

West Virginia Watershed Atlas

WATER USE SECTION



west virginia department of environmental protection

November 2013

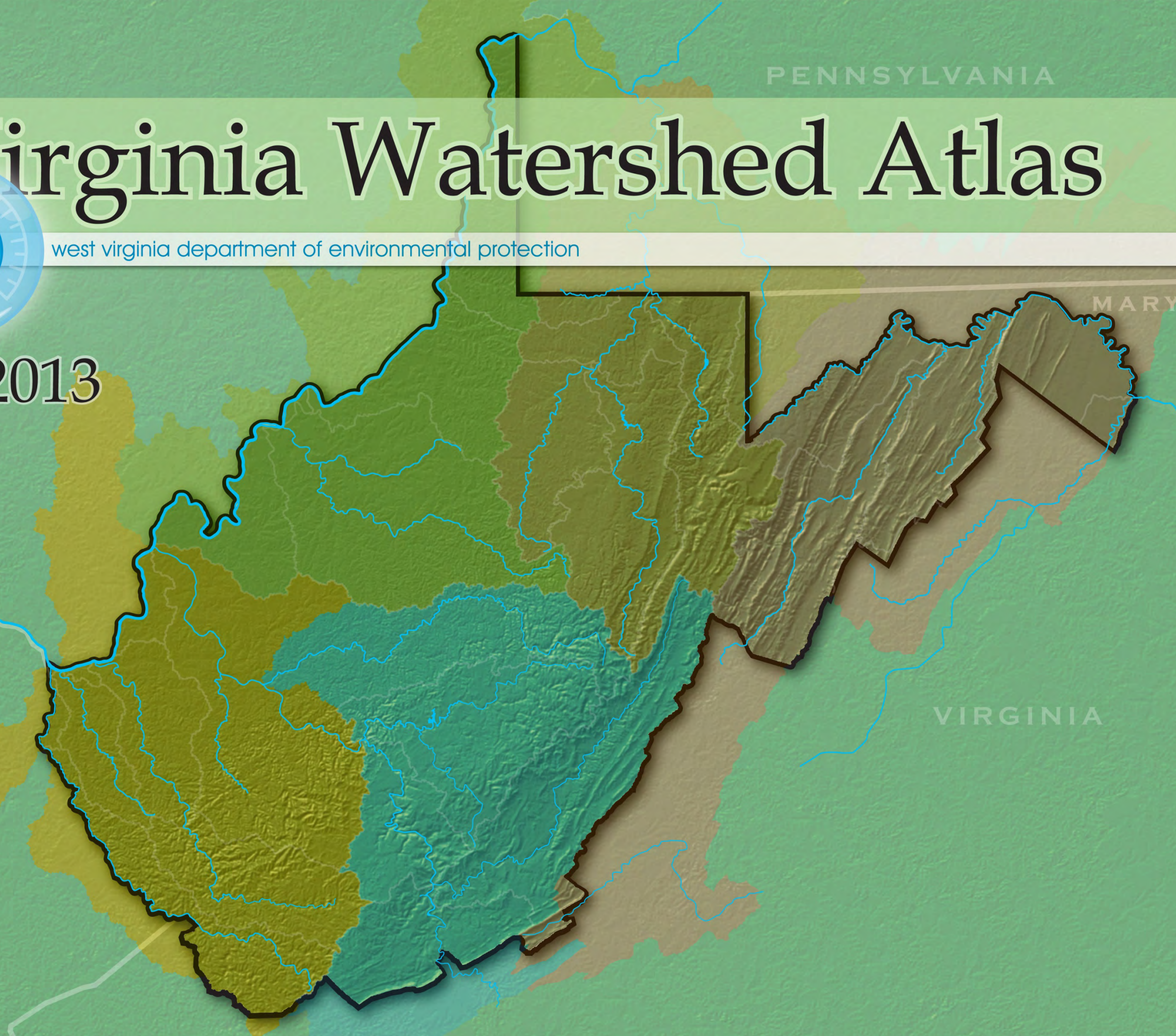
KENTUCKY

OHIO

PENNSYLVANIA

MARYLAND

VIRGINIA



Legal Disclaimer

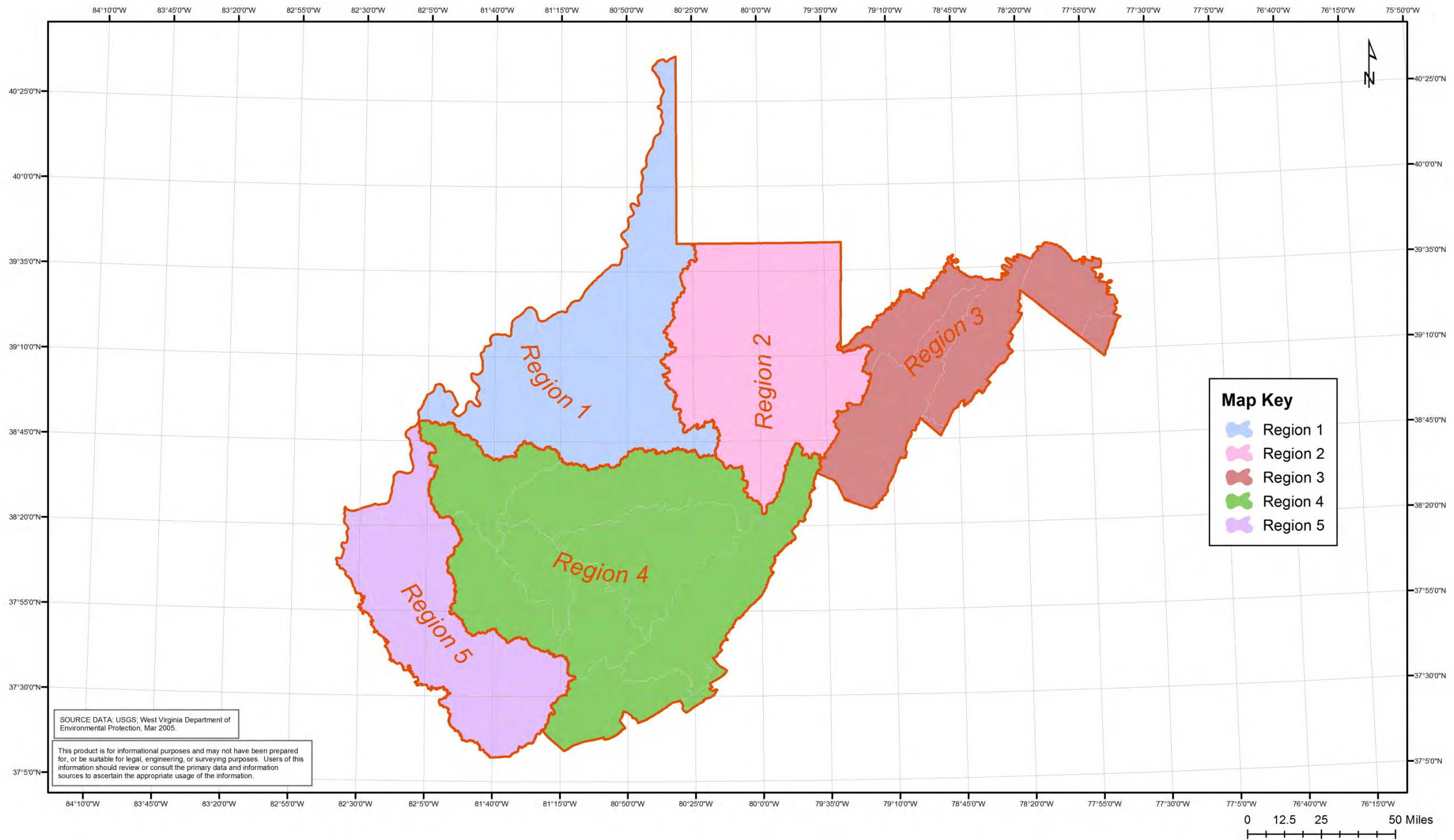


The West Virginia Department of Environmental Protection does not assume responsibility for the accuracy of this information. Persons using this information should verify its accuracy prior to use for any project.

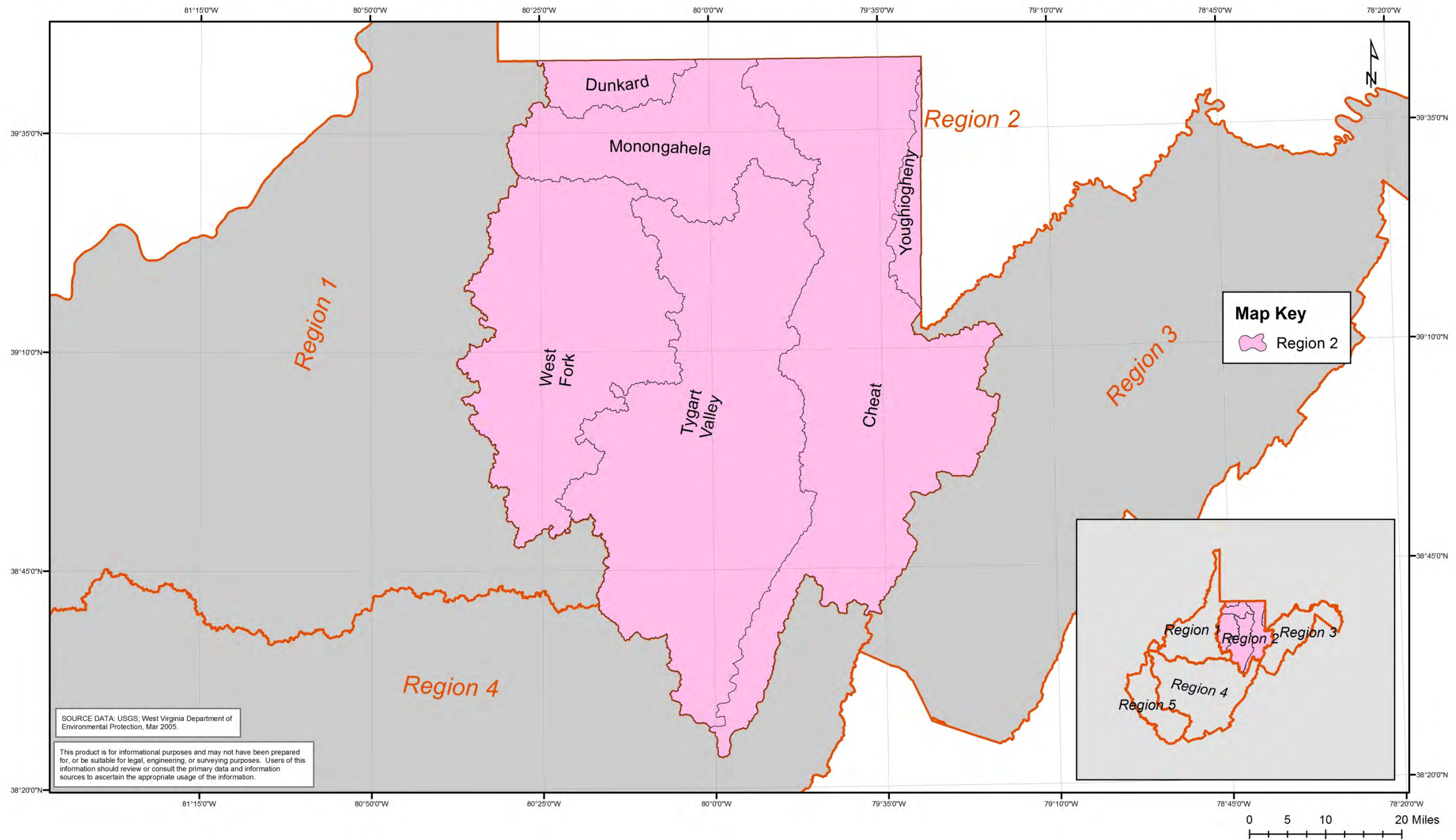
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West Virginia Watershed – Regional Map

