

West Virginia Watershed Atlas

WATER USE SECTION



west virginia department of environmental protection

November 2013

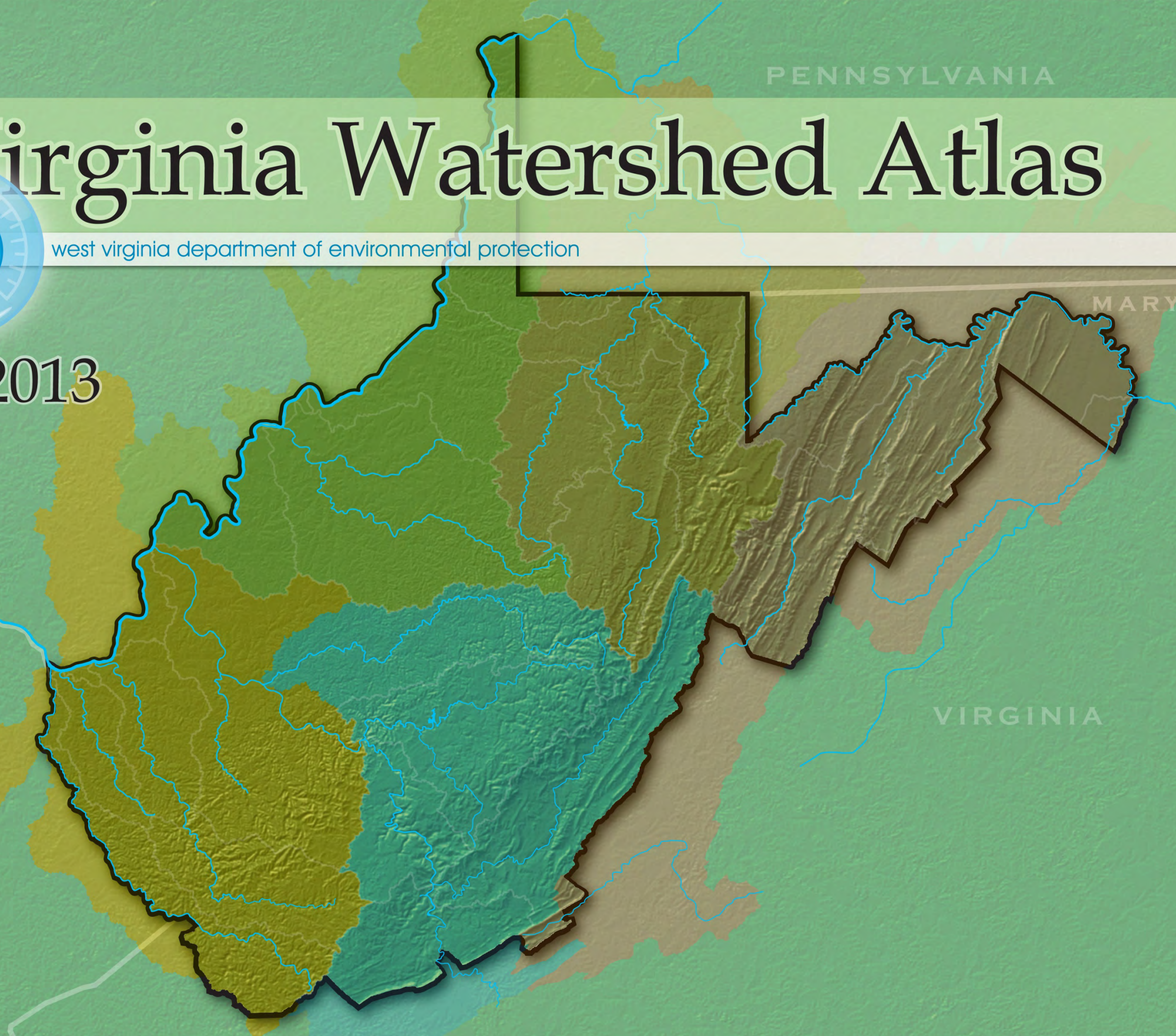
KENTUCKY

OHIO

PENNSYLVANIA

VIRGINIA

MARYLAND



Legal Disclaimer



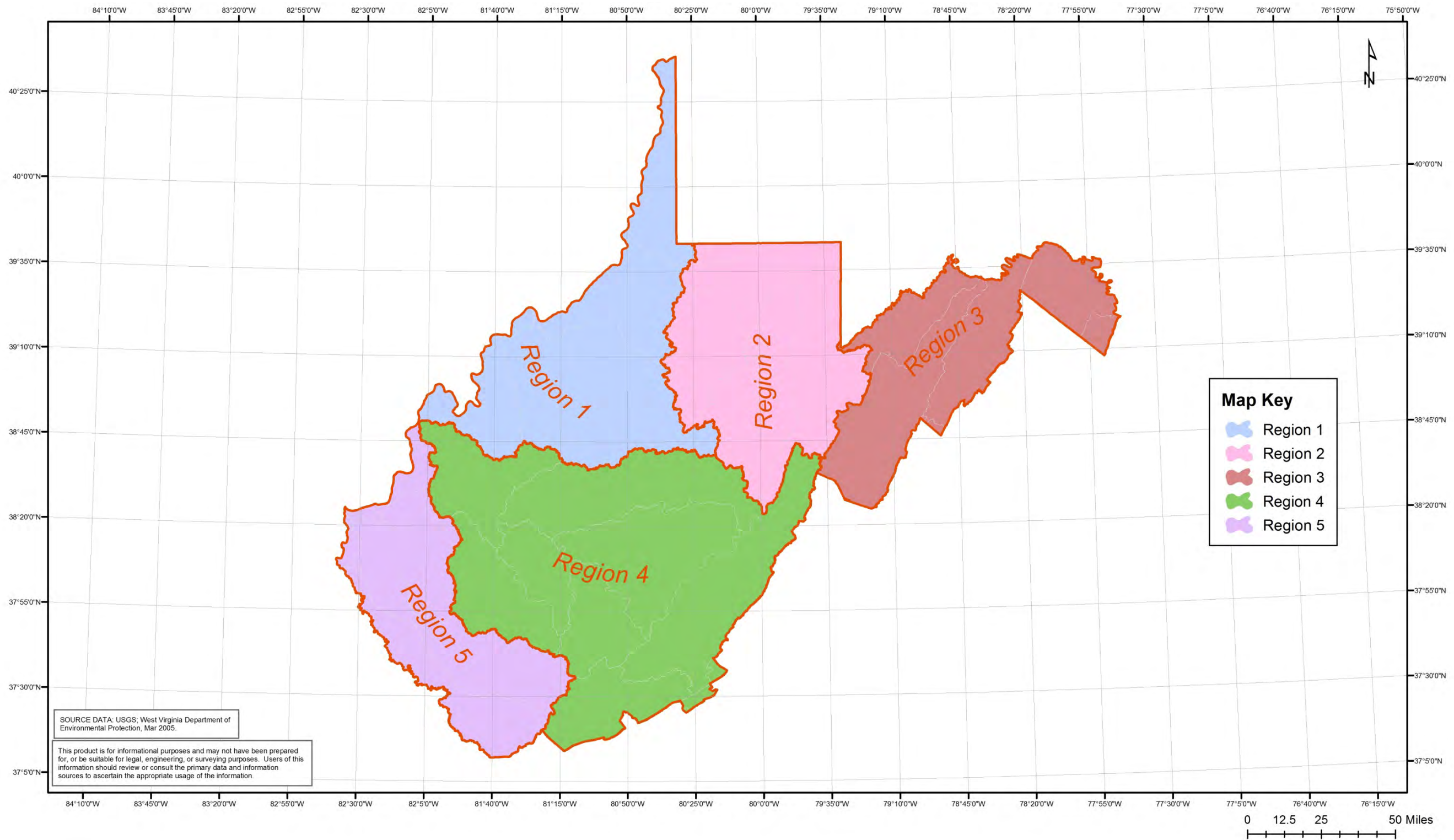
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Table of Contents

- West Virginia Watershed – Regional Map.....3**

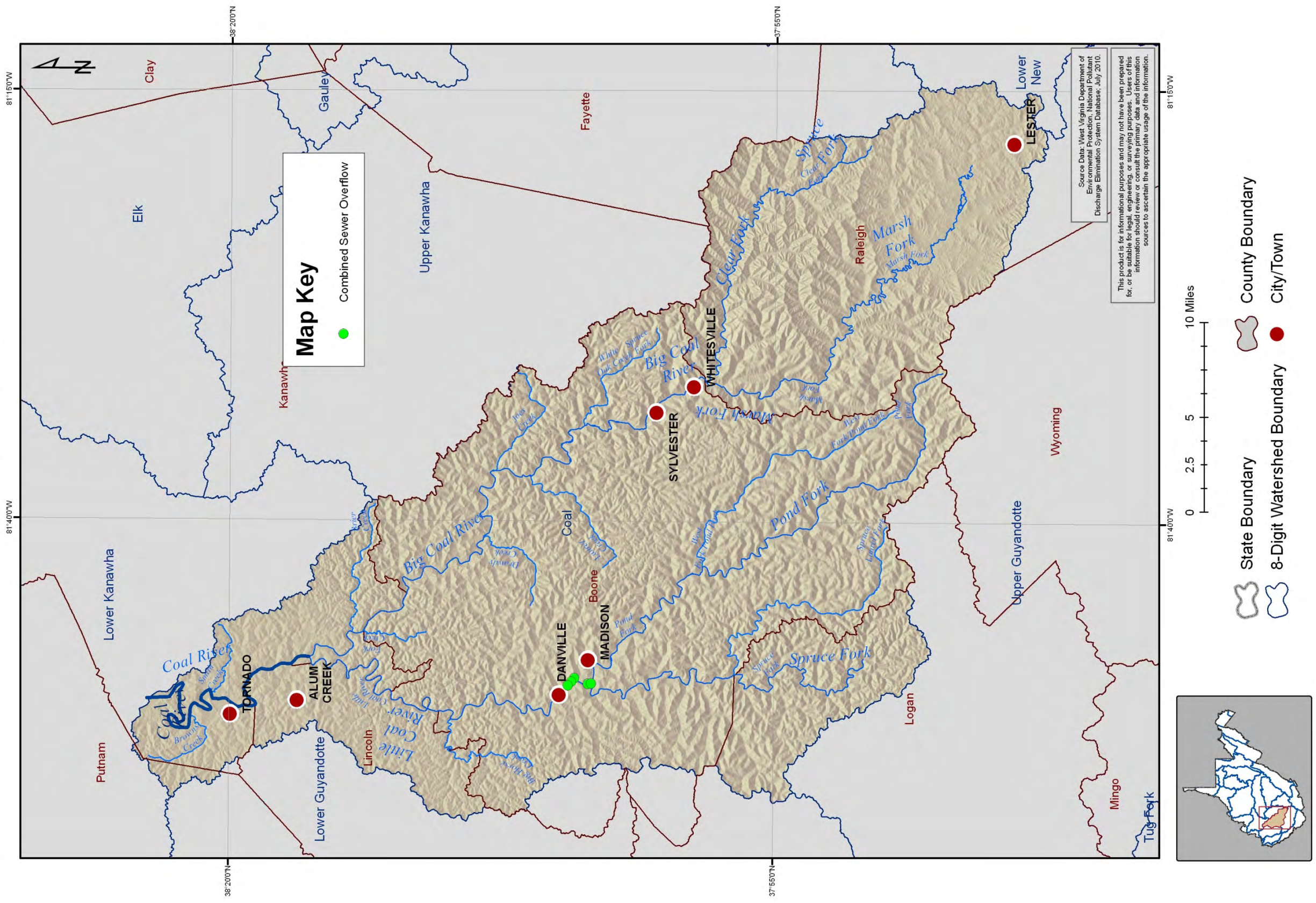
- Region 4..... 4**
 - Coal HUC-8 Watershed HUC-8 Watershed 5
 - Elk HUC-8 Watershed HUC-8 Watershed 25
 - Gauley HUC-8 Watershed 46
 - Greenbrier & James HUC-8 Watershed..... 67
 - Lower Kanawha HUC-8 Watershed 87
 - Lower New HUC-8 Watershed 108
 - Upper Kanawha HUC-8 Watershed 129
 - Upper New HUC-8 Watershed 150

