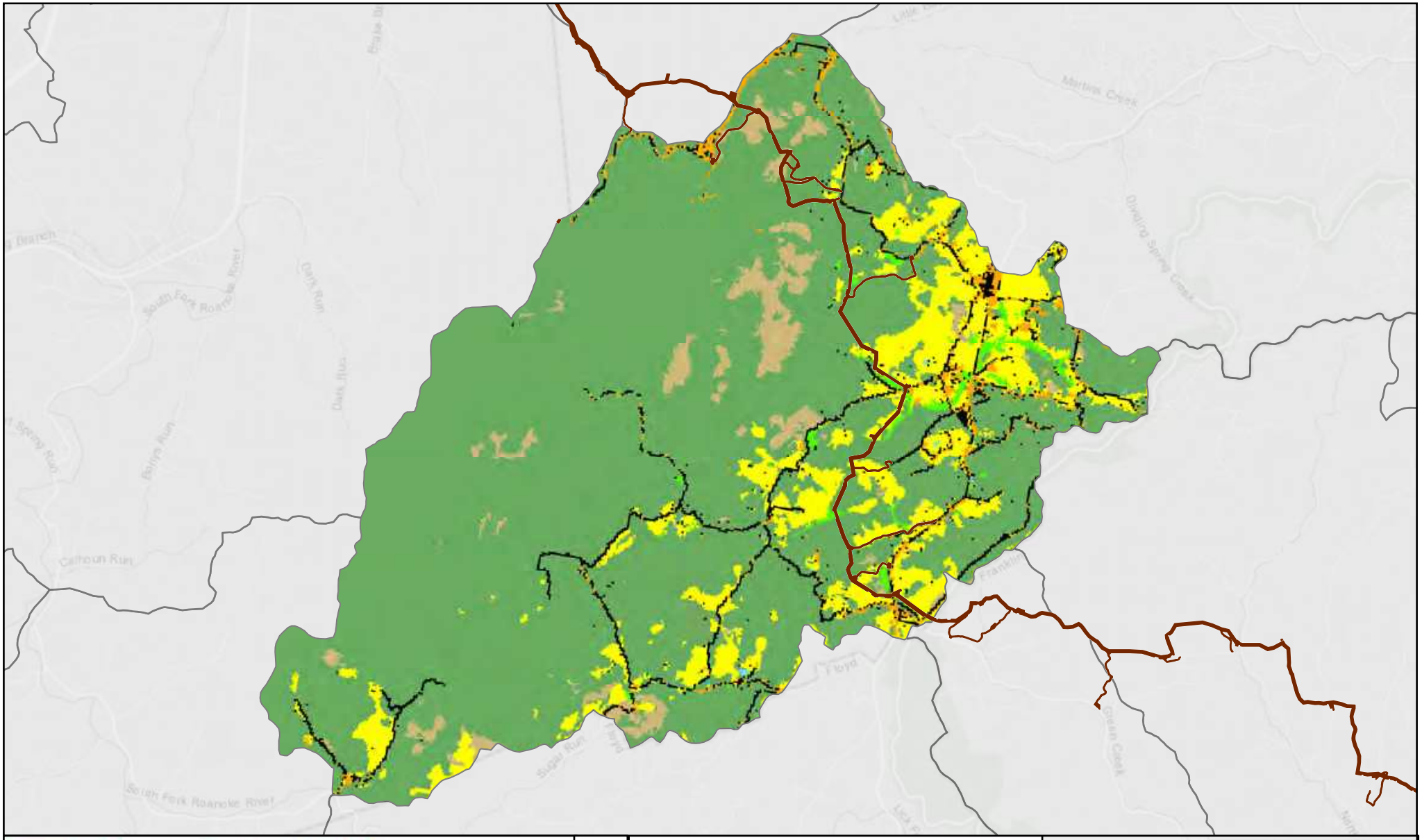
0 1 2 Miles

Scale: 1:75,000

Map Extent



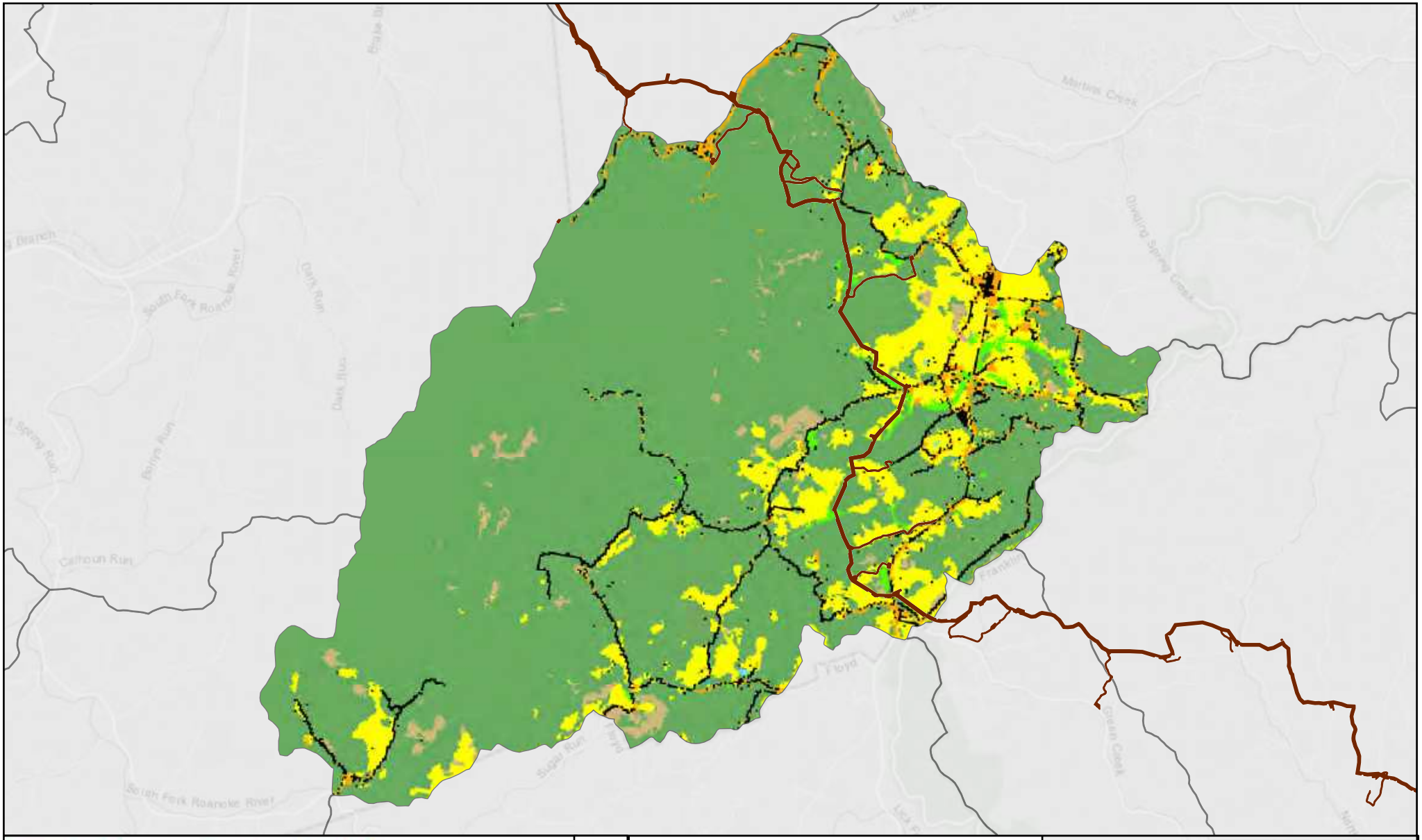
Mountain Valley PIPELINE

Figure: 271

Land Use/Land Cover 2016
Bottom Creek
30101010102 HUC12 Watershed

LEGEND

5/26/2022



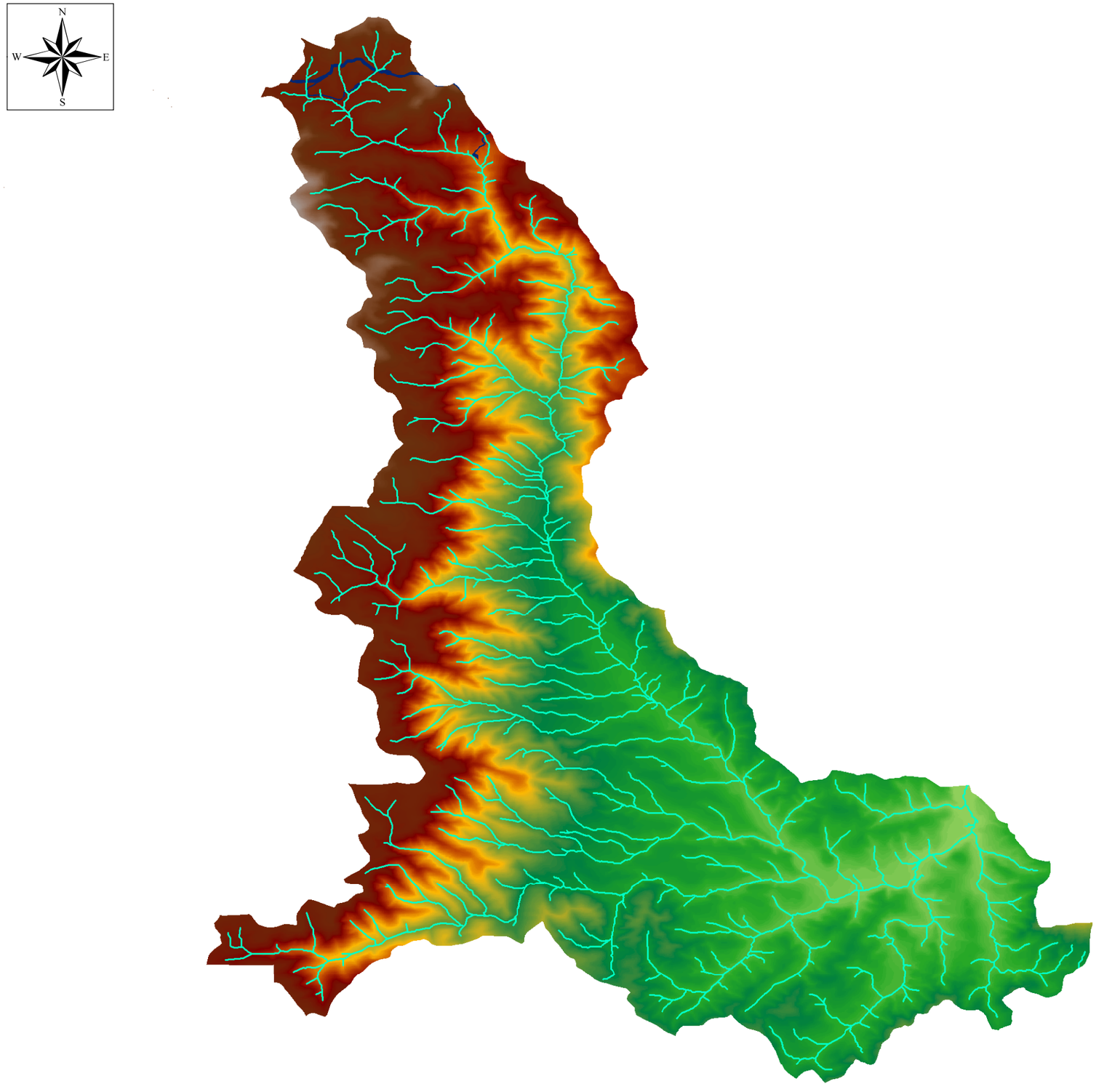
Mountain Valley PIPELINE

Figure: 271a

Land Use/Land Cover 2019
Bottom Creek
30101010102 HUC12 Watershed

LEGEND

5/25/2022



Legend

030101010502 South Fork Blackwater River Watershed

South Fork Blackwater River Watershed Total Streams - 695,228 Linear Feet

Mountain Valley Pipeline South Fork Blackwater River

VA DEM

Value

High : 1328.84 meters

Low : 135.786 meters

Total Impacts - 421 Linear Feet (0.0606%)

MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
South Fork Blackwater River Watershed (030101010502)
Upper Roanoke HUC 8 Watershed, Virginia

For Informational Purposes Only

FIGURE 272

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

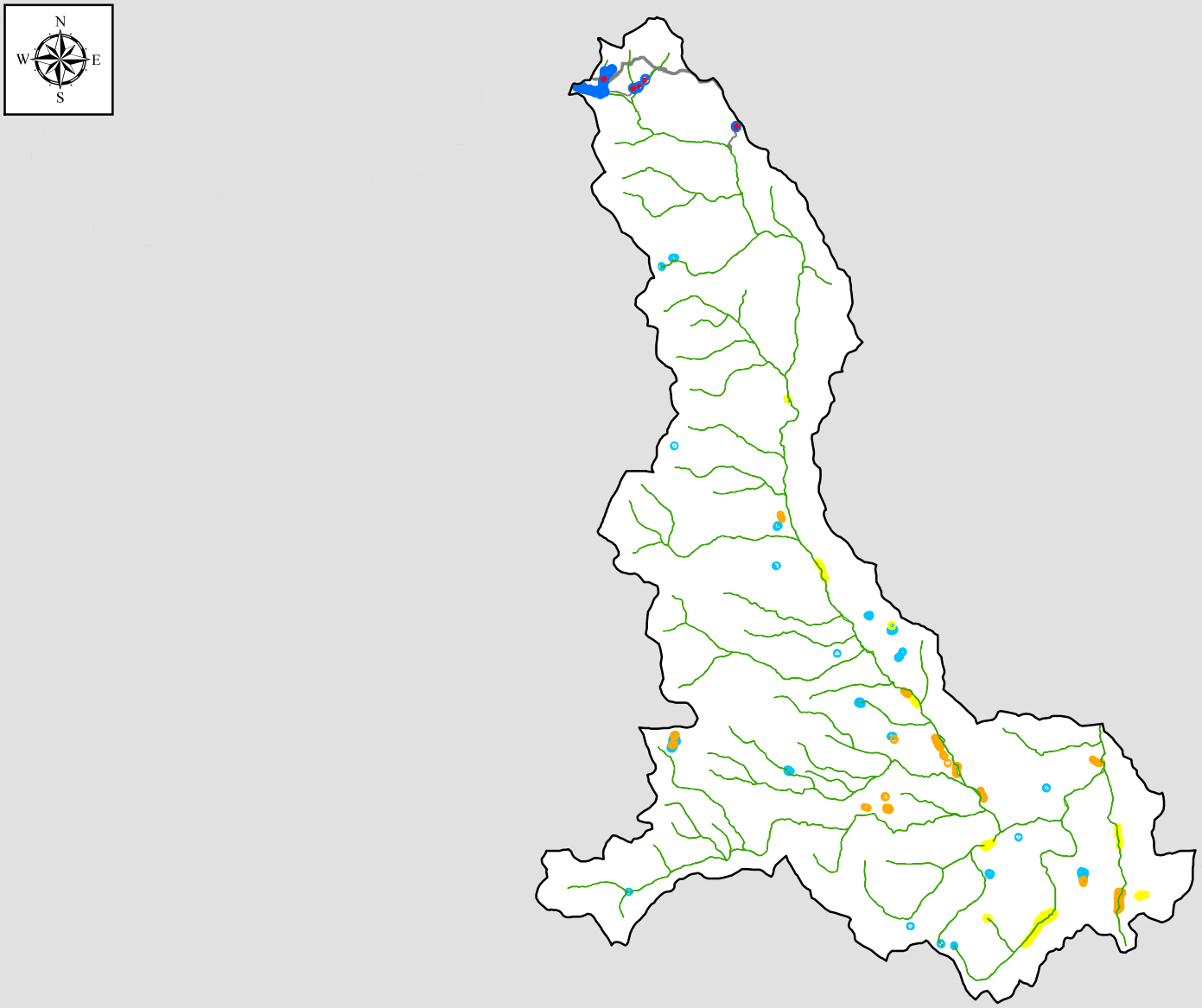
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

SCALE: 1" = 1 Mile
DATE: SEPT 2021
PN: **0101-17-0451.016**

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

I:\Projects\2017\17-0451.MVP.Env.Con. Monitoring\Maps\2021 CIA Soils\Figure 272 - South_Fork_Watershed.mxd



Mountain Valley PIPELINE

South Fork Blackwater River

Figure 273

1:110,000

1/6/2022

LEGEND

- Wetland Impacts - 0.19 acres
- South Fork Blackwater River Delineated Wetland Area - 3.53 acres

NWI Wetlands - 222 acres

- Freshwater Emergent Wetland - 9.66 acres
- Freshwater Forested/Shrub Wetland - 13.65 acres
- Freshwater Pond - 11.24 acres
- Riverine - 187.46 acres
- Mountain Valley Pipeline
- 030101010502_South Fork Blackwater River

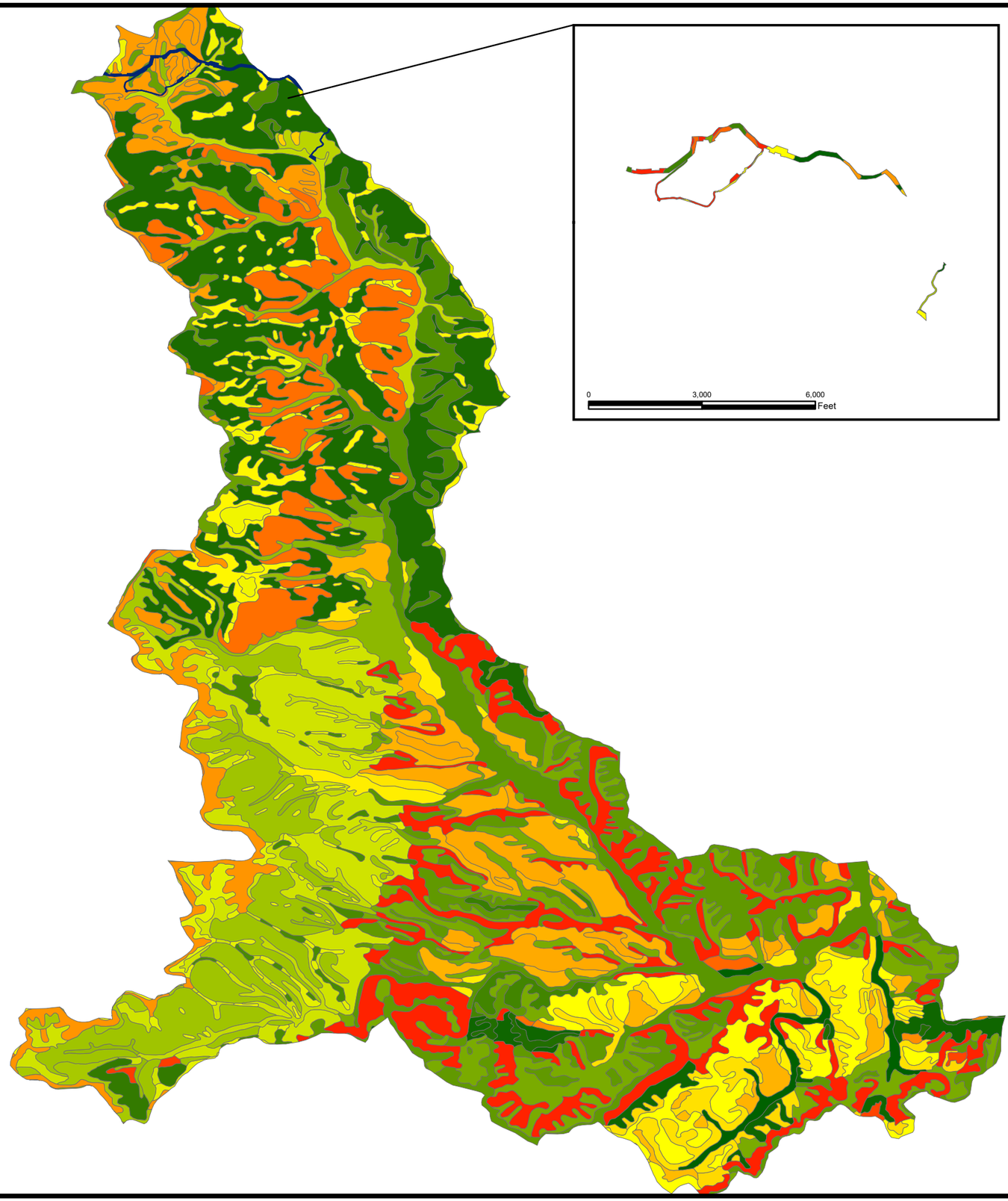
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline South Fork Blackwater River

South Fork Roanoke River

- 10B: Colescreek-Delanco complex, 2 to 8 percent slopes, rarely flooded
- 11A: Comus-Maggodee-Elsinboro complex, 0 to 4 percent slopes
- 13D: Cullasaja-Tuckasegee complex, 15 to 25 percent slopes, very stony
- 13E: Cullasaja-Tuckasegee complex, 25 to 60 percent slopes, very stony
- 15B: Delanco-Kinkora complex, 0 to 8 percent slopes, rarely flooded
- 16B: Edneyville fine sandy loam, 2 to 7 percent slopes
- 16C: Edneytown-Ashe complex, 8 to 15 percent slopes - Floyd; 16C: Edneytown-Ashe complex, 8 to 15 percent slopes - Franklin: 16C: Edneyville fine sandy loam, 7 to 15 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 16D: Edneytown-Ashe complex, 15 to 25 percent slopes - Floyd; 16D: Edneytown-Sauratown complex, 15 to 25 percent slopes, very stony - Franklin:
- 16E: Edneytown-Sauratown complex, 25 to 45 percent slopes, very stony - Franklin: 16E: Edneyville fine sandy loam, 25 to 55 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 16F: Edneytown-Sauratown complex, 45 to 95 percent slopes, very stony
- 17B: Elsinboro-Colescreek complex, 2 to 8 percent slopes, rarely flooded
- 19C: Hayesville loam, 8 to 15 percent slopes
- 19D: Edneyville-Ashe complex, 8 to 35 percent slopes, very stony
- 1C: Ashe-Edneyville-Peaks complex, 8 to 15 percent slopes, very stony
- 1E: Ashe-Edneytown complex, 25 to 35 percent slopes
- 20E: Hayesville loam, 25 to 45 percent slopes, very stony
- 21B: Glenelg and Hayesville loams, 3 to 8 percent slopes
- 21F: Hickoryknob-Rhodhiss complex, 45 to 75 percent slopes, rocky
- 22C: Glenelg loam, 8 to 15 percent slopes
- 22D: Glenelg loam, 15 to 25 percent slopes
- 23A: Iotla-Maggodee-Colescreek complex, 0 to 4 percent slopes
- 27C: Minnieville loam, 8 to 15 percent slopes
- 27D: Minnieville loam, 15 to 25 percent slopes
- 27E: Minnieville loam, 25 to 45 percent slopes
- 28C: Minnieville-Orenda-Redbrush complex, 8 to 15 percent slopes
- 28D: Minnieville-Orenda-Redbrush complex, 15 to 25 percent slopes
- 2D: Ashe-Peaks-Edneyville complex, 15 to 25 percent slopes, very stony
- 32C: Myersville loam, 8 to 15 percent slopes
- 33C: Myersville loam, 8 to 15 percent slopes, very stony
- 33E: Peaks-Ashe-Edneyville complex, 25 to 45 percent slopes, very stony
- 33F: Peaks-Ashe-Edneyville complex, 45 to 95 percent slopes, very stony
- 36C: Thurmont-Wintergreen complex, 8 to 15 percent slopes
- 36D: Thurmont-Wintergreen complex, 15 to 25 percent slopes
- 37E: Trimont-Porters complex, 25 to 45 percent slopes, very stony
- 37F: Trimont-Porters complex, 45 to 95 percent slopes, very stony
- 38C: Watauga-Brownwood complex, 8 to 15 percent slopes
- 38D: Watauga-Brownwood complex, 15 to 25 percent slopes
- 39B: Wintergreen loam, 2 to 8 percent slopes
- 39C: Wintergreen loam, 8 to 15 percent slopes
- 39D: Wintergreen loam, 15 to 25 percent slopes
- 3D: Bluemount-Redbrush-Spriggs complex, 15 to 25 percent slopes, stony
- 3E: Ashe-Edneyville complex, 35 to 55 percent slopes, very stony
- 41B: Tate loam, 3 to 8 percent slopes
- 4C: Braddock cobbly loam, 8 to 15 percent slopes
- 4E: Bluemount-Spriggs complex, 25 to 45 percent slopes, stony
- 5C: Bluemount-Spriggs-Redbrush complex, 8 to 15 percent slopes, stony
- 6C: Brownwood-Chandler complex, 8 to 15 percent slopes, very stony
- 6D: Brownwood-Chandler complex, 15 to 25 percent slopes, very stony
- 6E: Brownwood-Chandler complex, 25 to 45 percent slopes, very stony
- 6F: Brownwood-Chandler complex, 45 to 95 percent slopes, very stony
- 7B: Clifford fine sandy loam, 2 to 8 percent slopes
- 7C: Clifford fine sandy loam, 8 to 15 percent slopes
- 7D: Clifford fine sandy loam, 15 to 25 percent slopes
- 8E: Clifford-Hickoryknob complex, 25 to 45 percent slopes
- 9D: Cowee gravelly loam, 8 to 35 percent slopes, stony
- W: Water



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Miles

MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: See Mapping
DATE: AUGUST 2021
PN: 010-17-0451.016
DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

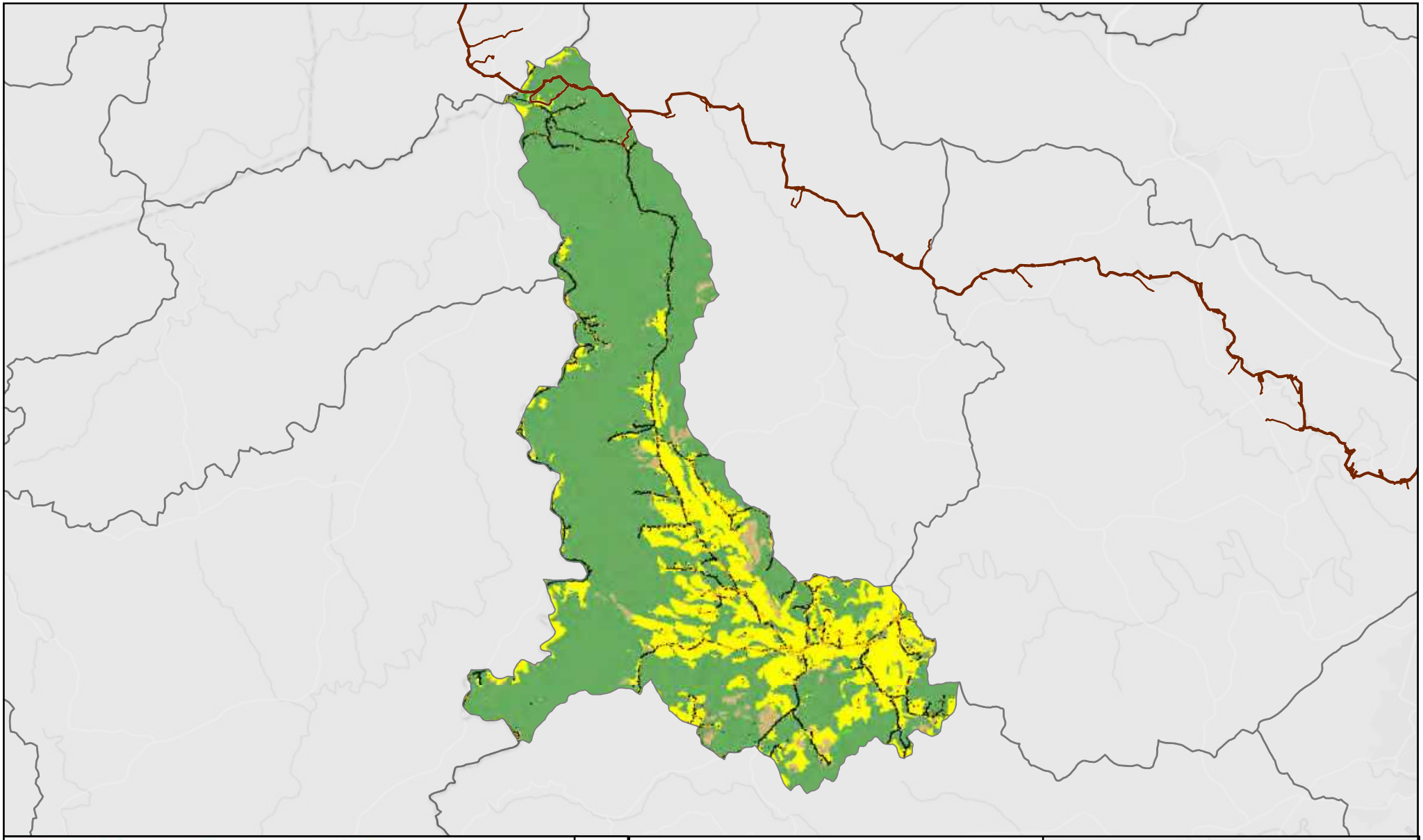
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 FAX: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
South Fork Blackwater River (0301010105030)
Upper Roanoke HUC 8 Watershed
Franklin, Floyd, and Roanoke Counties, &
Cities of Roanoke and Salem Virginia
For Informational Purposes Only

FIGURE 274



Mountain Valley PIPELINE

Figure: 275

Land Use/Land Cover 2011
South Fork Blackwater River
30101010502 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2011 Land Use Land Cover

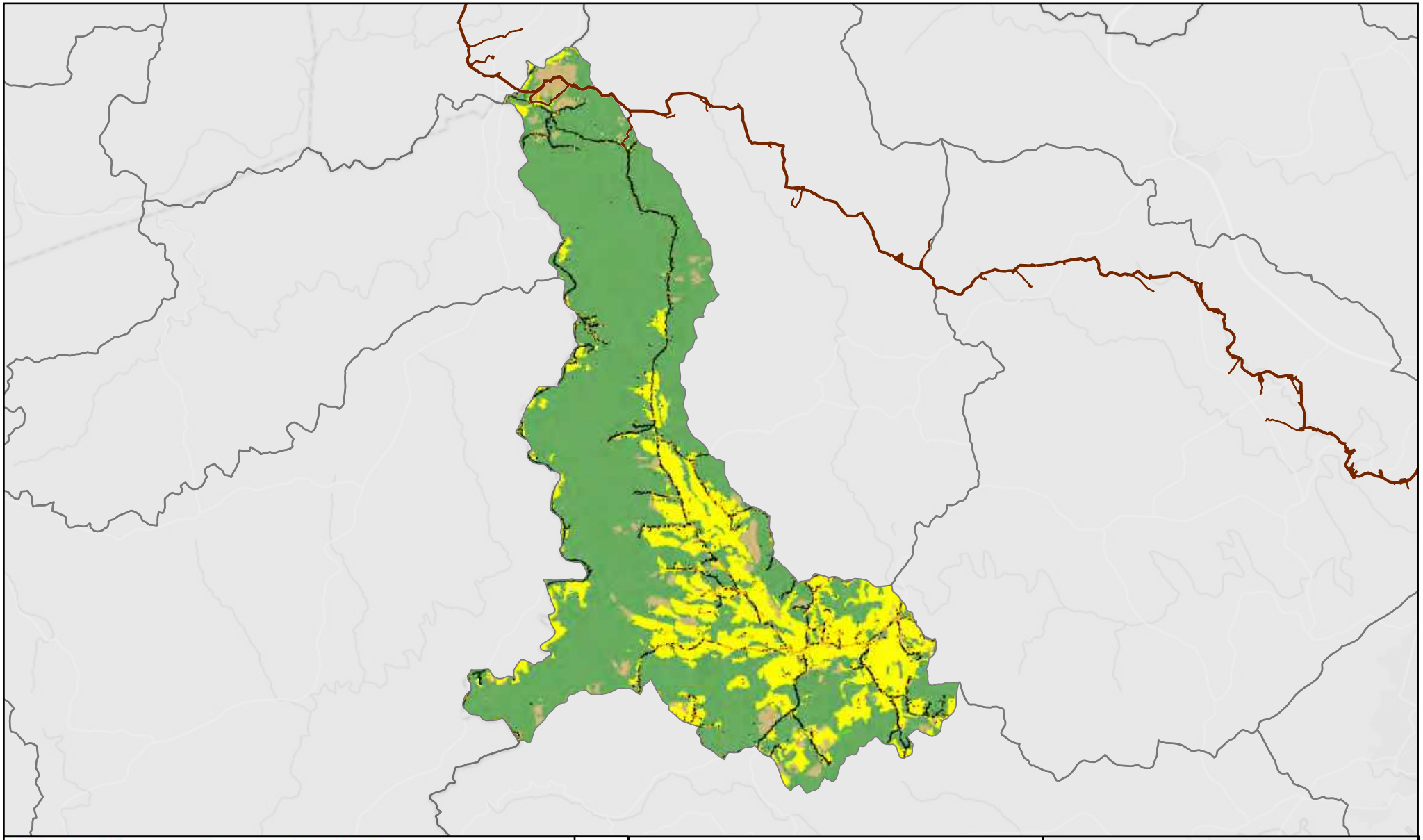
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N W E S

0 1.5 3 Miles

Scale: 1:120,000

Map Extent



Mountain Valley PIPELINE

Figure: 276

Land Use/Land Cover 2016
South Fork Blackwater River
30101010502 HUC12 Watershed

5/26/2022

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

N
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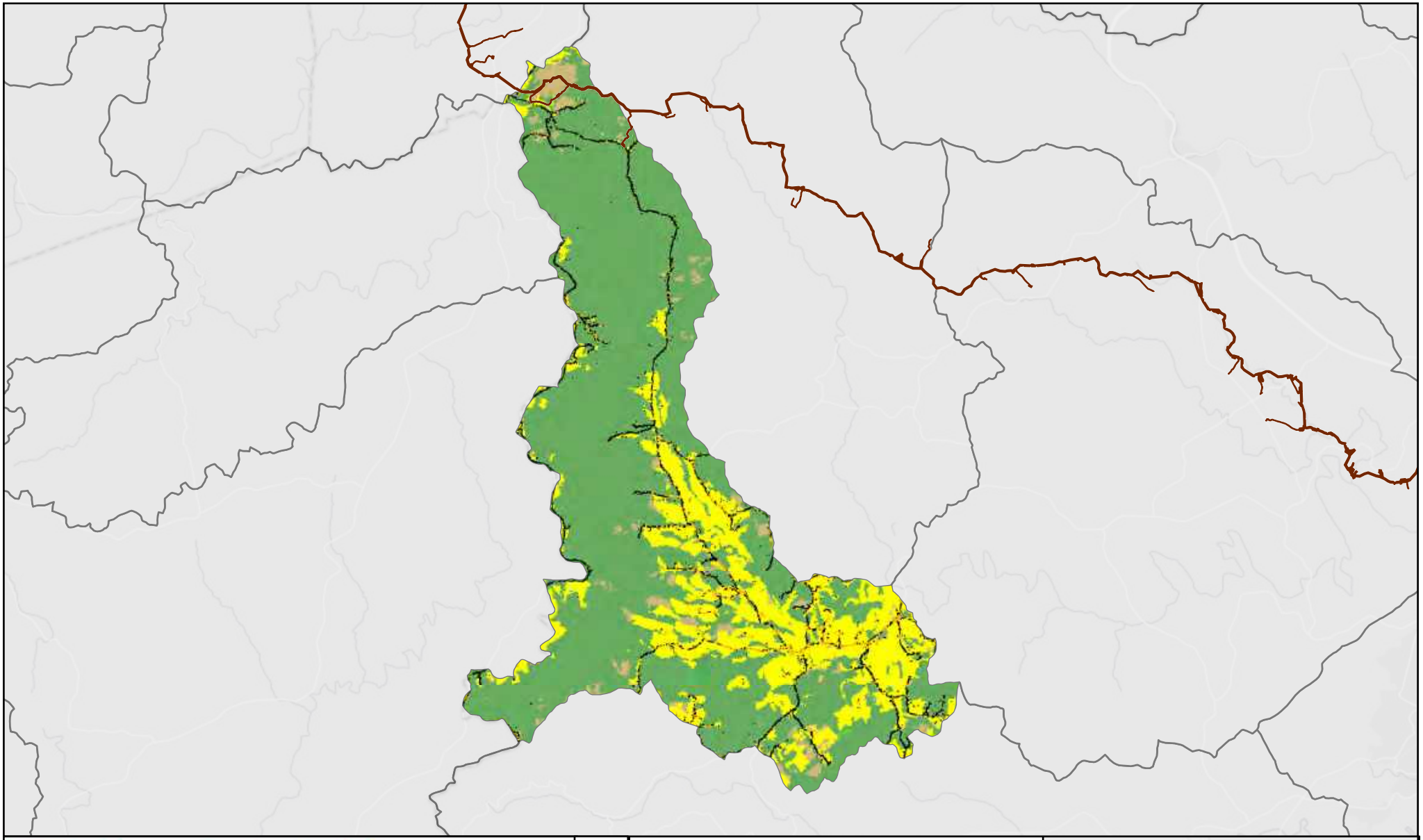
0 1.5 3