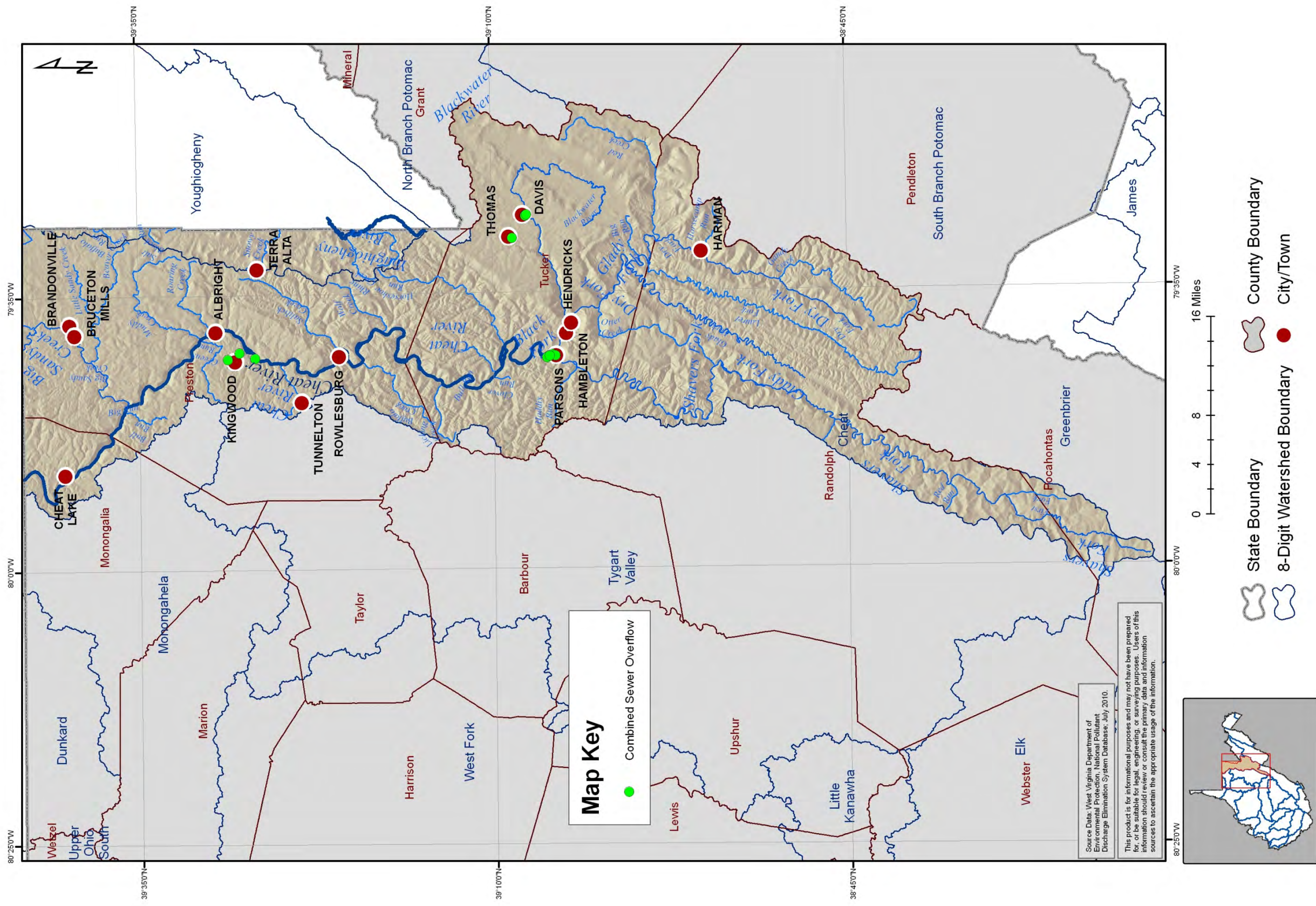


Region 2



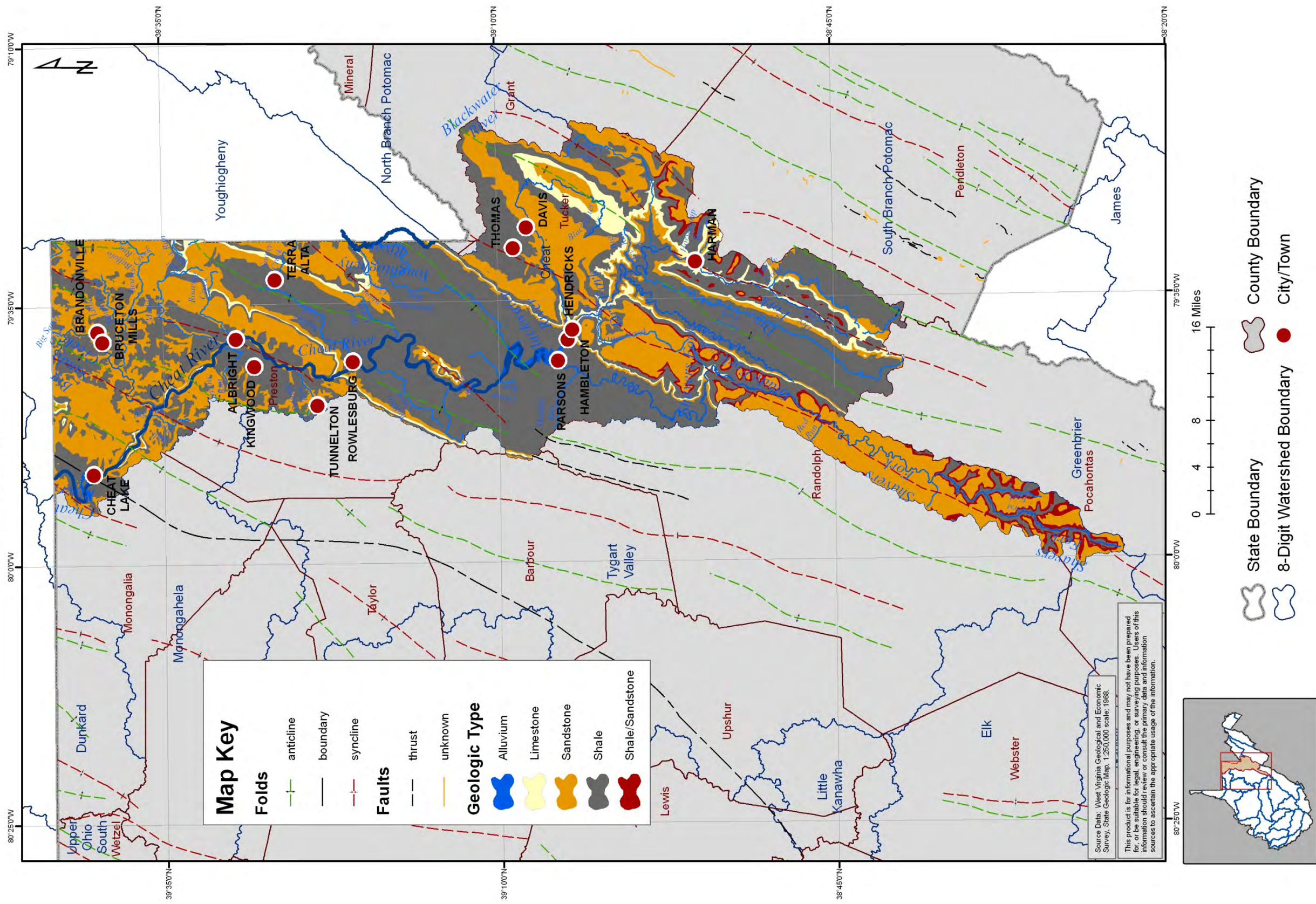
Cheat and Youghiogheny HUC-8 Watersheds

Combined Sewer Overflow



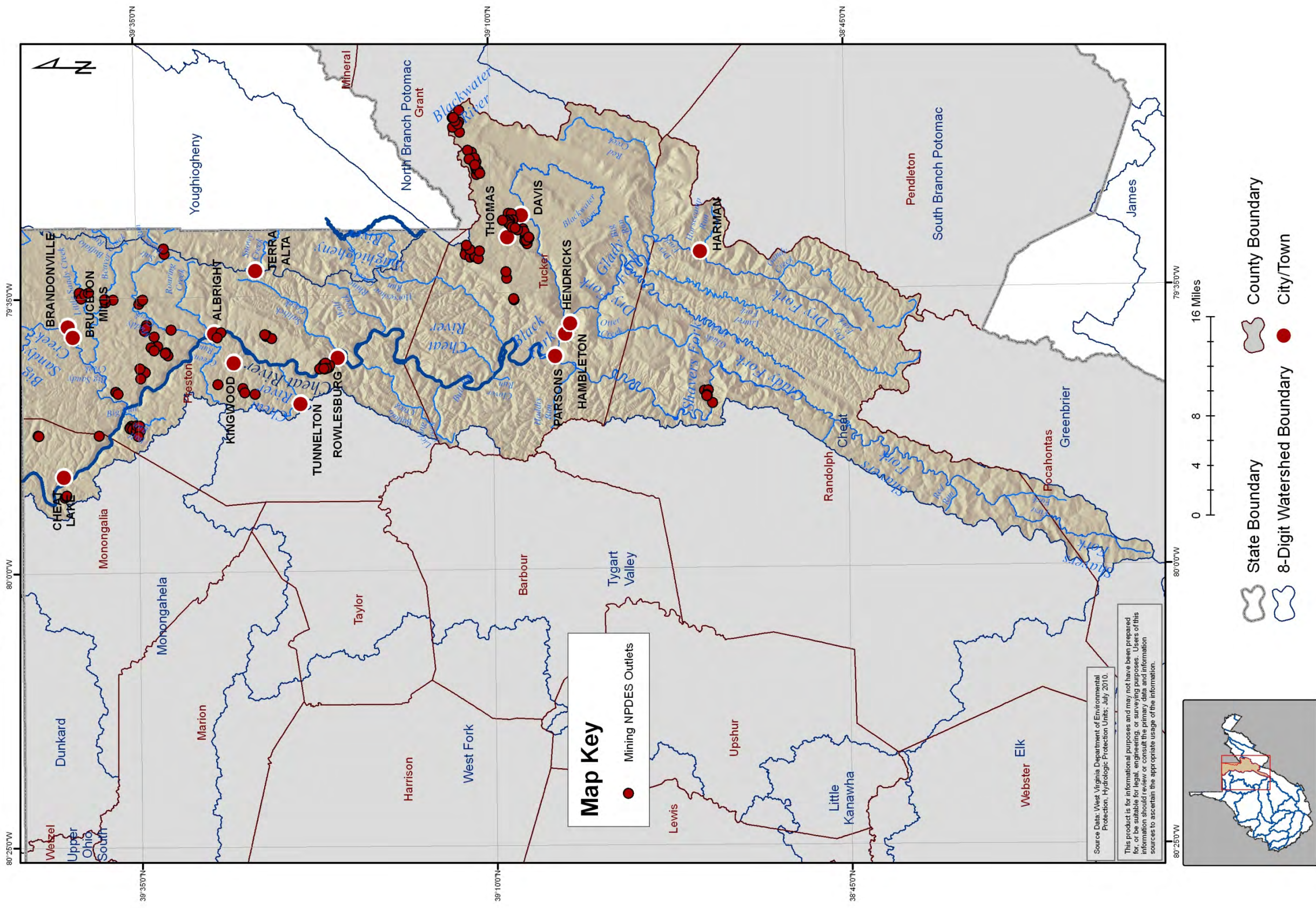
Cheat and Youghiogheny HUC-8 Watersheds

Surface Geology



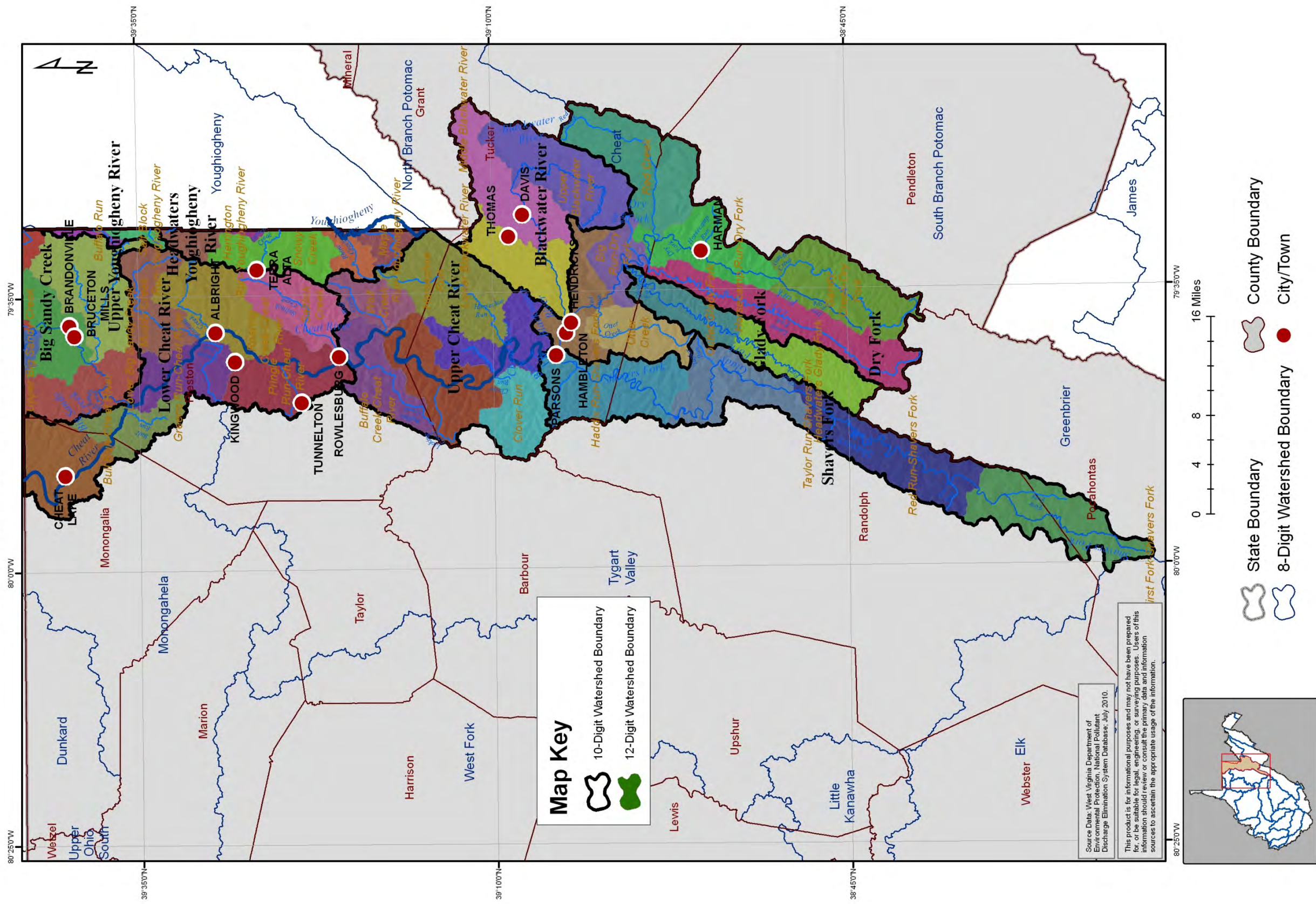
Cheat and Youghiogheny HUC-8 Watersheds

Mining Related NPDES Outlets



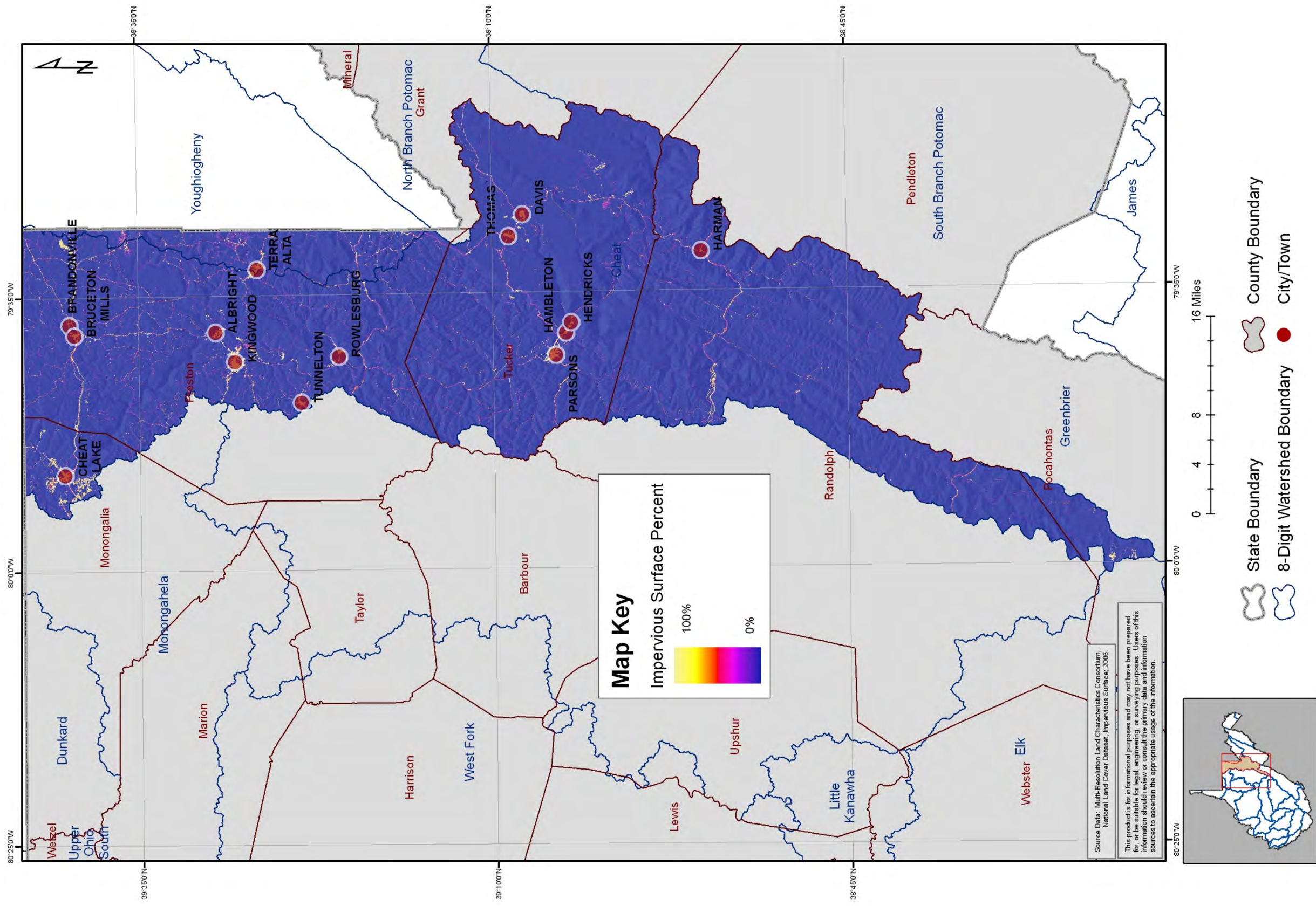
Cheat and Youghiogheny HUC-8 Watersheds

HUC 10 and HUC 12 Watersheds



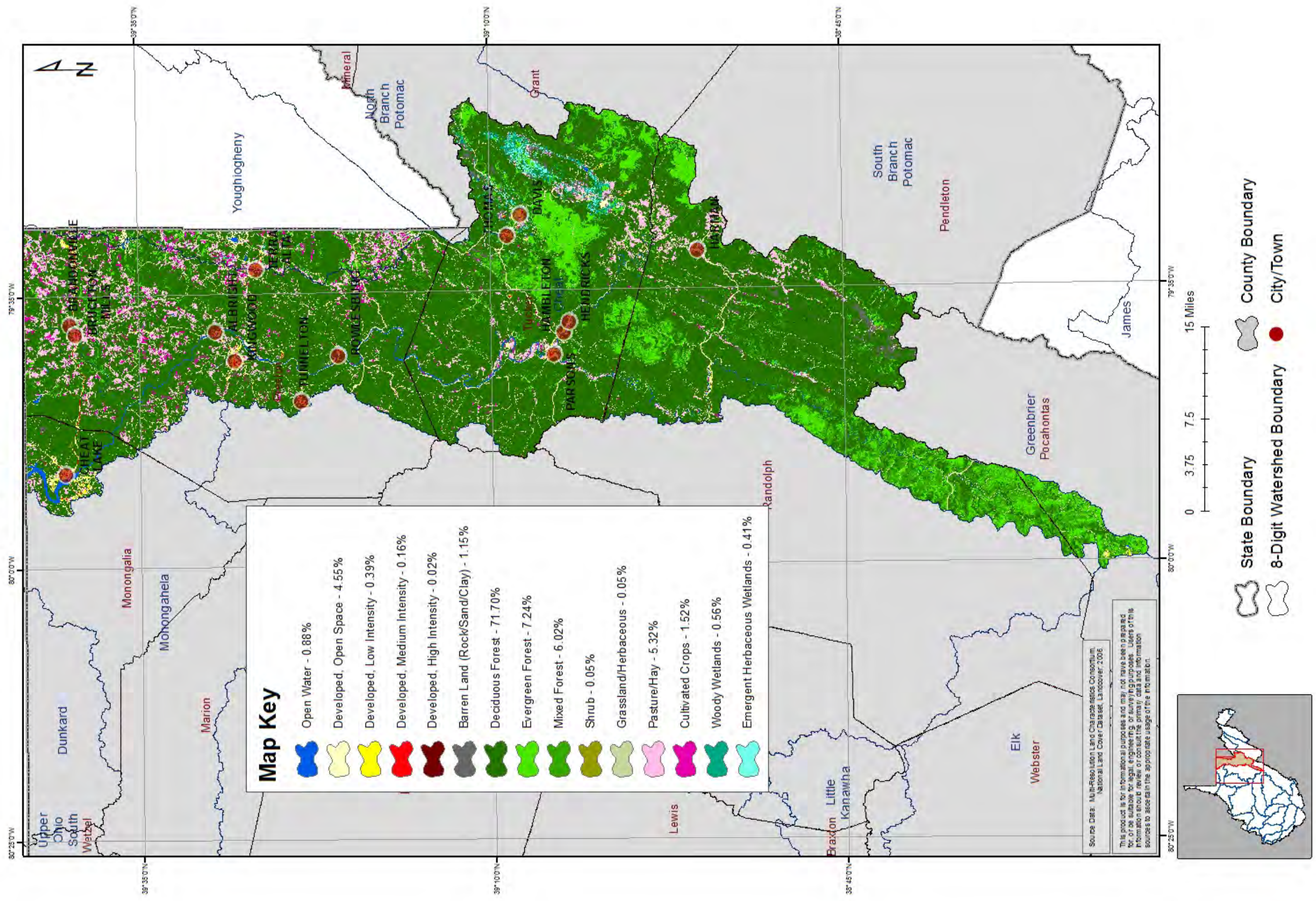
Cheat and Youghiogheny HUC-8 Watersheds

2006 Impervious Surfaces



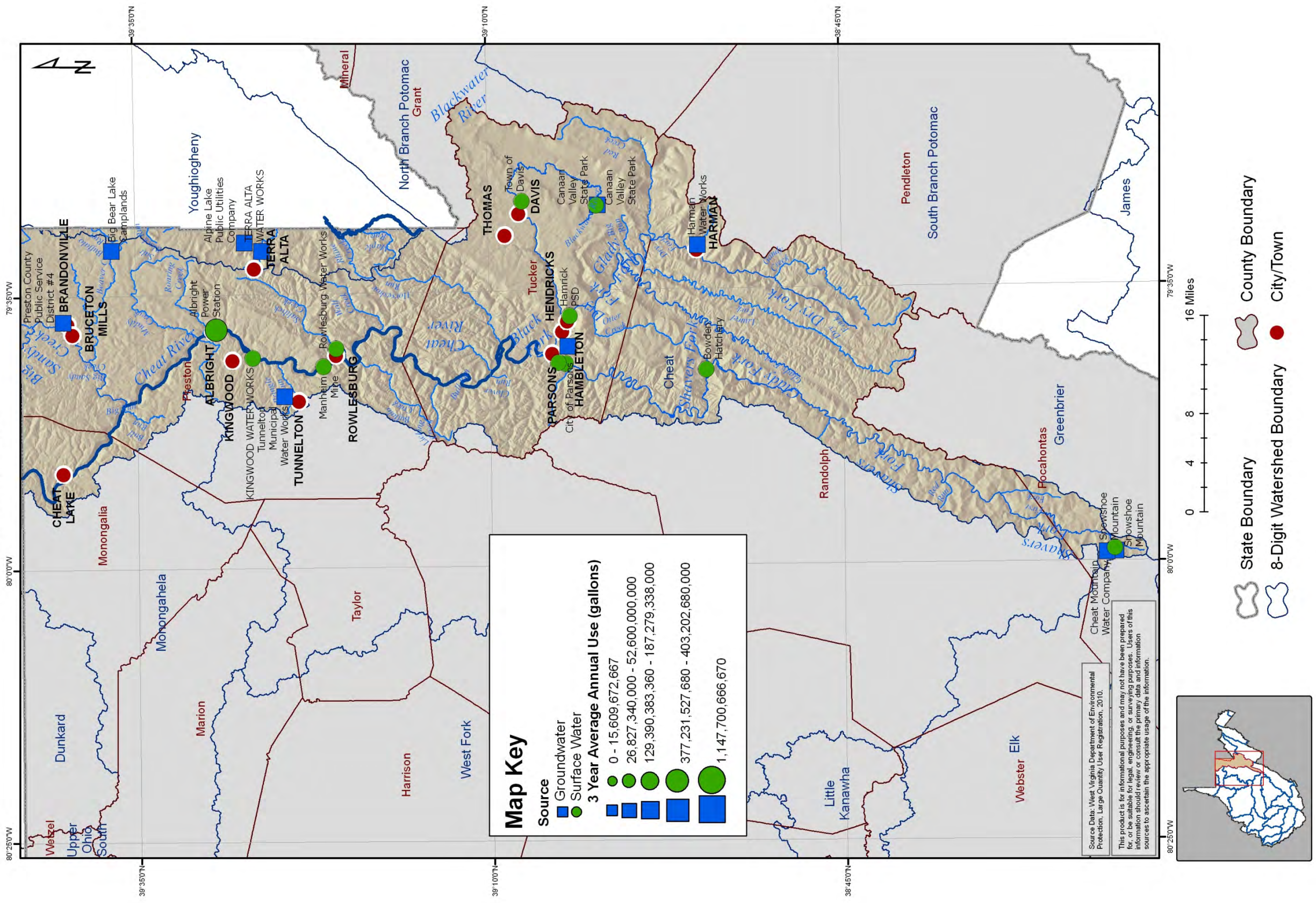
Cheat and Youghiogheny HUC-8 Watersheds

2006 Land Cover



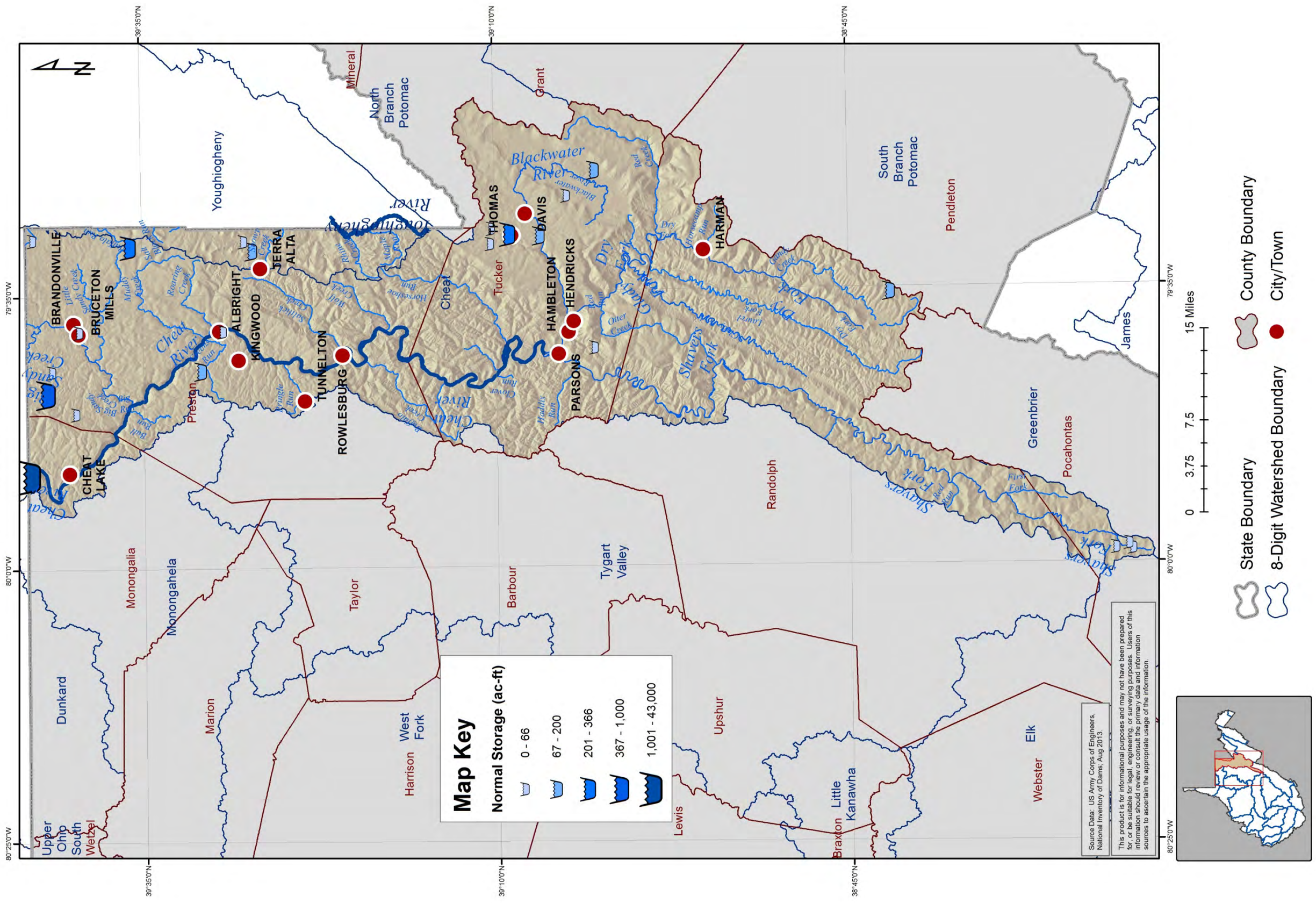
Cheat and Youghiogheny HUC-8 Watersheds

Large Quantity Users



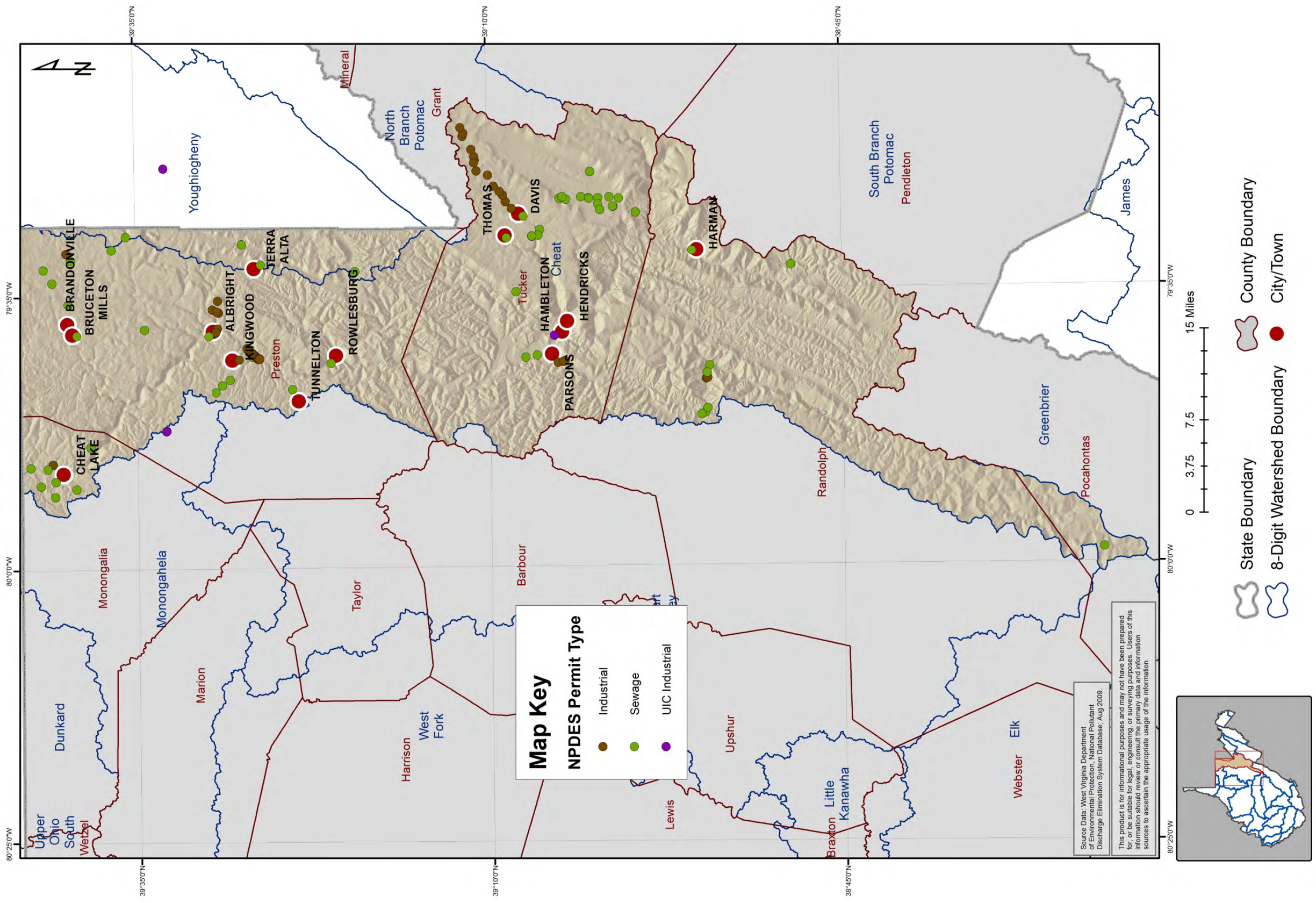
Cheat and Youghiogheny HUC-8 Watersheds

Permitted Dams



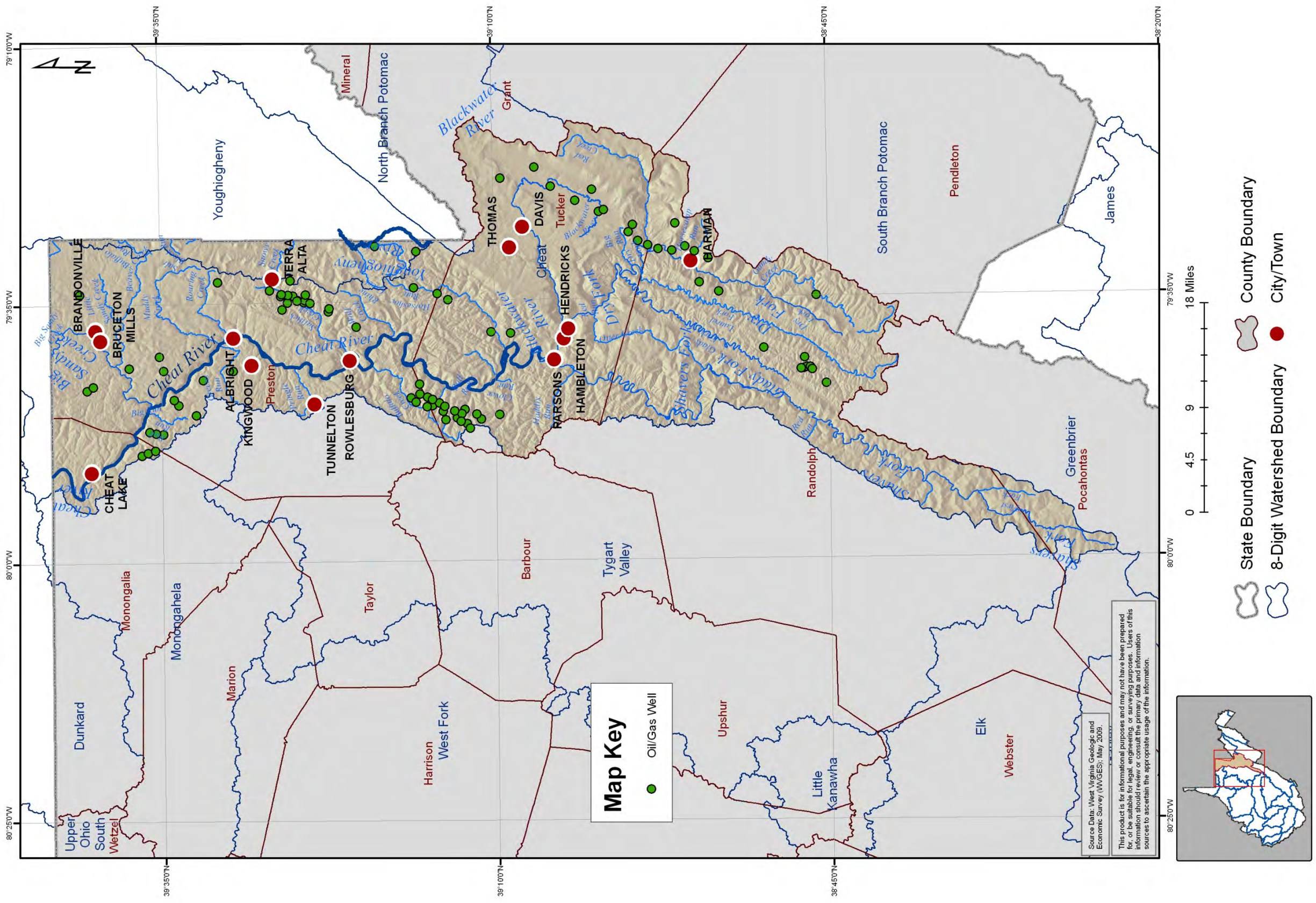
Cheat and Younghigheny HUC-8 Watersheds

Non-Mining NPDES Outlets



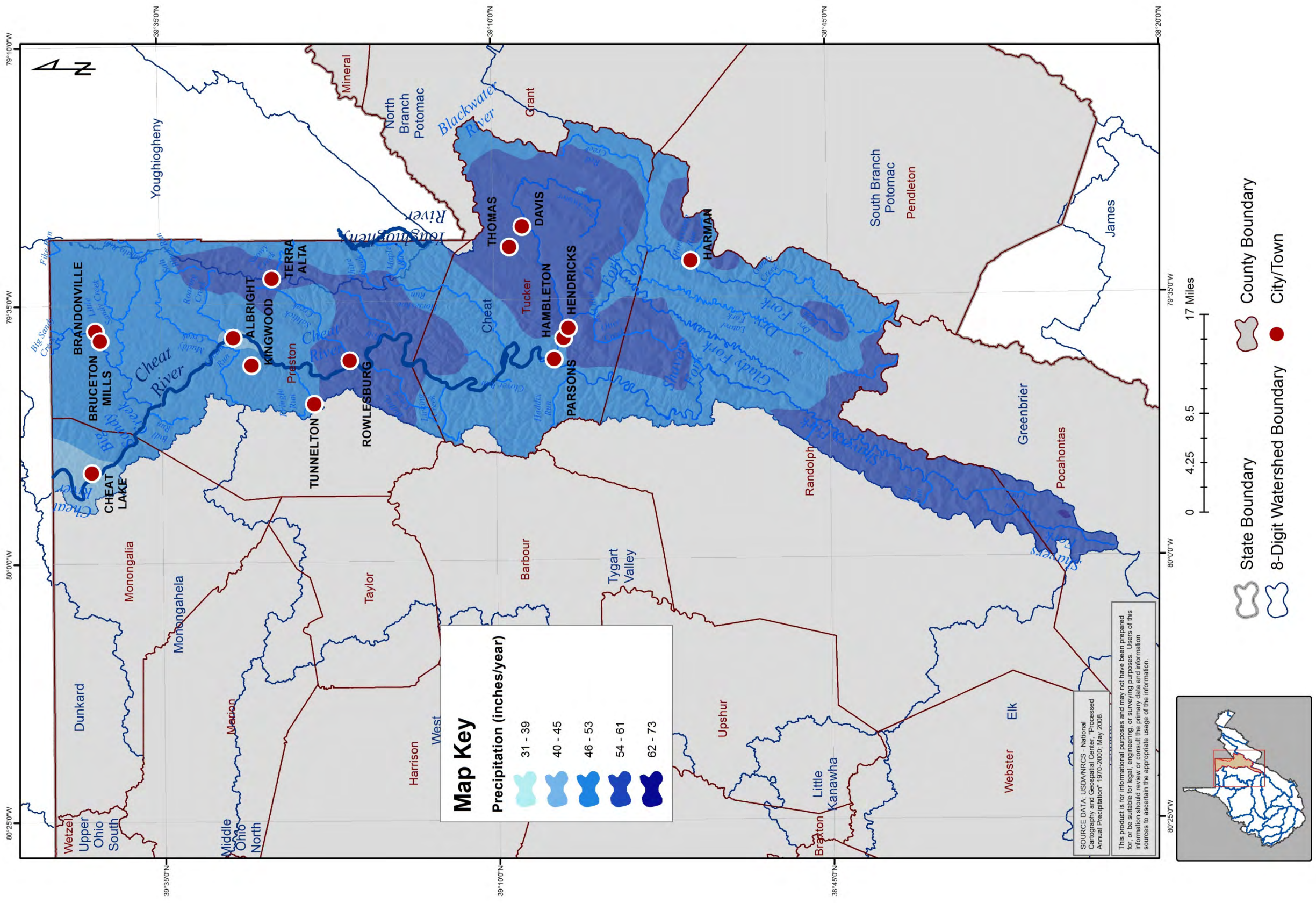
Cheat and Youghiogheny HUC-8 Watersheds

Well Logs with Gamma Rays and Water Shows



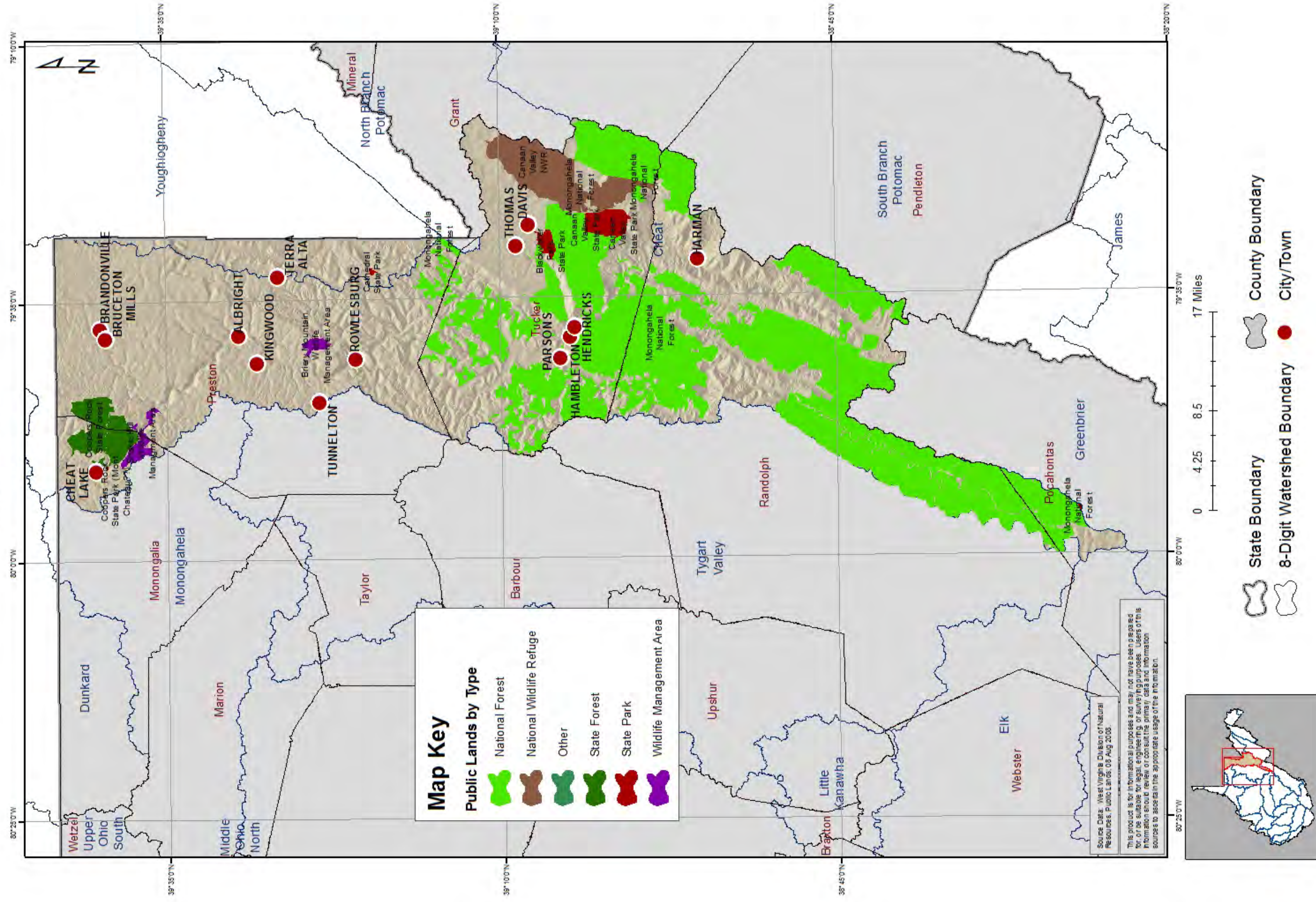
Cheat and Youghiogheny HUC-8 Watersheds

Average Annual Precipitation (1971-2000)



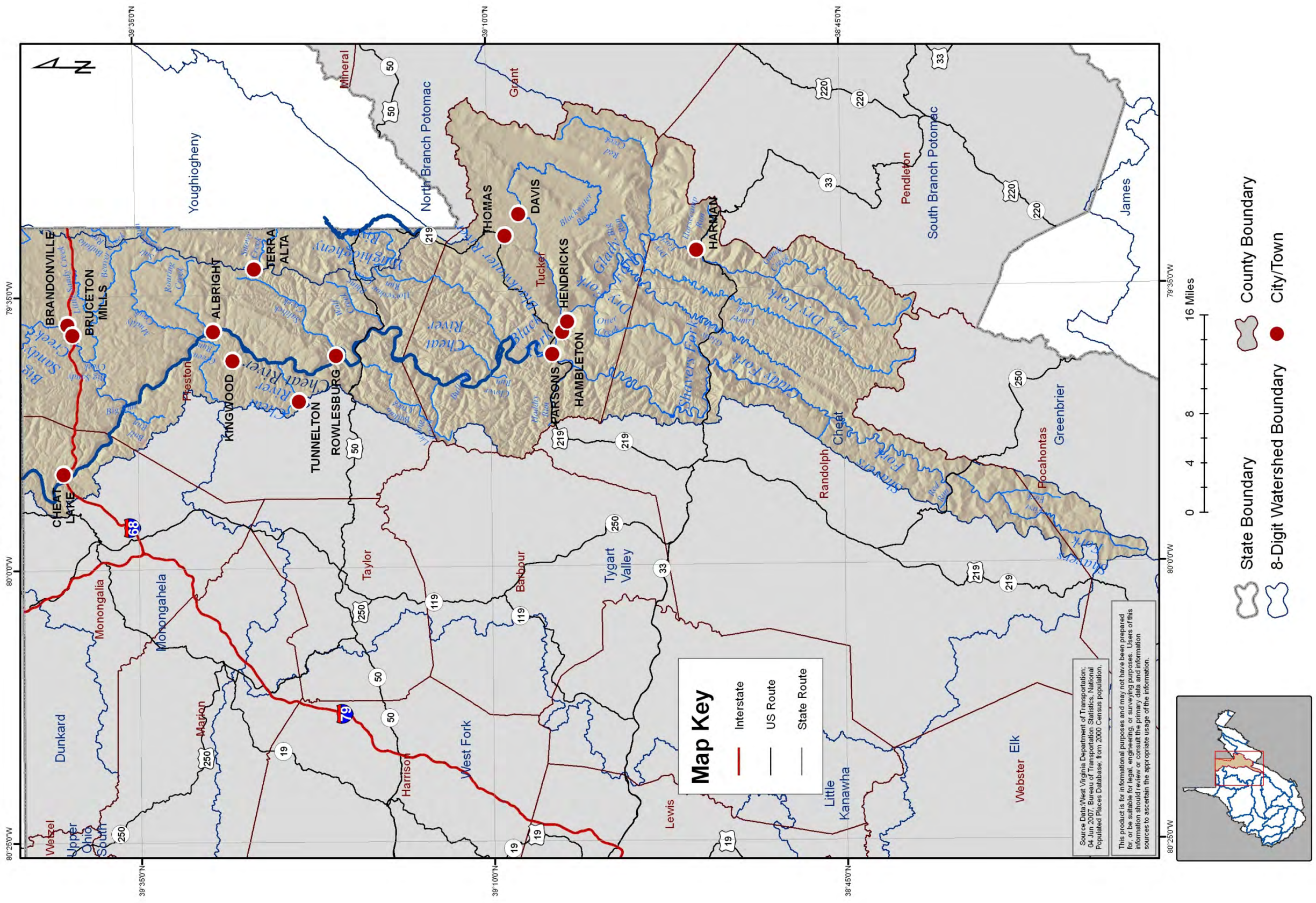
Cheat and Youghiogheny HUC-8 Watersheds

Public Lands



Cheat and Youghiogheny HUC-8 Watersheds

Major Roads and Cities

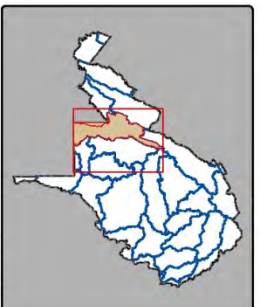


Map Key

- Interstate
- US Route
- State Route

Source Data: West Virginia Department of Transportation; 04 Jun 2007; Bureau of Transportation Statistics, National Populated Places Database; from 2000 Census population.

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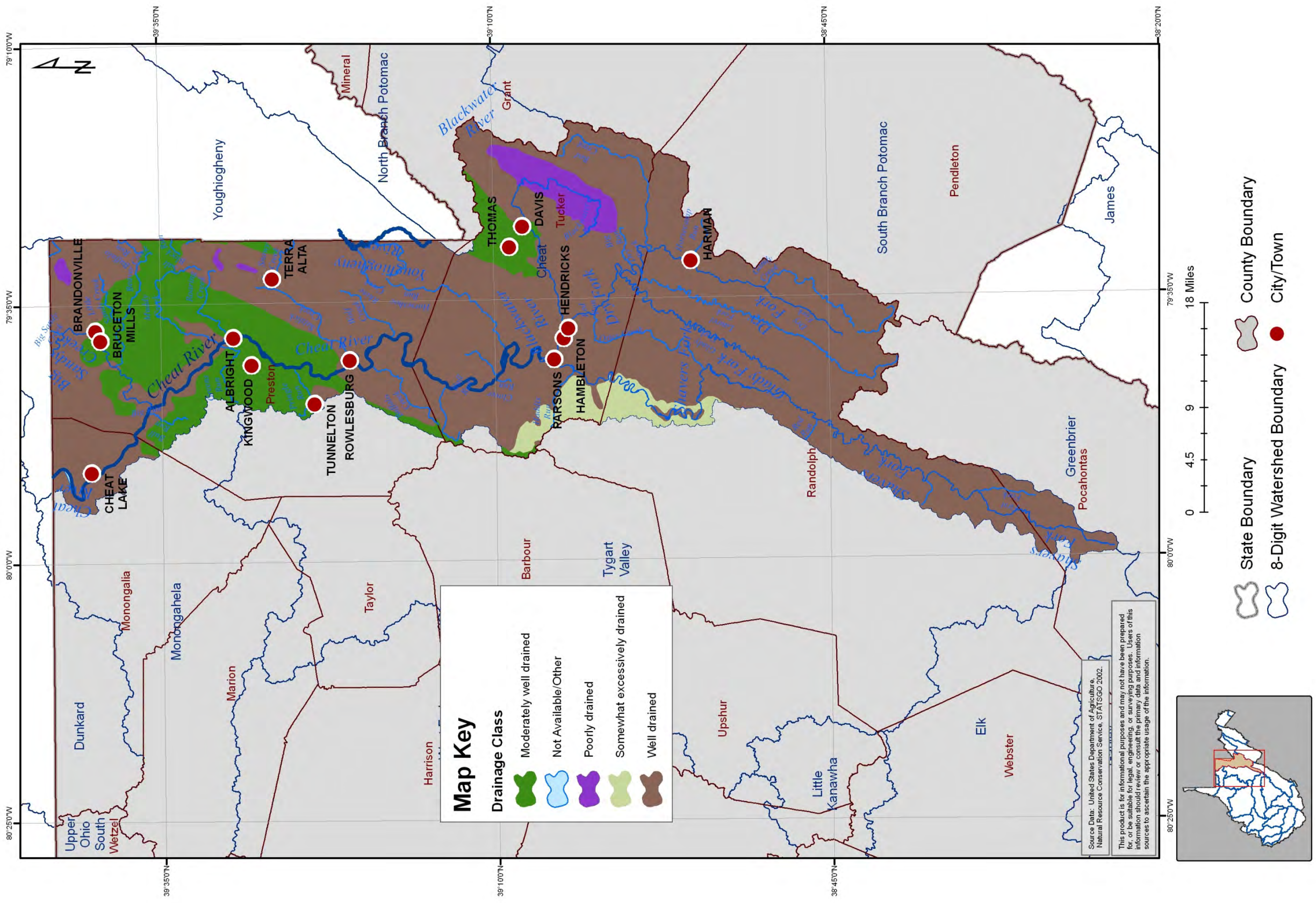


- State Boundary
- 8-Digit Watershed Boundary
- County Boundary
- City/Town



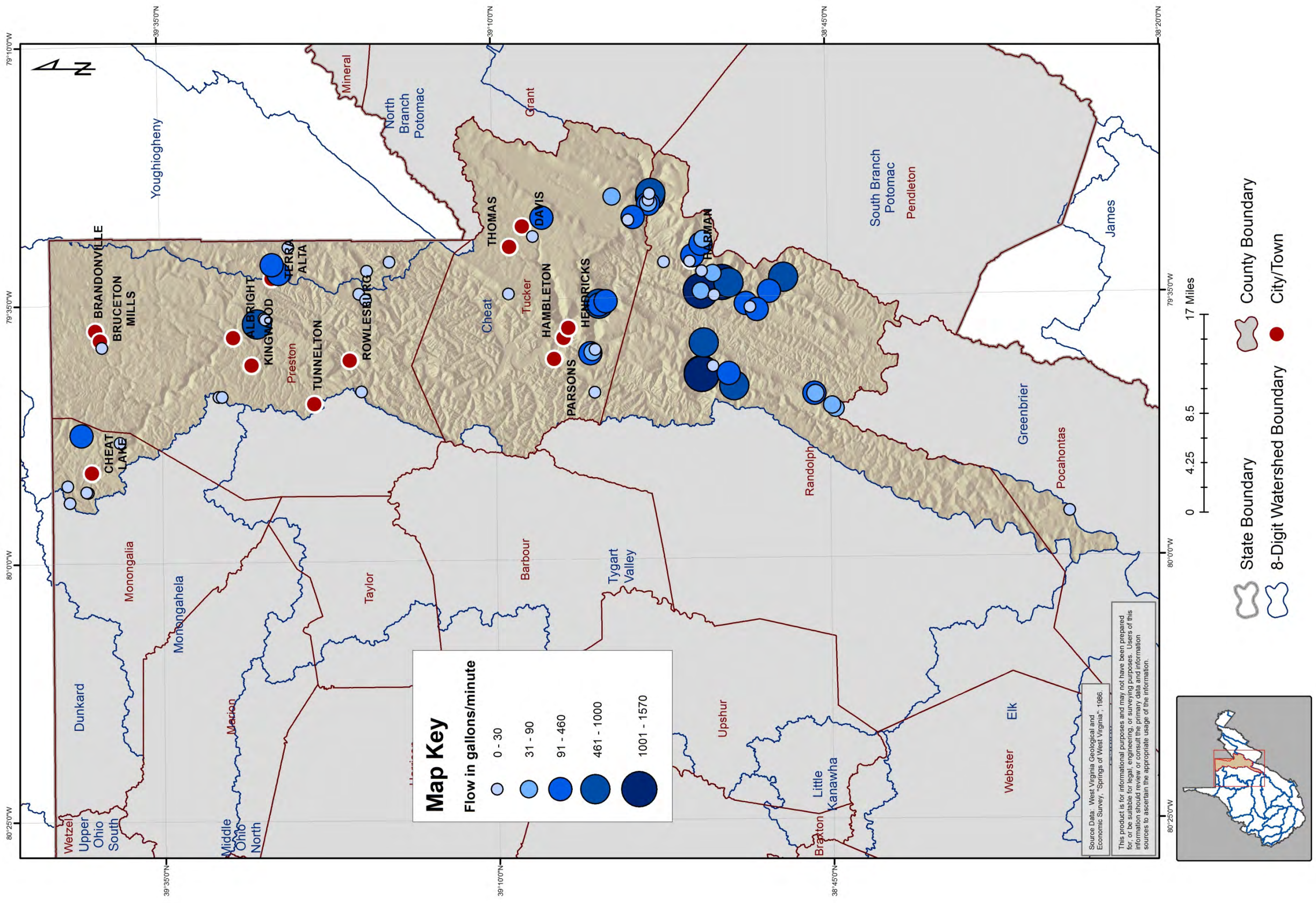
Cheat and Youghiogheny HUC-8 Watersheds

Soil Drainage Classes



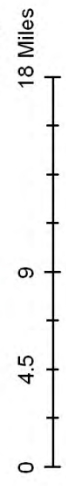
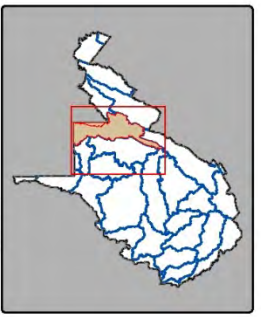
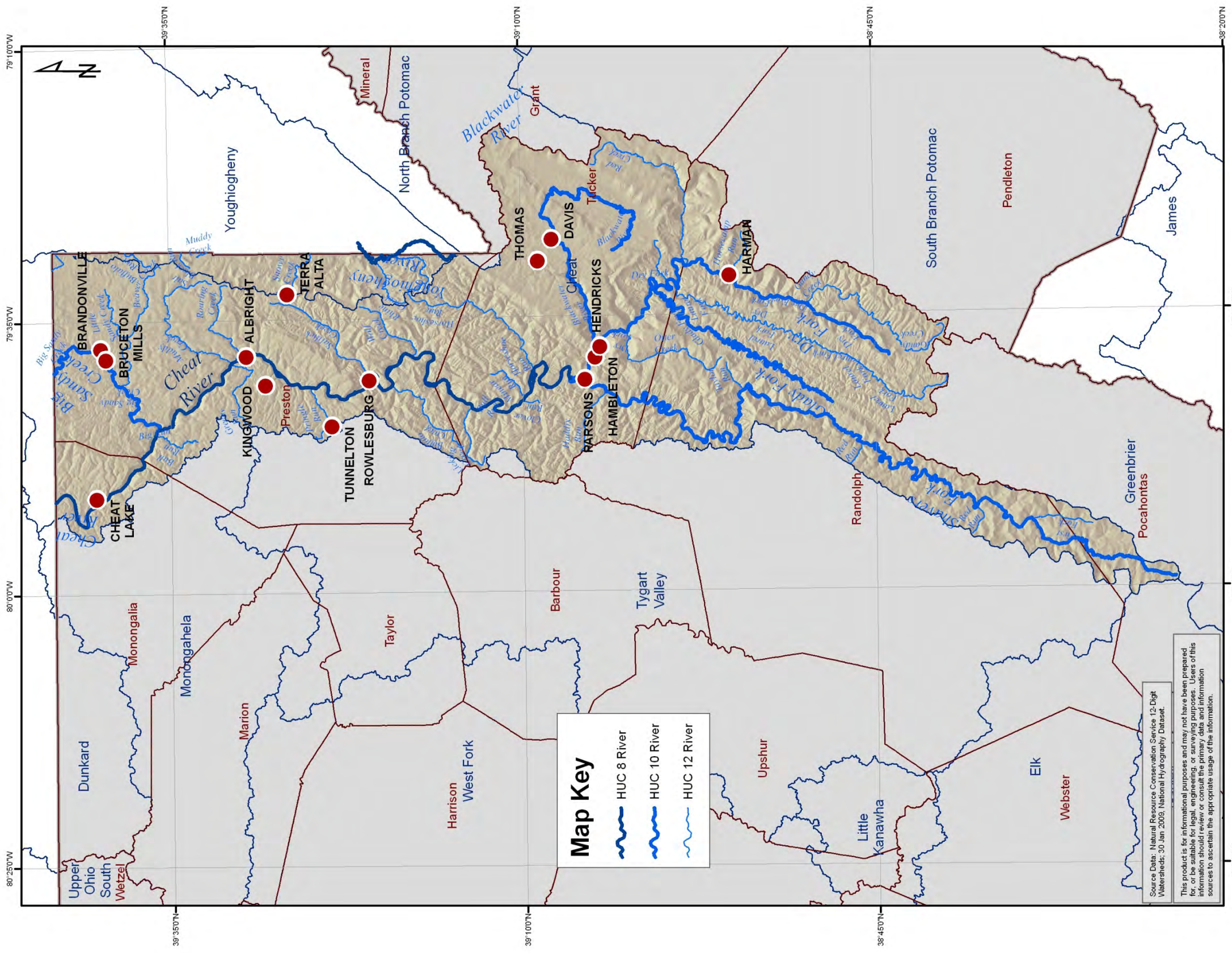
Cheat and Youghiogheny HUC-8 Watersheds

Documented Springs



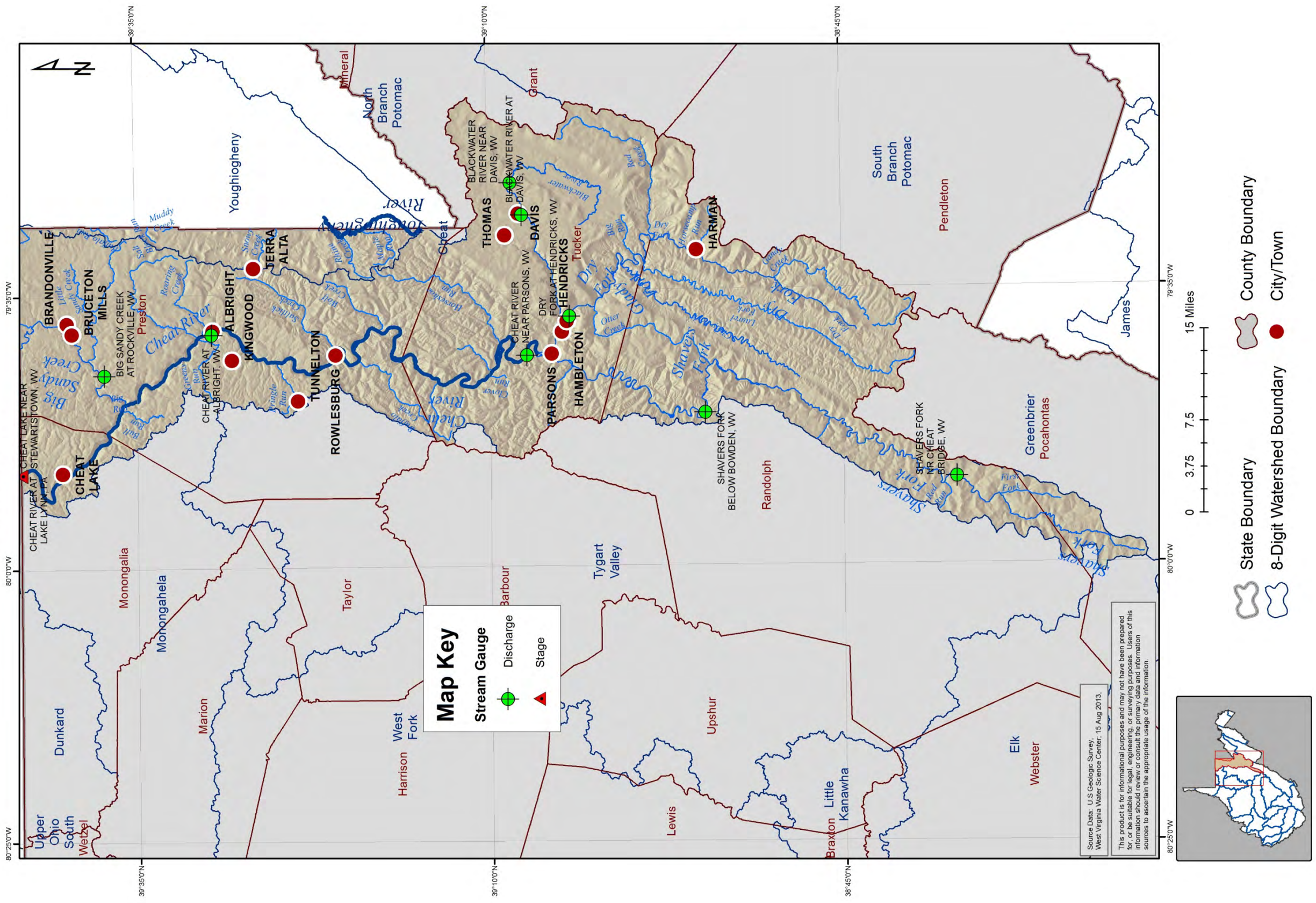
Cheat and Youghiogheny HUC-8 Watersheds

Stream Connections



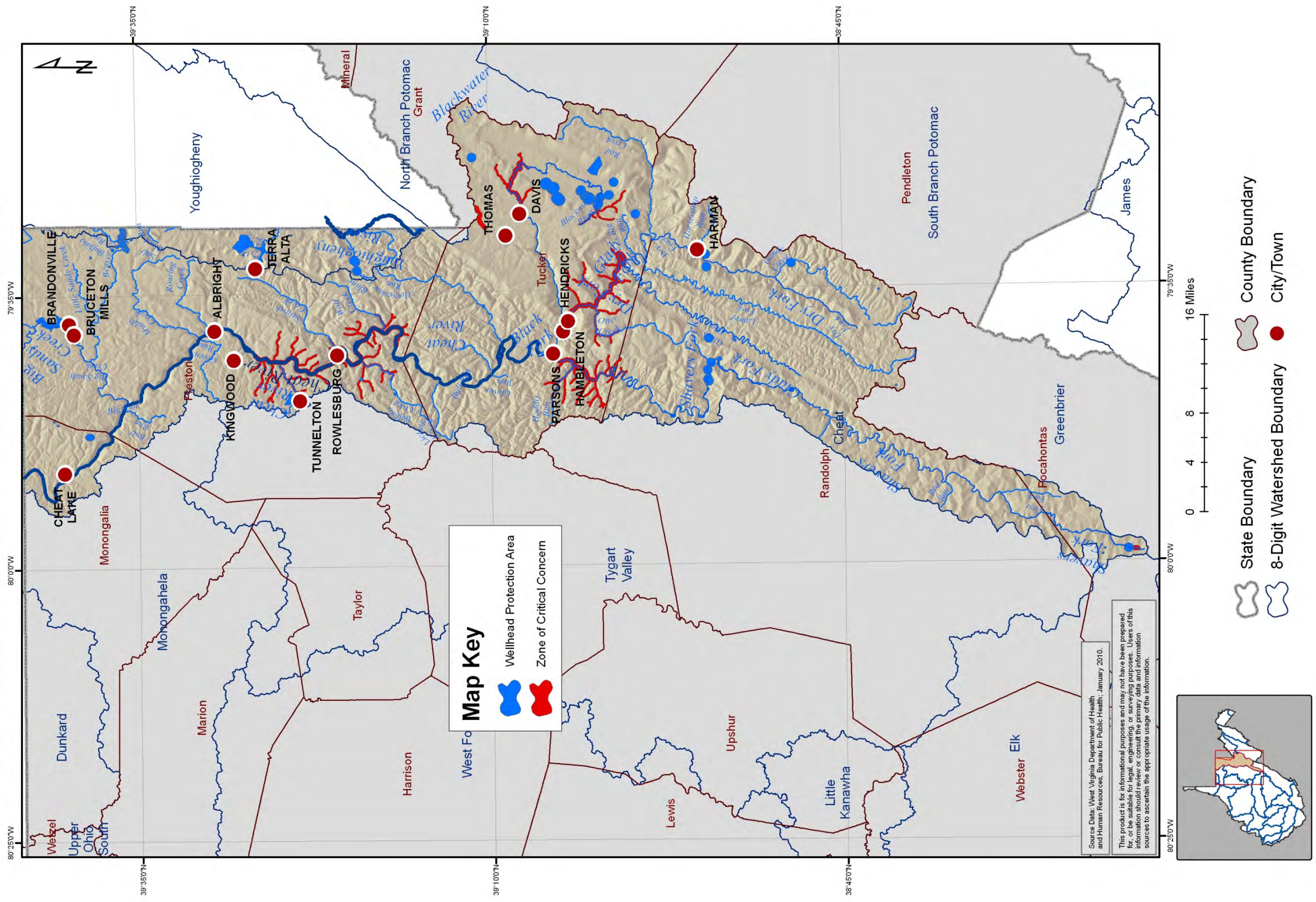
Cheat and Youghiogheny HUC-8 Watersheds

Stream Gauges

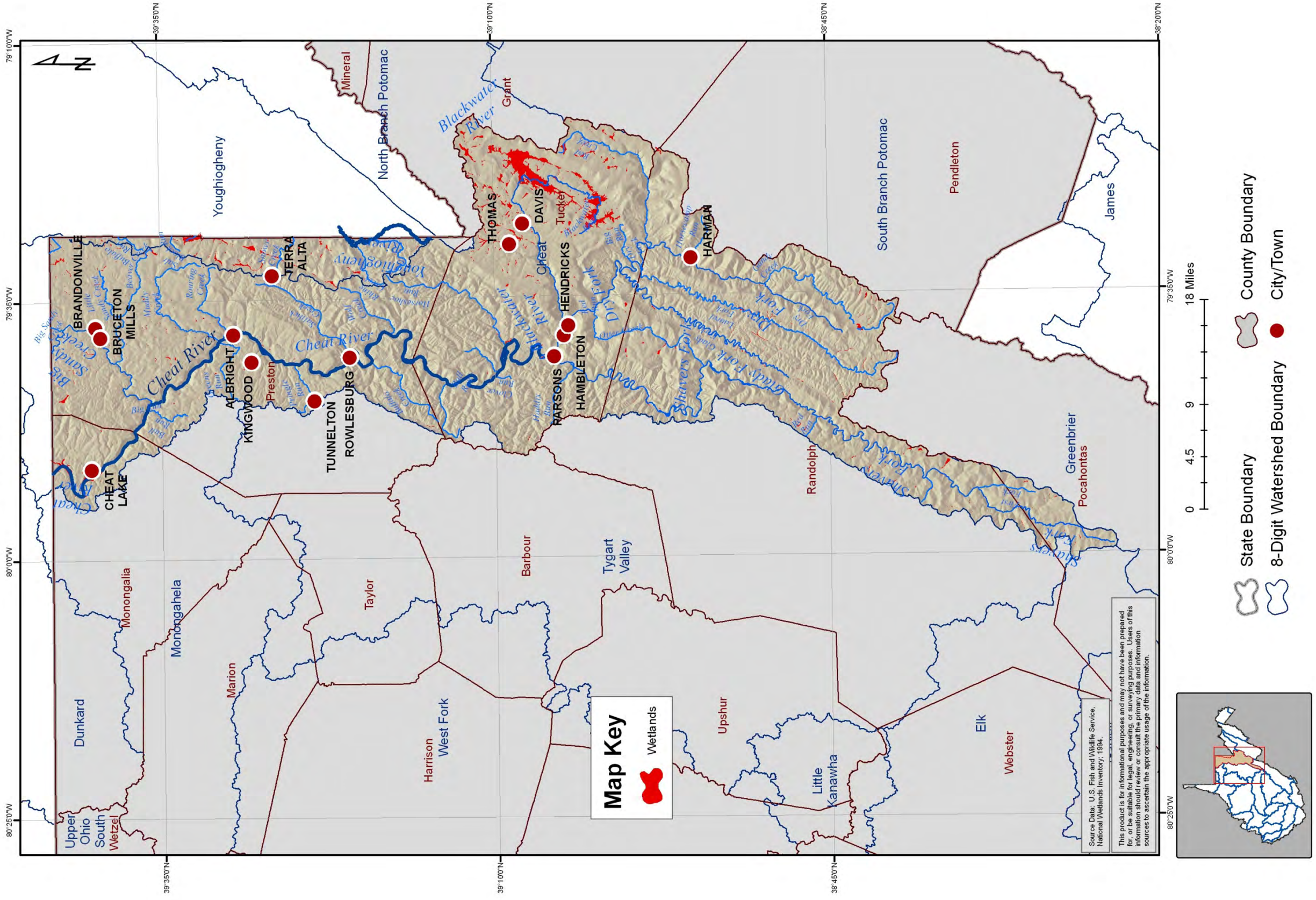


Cheat and Youghiogheny HUC-8 Watersheds

Source Water Assessment and Wellhead Protection Programs

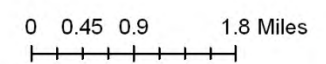
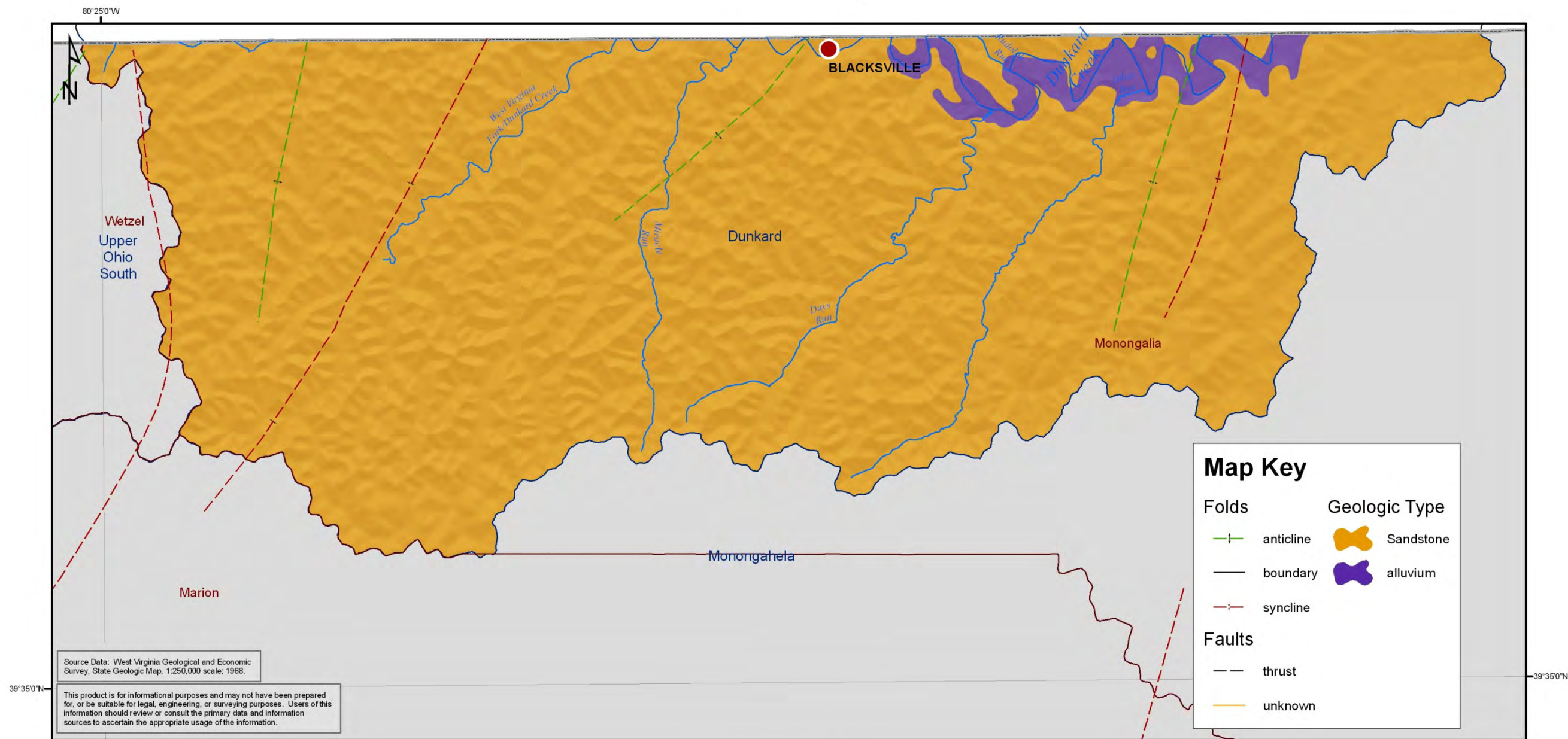


Cheat and Youghiogheny HUC-8 Watersheds Wetlands



Dunkard HUC-8 Watershed

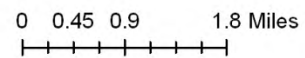
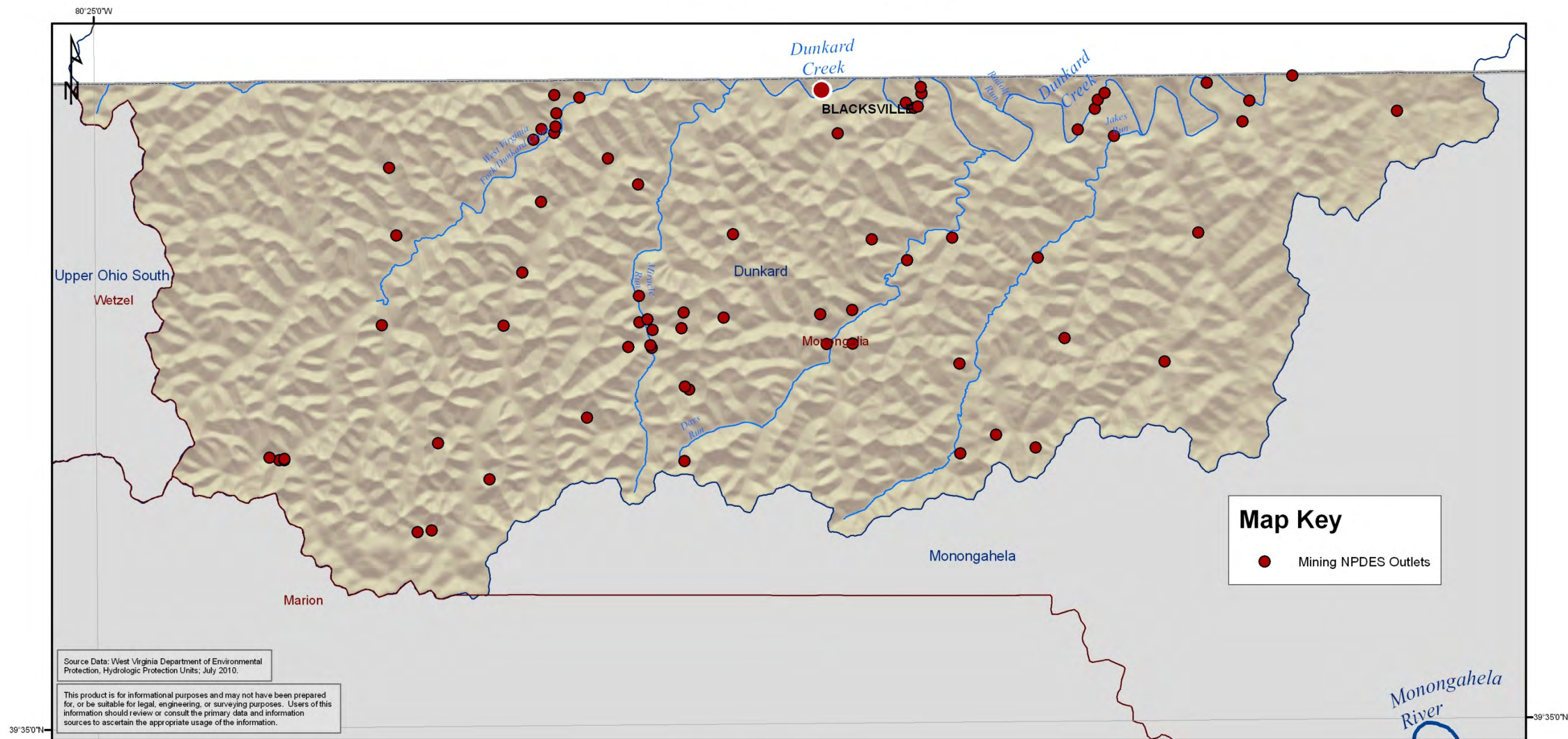
Surface Geology



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Dunkard HUC-8 Watershed

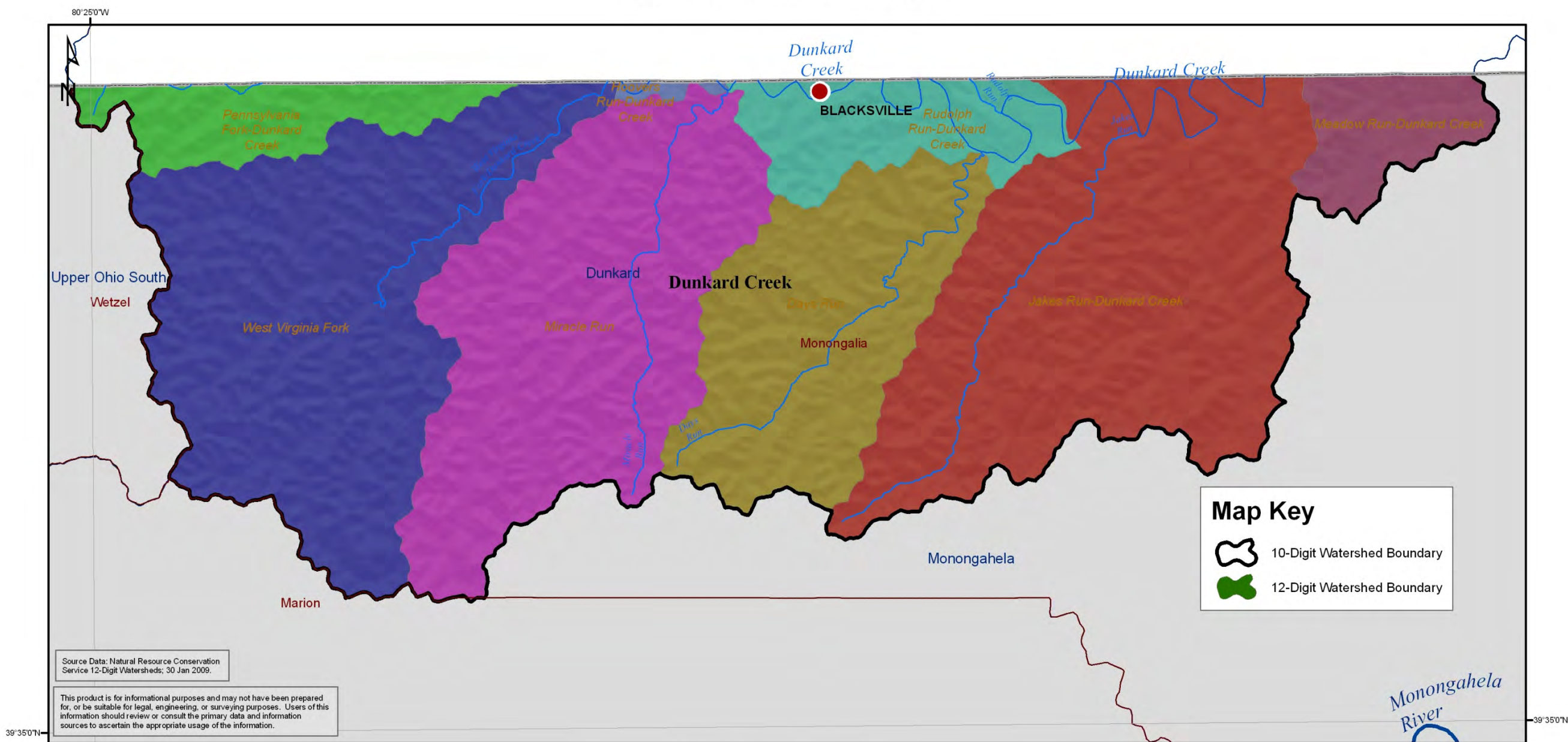
Mining Related NPDES Outlets



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Dunkard HUC-8 Watershed

HUC 10 and HUC 12 Watersheds

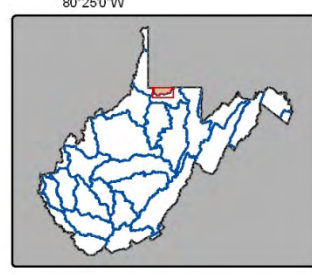


Map Key

- 10-Digit Watershed Boundary
- 12-Digit Watershed Boundary

Source Data: Natural Resource Conservation Service 12-Digit Watersheds, 30 Jan 2009.