West Virginia Watershed – Regional Map



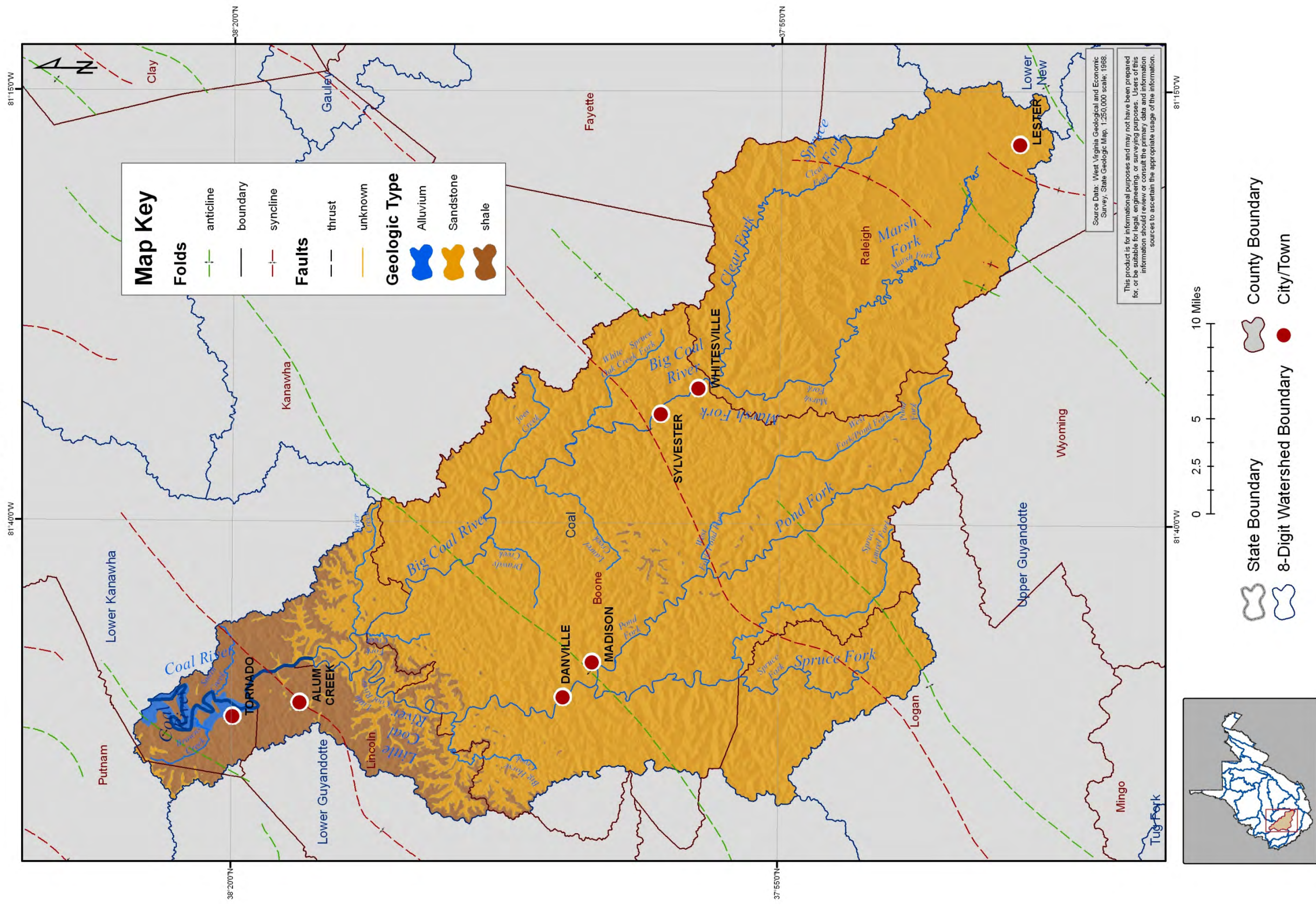
Coal HUC-8 Watershed

Combined Sewer Overflow



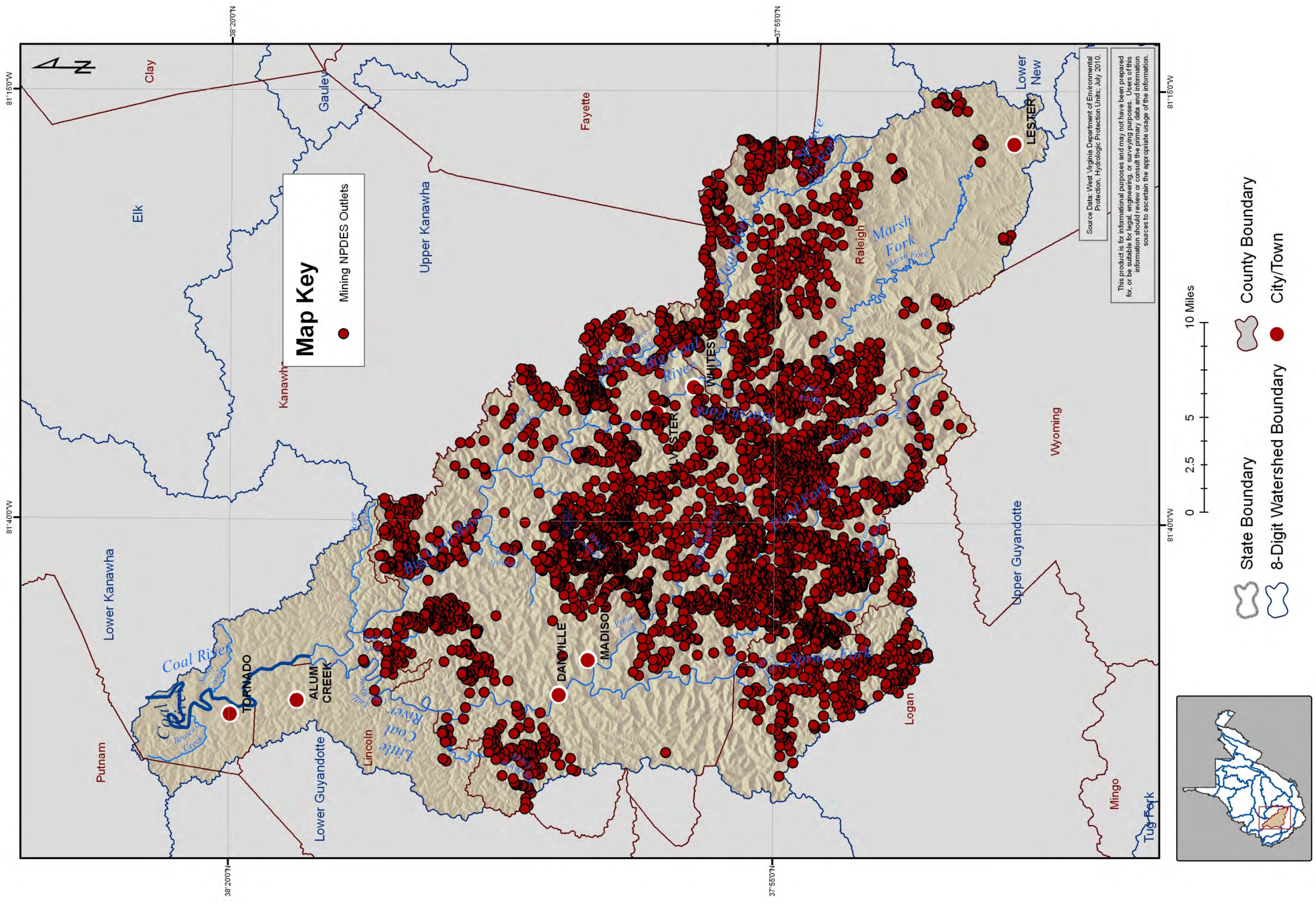
Coal HUC-8 Watershed

Surface Geology



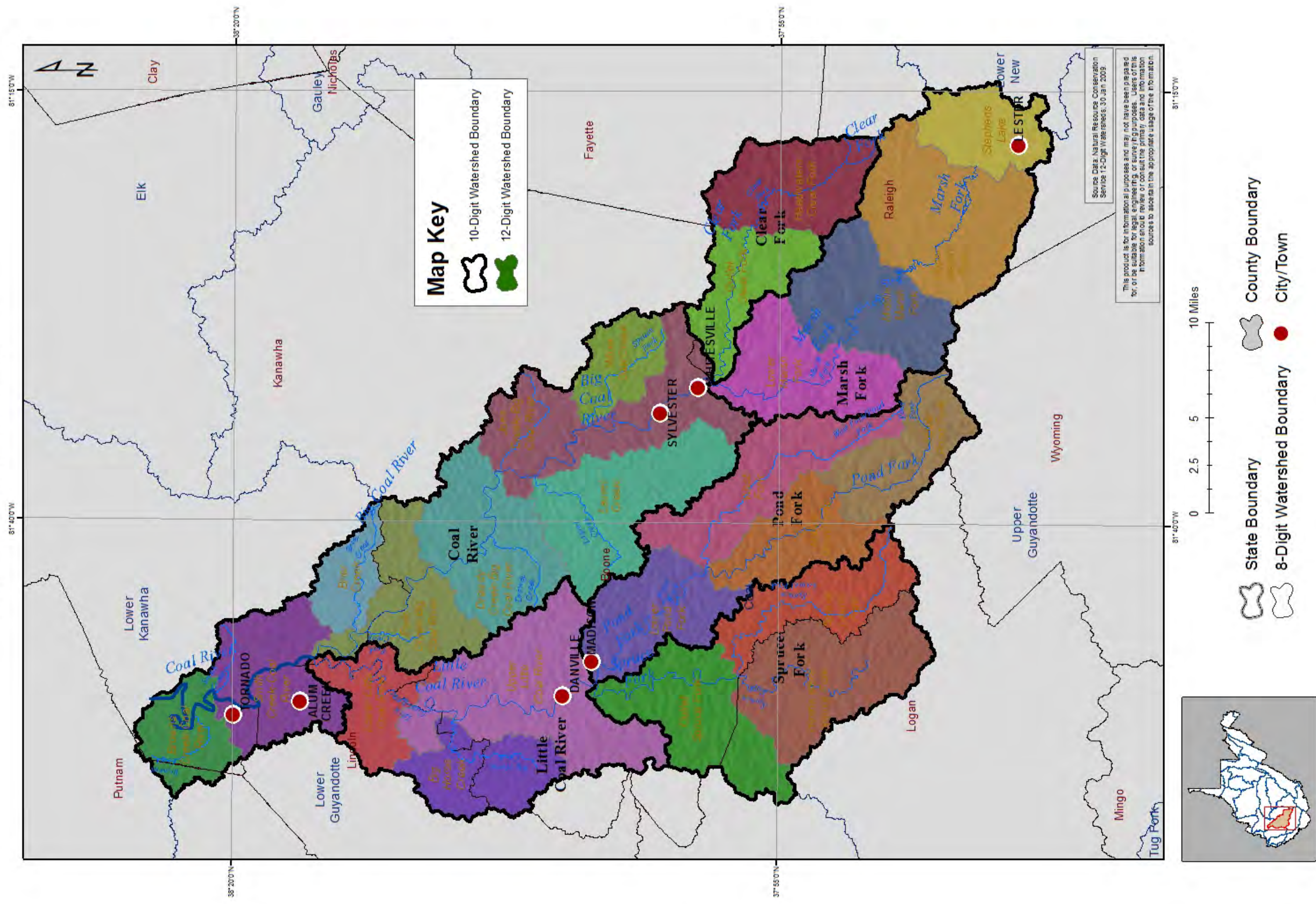
Coal HUC-8 Watershed

Mining Related NPDES Outlets



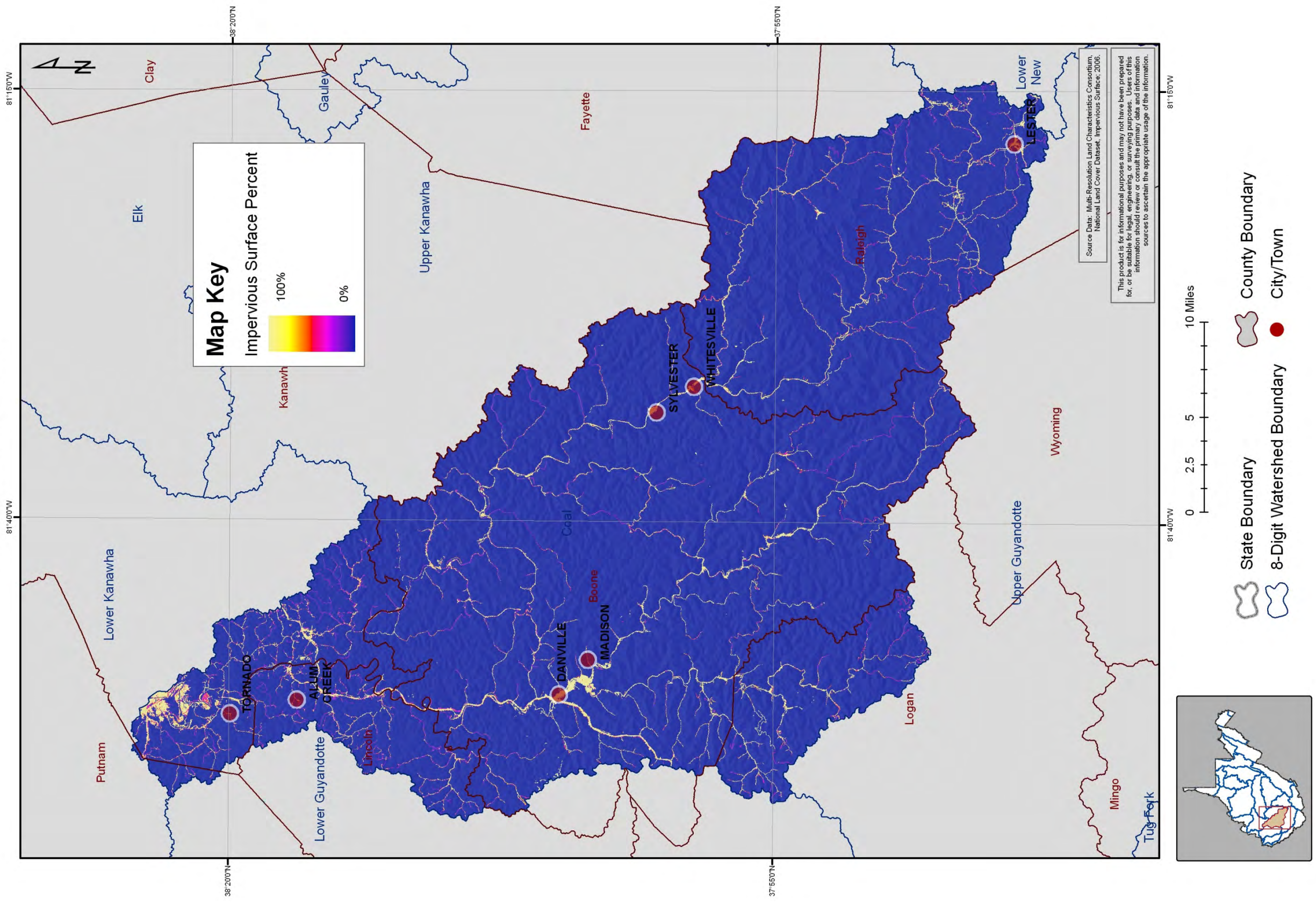
Coal HUC-8 Watershed

HUC 10 and HUC 12 Watersheds



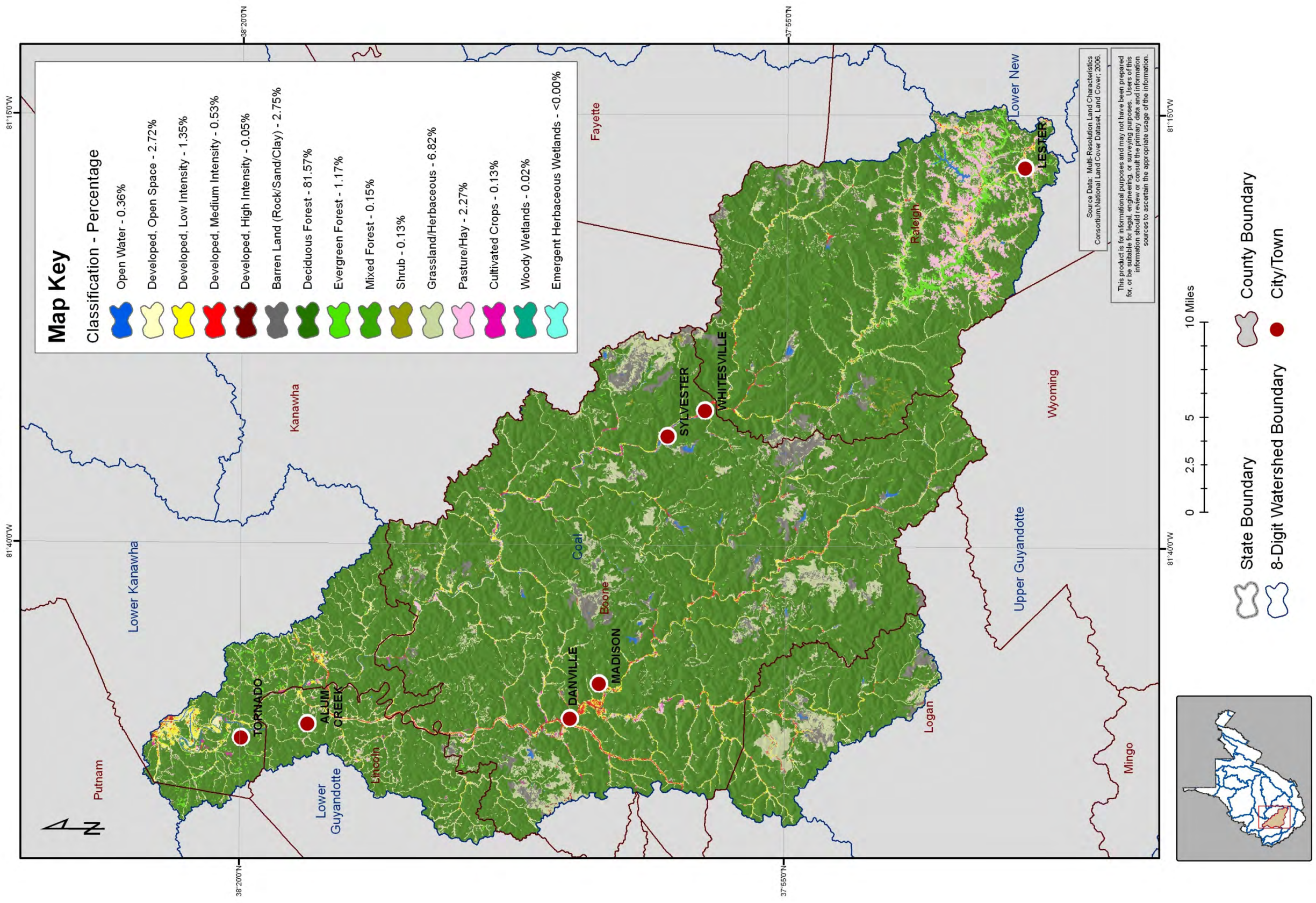
Coal HUC-8 Watershed

2006 Impervious Surfaces



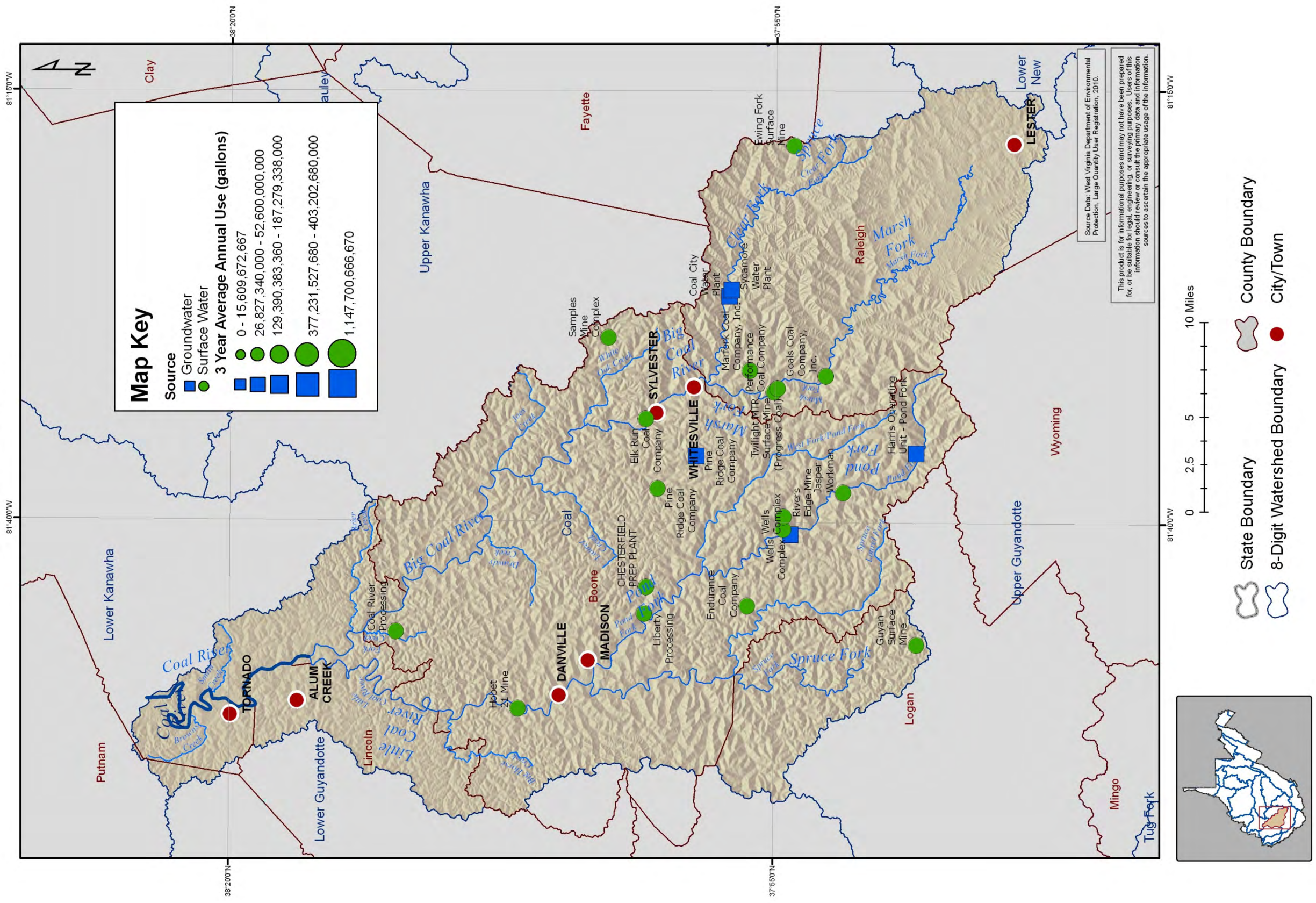
Coal HUC-8 Watershed

2006 Land Cover



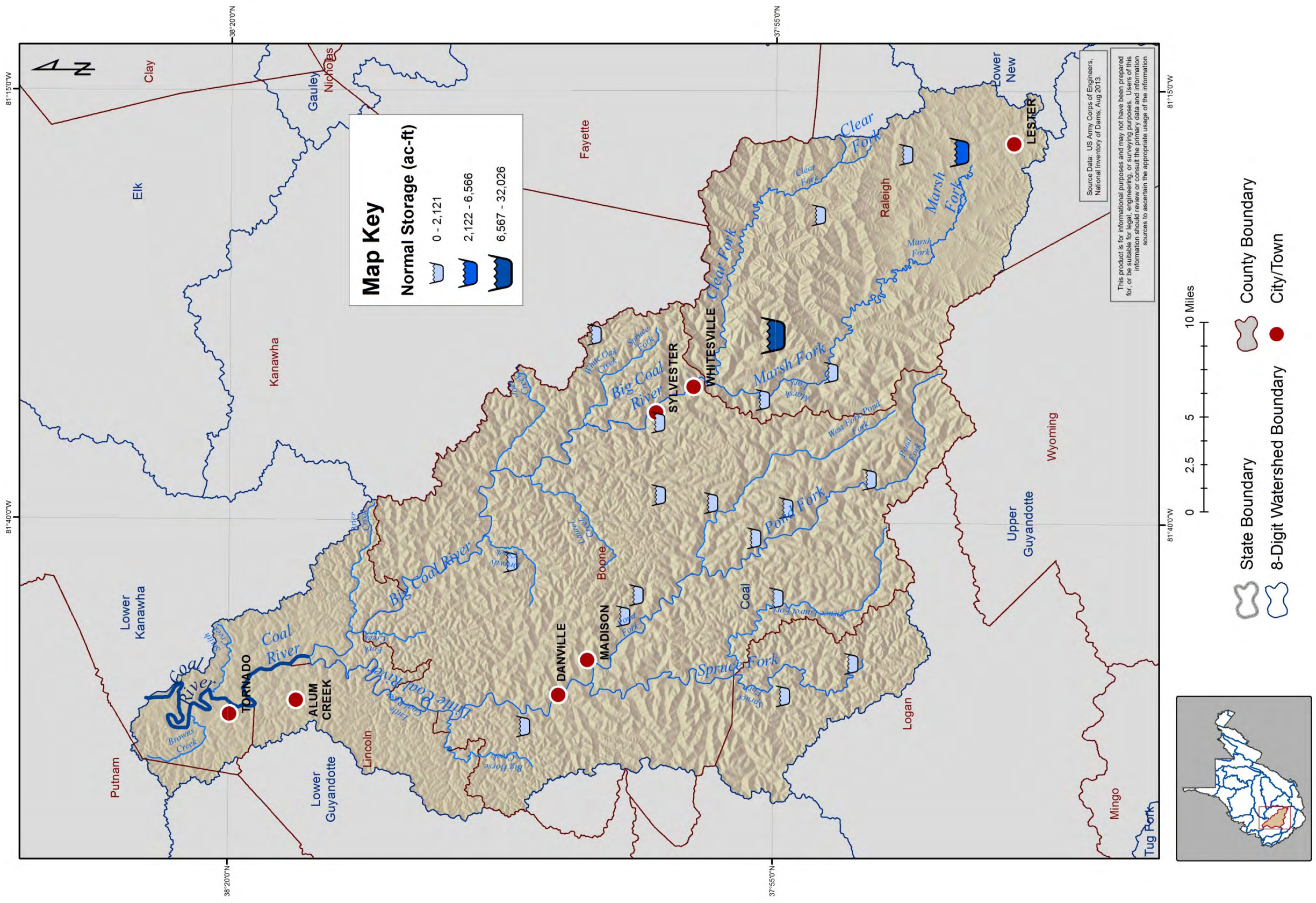
Coal HUC-8 Watershed

Large Quantity Users



Coal HUC-8 Watershed

Permitted Dams



Map Key

Normal Storage (ac-ft)