Scale: 1:120,000

Map Extent



Mountain Valley PIPELINE

Figure: 276a

Land Use/Land Cover 2019
South Fork Blackwater River
30101010502 HUC12 Watershed

5/25/2022

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

N
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0 1.5 3

Scale: 1:120,000

Map Extent

Legend

- 030101010501 North Fork Blackwater River Watershed
- North Fork Blackwater River Wateshed Total Stream - 851,091 Linear Feet
- Mountain Valley Pipeline North Fork Blackwater River

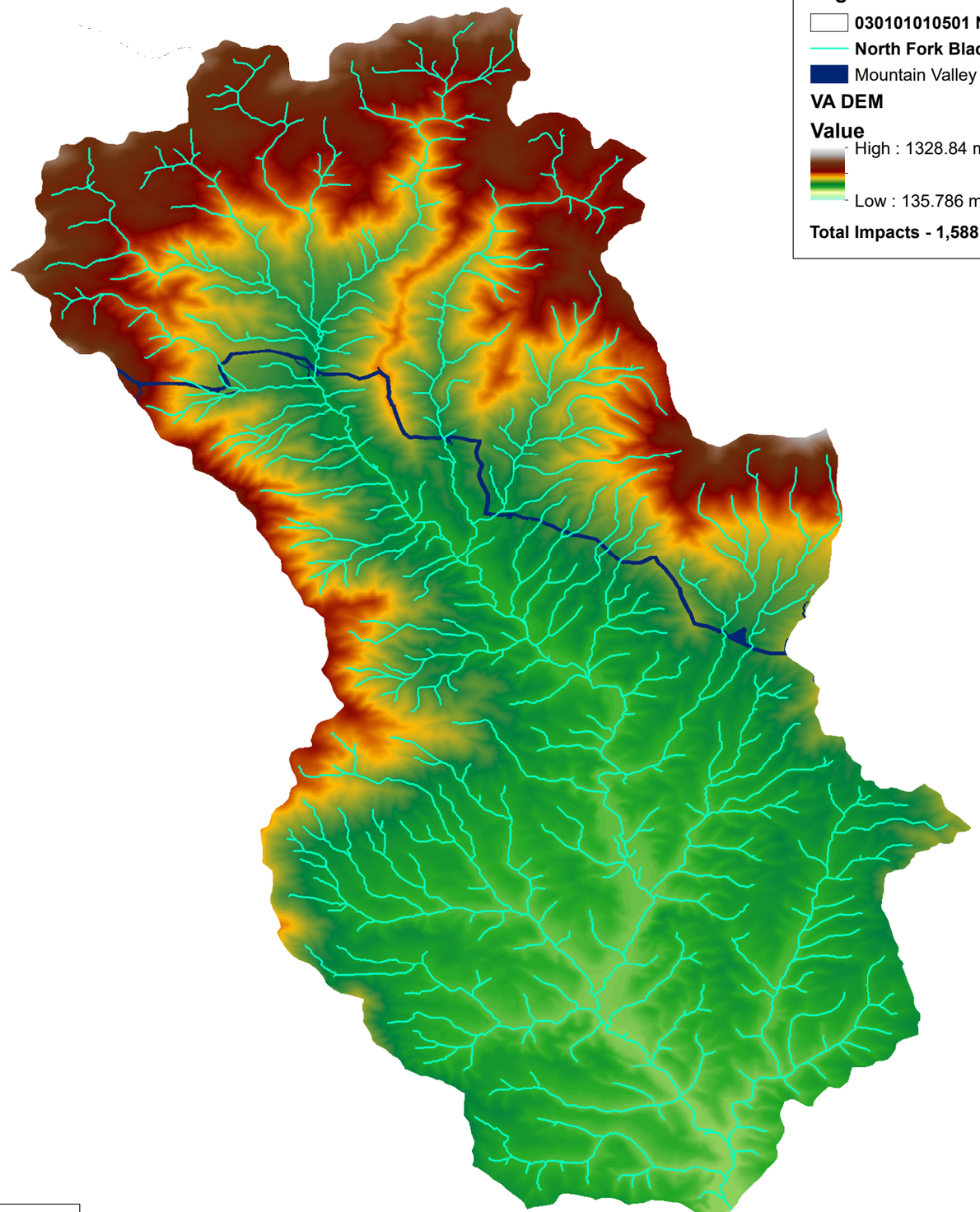
VA DEM

Value

High : 1328.84 meters

Low : 135.786 meters

Total Impacts - 1,588 Linear Feet (0.1866%)



0 1 2 4 Miles

MAPPING FOR VISUAL REPRESENTATION ONLY

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY
SCALE: 1" = 1 Mile
DATE: SEPT 2021
PN: **0101-174451.016**
J:\Projects\2017\174451.MVP.ForCo. Mastering\Maps\2021\FA Add\Figure 277-North_Fork_Watershed.mxd

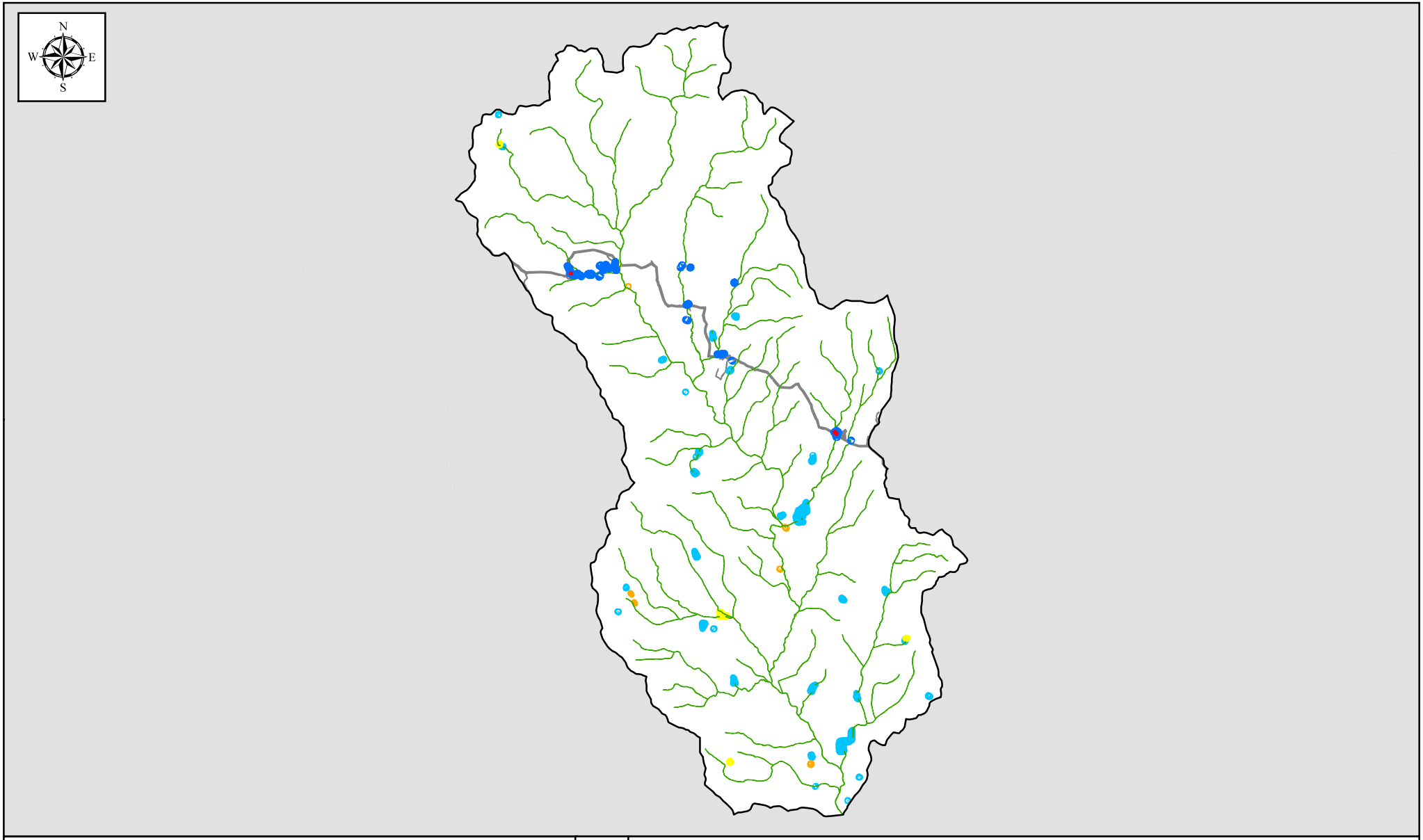
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
North Fork Blackwater River Watershed (030101010501)
Upper Roanoke HUC 8 Watershed, Virginia
For Informational Purposes Only

FIGURE 277



Mountain Valley PIPELINE

North Fork Blackwater River

Figure 278

1:100,000

1/6/2022

LEGEND

- Wetland Impacts - 0.08 acres
- North Fork Blackwater River Delineated Wetland Area - 2.23 acres

NWI Wetlands - 268.88 acres

- Freshwater Emergent Wetland - 0.89 acres
- Freshwater Forested/Shrub Wetland - 4.36 acres
- Freshwater Pond - 39.39 acres
- Riverine - 224.23 acres
- Mountain Valley Pipeline
- 030101010501_North Fork Blackwater River

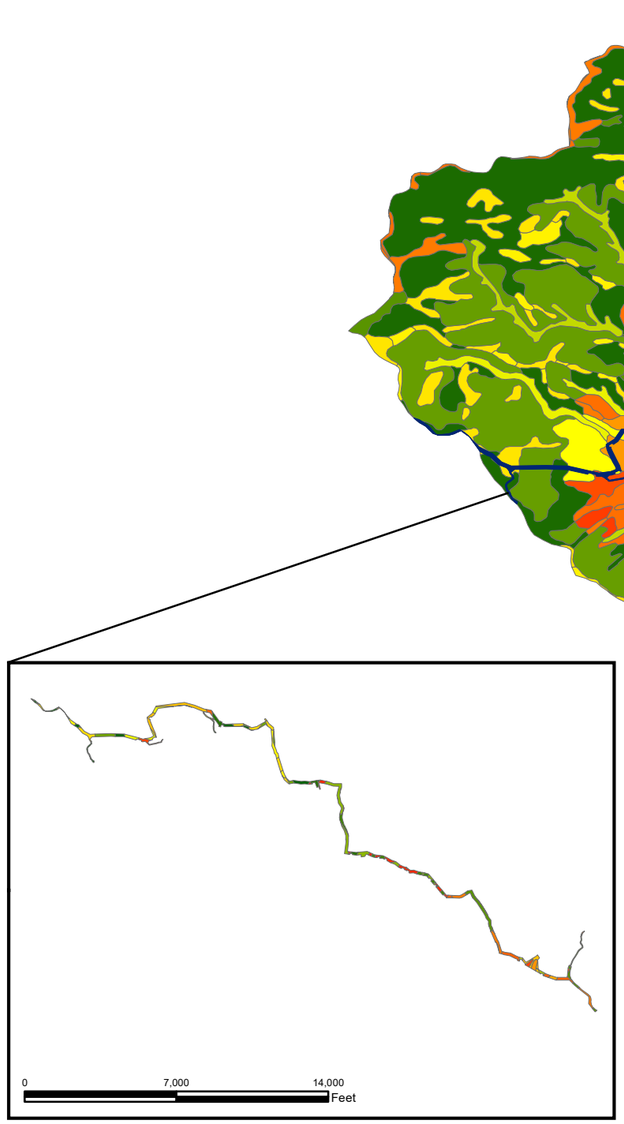
Note: Shapes are not to scale, enlarged to improve visibility.

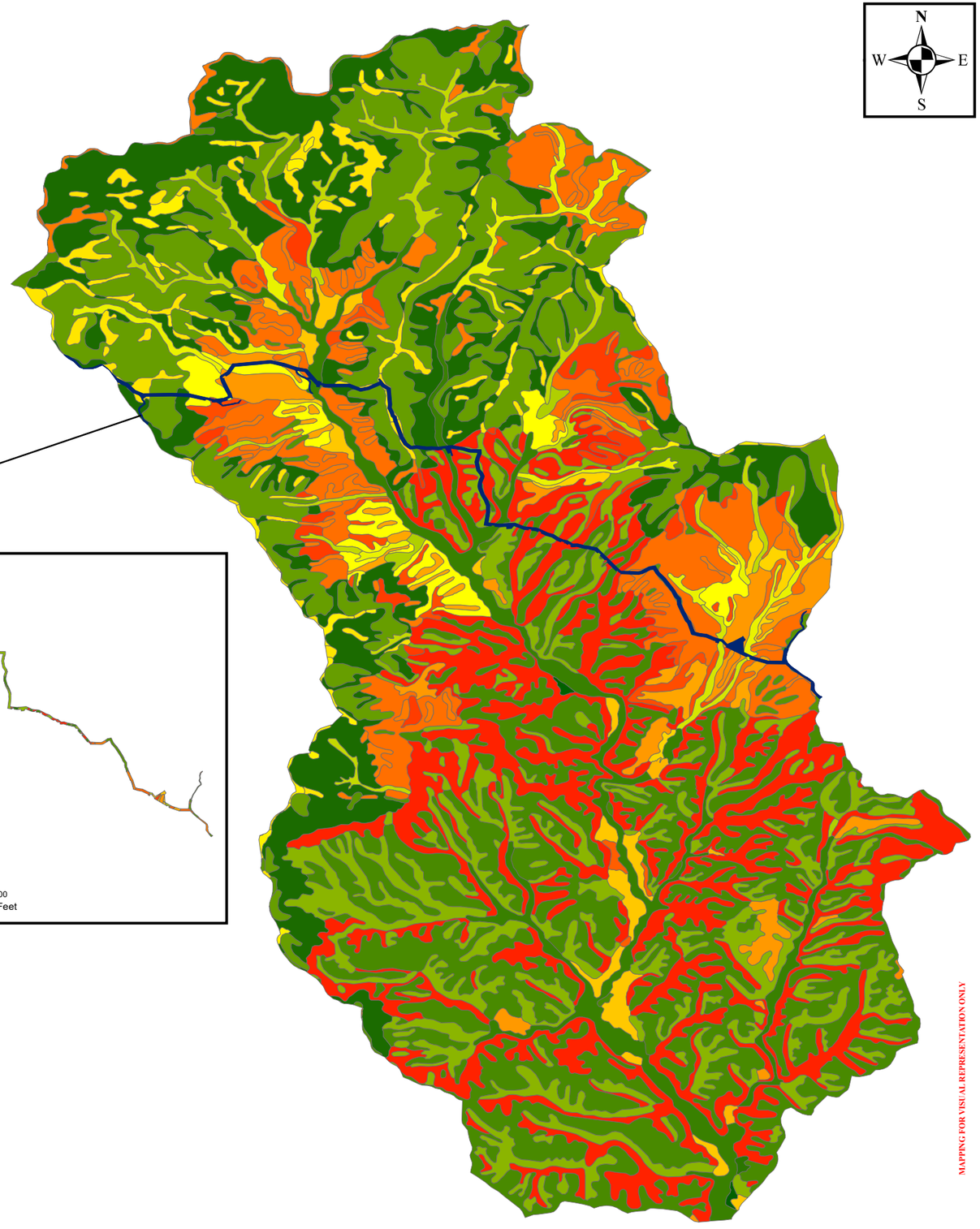
Legend

Mountain Valley Pipeline North Fork Blackwater River

North Fork Blackwater River

- 10B: Colescreek-Delanco complex, 2 to 8 percent slopes, rarely flooded
- 11A: Comus-Maggodee-Elsinboro complex, 0 to 4 percent slopes
- 13D: Cullasaja-Tuckasegee complex, 15 to 25 percent slopes, very stony
- 13E: Cullasaja-Tuckasegee complex, 25 to 60 percent slopes, very stony
- 14C: Cullasaja-Tuckasegee-Dellwood complex, 0 to 15 percent slopes, very stony
- 16C: Edneytown-Sauratown complex, 8 to 15 percent slopes, very stony - Franklin; 16C: Edneyville fine sandy loam, 7 to 15 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 16D: Edneytown-Sauratown complex, 15 to 25 percent slopes, very stony - Franklin; 16D: Edneyville fine sandy loam, 15 to 25 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 16E: Edneytown-Sauratown complex, 25 to 45 percent slopes, very stony - Franklin; 16E: Edneyville fine sandy loam, 25 to 55 percent slopes - Roanoke Co. & Cities of Roanoke and Salem, Va
- 16F: Edneytown-Sauratown complex, 45 to 95 percent slopes, very stony
- 16F: Edneytown-Sauratown complex, 45 to 95 percent slopes, very stony
- 19C: Hayesville loam, 8 to 15 percent slopes
- 19D: Hayesville loam, 15 to 25 percent slopes
- 1C: Ashe-Edneyville-Peaks complex, 8 to 15 percent slopes, very stony
- 20E: Hayesville loam, 25 to 45 percent slopes, very stony
- 21F: Hickoryknob-Rhodhiss complex, 45 to 75 percent slopes, rocky
- 23A: Iotla-Maggodee-Colescreek complex, 0 to 4 percent slopes
- 2D: Ashe-Peaks-Edneyville complex, 15 to 25 percent slopes, very stony
- 33E: Peaks-Ashe-Edneyville complex, 25 to 45 percent slopes, very stony
- 33F: Peaks-Ashe-Edneyville complex, 45 to 95 percent slopes, very stony
- 34E: Peaks gravelly loam, 35 to 60 percent slopes, very stony
- 34F: Peaks gravelly loam, 60 to 75 percent slopes, very stony
- 36C: Thurmont-Wintergreen complex, 8 to 15 percent slopes
- 39B: Wintergreen loam, 2 to 8 percent slopes
- 39C: Wintergreen loam, 8 to 15 percent slopes
- 39D: Wintergreen loam, 15 to 25 percent slopes
- 7C: Clifford fine sandy loam, 8 to 15 percent slopes
- 7D: Clifford fine sandy loam, 15 to 25 percent slopes
- 8E: Clifford-Hickoryknob complex, 25 to 45 percent slopes
- W: Water





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MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: See Mapping | DRAWN: KBW
DATE: AUGUST 2021 | CHECKED: JLY
PN: 010-17-0451.016 | APPROVED: JLY

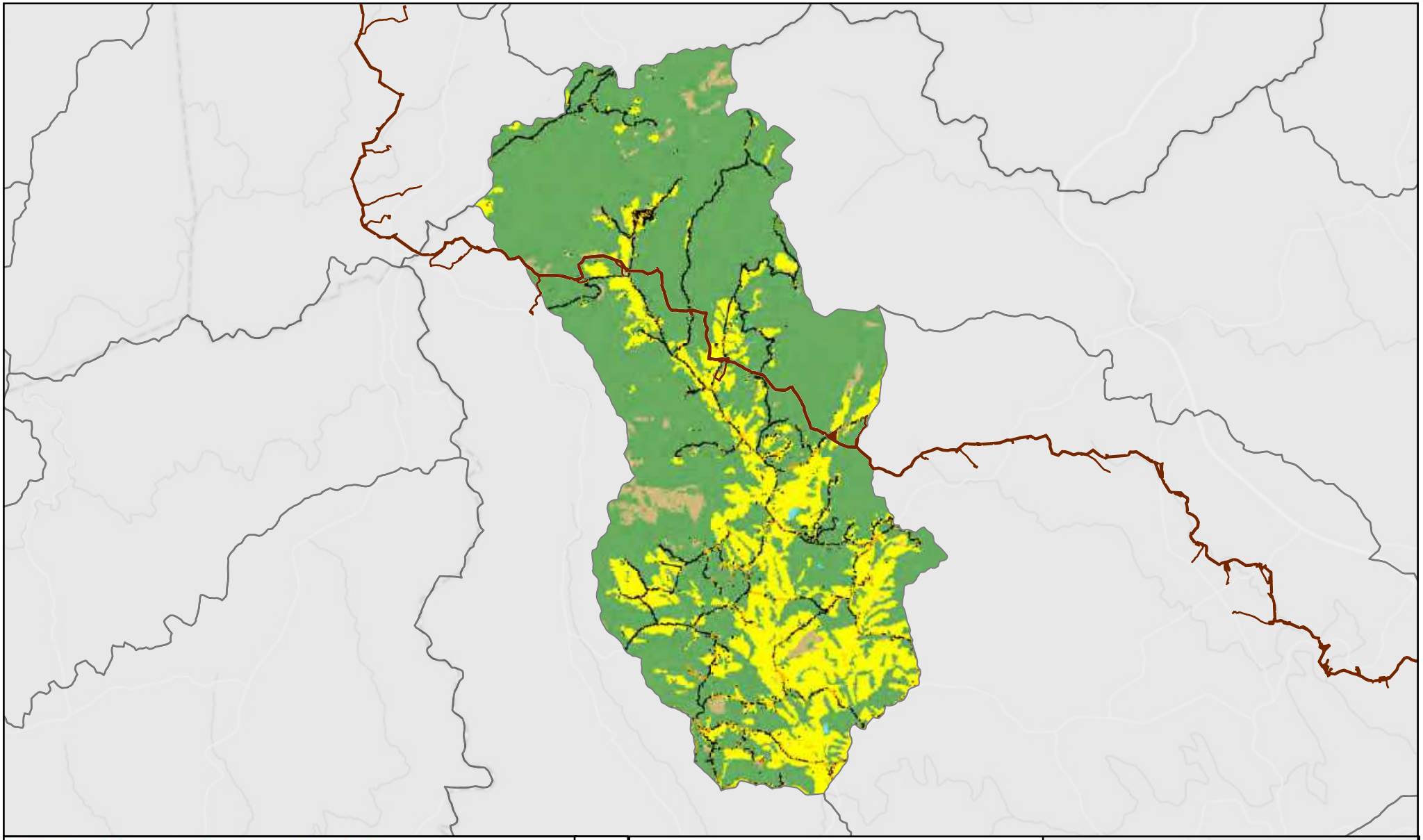
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
North Fork Blackwater River (030101010501)
Upper James HUC 8 Watershed
Franklin and Roanoke Counties, &
Cities of Roanoke and Salem, Virginia
For Informational Purposes Only

FIGURE 279



Mountain Valley PIPELINE

Figure: 280

Land Use/Land Cover 2011
North Fork Blackwater River
30101010501 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2011 Land Use Land Cover

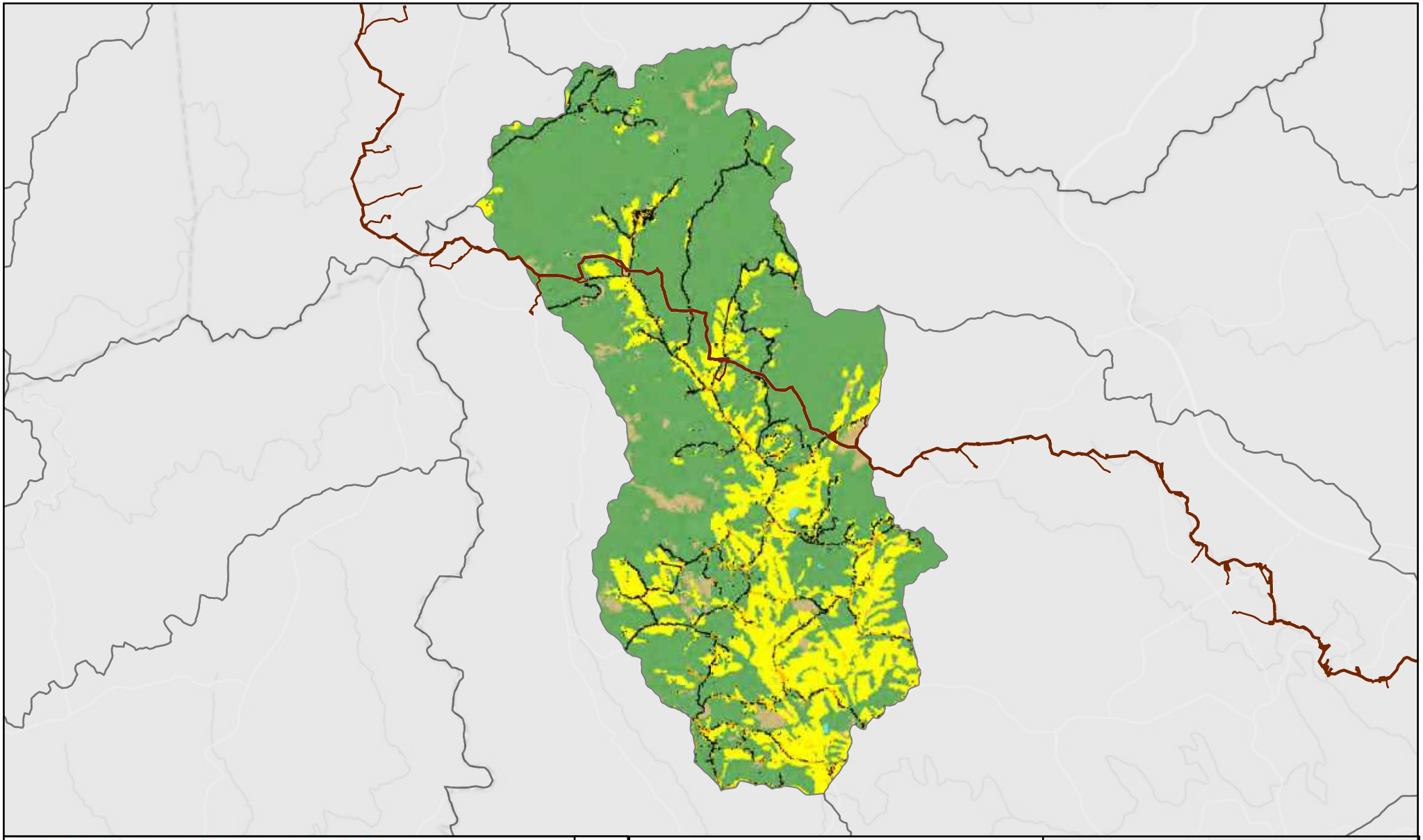
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 1.5 3 Miles

Scale: 1:110,000

Map Extent



Mountain Valley PIPELINE

Figure: 281

Land Use/Land Cover 2016
North Fork Blackwater River
30101010501 HUC12 Watershed

5/26/2022

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

N
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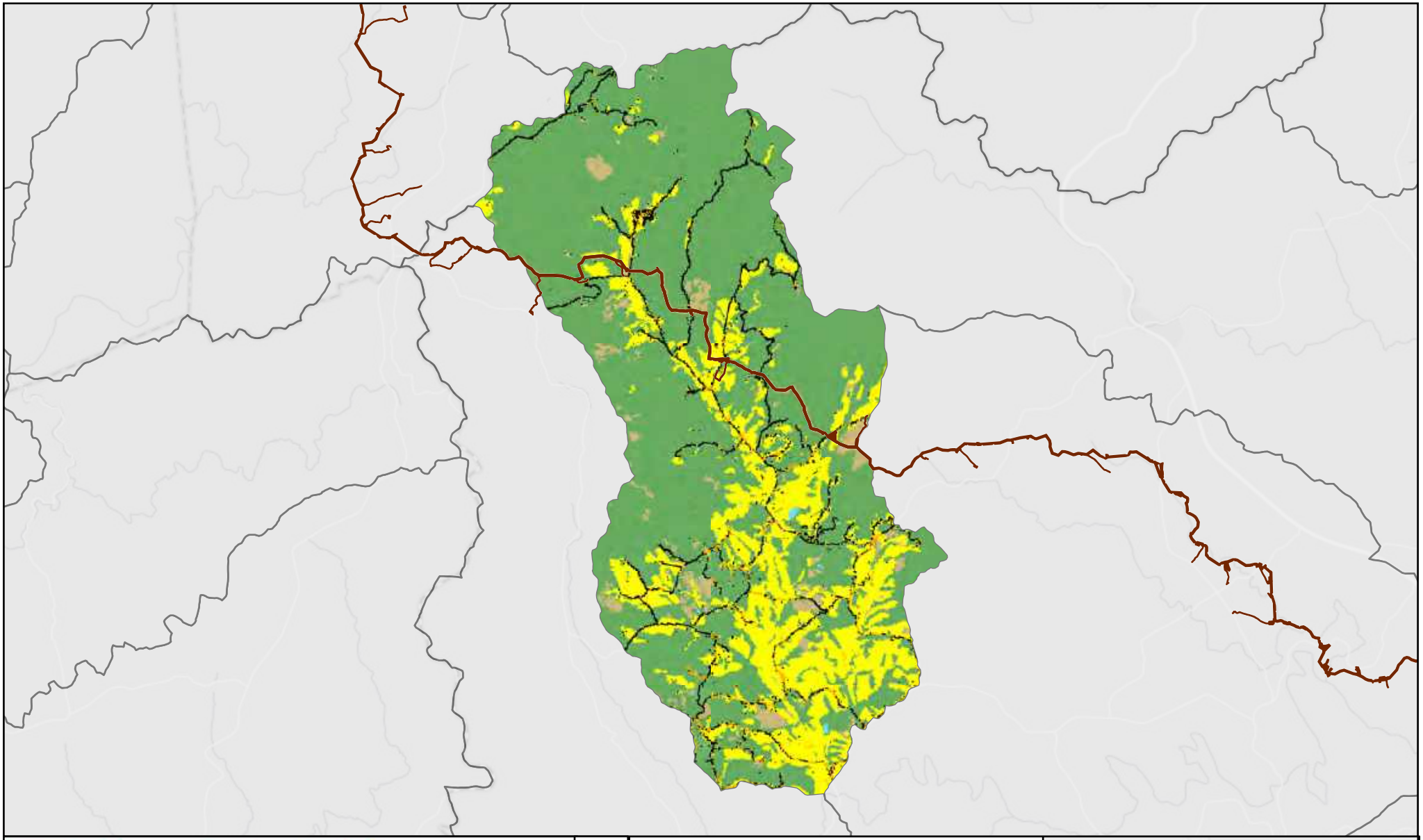
0 1.5 3 Miles

Scale: 1:110,000

Map Extent



Mountain Valley PIPELINE

Figure: 281a

Land Use/Land Cover 2019
North Fork Blackwater River
30101010501 HUC12 Watershed

5/25/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2019 Land Use Land Cover

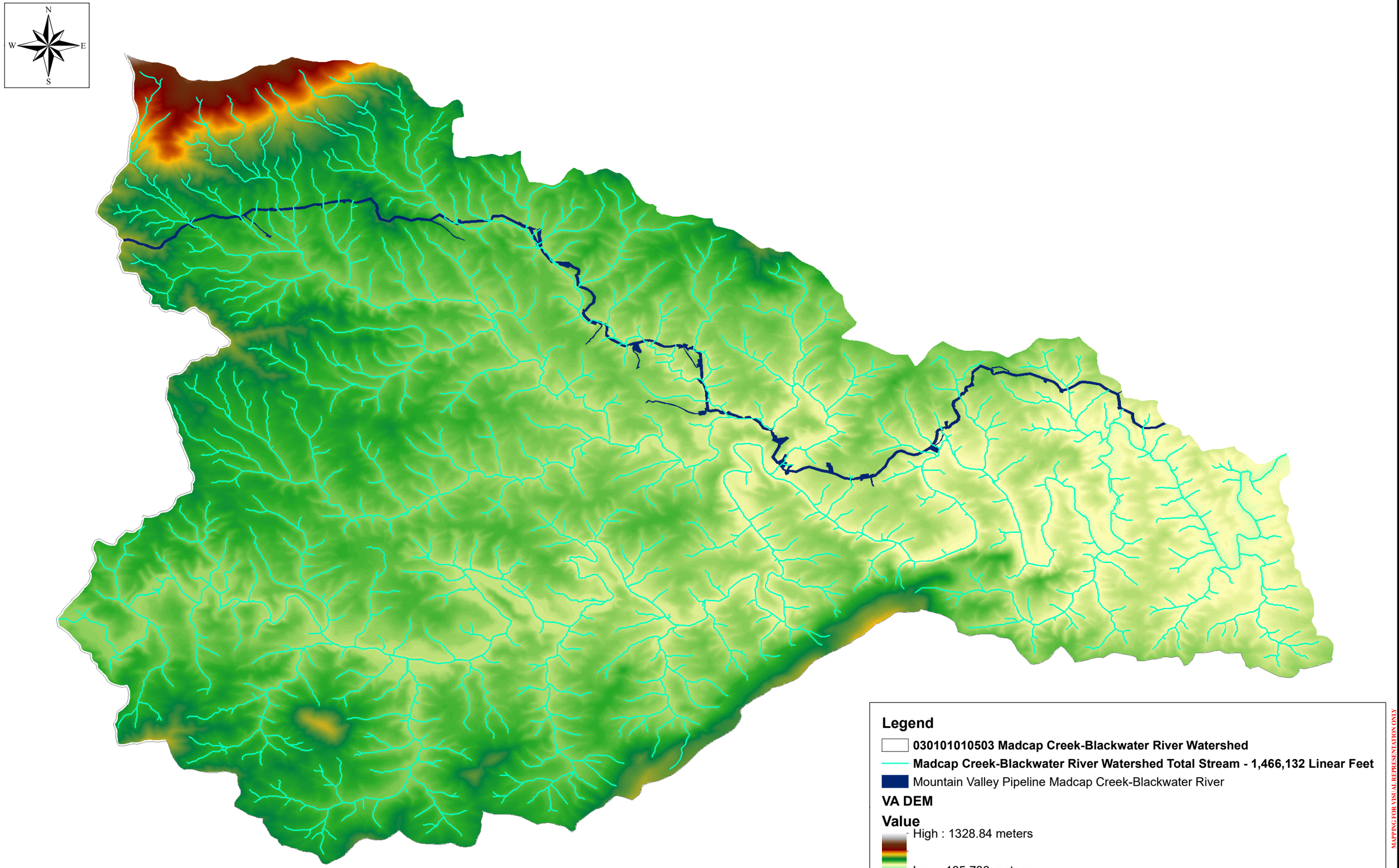
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N W E S

0 1.5 3 Miles

Scale: 1:110,000

Map Extent



MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: 1" = 1 Mile
DATE: SEPT 2021
PN: **0101-17-0451.016**
I:\Projects\2017\17-0451_MVP_EnvCon_Monitoring\Maps\2021\CIA_SolidFigure_282 - Madcap_Creek_Watershed.mxd

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

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

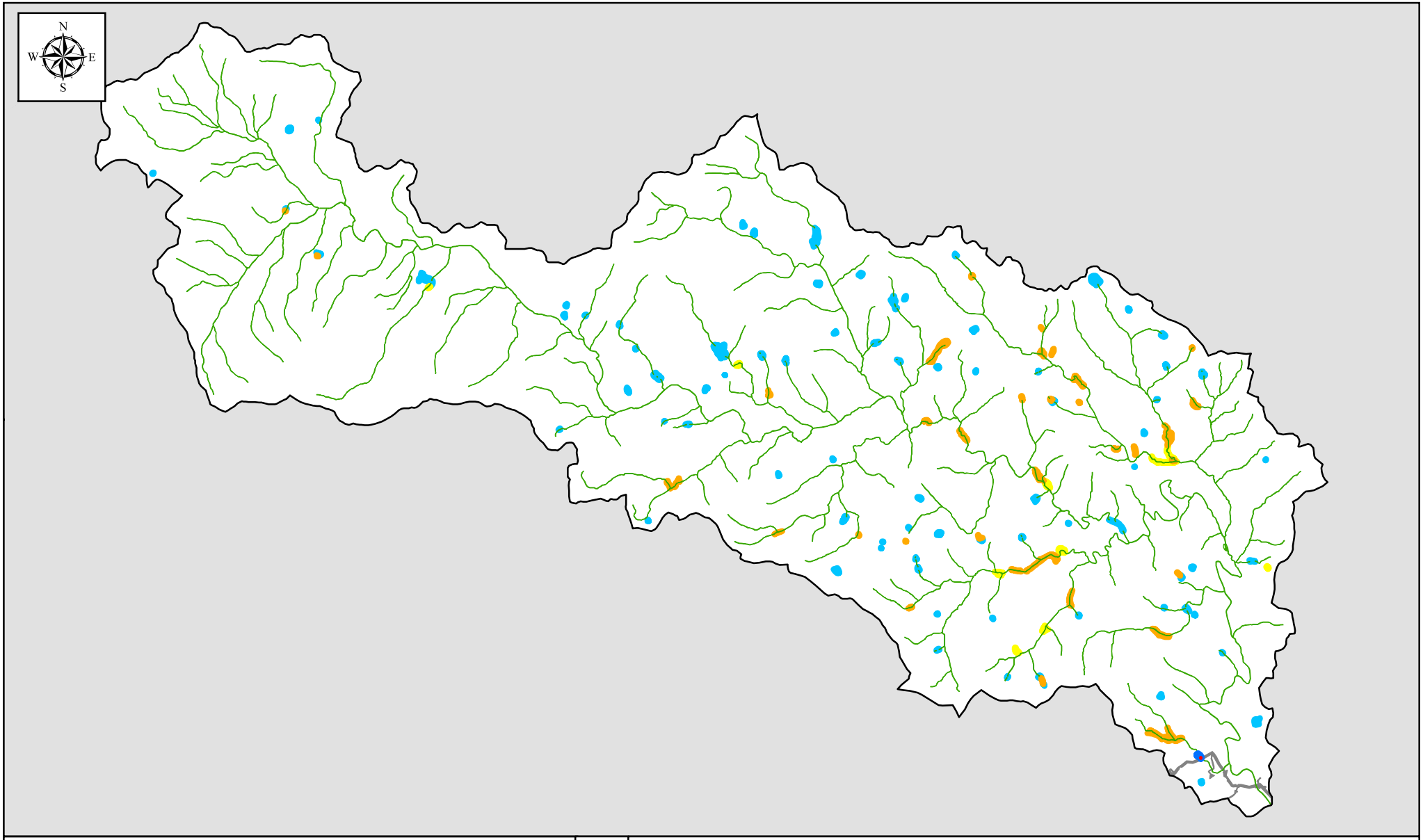
POTESTA

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

Cumulative Impact Assessment Report - Hydrology Impacts and Total Linear Footage Assessment Madcap Creek-Blackwater River Watershed (030101010503) Upper Roanoke HUC 8 Watershed, Virginia

For Informational Purposes Only

FIGURE 282



Mountain Valley PIPELINE

Madcap Creek-Blackwater River

Figure 283

1:90,000

1/6/2022

LEGEND

- Wetland Impacts - 0.65 acres
- Madcap Creek-Blackwater River Delineated Wetland Area - 0.2 acres

NWI Wetlands - 460.4 acres

- Freshwater Emergent Wetland - 36.09 acres
- Freshwater Forested/Shrub Wetland - 11.58 acres
- Freshwater Pond - 55.73 acres
- Riverine - 357 acres
- Mountain Valley Pipeline
- 030101010503_Madcap Creek-Blackwater River

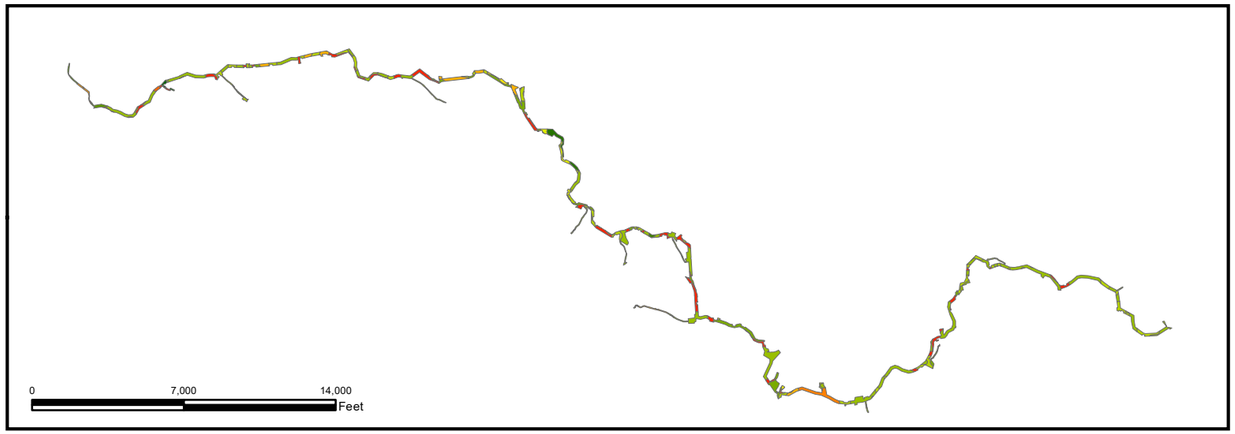
Note: Shapes are not to scale, enlarged to improve visibility.