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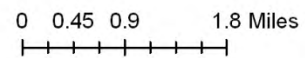
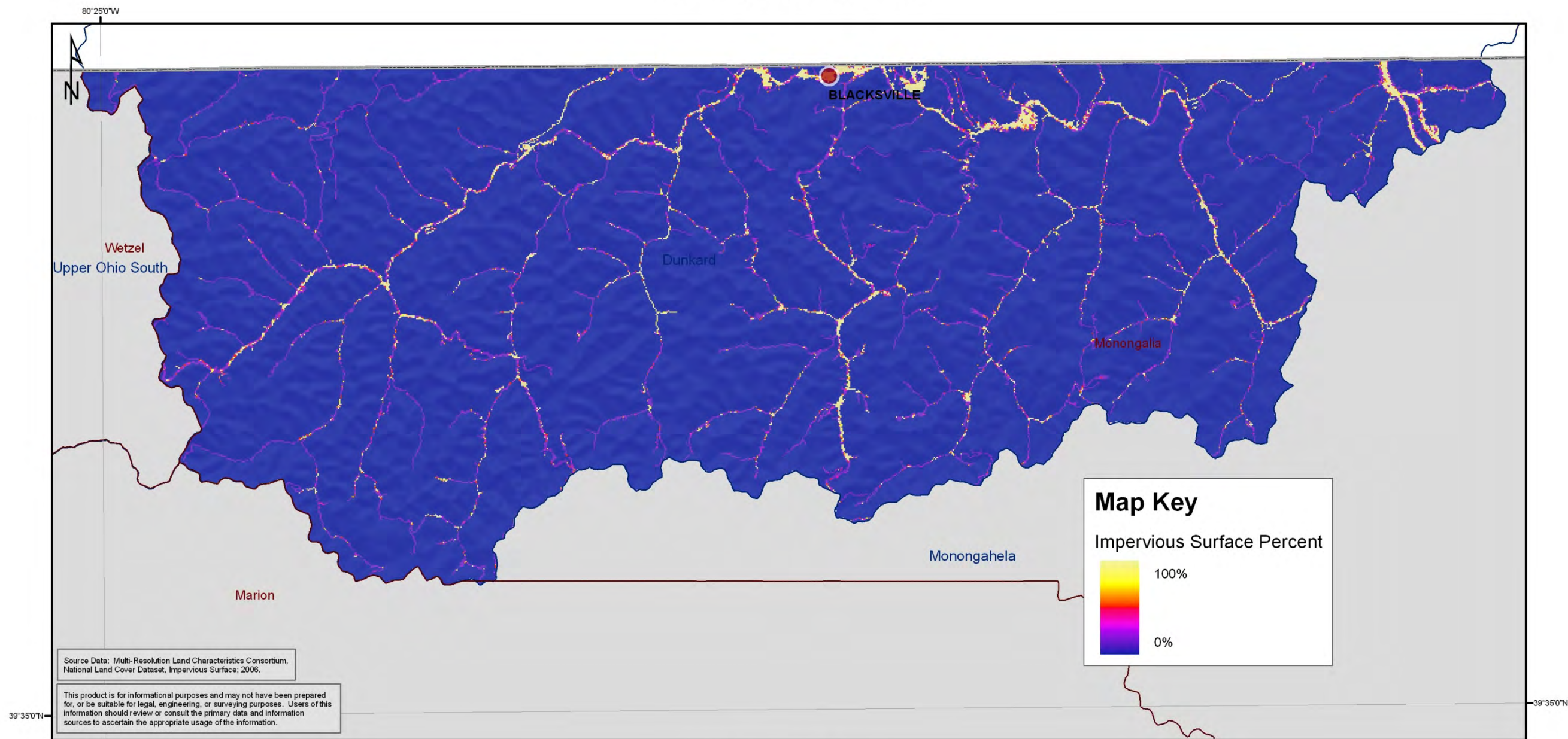


0 0.45 0.9 1.8 Miles

- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Dunkard HUC-8 Watershed

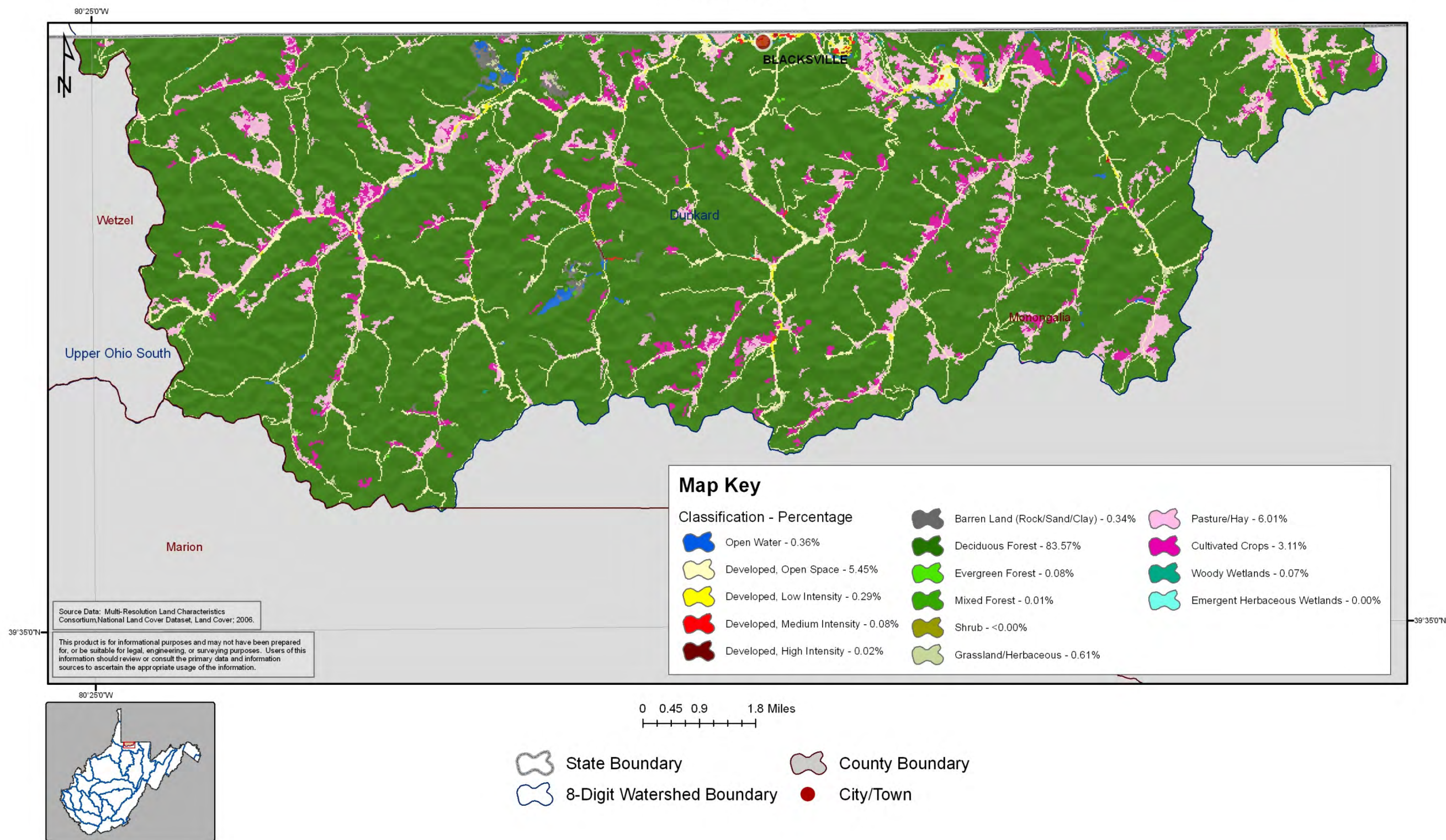
2006 Impervious Surfaces



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

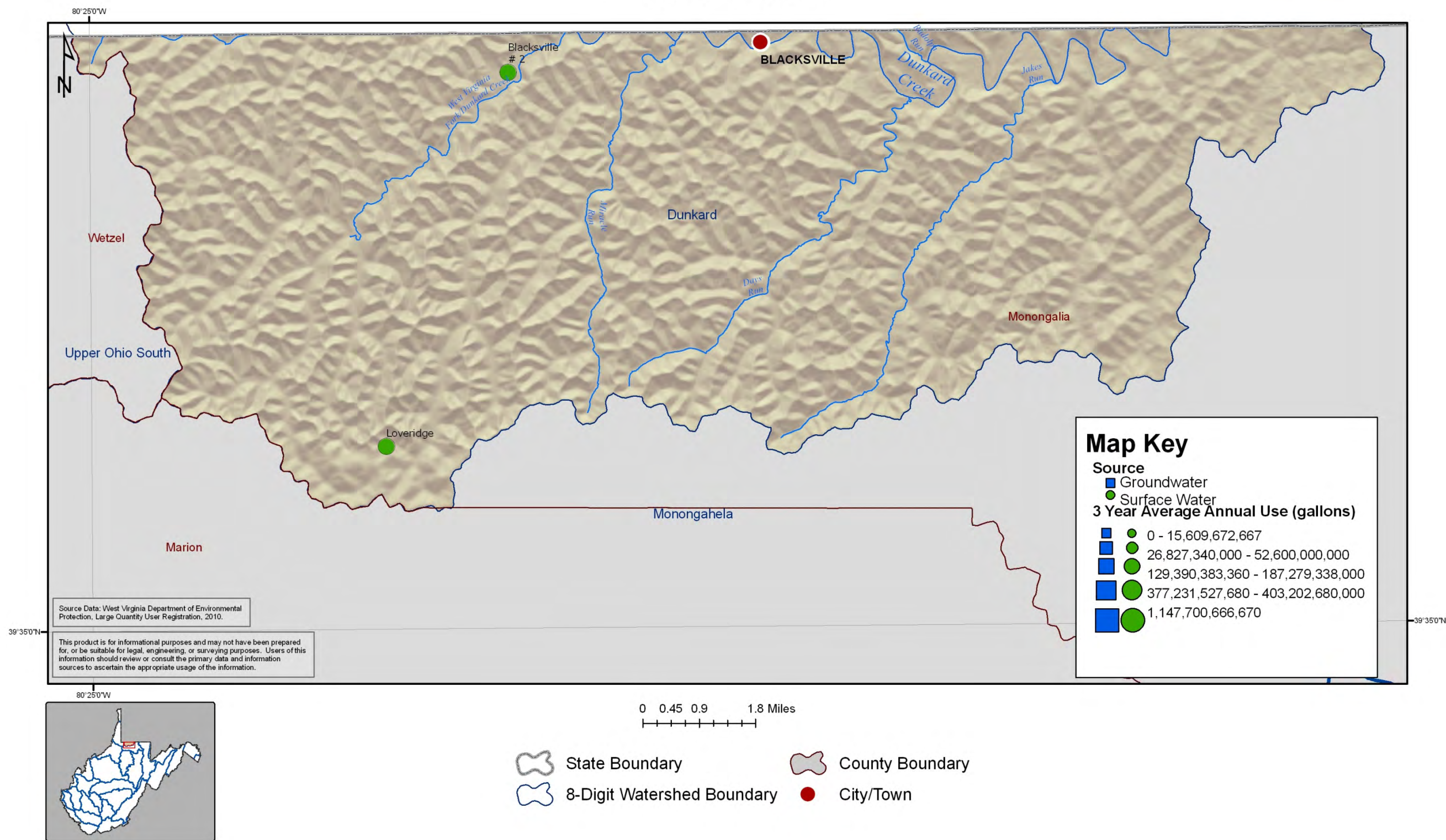
Dunkard HUC-8 Watershed

2006 Land Cover



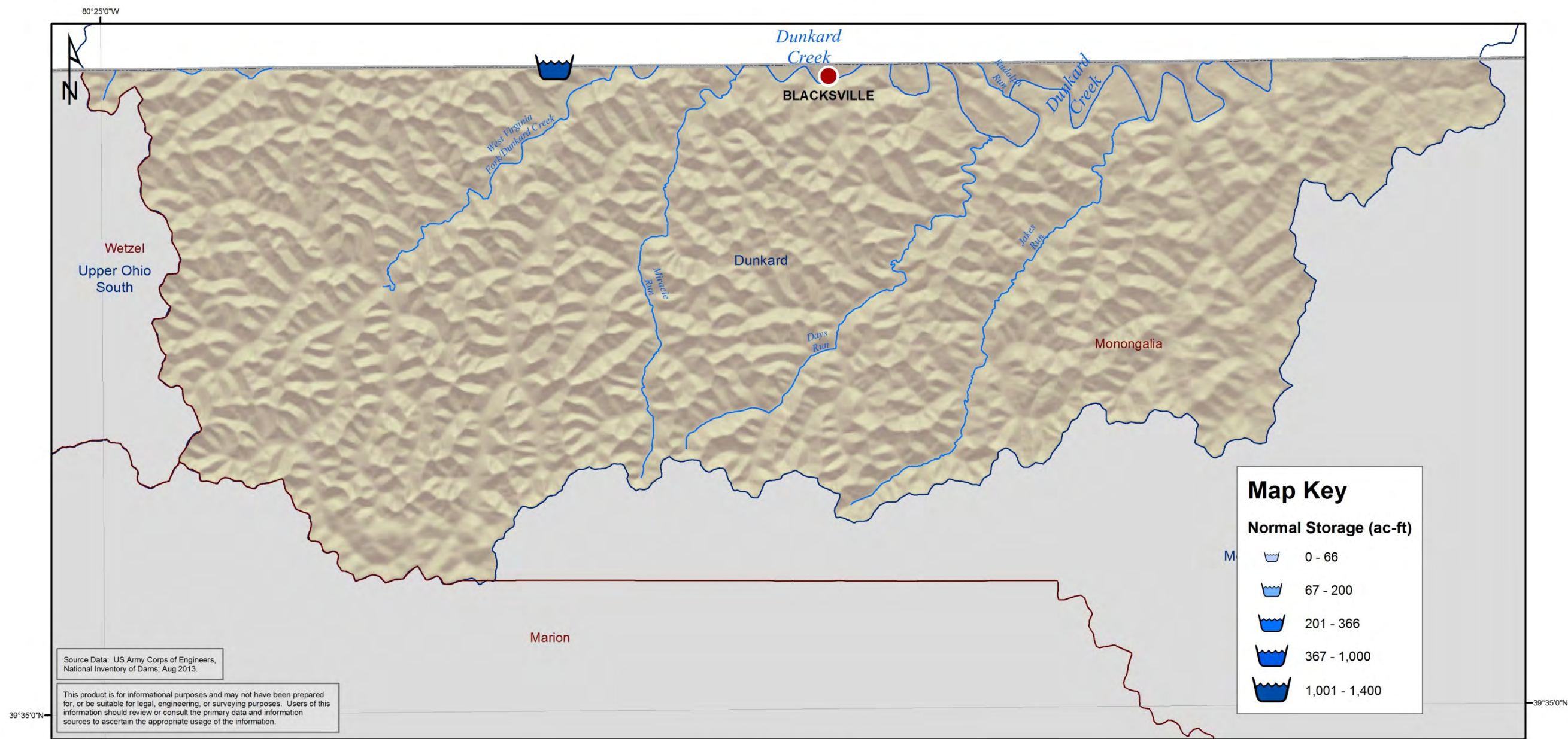
Dunkard HUC-8 Watershed

Large Quantity Users



Dunkard HUC-8 Watershed

Permitted Dams







Source Data: US Army Corps of Engineers, National Inventory of Dams, Aug 2013.

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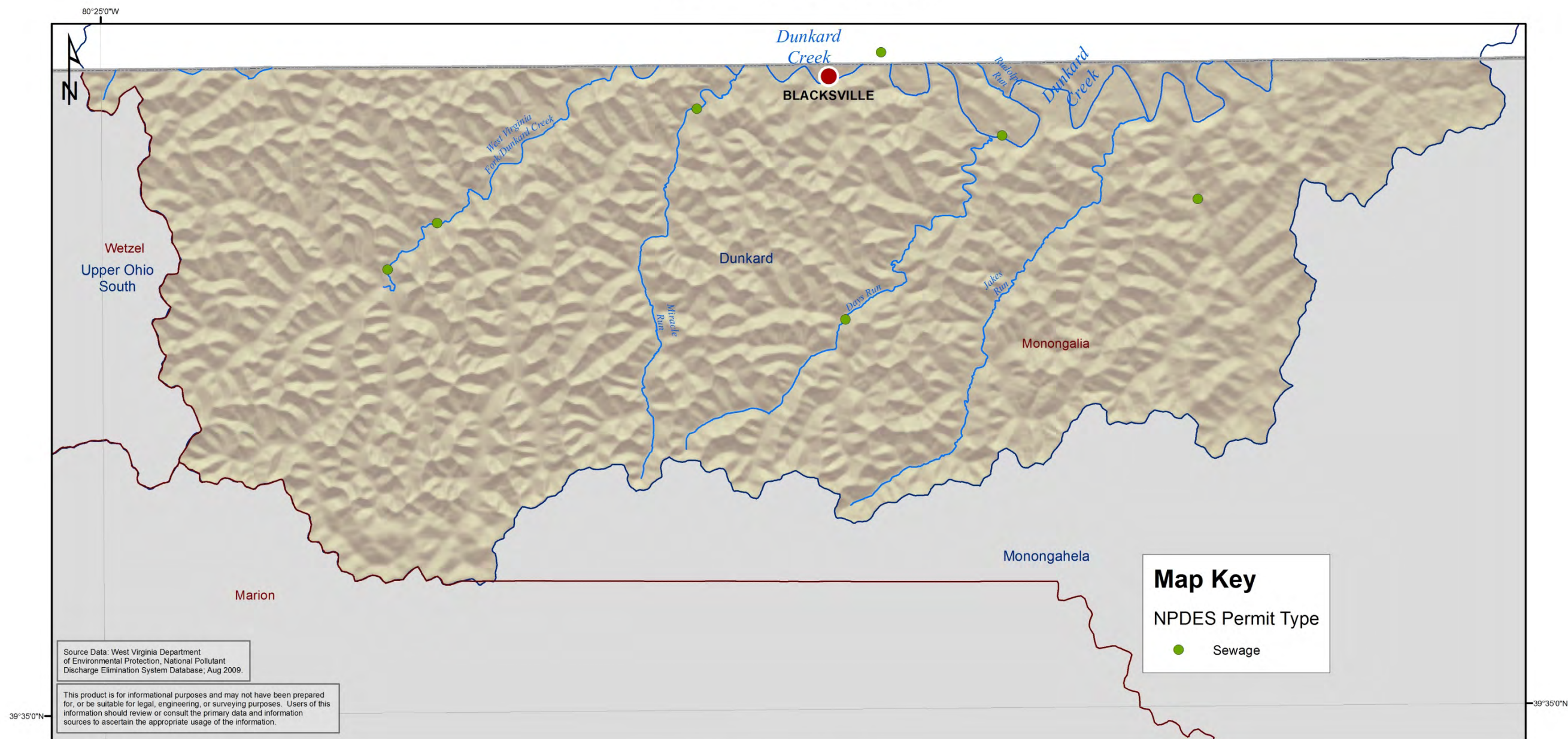


0 0.425 0.85 1.7 Miles

-  State Boundary
-  County Boundary
-  8-Digit Watershed Boundary
-  City/Town

Dunkard HUC-8 Watershed

Non-Mining NPDES Outlets



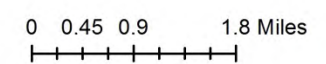
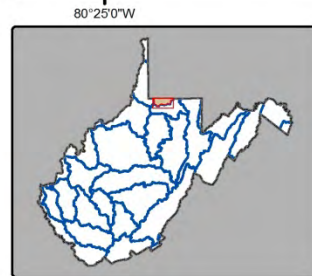
Source Data: West Virginia Department of Environmental Protection, National Pollutant Discharge Elimination System Database, Aug 2009.

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Map Key

NPDES Permit Type

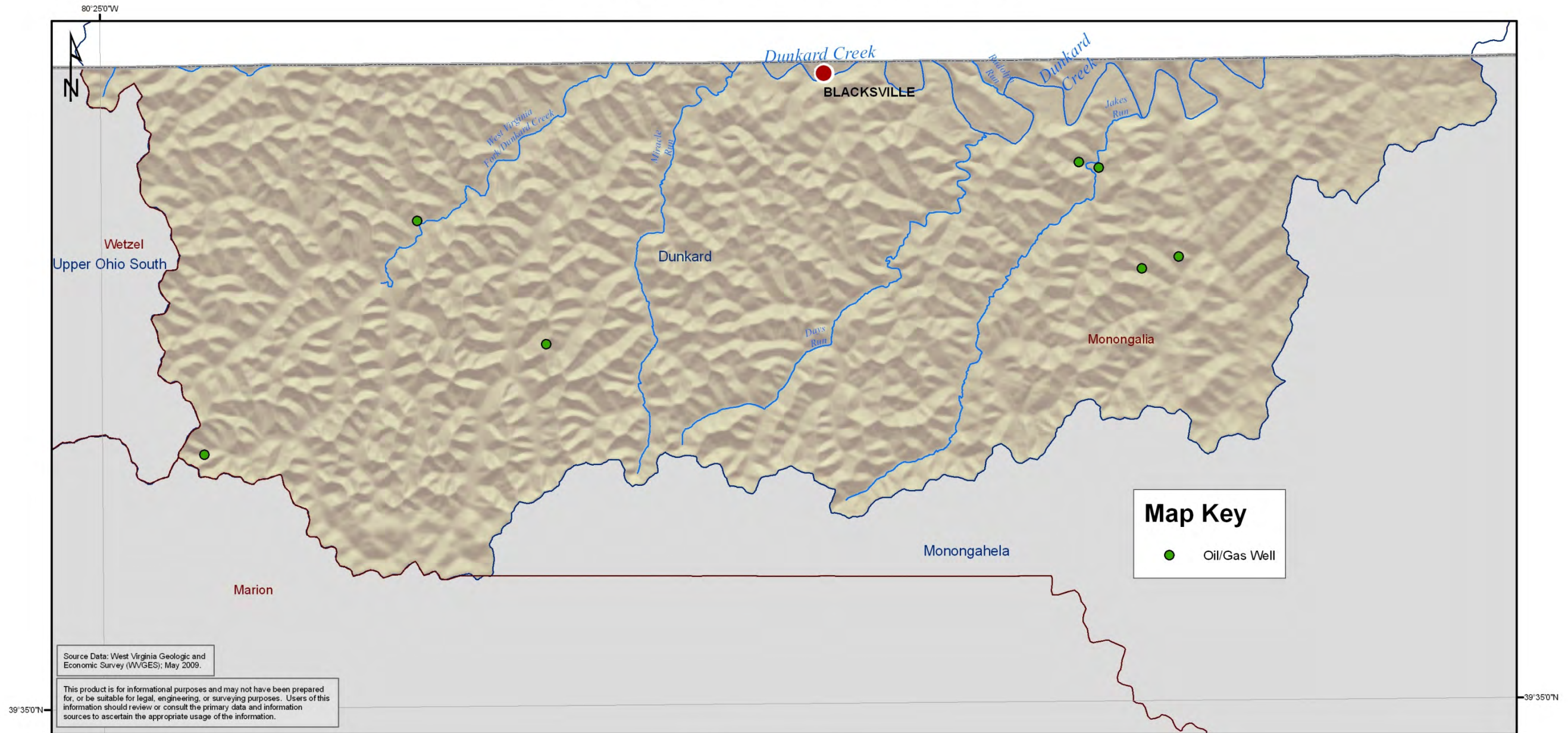
- Sewage



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Dunkard HUC-8 Watershed

Well Logs with Gamma Rays and Water Shows

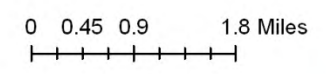
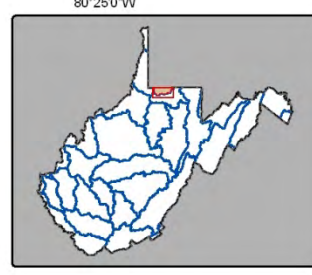


Map Key

- Oil/Gas Well

Source Data: West Virginia Geologic and Economic Survey (WVGES); May 2009.

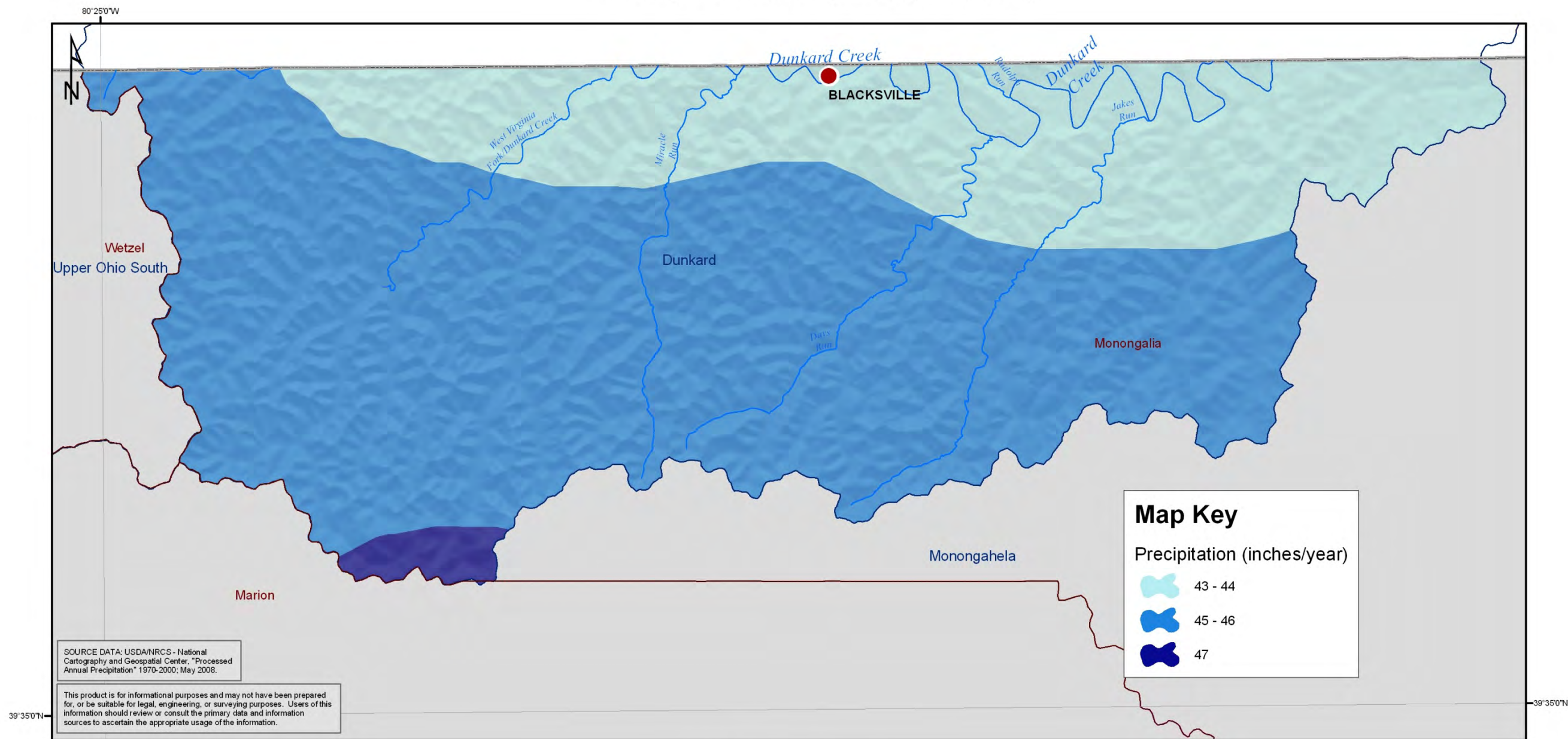
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Dunkard HUC-8 Watershed

Average Annual Precipitation (1971-2000)



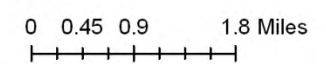
SOURCE DATA: USDA/NRCS - National Cartography and Geospatial Center, "Processed Annual Precipitation" 1970-2000; May 2008.

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Map Key

Precipitation (inches/year)

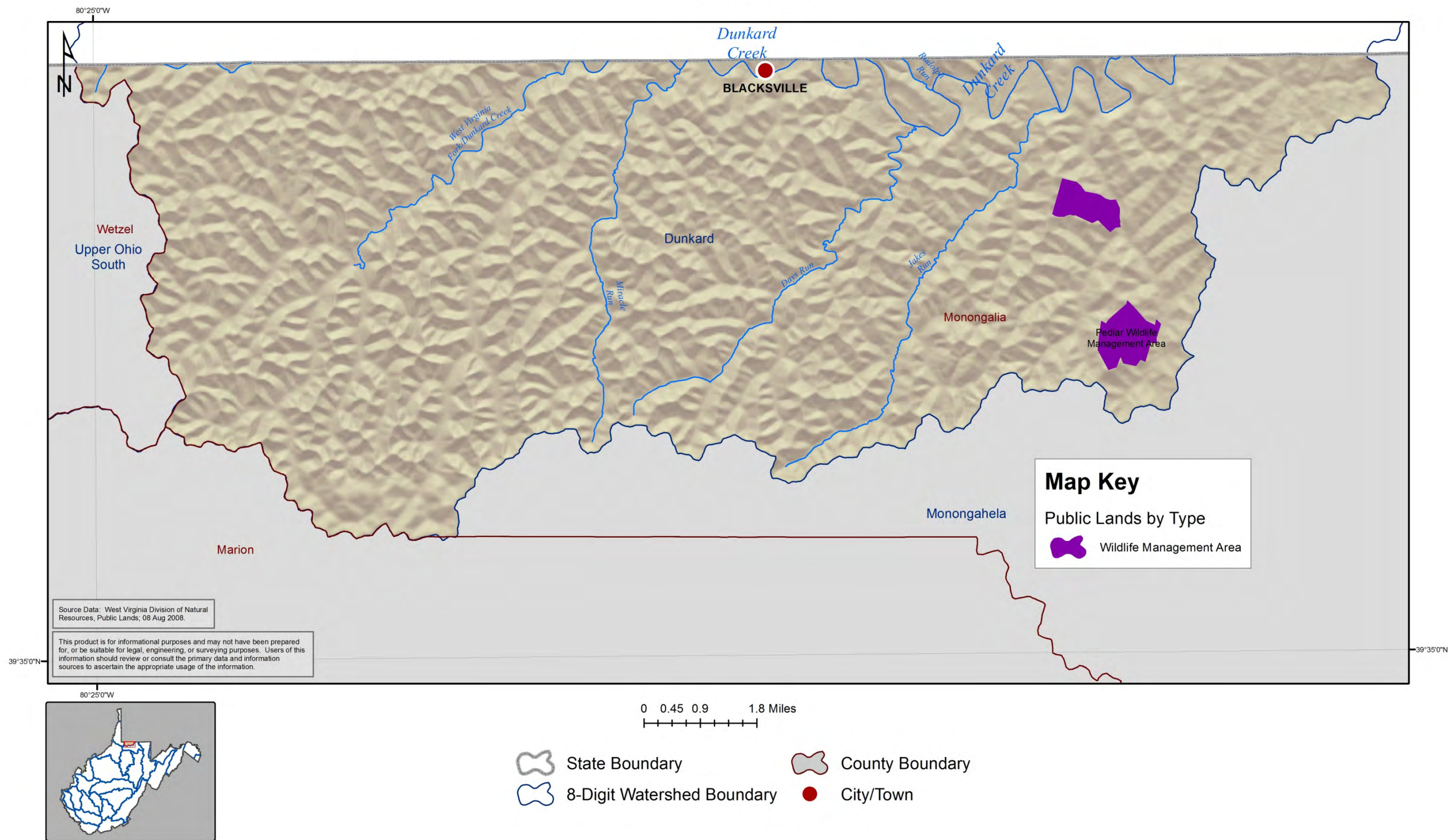
- 43 - 44
- 45 - 46
- 47



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

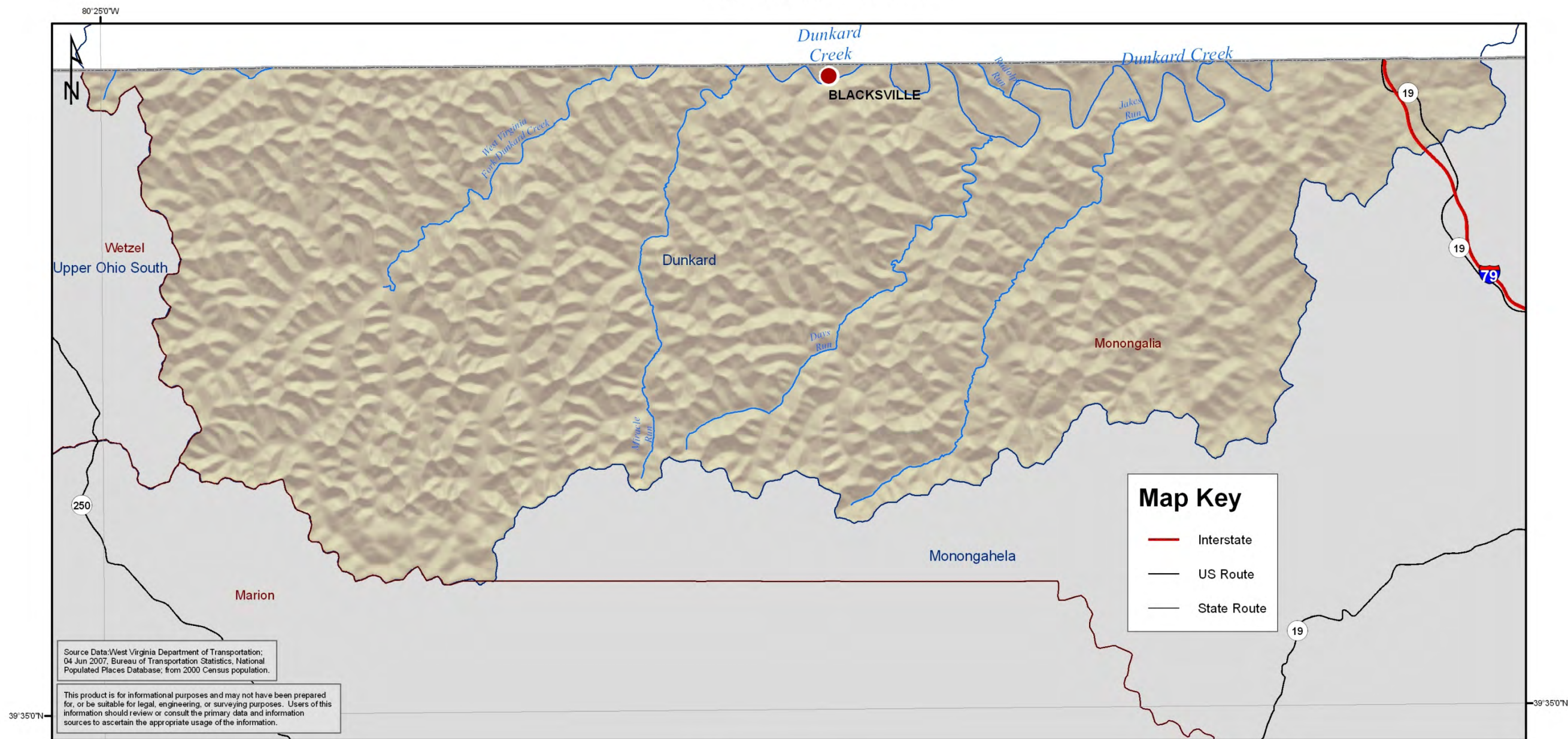
Dunkard HUC-8 Watershed

Public Lands



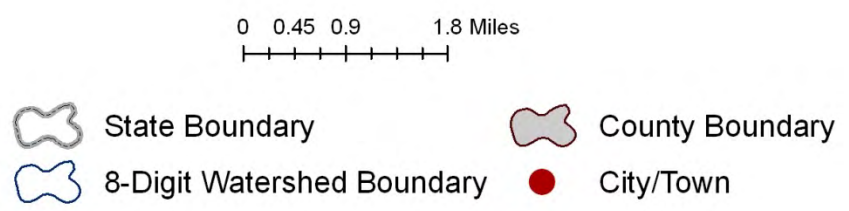
Dunkard HUC-8 Watershed

Major Roads and Cities



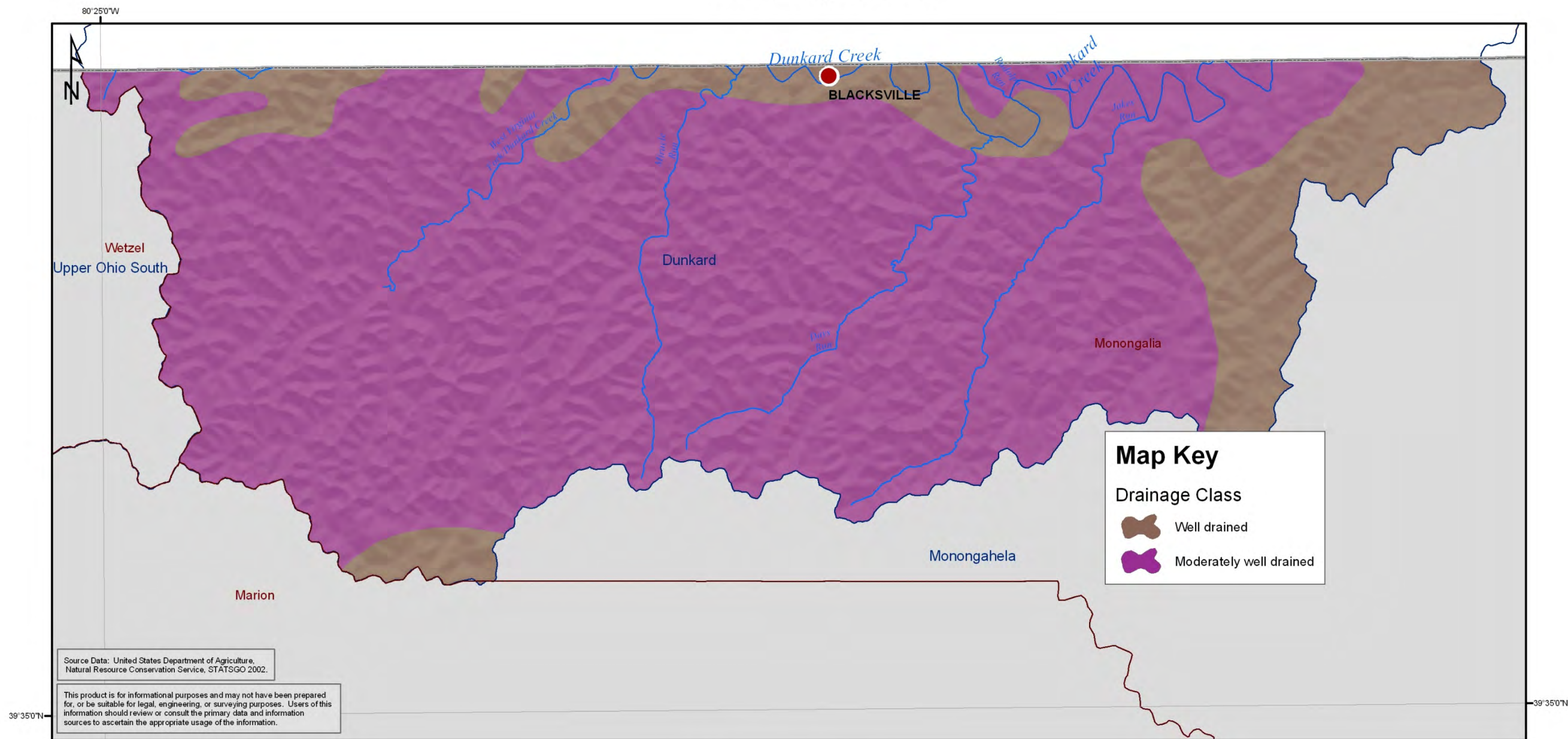
Source Data: West Virginia Department of Transportation; 04 Jun 2007, Bureau of Transportation Statistics, National Populated Places Database; from 2000 Census population.

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Dunkard HUC-8 Watershed

Soil Drainage Classes





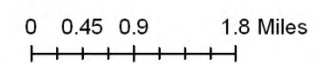
Source Data: United States Department of Agriculture, Natural Resource Conservation Service, STATSGO 2002.

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Map Key

Drainage Class

-  Well drained
-  Moderately well drained

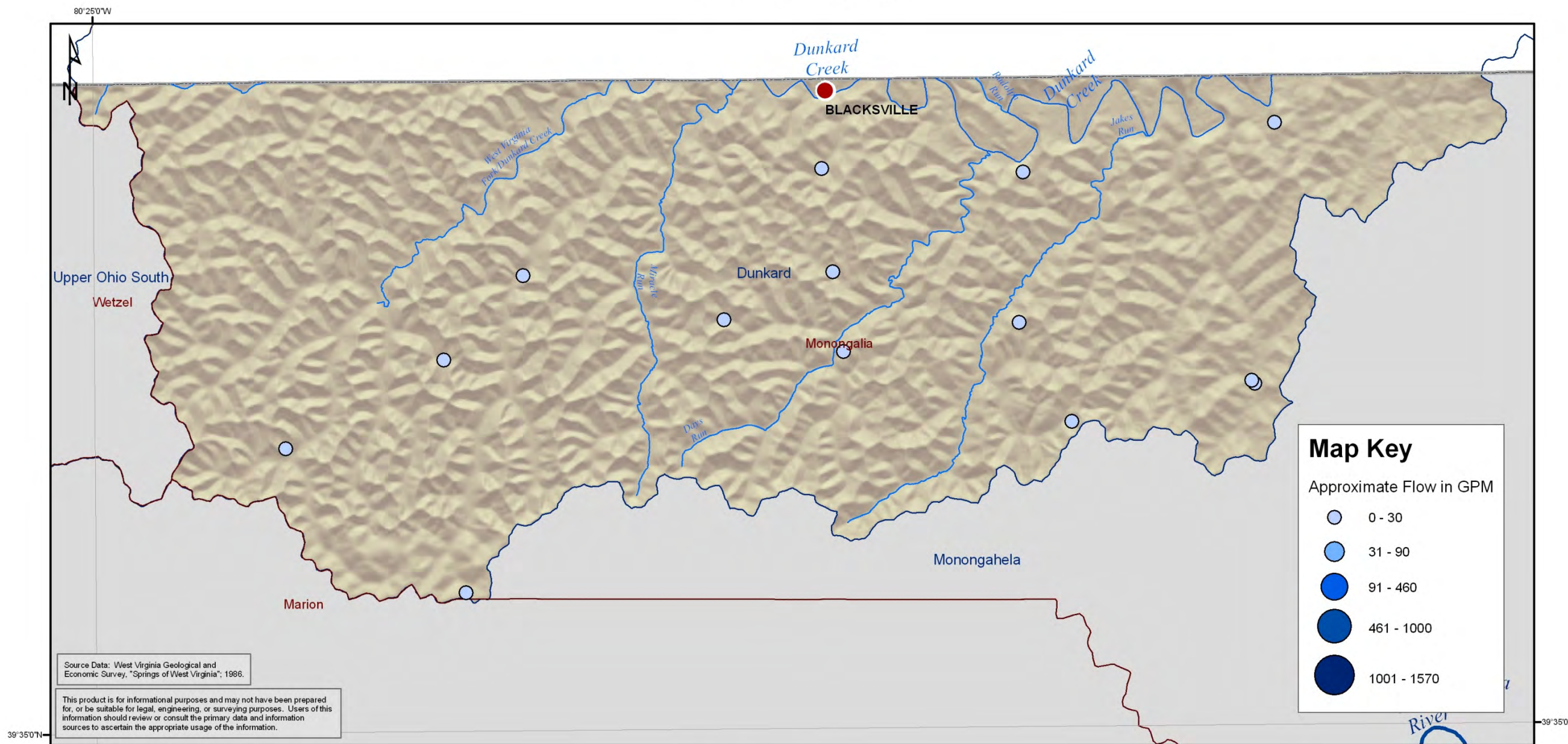


-  State Boundary
-  County Boundary
-  8-Digit Watershed Boundary
-  City/Town



Dunkard HUC-8 Watershed

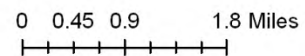
Documented Springs



Map Key

Approximate Flow in GPM

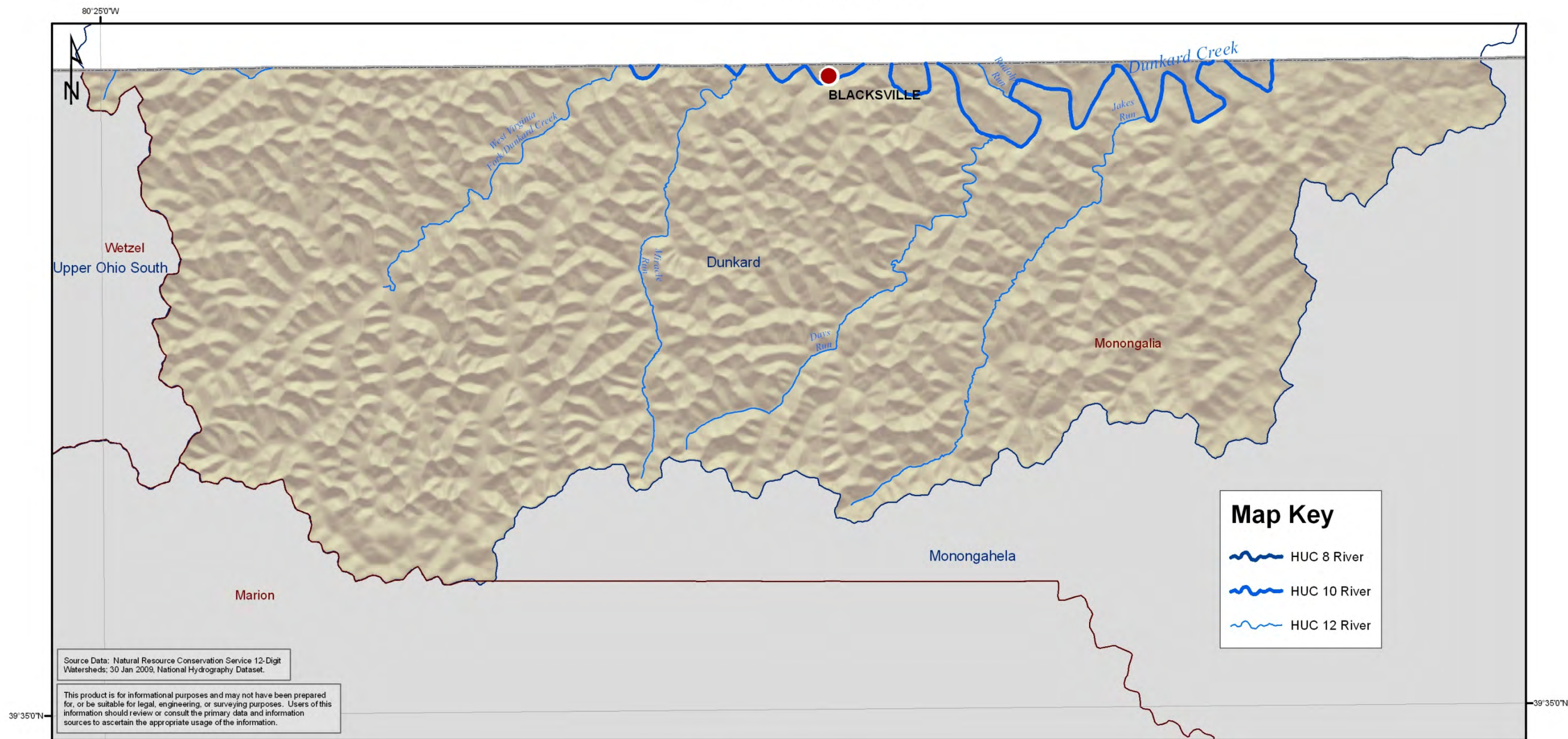
- 0 - 30
- 31 - 90
- 91 - 460
- 461 - 1000
- 1001 - 1570



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

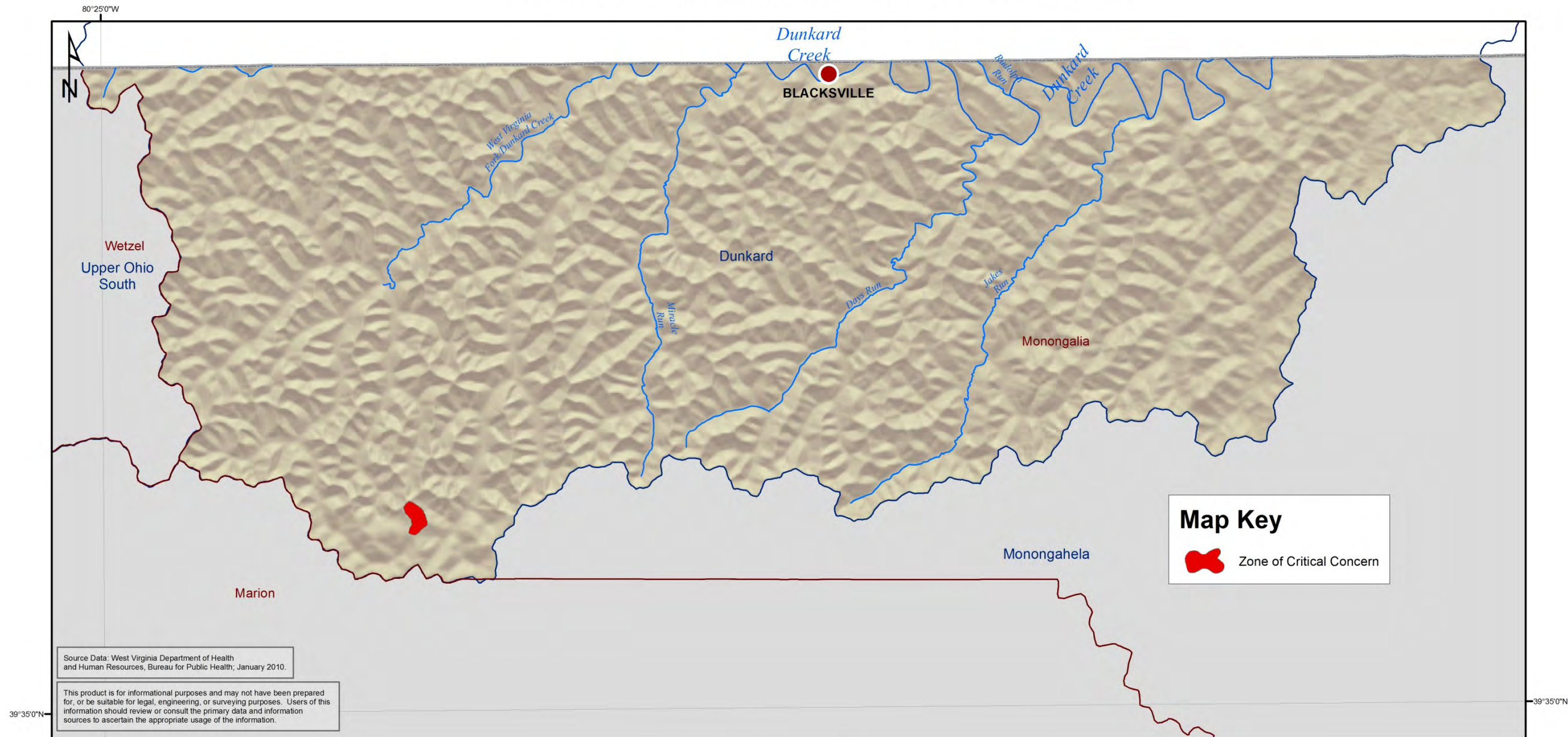
Dunkard HUC-8 Watershed

Stream Connections



Dunkard HUC-8 Watershed


Source Water Assessment and Wellhead Protection Programs

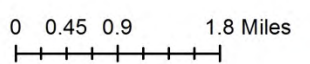






Source Data: West Virginia Department of Health and Human Resources, Bureau for Public Health, January 2010.