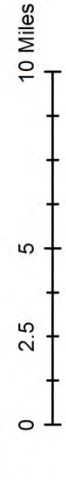
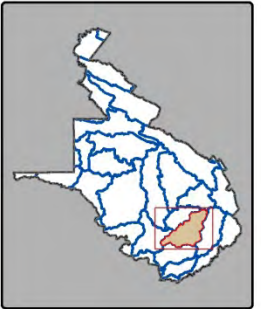
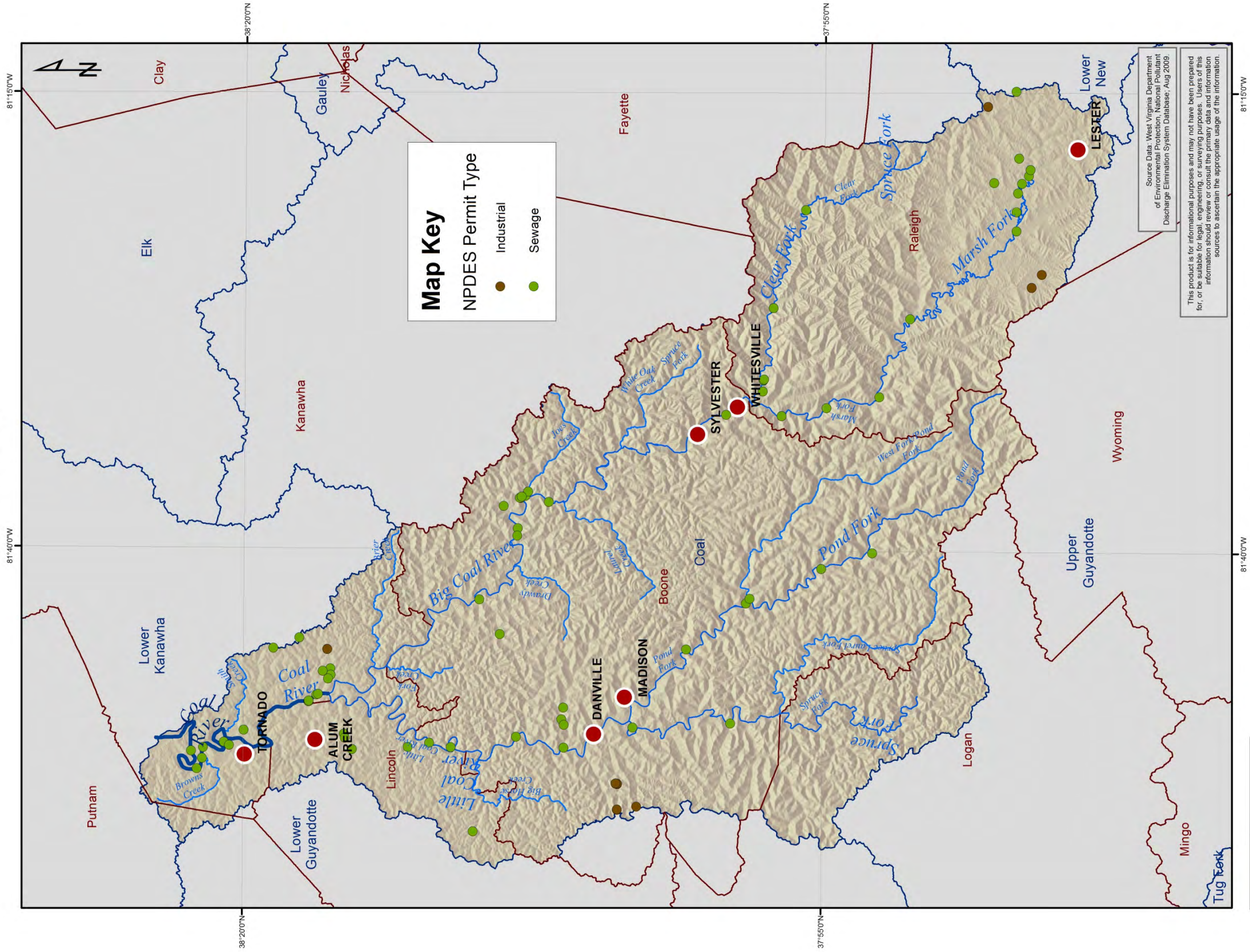
	0 - 2,121
	2,122 - 6,566
	6,567 - 32,026

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

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Coal HUC-8 Watershed

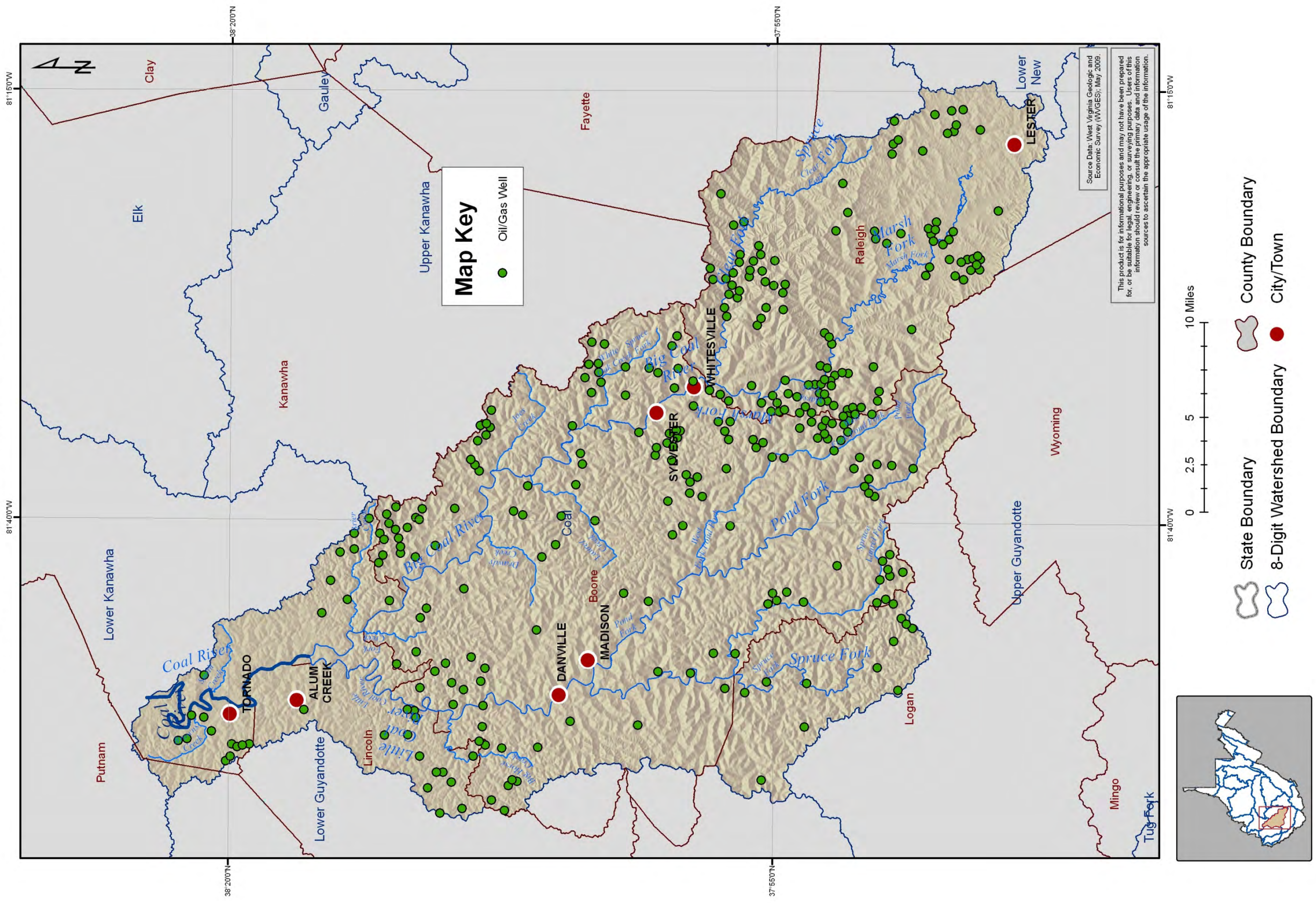
NPDES Outlets



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

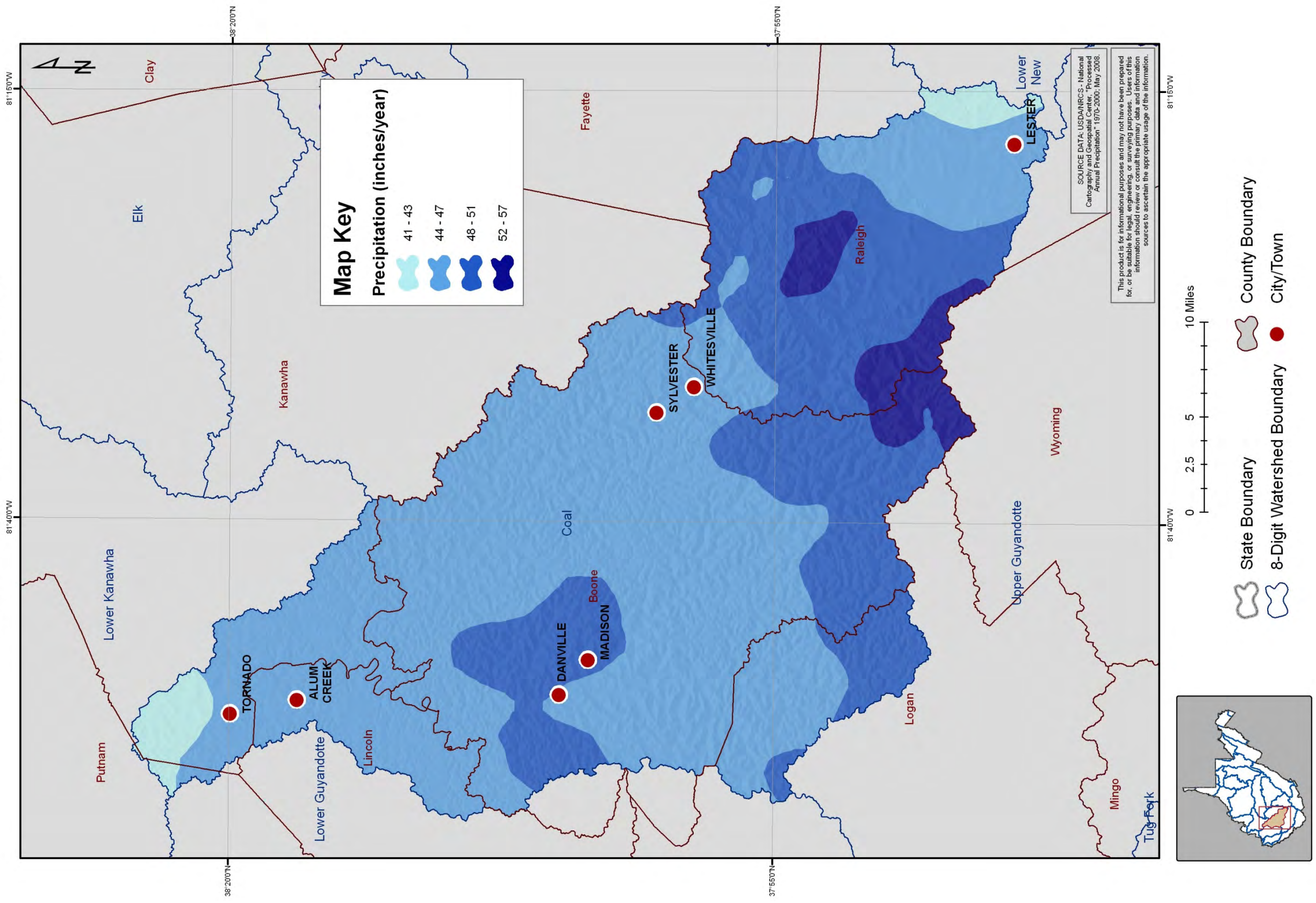
Coal HUC-8 Watershed

Well Logs with Gamma Rays and Water Shows



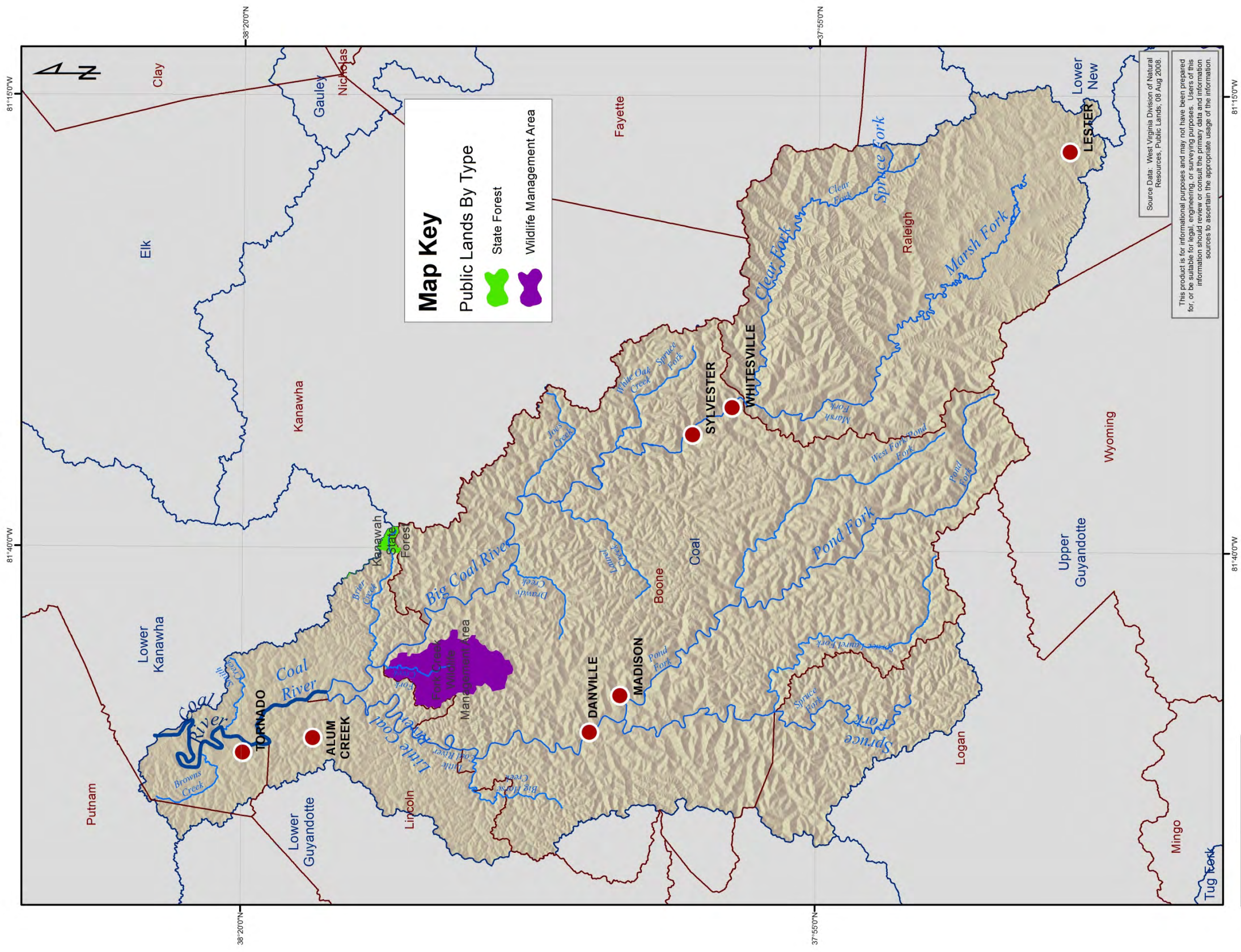
Coal HUC-8 Watershed

Average Annual Precipitation (1971-2000)



Coal HUC-8 Watershed

Public Lands



Map Key

Public Lands By Type

- State Forest
- Wildlife Management Area

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

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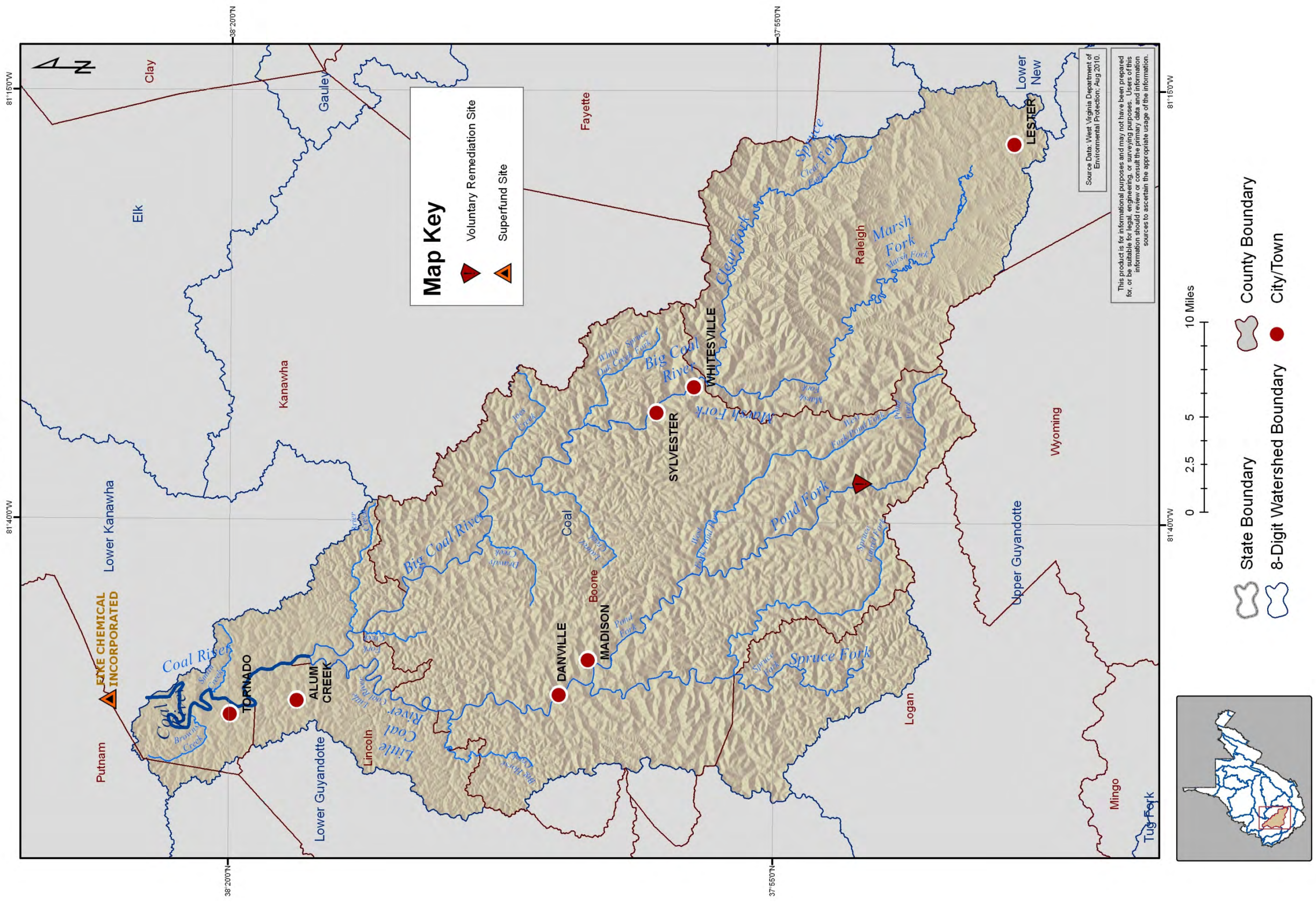