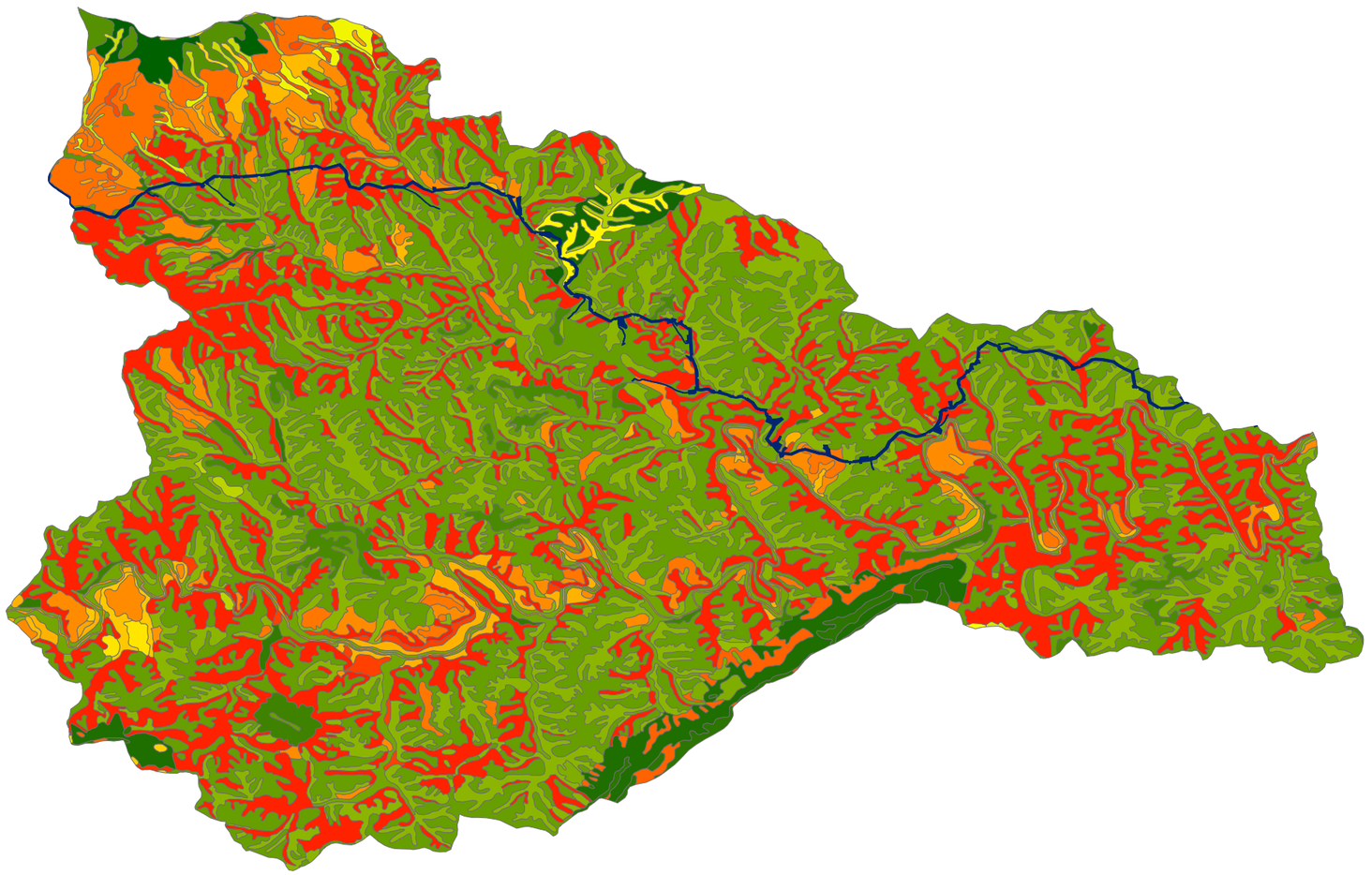
Legend

Mountain Valley Pipeline Madcap Creek-Blackwater River

Madcap Creek-Blackwater River

- 10B: Colescreek-Delanco complex, 2 to 8 percent slopes, rarely flooded
- 11A: Comus-Maggodee-Elsinboro complex, 0 to 4 percent slopes
- 13D: Cullasaja-Tuckasegee complex, 15 to 25 percent slopes, very stony
- 13E: Cullasaja-Tuckasegee complex, 25 to 60 percent slopes, very stony
- 15E: Drapermill gravelly loam, 25 to 60 percent slopes
- 16C: Edneytown-Sauratown complex, 8 to 15 percent slopes, very stony
- 16D: Edneytown-Sauratown complex, 15 to 25 percent slopes, very stony
- 16E: Edneytown-Sauratown complex, 25 to 45 percent slopes, very stony
- 16F: Edneytown-Sauratown complex, 45 to 95 percent slopes, very stony
- 17B: Elsinboro-Colescreek complex, 2 to 8 percent slopes, rarely flooded
- 19C: Hayesville loam, 8 to 15 percent slopes
- 19D: Hayesville loam, 15 to 25 percent slopes
- 1C
- 20E: Hayesville loam, 25 to 45 percent slopes, very stony
- 21F: Hickoryknob-Rhodhiss complex, 45 to 75 percent slopes, rocky
- 23A: Lotla-Maggodee-Colescreek complex, 0 to 4 percent slopes
- 24B: Jackland-Mirerock-Redbrush complex, 2 to 8 percent slopes
- 24C: Jackland-Mirerock-Redbrush complex, 8 to 15 percent slopes
- 26C: Littlejoe-Strawfield-Penhook complex, 8 to 15 percent slopes
- 26D: Littlejoe-Strawfield-Penhook complex, 15 to 25 percent slopes
- 27C: Minnieville loam, 8 to 15 percent slopes
- 27D: Minnieville loam, 15 to 25 percent slopes
- 27E: Minnieville loam, 25 to 45 percent slopes
- 28C: Minnieville-Orenda-Redbrush complex, 8 to 15 percent slopes
- 28D: Minnieville-Orenda-Redbrush complex, 15 to 25 percent slopes
- 2D
- 33E: Peaks-Ashe-Edneyville complex, 25 to 45 percent slopes, very stony
- 33F: Peaks-Ashe-Edneyville complex, 45 to 95 percent slopes, very stony
- 35C: Thurmont-Urban land-Wintergreen complex, 8 to 15 percent slopes
- 36B: Thurmont-Wintergreen complex, 2 to 8 percent slopes
- 36C: Thurmont-Wintergreen complex, 8 to 15 percent slopes
- 39B: Wintergreen loam, 2 to 8 percent slopes
- 39C: Wintergreen loam, 8 to 15 percent slopes
- 39D: Wintergreen loam, 15 to 25 percent slopes
- 3D: Bluemount-Redbrush-Spriggs complex, 15 to 25 percent slopes, stony
- 4E: Bluemount-Spriggs complex, 25 to 45 percent slopes, stony
- 5C: Bluemount-Spriggs-Redbrush complex, 8 to 15 percent slopes, stony
- 7B: Clifford fine sandy loam, 2 to 8 percent slopes
- 7C: Clifford fine sandy loam, 8 to 15 percent slopes
- 7D: Clifford fine sandy loam, 15 to 25 percent slopes
- 8E: Clifford-Hickoryknob complex, 25 to 45 percent slopes
- 9C: Clifford-Urban land complex, 8 to 15 percent slopes
- W: Water





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MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: See Mapping
DATE: AUGUST 2021
PN: 010-17-0451.016

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

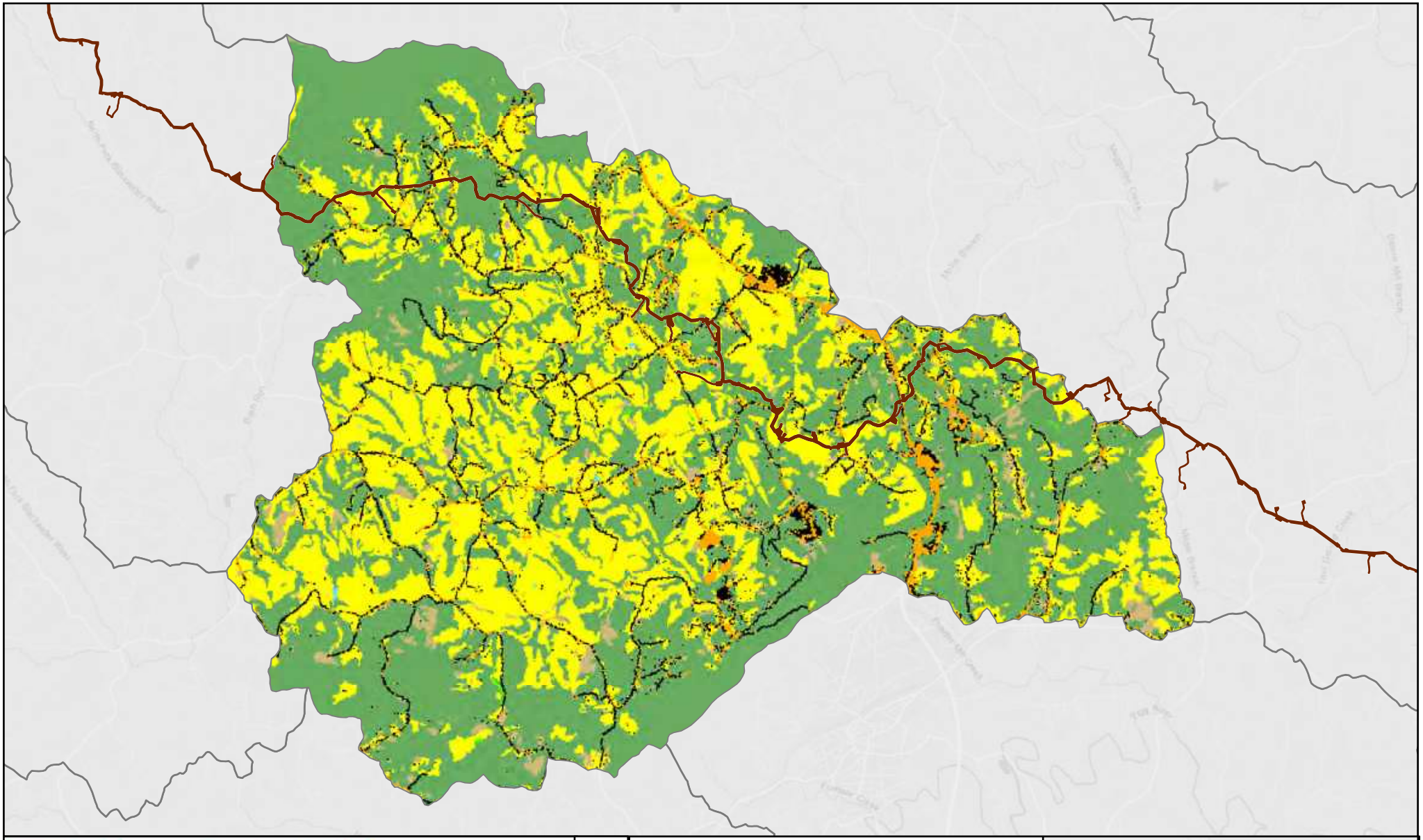
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
Madcap Creek-Blackwater River (03010101010503)
Upper Roanoke HUC 8 Watershed
Franklin County, Virginia
For Informational Purposes Only

FIGURE 284



Mountain Valley PIPELINE

Figure: 285

Land Use/Land Cover 2011
Madcap Creek-Blackwater River
30101010503 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2011 Land Use Land Cover

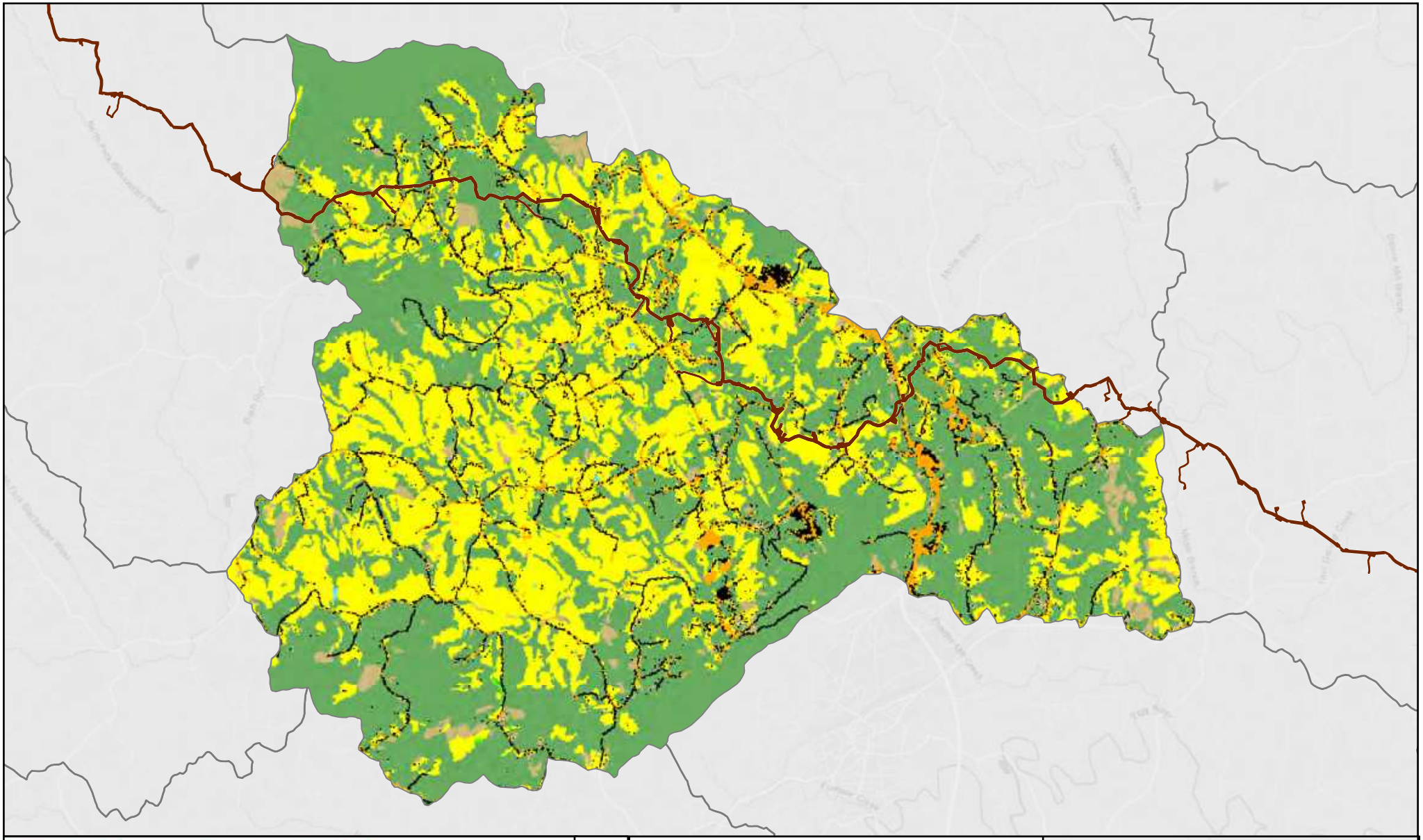
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N W E S

0 1.5 3 Miles

Scale: 1:100,000

Map Extent



Mountain Valley PIPELINE

Figure: 286

Land Use/Land Cover 2016
Madcap Creek-Blackwater River
30101010503 HUC12 Watershed

5/26/2022

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

N
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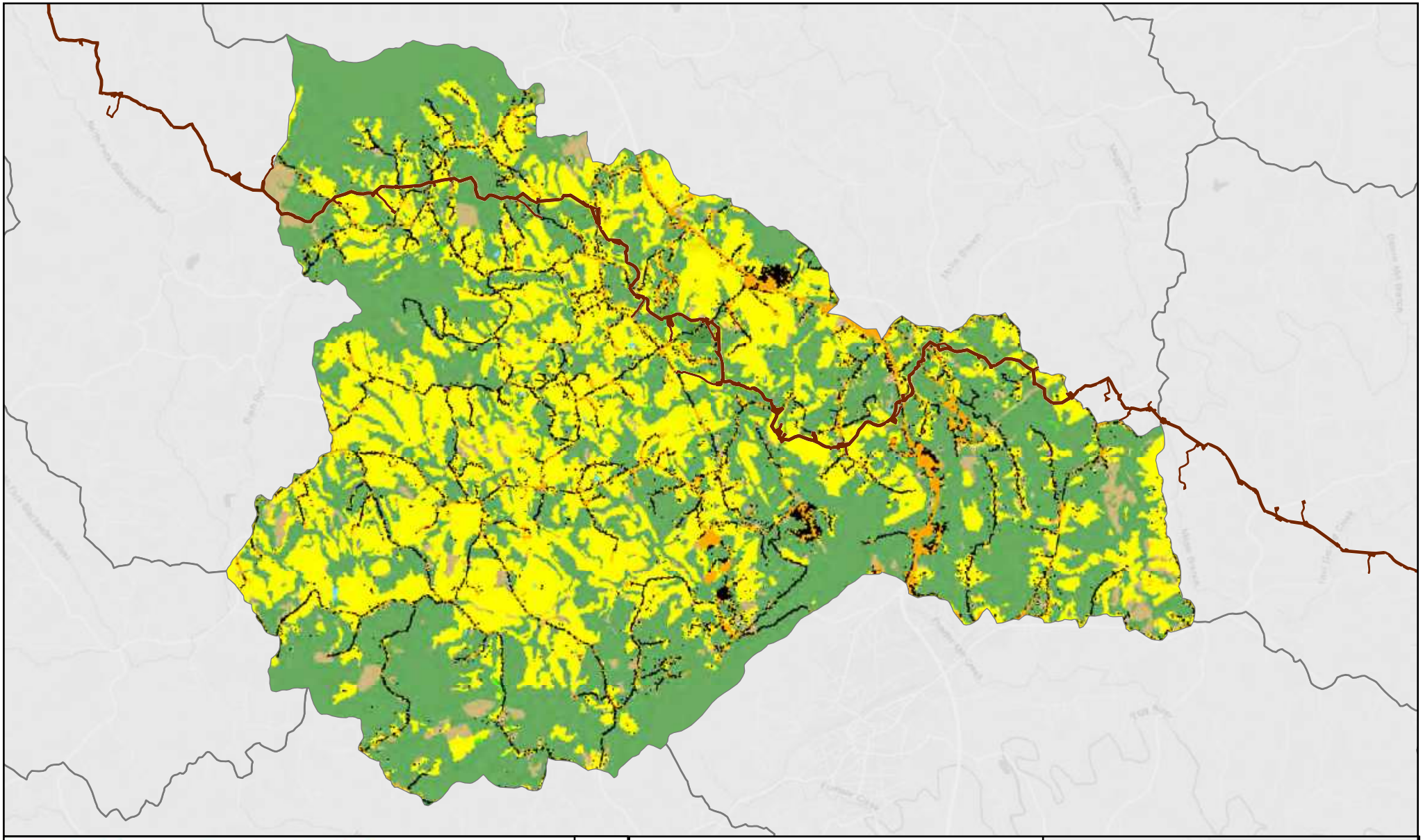
Miles
0 1.5 3

Scale: 1:100,000

Map Extent



Mountain Valley PIPELINE

Figure: 286a

Land Use/Land Cover 2019
Madcap Creek-Blackwater River
30101010503 HUC12 Watershed

5/25/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2019 Land Use Land Cover

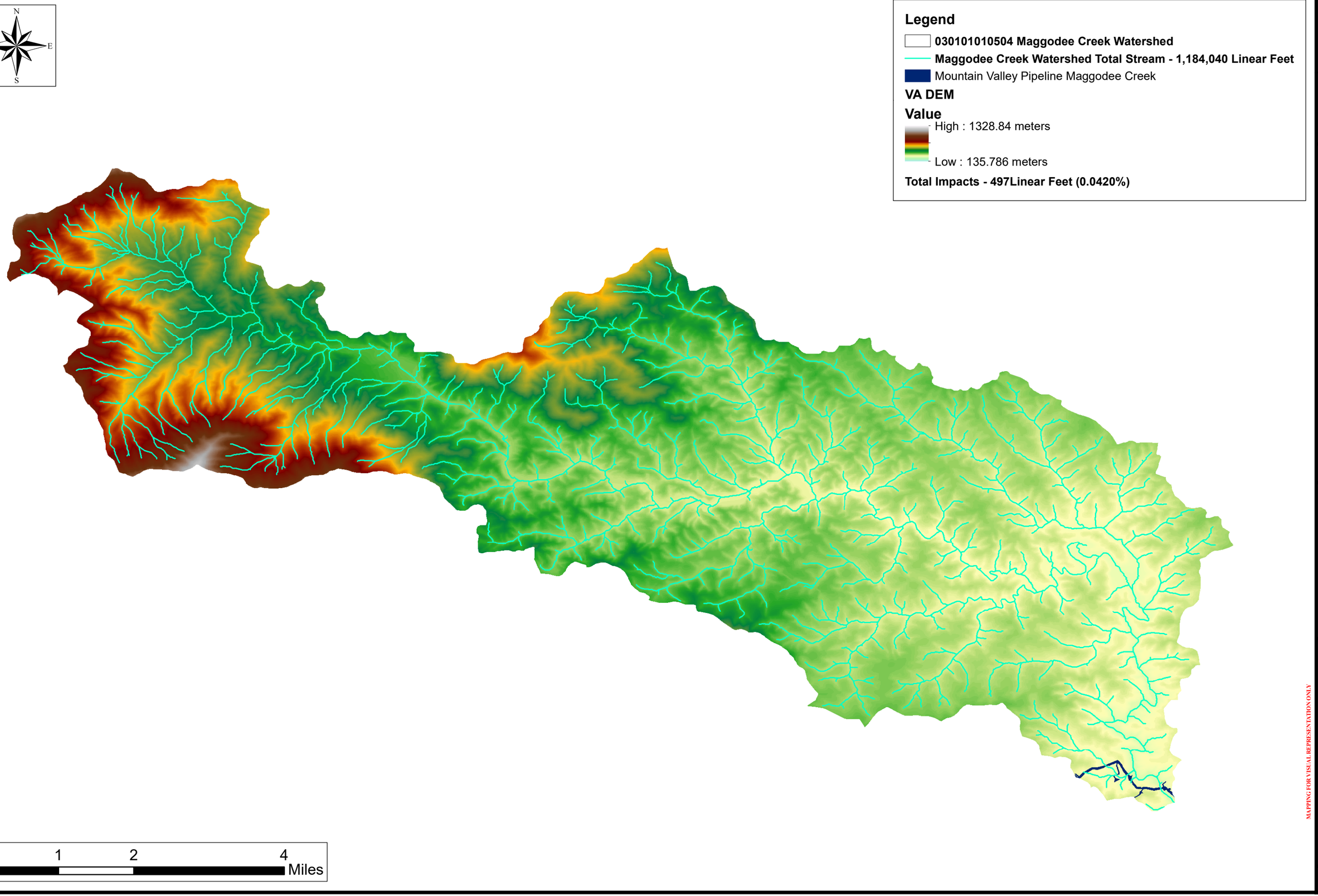
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N W E S

0 1.5 3 Miles

Scale: 1:100,000

Map Extent



SCALE: 1" = 1 Mile
DATE: SEPT 2021
PN: 0101-17-0451.016
DRAWN: KBW
CHECKED: JLY
APPROVED: JLY
I:\Projects\2017\17-0451-MVP_EnviCon_Monitoring\Map\2021-CIA_SetInFigure_287 - Maggodee_Creek_Watershed.mxd

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

POTESTA

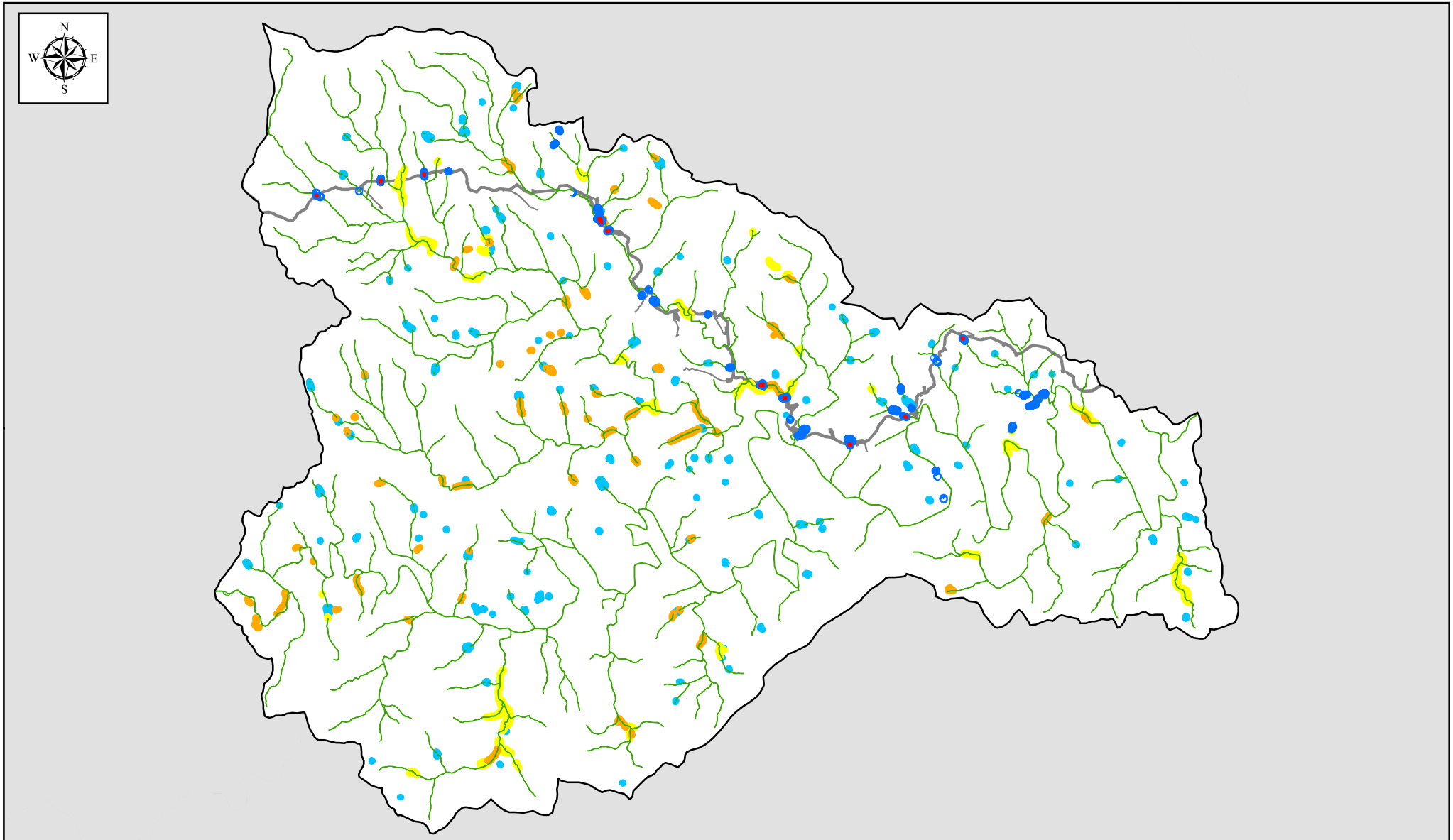
MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317

MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Maggodee Creek Watershed (030101010504)
Upper Roanoke HUC 8 Watershed, Virginia

For Informational Purposes Only

FIGURE 287



Mountain Valley PIPELINE

Maggodee Creek

Figure 288

1:97,000

1/6/2022

LEGEND

- Wetland Impacts - 0 acres
- Maggodee Creek Delineated Wetland Area - 8.29 acres

NWI Wetlands - 704 acres

- Freshwater Emergent Wetland - 47.4 acres
- Freshwater Forested/Shrub Wetland - 103.79 acres
- Freshwater Pond - 73.33 acres
- Riverine - 479.48 acres
- Mountain Valley Pipeline
- 030101010504_Maggodee Creek

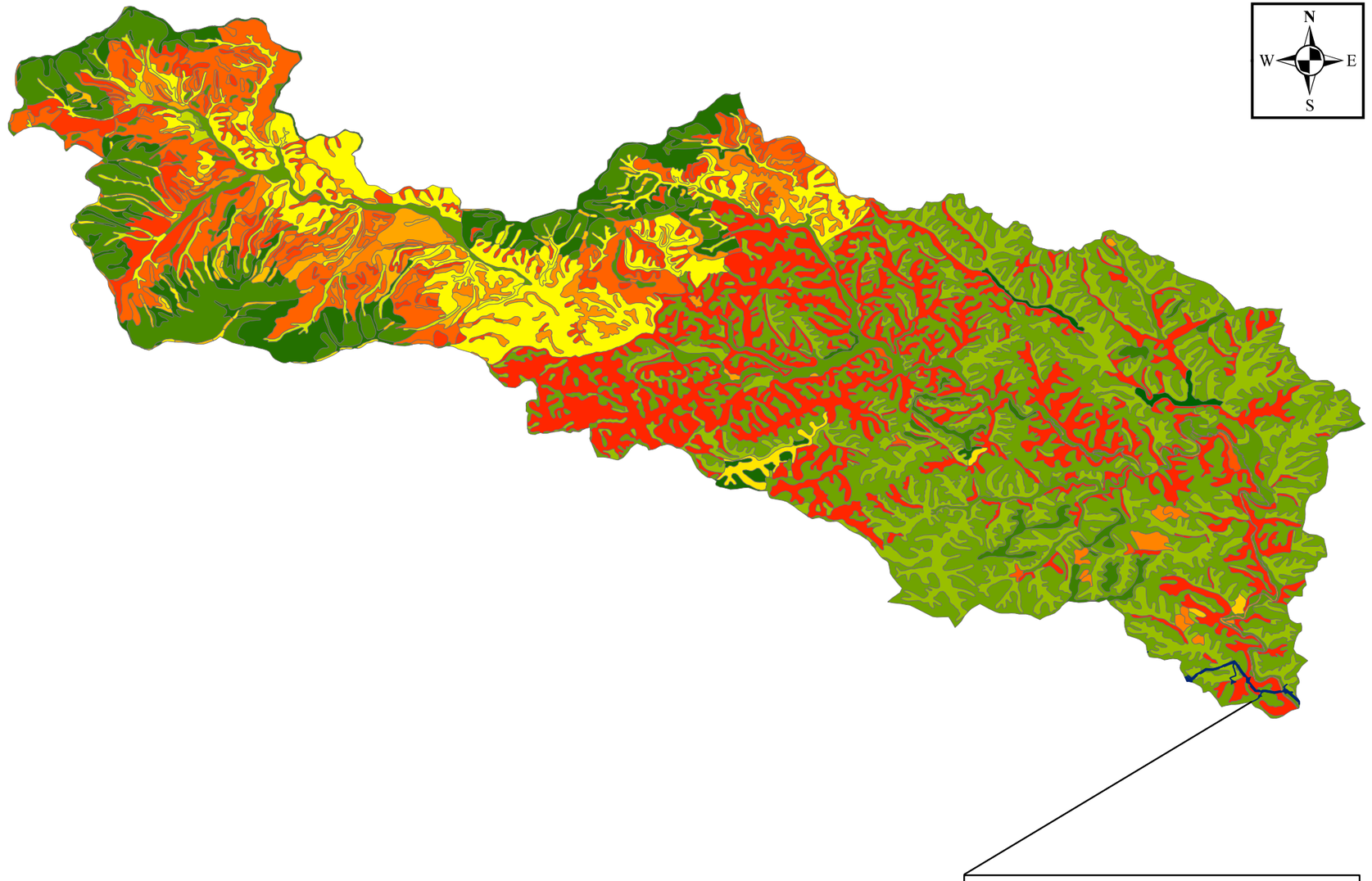
Note: Shapes are not to scale, enlarged to improve visibility.