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Map Key

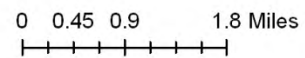
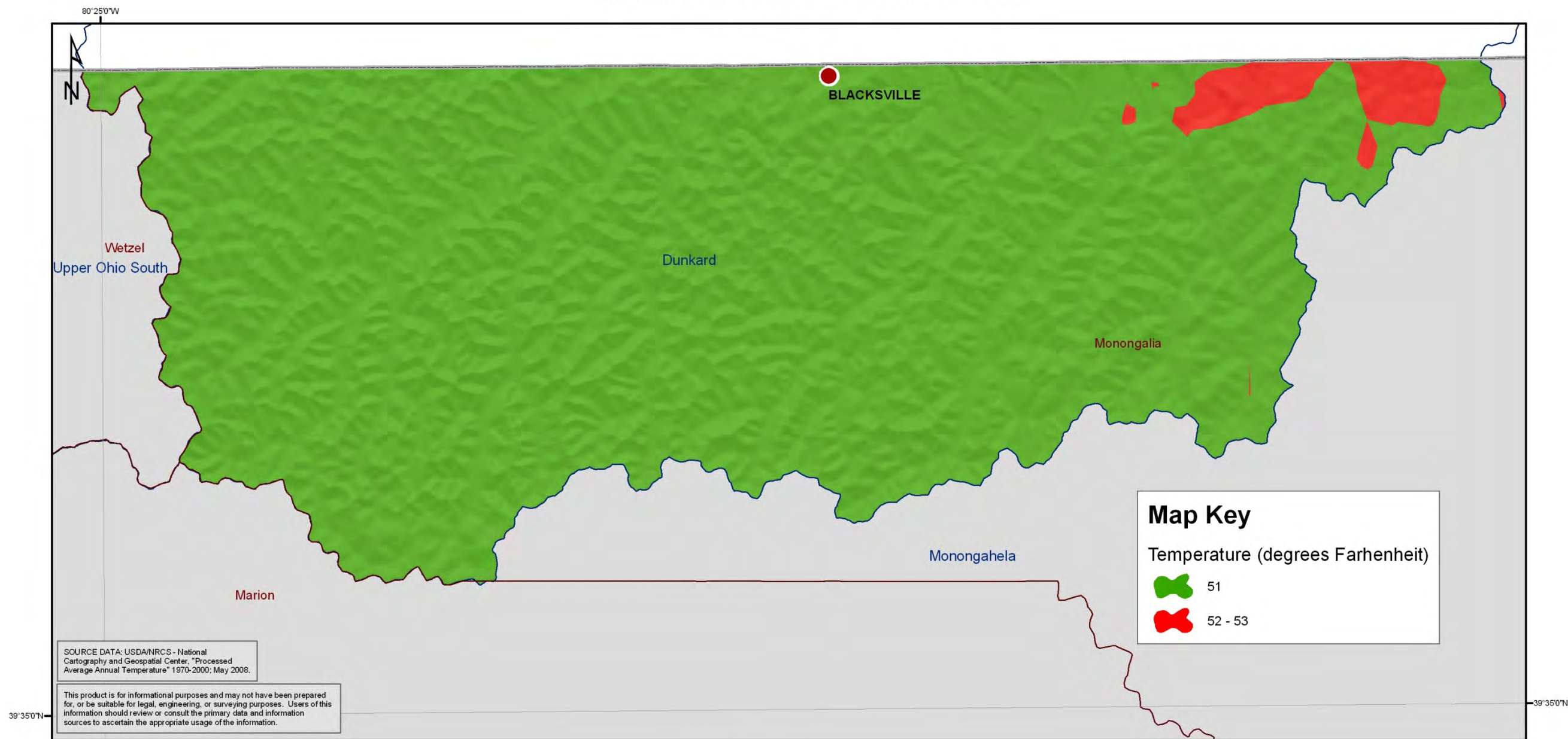
 Zone of Critical Concern



-  State Boundary
-  County Boundary
-  8-Digit Watershed Boundary
-  City/Town

Dunkard HUC-8 Watershed

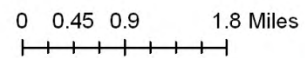
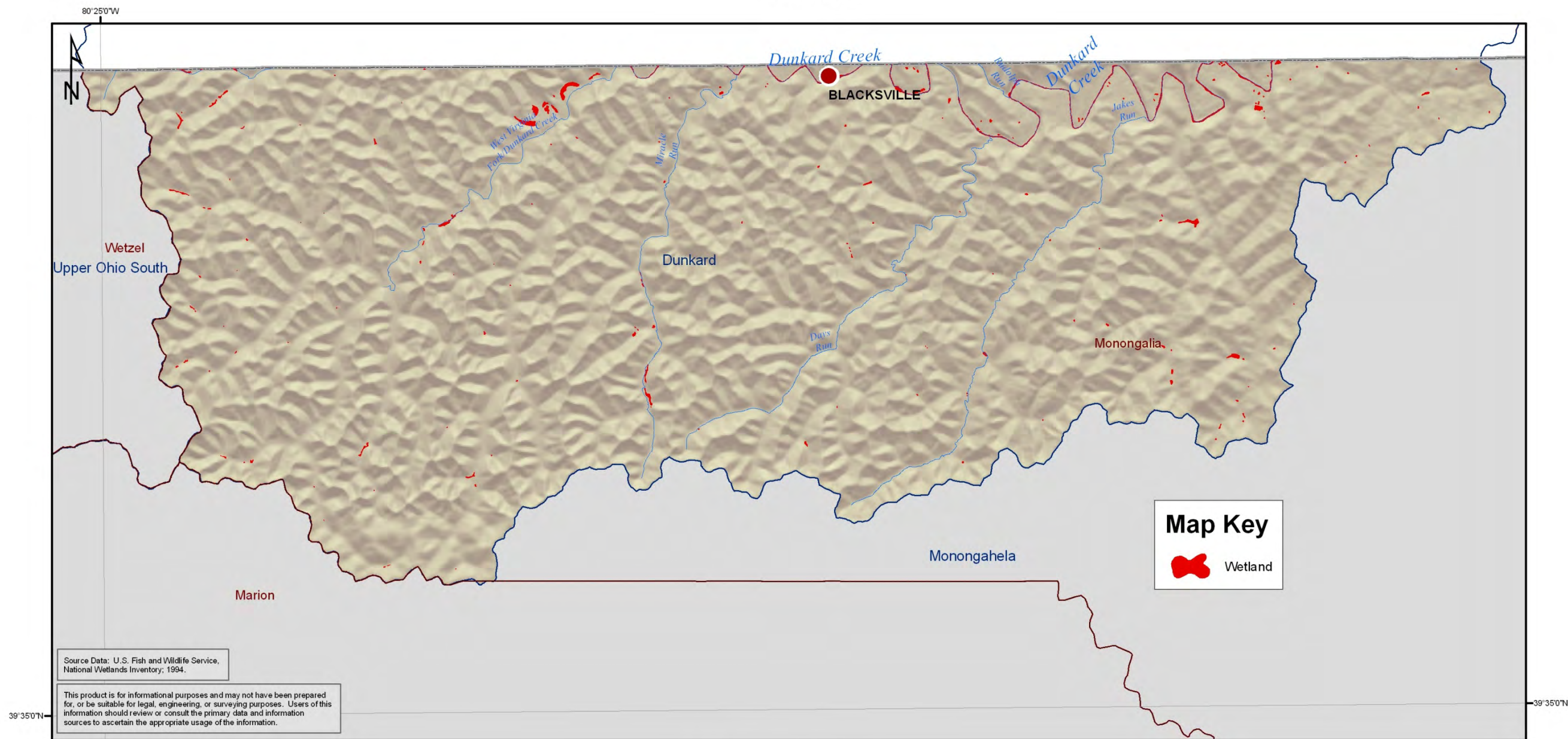
Average Annual Temperature (1971-2000)



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Dunkard HUC-8 Watershed

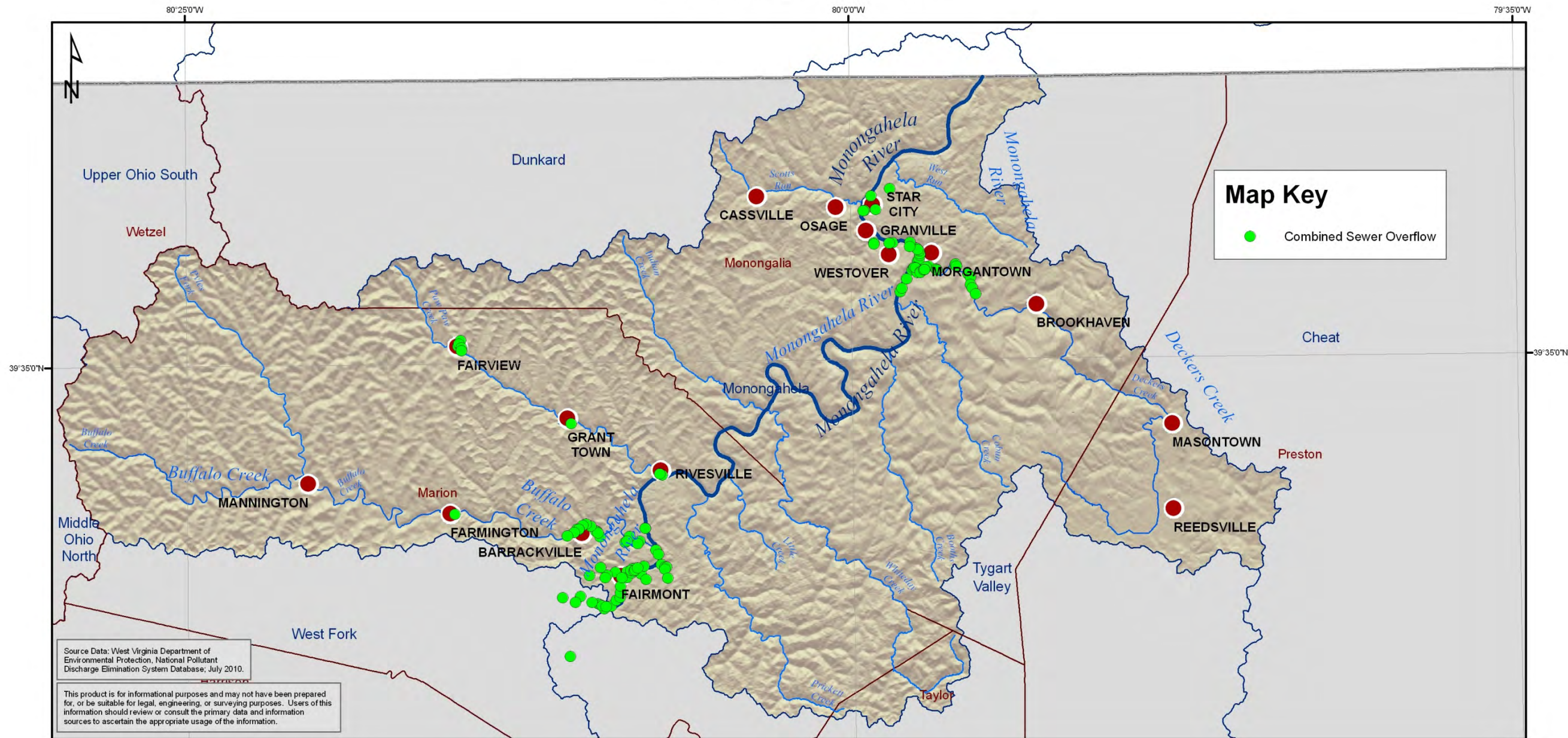
Wetlands



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Monongahela HUC-8 Watershed

Combined Sewer Overflow



Source Data: West Virginia Department of Environmental Protection, National Pollutant Discharge Elimination System Database; July 2010.

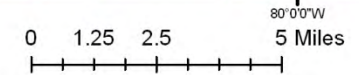
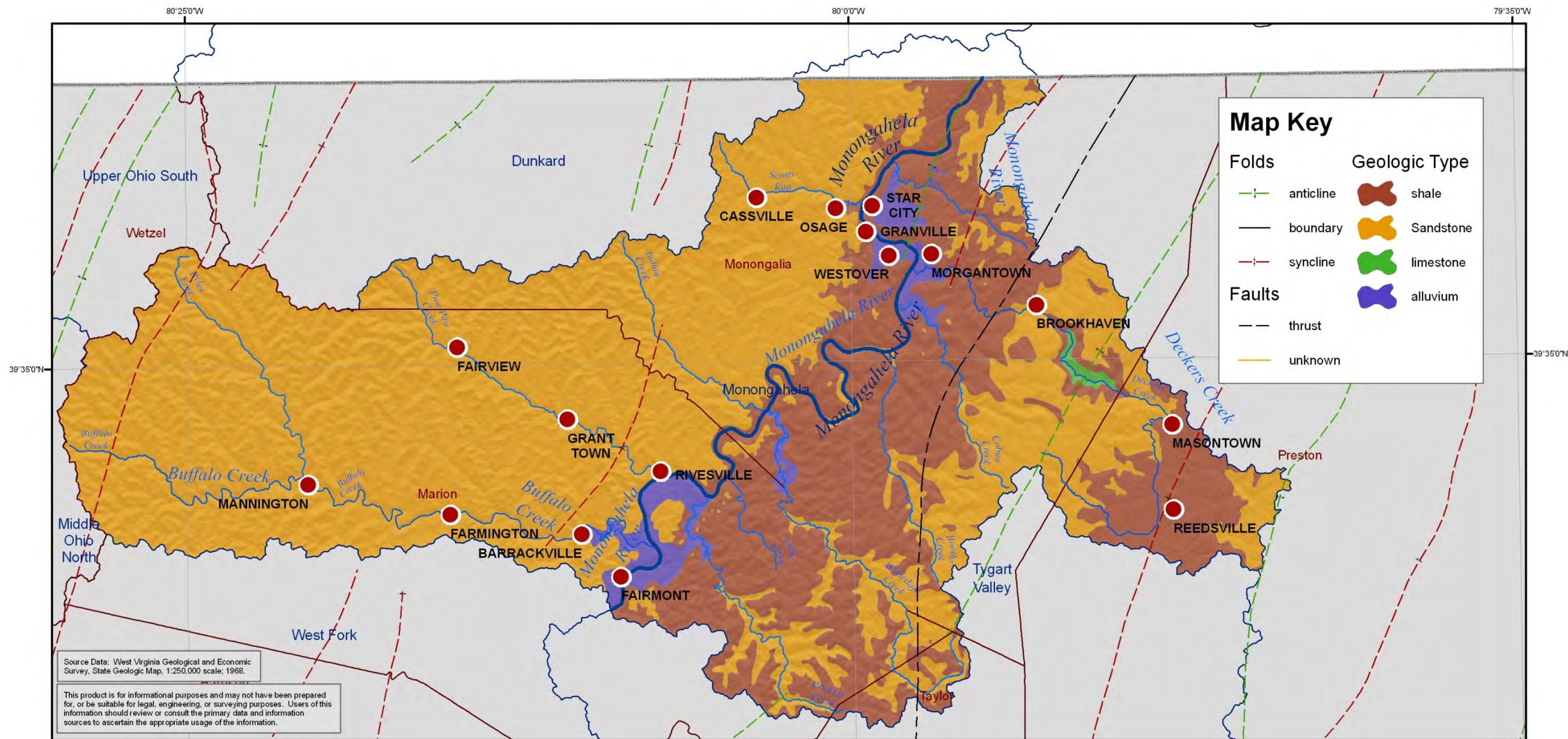
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Monongahela HUC-8 Watershed

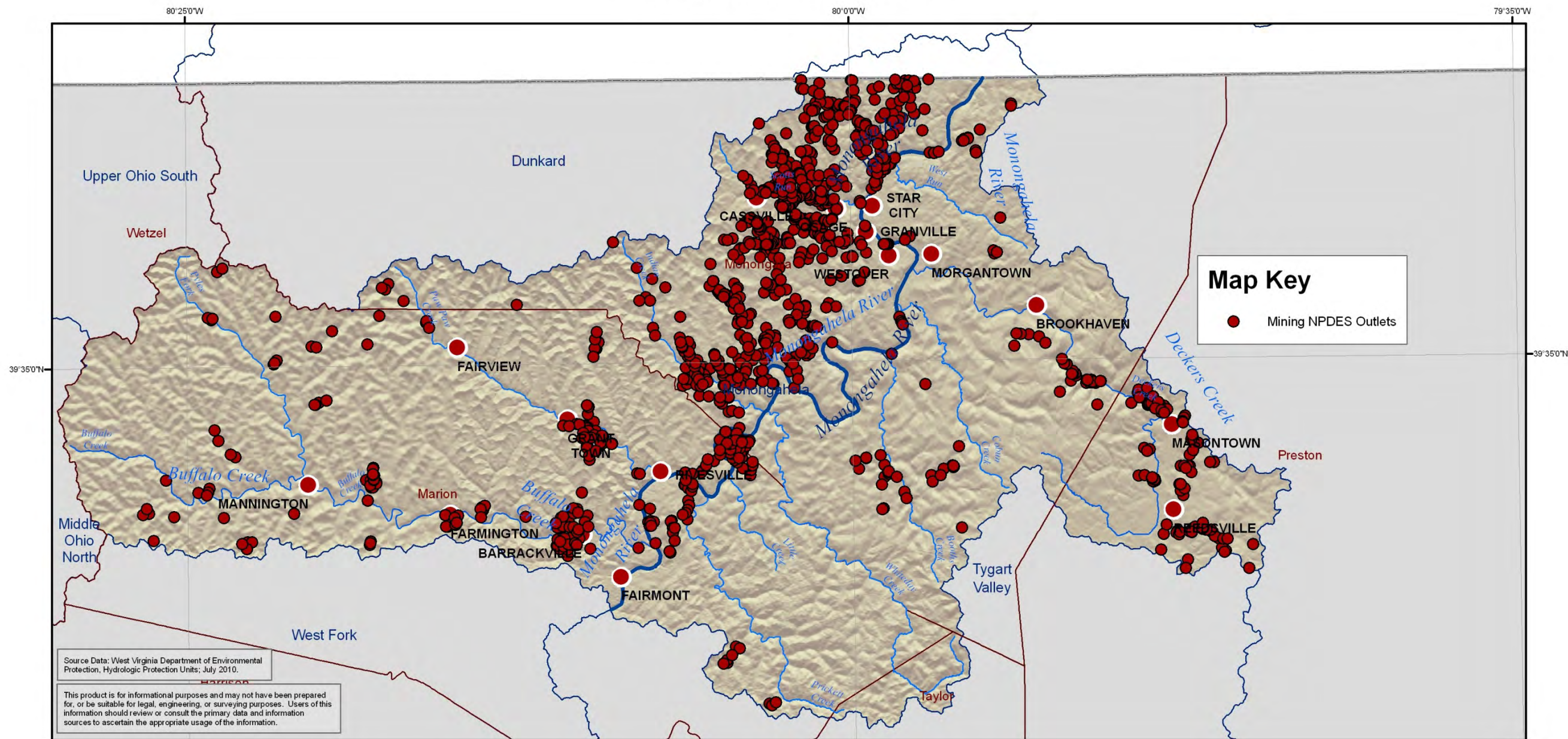
Surface Geology



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

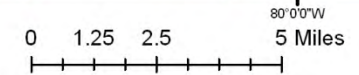
Monongahela HUC-8 Watershed

Mining Related NPDES Outlets



Source Data: West Virginia Department of Environmental Protection, Hydrologic Protection Units; July 2010.

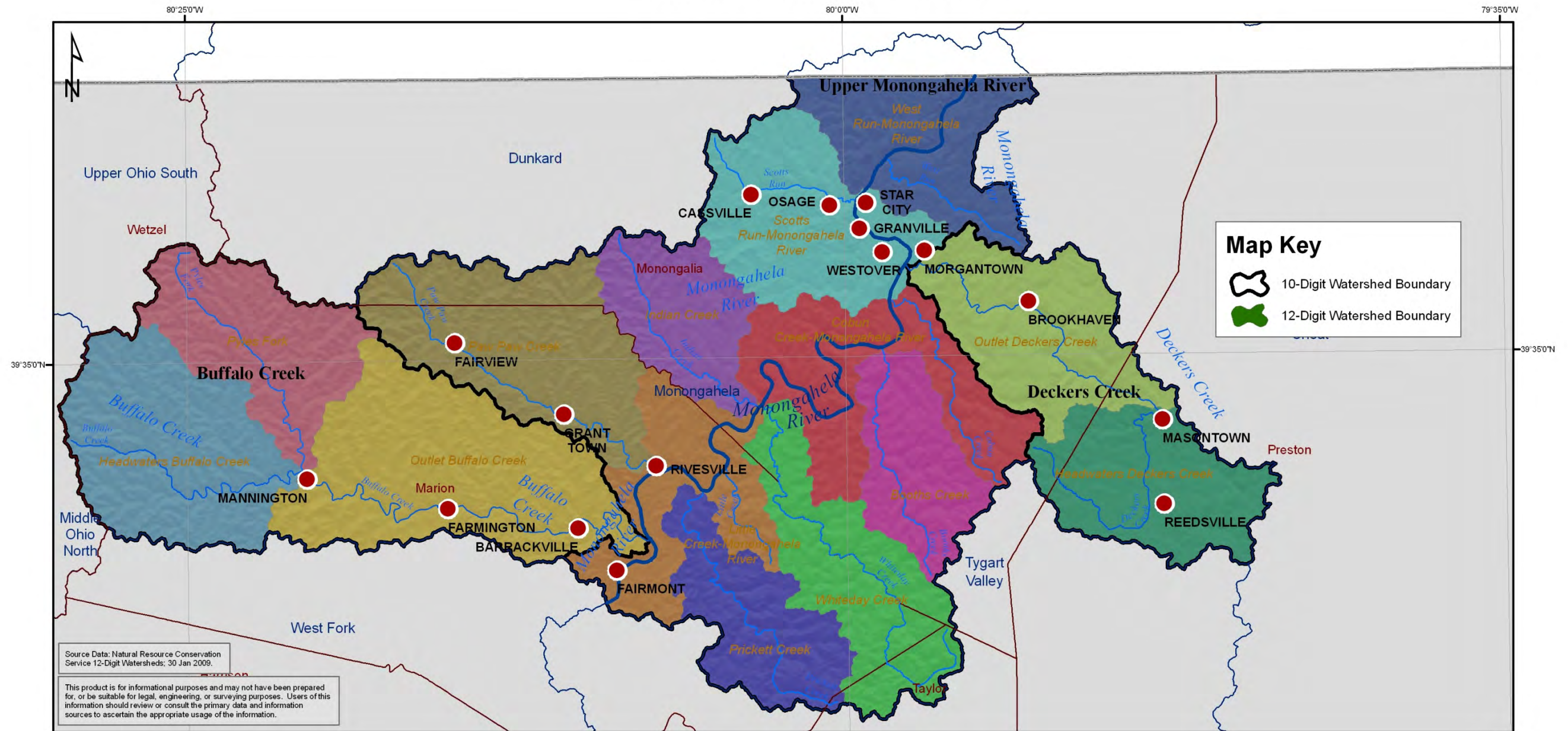
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Monongahela HUC-8 Watershed

HUC 10 and HUC 12 Watersheds

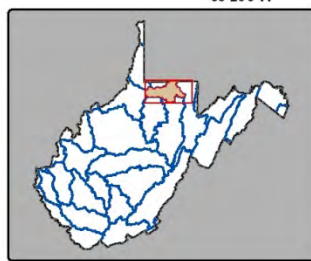
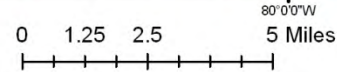


Map Key

- 10-Digit Watershed Boundary
- 12-Digit Watershed Boundary

Source Data: Natural Resource Conservation Service 12-Digit Watersheds; 30 Jan 2009.

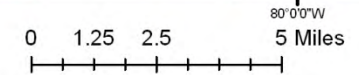
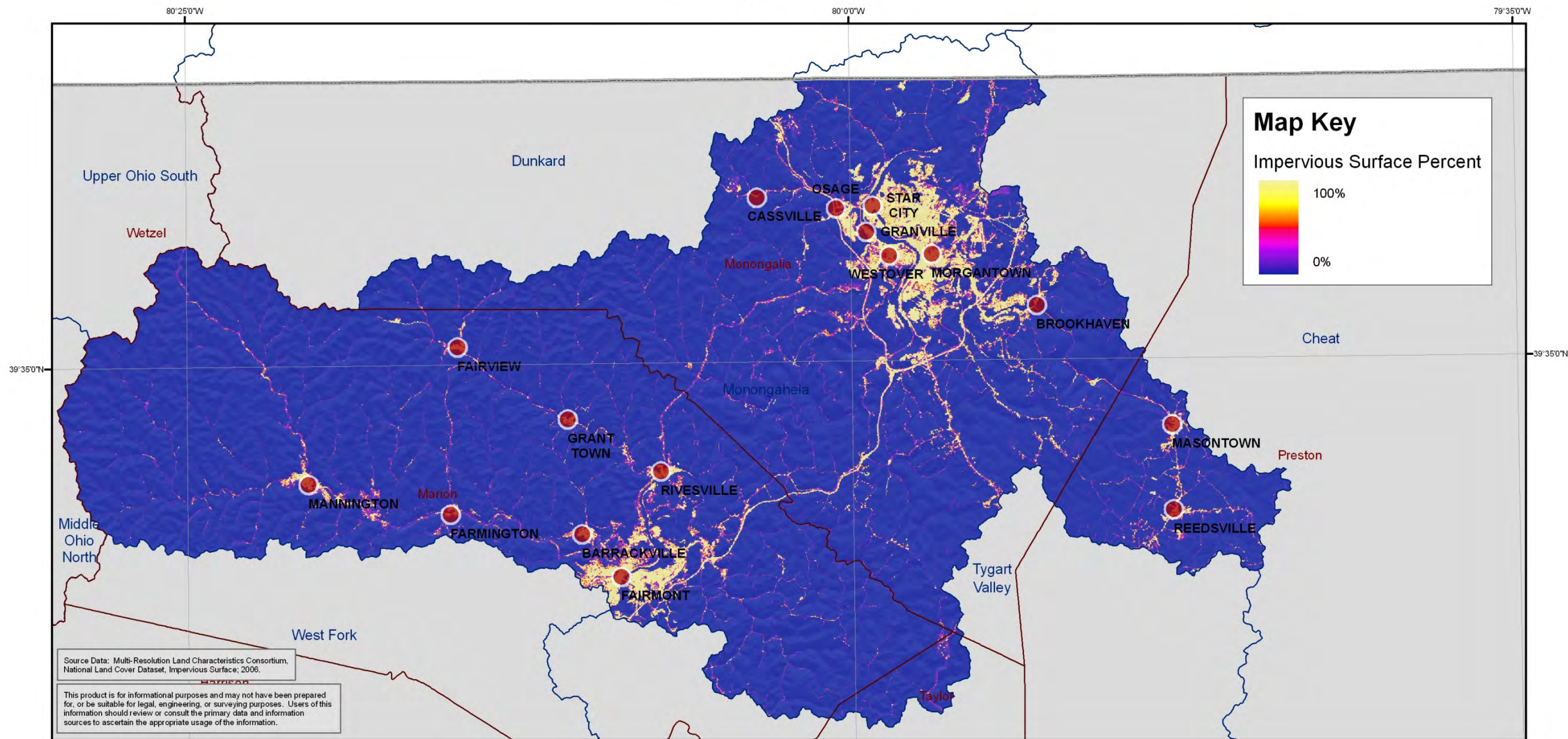
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Monongahela HUC-8 Watershed

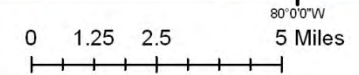
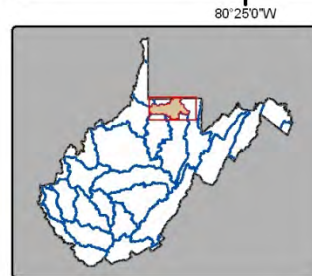
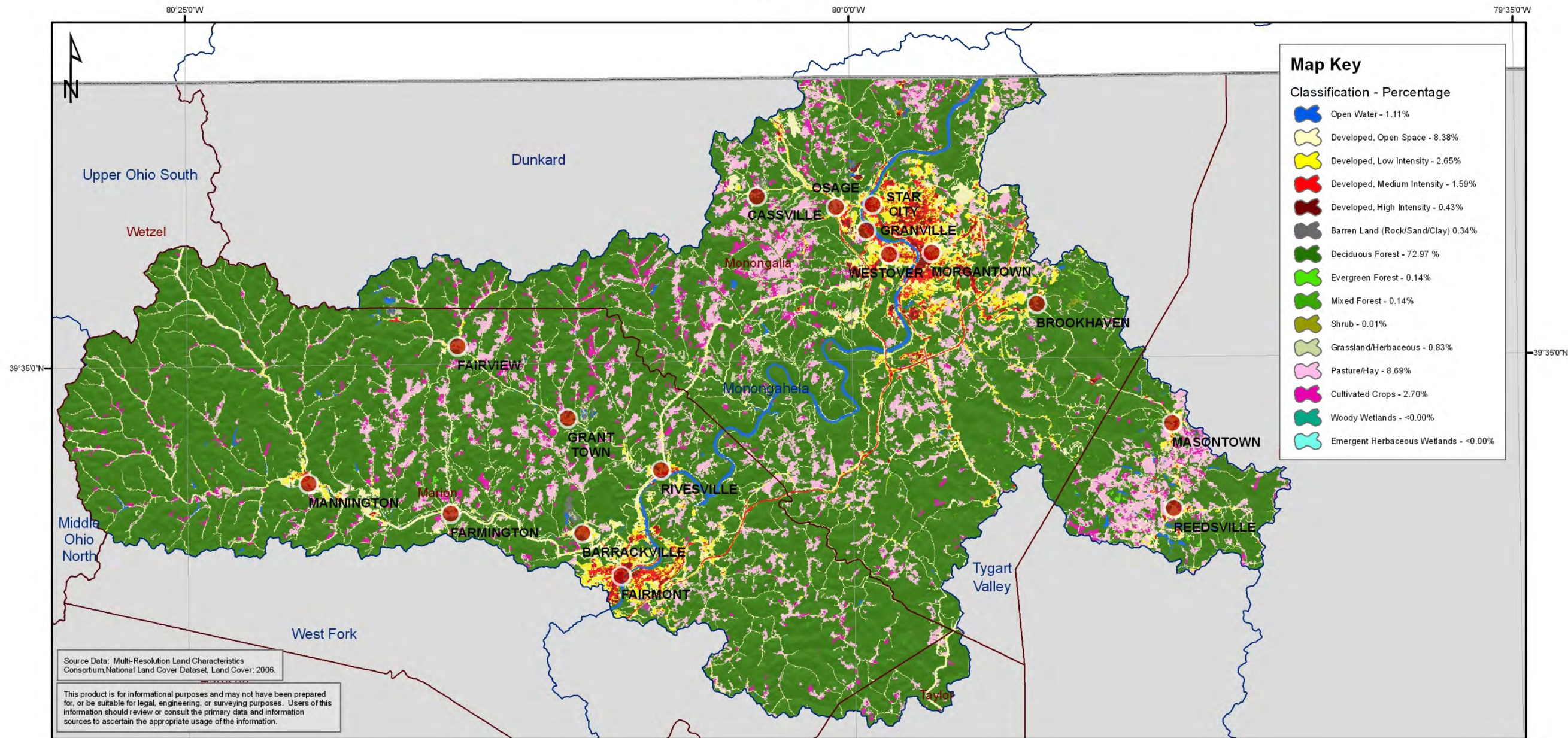
2006 Impervious Surfaces



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Monongahela HUC-8 Watershed

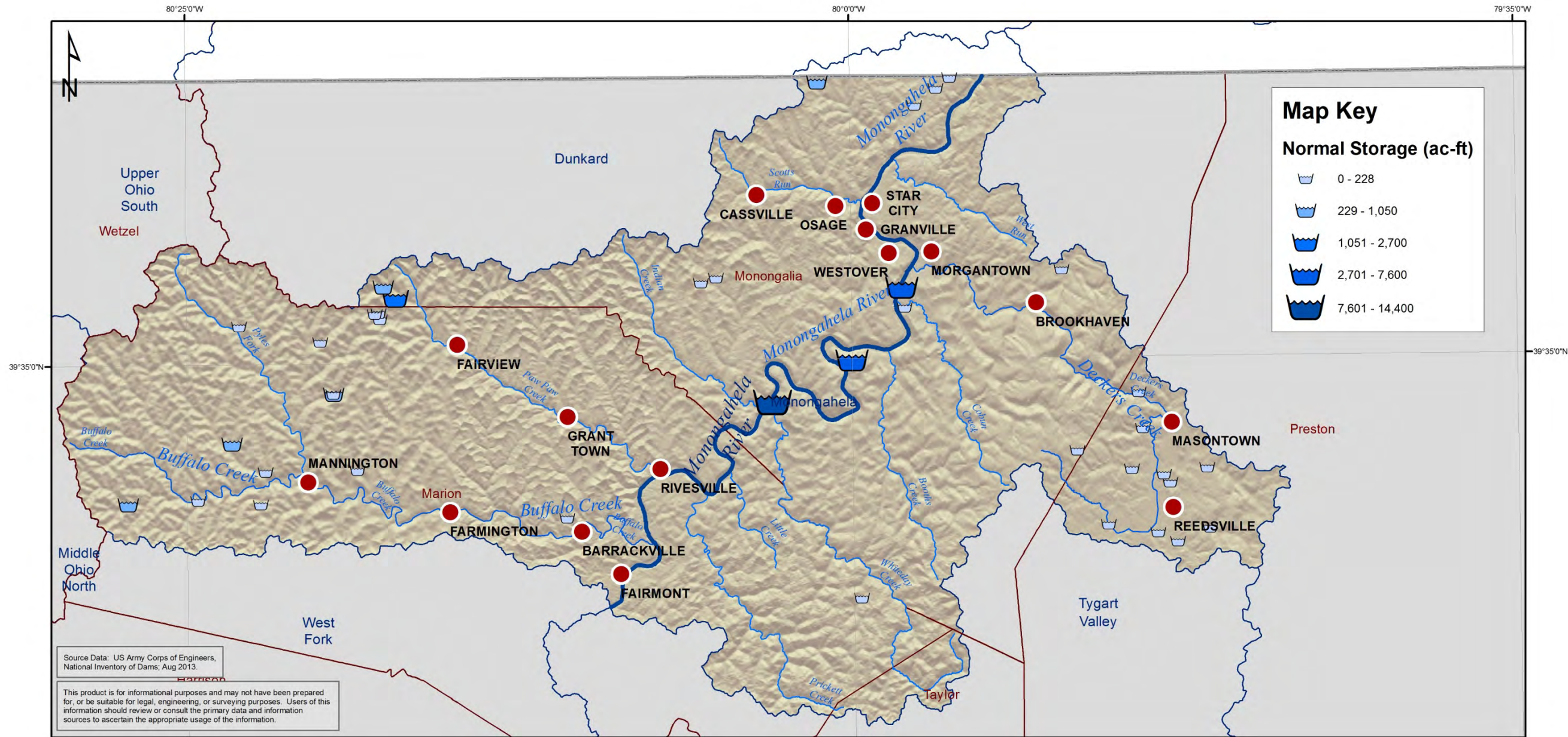
2006 Land Cover



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Monongahela HUC-8 Watershed

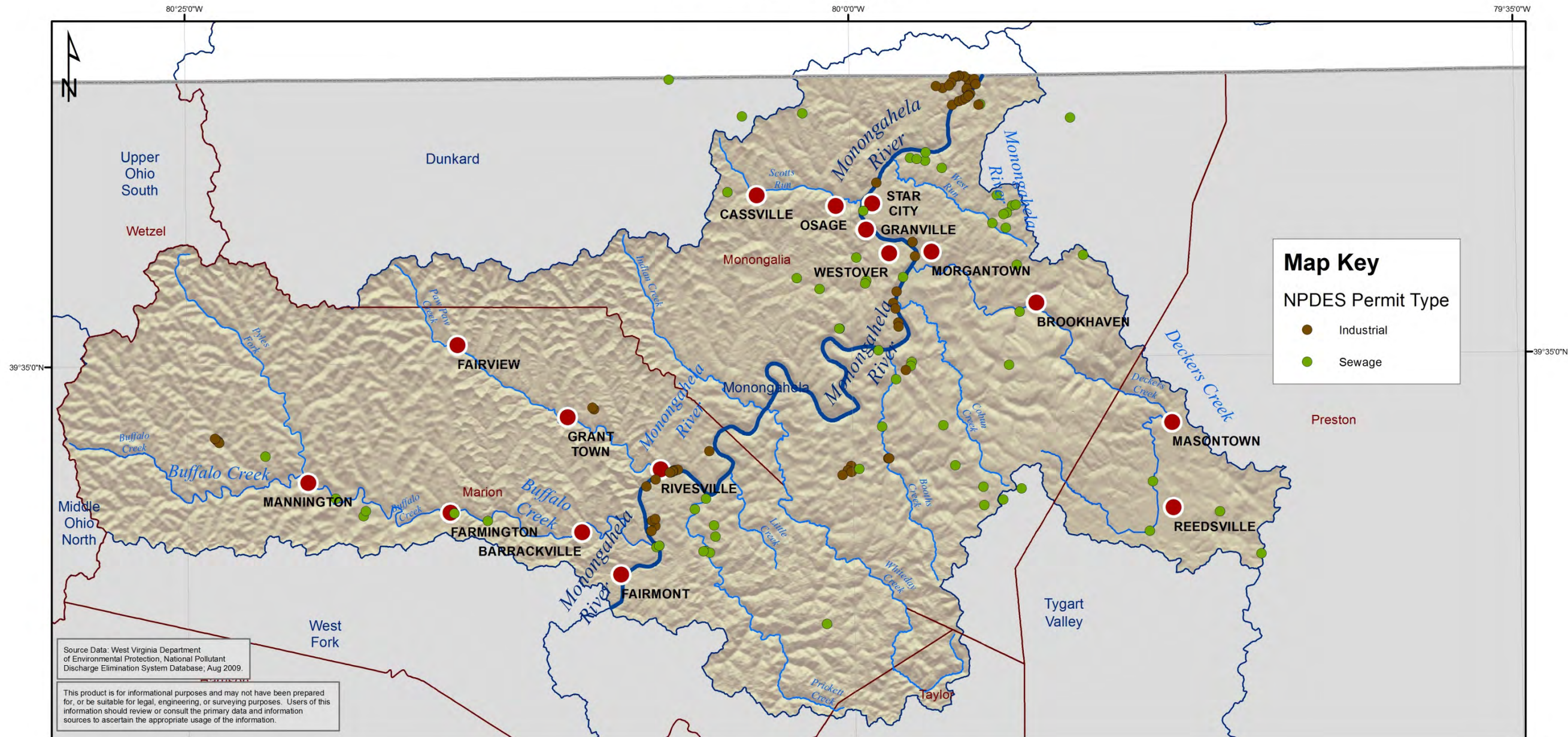
Permitted Dams



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Monongahela HUC-8 Watershed

Non-Mining NPDES Outlets



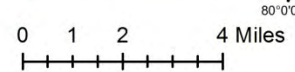
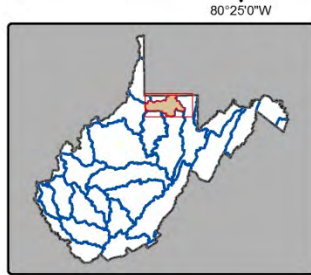
Map Key

NPDES Permit Type

- Industrial
- Sewage

Source Data: West Virginia Department of Environmental Protection, National Pollutant Discharge Elimination System Database, Aug 2009.