Legend for boundaries:

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

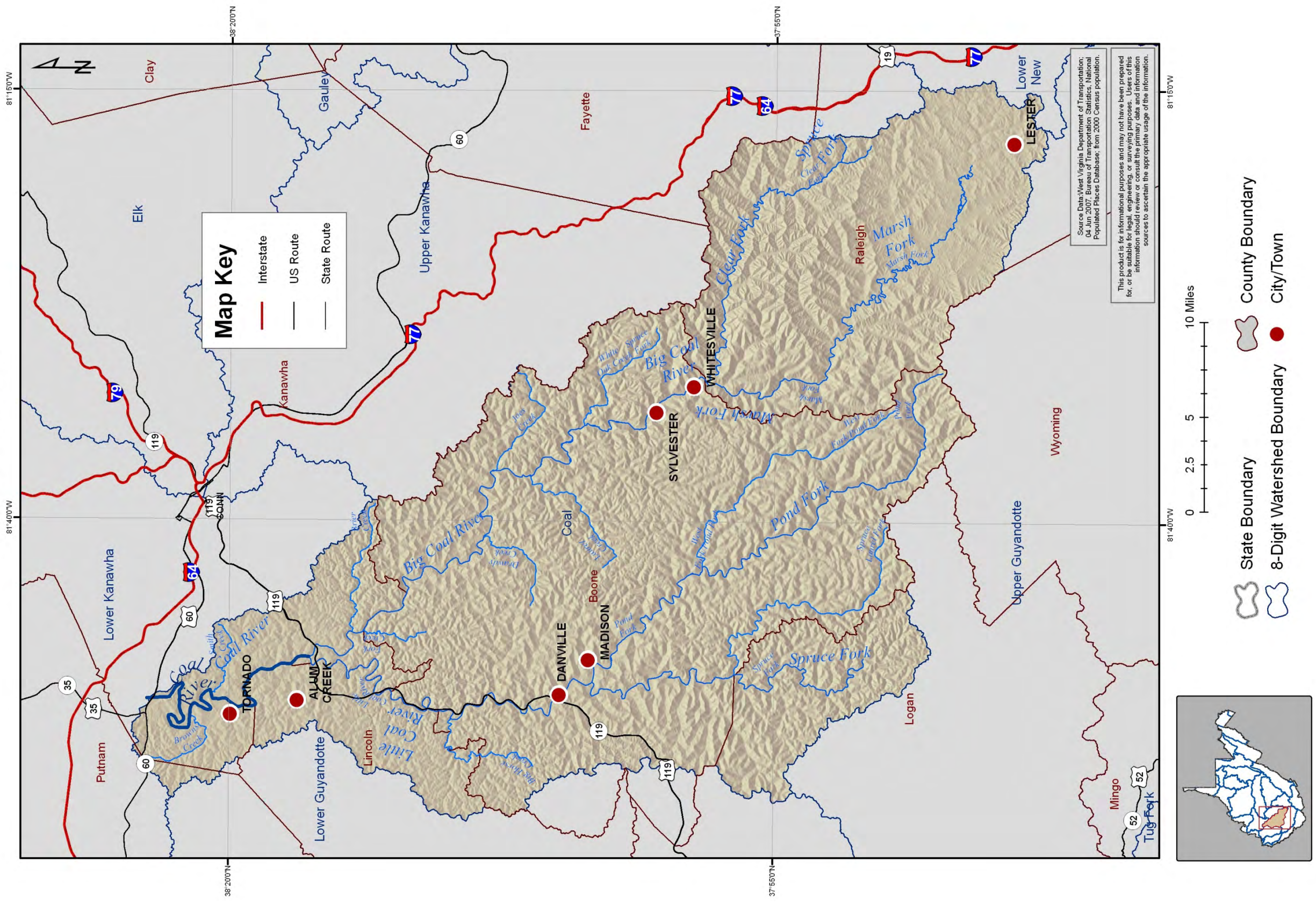
Coal HUC-8 Watershed

Remediation Sites



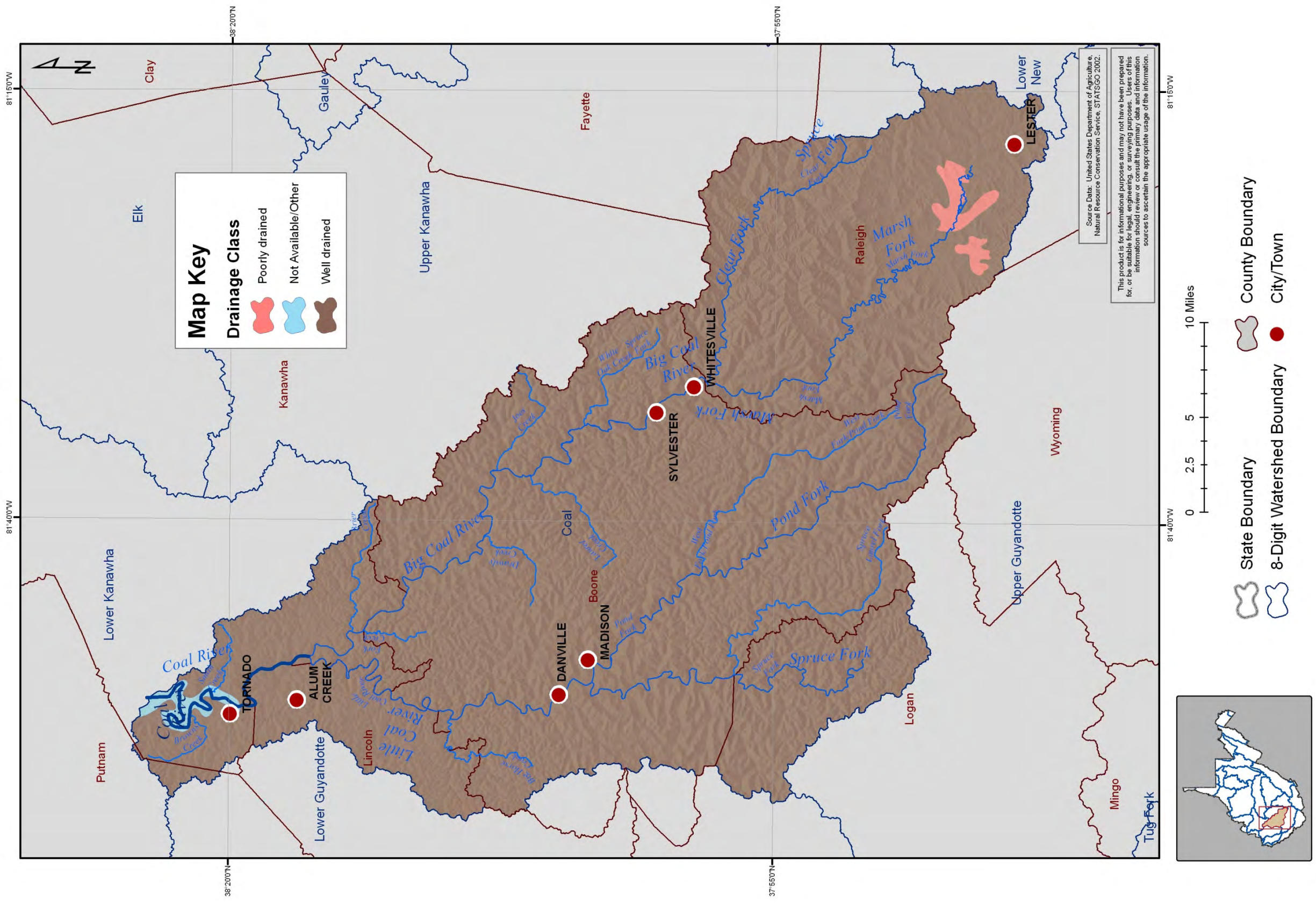
Coal HUC-8 Watershed

Major Roads and Cities



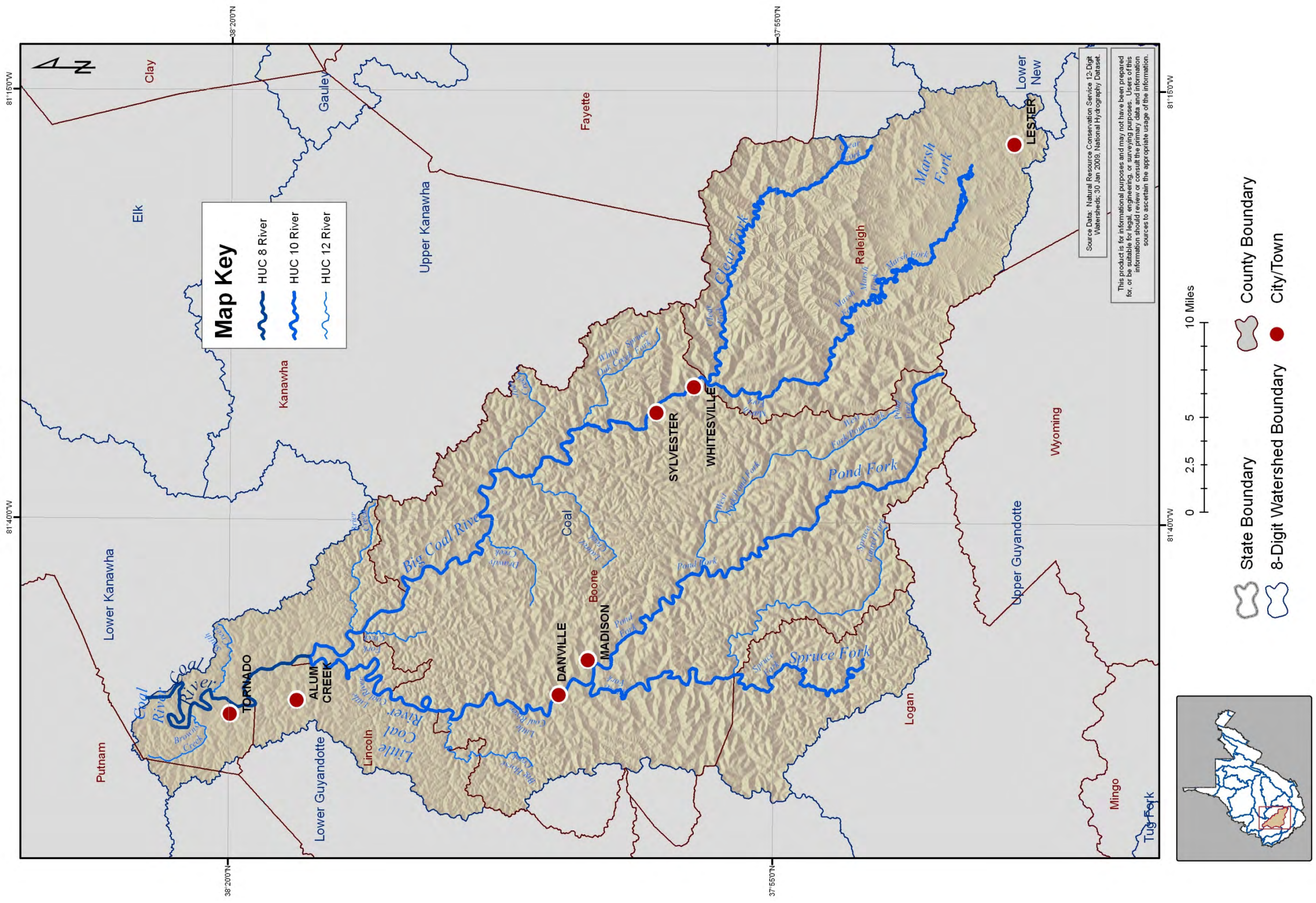
Coal HUC-8 Watershed

Soil Drainage Classes



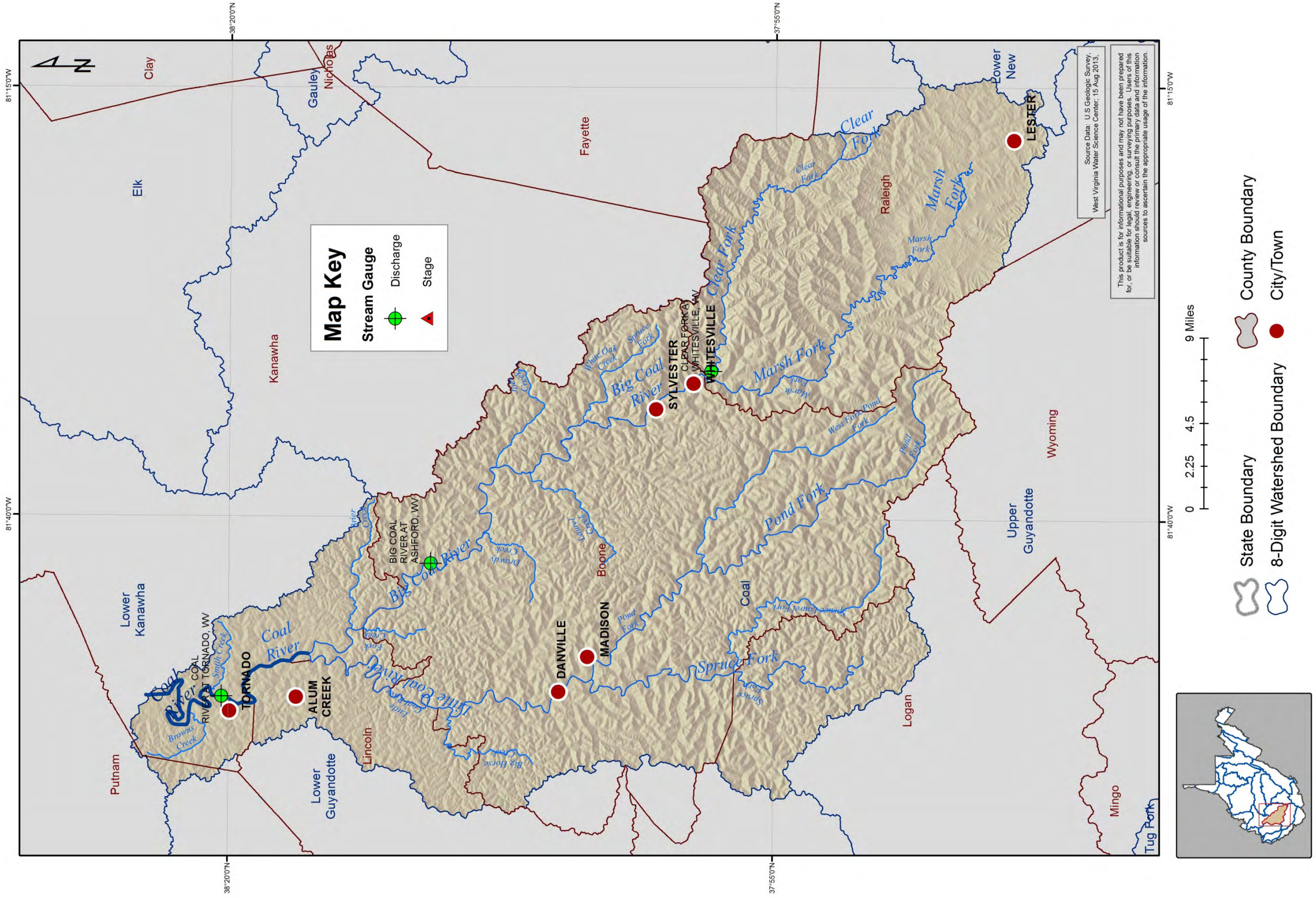
Coal HUC-8 Watershed

Stream Connections



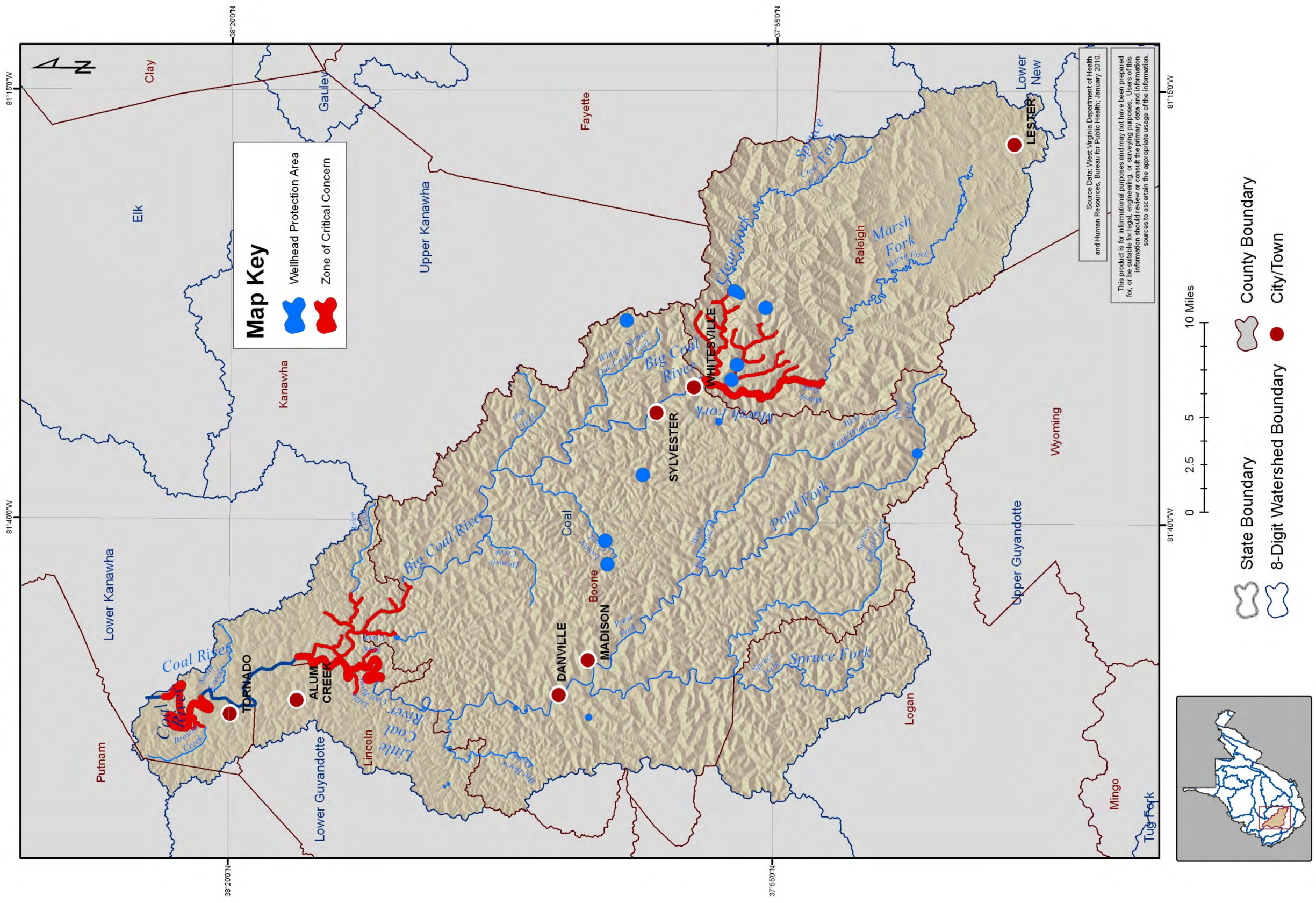
Coal HUC-8 Watershed

Stream Gauges



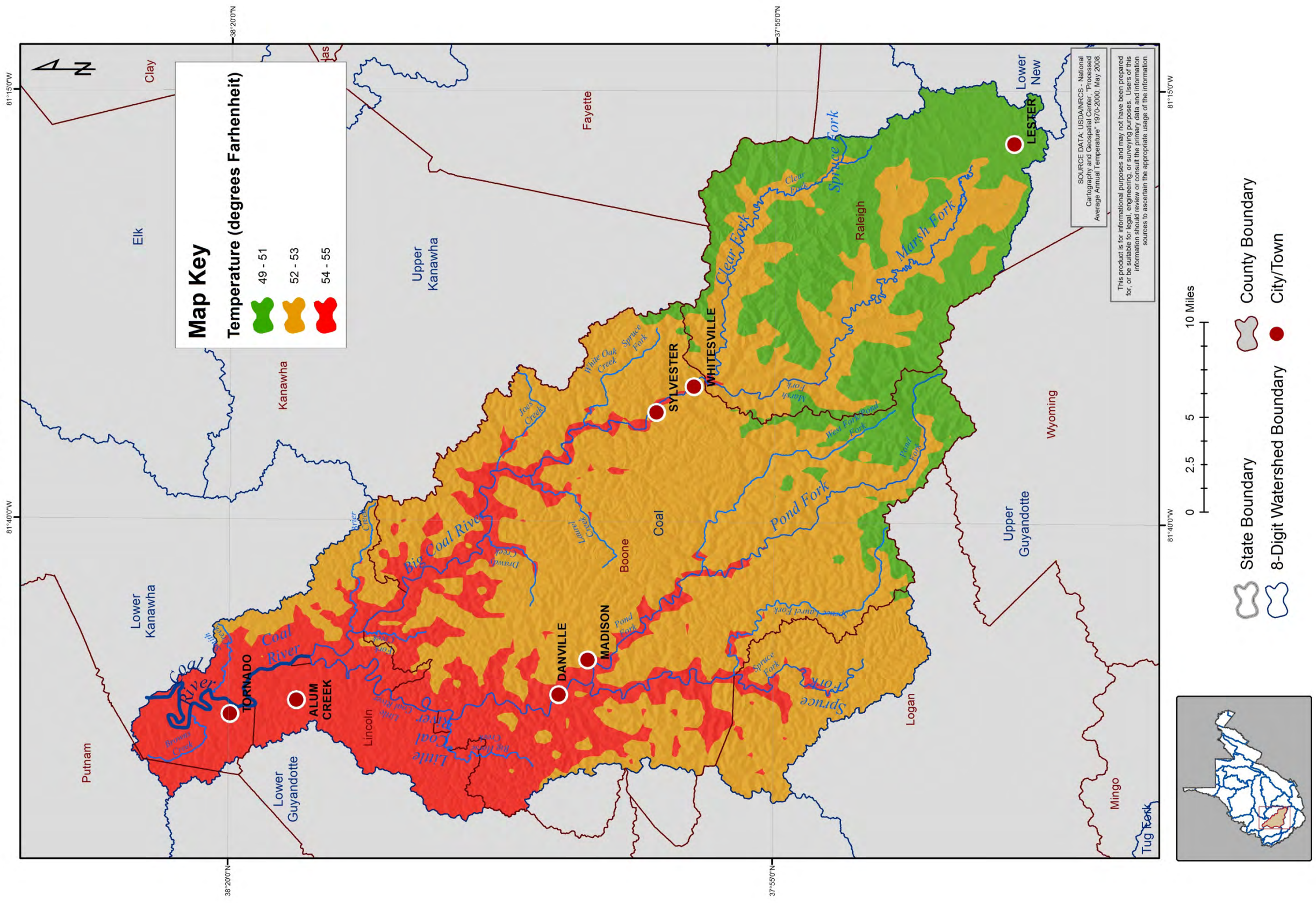
Coal HUC-8 Watershed

Source Water Assessment and Wellhead Protection Programs



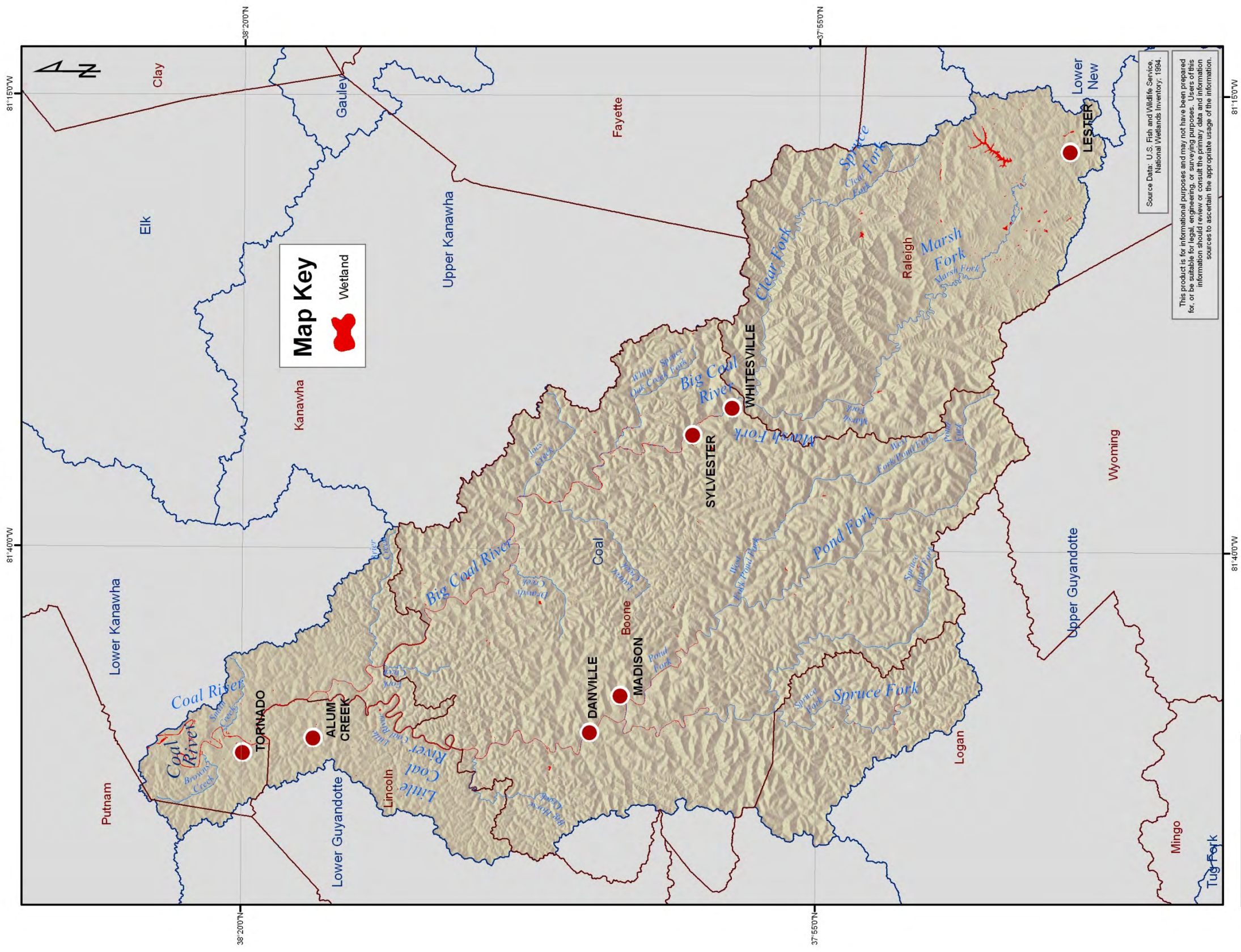
Coal HUC-8 Watershed

Average Annual Temperature (1971-2000)



Coal HUC-8 Watershed

Wetlands

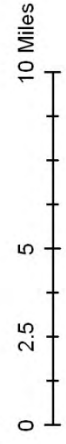
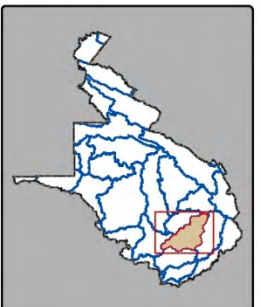


Map Key

- Wetland