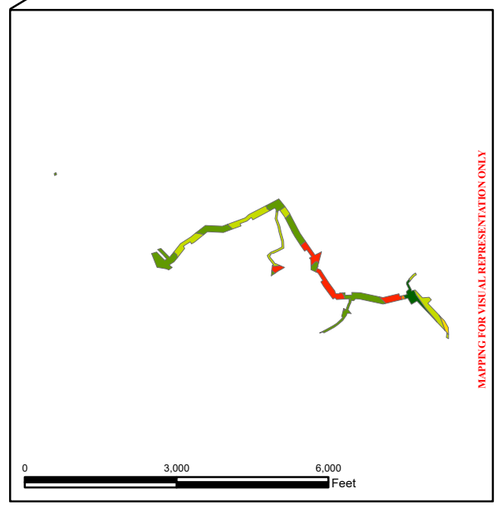
Legend

Mountain Valley Pipeline Maggodee Creek

Maggodee Creek

- 10B: Colescreek-Delanco complex, 2 to 8 percent slopes, rarely flooded
- 11A: Comus-Maggodee-Elsinboro complex, 0 to 4 percent slopes
- 13D: Cullasaja-Tuckasegee complex, 15 to 25 percent slopes, very stony
- 13E: Cullasaja-Tuckasegee complex, 25 to 60 percent slopes, very stony
- 15E: Drapermill gravelly loam, 25 to 60 percent slopes
- 16C: Edneytown-Sauratown complex, 8 to 15 percent slopes, very stony
- 16D: Edneytown-Sauratown complex, 15 to 25 percent slopes, very stony
- 16E: Edneytown-Sauratown complex, 25 to 45 percent slopes, very stony
- 16F: Edneytown-Sauratown complex, 45 to 95 percent slopes, very stony
- 17B: Elsinboro-Colescreek complex, 2 to 8 percent slopes, rarely flooded
- 17E: Evard fine sandy loam, 25 to 55 percent slopes
- 19C: Hayesville loam, 8 to 15 percent slopes
- 19D: Hayesville loam, 15 to 25 percent slopes
- 1C: Ashe-Edneyville-Peaks complex, 8 to 15 percent slopes, very stony
- 20E: Hayesville loam, 25 to 45 percent slopes, very stony
- 21F: Hickoryknob-Rhodhiss complex, 45 to 75 percent slopes, rocky
- 23A: Iotla-Maggodee-Colescreek complex, 0 to 4 percent slopes
- 26C: Littlejoe-Strawfield-Penhook complex, 8 to 15 percent slopes
- 26D: Littlejoe-Strawfield-Penhook complex, 15 to 25 percent slopes
- 27C: Minnieville loam, 8 to 15 percent slopes
- 28E: Hayesville channery fine sandy loam, 25 to 50 percent slopes, very stony
- 2D: Ashe-Peaks-Edneyville complex, 15 to 25 percent slopes, very stony
- 33E: Peaks-Ashe-Edneyville complex, 25 to 45 percent slopes, very stony
- 33F: Peaks-Ashe-Edneyville complex, 45 to 95 percent slopes, very stony
- 34E: Peaks gravelly loam, 35 to 60 percent slopes, very stony
- 34F: Peaks gravelly loam, 60 to 75 percent slopes, very stony
- 36C: Thurmont-Wintergreen complex, 8 to 15 percent slopes
- 36D: Thurmont-Wintergreen complex, 15 to 25 percent slopes
- 39B: Wintergreen loam, 2 to 8 percent slopes
- 39C: Wintergreen loam, 8 to 15 percent slopes
- 39D: Wintergreen loam, 15 to 25 percent slopes
- 7B: Clifford fine sandy loam, 2 to 8 percent slopes
- 7C: Clifford fine sandy loam, 8 to 15 percent slopes
- 7D: Clifford fine sandy loam, 15 to 25 percent slopes
- 8E: Clifford-Hickoryknob complex, 25 to 45 percent slopes
- W: Water





MAPPING FOR VISUAL REPRESENTATION ONLY

0 1.5 3 6 Miles

SCALE: See Mapping | DRAWN: KBW
DATE: AUGUST 2021 | CHECKED: JLY
PN: 010-17-0451.016 | APPROVED: JLY
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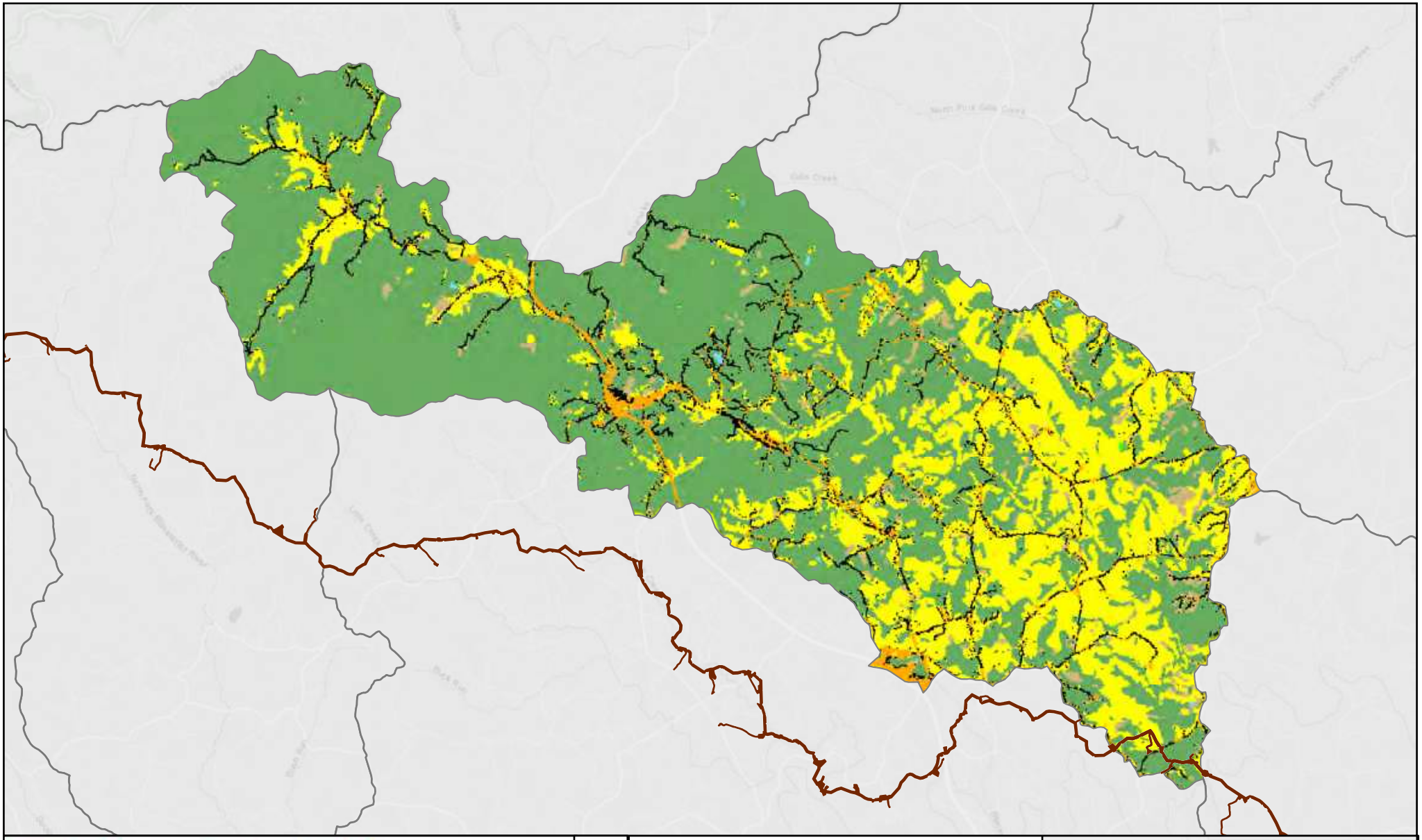
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 343-7402 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
Maggodee Creek (0301010104)
Upper Roanoke HUC 8 Watershed
Franklin and Roanoke Counties & Cities of Roanoke and Salem, Virginia
for environmental impact study

FIGURE 289



Mountain Valley PIPELINE

Figure: 290

Land Use/Land Cover 2011
Maggodee Creek
30101010504 HUC12 Watershed

5/26/2022

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

N
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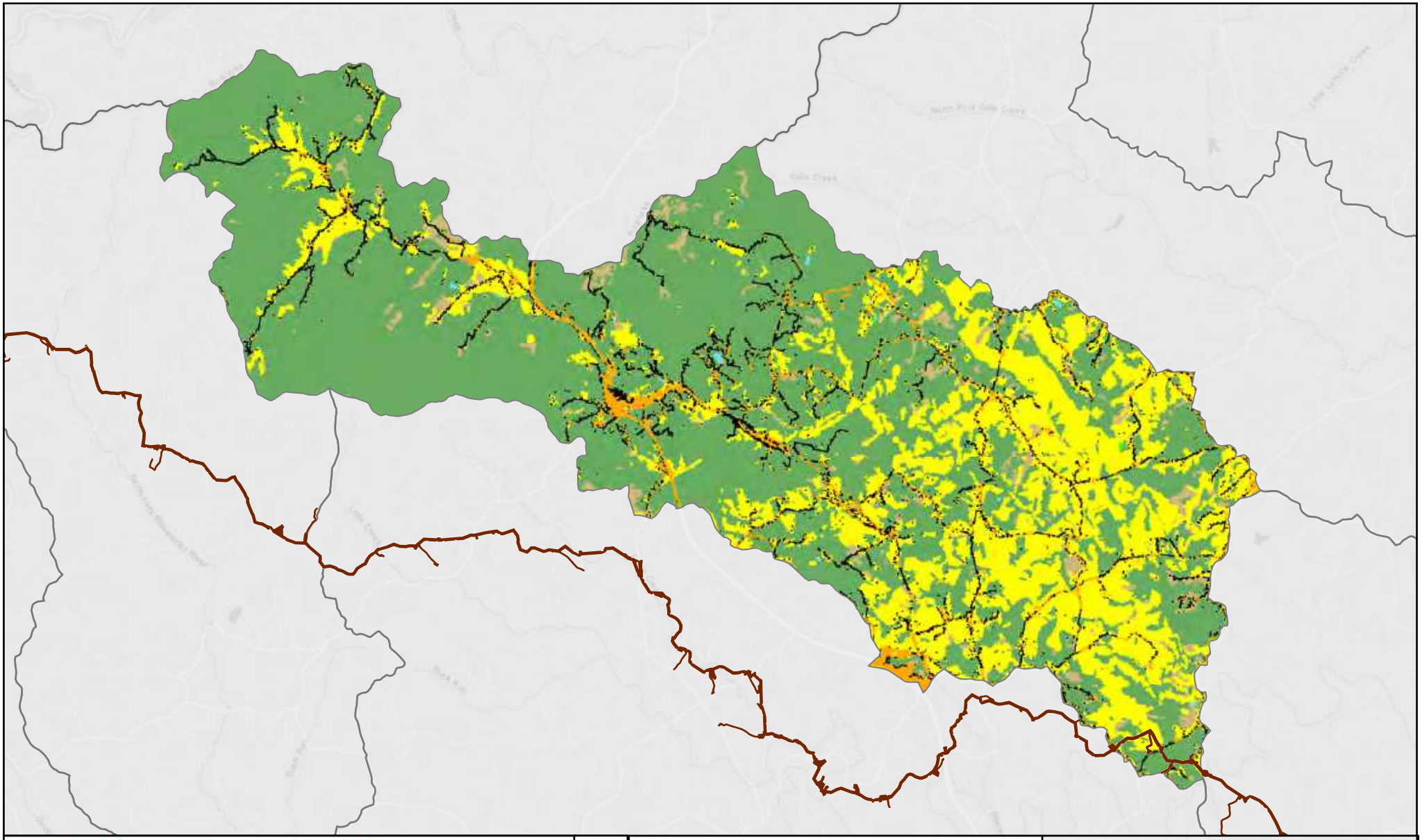
0 1.5 3 Miles

Scale: 1:100,000

Map Extent



Mountain Valley PIPELINE

Figure: 291

Land Use/Land Cover 2016
Maggodee Creek
30101010504 HUC12 Watershed

5/26/2022

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

N
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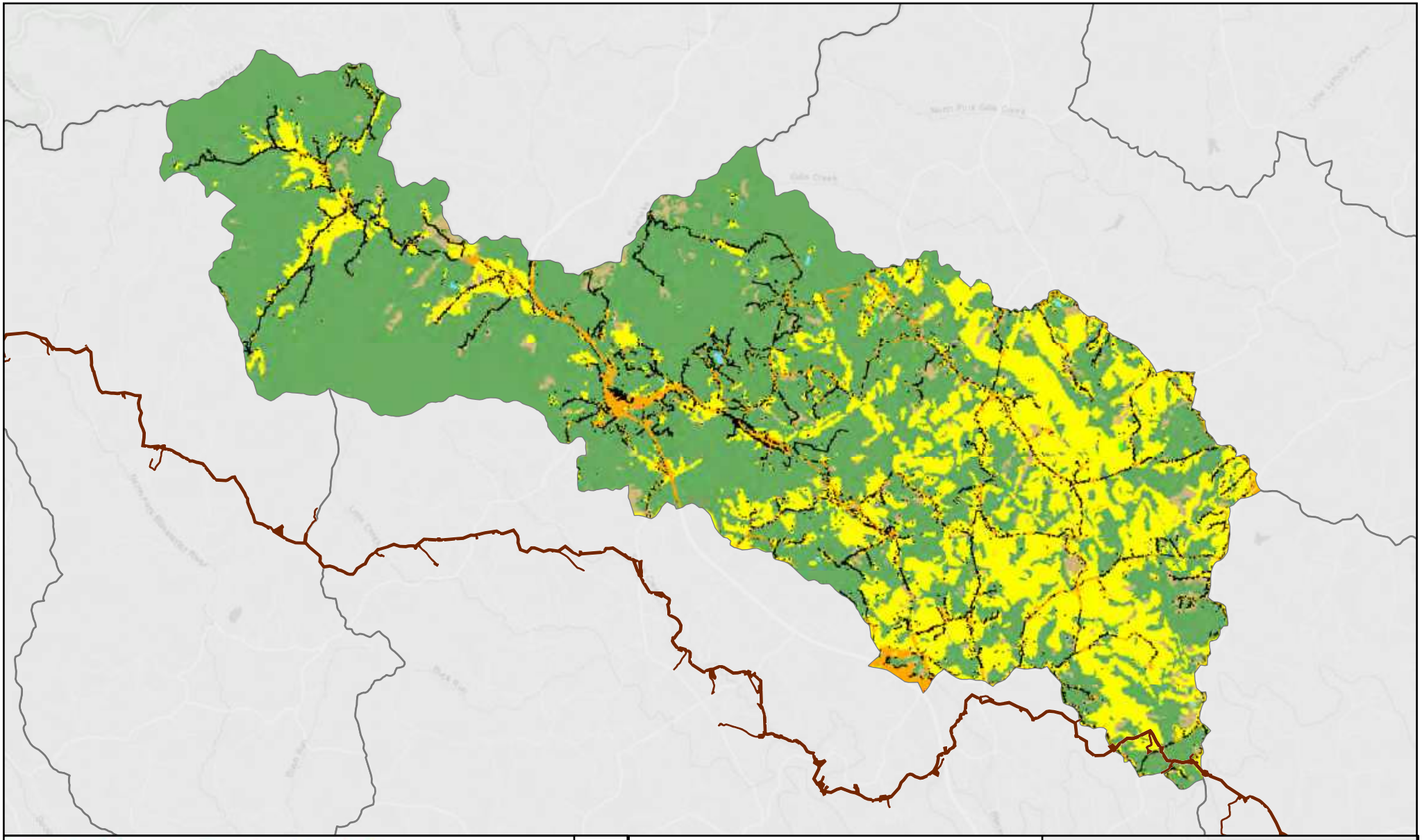
Miles
0 1.5 3

Scale: 1:100,000

Map Extent



Mountain Valley PIPELINE

Figure: 291a

Land Use/Land Cover 2019
Maggodee Creek
30101010504 HUC12 Watershed

5/25/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2019 Land Use Land Cover

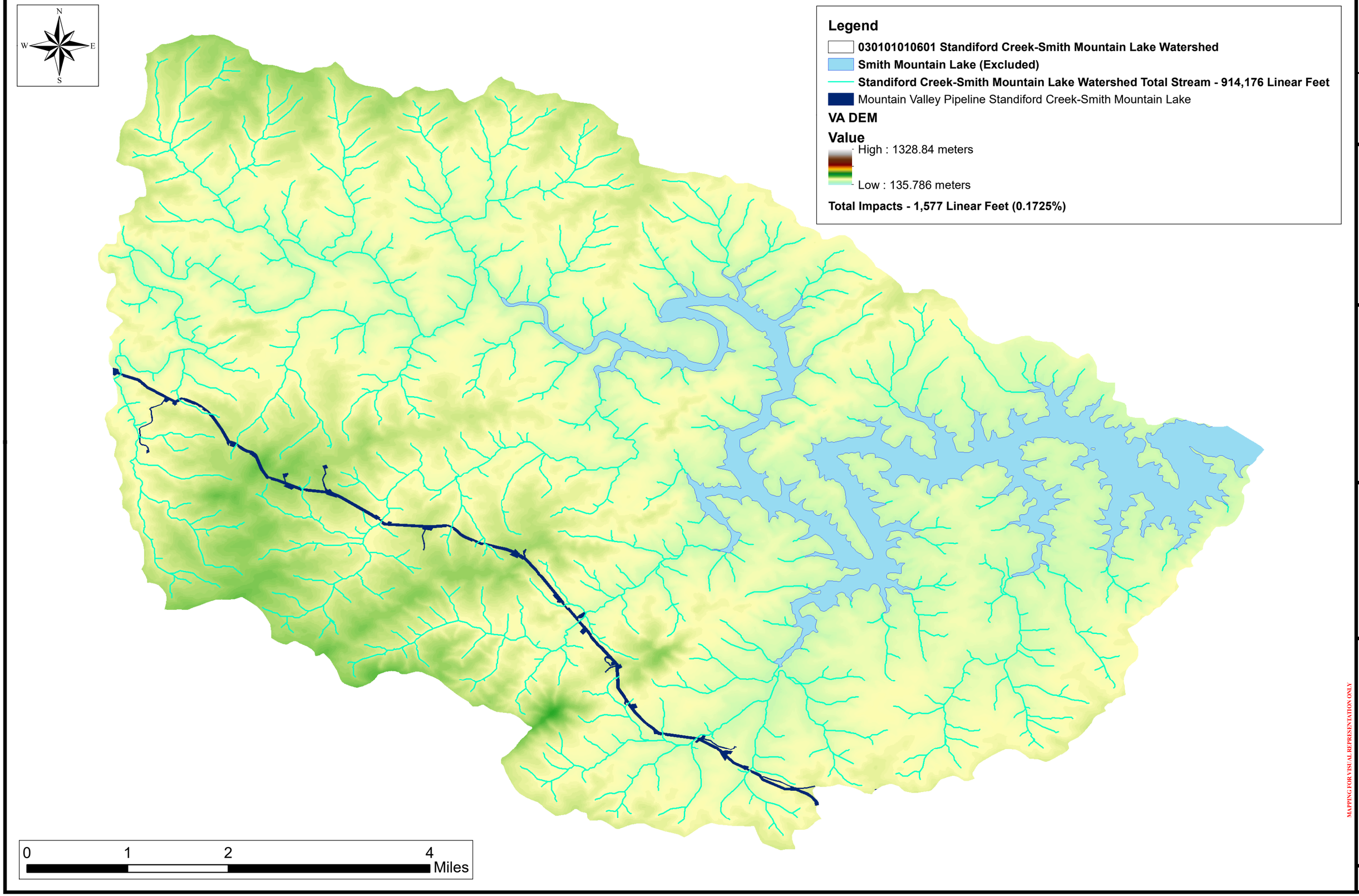
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

Miles
0 1.5 3

Scale: 1:100,000

Map Extent



DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

SCALE: 1" = 1 Mile
DATE: SEPT 2021
PN: 0101-17-0451.016

I:\Projects\2017\17-0451.MVP.EnvCon.Monitoring\Maps\2021\CIA Std\Figure 292 - Standiford Creek_Watershed.mxd

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

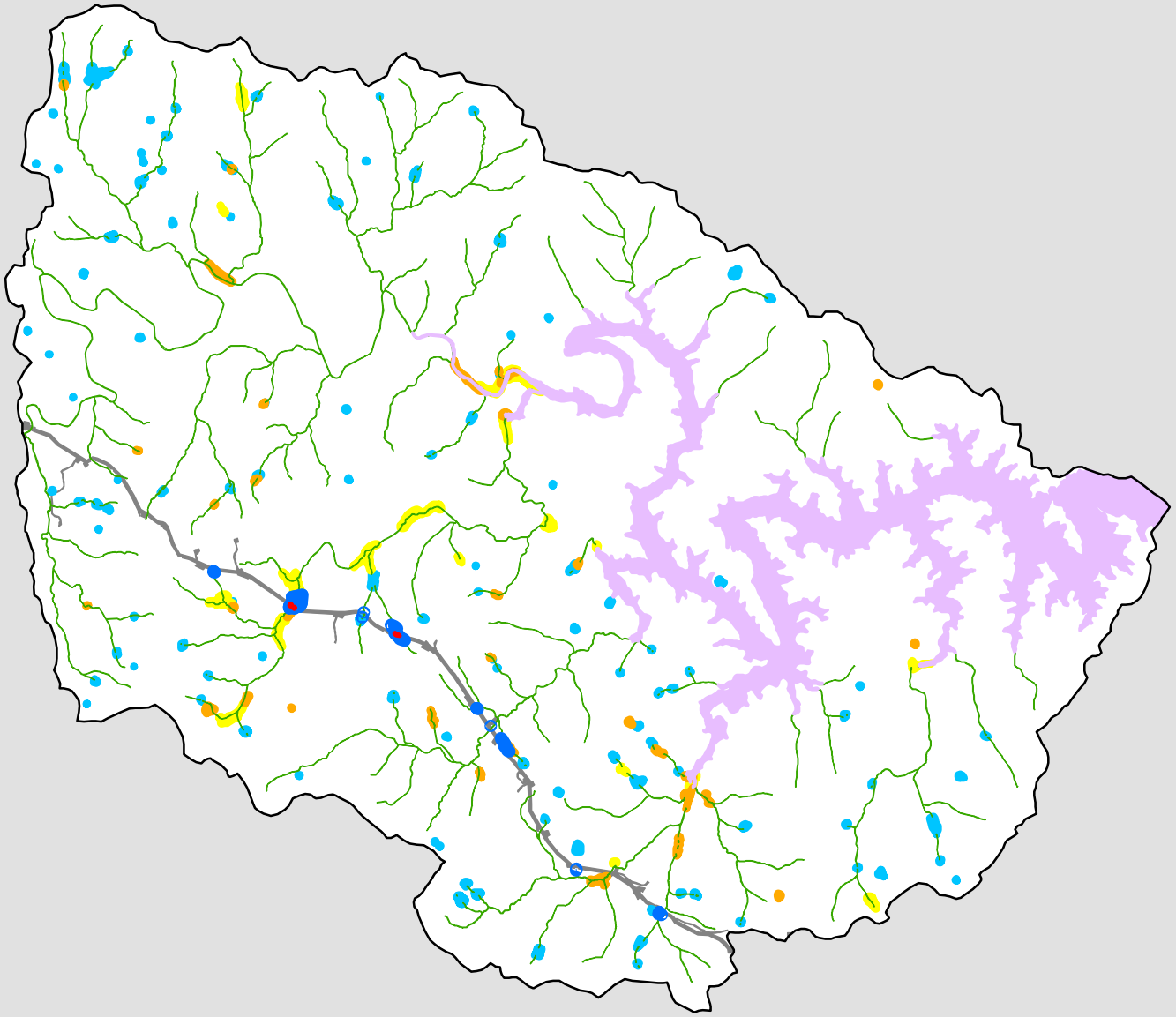
POTESTA

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

MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Standiford Creek-Smith Mountain Lake
Watershed (030101010601)
Upper Roanoke HUC 8 Watershed, Virginia
For Informational Purposes Only

FIGURE 292



Mountain Valley PIPELINE

Standiford Creek-Smith Mountain Lake

Figure 293

1:86,000

1/6/2022

LEGEND

- Wetland Impacts - 0.22 acres
- Standiford Creek-Smith Mountain Lake Delineated Wetland Area - 5.66 acres

NWI Wetlands - 2483.43 acres

- Freshwater Emergent Wetland - 28.02 acres
- Freshwater Forested/Shrub Wetland - 69.01 acres
- Freshwater Pond - 69.15 acres
- Lake - 2058.39 acres
- Riverine - 258.86 acres
- Mountain Valley Pipeline
- 030101010601_Standiford Creek-Smith Mountain Lake

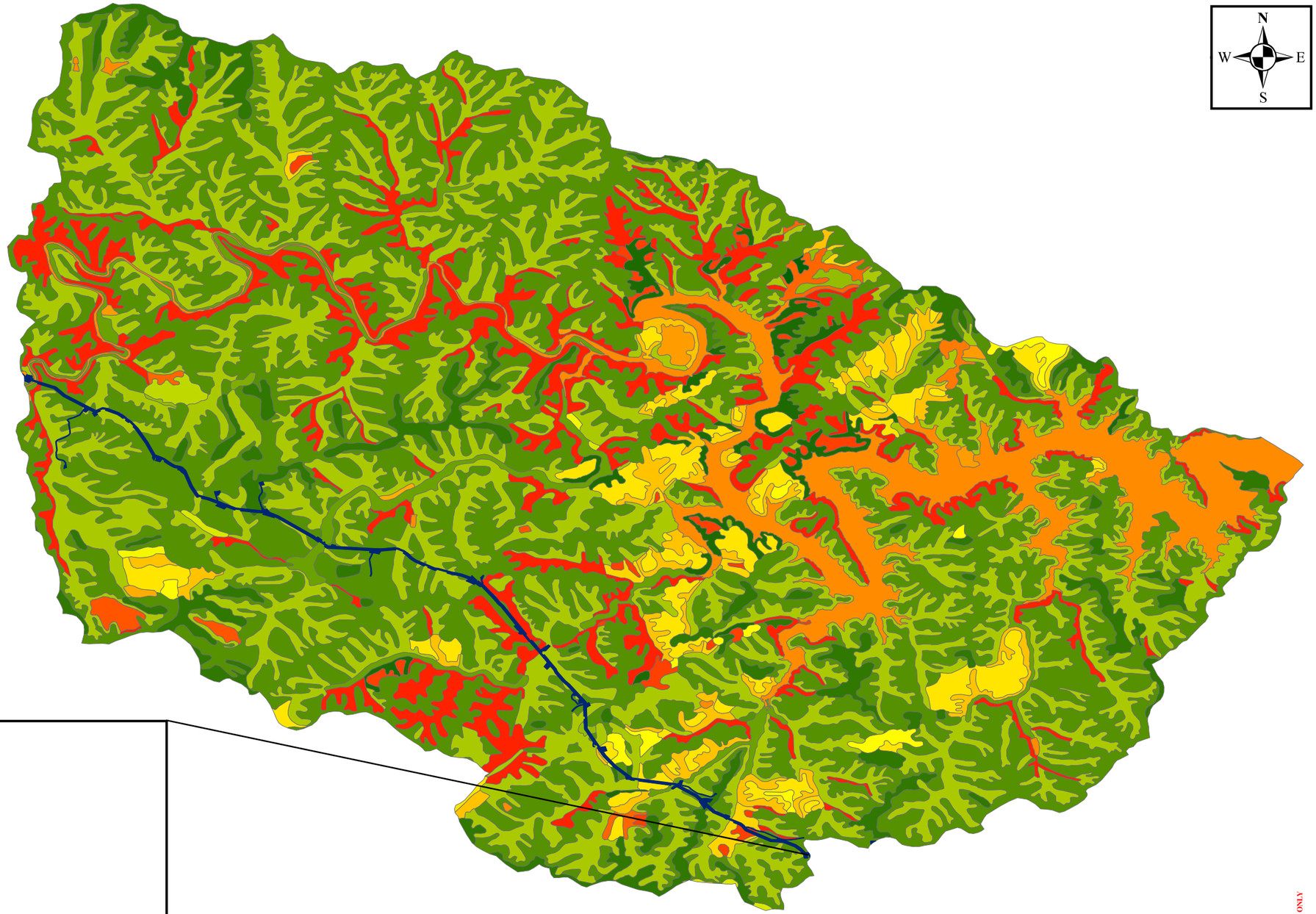
Note: Shapes are not to scale, enlarged to improve visibility.

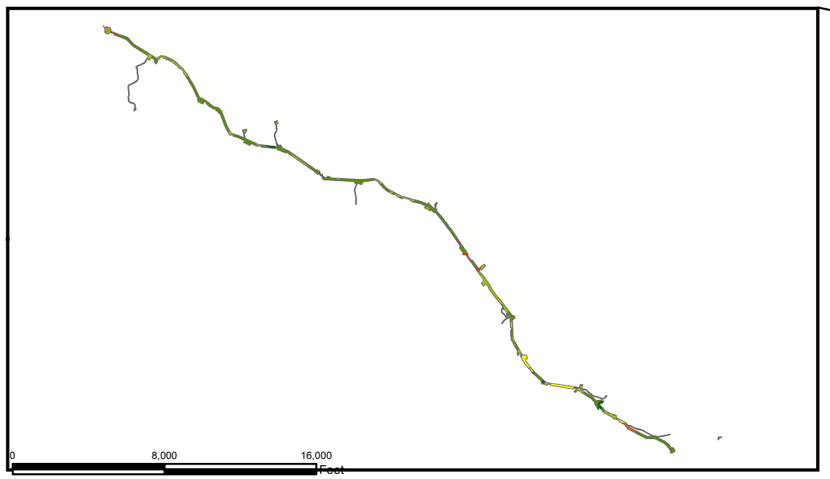
Legend

Mountain Valley Pipeline Standiford Creek-Smith Mountain Lake

Standiford Creek-Smith Mountain Lake Soil

- 10B: Colescreek-Delanco complex, 2 to 8 percent slopes, rarely flooded
- 11A: Comus-Maggodee-Elsinboro complex, 0 to 4 percent slopes
- 17B: Elsinboro-Colescreek complex, 2 to 8 percent slopes, rarely flooded
- 21F: Hickoryknob-Rhodhiss complex, 45 to 75 percent slopes, rocky
- 24B: Jackland-Mirerock-Redbrush complex, 2 to 8 percent slopes
- 24C: Jackland-Mirerock-Redbrush complex, 8 to 15 percent slopes
- 27B: Minnieville loam, 2 to 8 percent slopes
- 27C: Minnieville loam, 8 to 15 percent slopes
- 27D: Minnieville loam, 15 to 25 percent slopes
- 28C: Minnieville-Orenda-Redbrush complex, 8 to 15 percent slopes
- 28D: Minnieville-Orenda-Redbrush complex, 15 to 25 percent slopes
- 36B: Thurmont-Wintergreen complex, 2 to 8 percent slopes
- 36C: Thurmont-Wintergreen complex, 8 to 15 percent slopes
- 36D: Thurmont-Wintergreen complex, 15 to 25 percent slopes
- 39B: Wintergreen loam, 2 to 8 percent slopes
- 39C: Wintergreen loam, 8 to 15 percent slopes
- 3D: Bluemount-Redbrush-Spriggs complex, 15 to 25 percent slopes, stony
- 4E: Bluemount-Spriggs complex, 25 to 45 percent slopes, stony
- 5C: Bluemount-Spriggs-Redbrush complex, 8 to 15 percent slopes, stony
- 7B: Clifford fine sandy loam, 2 to 8 percent slopes
- 7C: Clifford fine sandy loam, 8 to 15 percent slopes
- 7D: Clifford fine sandy loam, 15 to 25 percent slopes
- 8E: Clifford-Hickoryknob complex, 25 to 45 percent slopes
- W: Water





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MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: See Mapping | DRAWN: KBW
DATE: AUGUST 2021 | CHECKED: JLY
PN: 010-17-0451.016 | APPROVED: JLY
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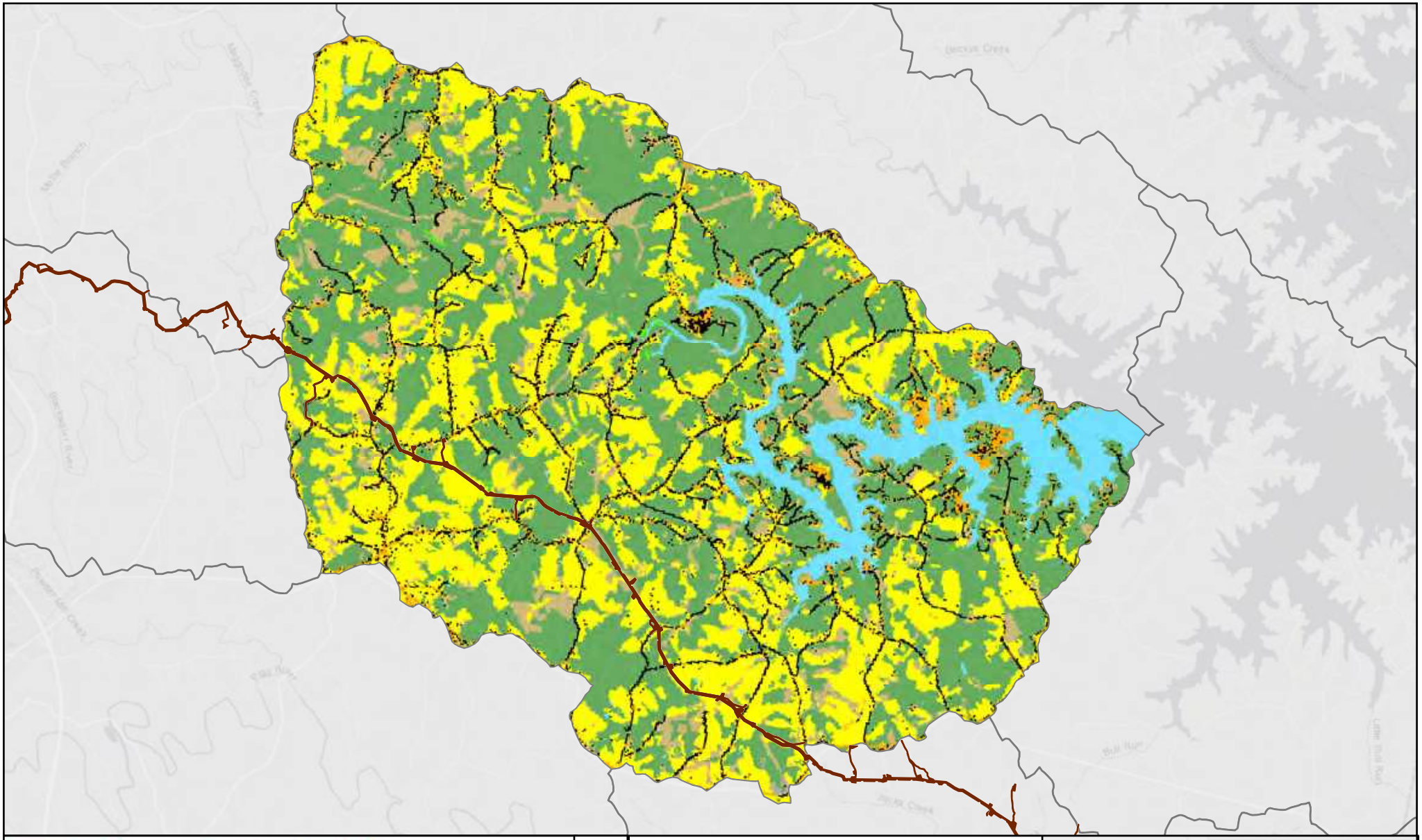
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 FAX: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
Standiford Creek-Smith Mountain Lake (03010101010601)
Upper Roanoke HUC 8 Watershed
Franklin County, Virginia
For Informational Purposes Only

FIGURE 294



Mountain Valley PIPELINE

Figure: 295

Land Use/Land Cover 2011
Standiford Creek-Smith Mountain Lake
30101010601 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2011 Land Use Land Cover