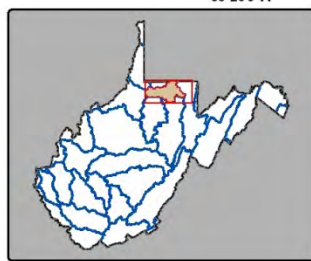
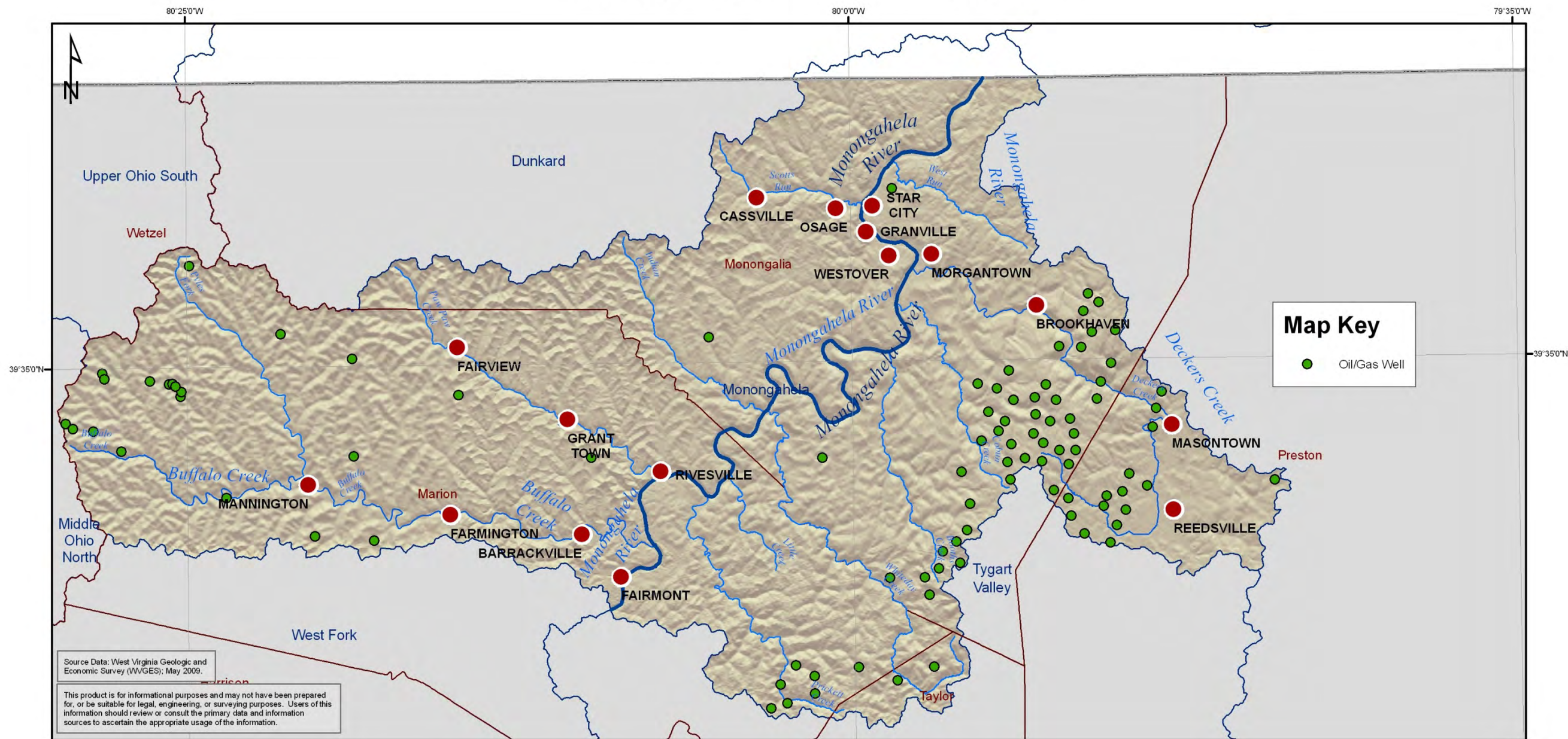
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Monongahela HUC-8 Watershed

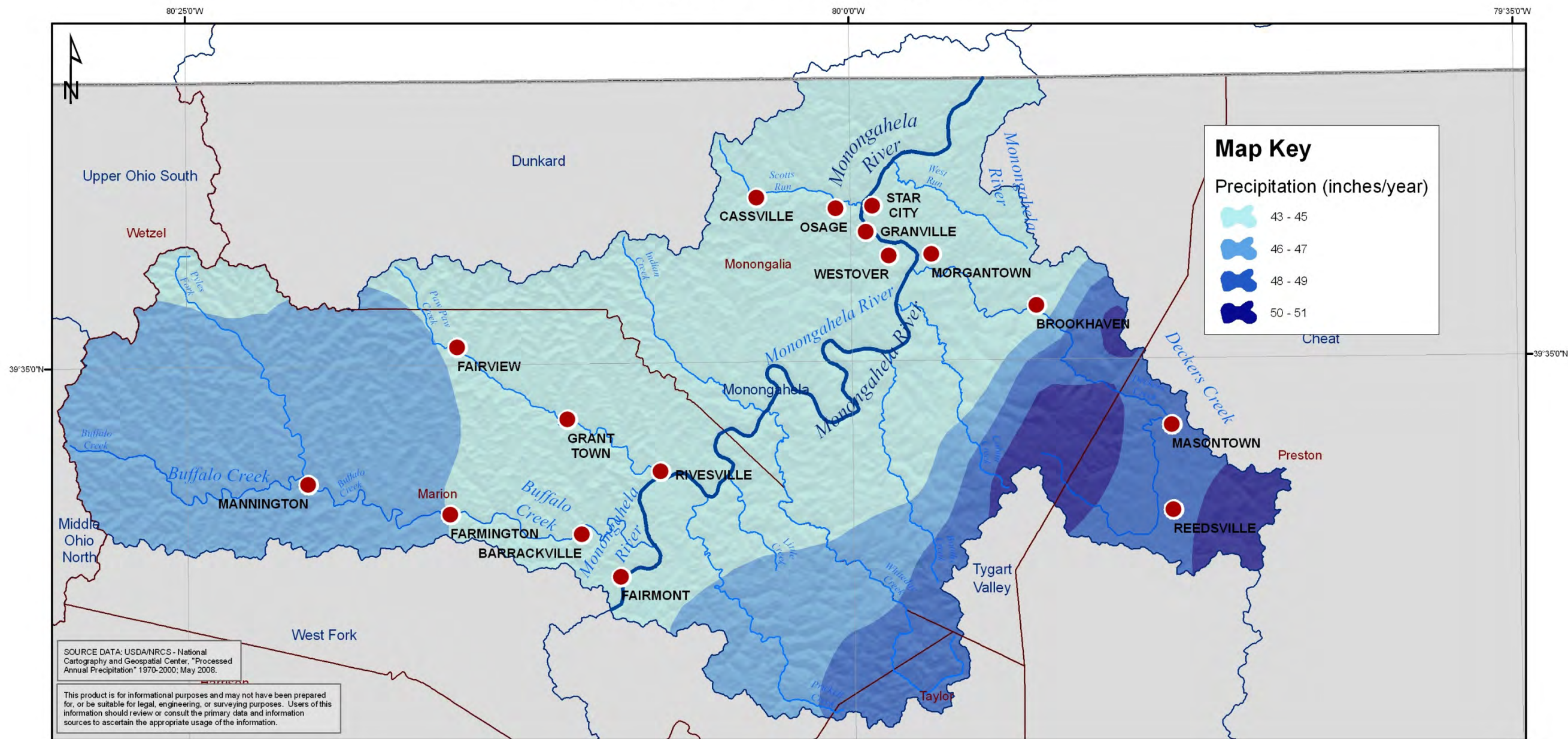
Well Logs with Gamma Rays and Water Shows



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

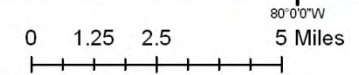
Monongahela HUC-8 Watershed

Average Annual Precipitation (1971-2000)



SOURCE DATA: USDA/NRCS - National Cartography and Geospatial Center, "Processed Annual Precipitation" 1970-2000; May 2008.

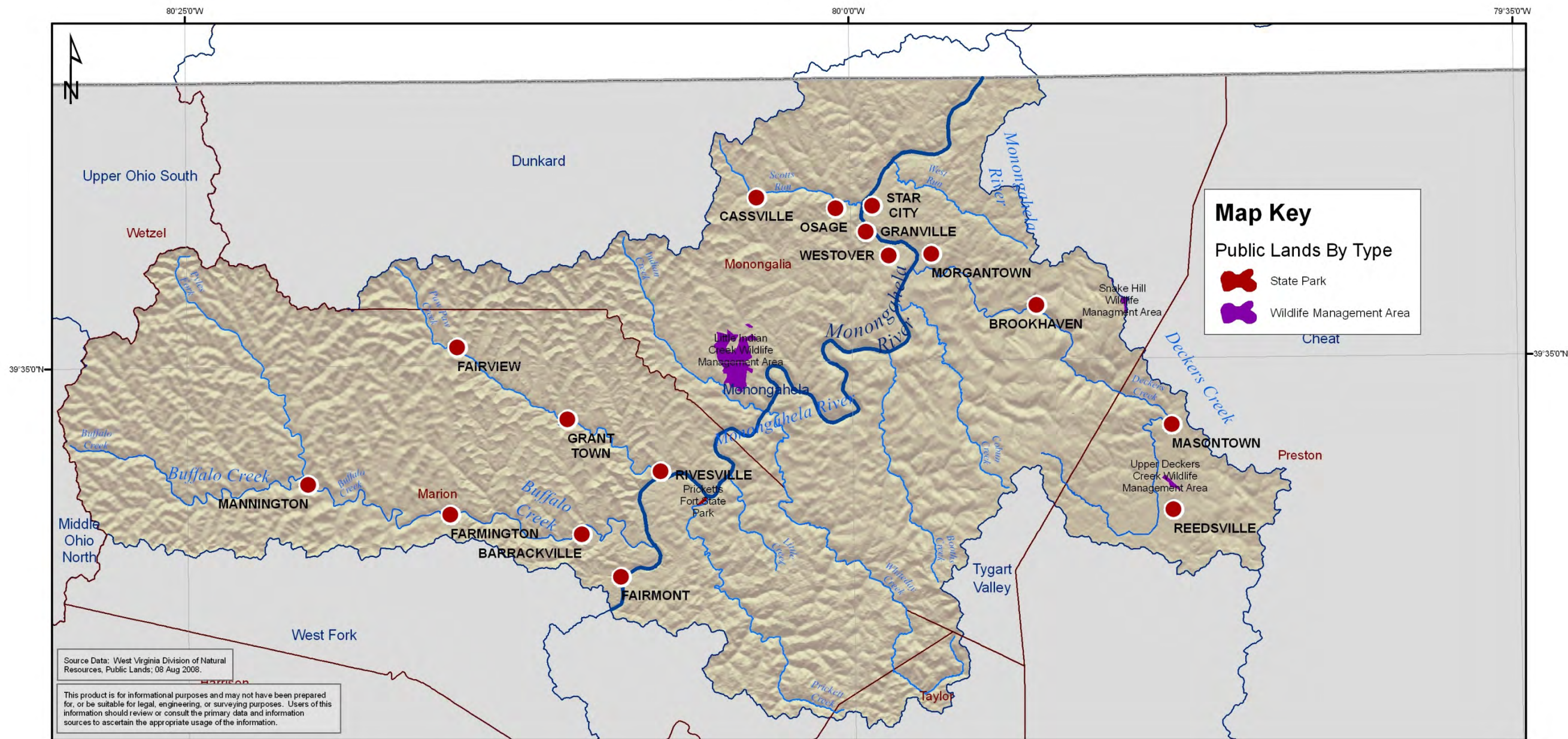
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

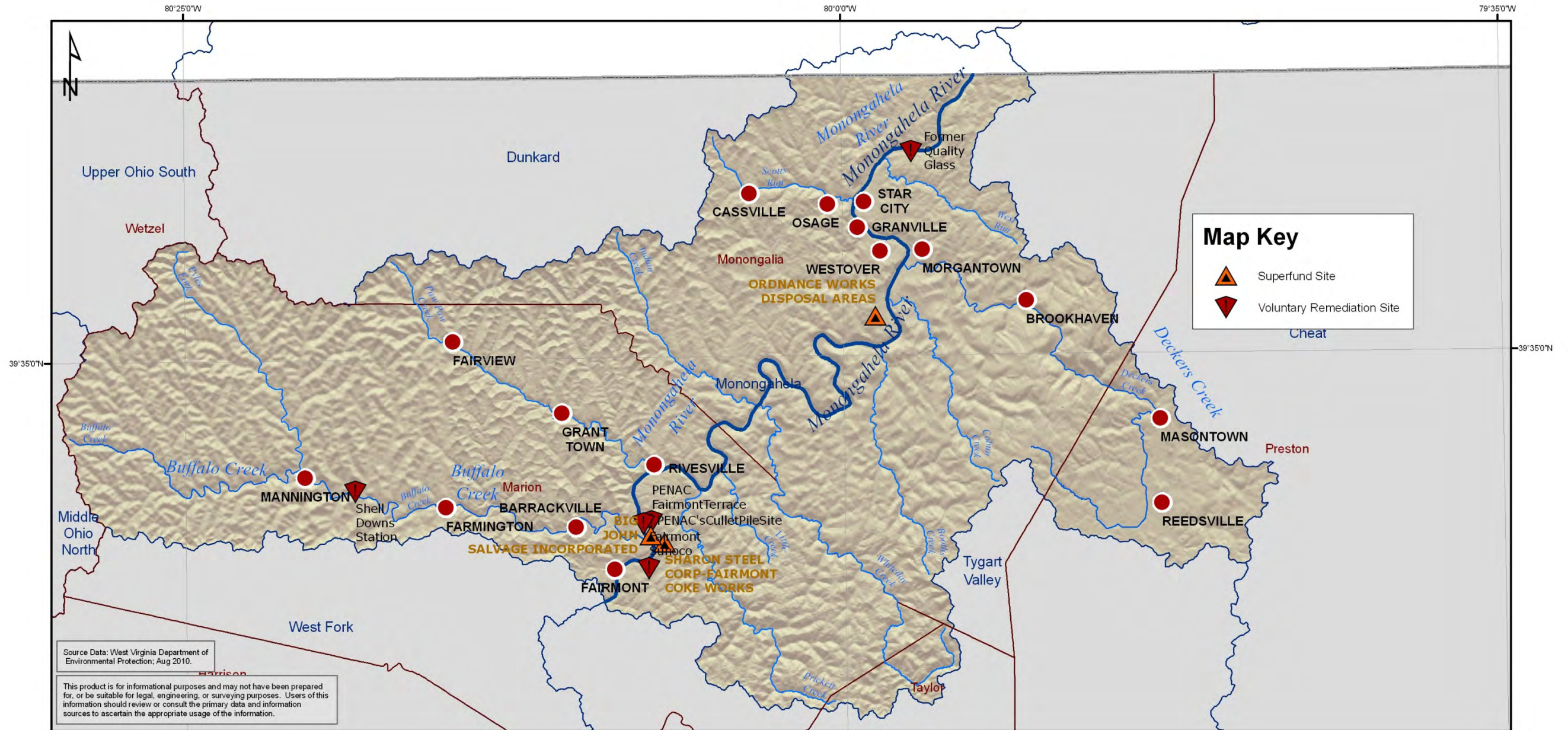
Monongahela HUC-8 Watershed

Public Lands



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Monongahela HUC-8 Watershed Remediation Sites

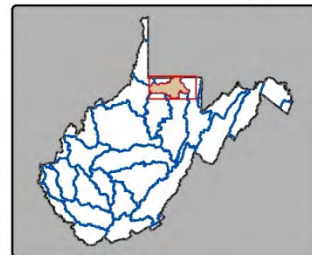
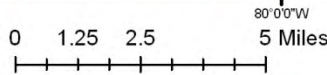


Map Key

- Superfund Site
- Voluntary Remediation Site

Source Data: West Virginia Department of Environmental Protection; Aug 2010.

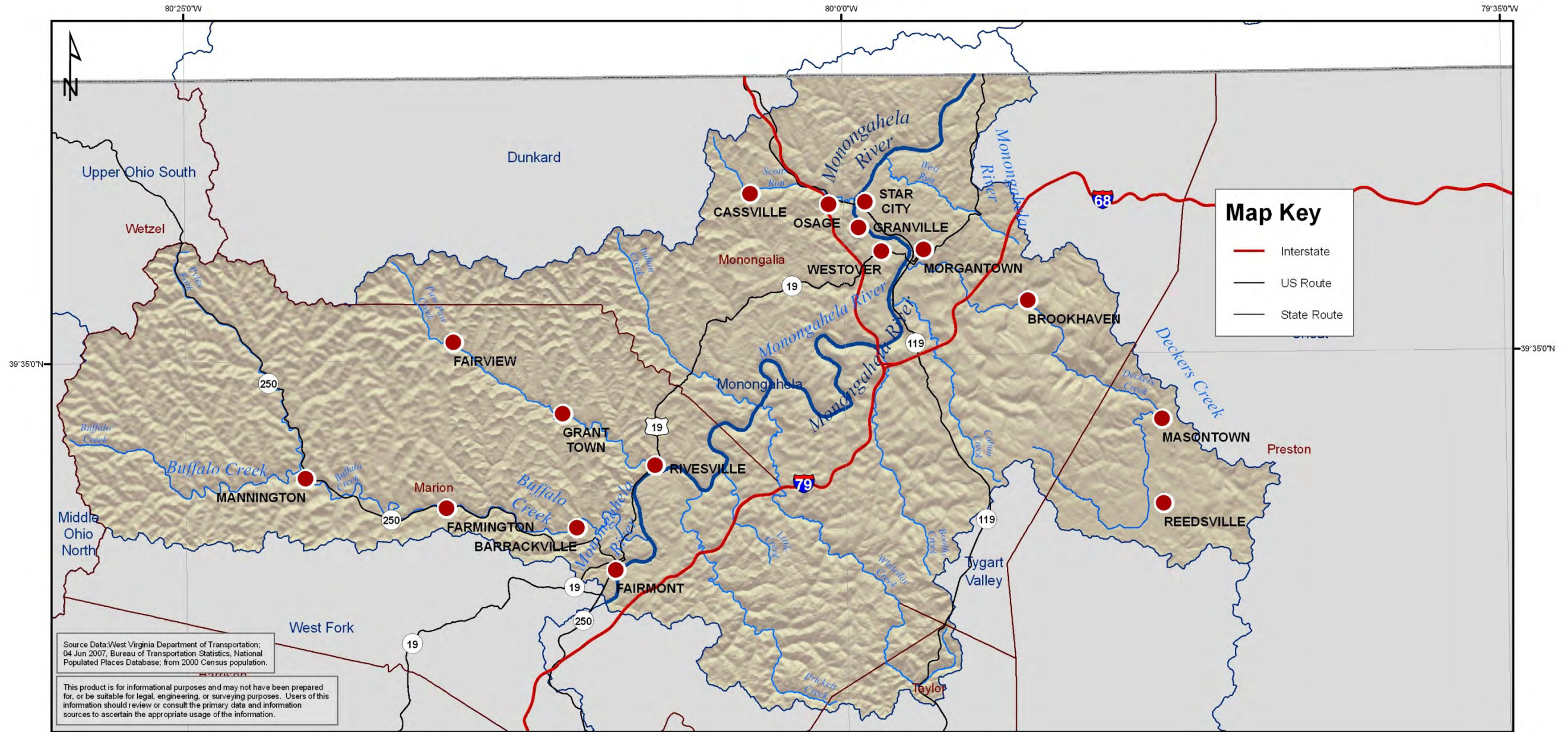
This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the appropriate usage of the information.



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

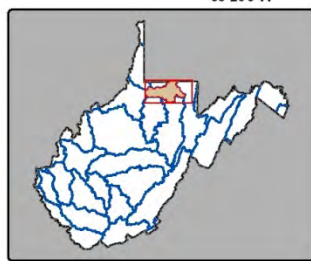
Monongahela HUC-8 Watershed

Major Roads and Cities



Source Data: West Virginia Department of Transportation; 04 Jun 2007, Bureau of Transportation Statistics, National Populated Places Database; from 2000 Census population.

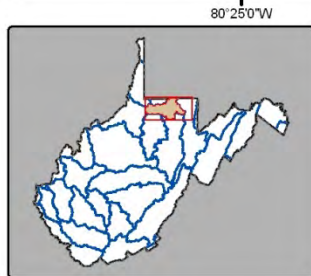
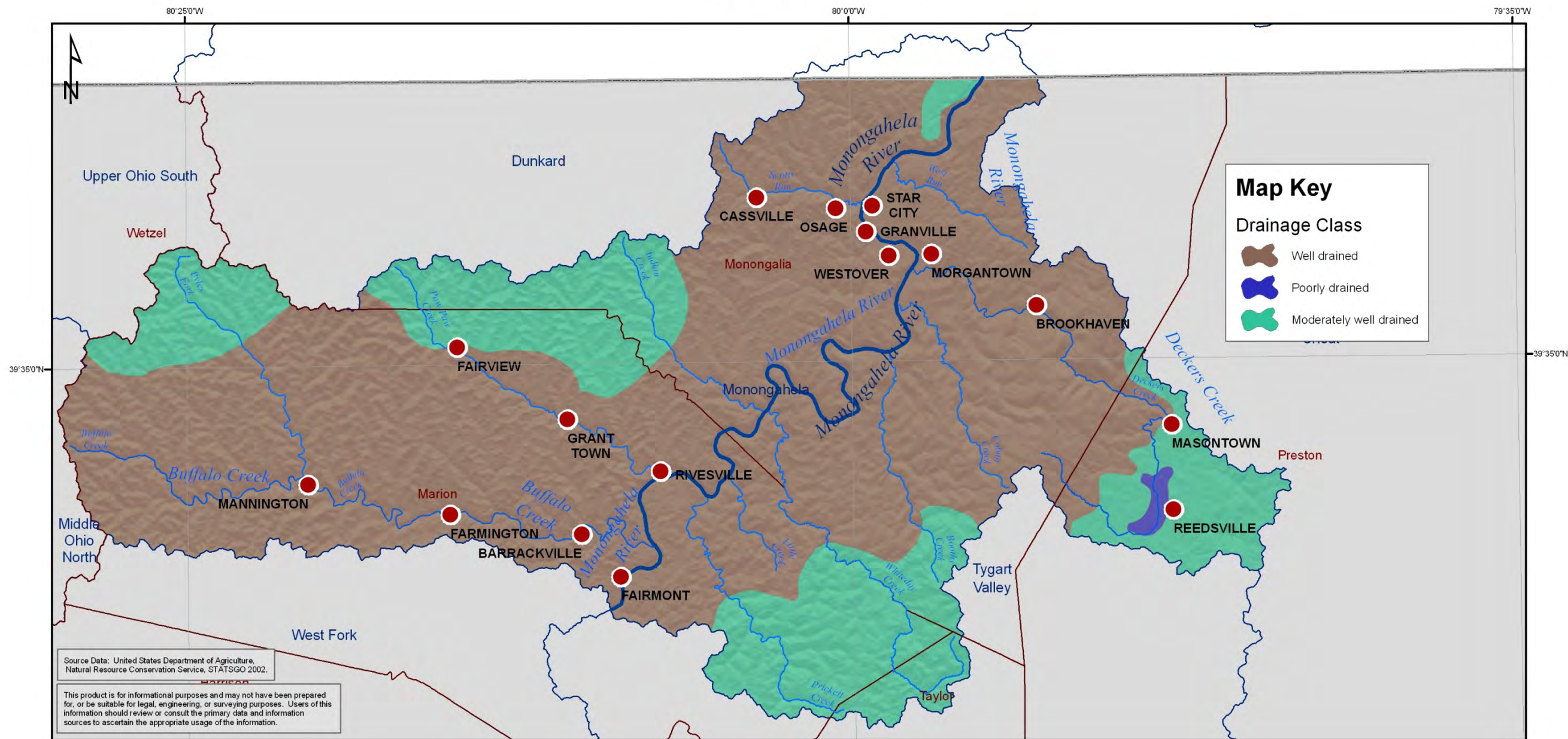
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- State Boundary
- 8-Digit Watershed Boundary
- County Boundary
- City/Town

Monongahela HUC-8 Watershed

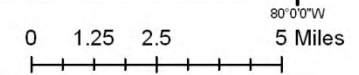
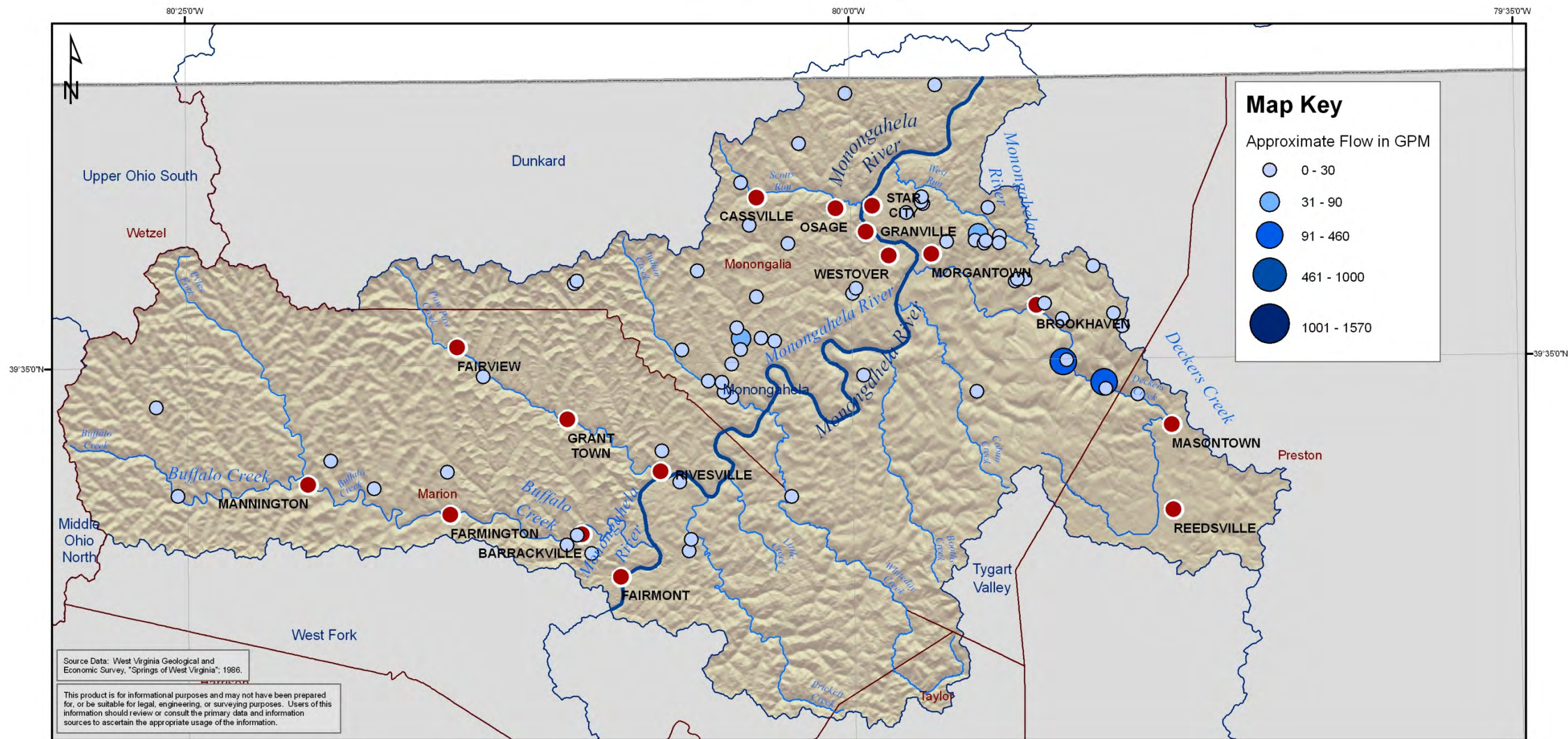
Soil Drainage Classes



-  State Boundary
-  County Boundary
-  8-Digit Watershed Boundary
-  City/Town

Monongahela HUC-8 Watershed

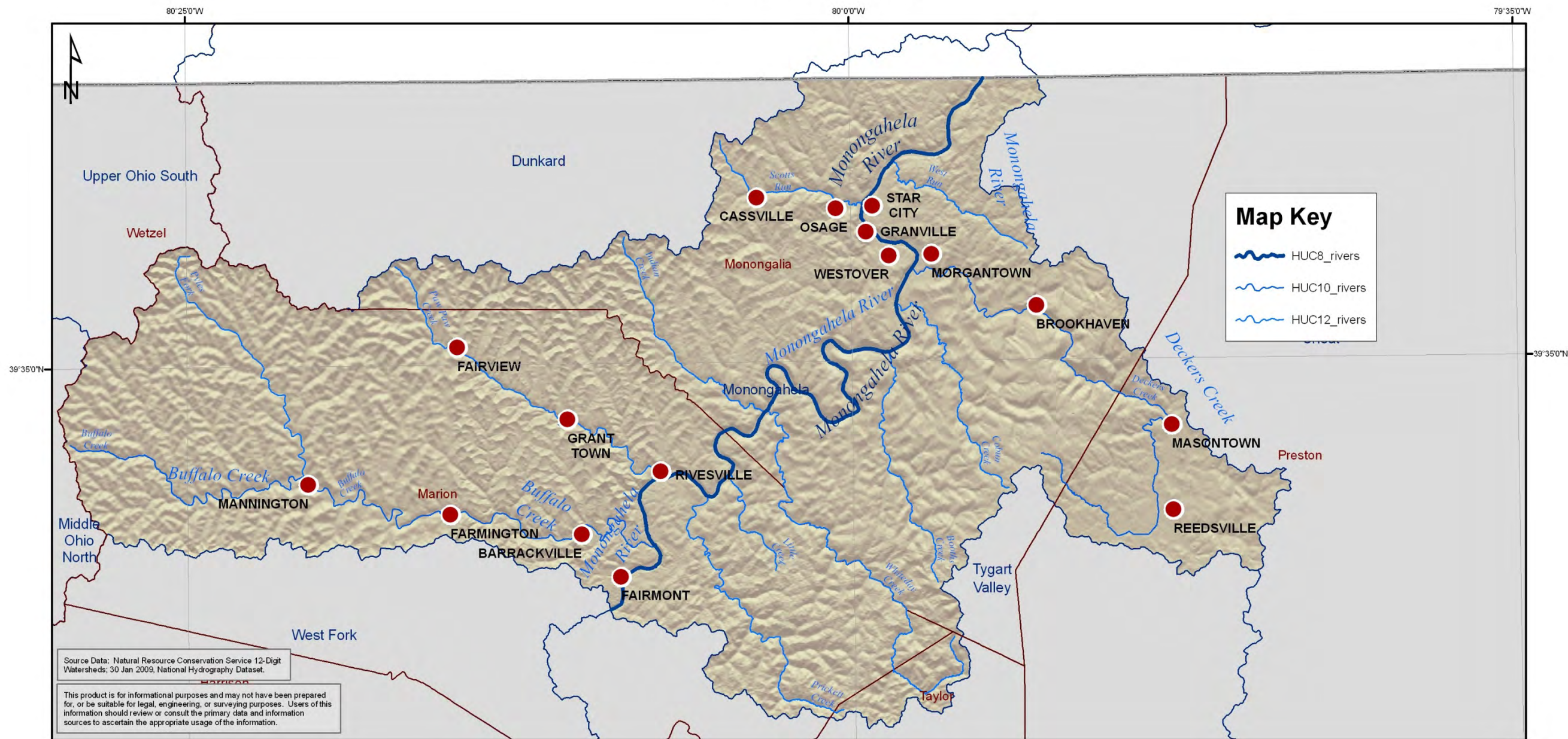
Documented Springs



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

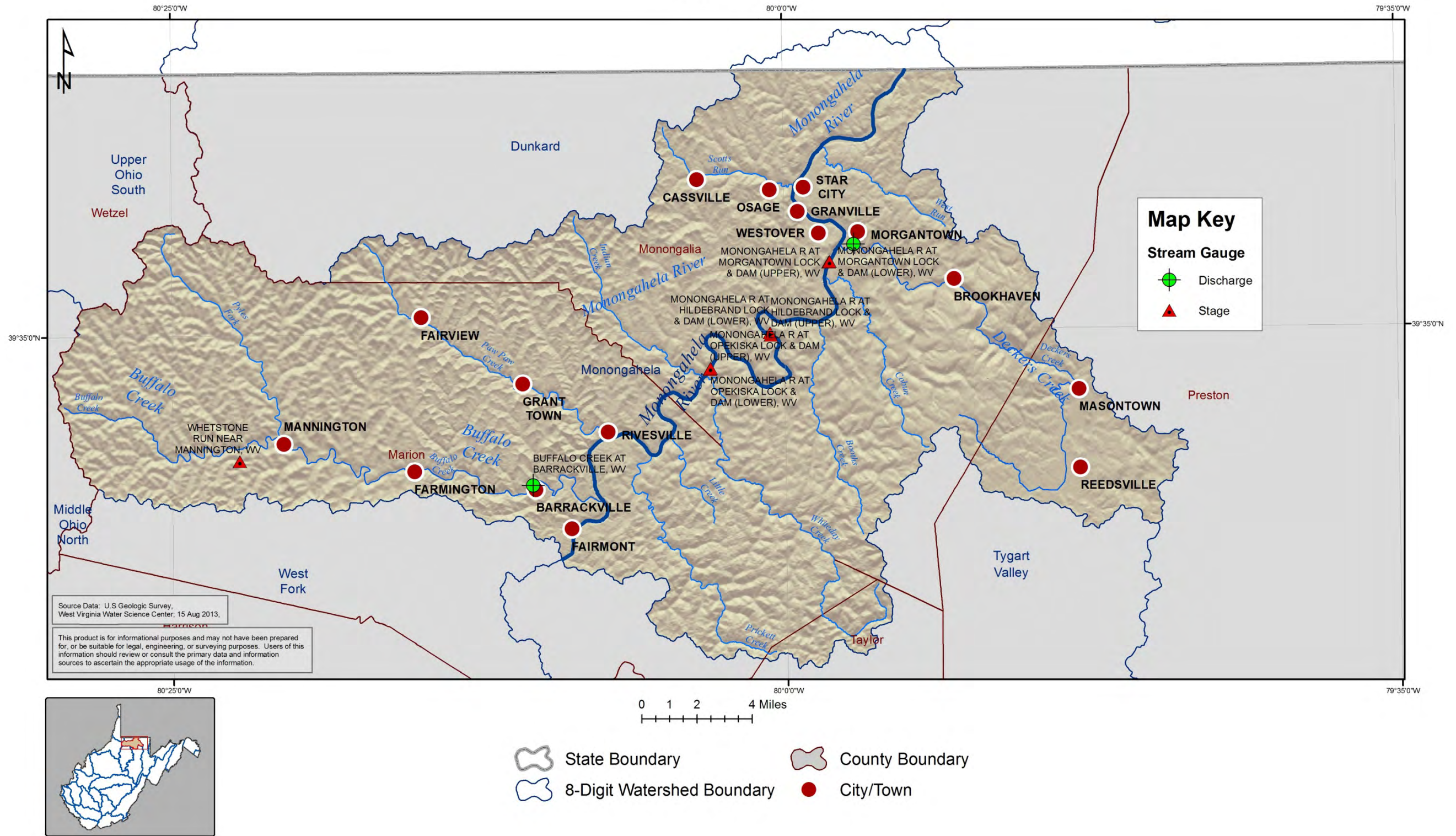
Monongahela HUC-8 Watershed

Stream Connections



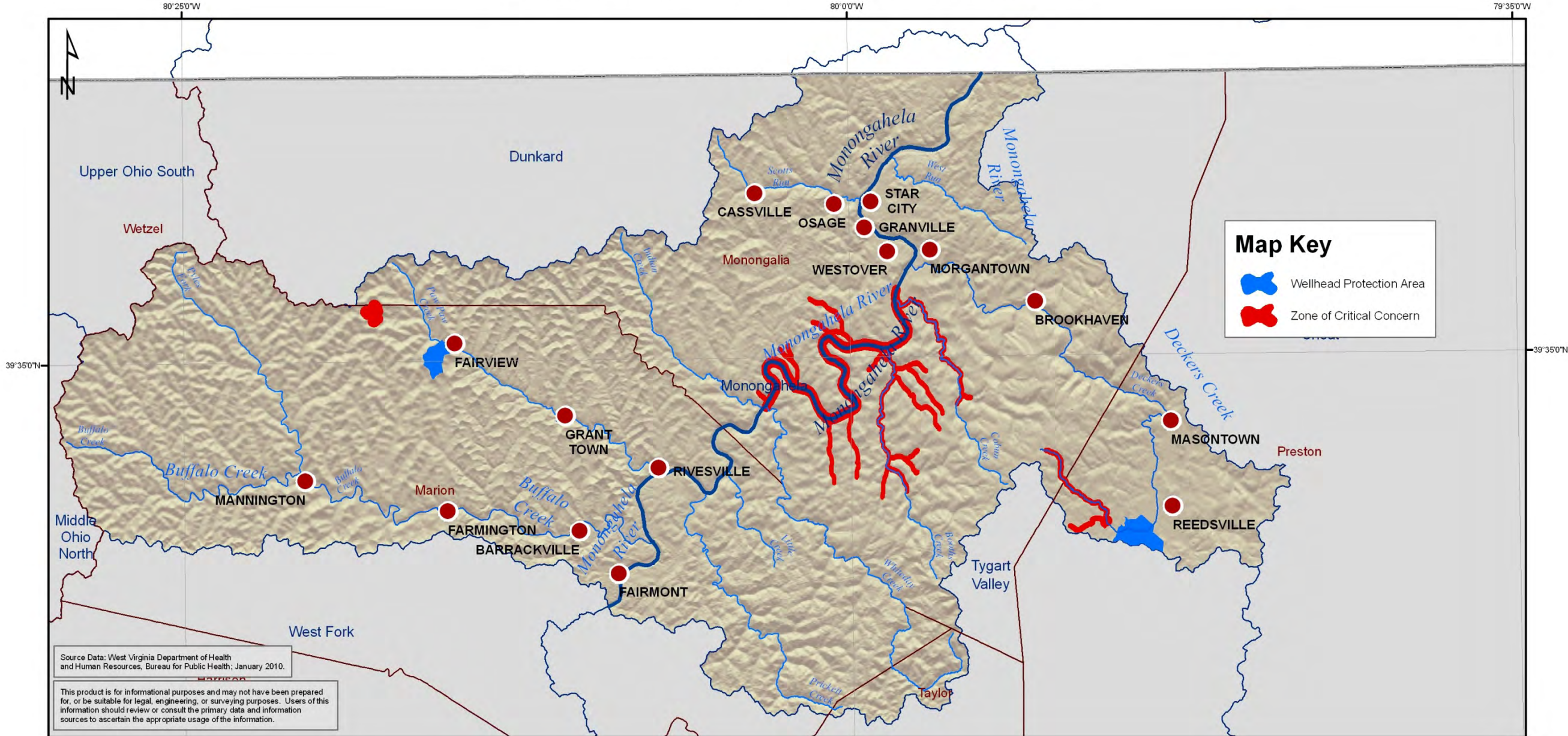
Monongahela HUC-8 Watershed

Stream Gauges



Monongahela HUC-8 Watershed

Source Water Assessment and Wellhead Protection Programs

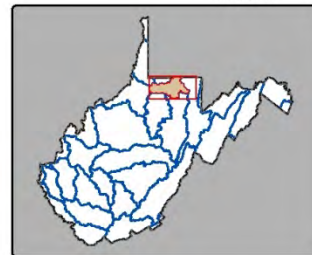
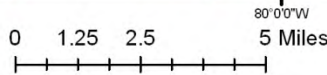


Map Key

- Wellhead Protection Area
- Zone of Critical Concern

Source Data: West Virginia Department of Health and Human Resources, Bureau for Public Health; January 2010.

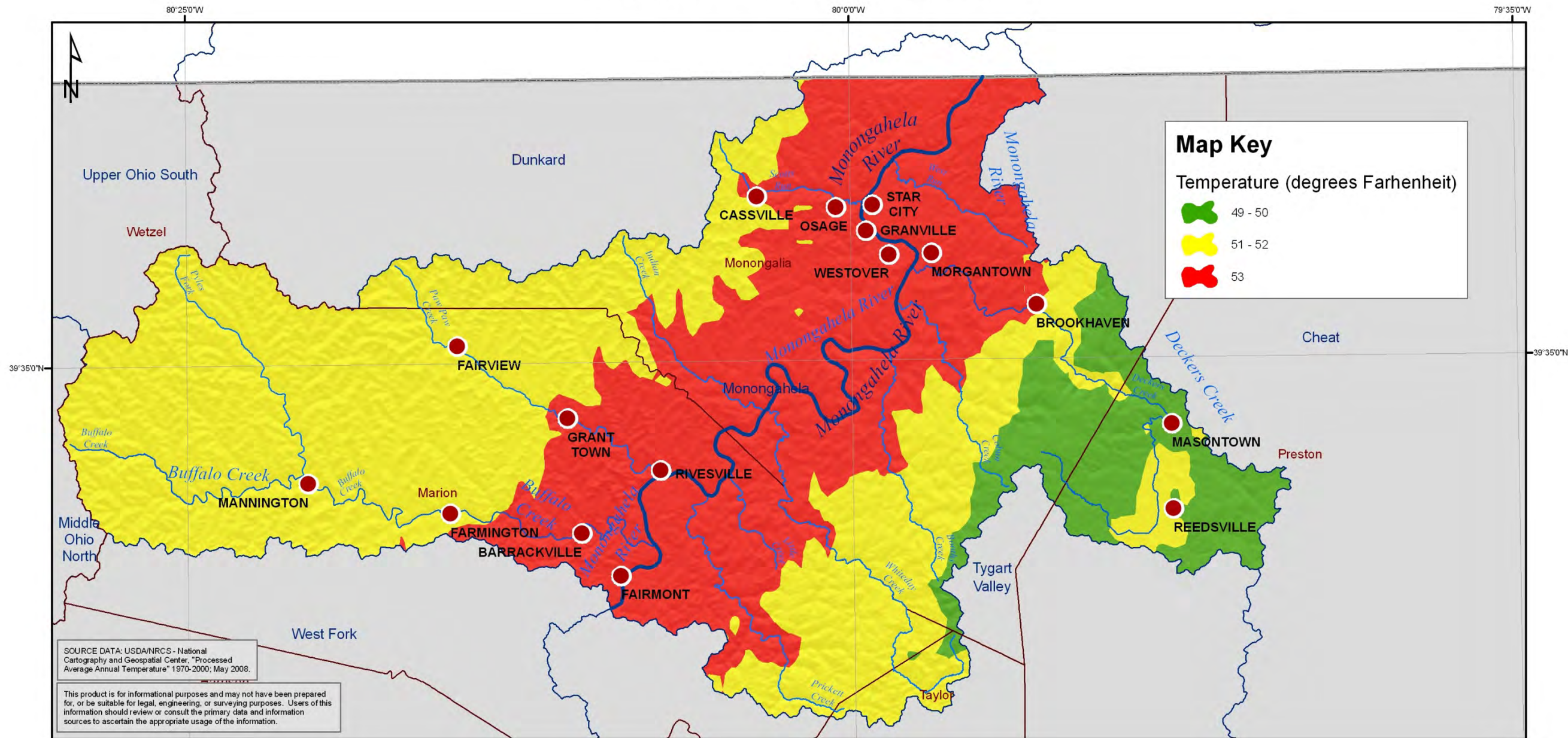
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Monongahela HUC-8 Watershed

Average Annual Temperature (1971-2000)



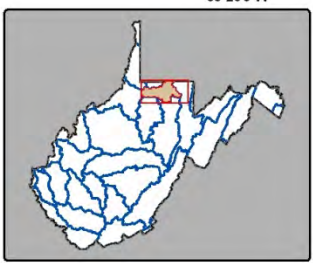
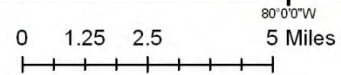
Map Key

Temperature (degrees Fahrenheit)

- 49 - 50
- 51 - 52
- 53

SOURCE DATA: USDA/NRCS - National Cartography and Geospatial Center, "Processed Average Annual Temperature" 1970-2000; May 2008.