Source Data: U.S. Fish and Wildlife Service, National Wetlands Inventory, 1984.

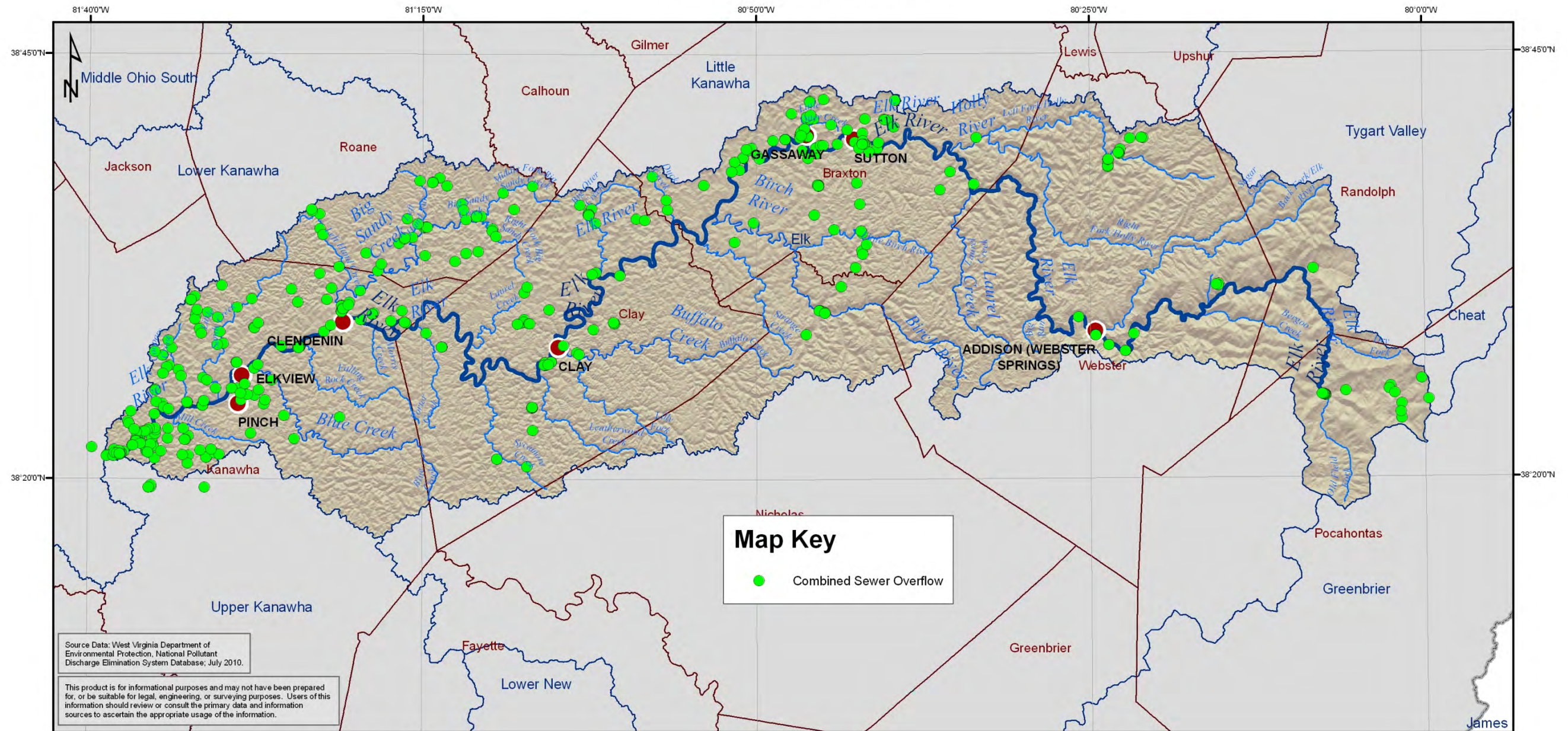
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- State Boundary
- 8-Digit Watershed Boundary
- County Boundary
- City/Town

Elk HUC-8 Watersheds

Combined Sewer Overflow

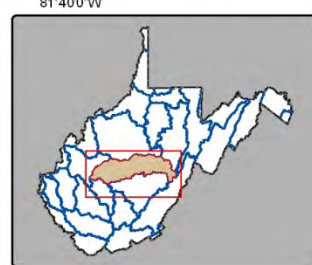
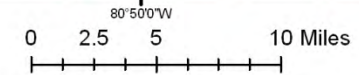


Source Data: West Virginia Department of Environmental Protection, National Pollutant Discharge Elimination System Database, July 2010.

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Map Key

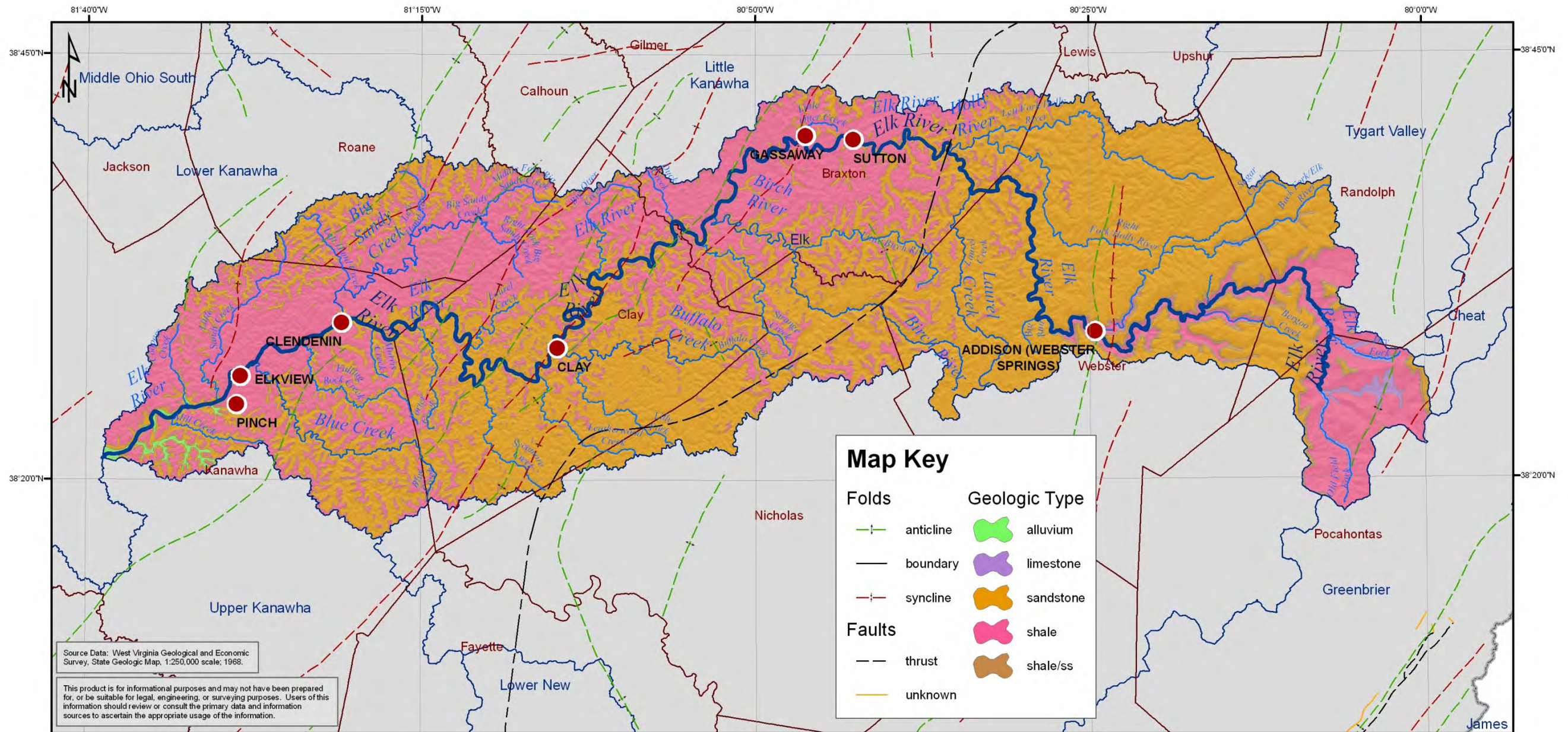
- Combined Sewer Overflow



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

Elk HUC-8 Watersheds

Surface Geology

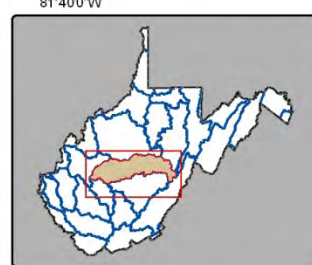


Source Data: West Virginia Geological and Economic Survey, State Geologic Map, 1:250,000 scale, 1968.