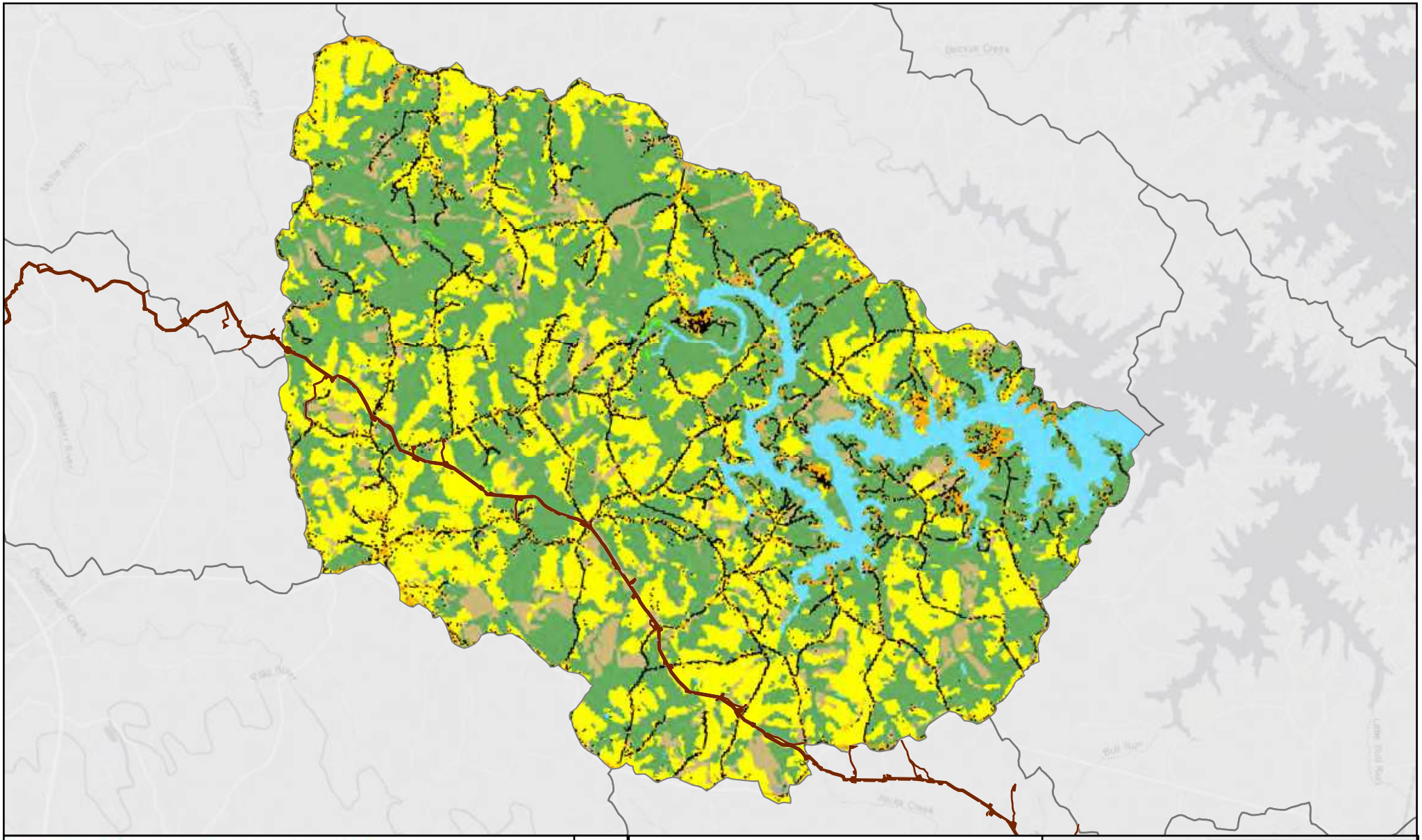
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N W E S

Miles
0 1 2

Scale: 1:90,000

Map Extent



Mountain Valley PIPELINE

Figure: 296

Land Use/Land Cover 2016
Standiford Creek-Smith Mountain Lake
30101010601 HUC12 Watershed

5/26/2022

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

N
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Miles
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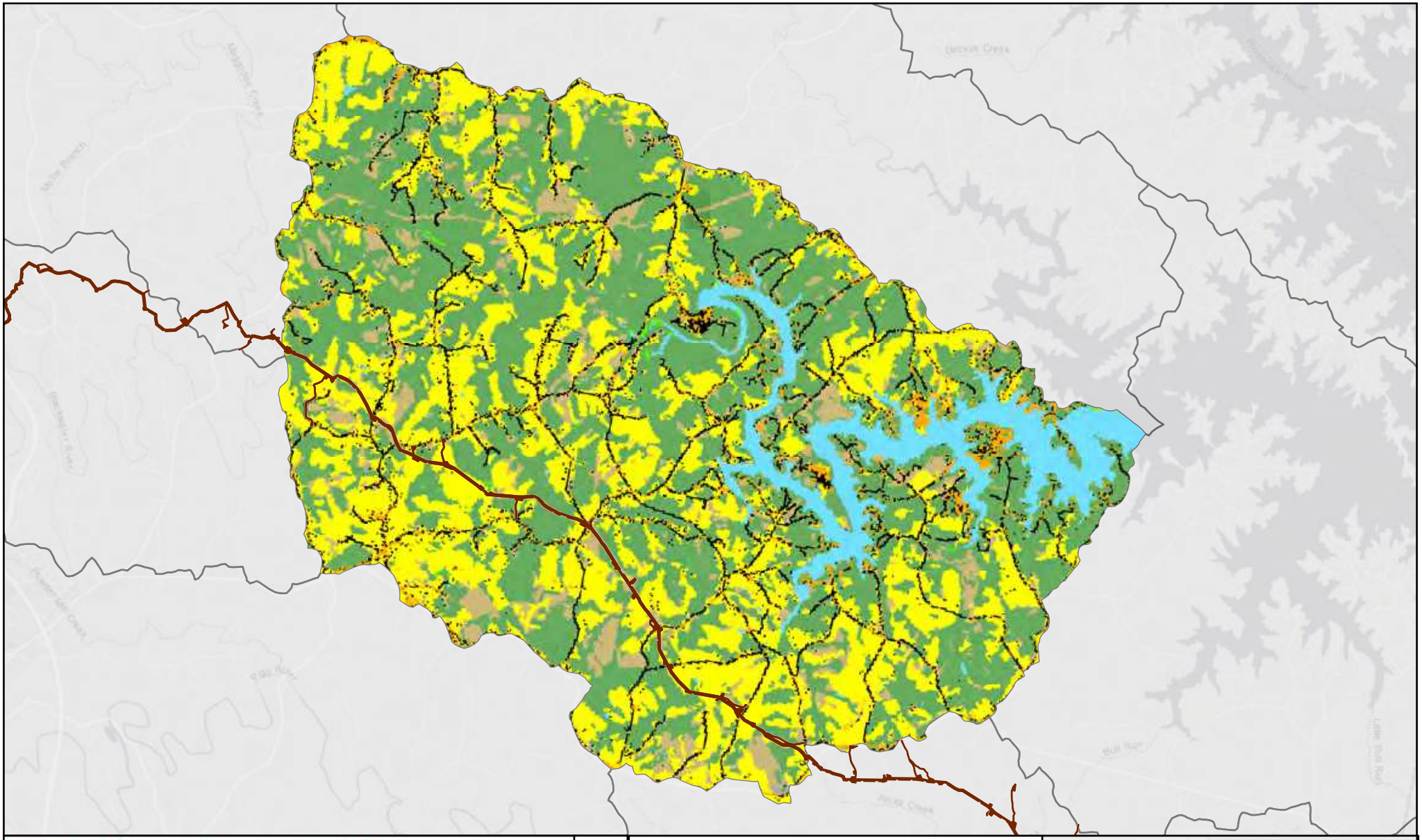
Scale: 1:90,000

Map Extent



Mountain Valley PIPELINE

Figure: 296a

Land Use/Land Cover 2019
Standiford Creek-Smith Mountain Lake
30101010601 HUC12 Watershed

5/25/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2019 Land Use Land Cover

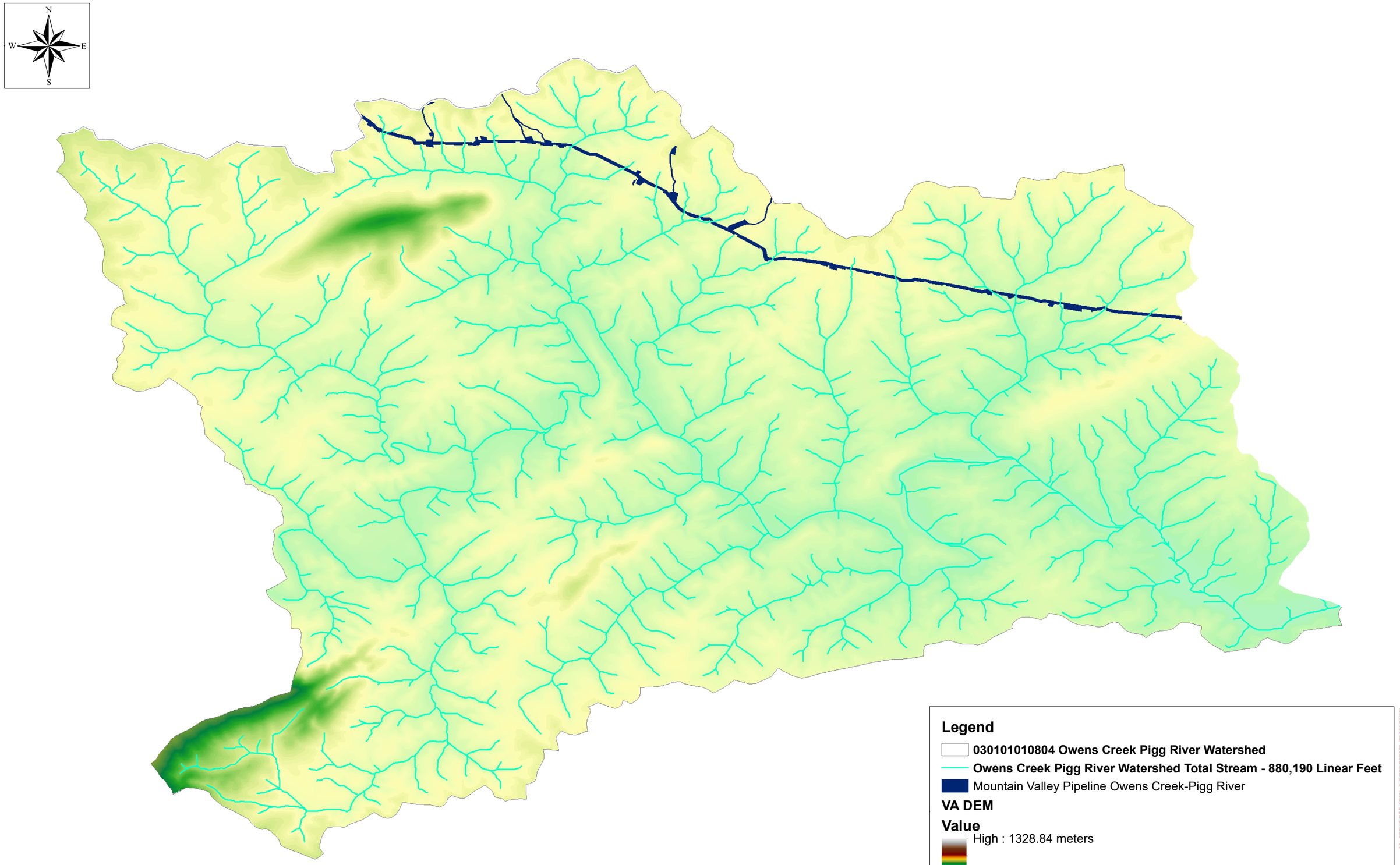
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 1 2 Miles

Scale: 1:90,000

Map Extent



Legend

- 030101010804 Owens Creek Pigg River Watershed
- Owens Creek Pigg River Watershed Total Stream - 880,190 Linear Feet
- Mountain Valley Pipeline Owens Creek-Pigg River

VA DEM

Value

- High : 1328.84 meters
- Low : 135.786 meters

Total Impacts - 1,330 Linear Feet (0.1511%)

MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: 1" = 1 Mile
DATE: SEPT 2021
PN: **0101-17-0451.016**

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

P:\Projects\2017\17-0451.MVP.EnvCon_Monitoring\Maps\2021 CIA Soils\Figure 297 - Owens_Creek_Watershed.mxd

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

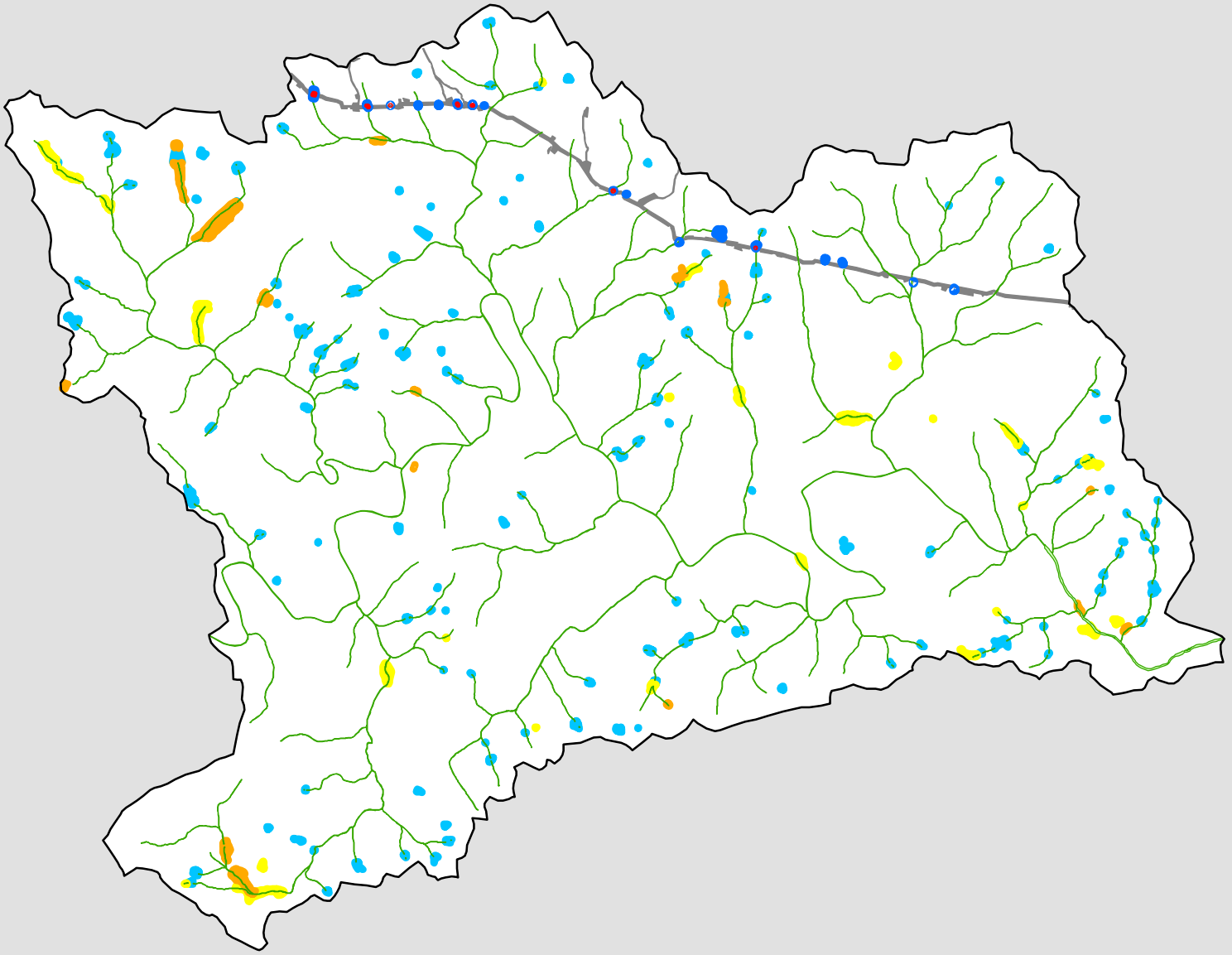
POTESTA

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

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Owens Creek-Pigg River Watershed (030101010804)
Upper Roanoke HUC 8 Watershed, Virginia

For Informational Purposes Only

FIGURE 297



Mountain Valley PIPELINE

Owens Creek-Pigg River

Figure 298

1:75,000

1/6/2022

LEGEND

- Wetland Impacts - 0.15 acres
- Owens Creek-Pigg River Delineated Wetland Area - 2.31 acres

NWI Wetlands - 448.12 acres

- Freshwater Emergent Wetland - 36.87 acres
- Freshwater Forested/Shrub Wetland - 48.91 acres
- Freshwater Pond - 73.14 acres
- Riverine - 289.21 acres
- Mountain Valley Pipeline
- 030101010804_Owens Creek-Pigg River

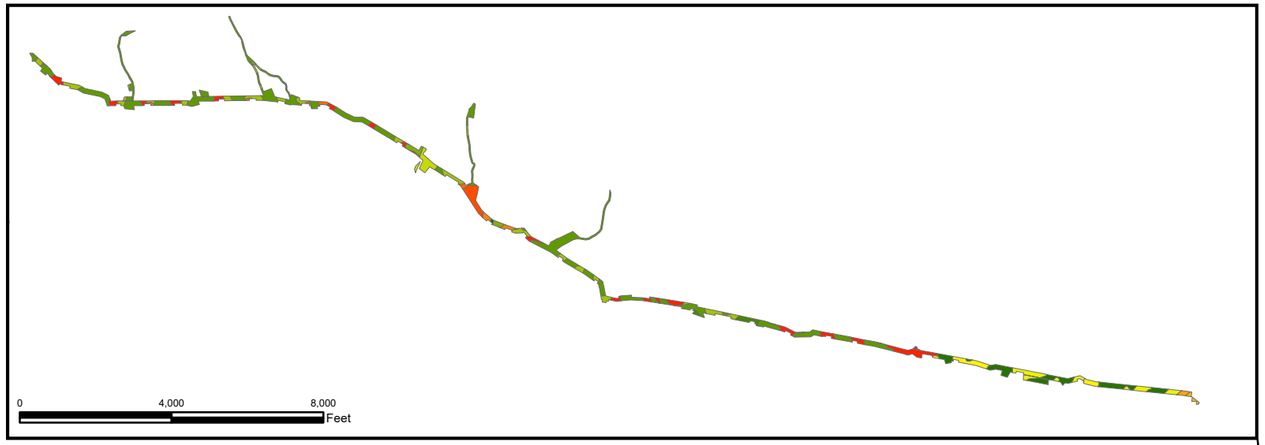
Note: Shapes are not to scale, enlarged to improve visibility.

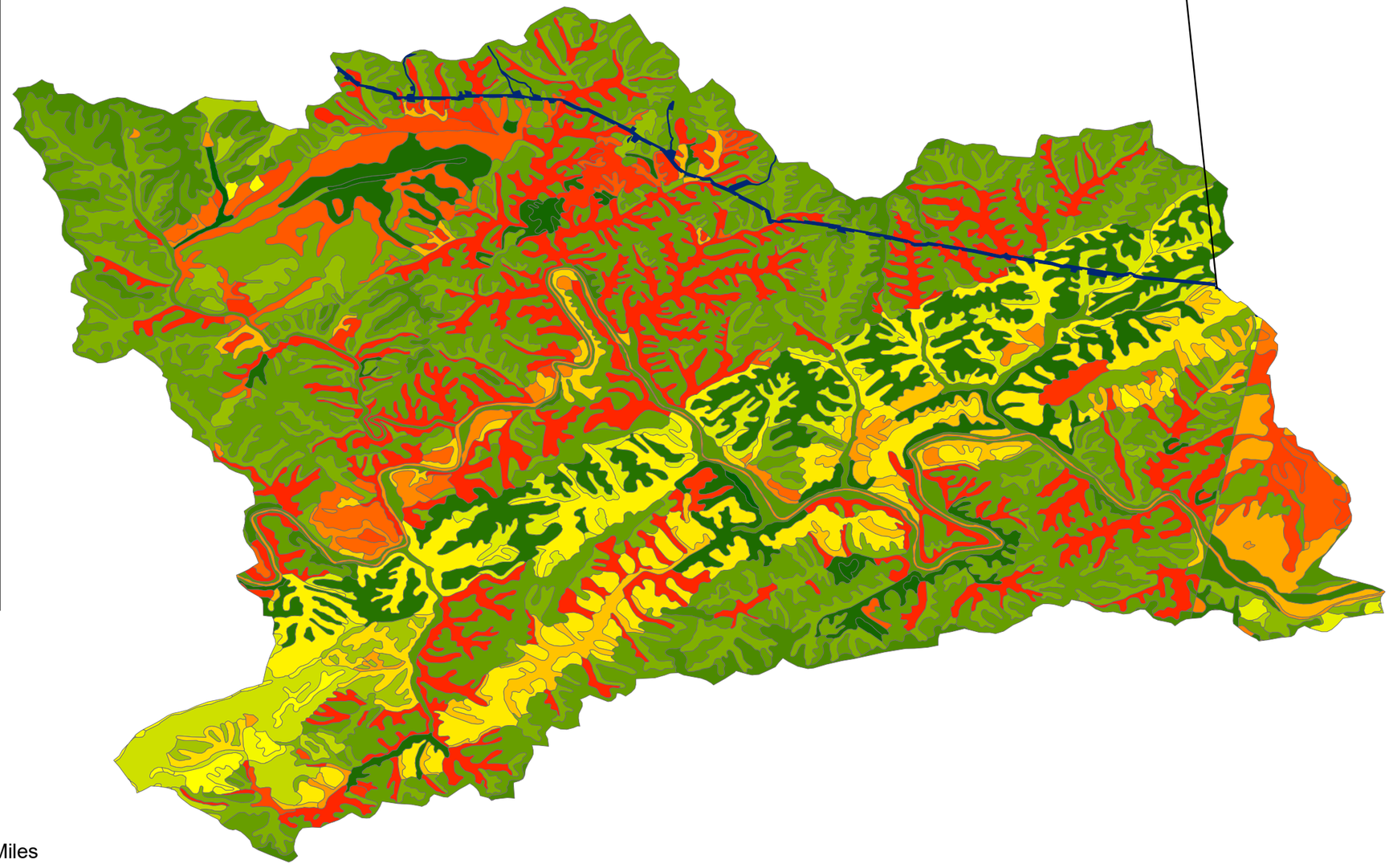
Legend

Mountain Valley Pipeline Owens Creek-Pigg River

Owens Creek-Pigg River Soil

- 10B: Colescreek-Delanco complex, 2 to 8 percent slopes, rarely flooded
- 11A: Comus-Maggodee-Elsinboro complex, 0 to 4 percent slopes
- 11B3: Minnieville clay loam, 2 to 7 percent slopes, severely eroded
- 11C3: Minnieville clay loam, 7 to 15 percent slopes, severely eroded
- 15E: Drapermill gravelly loam, 25 to 60 percent slopes
- 17B: Elsinboro-Colescreek complex, 2 to 8 percent slopes, rarely flooded
- 18B3: Yadkin clay loam, 2 to 7 percent slopes, severely eroded
- 18C3: Yadkin clay loam, 7 to 15 percent slopes, severely eroded
- 21D: Poplar Forest fine sandy loam, 15 to 25 percent slopes
- 21E: Poplar Forest fine sandy loam, 25 to 45 percent slopes
- 21F: Hickoryknob-Rhodhiss complex, 45 to 75 percent slopes, rocky
- 22C: Hickoryknob-Rhodhiss-Stott Knob complex, 8 to 15 percent slopes
- 22D: Hickoryknob-Rhodhiss-Stott Knob complex, 15 to 25 percent slopes
- 22E: Hickoryknob-Rhodhiss-Stott Knob complex, 25 to 60 percent slopes
- 23A: Iotla-Maggodee-Colescreek complex, 0 to 4 percent slopes
- 24B: Jackland-Mirerock-Redbrush complex, 2 to 8 percent slopes
- 24C: Jackland-Mirerock-Redbrush complex, 8 to 15 percent slopes
- 26B: Fairview fine sandy loam, 2 to 7 percent slopes
- 26C: Littlejoe-Strawfield-Penhook complex, 8 to 15 percent slopes
- 26D: Littlejoe-Strawfield-Penhook complex, 15 to 25 percent slopes
- 27B: Minnieville loam, 2 to 8 percent slopes
- 27C: Minnieville loam, 8 to 15 percent slopes
- 27C3: Fairview sandy clay loam, 7 to 15 percent slopes, severely eroded
- 27D: Minnieville loam, 15 to 25 percent slopes
- 27E: Minnieville loam, 25 to 45 percent slopes
- 28C: Minnieville-Orenda-Redbrush complex, 8 to 15 percent slopes
- 28D: Minnieville-Orenda-Redbrush complex, 15 to 25 percent slopes
- 36B: Thurmont-Wintergreen complex, 2 to 8 percent slopes
- 36C: Thurmont-Wintergreen complex, 8 to 15 percent slopes
- 38A: Comus fine sandy loam, 0 to 2 percent slopes, occasionally flooded
- 39B: Wintergreen loam, 2 to 8 percent slopes
- 39C: Wintergreen loam, 8 to 15 percent slopes
- 39D: Wintergreen loam, 15 to 25 percent slopes
- 3D: Bluemount-Redbrush-Spriggs complex, 15 to 25 percent slopes, stony
- 40C: Woolwine-Fairview-Westfield complex, 8 to 15 percent slopes, stony
- 40D: Woolwine-Fairview-Westfield complex, 15 to 25 percent slopes, stony
- 40E: Woolwine-Fairview-Westfield complex, 25 to 60 percent slopes, stony
- 4B: Clifford sandy loam, 2 to 7 percent slopes
- 4C: Clifford sandy loam, 7 to 15 percent slopes
- 4E: Bluemount-Spriggs complex, 25 to 45 percent slopes, stony
- 5B3: Clifford sandy clay loam, 2 to 7 percent slopes, severely eroded
- 5C: Bluemount-Spriggs-Redbrush complex, 8 to 15 percent slopes, stony
- 5C3: Clifford sandy clay loam, 7 to 15 percent slopes, severely eroded
- 7A: Codorus loam, 0 to 2 percent slopes, occasionally flooded
- 7B: Clifford fine sandy loam, 2 to 8 percent slopes
- 7C: Clifford fine sandy loam, 8 to 15 percent slopes
- 7D: Clifford fine sandy loam, 15 to 25 percent slopes
- 8E: Clifford-Hickoryknob complex, 25 to 45 percent slopes
- W: Water





0 1 2 4 Miles

MAPPING FOR VISUAL REPRESENTATION ONLY

N W E S

SCALE: See Mapping | DRAWN: KBW
DATE: AUGUST 2021 | CHECKED: JLY
PN: 010-17-0451.016 | APPROVED: JLY
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ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 FAX: (304) 343-9031
E-mail: potesta@potesta.com

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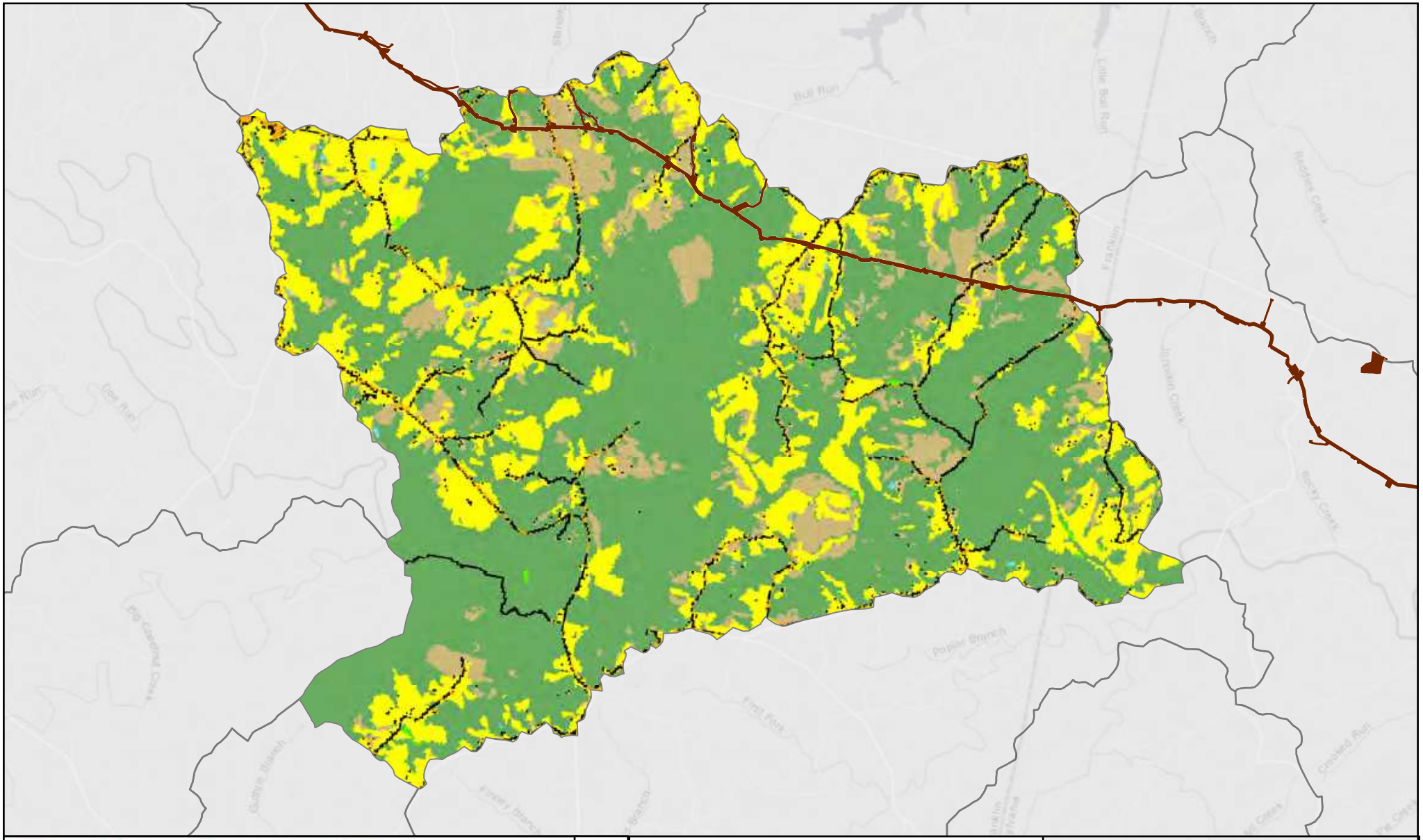
MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317

Cumulative Impact Assessment - Soil
Owens Creek-Pigg River (0301010105040)
Upper Roanoke HUC 8 Watershed
Franklin and Pittsylvania Counties & City of Danville, Virginia
For Informational Purposes Only

FIGURE 299



Mountain Valley PIPELINE

Figure: 300

Land Use/Land Cover 2011
Owens Creek-Pigg River
30101010804 HUC12 Watershed

5/26/2022

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

N
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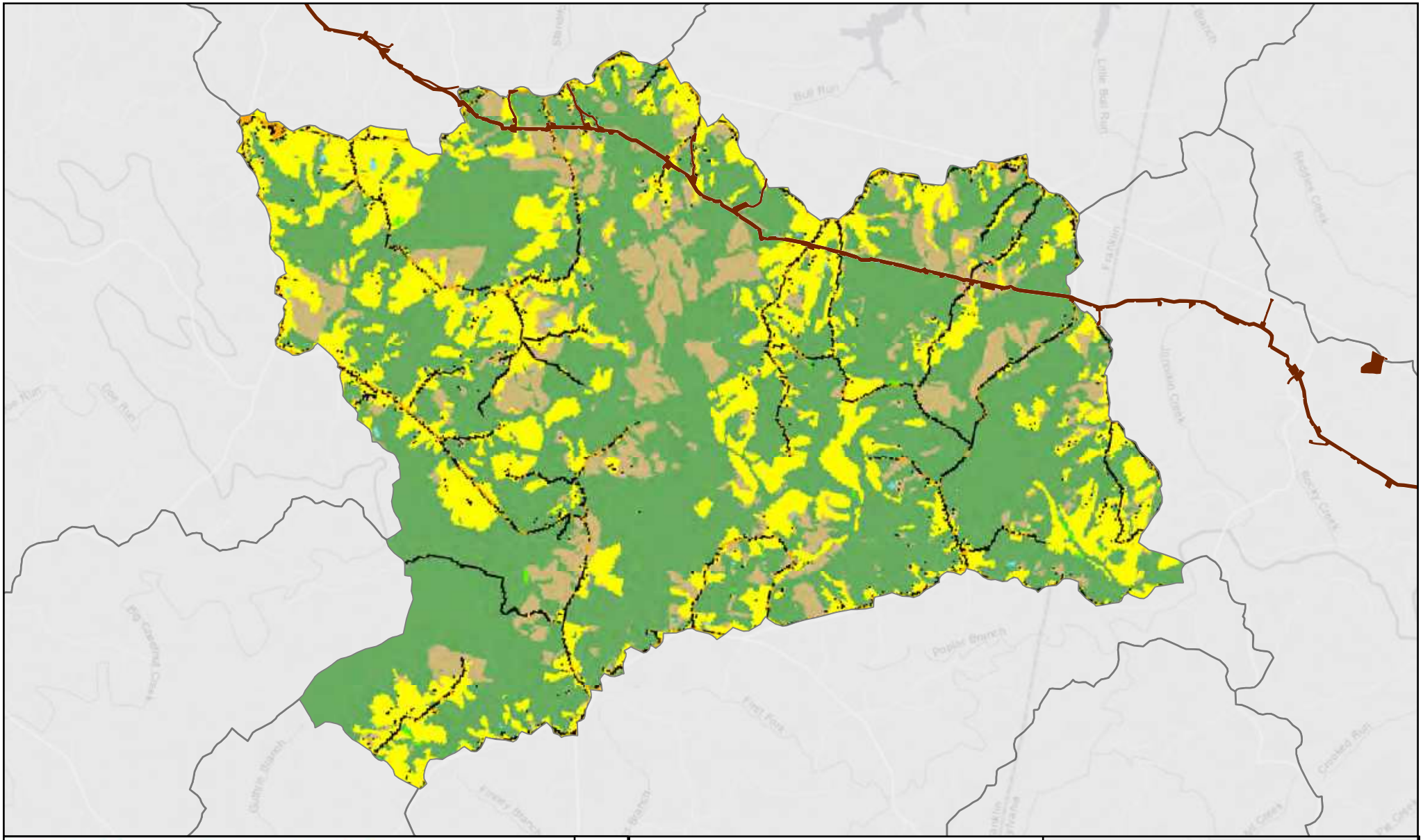
0 1 2

Scale: 1:80,000

Map Extent



Mountain Valley PIPELINE

Figure: 301

Land Use/Land Cover 2016
Owens Creek-Pigg River
30101010804 HUC12 Watershed

5/26/2022

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

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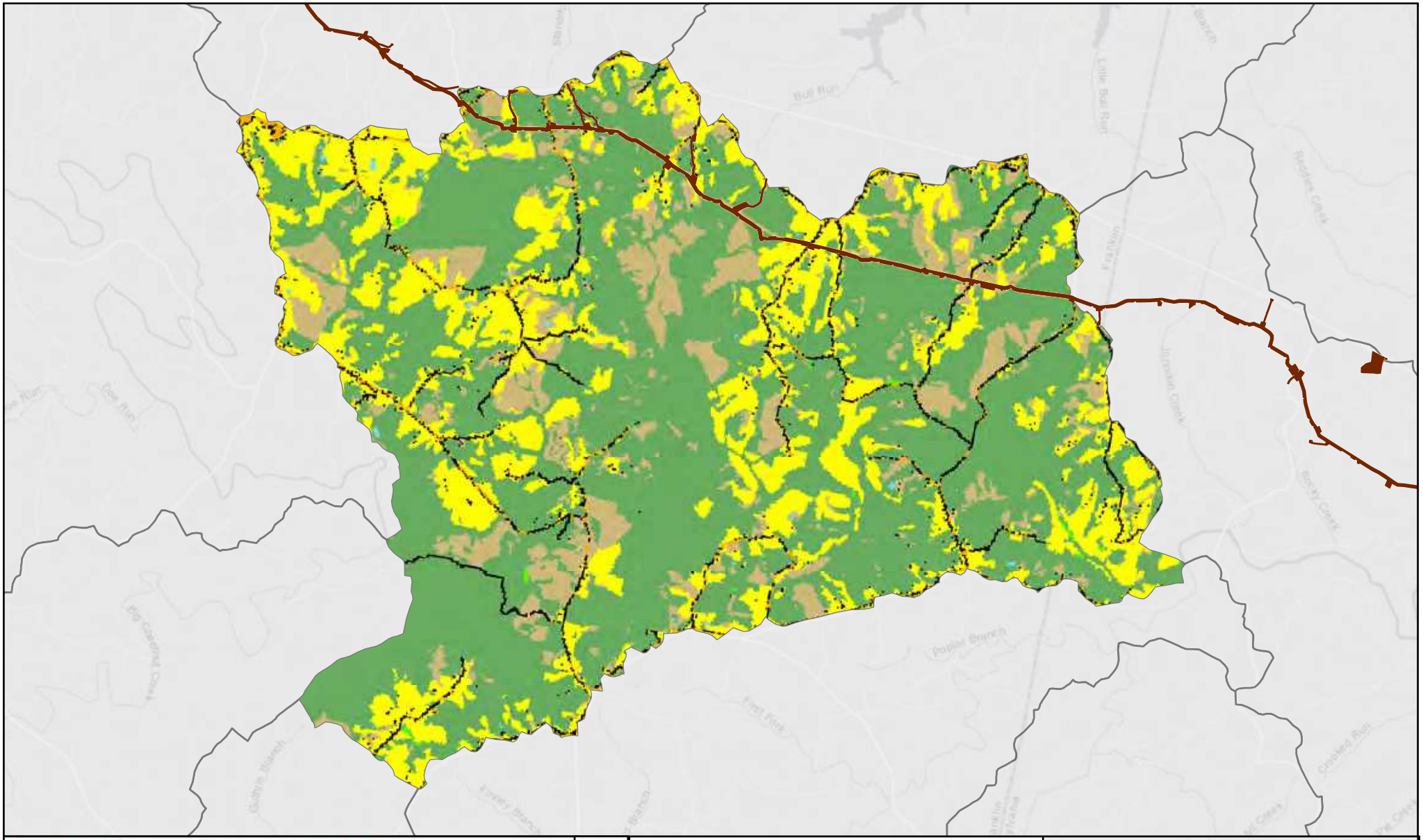
Scale: 1:80,000