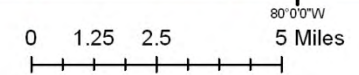
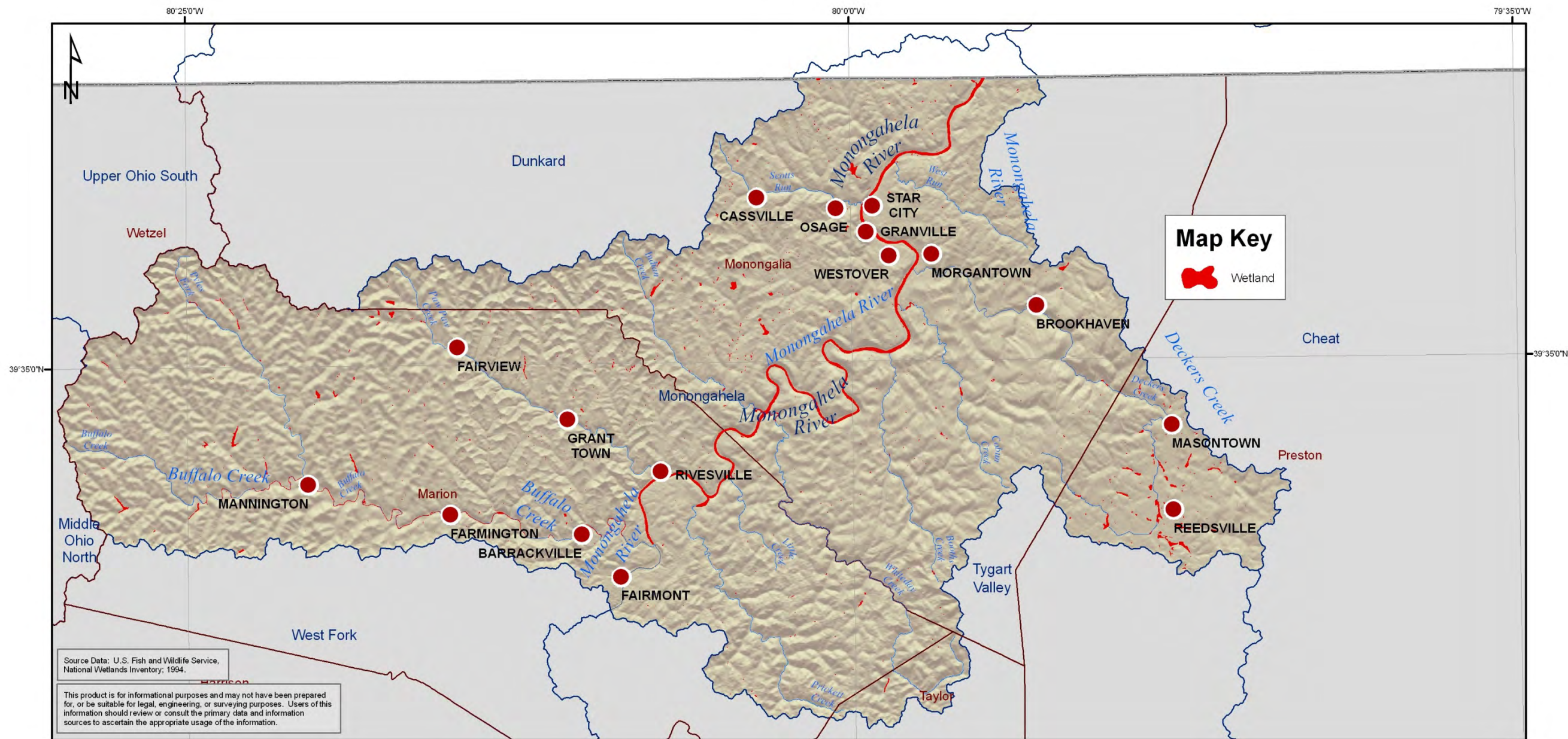
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Monongahela HUC-8 Watershed

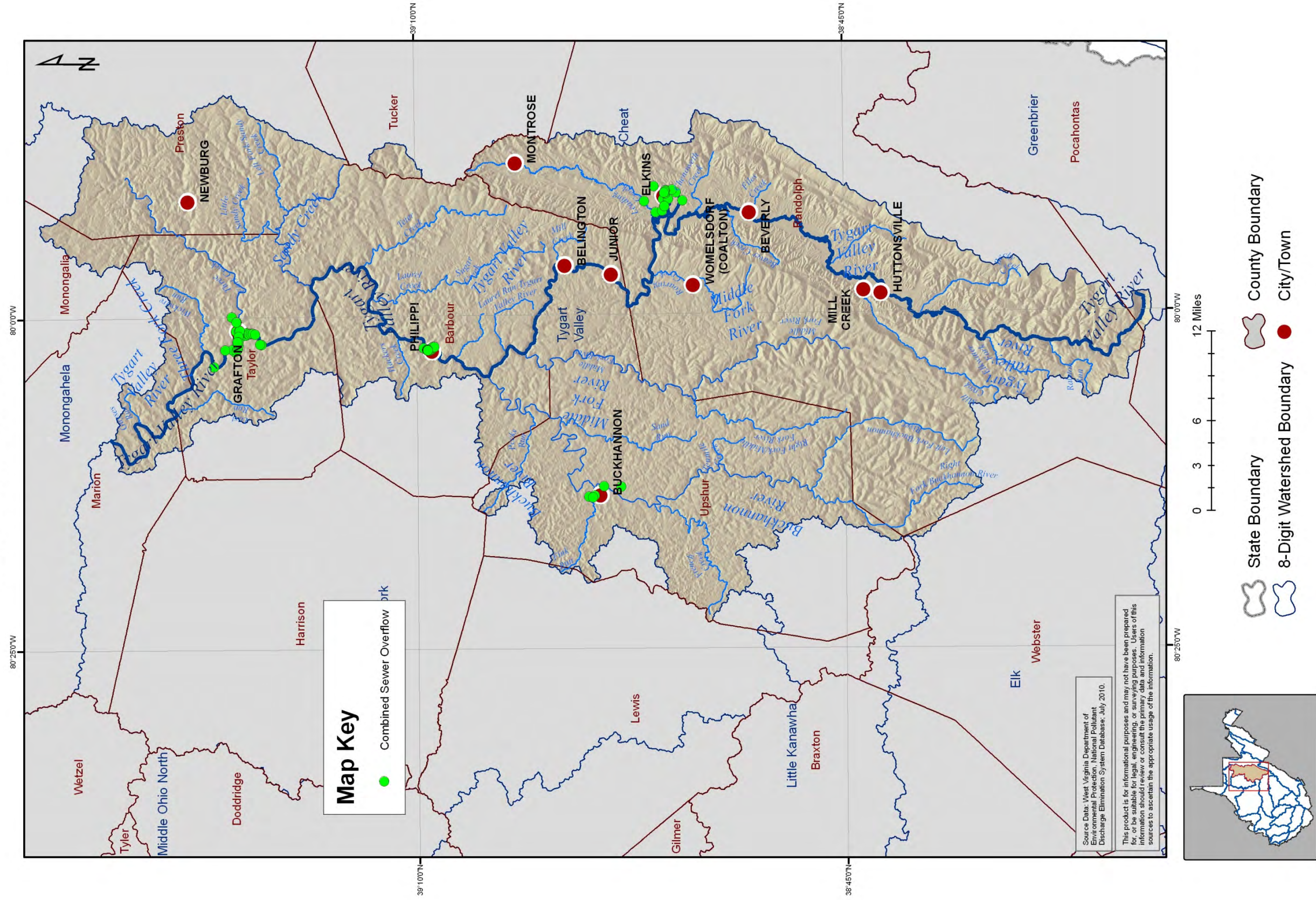
Wetlands



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

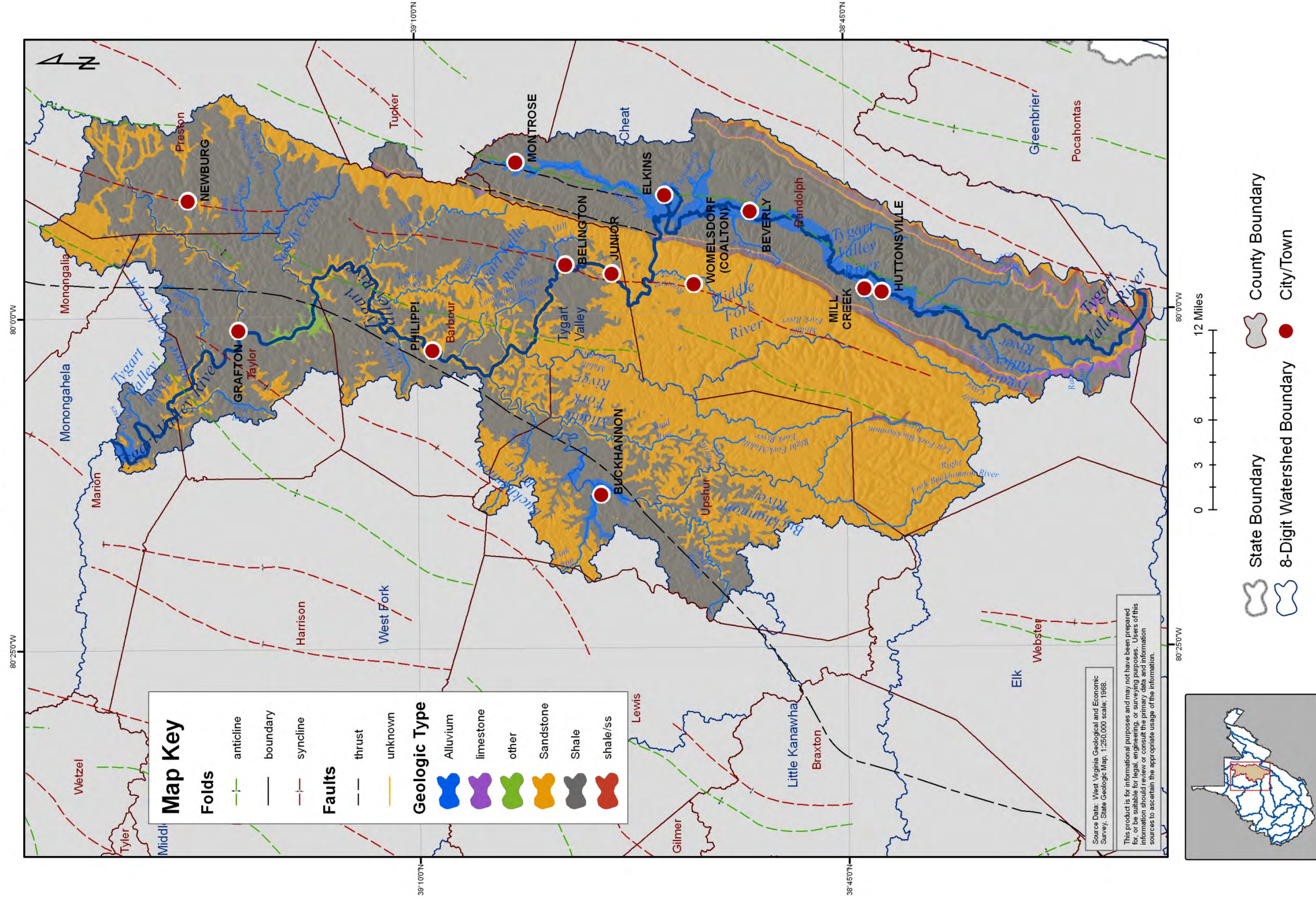
Tygart Valley HUC-8 Watershed

Combined Sewer Overflows



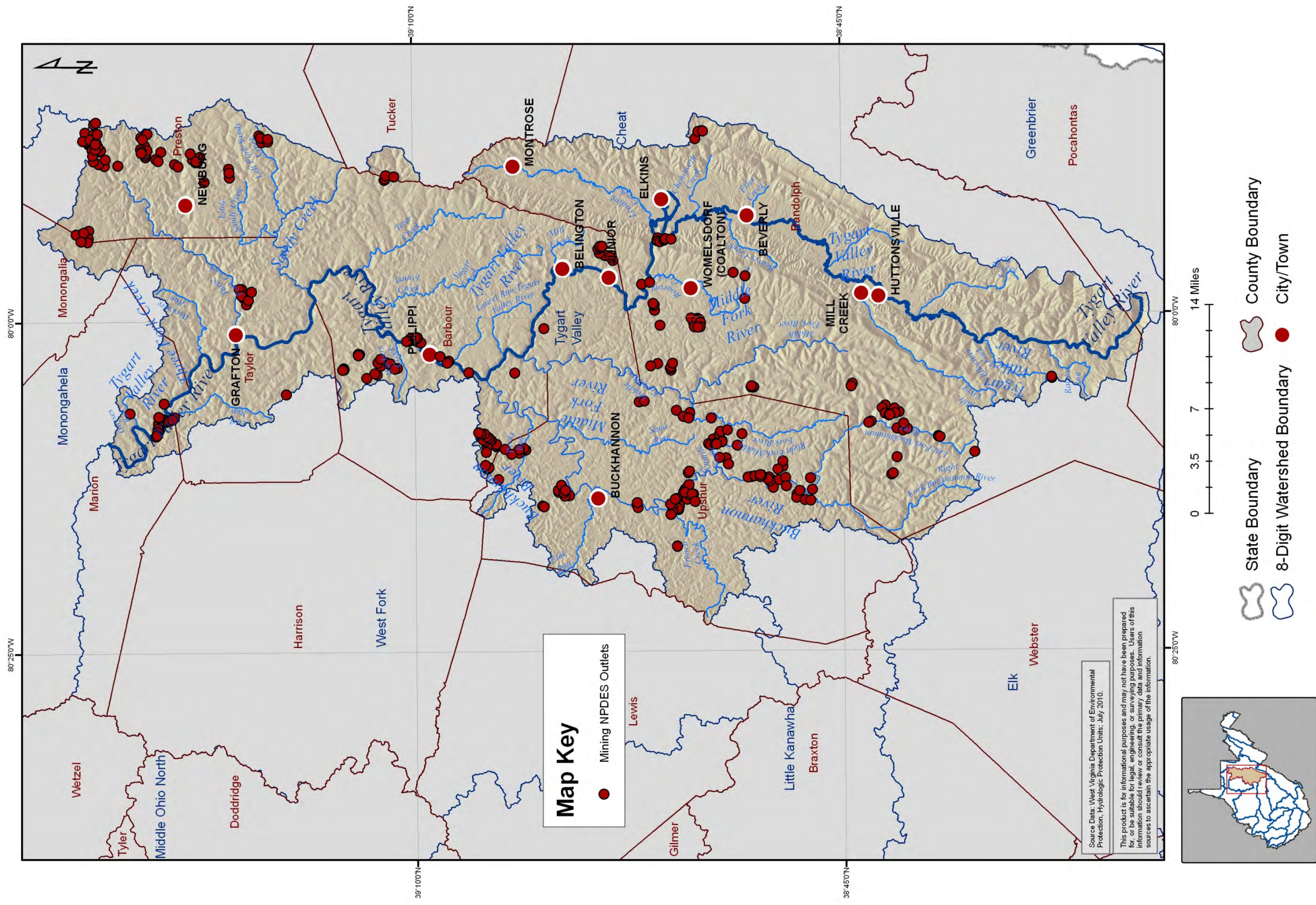
Tygart Valley HUC-8 Watershed

Surface Geology



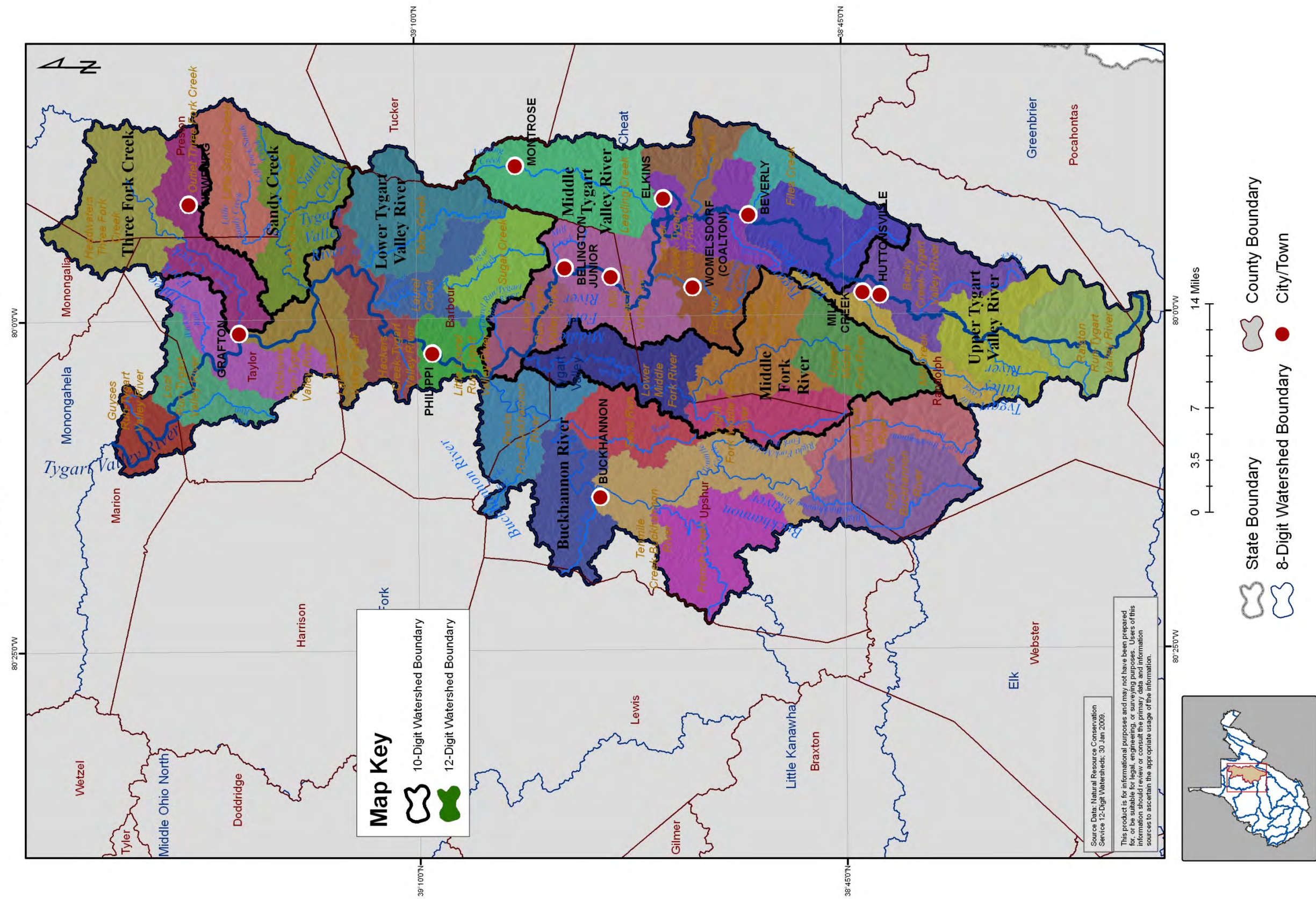
Tygart Valley HUC-8 Watershed

Mining Related NPDES Outlets



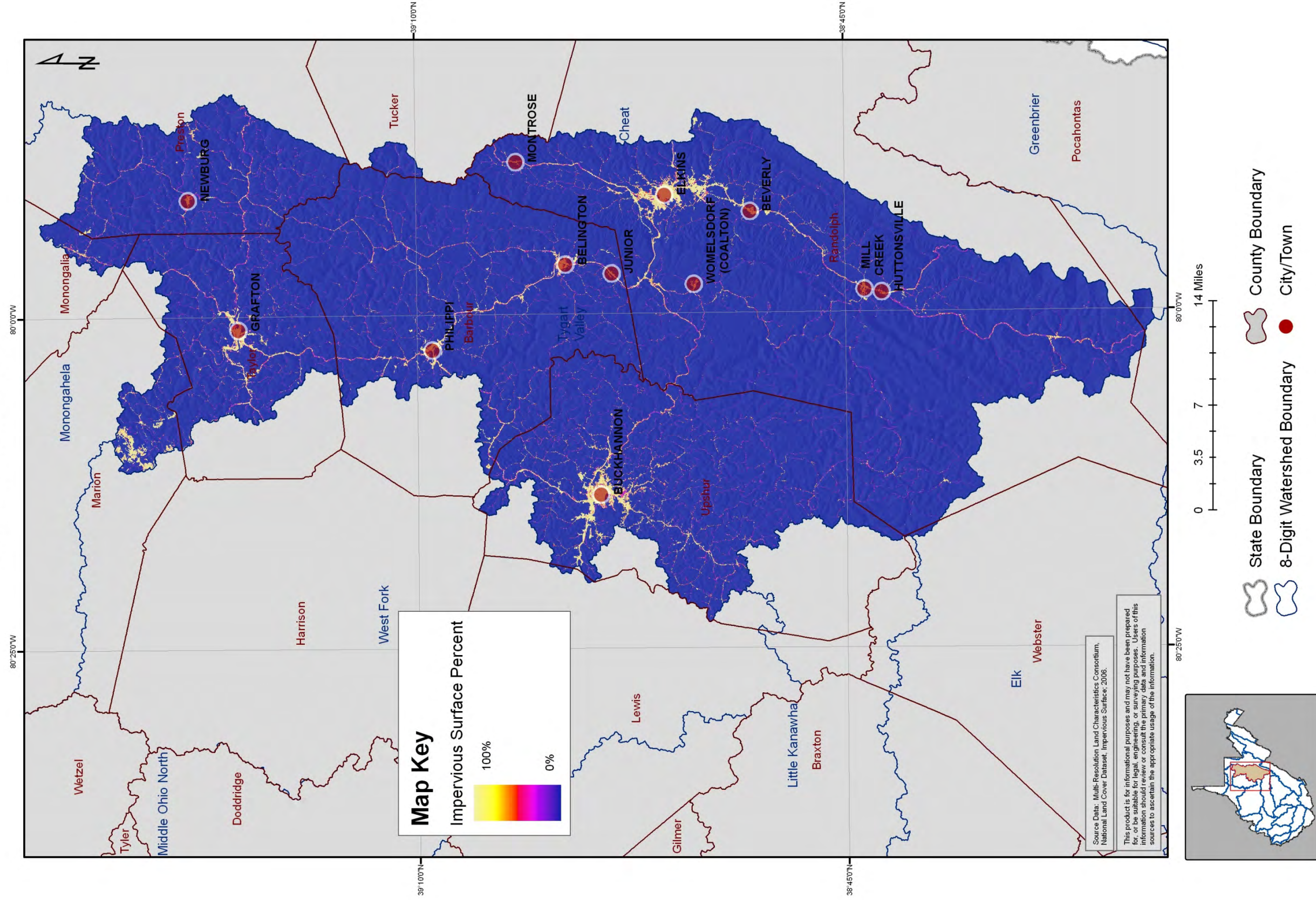
Tygart Valley HUC-8 Watershed

HUC 10 and HUC 12 Watersheds



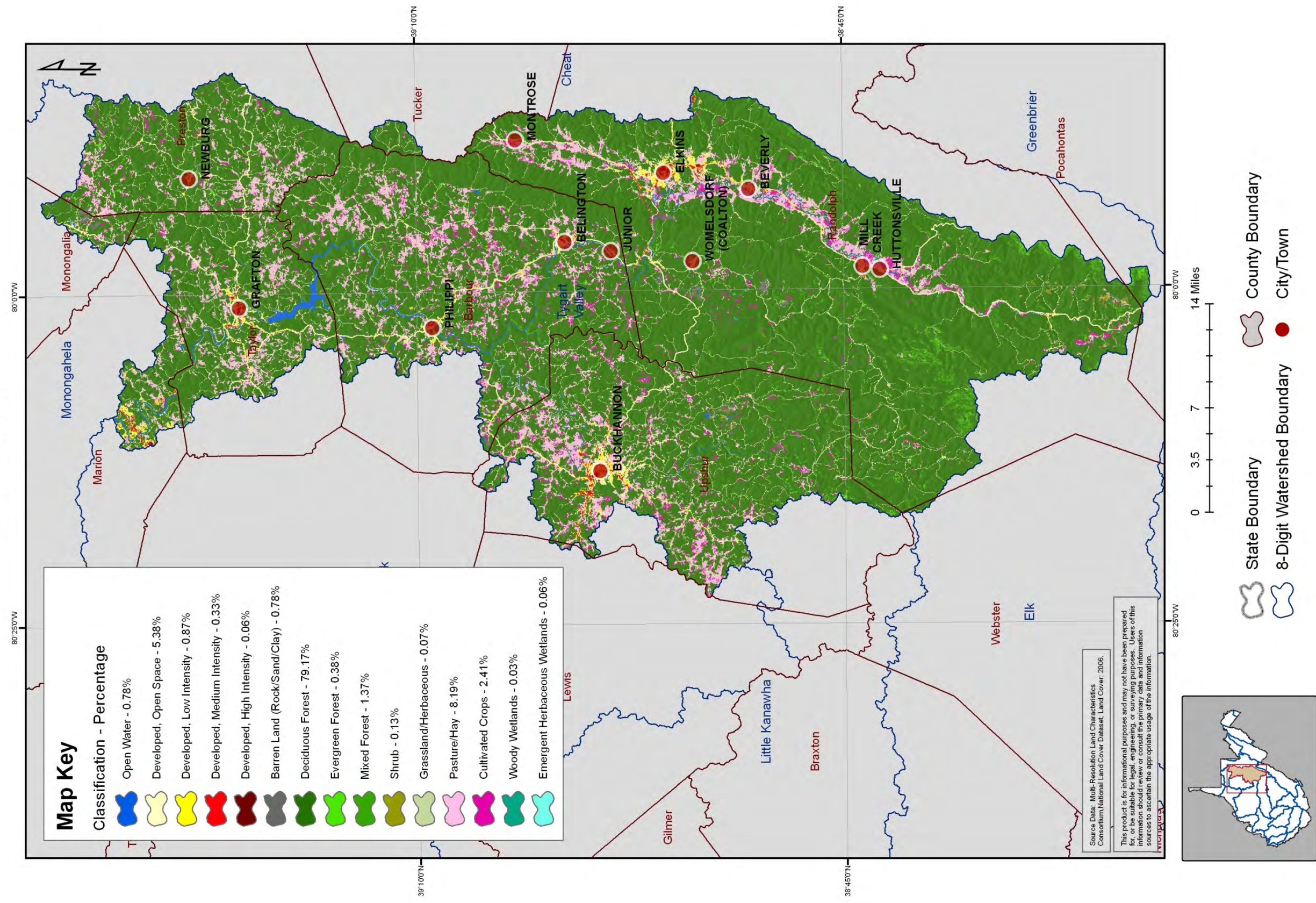
Tygart Valley HUC-8 Watershed

2006 Impervious Surfaces



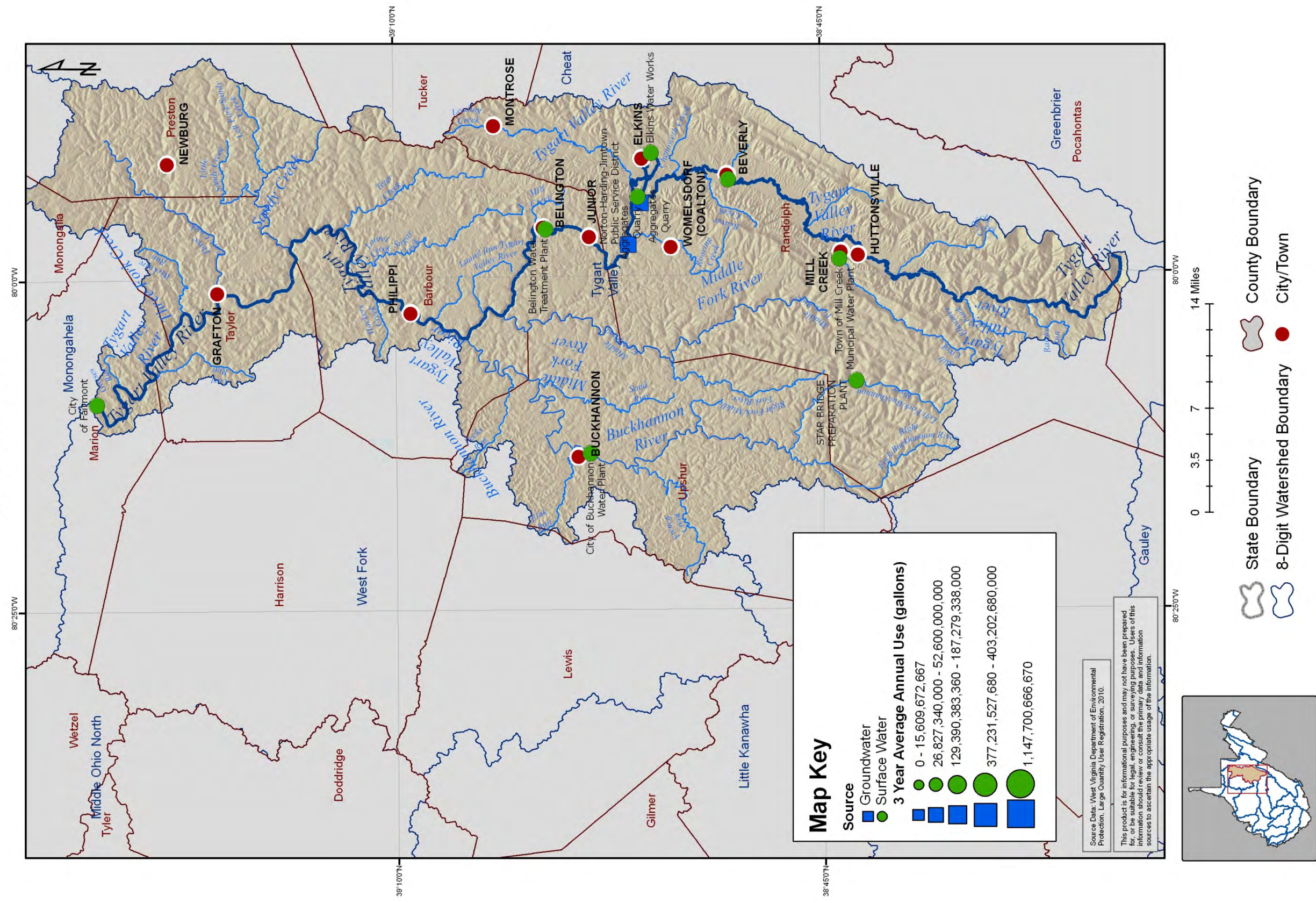
Tygart Valley HUC-8 Watershed

2006 Land Cover



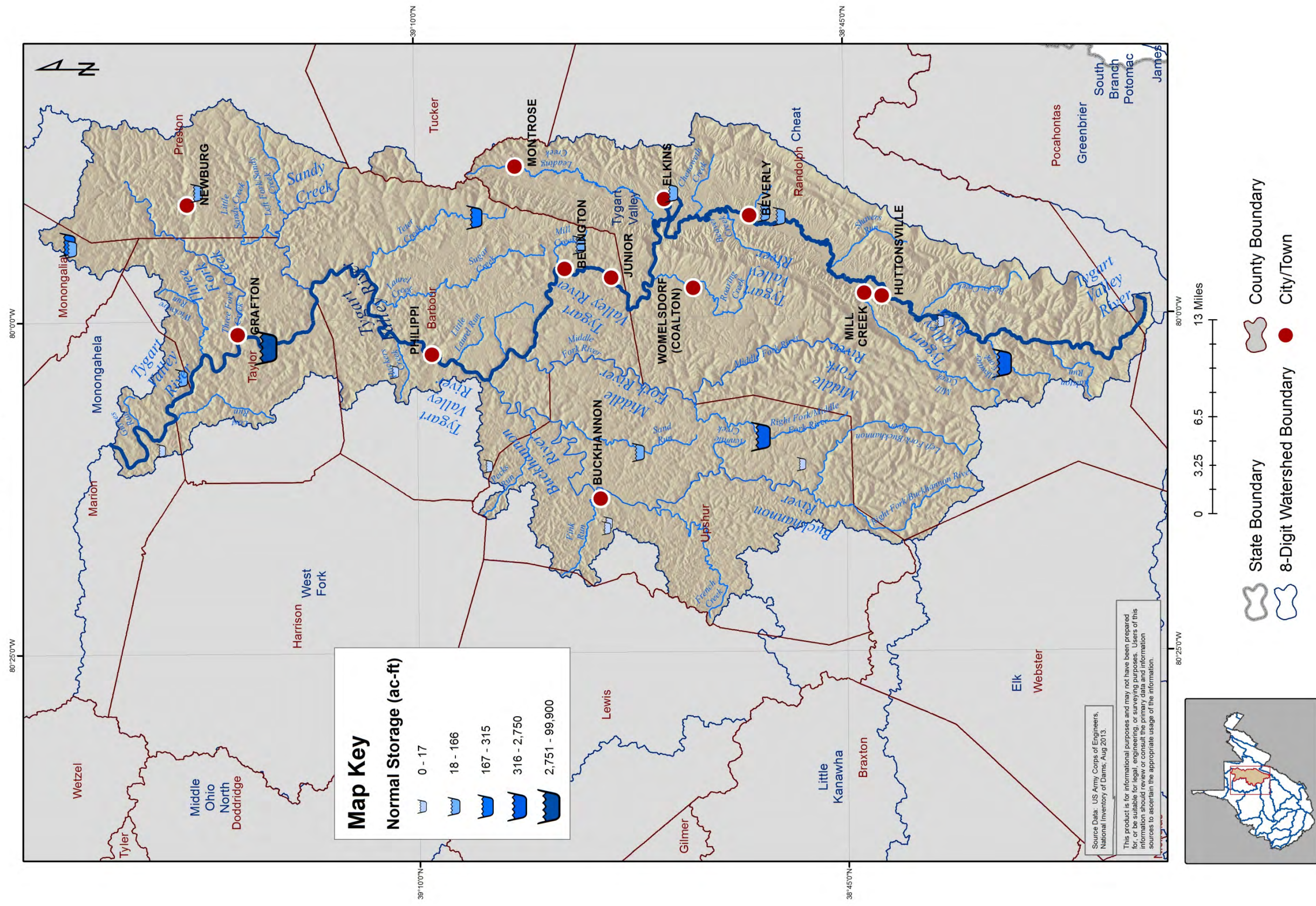
Tygart Valley HUC-8 Watershed

Large Quantity Users



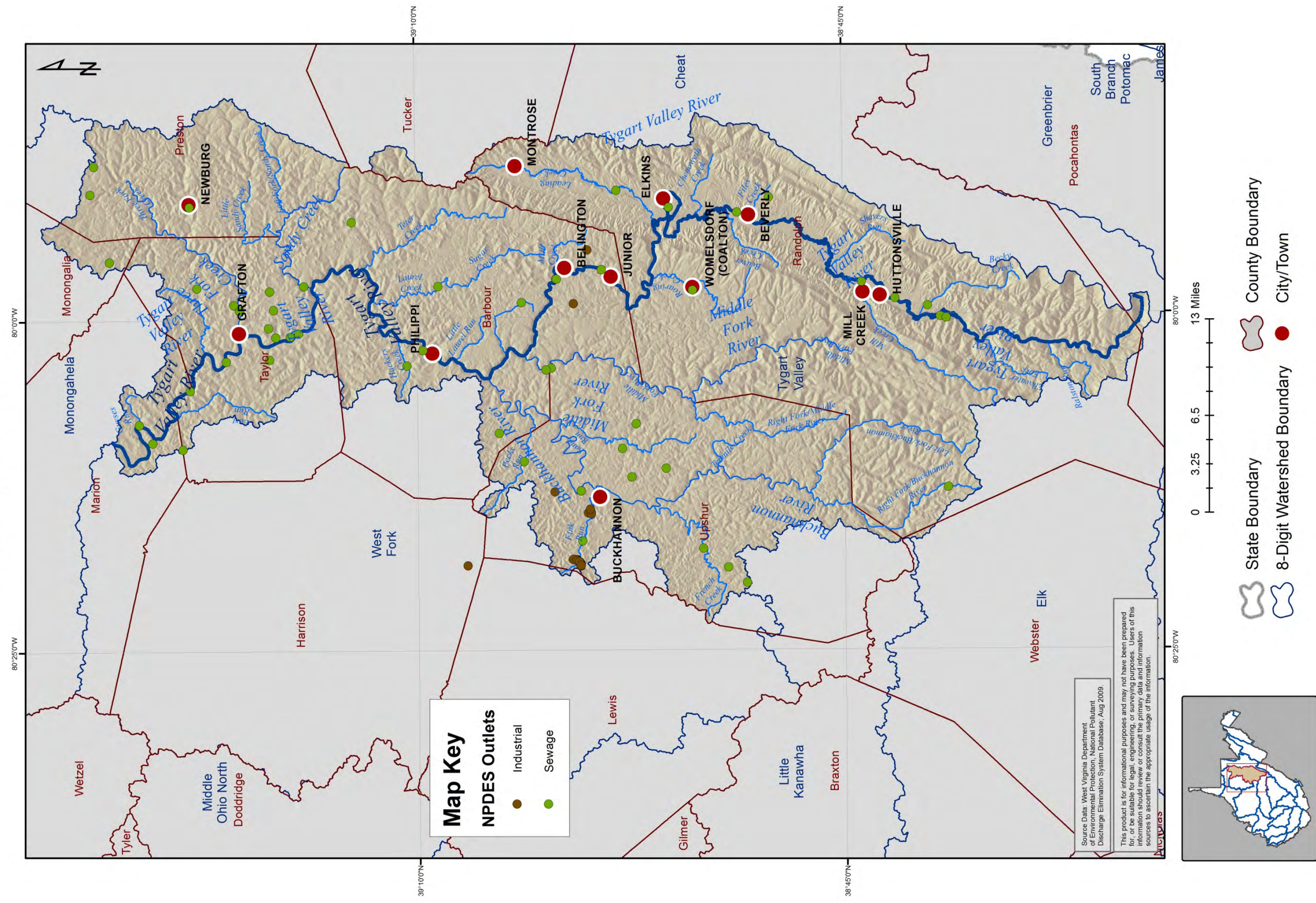
Tygart Valley HUC-8 Watershed

Permitted Dams



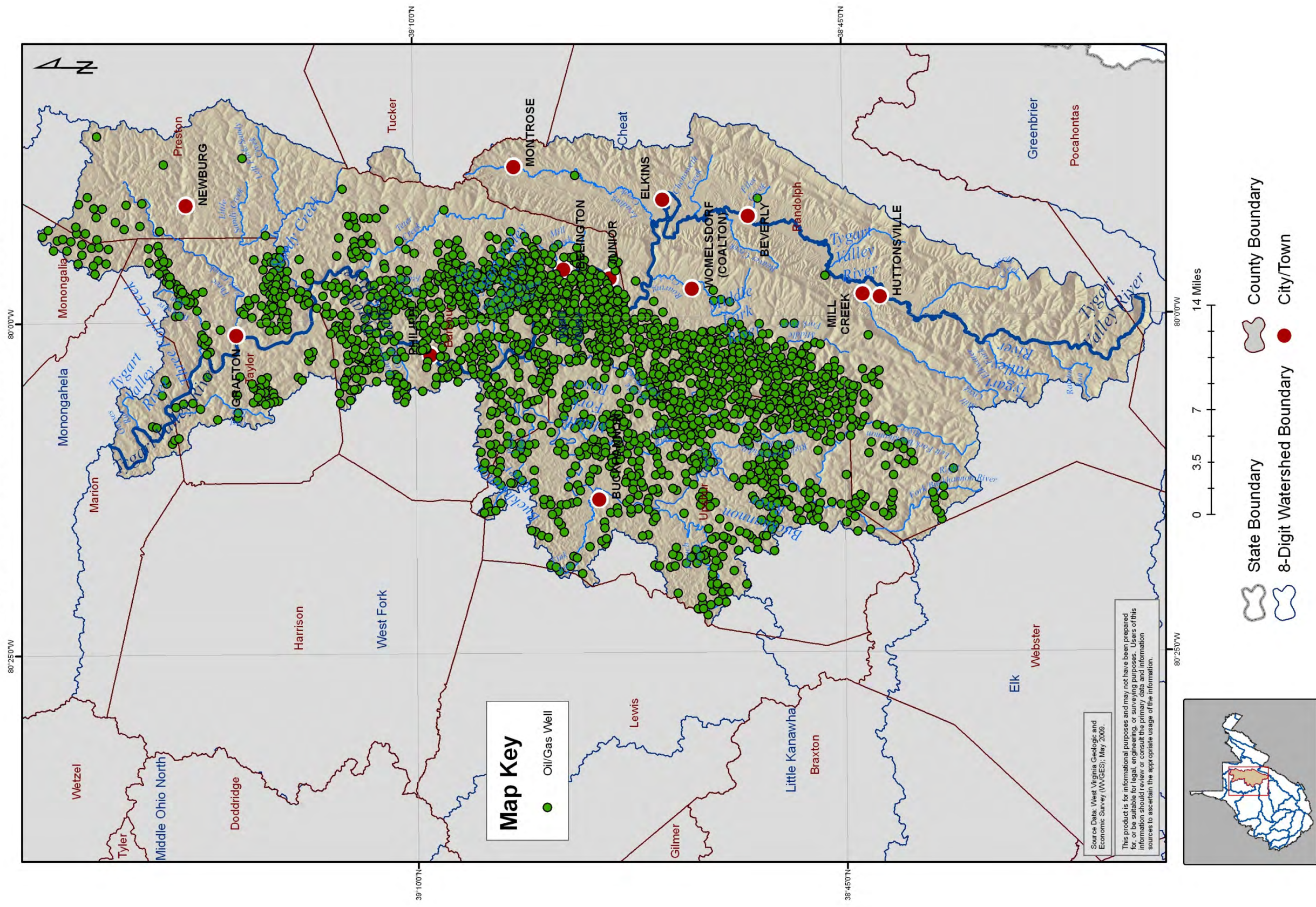
Tygart Valley HUC-8 Watershed

Non-Mining NPDES Outlets



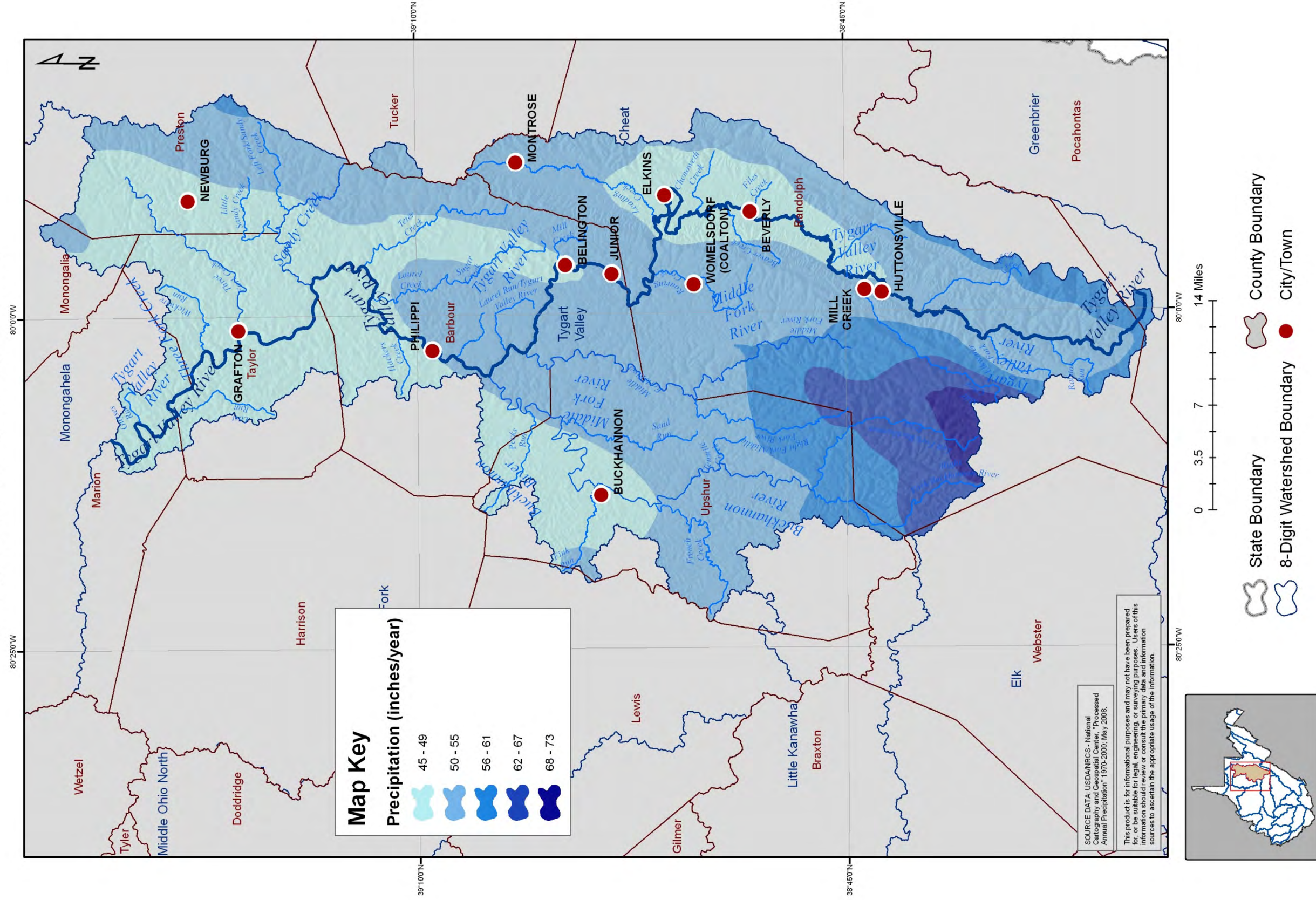
Tygart Valley HUC-8 Watershed

Well Logs with Gamma Rays and Water Shows



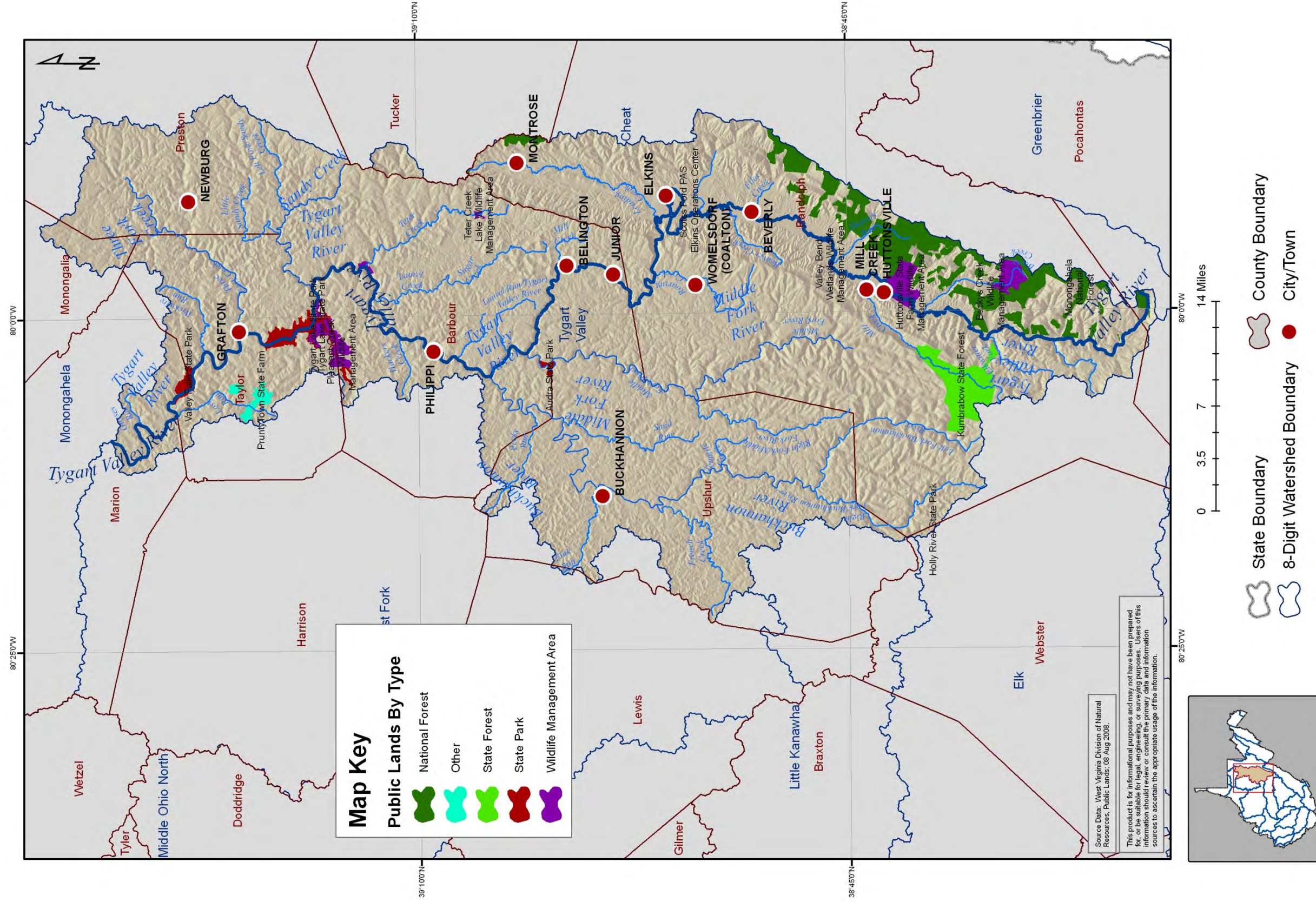
Tygart Valley HUC-8 Watershed

Average Annual Precipitation (1971-2000)