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Map Key

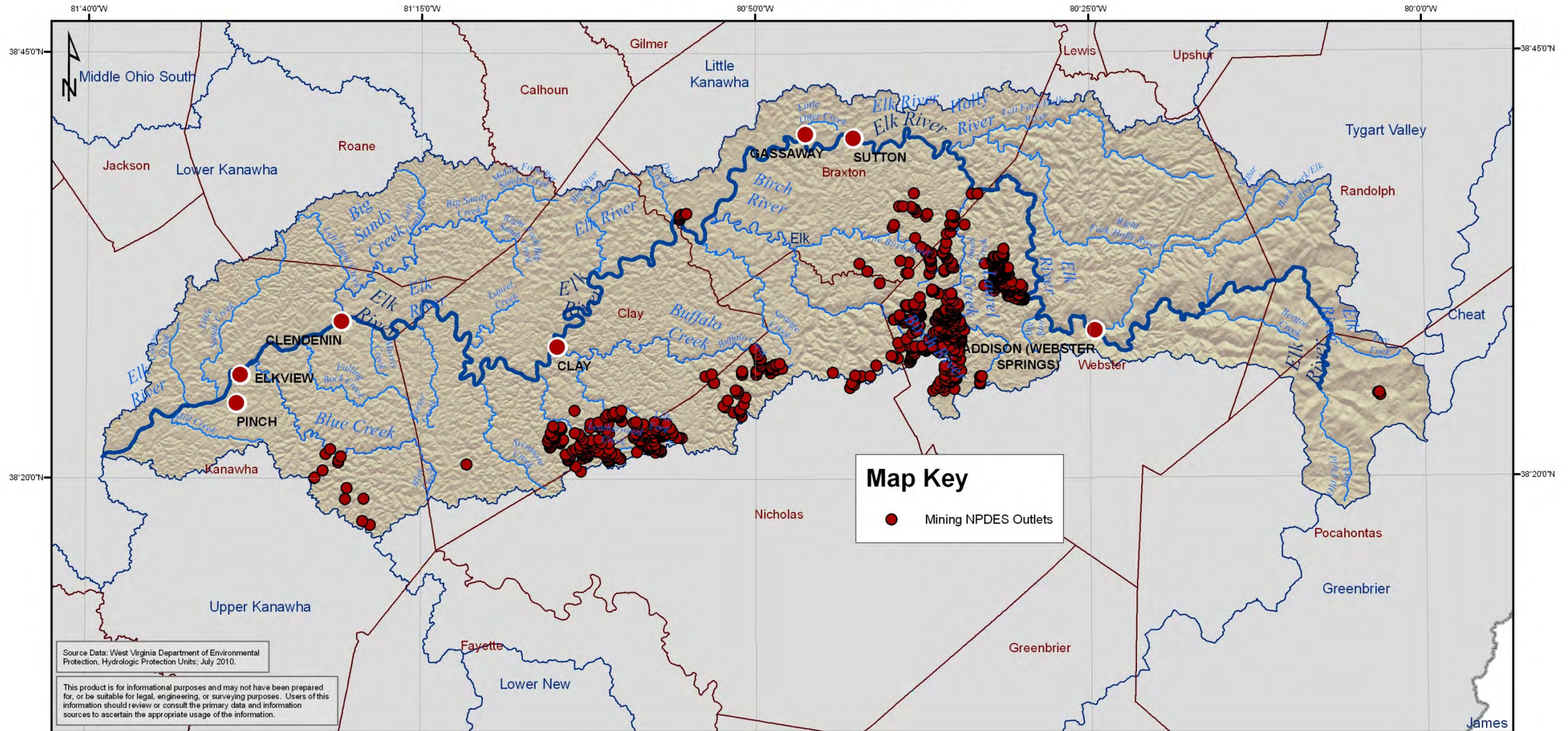
Folds	Geologic Type
anticline	alluvium
boundary	limestone
syncline	sandstone
thrust	shale
unknown	shale/ss



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

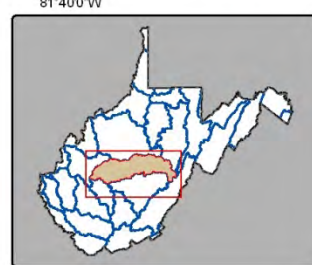
Elk HUC-8 Watersheds

Mining Related NPDES Outlets



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

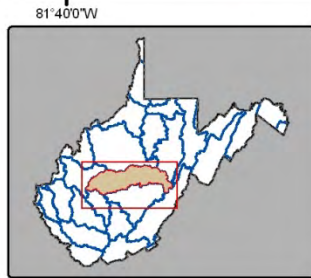
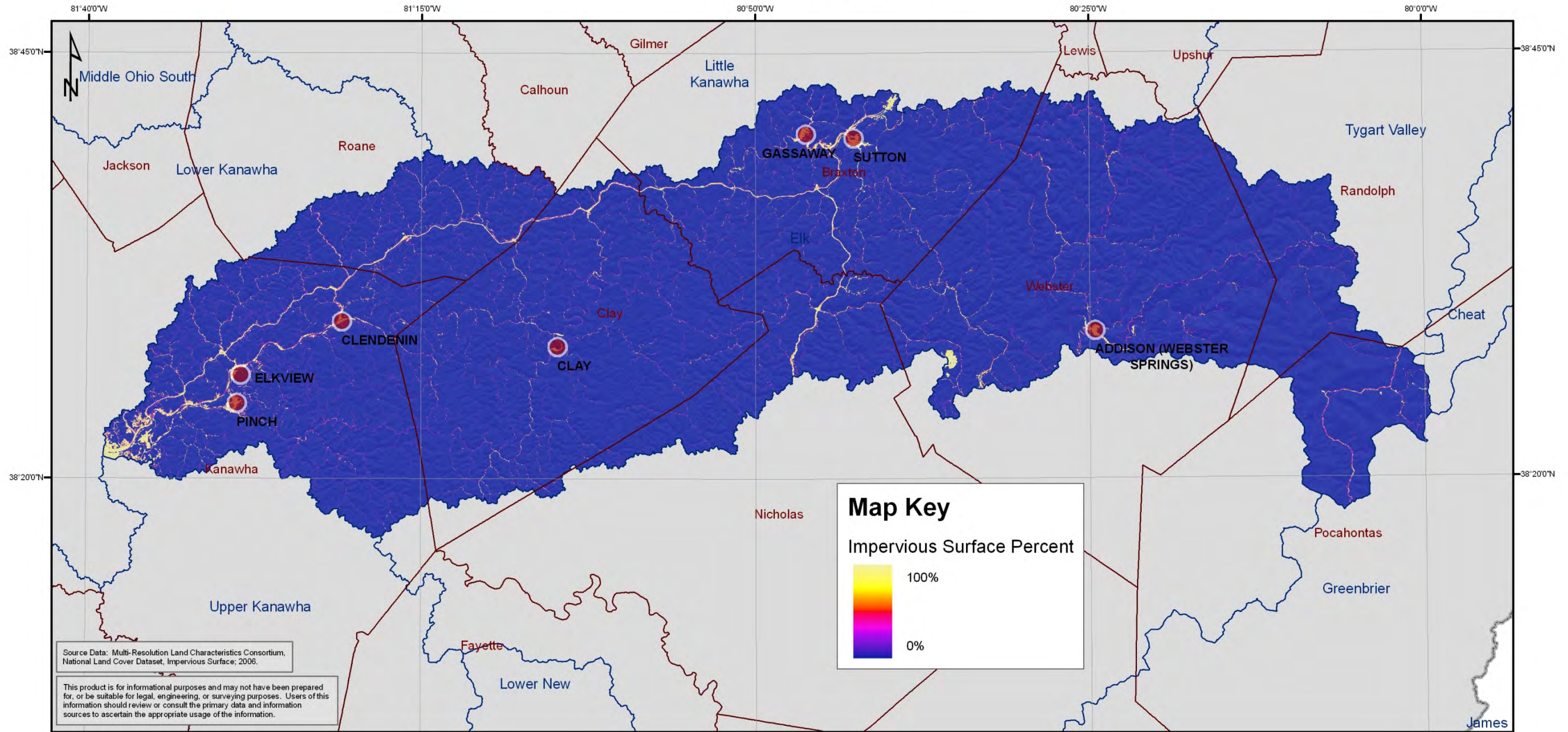
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Elk HUC-8 Watersheds

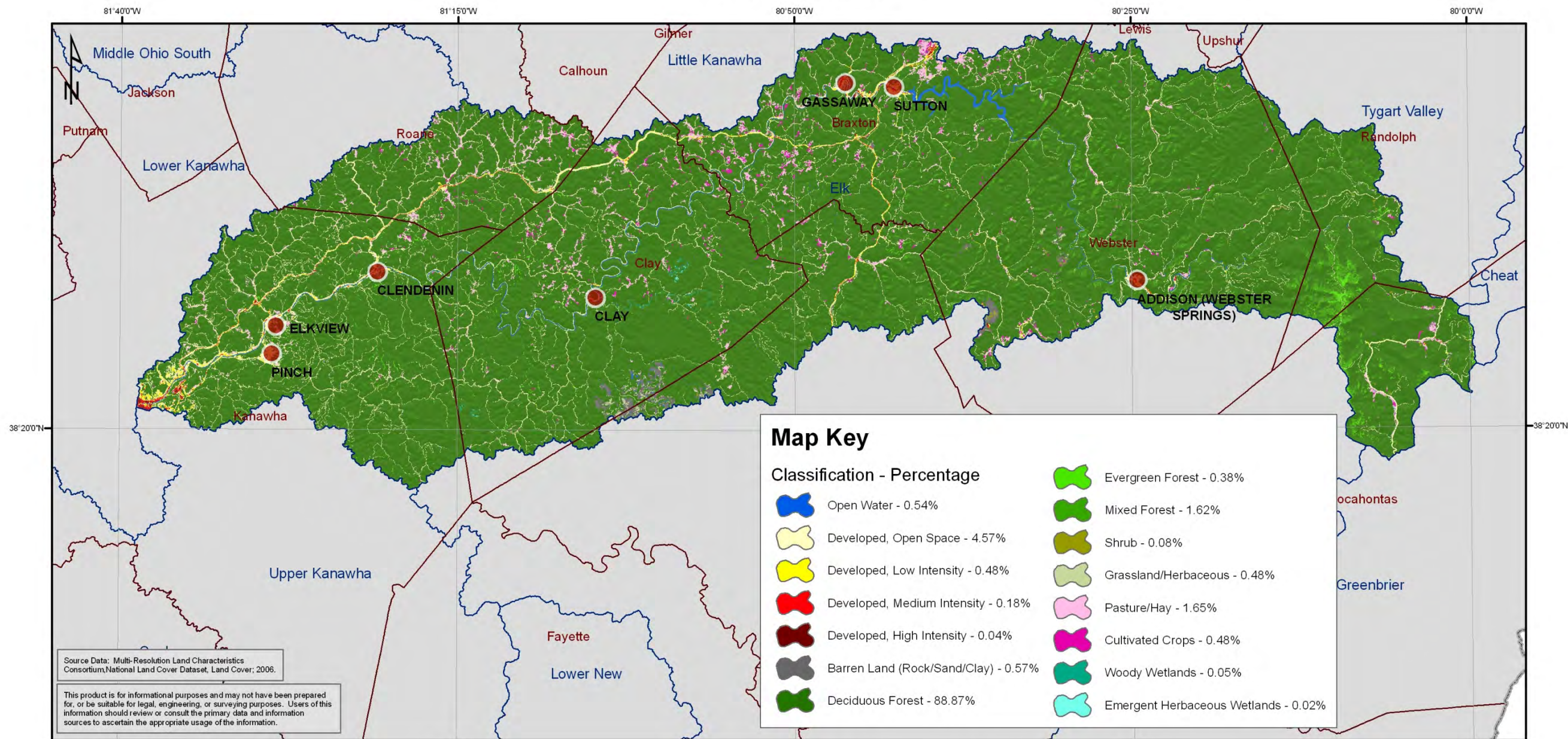
2006 Impervious Surfaces



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

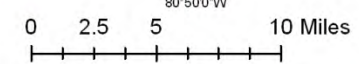
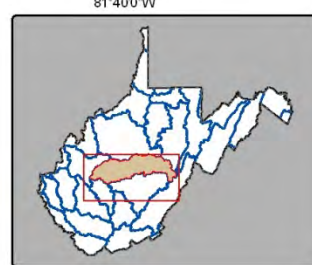
Eik HUC-8 Watershed

2006 Land Cover



Source Data: Multi-Resolution Land Characteristics Consortium, National Land Cover Dataset, Land Cover, 2006.

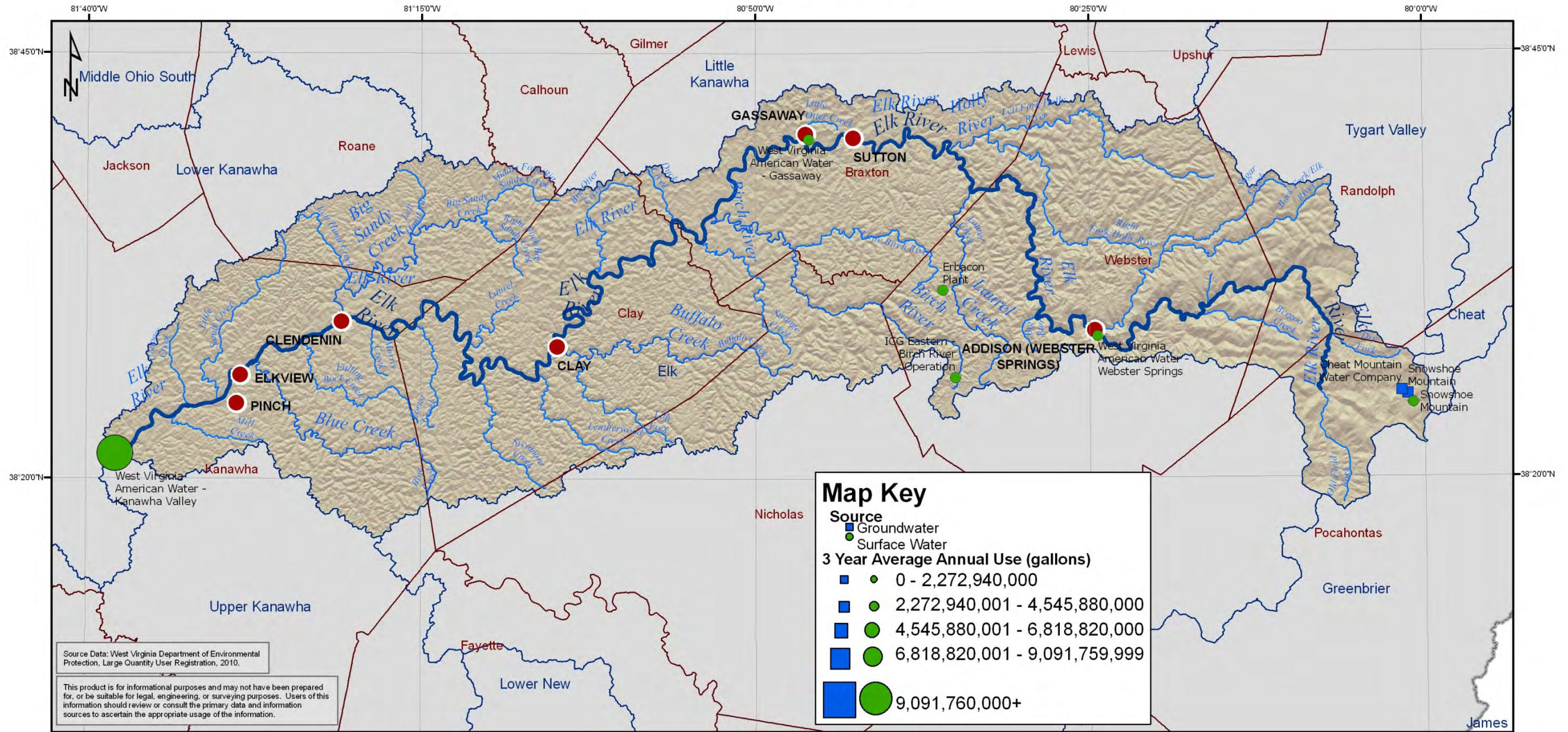
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

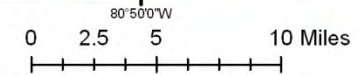
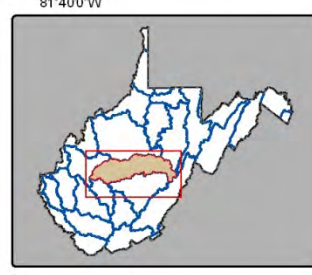
Elk HUC-8 Watersheds

Large Quantity Users



Source Data: West Virginia Department of Environmental Protection, Large Quantity User Registration, 2010.

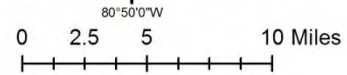
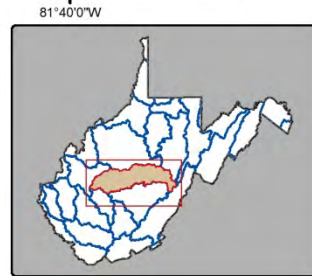
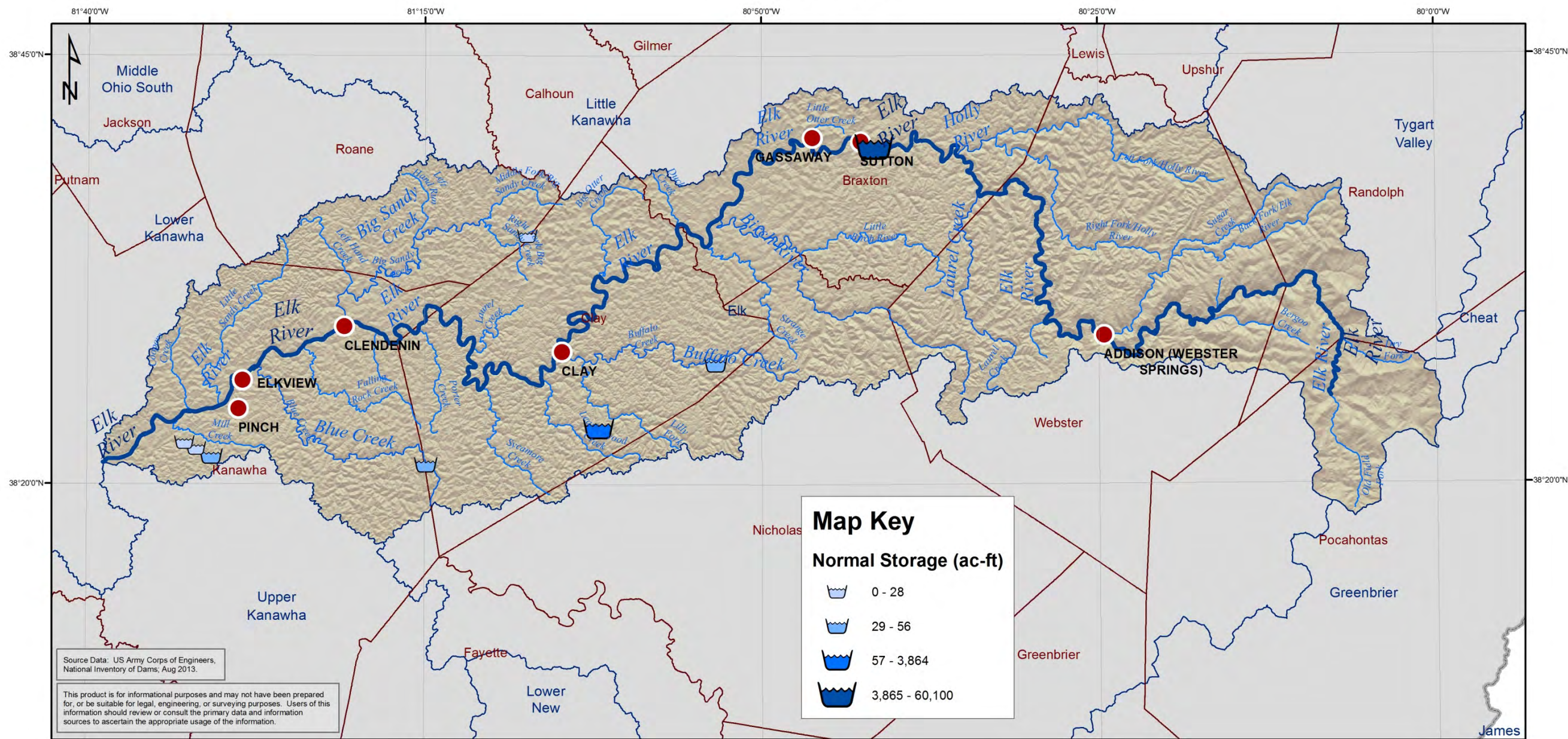
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Elk HUC-8 Watersheds