Map Extent



Mountain Valley PIPELINE

Figure: 301a

Land Use/Land Cover 2019
Owens Creek-Pigg River
30101010804 HUC12 Watershed

5/25/2022

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

N
W E
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0 1 2 Miles

Scale: 1:80,000

Map Extent

Legend

030101011001 Tomahawk Creek-Pigg River Watershed

Tomahawk Creek-Pigg River Watershed - 997,467 Linear Feet

Mountain Valley Pipeline Tomahawk-Creek Pigg River

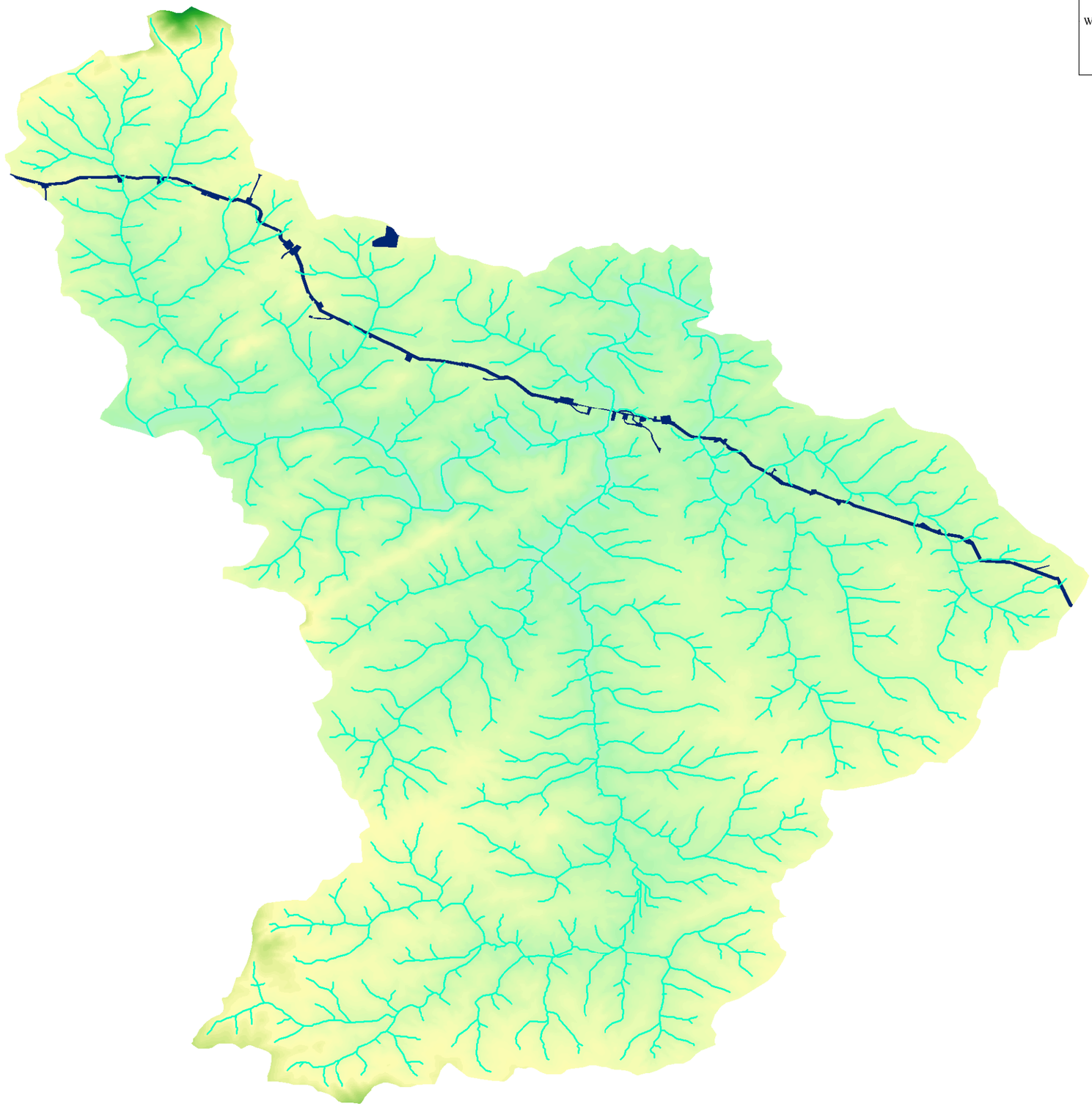
VA DEM

Value

High : 1328.84 meters

Low : 135.786 meters

Total Impacts - 1,191 Linear Feet (0.1194%)



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0 1 2 4 Miles

SCALE: 1" = 1 Mile
DATE: SEPT 2021
PN: **0101-17-0451.016**
I:\Projects\2017\17-0451.NWP_Env.Con.Mentoring\Maps\2021 CIA Scale\Figure 302 - Tomahawk_Creek_Watershed.mxd

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

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

POTESTA

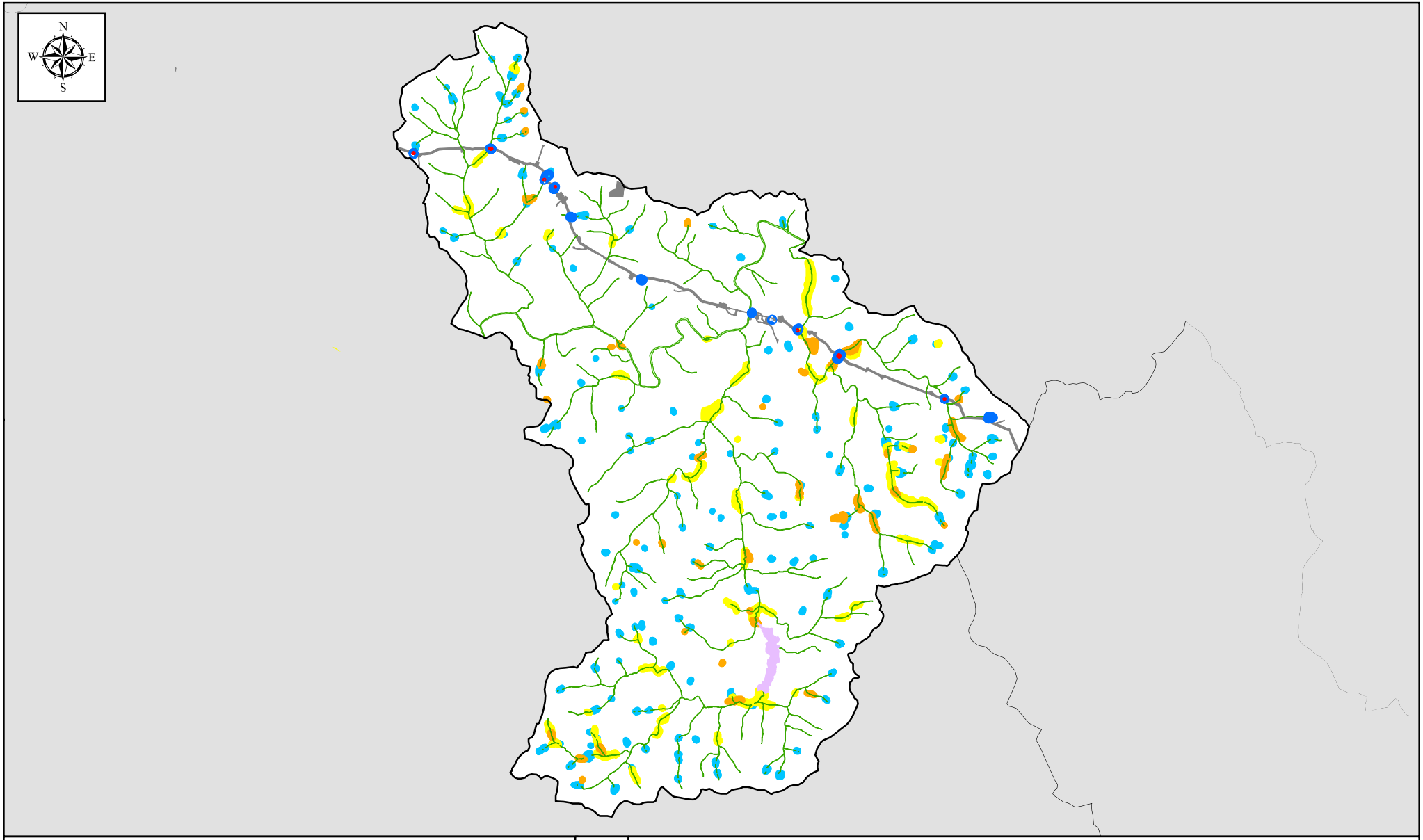
MOUNTAIN VALLEY PIPELINE, LLC
2200 Energy Drive, 2nd Floor
Canonsburg, PA 15317

MAPPING FOR VISUAL REPRESENTATION ONLY

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Tomahawk Creek-Pigg River Watershed (030101011001)
Upper Roanoke HUC 8 Watershed, Virginia

For Informational Purposes Only

FIGURE 302



Mountain Valley PIPELINE

Tomahawk Creek-Pigg River

Figure 303

1:110,000

1/6/2022

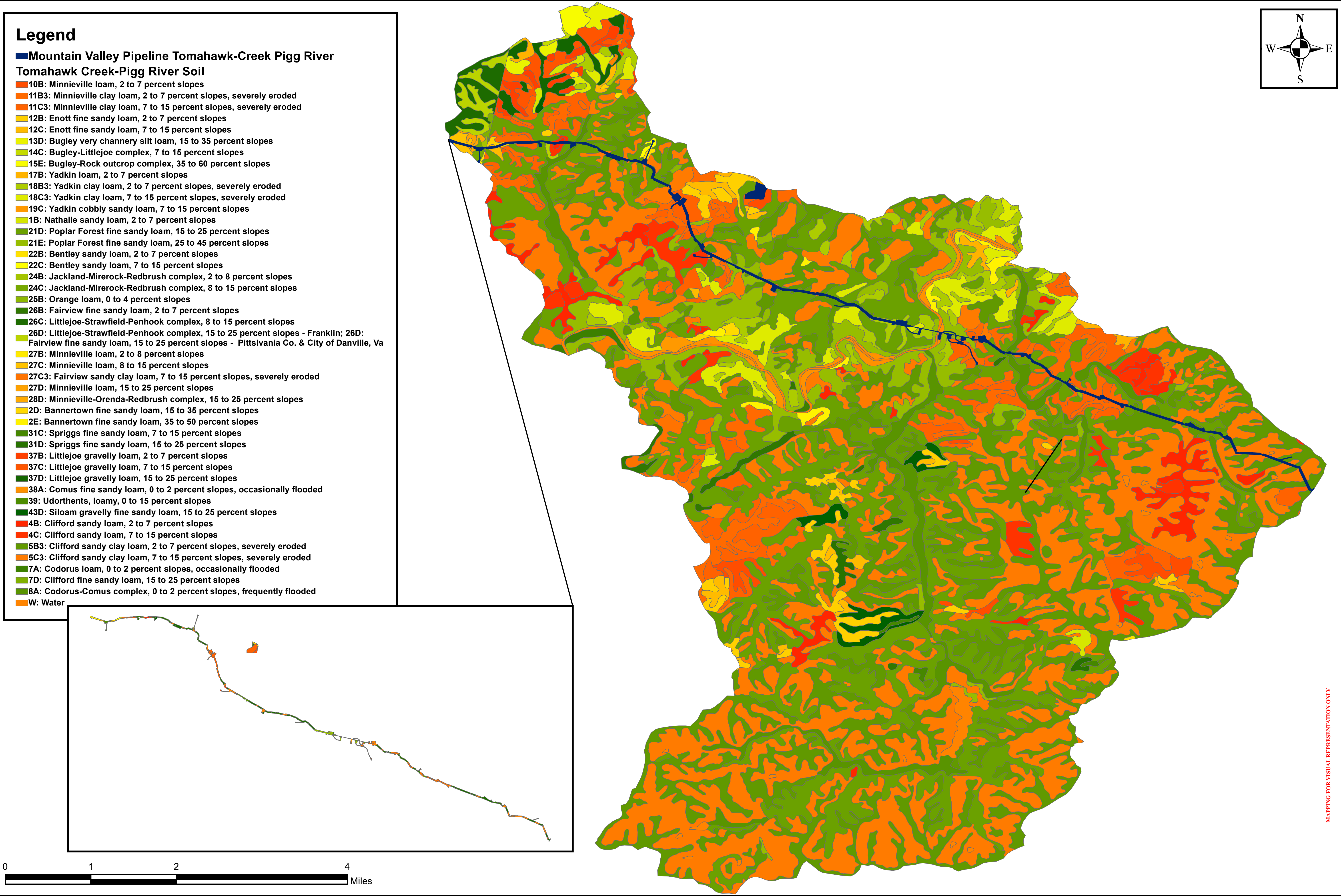
LEGEND

- Wetland Impacts - 0.27 acres
- Tomahawk Creek-Pigg River Delineated Wetland Area - 3.93 acres

NWI Wetlands - 777.91 acres

- Freshwater Emergent Wetland - 54.22 acres
- Freshwater Forested/Shrub Wetland - 194.52 acres
- Freshwater Pond - 113.14 acres
- Lake - 62.05 acres
- Riverine - 353.98 acres
- Mountain Valley Pipeline
- 030101011001_Tomahawk Creek-Pigg River

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



MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: See Mapping | DRAWN: KBW
DATE: AUGUST 2021 | CHECKED: JLY
PN: 0101-17-0451.016 | APPROVED: JLY

I:\Projects\2017\17_0451_MVP_EnviCon_Monitoring\Maps\2021\CIA Soils\Figure 304 - Tomahawk Creek Pigg River Soil.mxd

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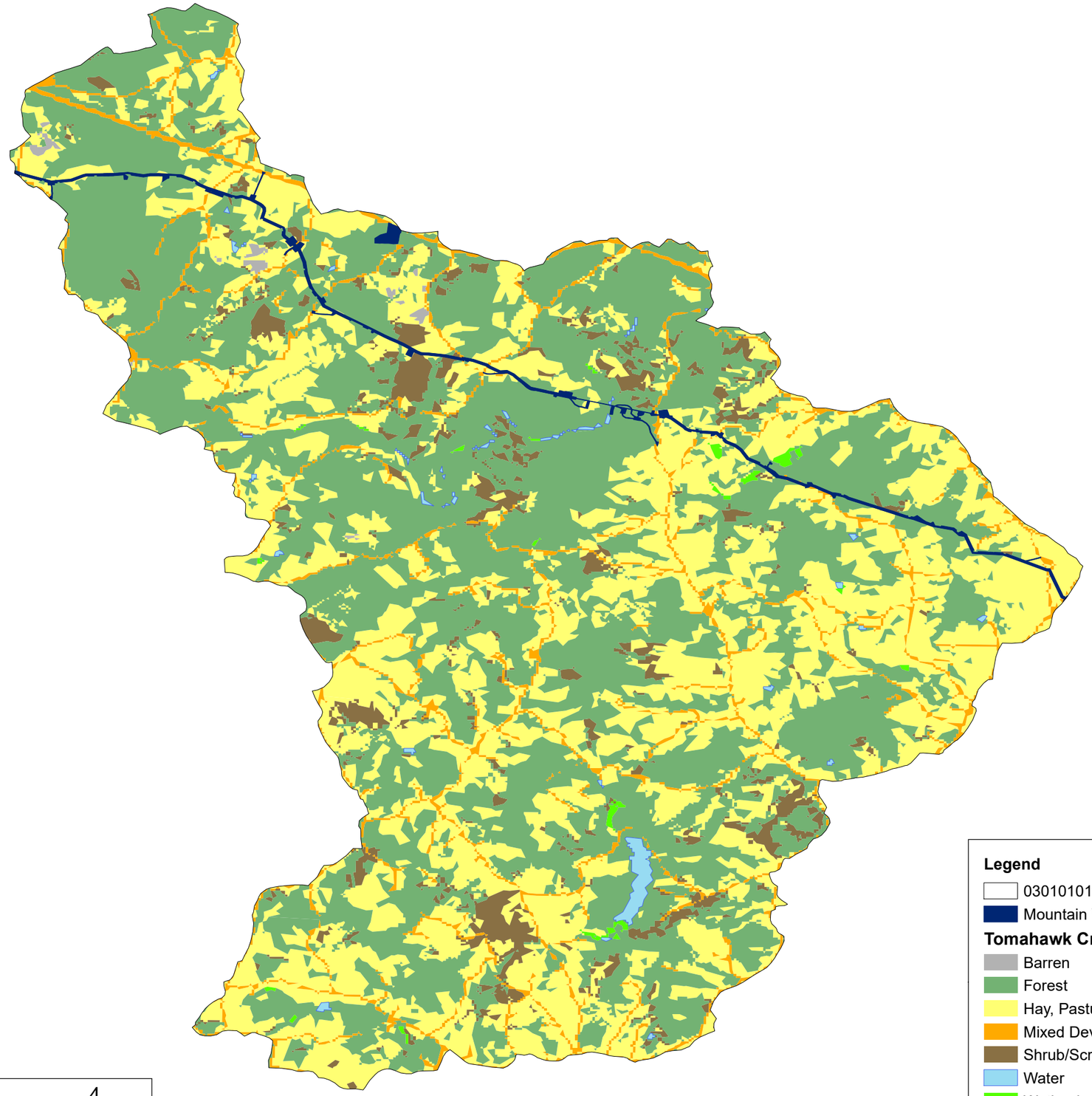
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304)-343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
Tomahawk Creek-Pigg River (030101011001)
Upper Roanoke HUC 8 Watershed
Franklin and Pittslvania Counties &
City of Danville, Virginia
For Informational Purposes Only

FIGURE 304



0 1 2 4 Miles

Legend

- 030101011001 Tomahawk Creek-Pigg River Watershed
- Mountain Valley Pipeline Tomahawk Creek-Pigg River

Tomahawk Creek-Pigg River Watershed 2011 LULC

- Barren
- Forest
- Hay, Pasture, Cultivated Crops, Herbaceous
- Mixed Development
- Shrub/Scrub
- Water
- Wetland

MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: 1" = 1 Mile
DATE: DEC 2021
PN: **0101-17-0451.016**
I:\Projects\2017\17-0451_MVP_EnvCon_Monitoring\Maps\GIS\MXD

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

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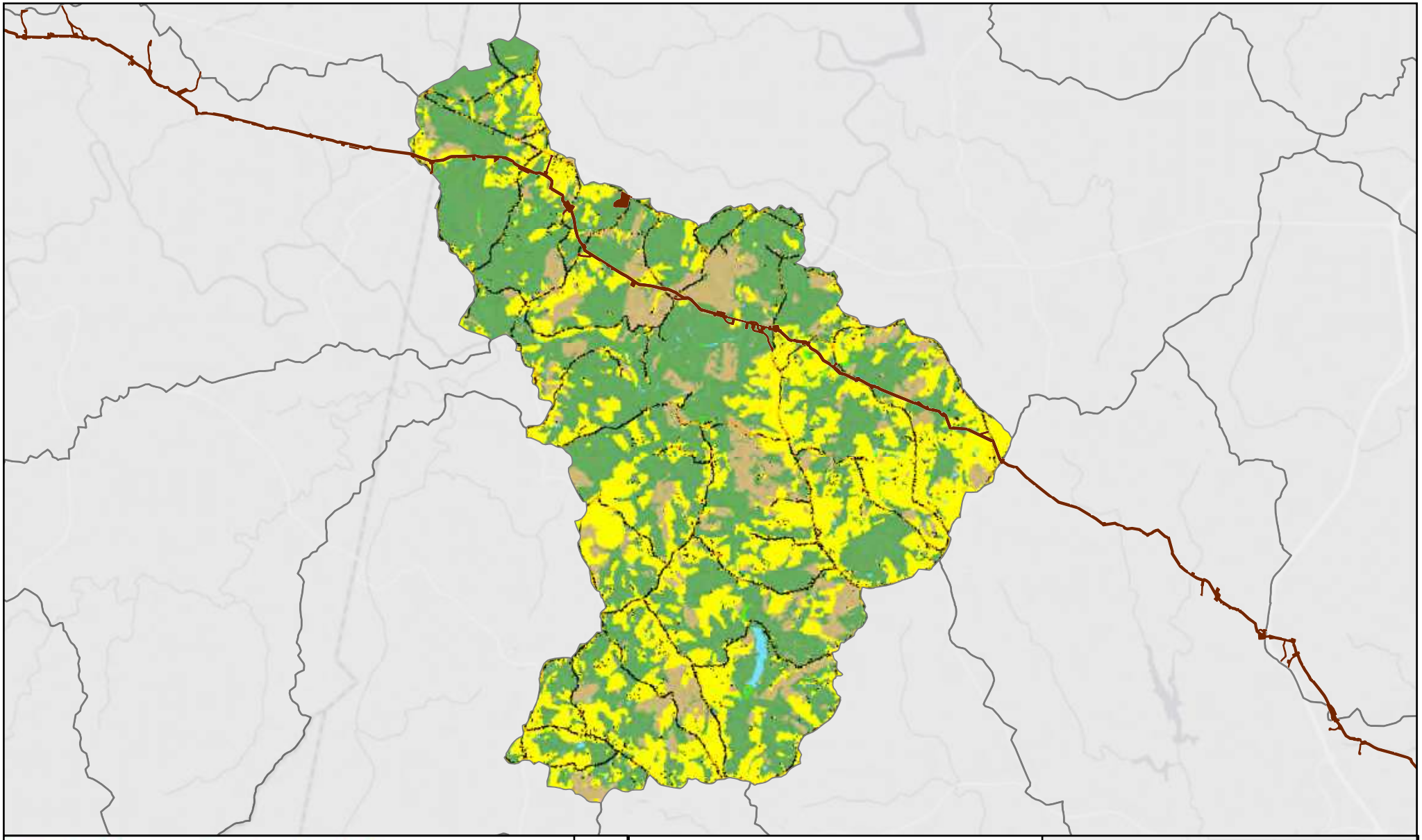
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment
Land Use/Land Cover 2011
Tomahawk Creek-Pigg River Watershed (030101050203)
Upper Roanoke HUC8 Watershed
Franklin and Pittsylvania Counties & City of Danville, Virginia
For Informational Purposes Only

FIGURE 305



Mountain Valley PIPELINE

Figure: 306

Land Use/Land Cover 2011
Tomahawk Creek-Pigg River
30101011001 HUC12 Watershed

5/26/2022

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

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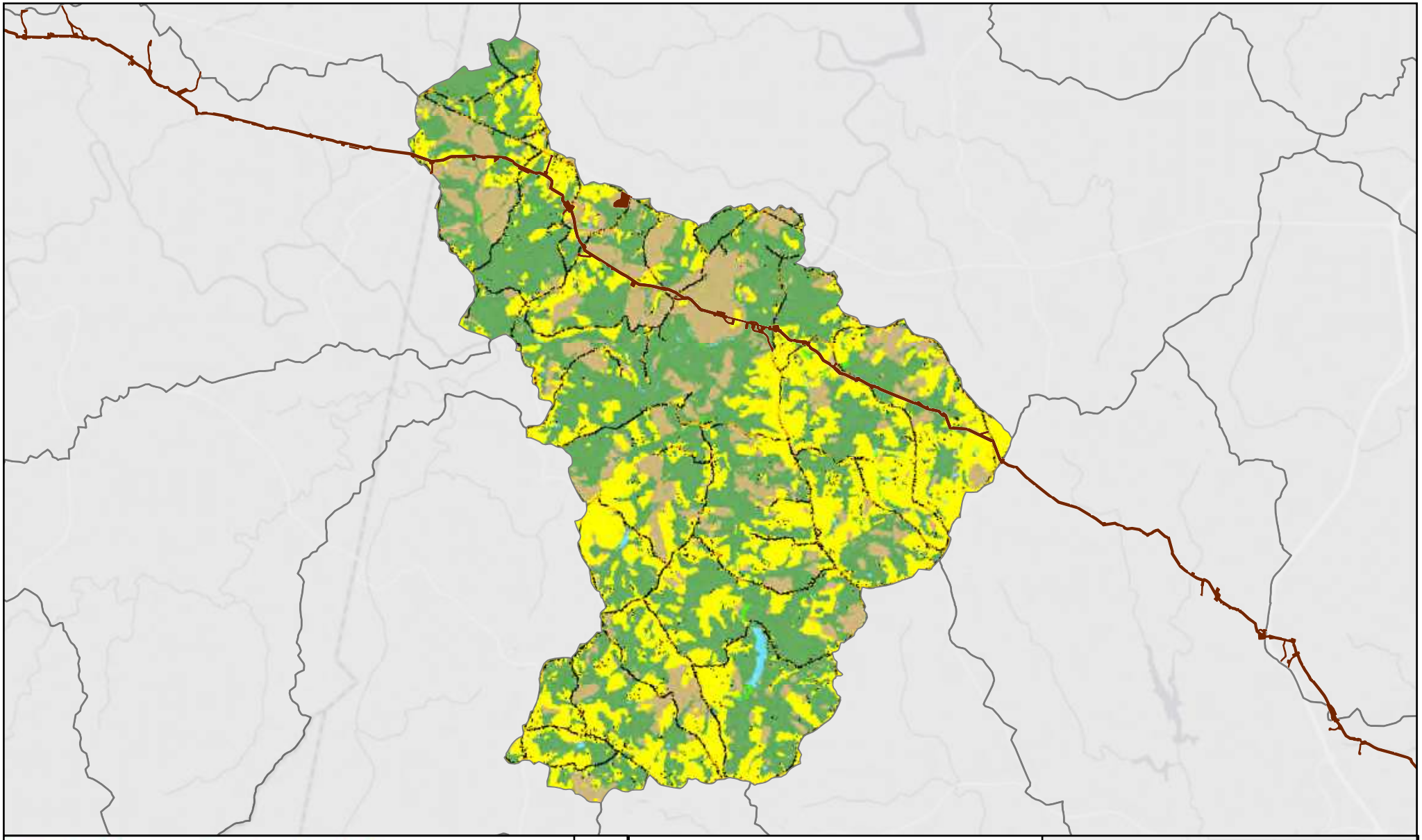
0 1.5 3 Miles

Scale: 1:115,000

Map Extent



Mountain Valley PIPELINE

Figure: 307

Land Use/Land Cover 2016
Tomahawk Creek-Pigg River
30101011001 HUC12 Watershed

5/26/2022

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

N
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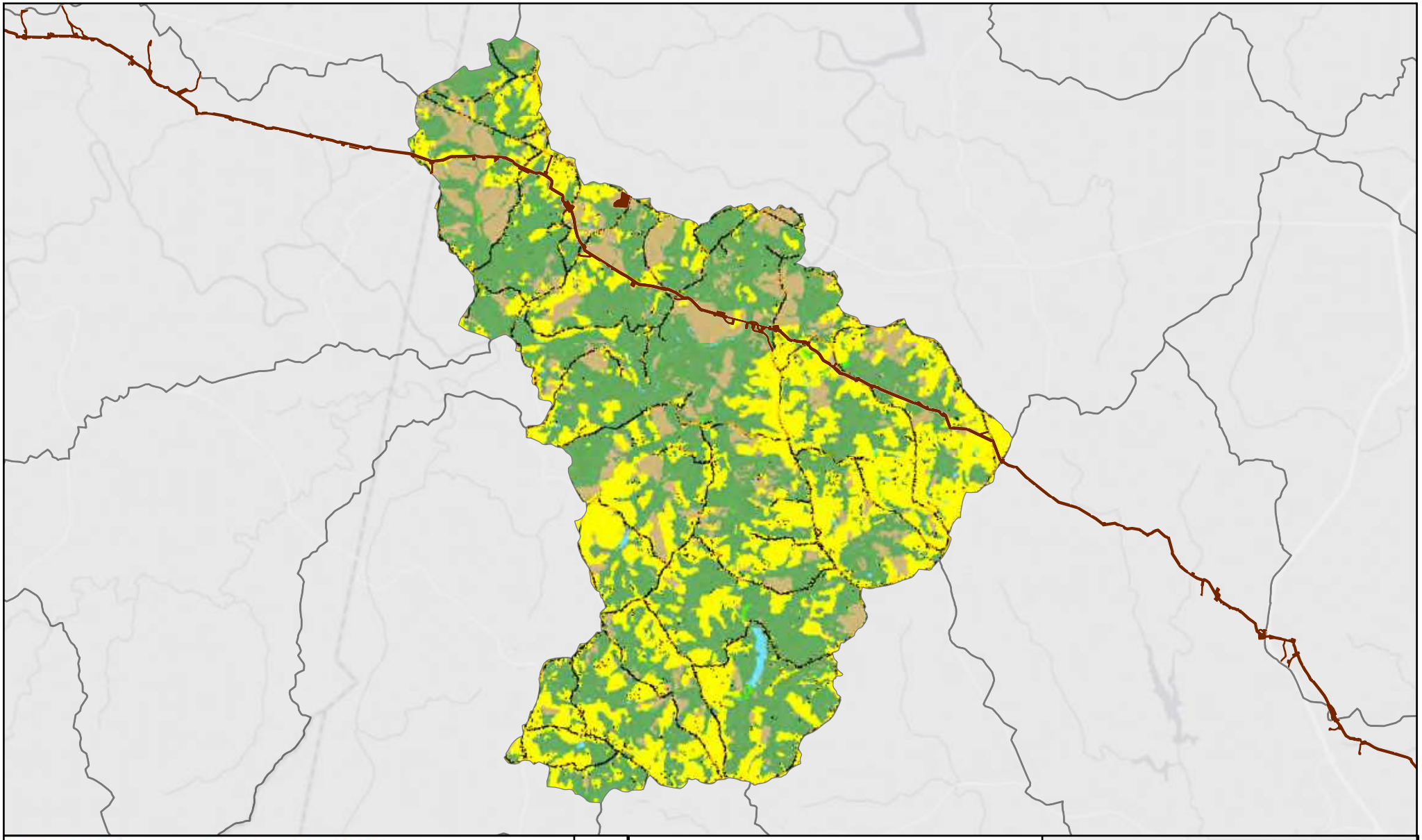
0 1.5 3 Miles

Scale: 1:115,000

Map Extent



Mountain Valley PIPELINE

Figure: 307a

Land Use/Land Cover 2019
Tomahawk Creek-Pigg River
30101011001 HUC12 Watershed

5/25/2022

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

N
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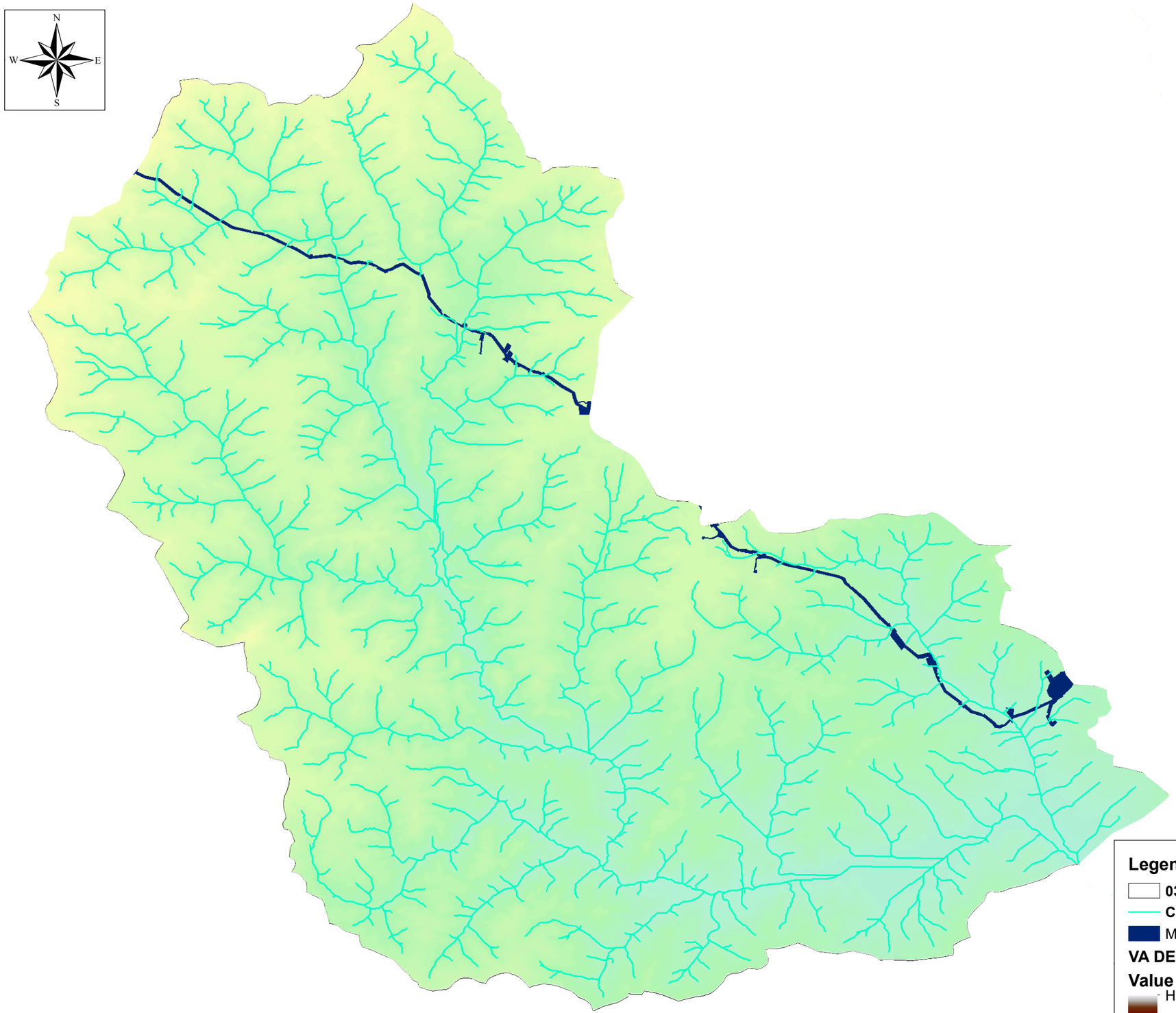
0 1.5 3

Scale: 1:115,000

Map Extent



Legend

- 030101050104 Cherrystone Creek Watershed
- Cherrystone Creek Watershed Total Stream - 1,083,738 Linear Feet
- Mountain Valley Pipeline Cherrystone Creek

VA DEM

Value

- High : 1328.84 meters
- Low : 135.786 meters

Total Impacts - 1,646 Linear Feet (0.1519%)

MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: 1" = 1 Mile
DATE: SEPT 2021
PN: **0101-17-0451.016**
J:\Projects\2017\17-0451.MVP.JayneKim Monitoring Maps\2021\CIA Suite\Figure_308 - Cherrystone_Creek_Watershed.mxd