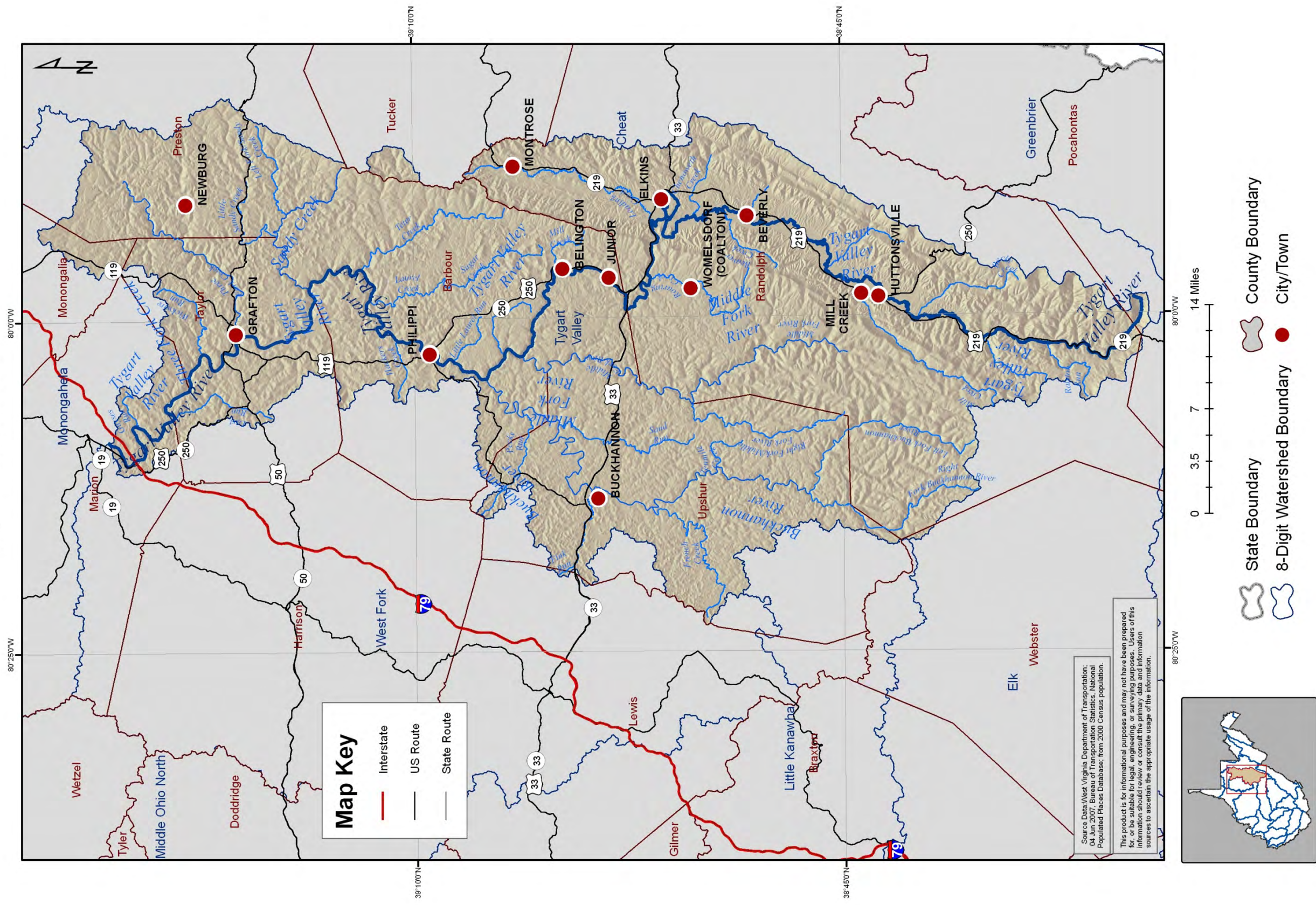
Tygart Valley HUC-8 Watershed

Public Lands



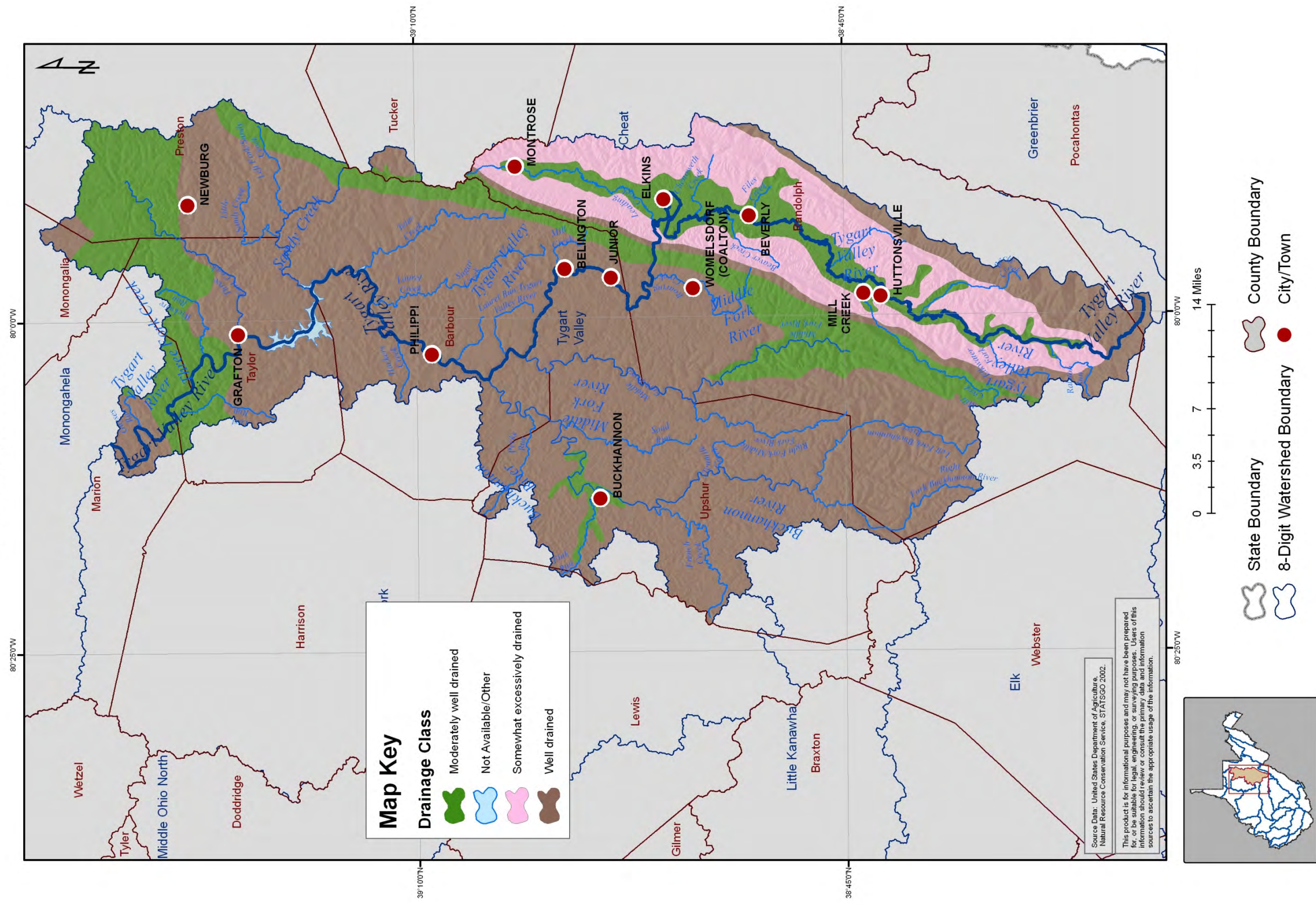
Tygart Valley HUC-8 Watershed

Major Roads and Cities



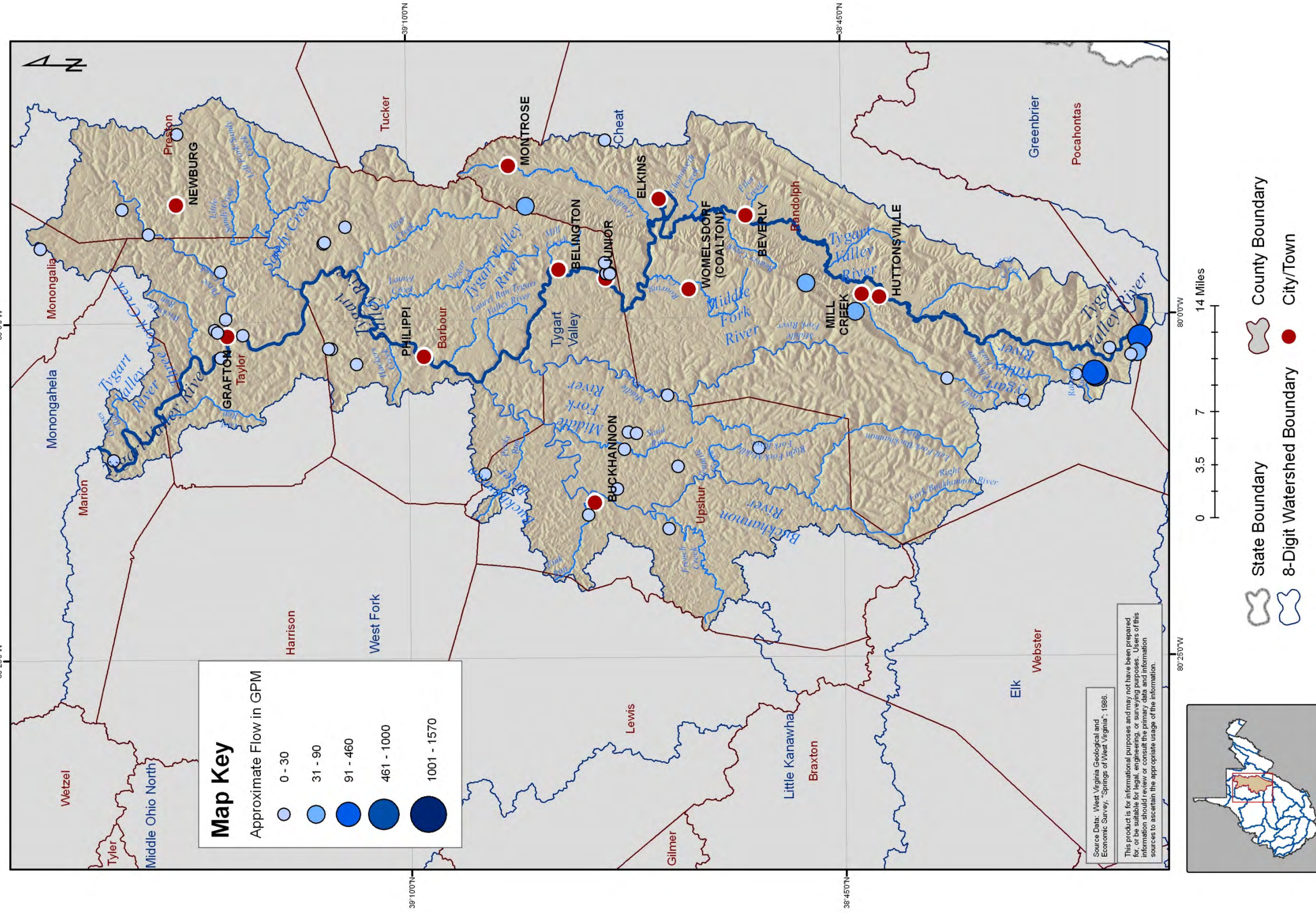
Tygart Valley HUC-8 Watershed

Soil Drainage Classes



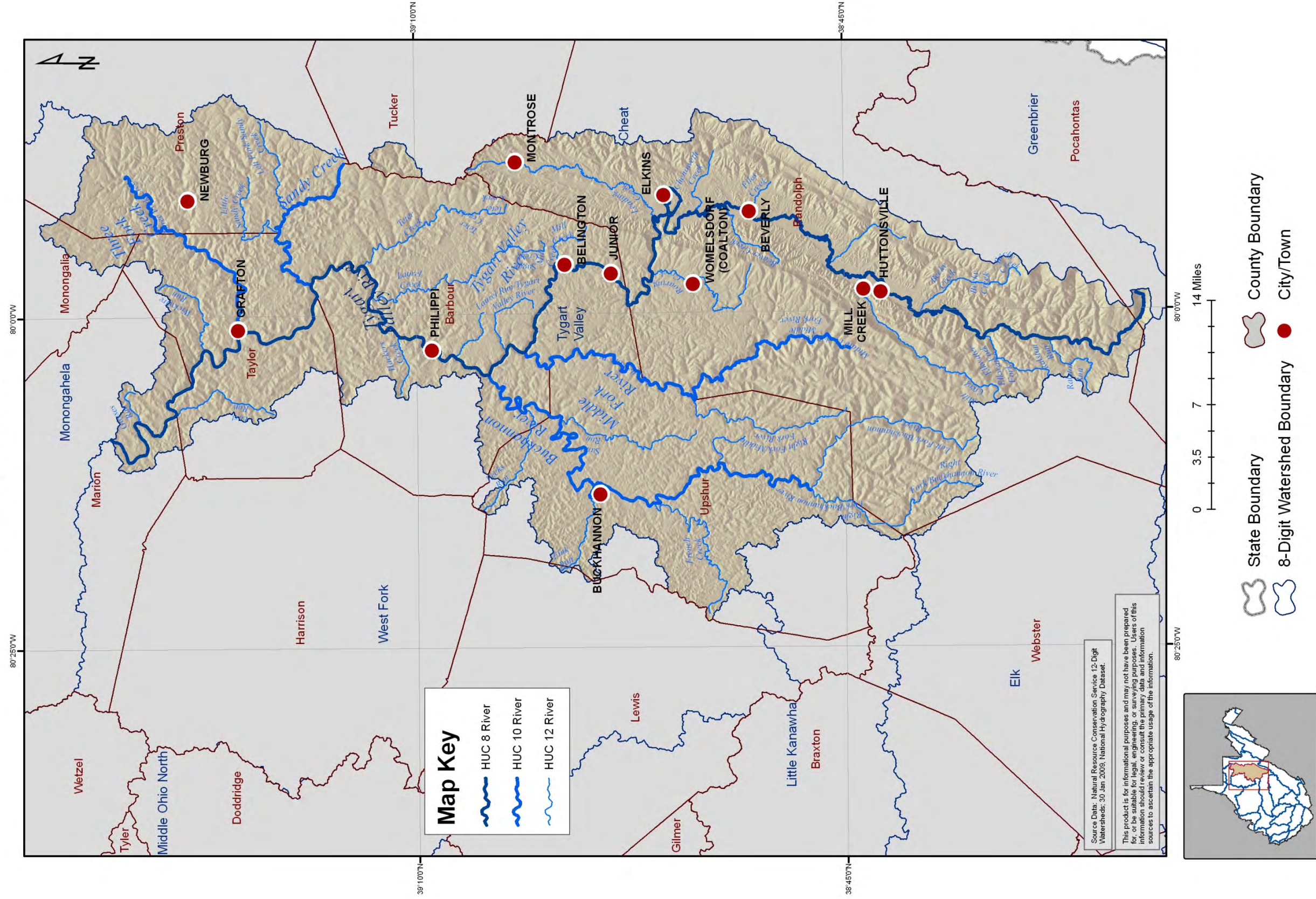
Tygart Valley HUC-8 Watershed

Documented Springs



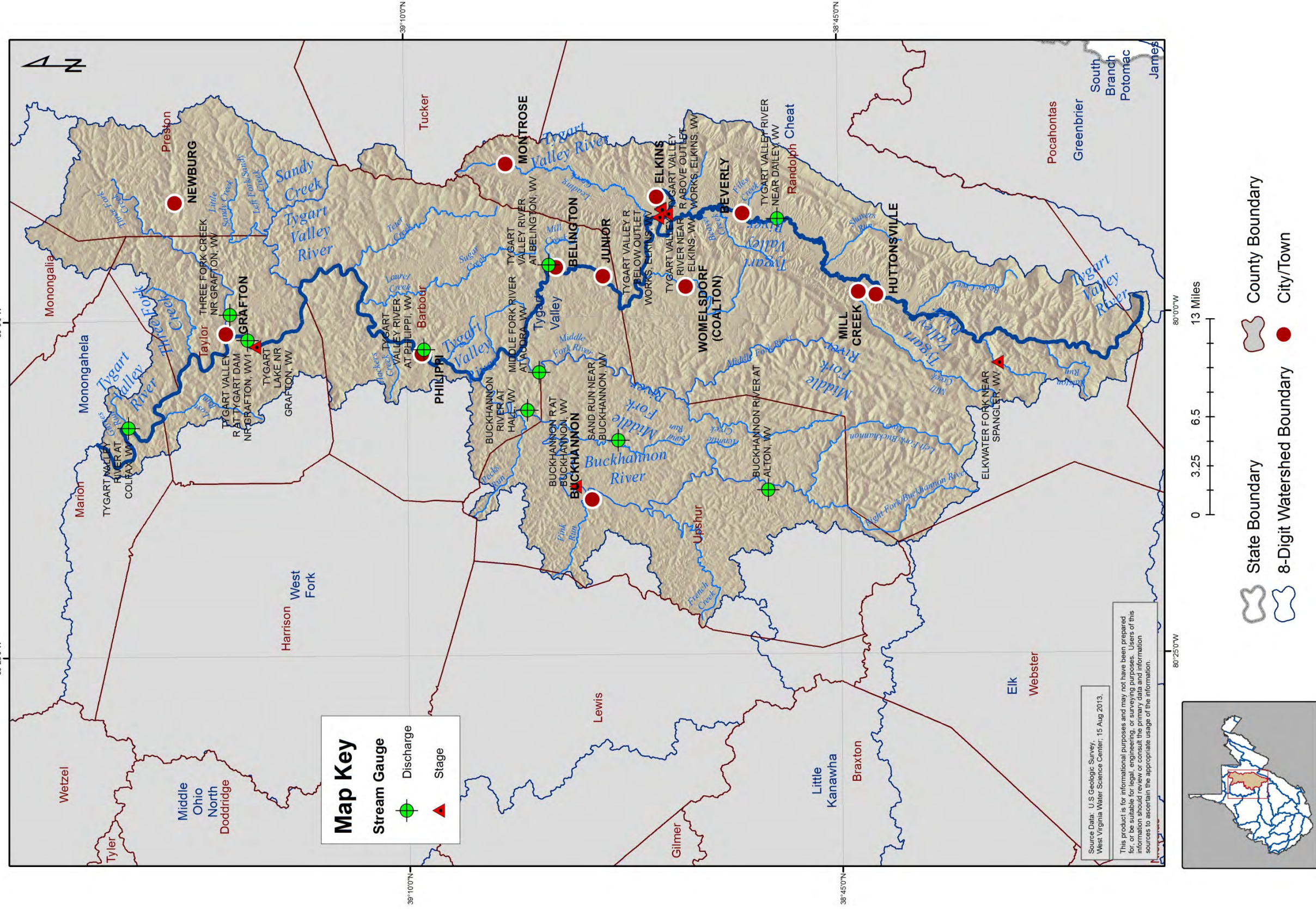
Tygart Valley HUC-8 Watershed

Stream Connections



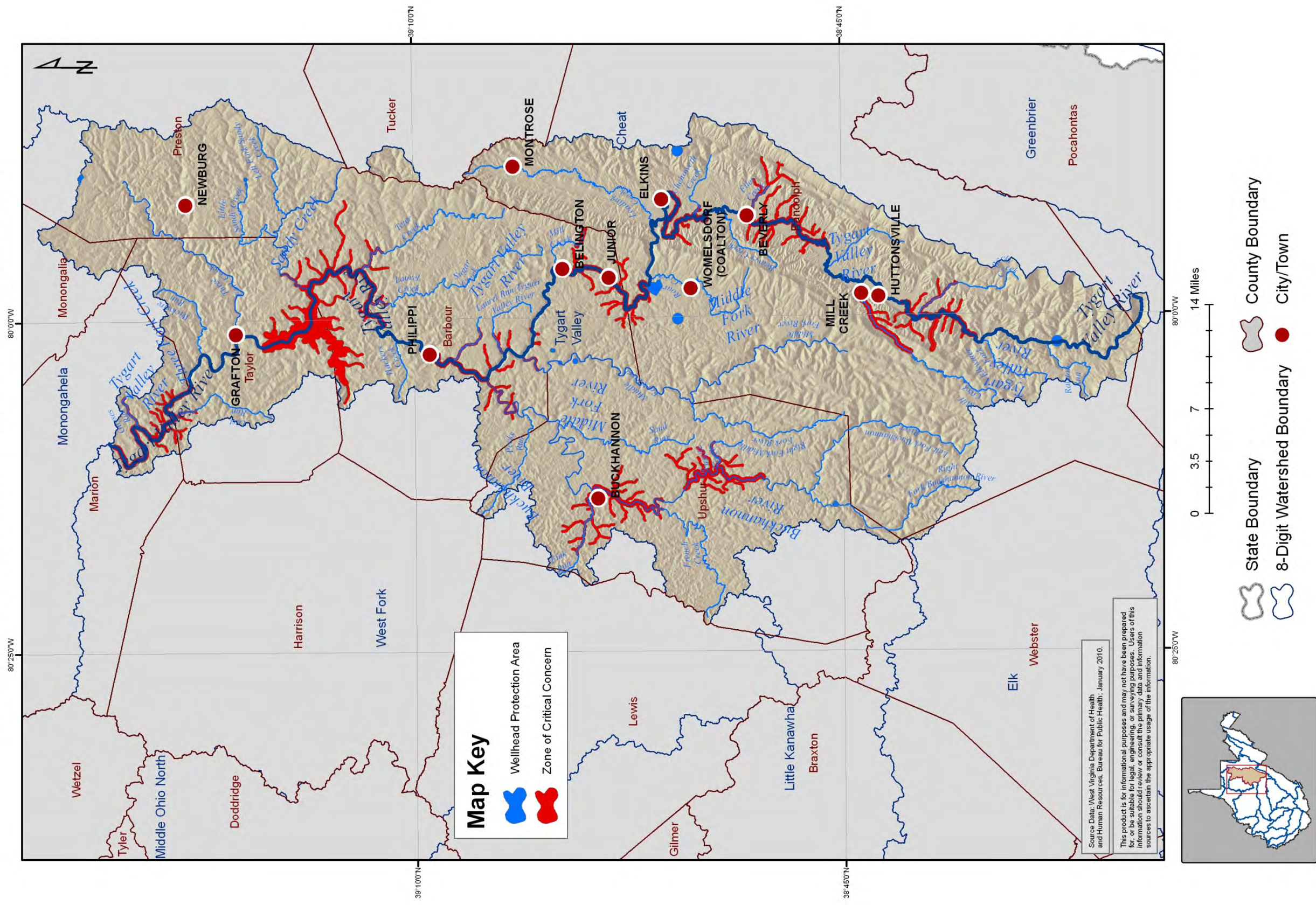
Tygart Valley HUC-8 Watershed

Stream Gauges



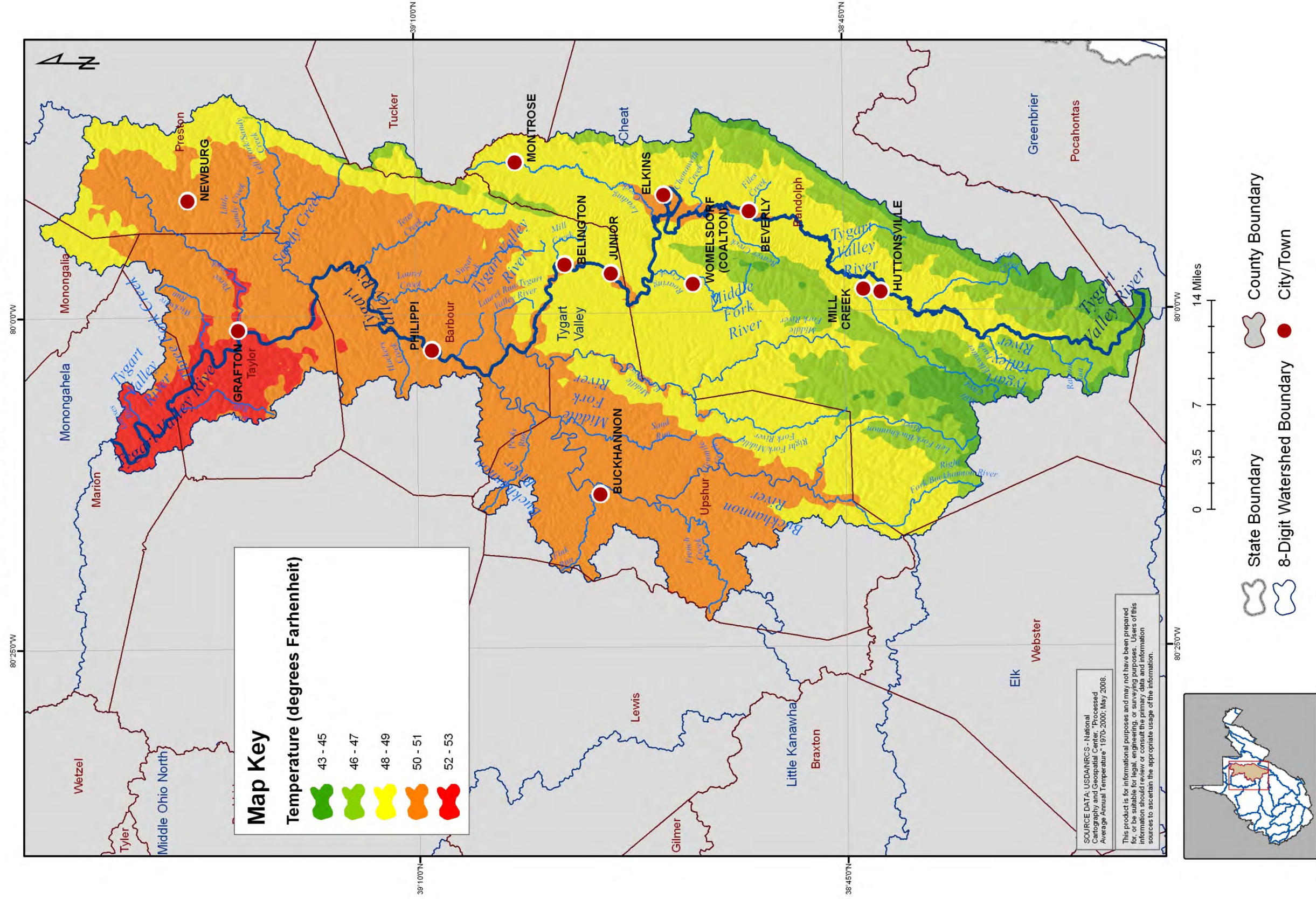
Tygart Valley HUC-8 Watershed

Source Water Assessment and Wellhead Protection Programs



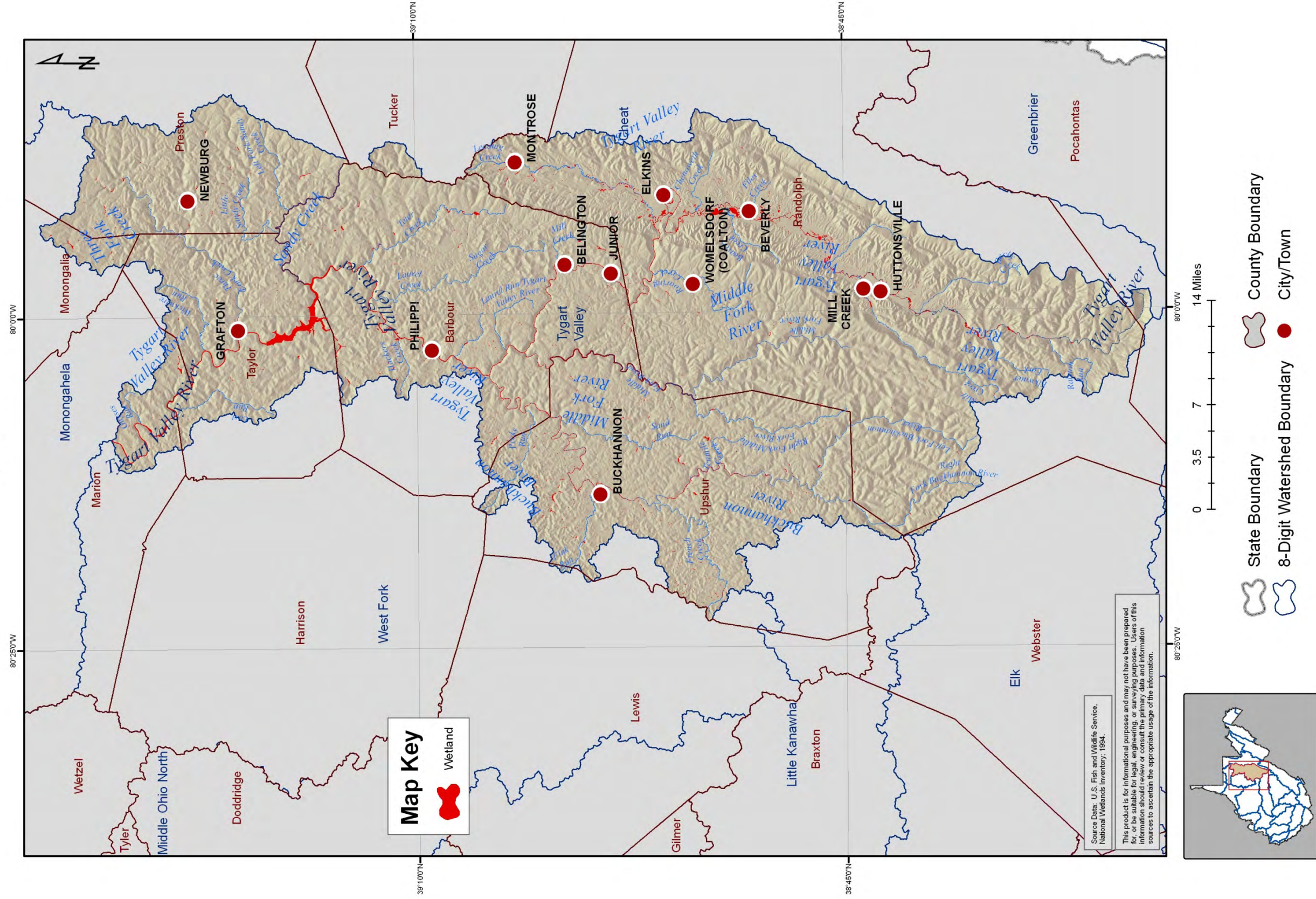
Tygart Valley HUC-8 Watershed

Average Annual Temperature (1971-2000)