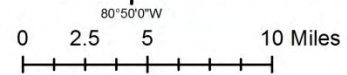
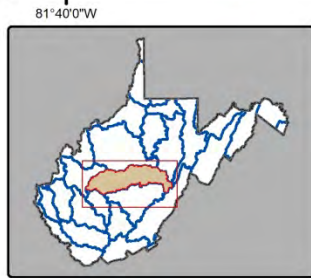
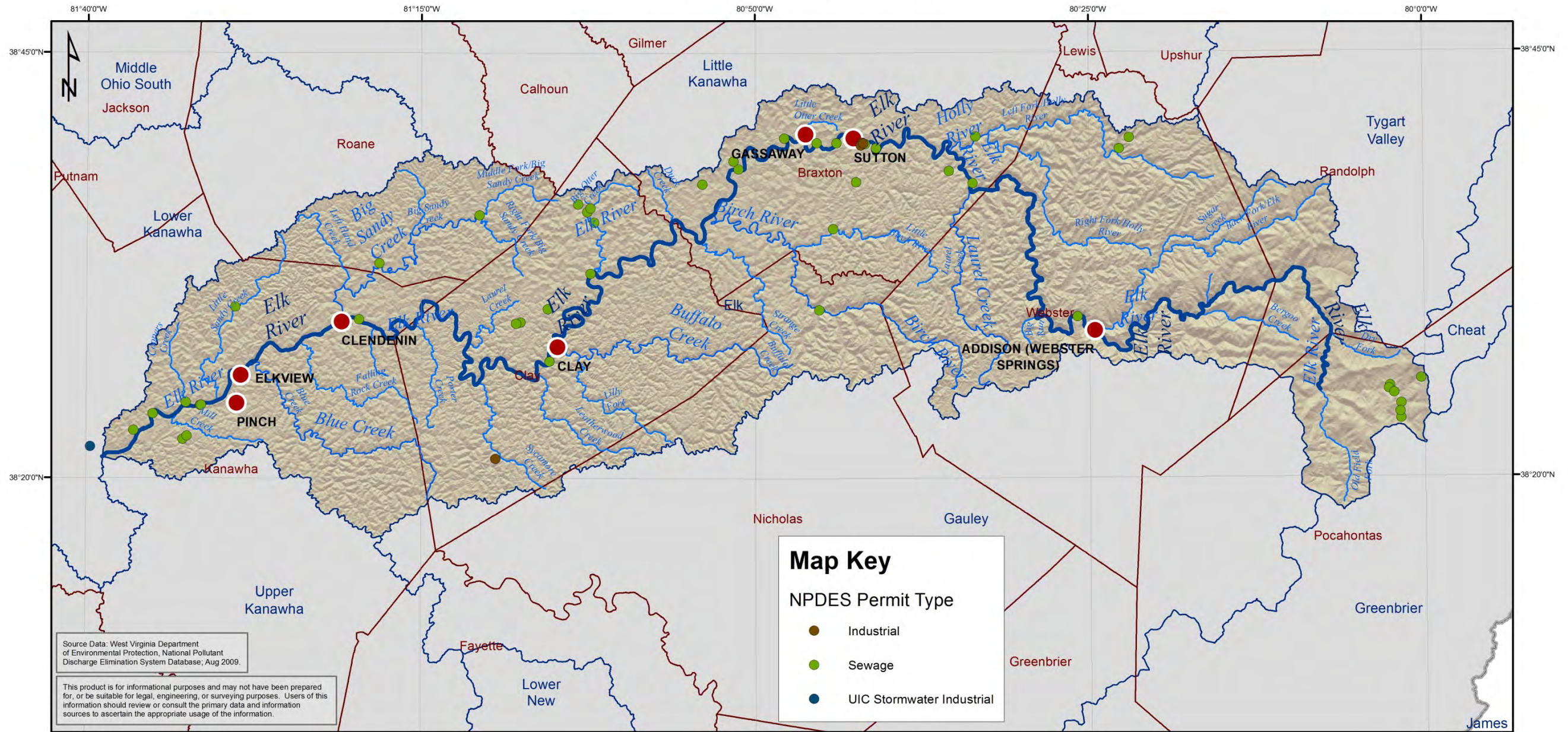
Permitted Dams



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

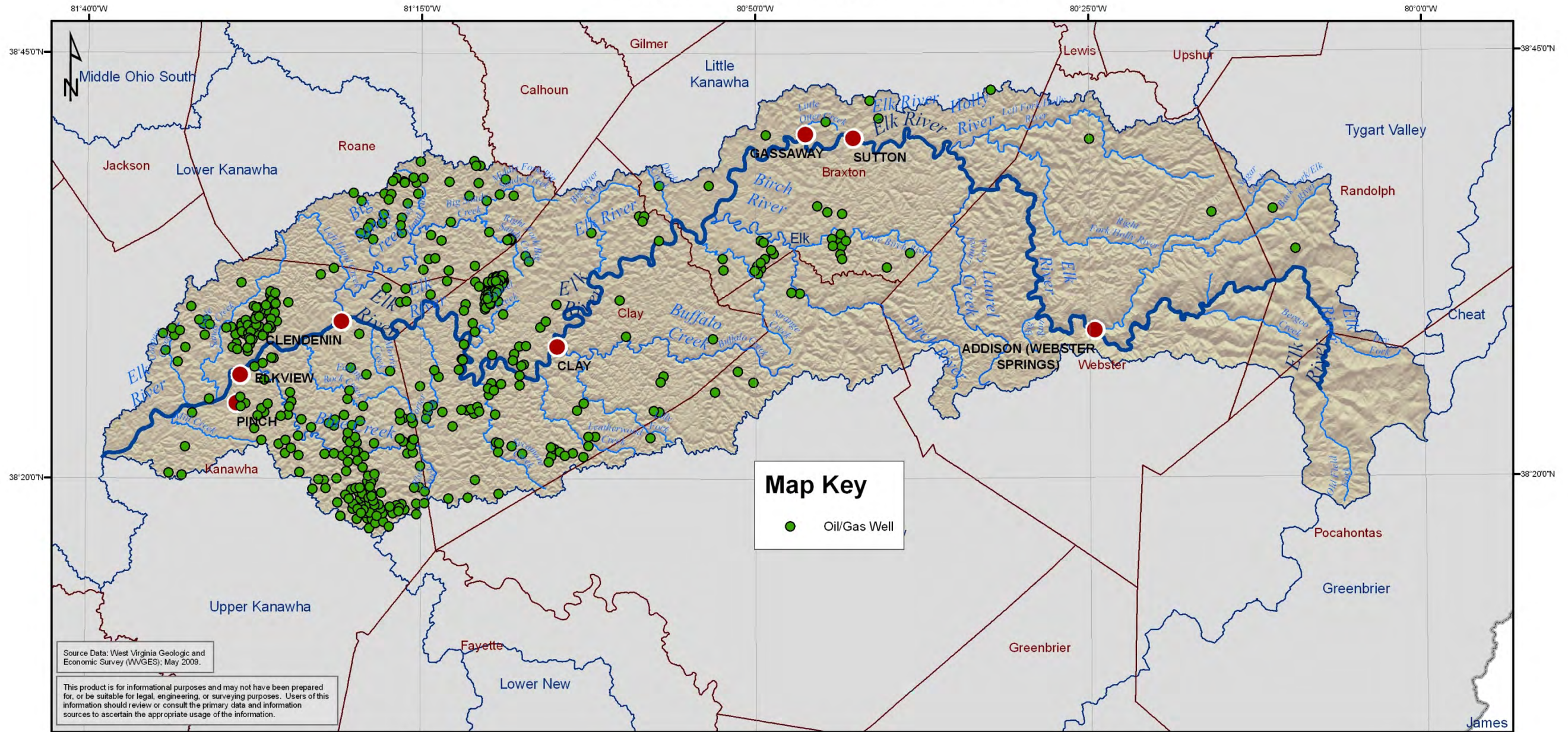
Elk HUC-8 Watersheds

Non-Mining NPDES Outlets



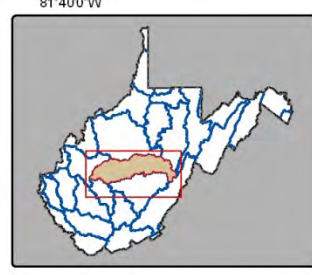
Elk HUC-8 Watersheds

Well Logs with Gamma Rays and Water Shows



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

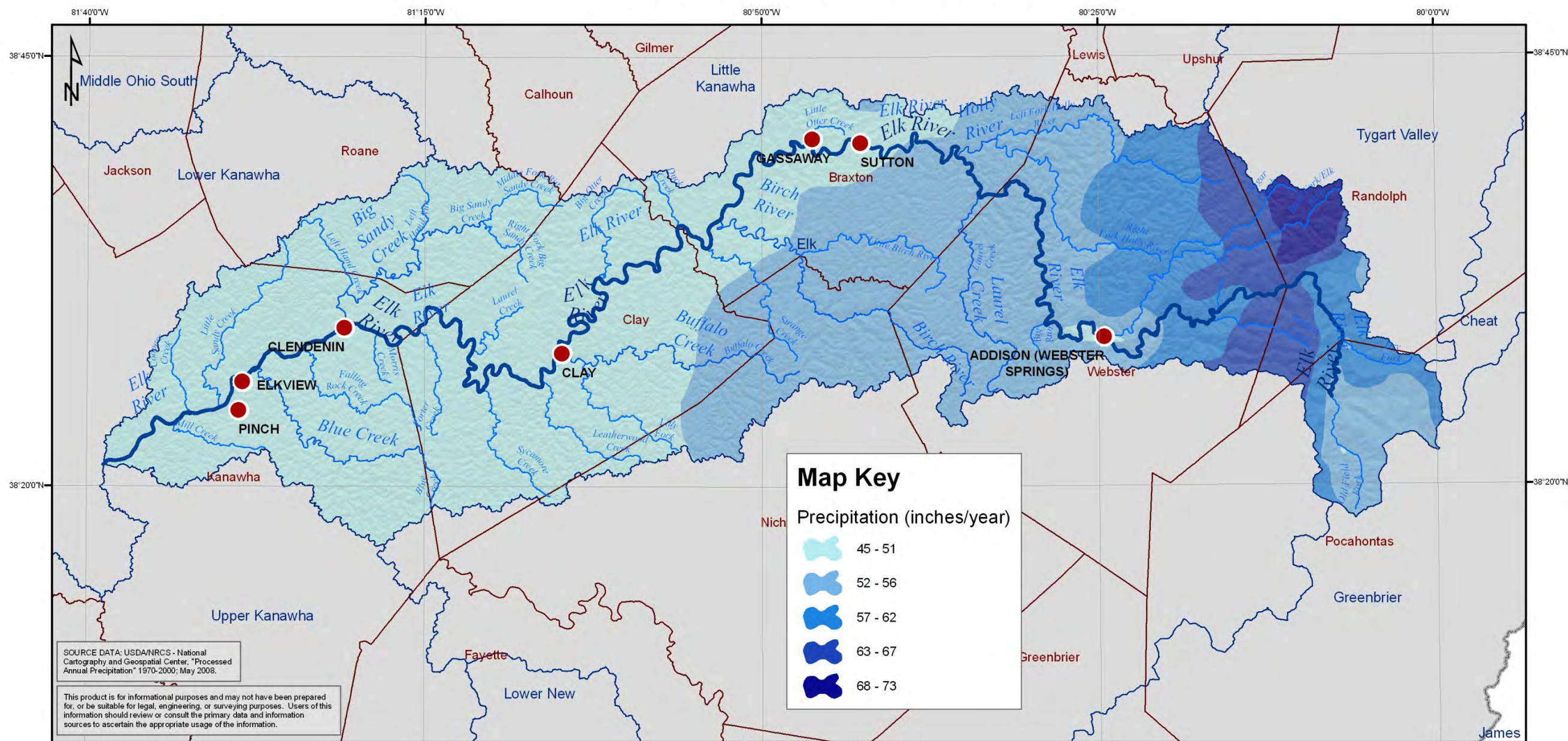
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

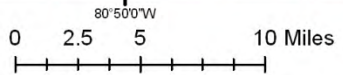
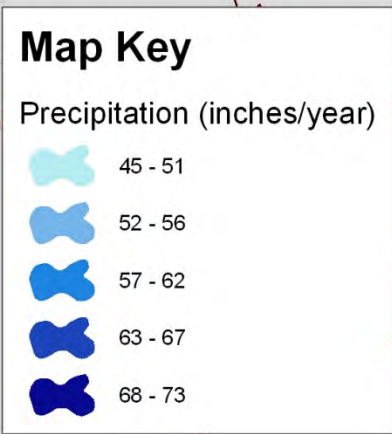
Elk HUC-8 Watersheds

Average Annual Precipitation (1971-2000)

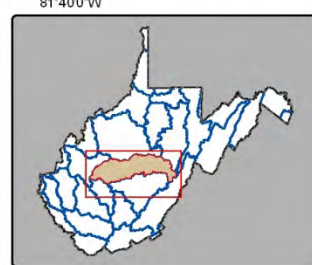


SOURCE DATA: USDA/NRCS - National Cartography and Geospatial Center, "Processed Annual Precipitation" 1970-2000; May 2008.

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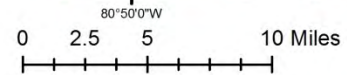
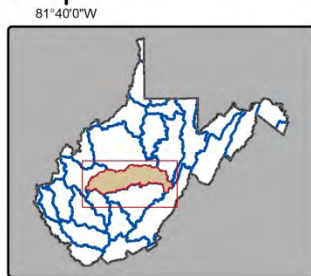
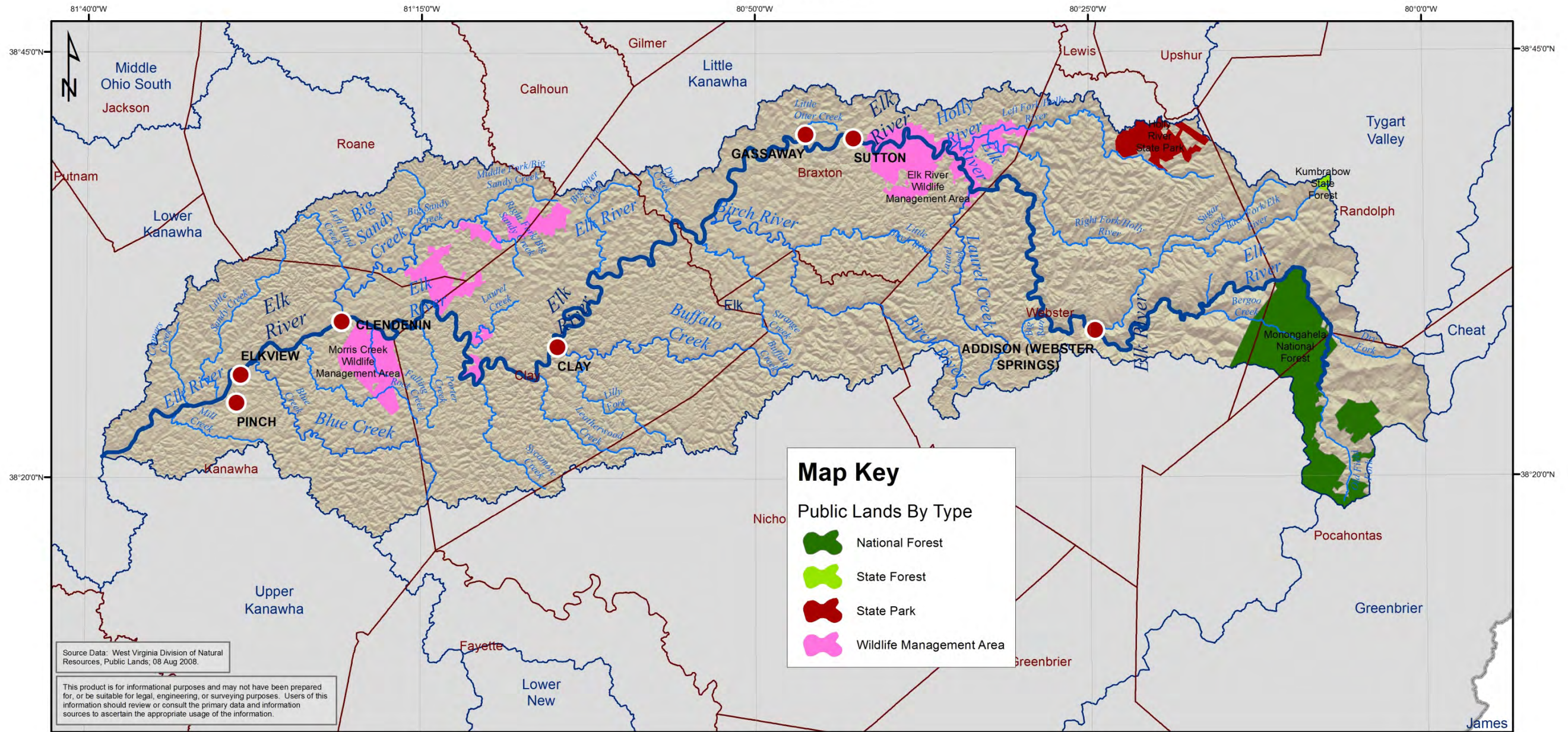


- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town



Elk HUC-8 Watersheds

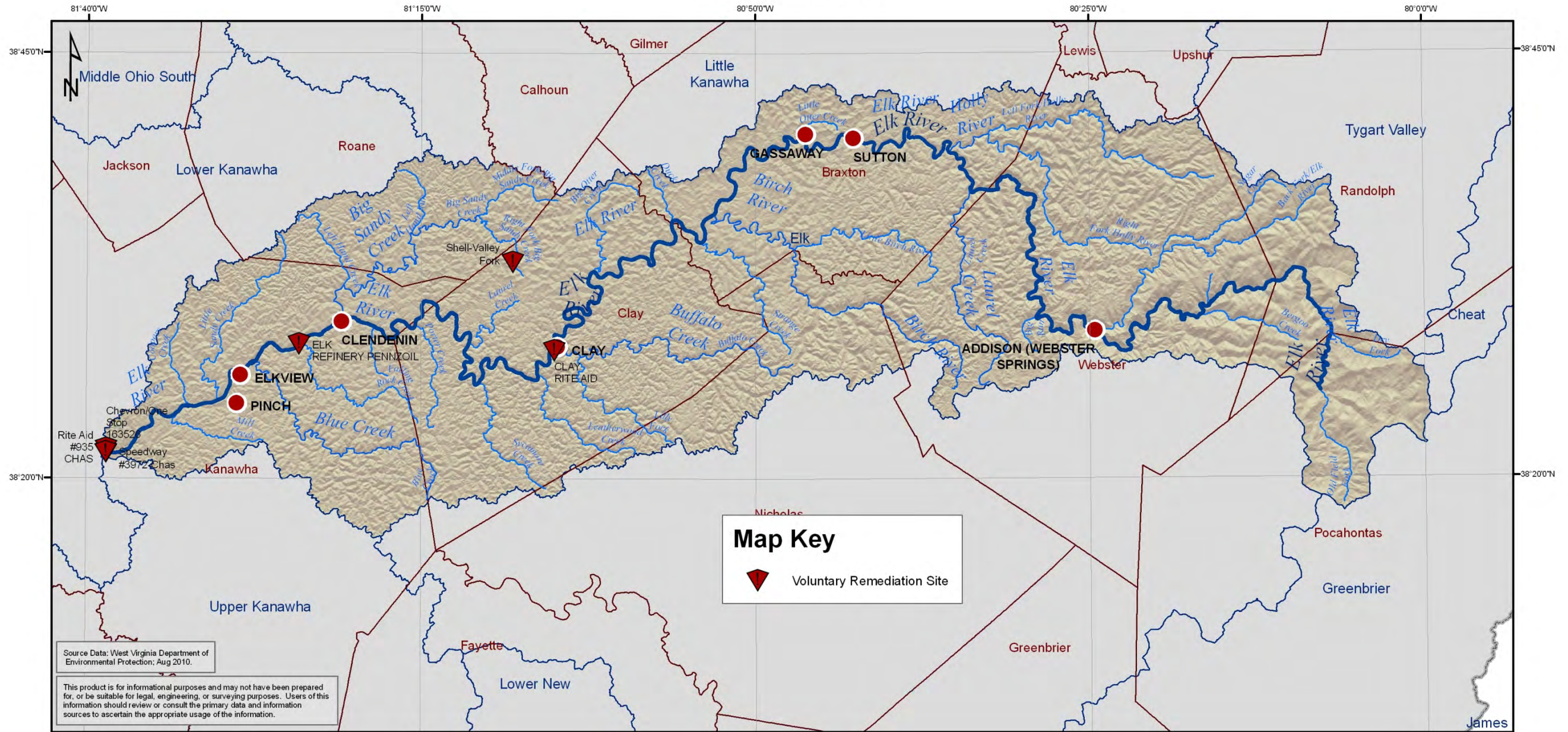
Public Lands



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

Elk HUC-8 Watersheds

Remediation Sites

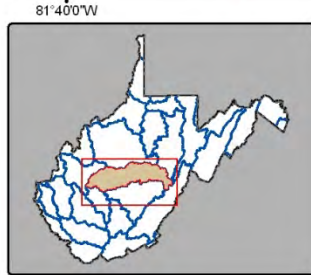
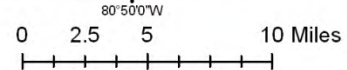


Source Data: West Virginia Department of Environmental Protection; Aug 2010.