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

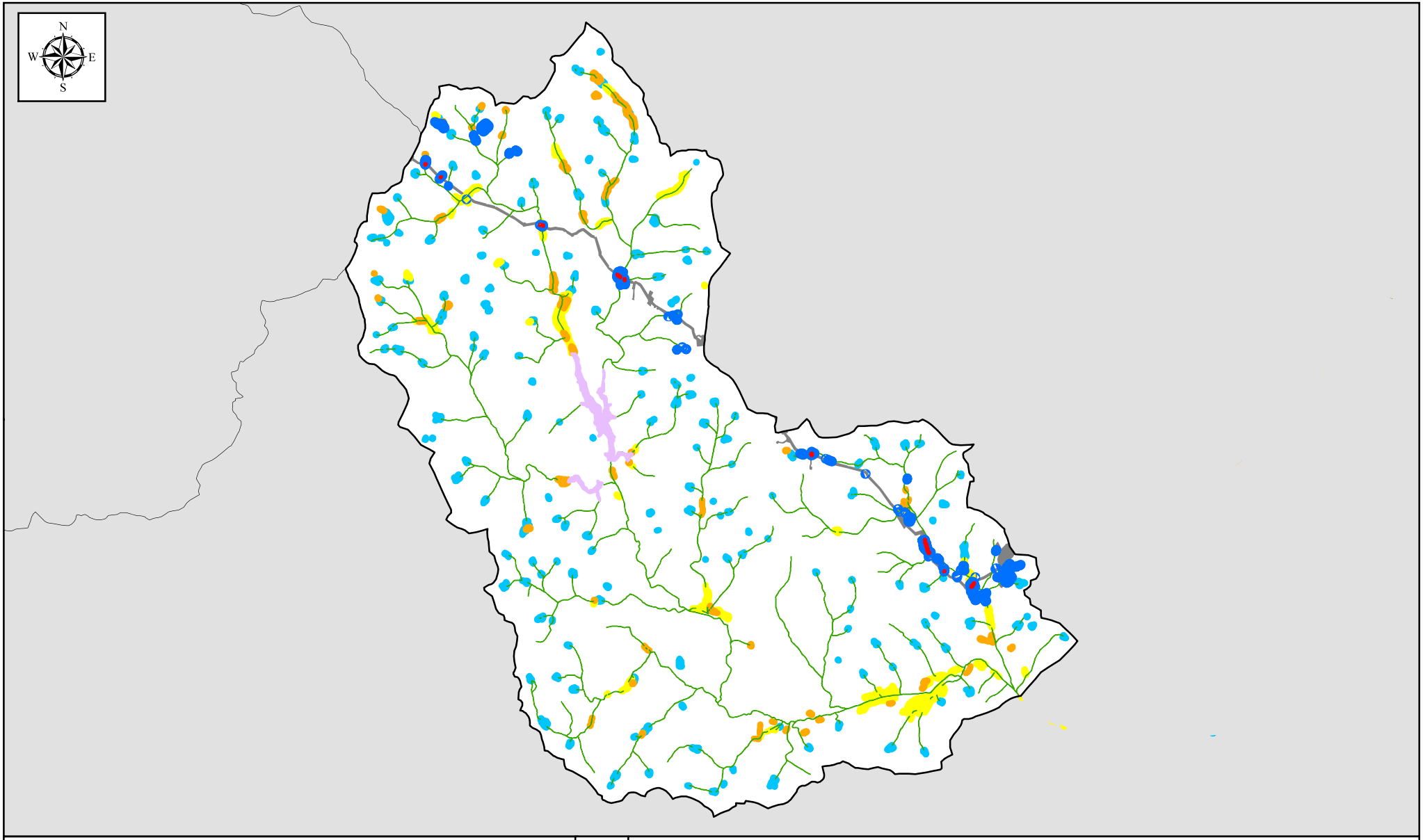
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: (304) 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Cherrystone Creek Watershed (030101050104)
Banister HUC 8 Watershed, Virginia
For Informational Purposes Only

FIGURE 308



Mountain Valley PIPELINE

Cherrystone Creek

Figure 309

1:110,000

1/6/2022

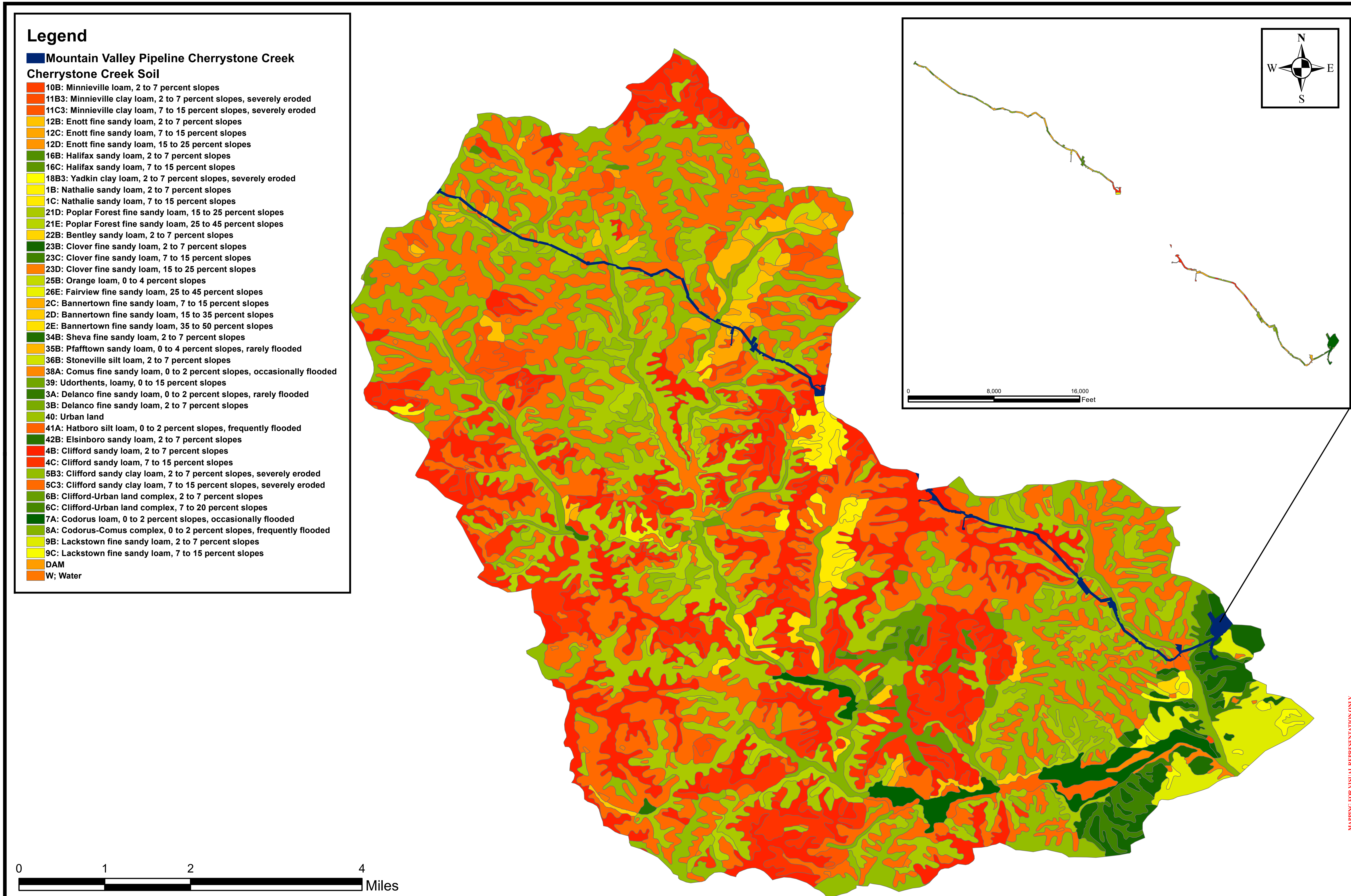
LEGEND

- Wetland Impacts - 1.61 acres
- Cherrystone Creek Delineated Wetland Area - 27.35 acres

NWI Wetlands - 816.46 acres

- Freshwater Emergent Wetland - 57.23 acres
- Freshwater Forested/Shrub Wetland - 170.75 acres
- Freshwater Pond - 185.8 acres
- Lake - 129.28 acres
- Riverine - 273.4 acres
- Mountain Valley Pipeline
- 030101050104_Cherrystone Creek

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



SCALE: See Mapping
DATE: AUGUST 2021
PN: 0101-17-0451.016
I:\Projects\2017\17_0451_MVP_EnviCon_Monitoring\Maps\2021\CIA Soils\Figure 310 - Cherrystone Creek Soil.mxd

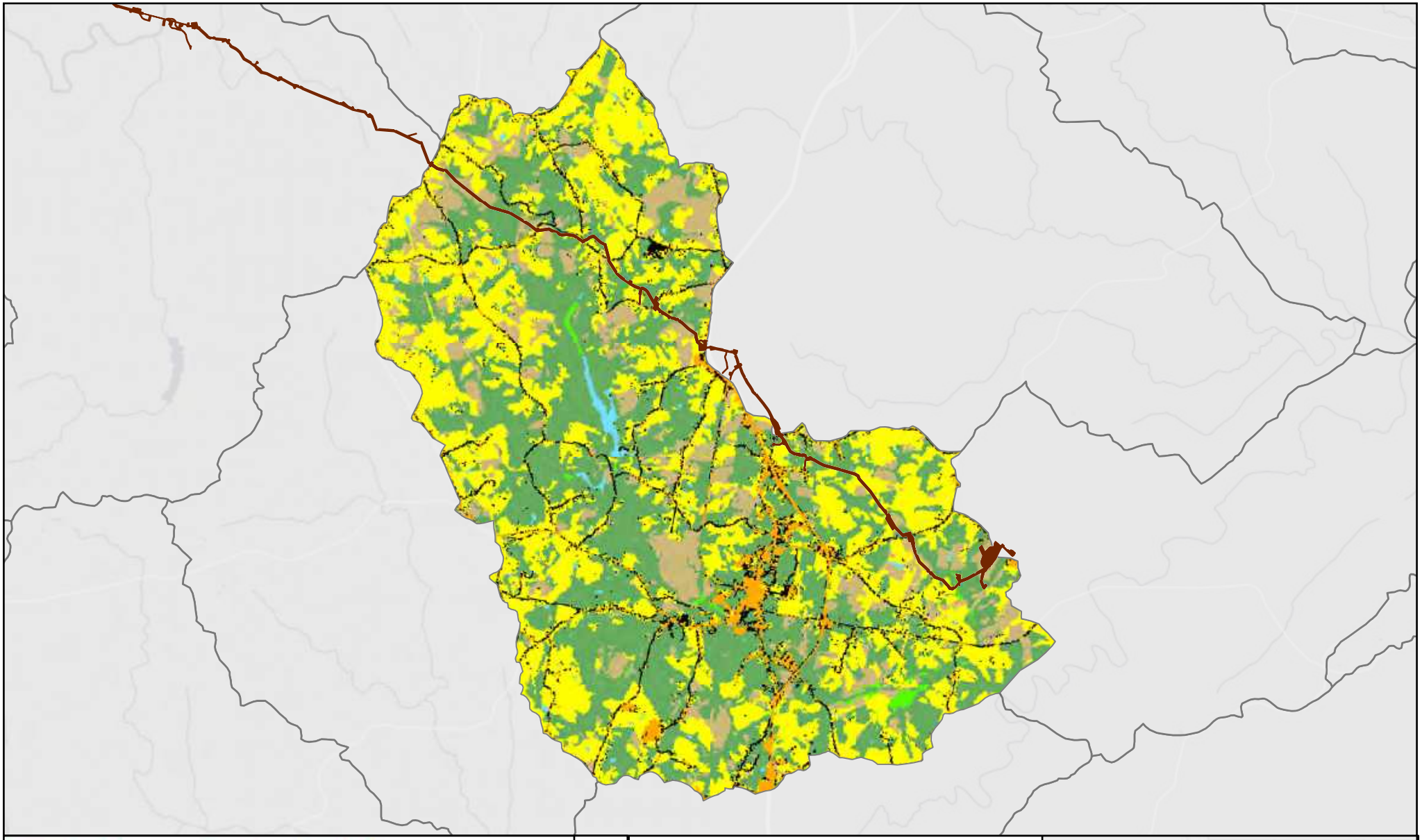
DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

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

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

Cumulative Impact Assessment - Soil
Cherrystone Creek (030101050104)
Banister HUC 8 Watershed
Pittsylvania County & City of Danville, Virginia
For Informational Purposes Only

FIGURE 310



Mountain Valley PIPELINE

Figure: 311

Land Use/Land Cover 2011
Cherrystone Creek
30101050104 HUC12 Watershed

5/26/2022

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

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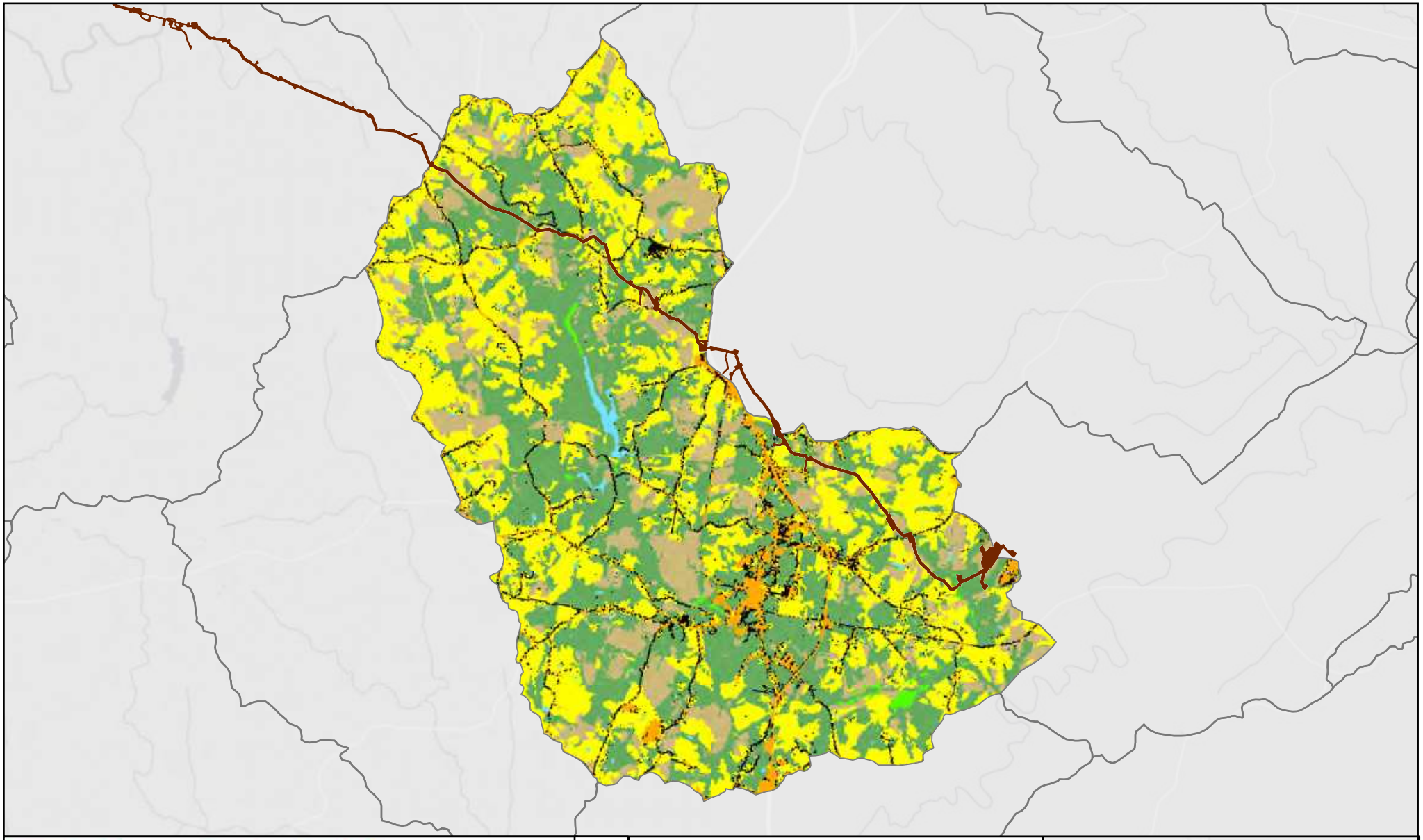
0 1.5 3 Miles

Scale: 1:110,000

Map Extent



Mountain Valley PIPELINE

Figure: 312

Land Use/Land Cover 2016
Cherrystone Creek
30101050104 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2016 Land Use Land Cover

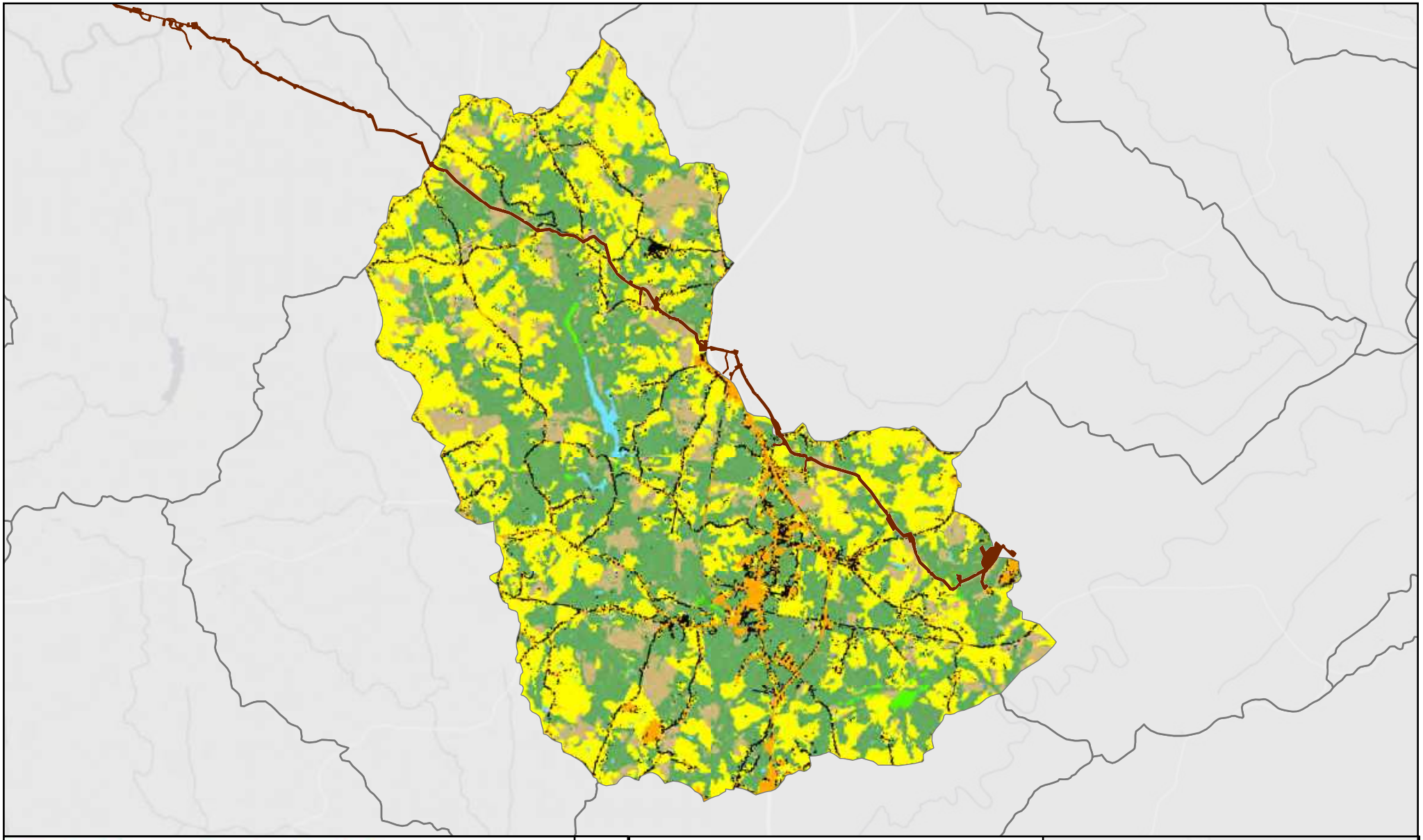
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N W E S

0 1.5 3 Miles

Scale: 1:110,000

Map Extent



Mountain Valley PIPELINE

Figure: 312a

Land Use/Land Cover 2019
Cherrystone Creek
30101050104 HUC12 Watershed

5/25/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2019 Land Use Land Cover

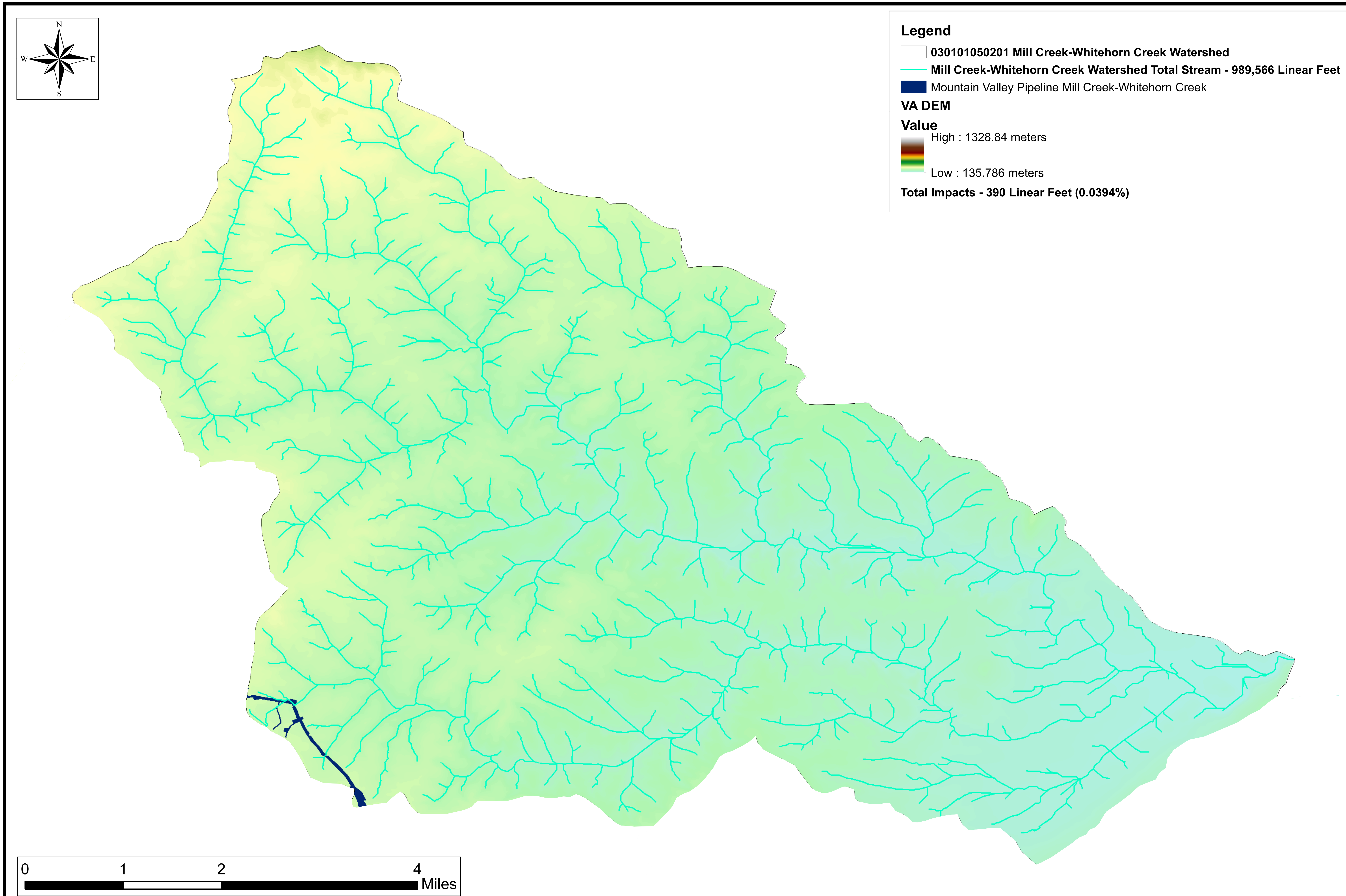
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N W E S

0 1.5 3 Miles

Scale: 1:110,000

Map Extent



MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: 1" = 1 Mile | DRAWN: KBW
DATE: SEPT 2021 | CHECKED: JLY
PN: 0101-17-0451.016 | APPROVED: JLY

I:\Projects\2017\17_0451_MVP_EnviCon_Monitoring\Maps\2021\CIA Soils\Figure 313 - Mill_Creek_Whitehorn_Watershed.mxd

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

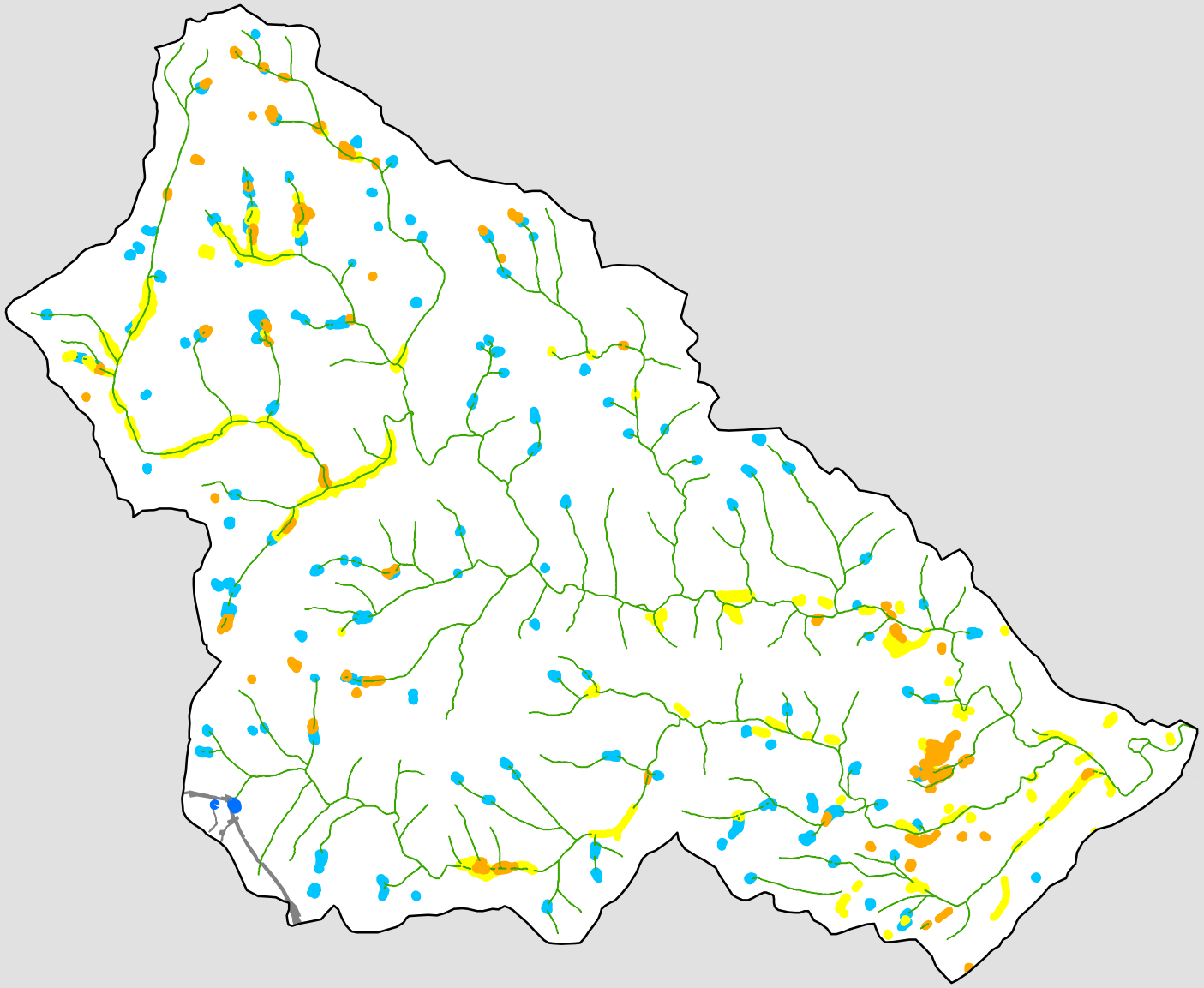
POTESTA

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

Cumulative Impact Assessment Report - Hydrology Impacts and Total Linear Footage Assessment Mill Creek-Whitehorn Creek Watershed (030101050201) Banister HUC 8 Watershed, Virginia

For Informational Purposes Only

FIGURE 313



Mountain Valley PIPELINE

Mill Creek-Whitehorn Creek

Figure 314

1:88,000

1/6/2022

LEGEND

- Wetland Impacts - 0 acres
- Mill Creek-Whitehorn Creek Delineated Wetland Area - 0.69 acres

NWI Wetlands - 670.1 acres

- Freshwater Emergent Wetland - 72.67 acres
- Freshwater Forested/Shrub Wetland - 191.44 acres
- Freshwater Pond - 131 acres
- Riverine - 274.98 acres
- Mountain Valley Pipeline
- 030101050201_Mill Creek-Whitehorn Creek

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

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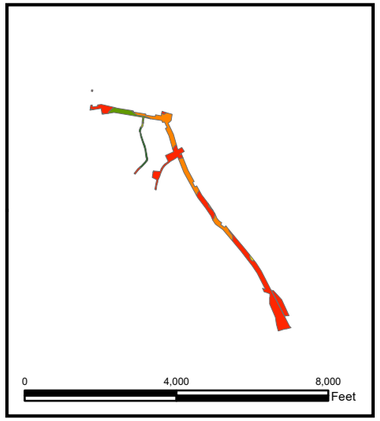

Legend

Mountain Valley Pipeline Mill Creek-Whitehorn Creek

Mill Creek-Whitehorn Creek Soil

- 10B: Minnieville loam, 2 to 7 percent slopes
- 11B3: Minnieville clay loam, 2 to 7 percent slopes, severely eroded
- 11C3: Minnieville clay loam, 7 to 15 percent slopes, severely eroded
- 12D: Enott fine sandy loam, 15 to 25 percent slopes
- 16B: Halifax sandy loam, 2 to 7 percent slopes
- 1B: Nathalie sandy loam, 2 to 7 percent slopes
- 1C: Nathalie sandy loam, 7 to 15 percent slopes
- 20B: Leaksville silt loam, 0 to 4 percent slopes
- 21D: Poplar Forest fine sandy loam, 15 to 25 percent slopes
- 21E: Poplar Forest fine sandy loam, 25 to 45 percent slopes
- 22B: Bentley sandy loam, 2 to 7 percent slopes
- 23B: Clover fine sandy loam, 2 to 7 percent slopes
- 23C: Clover fine sandy loam, 7 to 15 percent slopes
- 23D: Clover fine sandy loam, 15 to 25 percent slopes
- 24B: Meadows gravelly loam, 2 to 7 percent slopes
- 24C: Meadows gravelly loam, 7 to 15 percent slopes
- 26B: Fairview fine sandy loam, 2 to 7 percent slopes
- 26D: Fairview fine sandy loam, 15 to 25 percent slopes
- 27C3: Fairview sandy clay loam, 7 to 15 percent slopes, severely eroded
- 28D: Pinkston cobbly sandy loam, 15 to 35 percent slopes
- 29E: Pinkston-Clover complex, 35 to 50 percent slopes, very stony
- 2E: Bannertown fine sandy loam, 35 to 50 percent slopes
- 33A: Dan River silt loam, 0 to 2 percent slopes, occasionally flooded
- 34B: Sheva fine sandy loam, 2 to 7 percent slopes
- 35B: Pfafftown sandy loam, 0 to 4 percent slopes, rarely flooded
- 36B: Stoneville silt loam, 2 to 7 percent slopes
- 36C: Stoneville silt loam, 7 to 15 percent slopes
- 38A: Comus fine sandy loam, 0 to 2 percent slopes, occasionally flooded
- 39: Udorthents, loamy, 0 to 15 percent slopes
- 3A: Delanco fine sandy loam, 0 to 2 percent slopes, rarely flooded
- 3B: Delanco fine sandy loam, 2 to 7 percent slopes
- 40: Urban land
- 41A: Hatboro silt loam, 0 to 2 percent slopes, frequently flooded
- 42B: Elsinboro sandy loam, 2 to 7 percent slopes
- 4B: Clifford sandy loam, 2 to 7 percent slopes
- 4C: Clifford sandy loam, 7 to 15 percent slopes
- 5B3: Clifford sandy clay loam, 2 to 7 percent slopes, severely eroded
- 5C3: Clifford sandy clay loam, 7 to 15 percent slopes, severely eroded
- 6B: Clifford-Urban land complex, 2 to 7 percent slopes
- 7A: Codorus loam, 0 to 2 percent slopes, occasionally flooded
- 8A: Codorus-Comus complex, 0 to 2 percent slopes, frequently flooded
- 9B: Lackstown fine sandy loam, 2 to 7 percent slopes
- W: Water

MAPPING FOR VISUAL REPRESENTATION ONLY

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

SCALE: See Mapping
DATE: AUGUST 2021
PN: 010-17-0451.016
I:\Projects\2017\17-0451.016\Cumulative Impact Assessment\Mapping\Mill Creek-Whitehorn Creek\Mill Creek-Whitehorn Creek Soil.mxd

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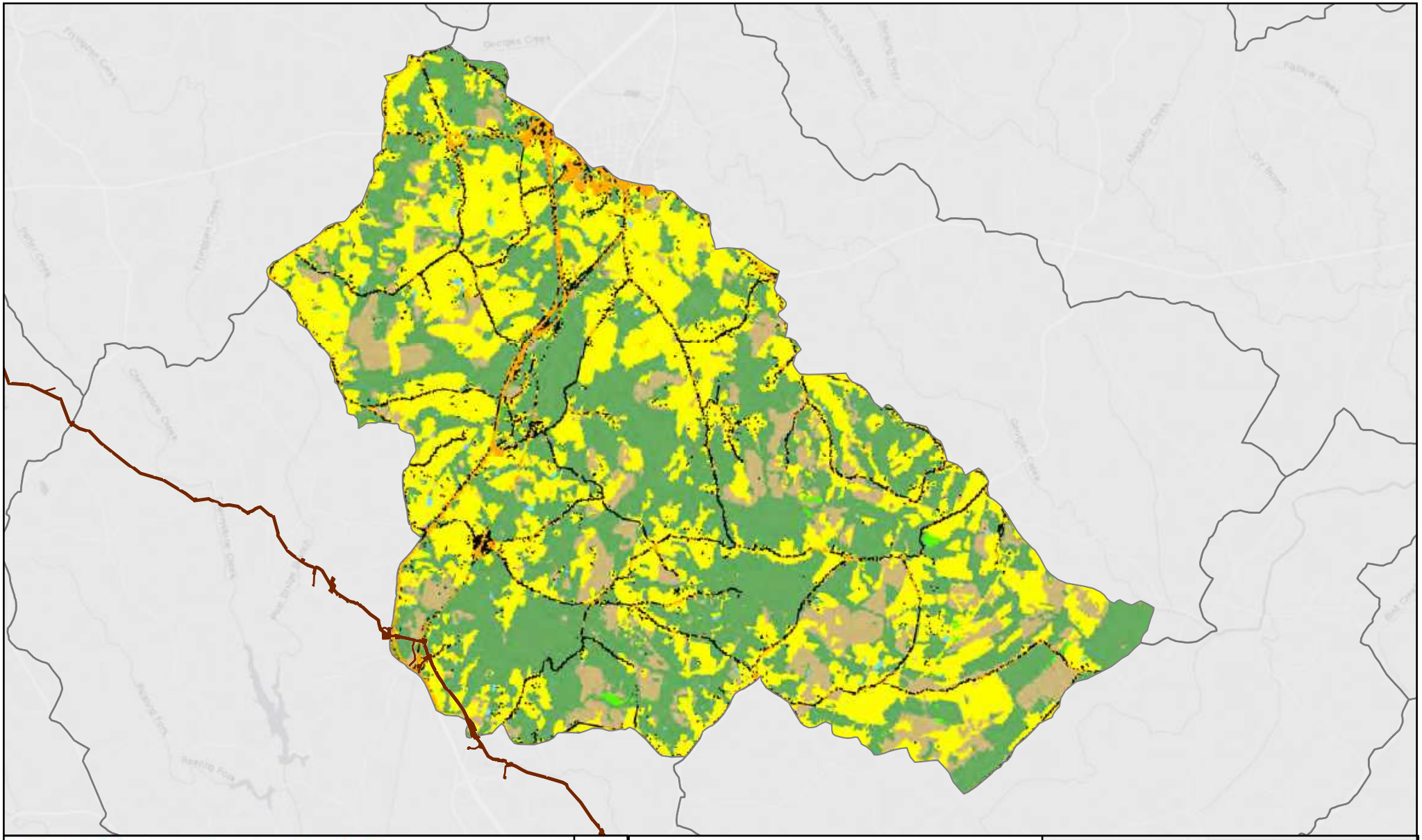
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 FAX: 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
Mill Creek-Whitehorn Creek (0301010502O1)
Banister HUC 8 Watershed
Pittsylvania County & City of Danville, Virginia
For Informational Purposes Only

FIGURE 315



Mountain Valley PIPELINE

Figure: 316

Land Use/Land Cover 2011
Mill Creek-Whitehorn Creek
30101050201 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2011 Land Use Land Cover