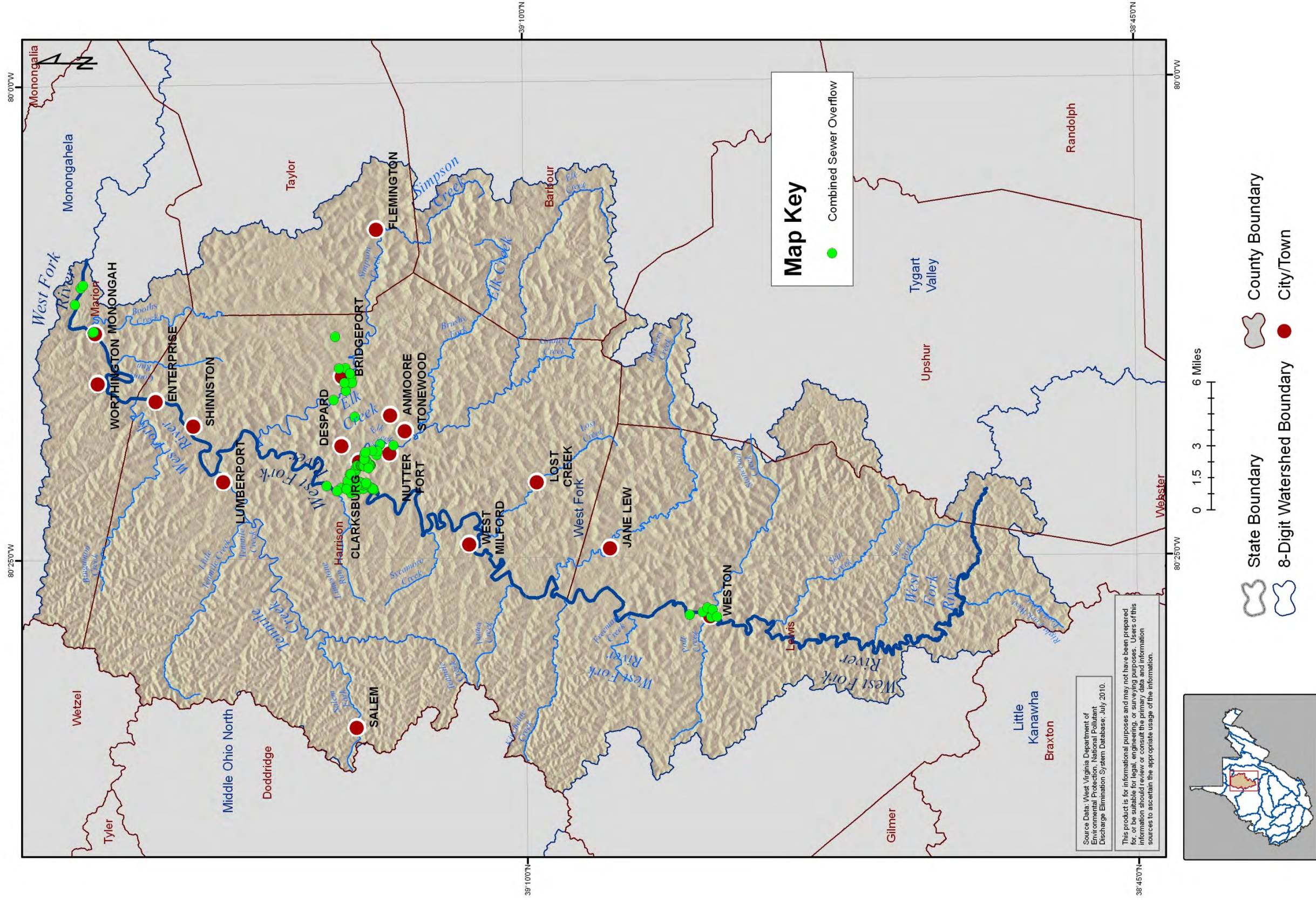
Tygart Valley HUC-8 Watershed

Wetlands



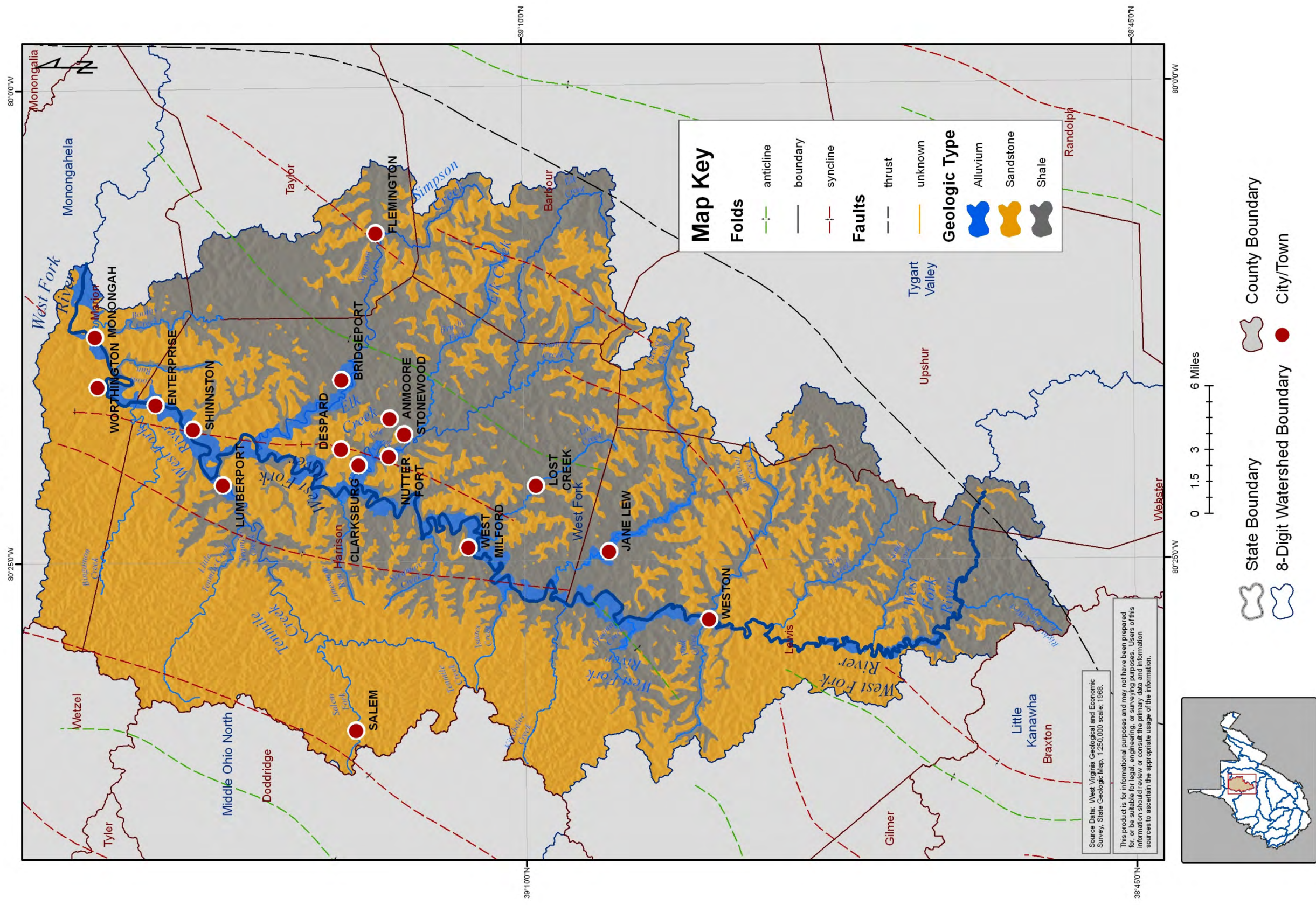
West Fork HUC-8 Watershed

Combined Sewer Overflows



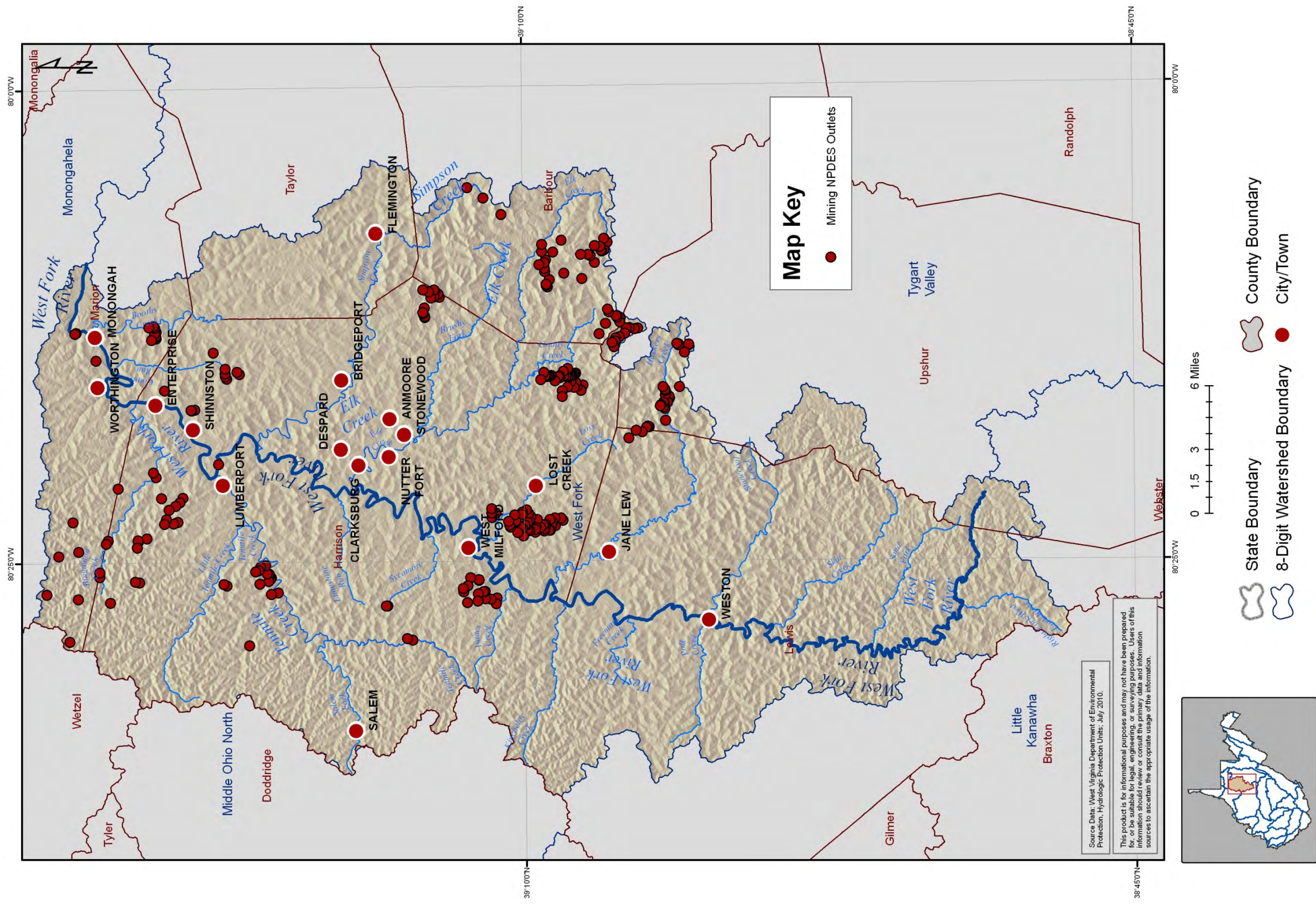
West Fork HUC-8 Watershed

Surface Geology



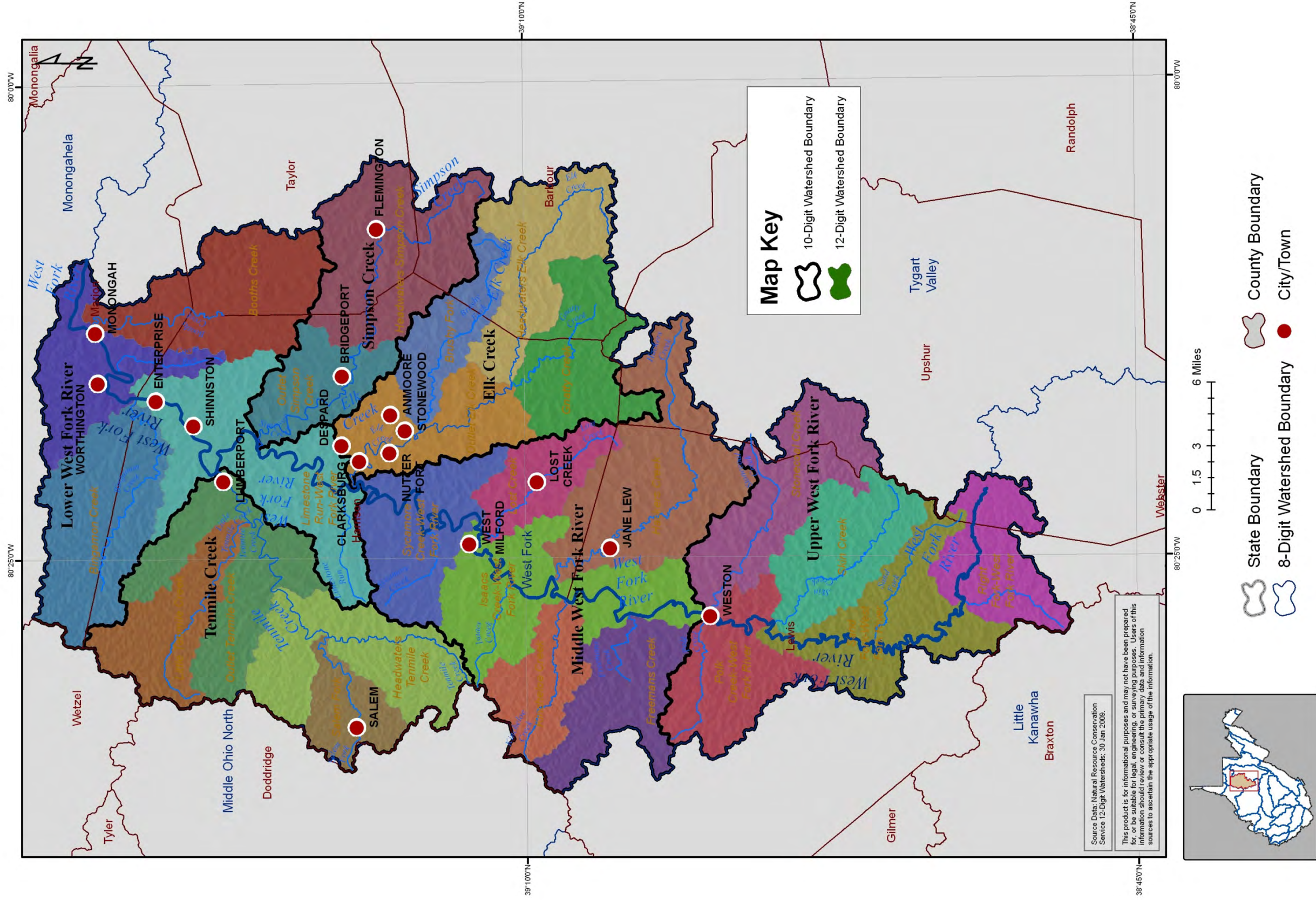
West Fork HUC-8 Watershed

Mining Related NPDES Outlets



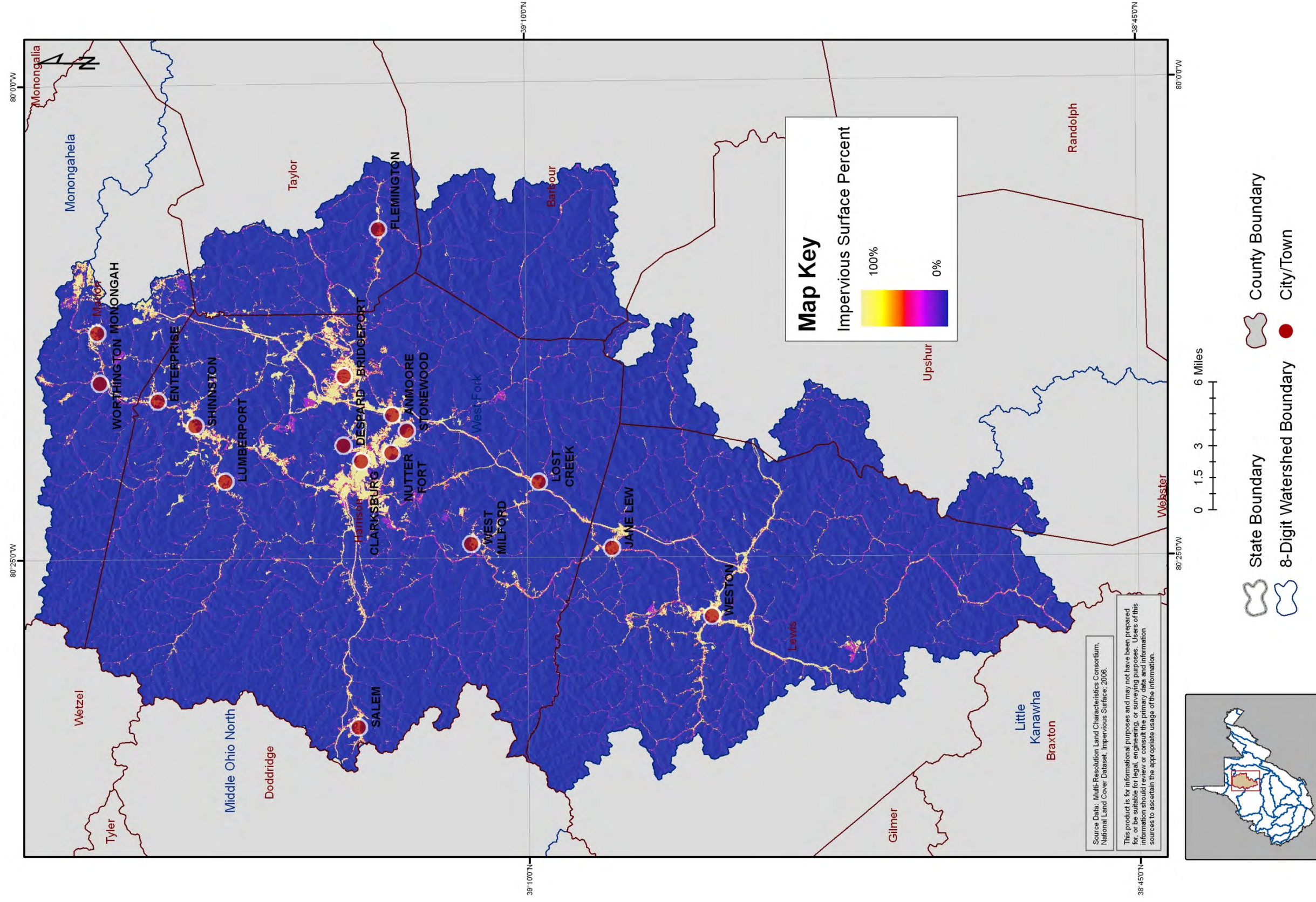
West Fork HUC-8 Watershed

HUC 10 and HUC 12 Watersheds



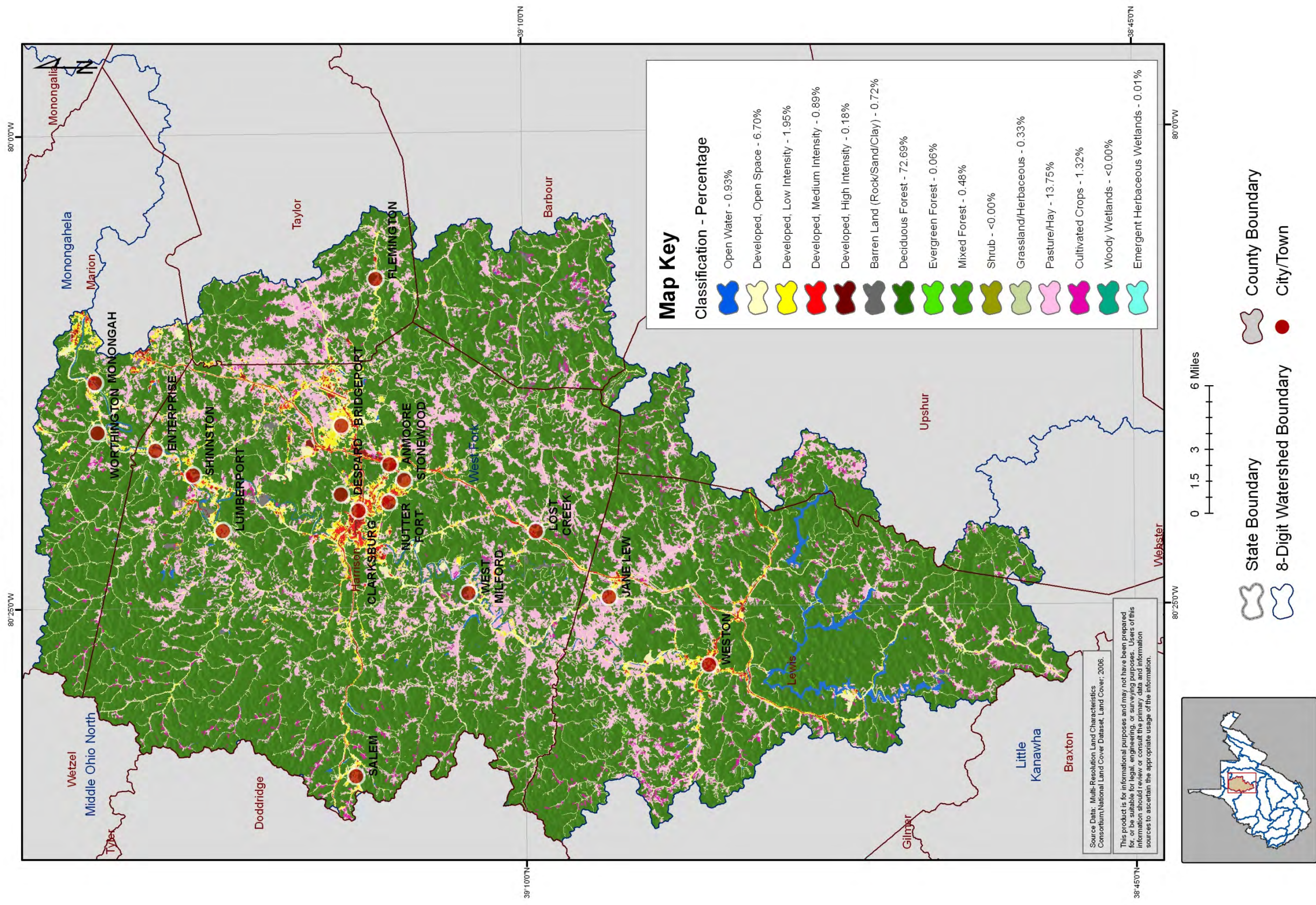
West Fork HUC-8 Watershed

2006 Impervious Surfaces



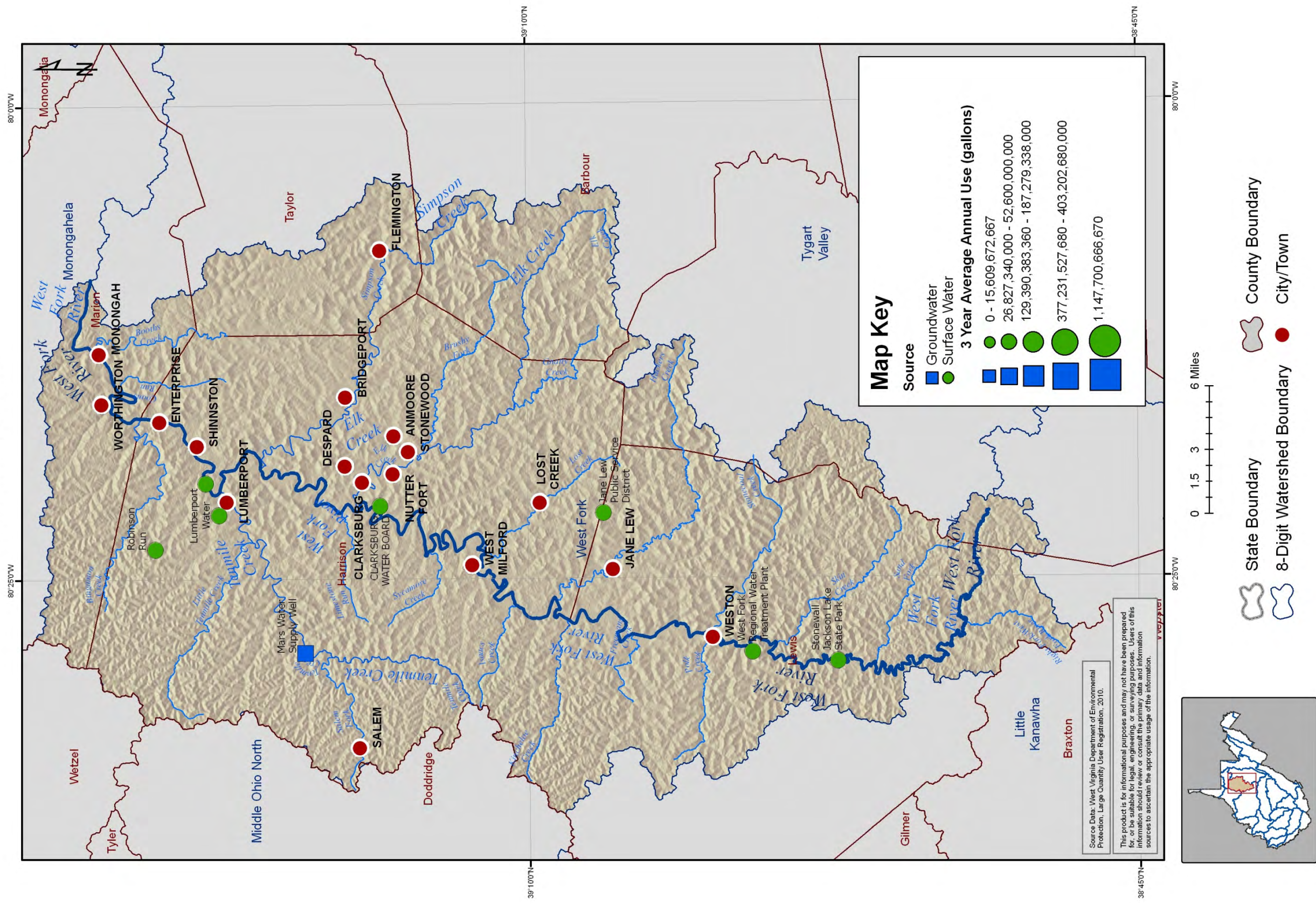
West Fork HUC-8 Watershed

2006 Land Cover



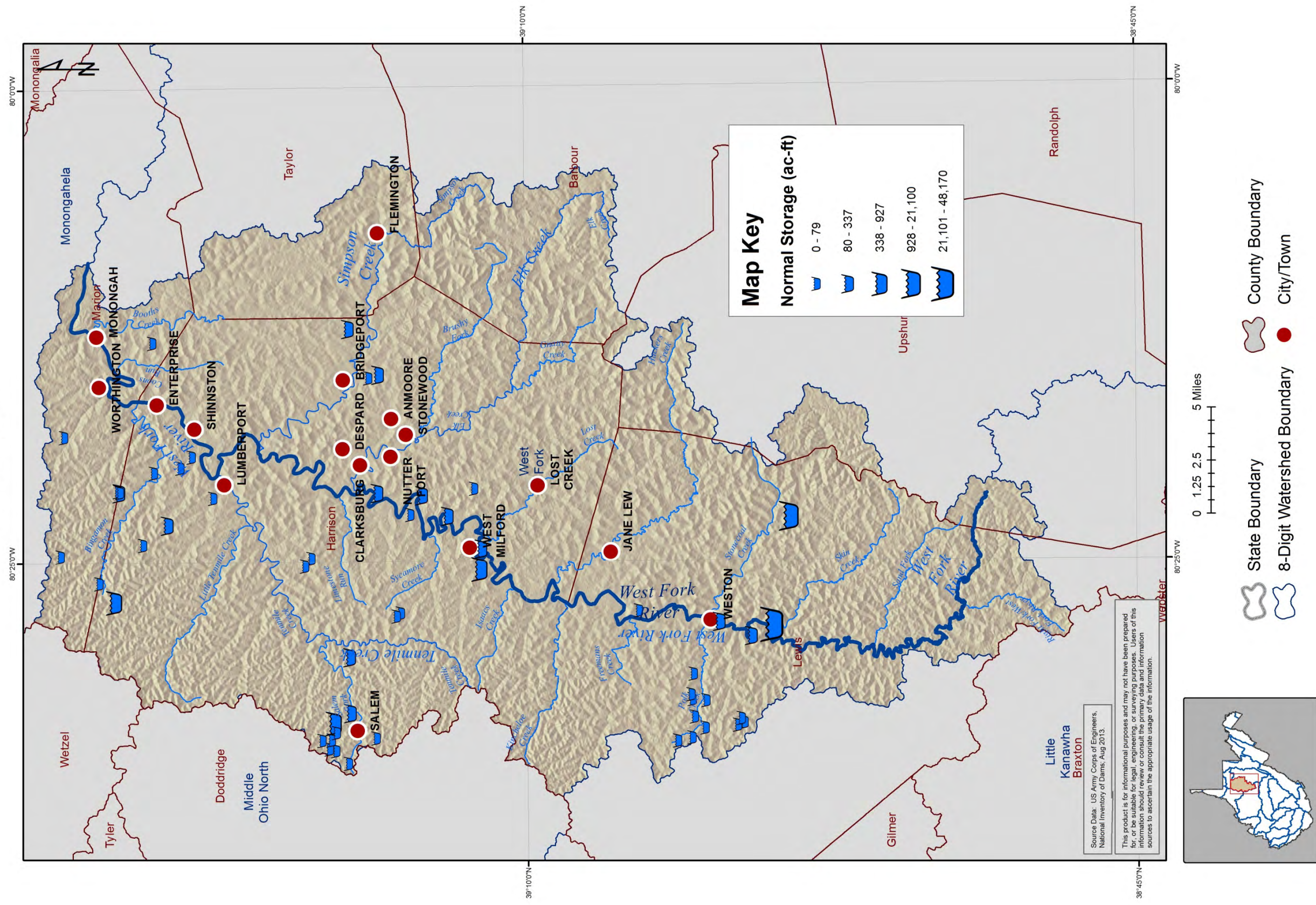
West Fork HUC-8 Watershed

Large Quantity Users



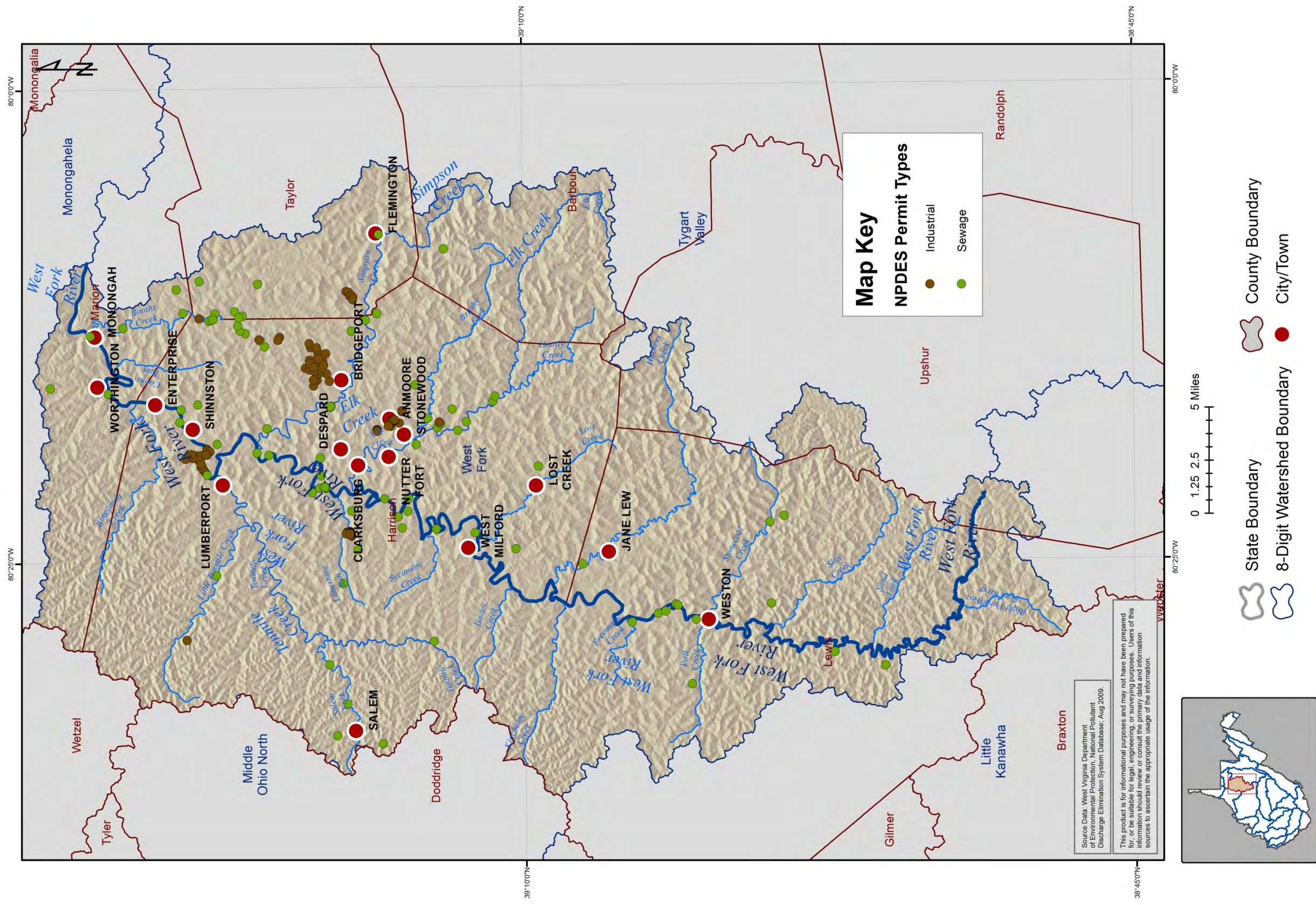
West Fork HUC-8 Watershed

Permitted Dams



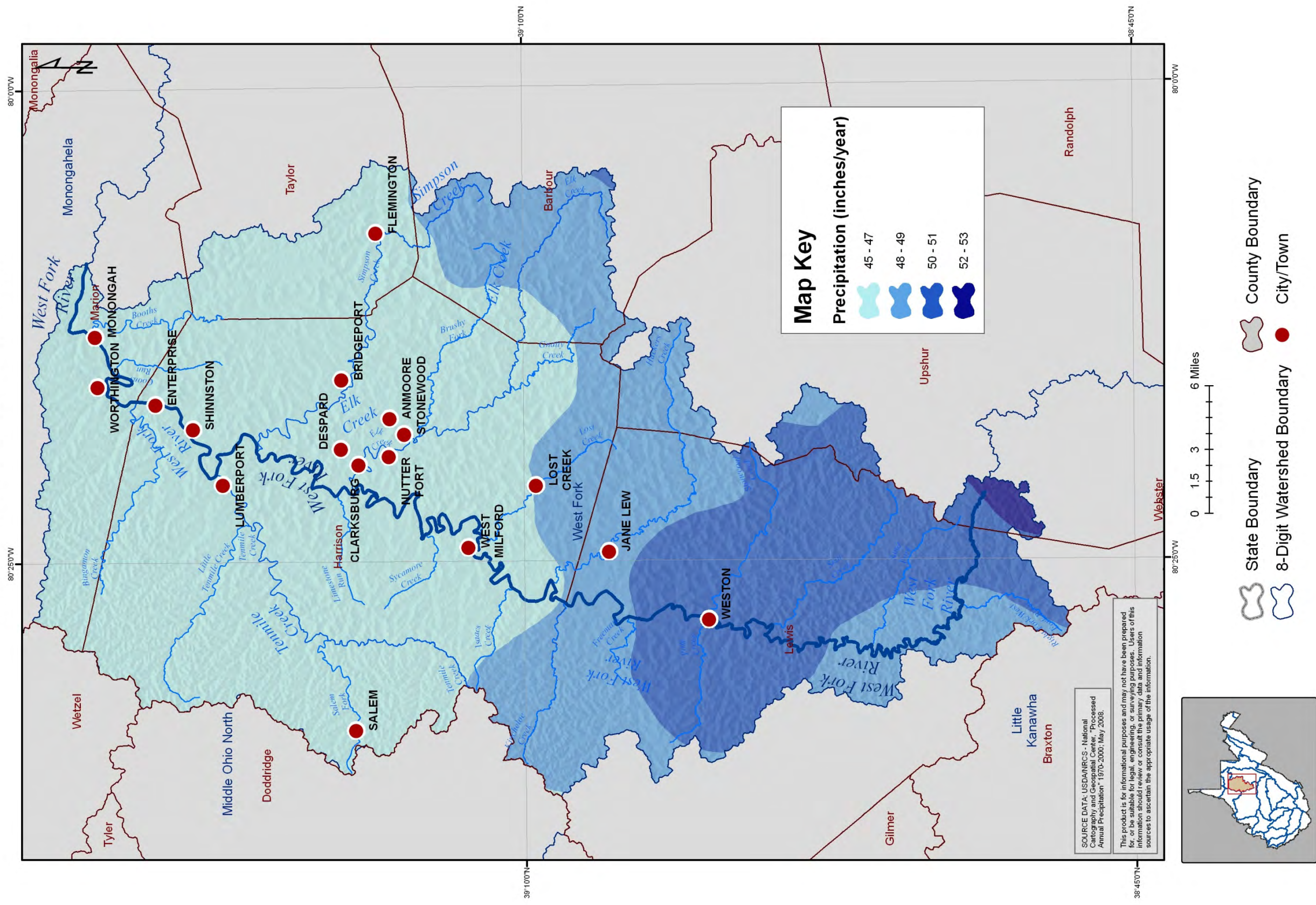
West Fork HUC-8 Watershed

Non-Mining NPDES Outlets



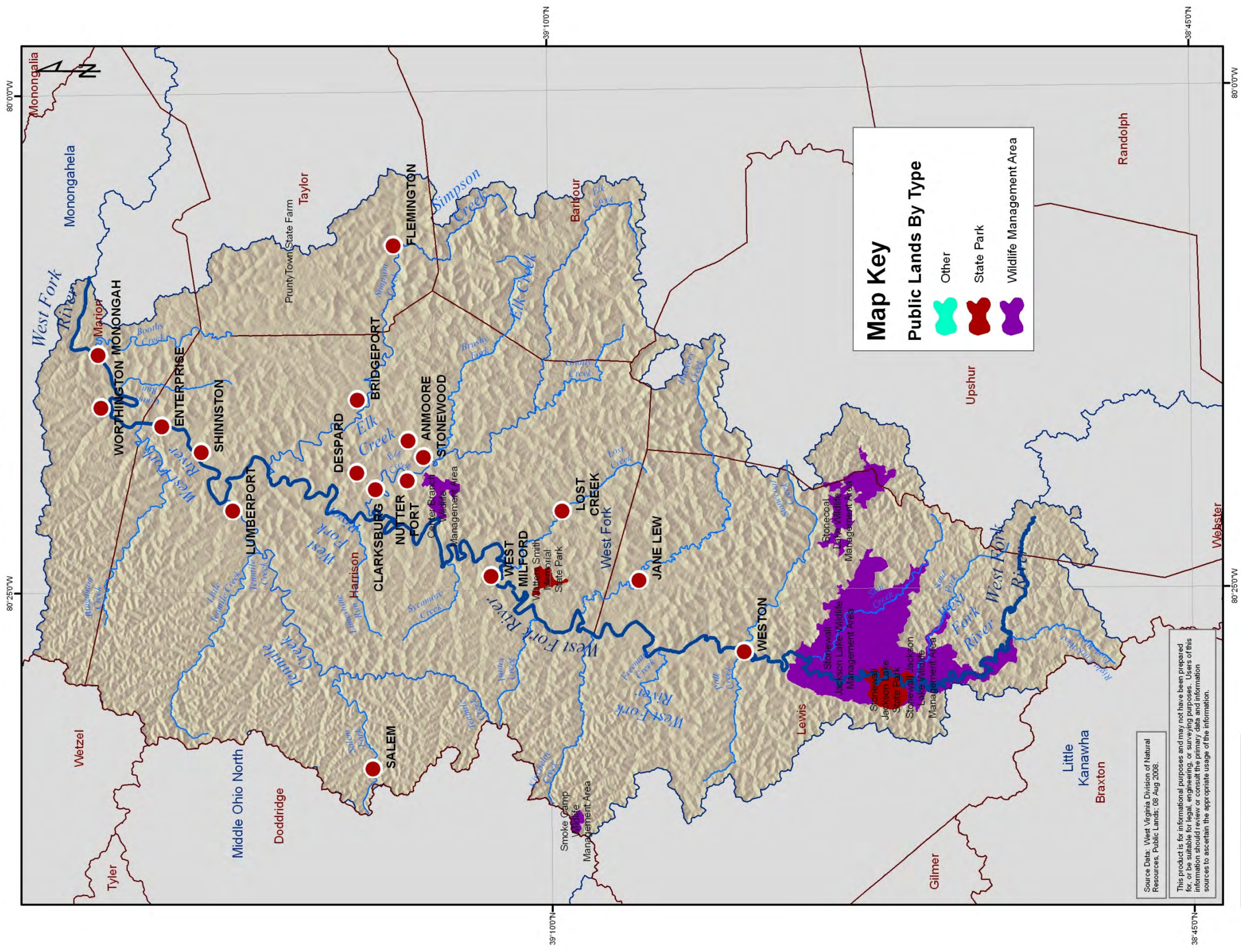
West Fork HUC-8 Watershed

Average Annual Precipitation (1971-2000)



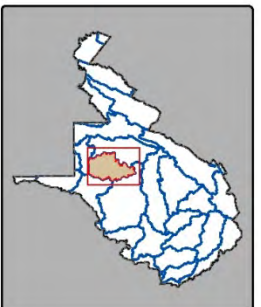
West Fork HUC-8 Watershed

Public Lands



Source Data: West Virginia Division of Natural Resources, Public Lands, 08 Aug 2008.

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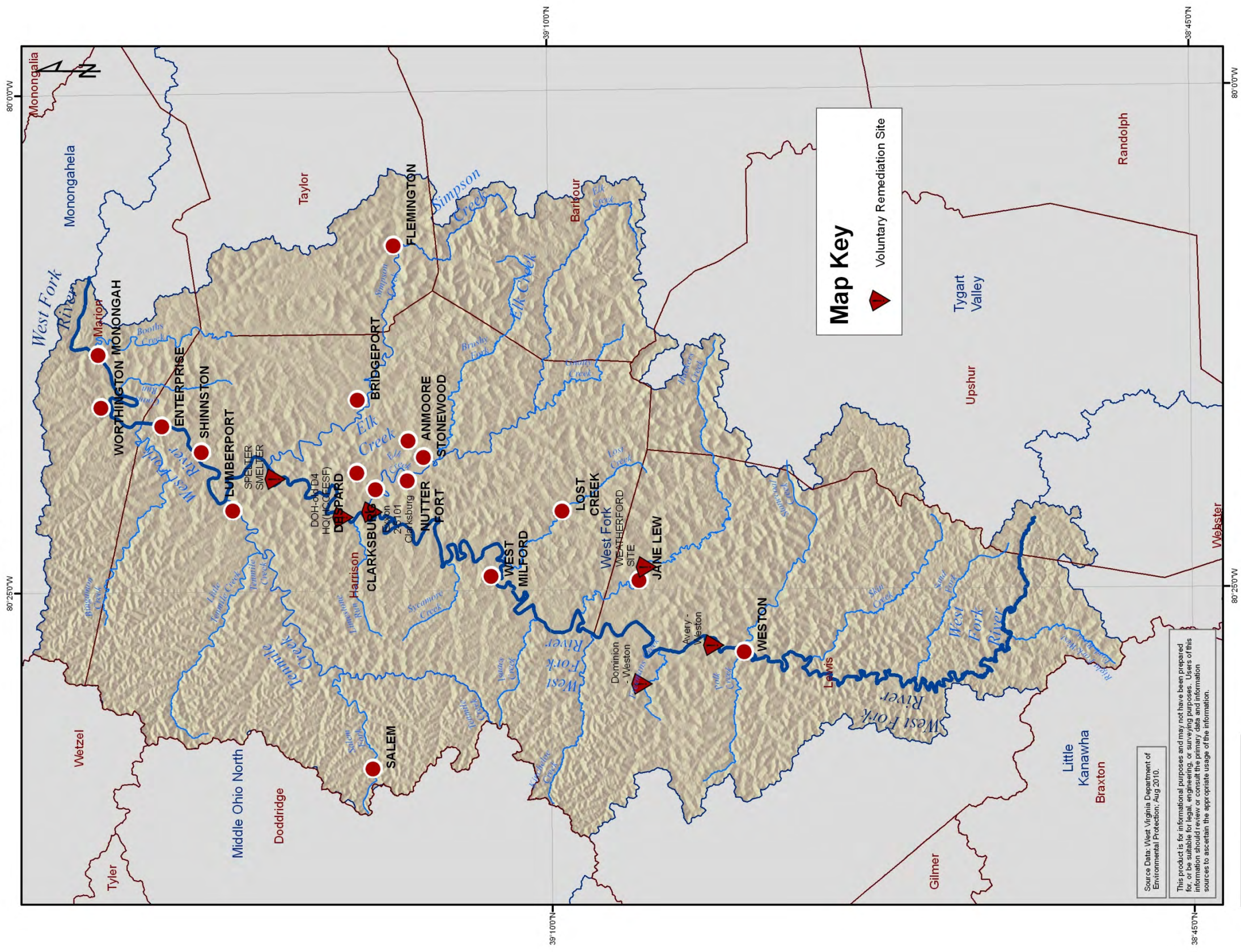


-  State Boundary
-  8-Digit Watershed Boundary
-  County Boundary
-  City/Town

0 1.5 3 6 Miles

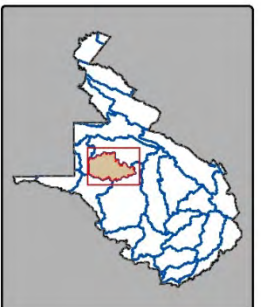
West Fork HUC-8 Watershed

Remediation Sites



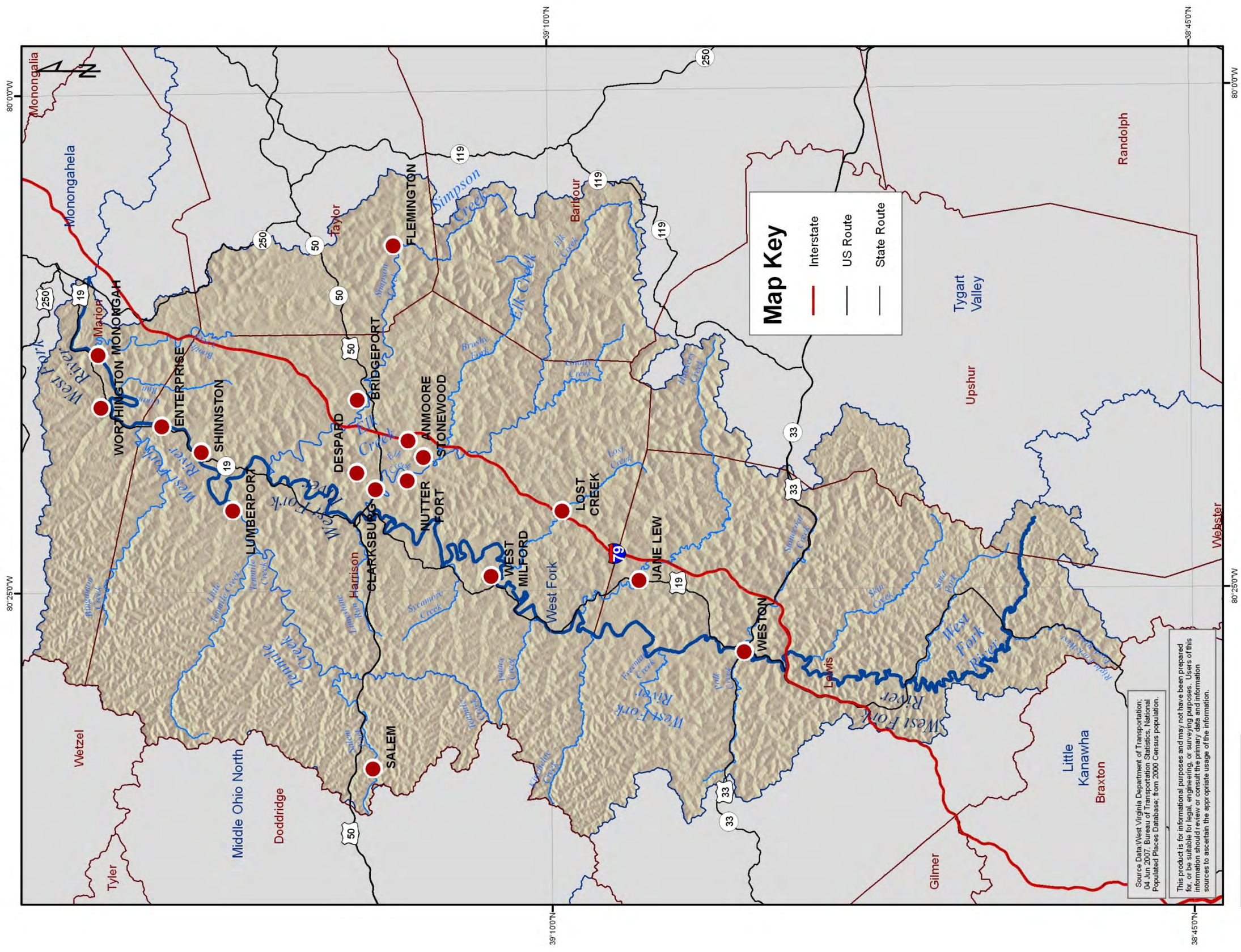
Source Data: West Virginia Department of Environmental Protection; Aug 2010.

This product is for informational purposes and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the appropriate usage of the information.



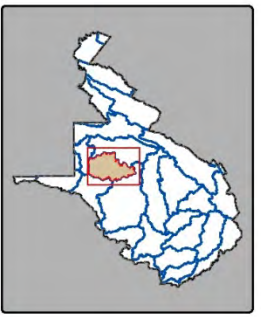
West Fork HUC-8 Watershed

Major Roads and Cities



Source Data: West Virginia Department of Transportation; 04 Jun 2007. Bureau of Transportation Statistics. National Populated Places Database. from 2000 Census population.

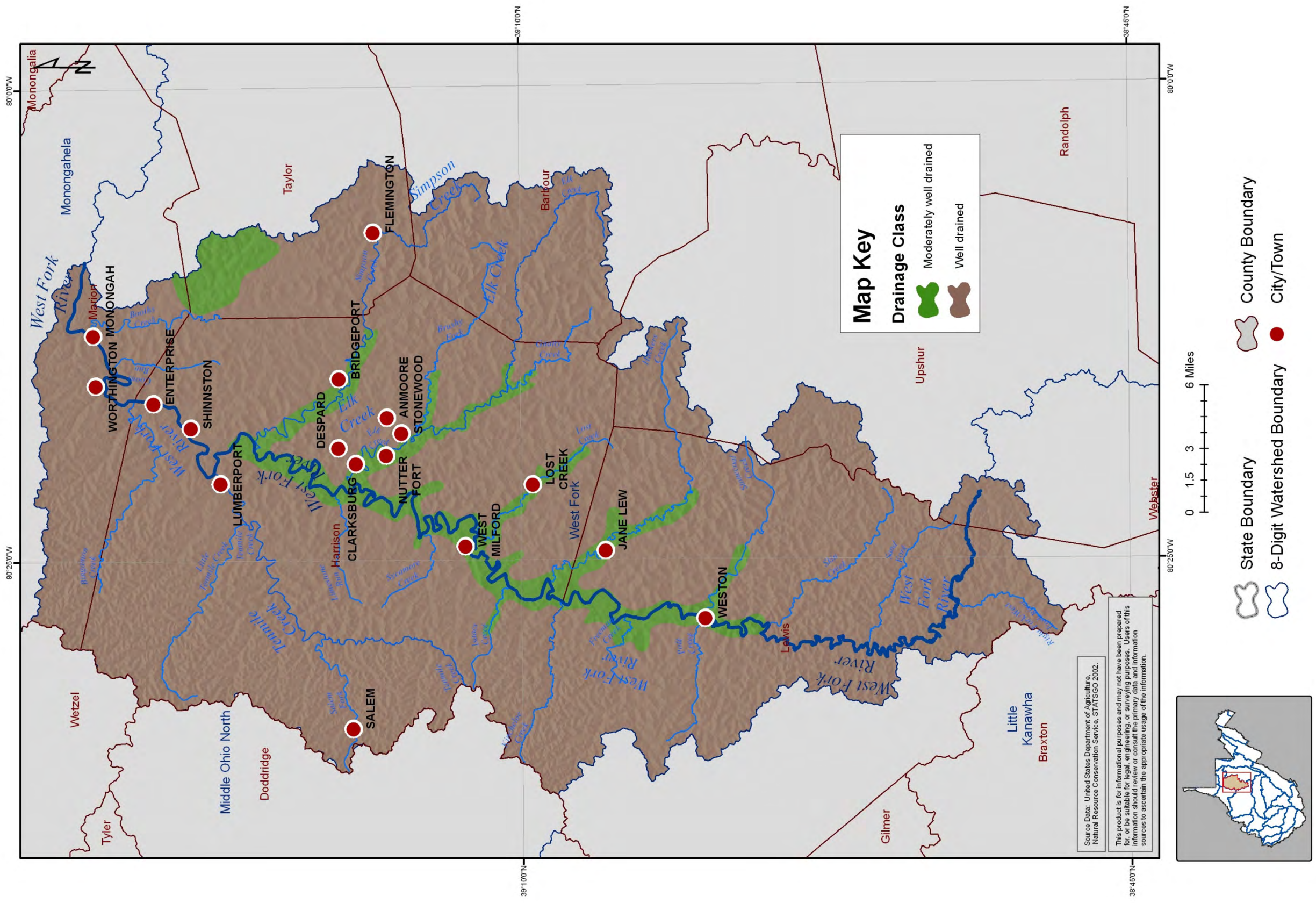
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- State Boundary
- 8-Digit Watershed Boundary
- County Boundary
- City/Town

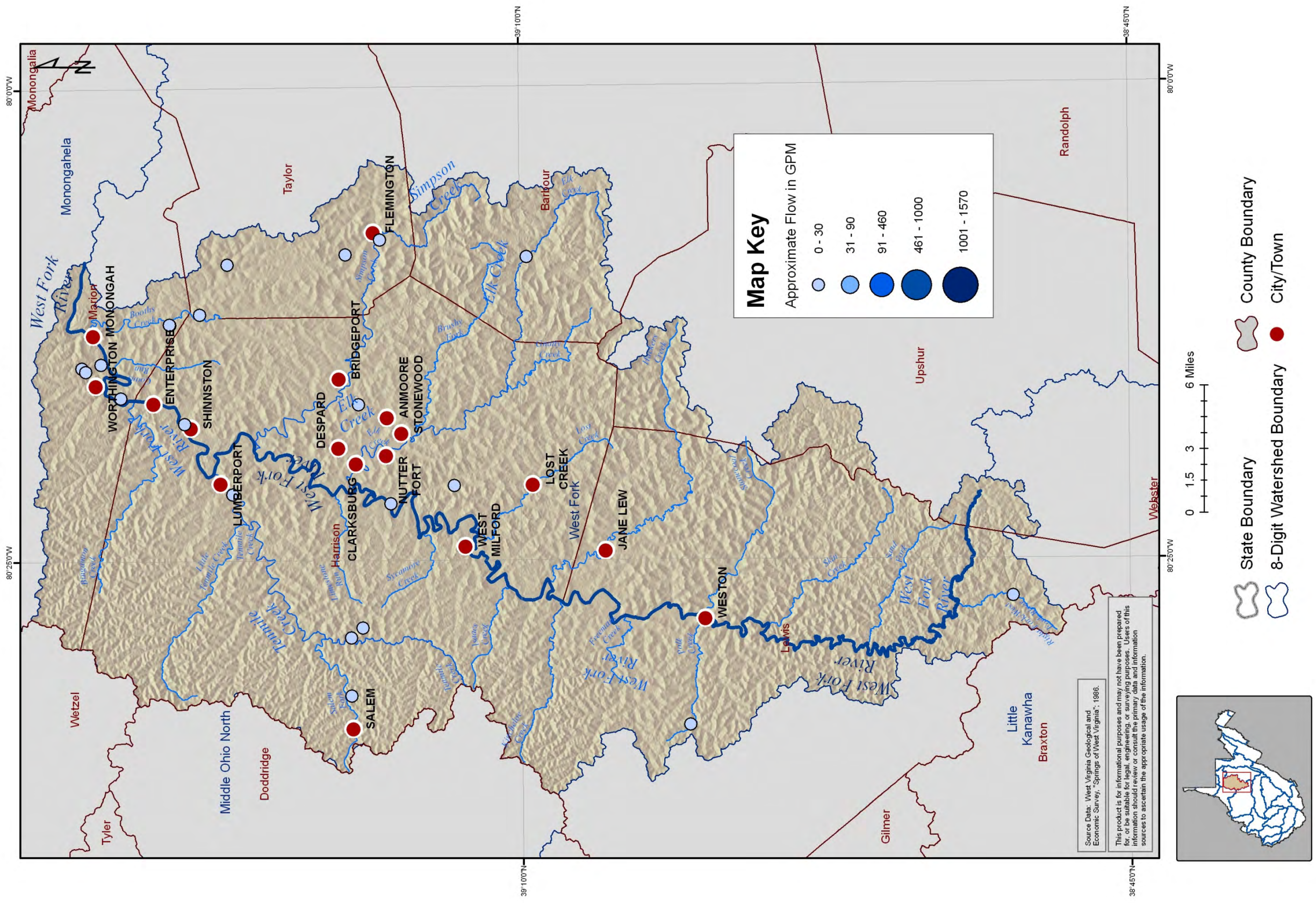
West Fork HUC-8 Watershed

Soil Drainage Classes



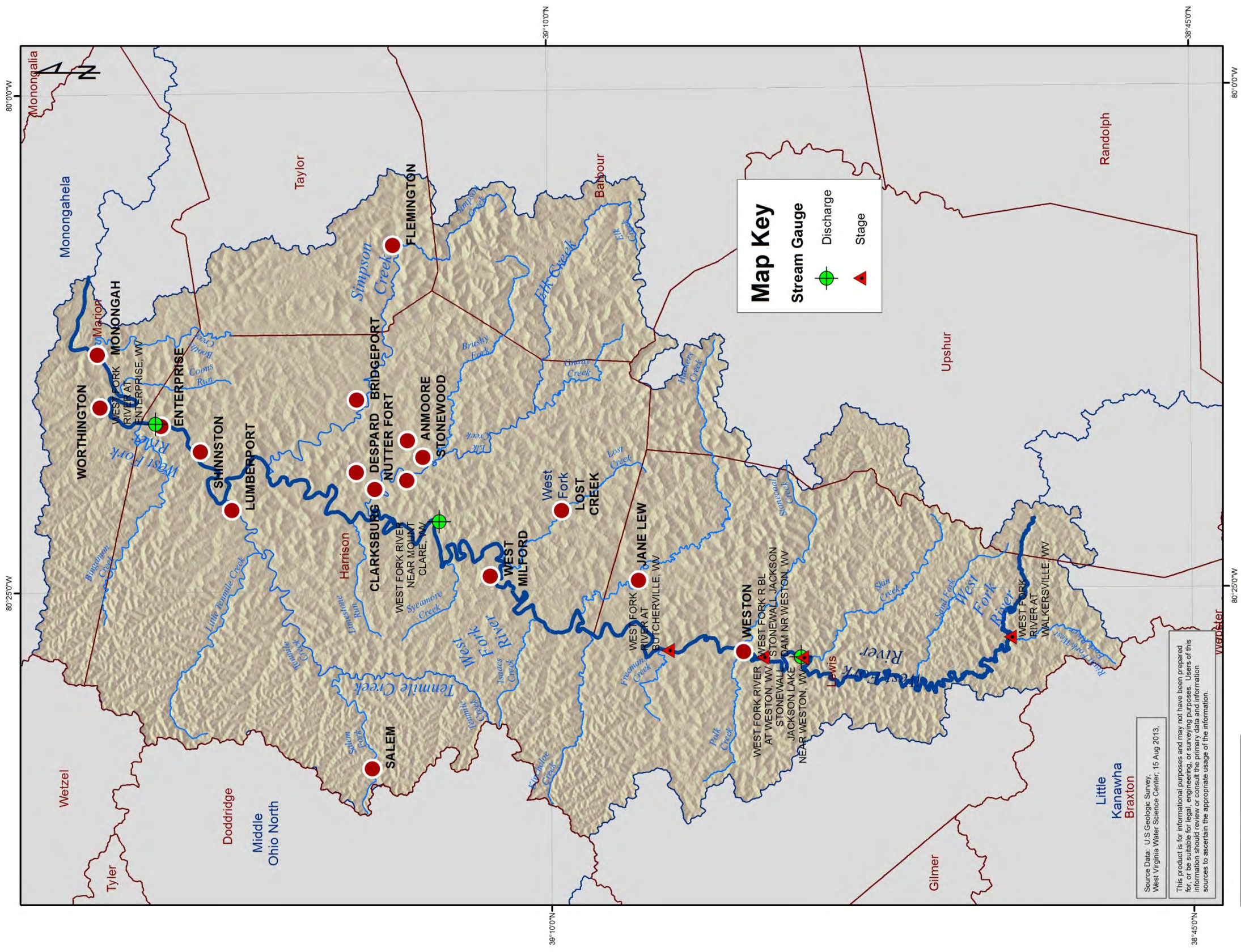
West Fork HUC-8 Watershed

Major Roads and Cities



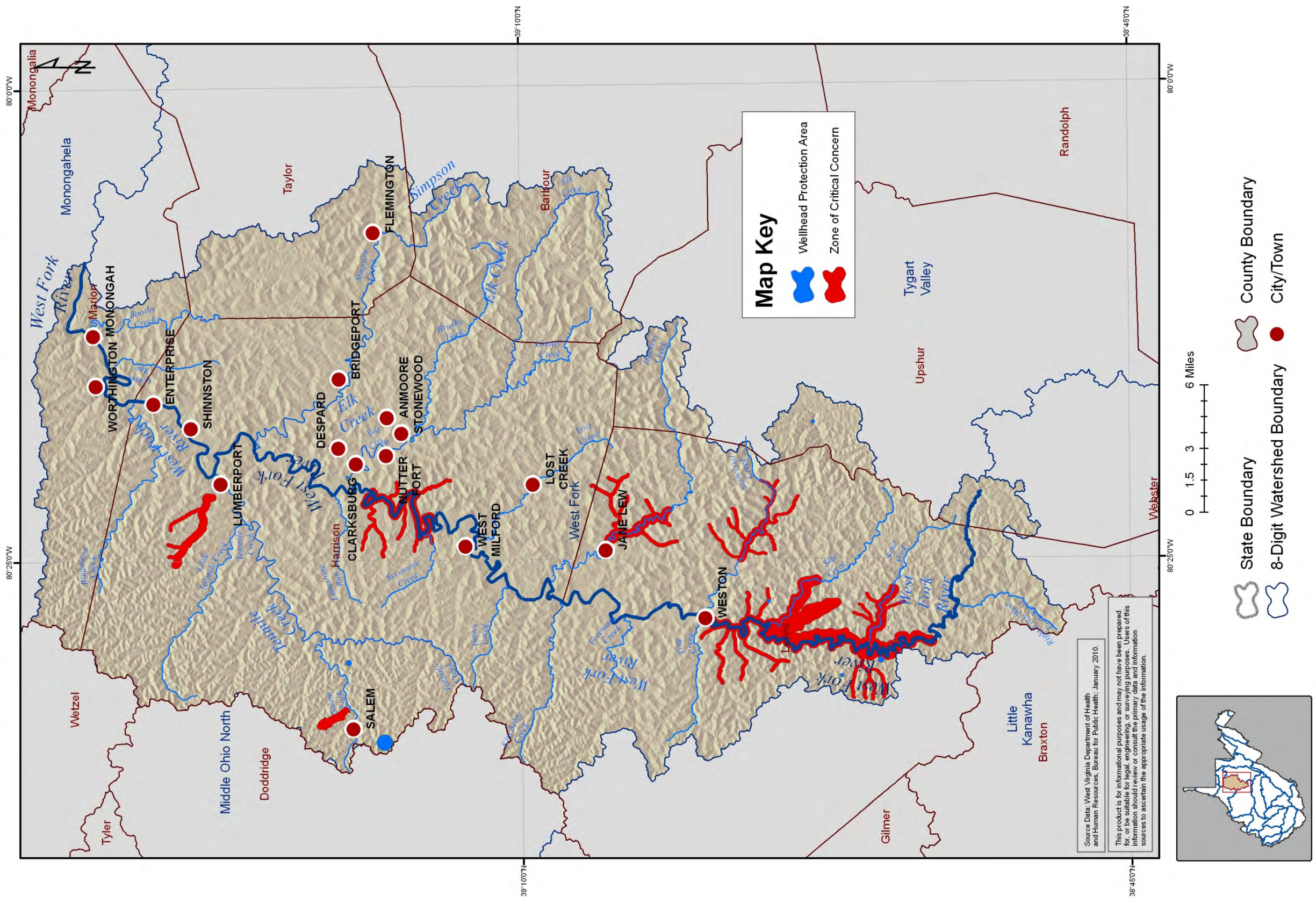
West Fork HUC-8 Watershed

Stream Gauges



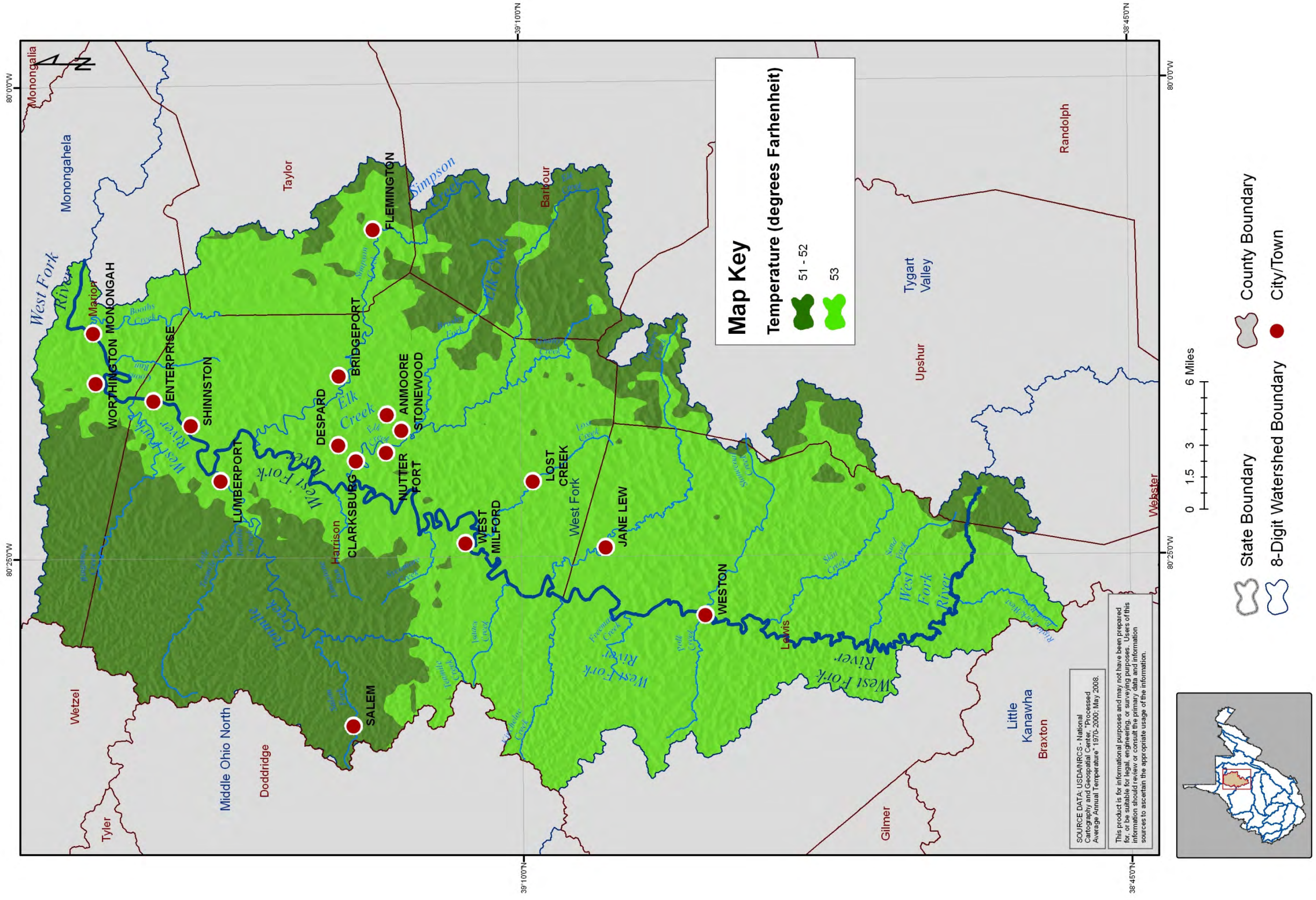
West Fork HUC-8 Watershed

Source Water Assessment and Wellhead Protection Programs



West Fork HUC-8 Watershed

Average Annual Temperature (1971-2000)



West Fork HUC-8 Watershed

Wetlands