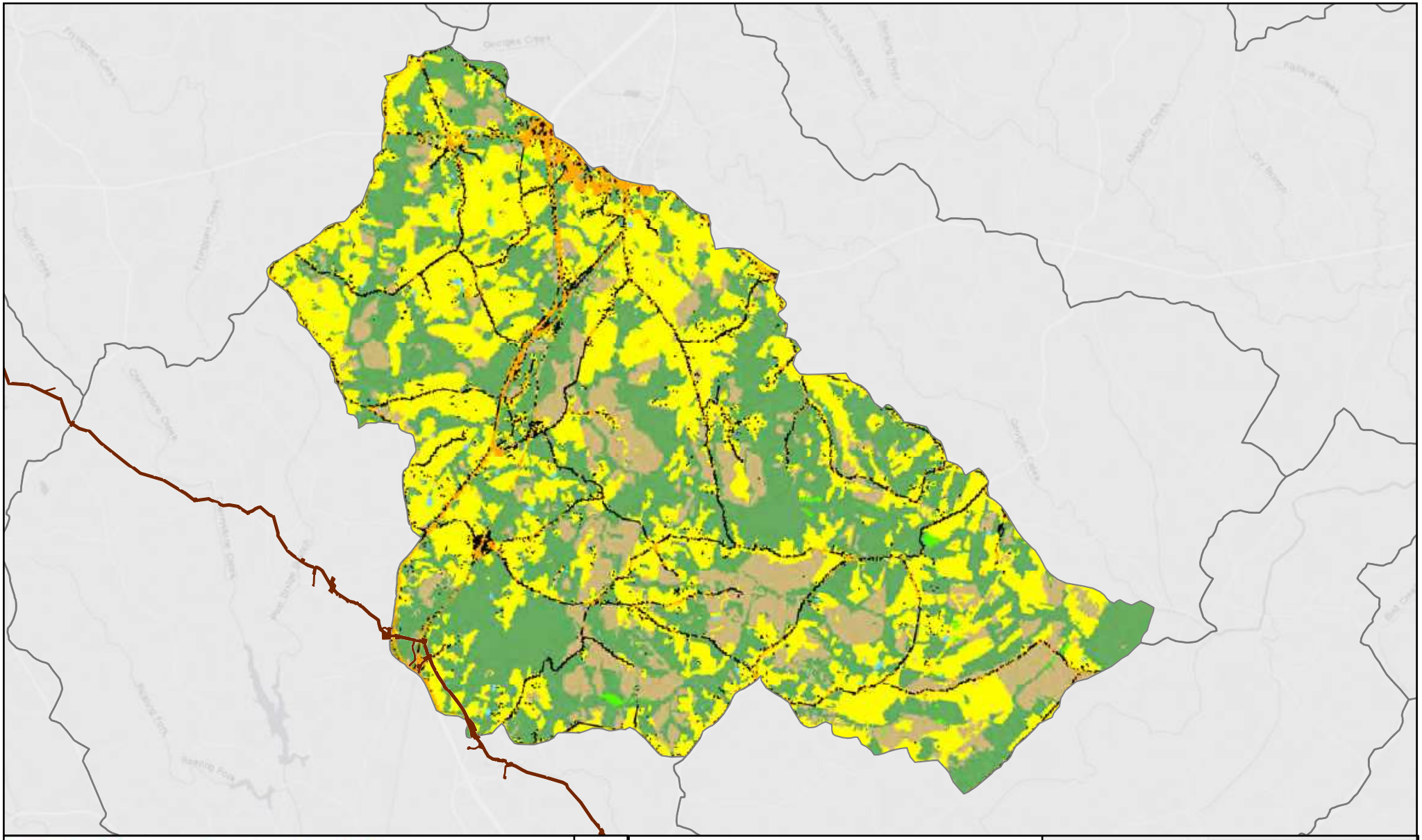
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

0 1 2 Miles

Scale: 1:95,000

Map Extent



Mountain Valley PIPELINE

Figure: 317

Land Use/Land Cover 2016
Mill Creek-Whitehorn Creek
30101050201 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2016 Land Use Land Cover

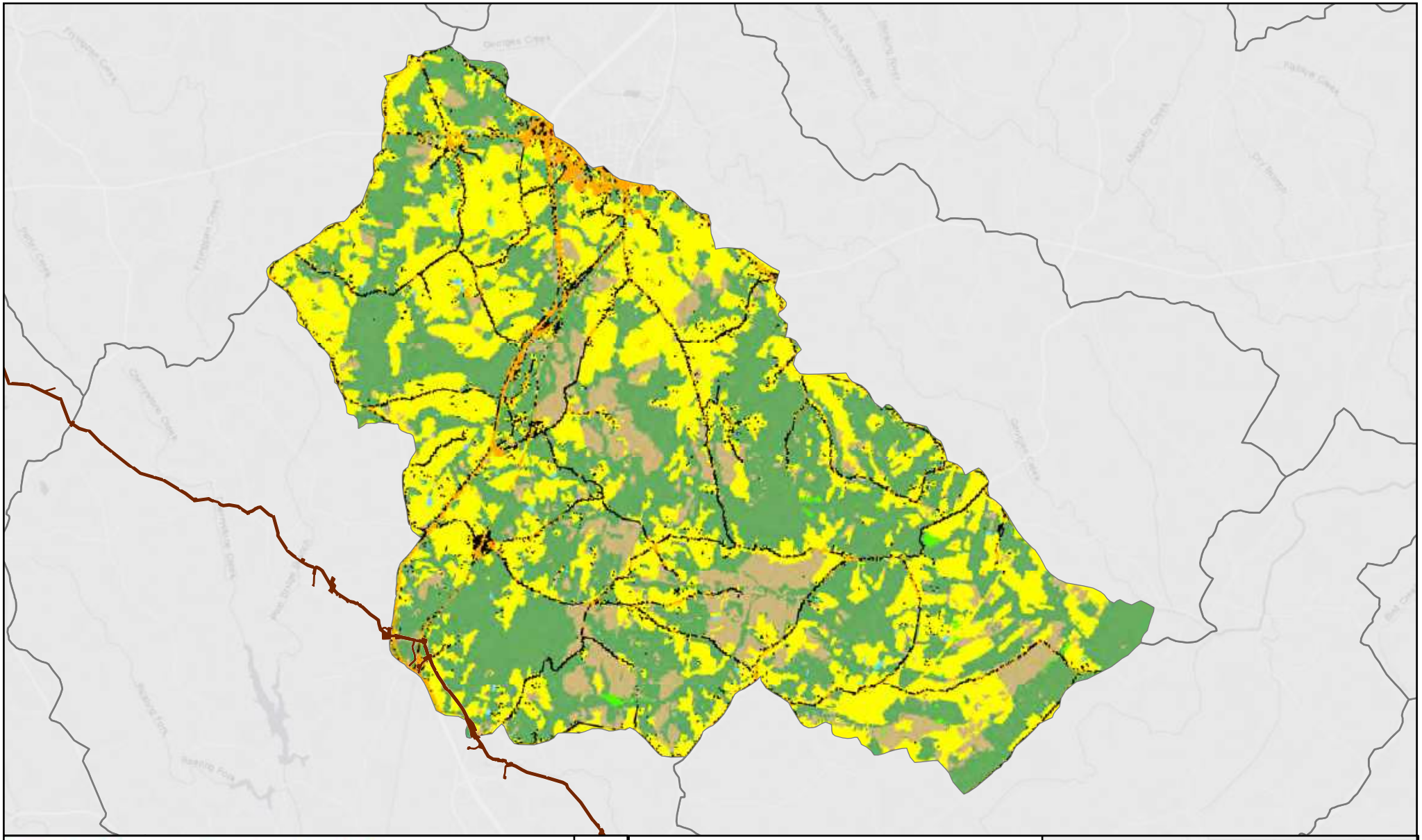
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

Miles
0 1 2

Scale: 1:95,000

Map Extent



Mountain Valley PIPELINE

Figure: 317a

Land Use/Land Cover 2019
Mill Creek-Whitehorn Creek
30101050201 HUC12 Watershed

5/25/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2019 Land Use Land Cover

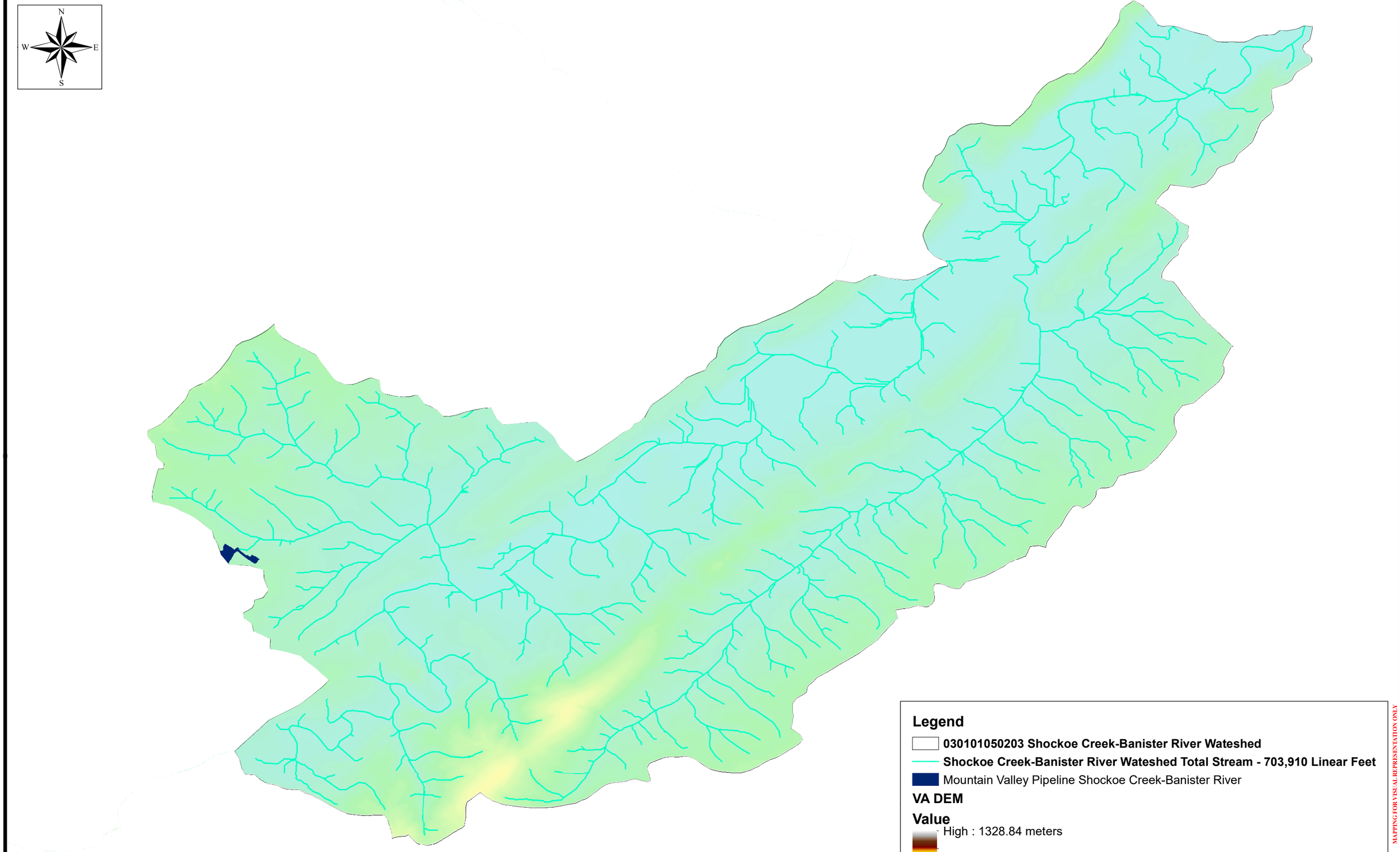
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N
W E
S

Miles
0 1 2

Scale: 1:95,000

Map Extent



Legend

030101050203 Shockoe Creek-Banister River Wateshed

Shockoe Creek-Banister River Wateshed Total Stream - 703,910 Linear Feet

Mountain Valley Pipeline Shockoe Creek-Banister River

VA DEM

Value

High : 1328.84 meters

Low : 135.786 meters

Total Impacts - 0 Linear Feet (0.0000%)

MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: 1" = 1 Mile
DATE: SEPT 2021
PN: **0101-17-0451.016**

DRAWN: KBW
CHECKED: JLY
APPROVED: JLY

J:\Projects\2017\17-0451.MVP_EnvCon_Monitoring\Maps\2021\CIA Satisfy\Figure 318- Shockoe_Creek_Watershed.mxd

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

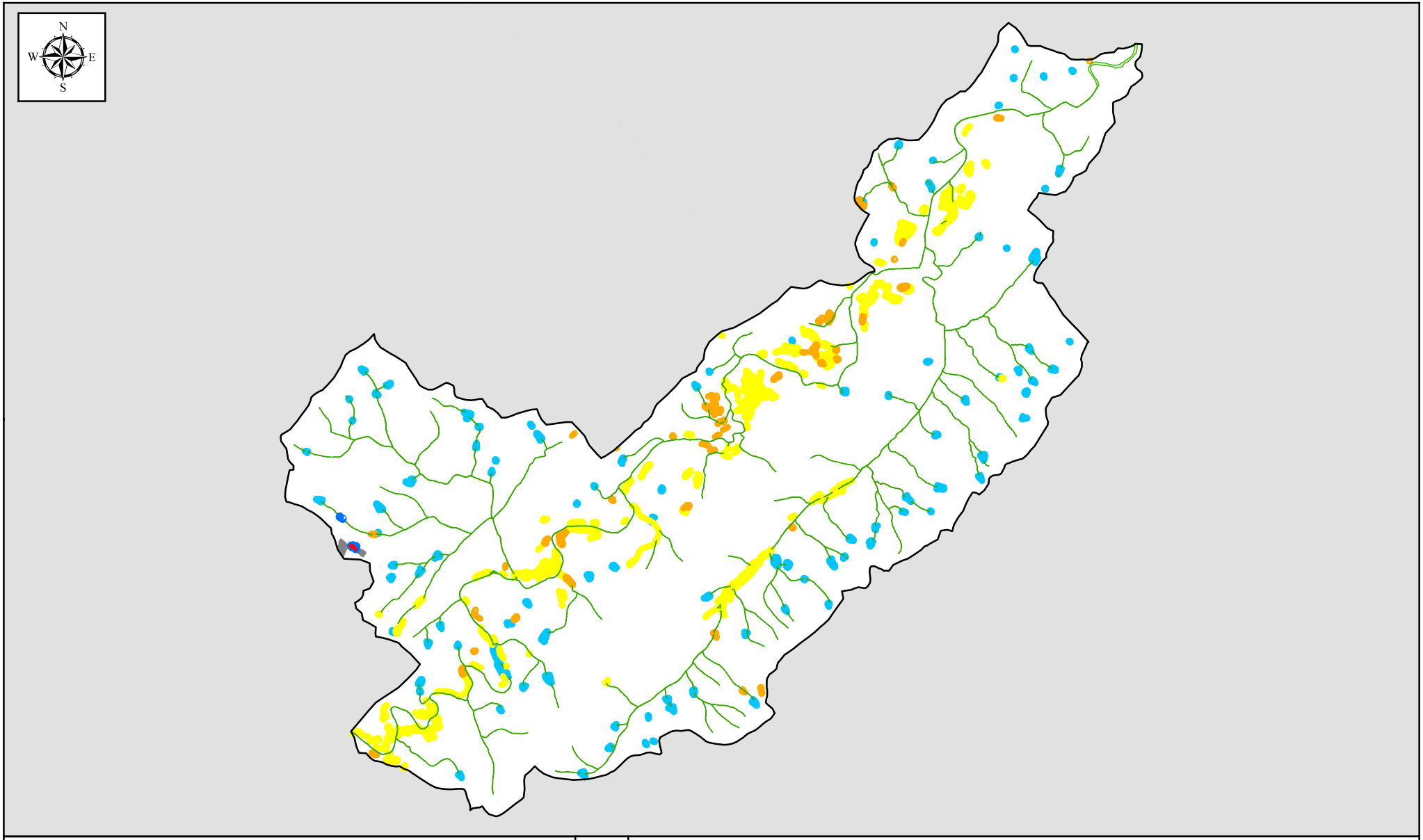
POTESTA

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

Cumulative Impact Assessment Report - Hydrology
Impacts and Total Linear Footage Assessment
Shockoe Creek-Banister River Watershed (030101050203)
Banister HUC 8 Watershed, Virginia

For Informational Purposes Only

FIGURE 318



Mountain Valley PIPELINE

Shockoe Creek-Banister River

Figure 319

1:86,000

1/6/2022

LEGEND

- Wetland Impacts - 0.08 acres
- Shockoe Creek-Banister River Delineated Wetland Area - 0.67 acres

NWI Wetlands - 564.95 acres

- Freshwater Emergent Wetland - 31.31 acres
- Freshwater Forested/Shrub Wetland - 236.77 acres
- Freshwater Pond - 89.09 acres
- Riverine - 207.78 acres
- Mountain Valley Pipeline
- 030101050203_Shockoe Creek-Banister River

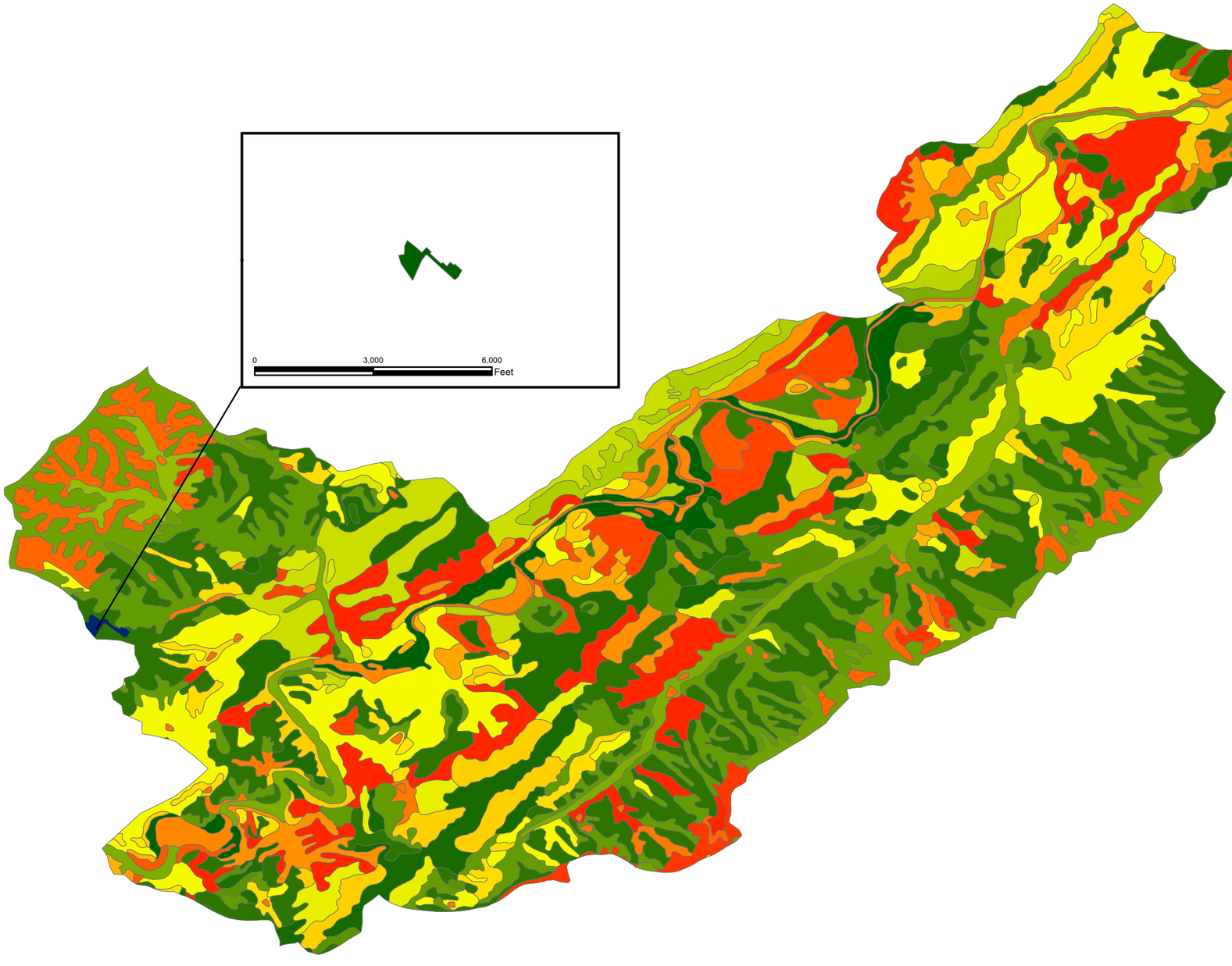
Note: Shapes are not to scale, enlarged to improve visibility.

Legend

Mountain Valley Pipeline Shockoe Creek-Banister River

Shockoe Creek-Banister River Soil

- 16B: Halifax sandy loam, 2 to 7 percent slopes
- 17B: Yadkin loam, 2 to 7 percent slopes
- 18B3: Yadkin clay loam, 2 to 7 percent slopes, severely eroded
- 18C3: Yadkin clay loam, 7 to 15 percent slopes, severely eroded
- 20B: Leaksville silt loam, 0 to 4 percent slopes
- 21D: Poplar Forest fine sandy loam, 15 to 25 percent slopes
- 22B: Bentley sandy loam, 2 to 7 percent slopes
- 22C: Bentley sandy loam, 7 to 15 percent slopes
- 23B: Clover fine sandy loam, 2 to 7 percent slopes
- 23C: Clover fine sandy loam, 7 to 15 percent slopes
- 23D: Clover fine sandy loam, 15 to 25 percent slopes
- 24B: Meadows gravelly loam, 2 to 7 percent slopes
- 24C: Meadows gravelly loam, 7 to 15 percent slopes
- 26D: Fairview fine sandy loam, 15 to 25 percent slopes
- 28C: Pinkston cobbly sandy loam, 7 to 15 percent slopes
- 28D: Pinkston cobbly sandy loam, 15 to 35 percent slopes
- 29C: Pinkston-Clover complex, 7 to 15 percent slopes, very stony
- 29D: Pinkston-Clover complex, 15 to 35 percent slopes, very stony
- 29E: Pinkston-Clover complex, 35 to 50 percent slopes, very stony
- 33A: Dan River silt loam, 0 to 2 percent slopes, occasionally flooded
- 34B: Sheva fine sandy loam, 2 to 7 percent slopes
- 34C: Sheva fine sandy loam, 7 to 15 percent slopes
- 35B: Pfafftown sandy loam, 0 to 4 percent slopes, rarely flooded
- 36B: Stoneville silt loam, 2 to 7 percent slopes
- 36C: Stoneville silt loam, 7 to 15 percent slopes
- 36D: Stoneville silt loam, 15 to 25 percent slopes
- 38A: Comus fine sandy loam, 0 to 2 percent slopes, occasionally flooded
- 3A: Delanco fine sandy loam, 0 to 2 percent slopes, rarely flooded
- 3A: Delanco fine sandy loam, 0 to 2 percent slopes, rarely flooded
- 41A: Hatboro silt loam, 0 to 2 percent slopes, frequently flooded
- 42B: Elsinboro sandy loam, 2 to 7 percent slopes
- 4B: Clifford sandy loam, 2 to 7 percent slopes
- 4C: Clifford sandy loam, 7 to 15 percent slopes
- 5B3: Clifford sandy clay loam, 2 to 7 percent slopes, severely eroded
- 5C3: Clifford sandy clay loam, 7 to 15 percent slopes, severely eroded
- 7A: Codorus loam, 0 to 2 percent slopes, occasionally flooded
- 8A: Codorus-Comus complex, 0 to 2 percent slopes, frequently flooded
- 9B: Lackstown fine sandy loam, 2 to 7 percent slopes
- 9C: Lackstown fine sandy loam, 7 to 15 percent slopes
- W: Water



MAPPING FOR VISUAL REPRESENTATION ONLY

SCALE: See Mapping | DRAWN: KBW
DATE: AUGUST 2021 | CHECKED: JLY
PN: 010-17-0451.016 | APPROVED: JLY

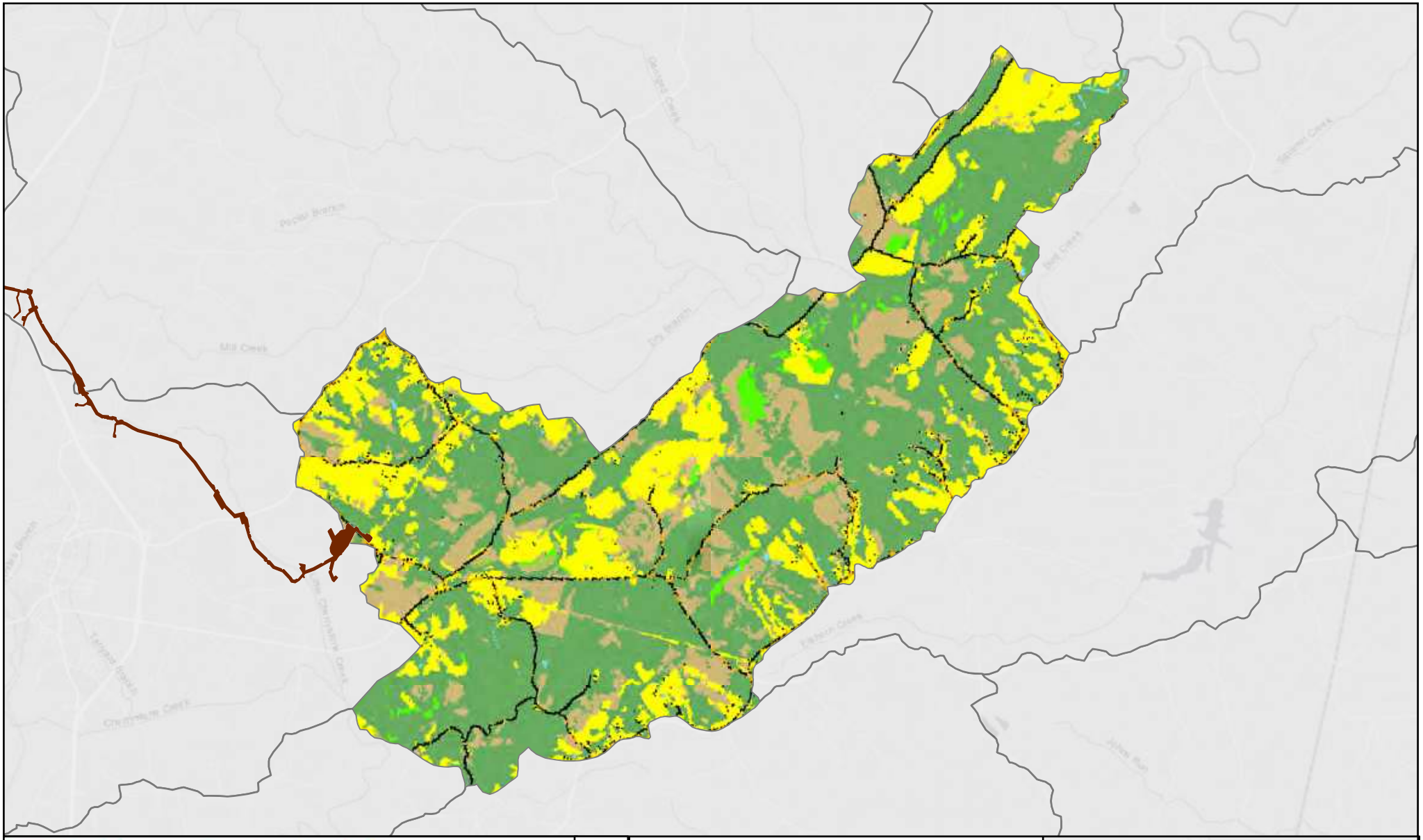
Potesta & Associates, Inc.
ENGINEERS AND ENVIRONMENTAL CONSULTANTS
7012 MacCorkle Avenue, S.E.
Charleston, WV 25304
Office: (304) 342-1400 Fax: 343-9031
E-mail: potesta@potesta.com

POTESTA

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

Cumulative Impact Assessment - Soil
Shockoe Creek-Banister River (03010105020 3)
Banister HUC 8 Watershed
Pittsylvania County, & City of Danville, Virginia
For Informational Purposes Only

FIGURE 320



Mountain Valley PIPELINE

Figure: 321

Land Use/Land Cover 2011
Shockoe Creek-Banister River
30101050203 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2011 Land Use Land Cover

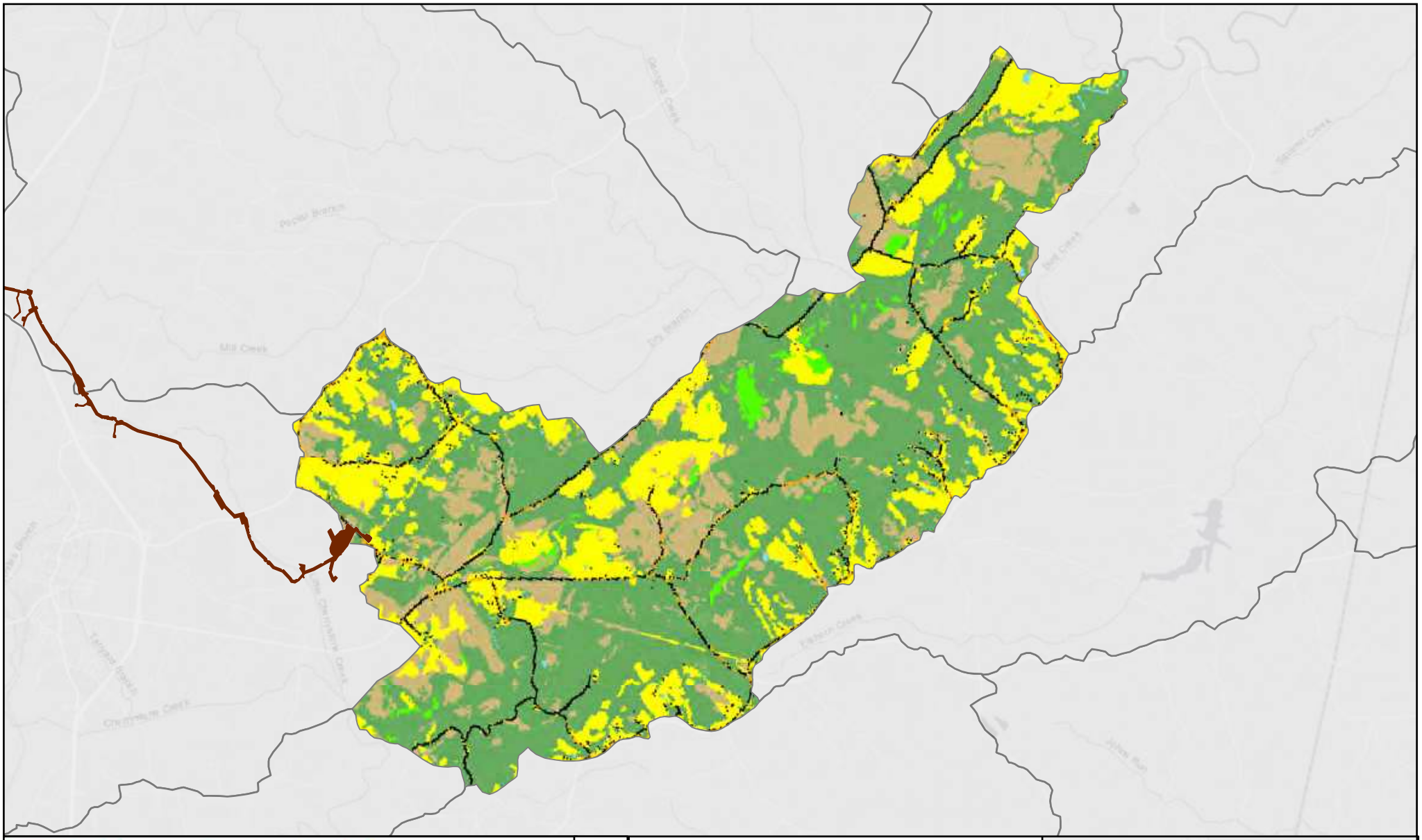
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N W E S

0 1 2 Miles

Scale: 1:90,000

Map Extent



Mountain Valley PIPELINE

Figure: 322

Land Use/Land Cover 2016
Shockoe Creek-Banister River
30101050203 HUC12 Watershed

5/26/2022

LEGEND

- Mountain Valley Pipeline LOD & Laydown Yards

2016 Land Use Land Cover

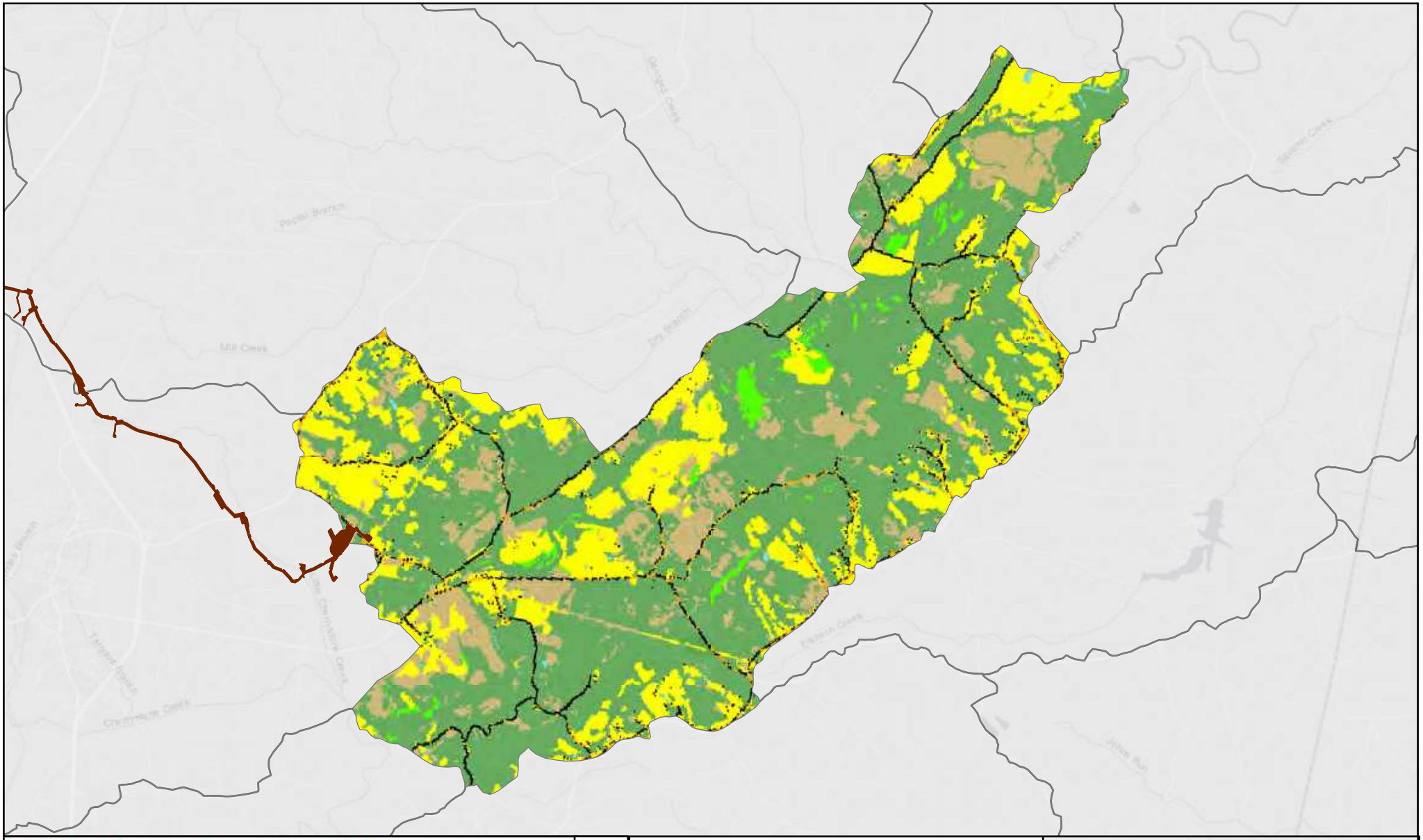
- Water
- Roads, Impervious Surface
- Mixed Development
- Barren Land
- Forest
- Low Vegetation
- Pasture, Hay, Agriculture
- Wetlands

N W E S

0 1 2 Miles

Scale: 1:90,000

Map Extent



Mountain Valley PIPELINE

Figure: 322a

Land Use/Land Cover 2019
Shockoe Creek-Banister River
30101050203 HUC12 Watershed

5/25/2022

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

N W E S

0 1 2 Miles

Scale: 1:90,000

Map Extent