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Map Key

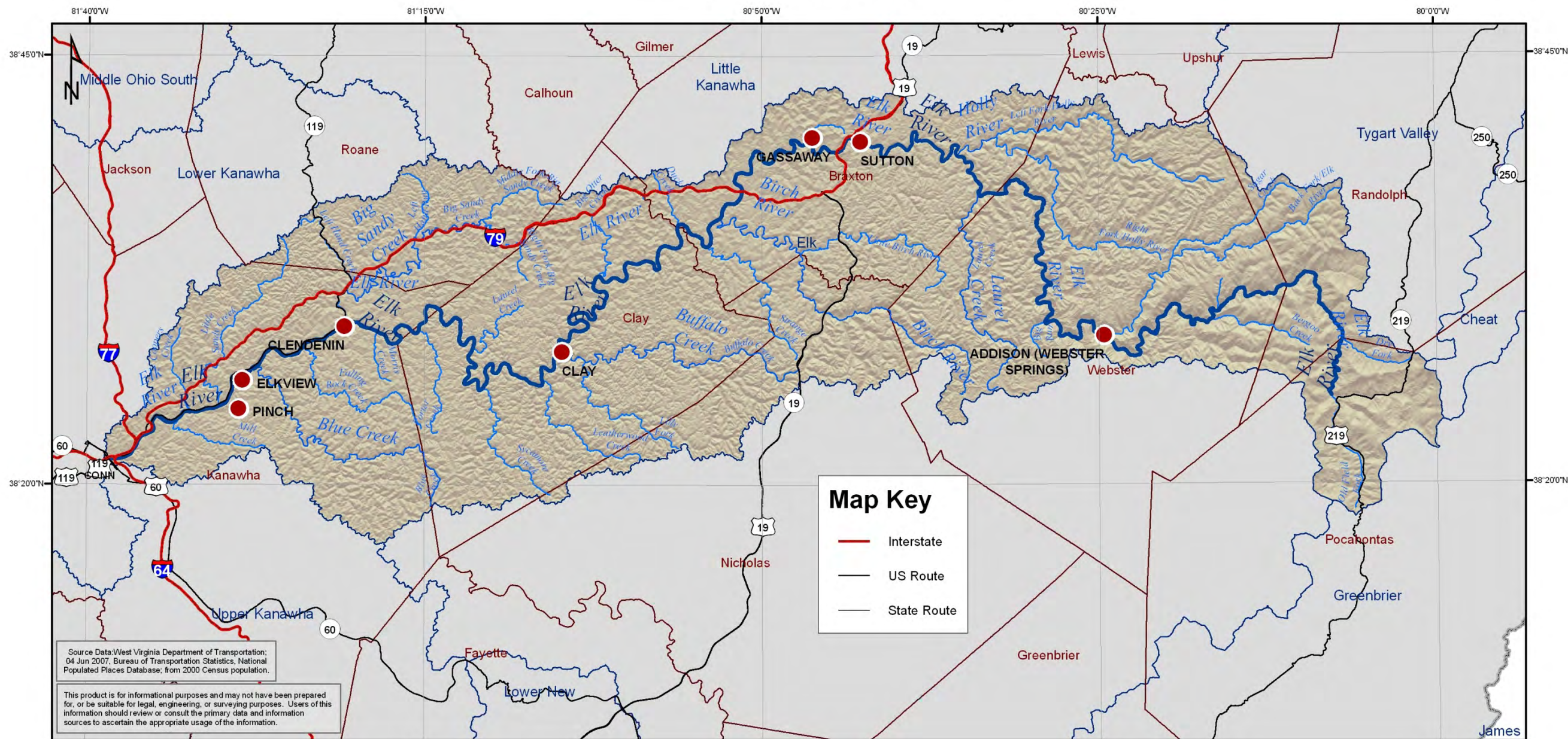
- Voluntary Remediation Site



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

Elk HUC-8 Watersheds

Major Roads and Cities

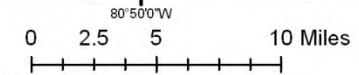


Source Data: West Virginia Department of Transportation; 04 Jun 2007, Bureau of Transportation Statistics, National Populated Places Database; from 2000 Census population.

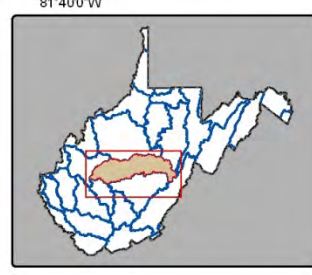
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Map Key

- Interstate
- US Route
- State Route

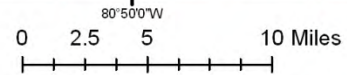
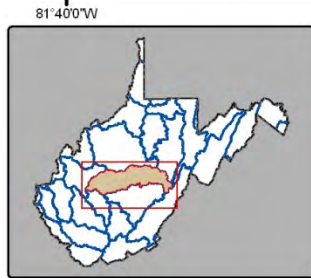
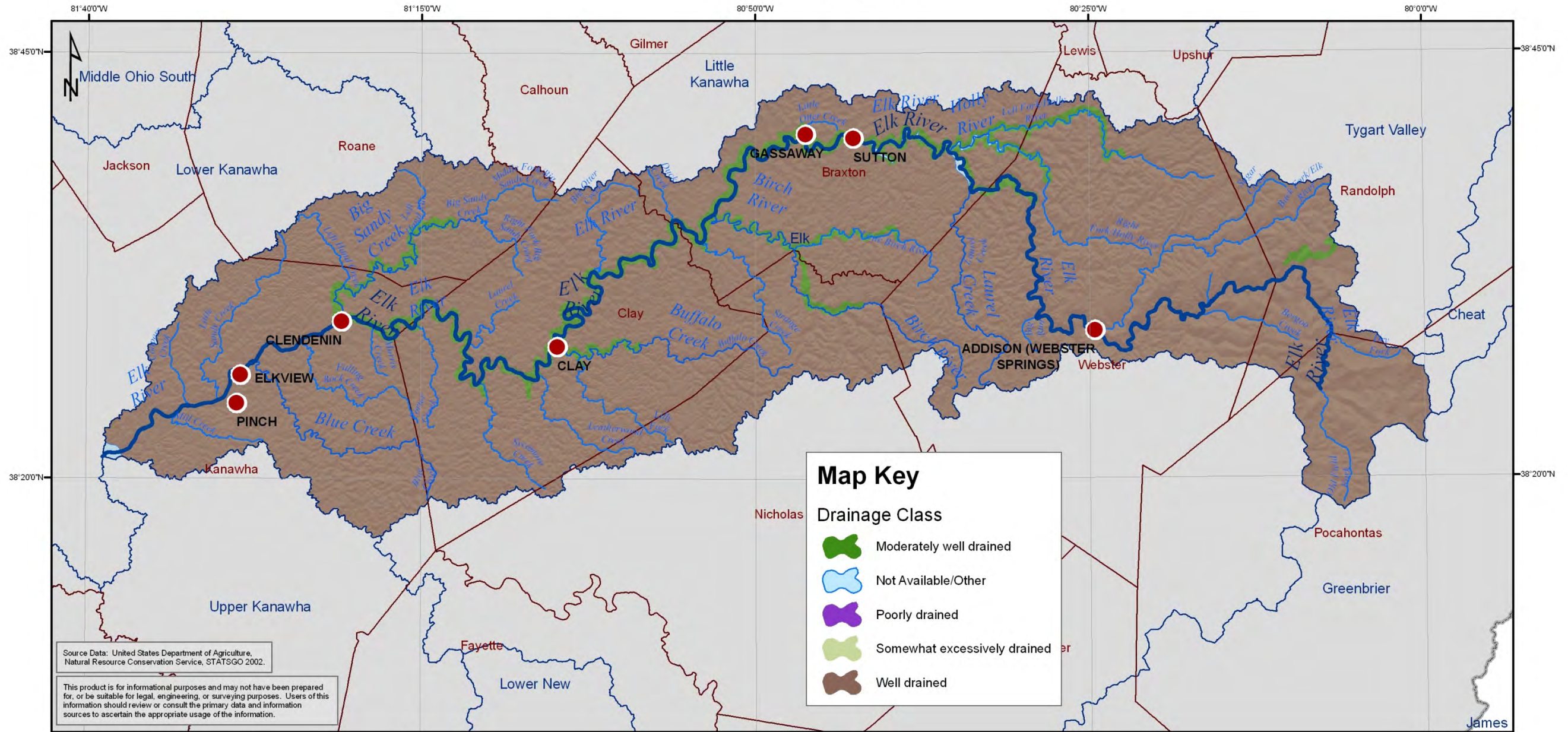


- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town



Elk HUC-8 Watersheds

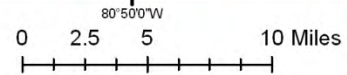
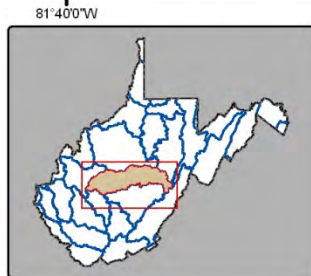
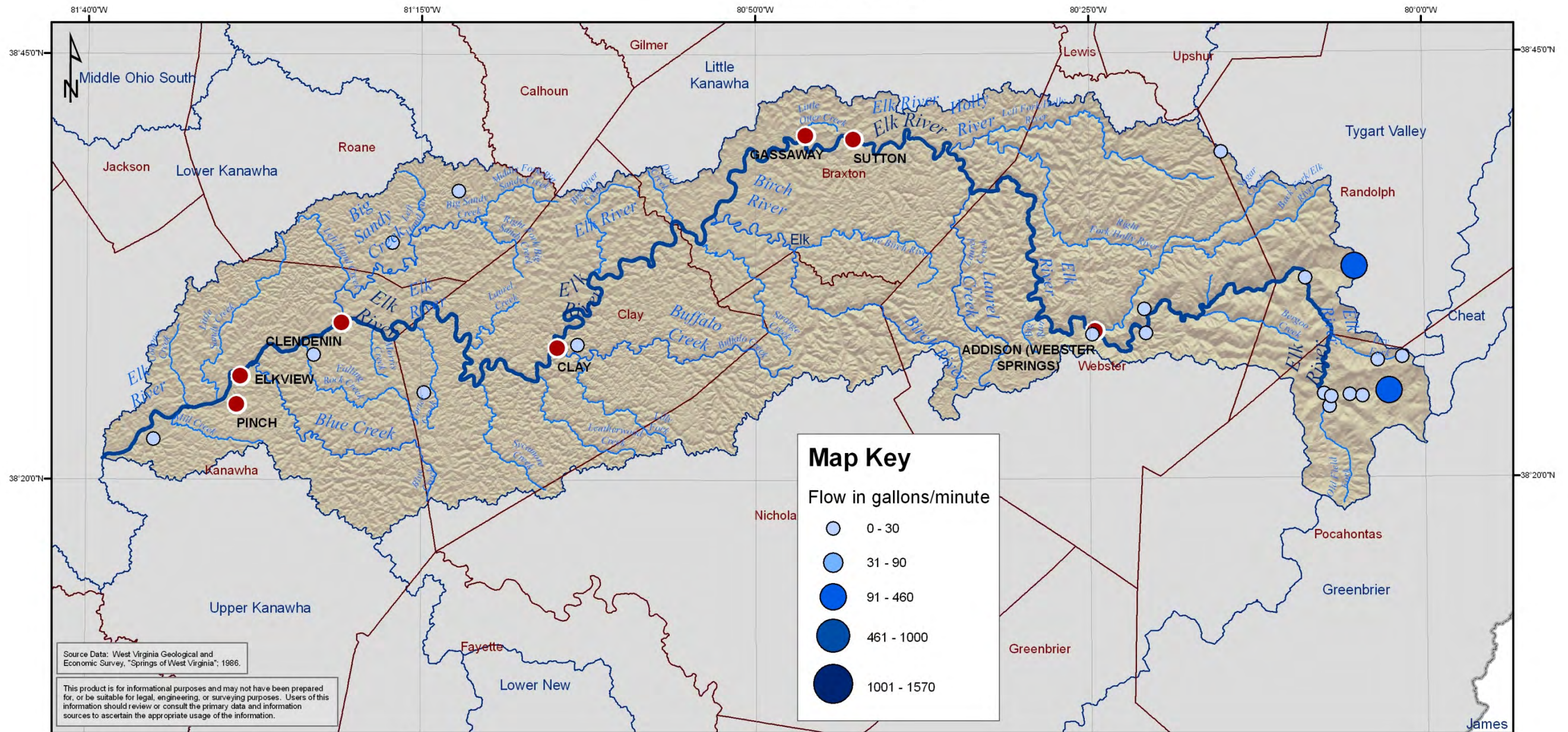
Soil Drainage Classes



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

Elk HUC-8 Watersheds

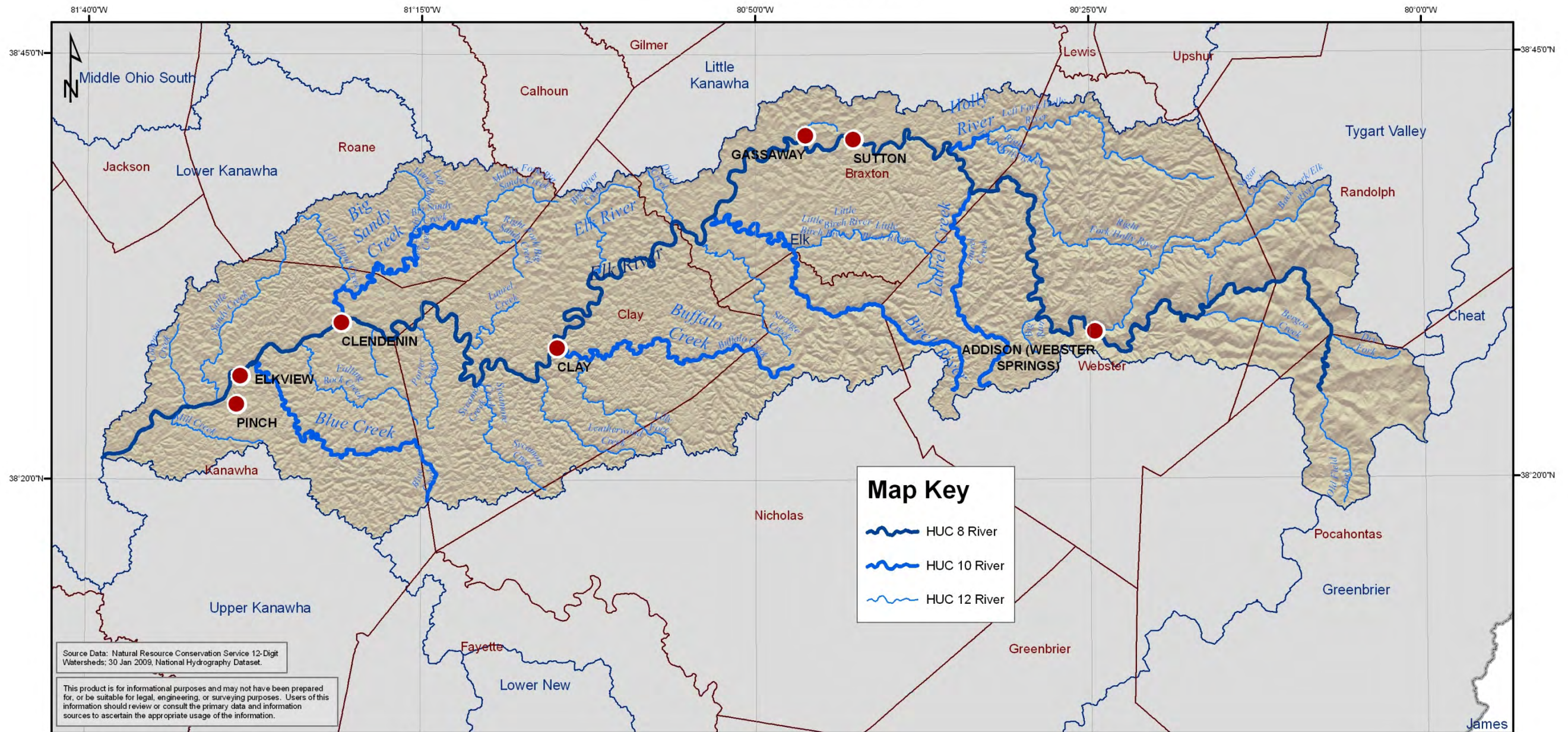
Documented Springs



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

Elk HUC-8 Watersheds

Stream Connections

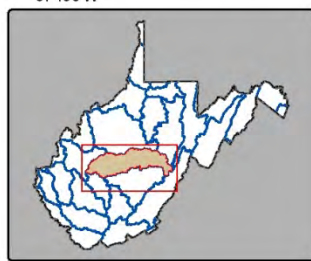
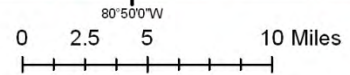


Source Data: Natural Resource Conservation Service 12-Digit Watersheds; 30 Jan 2009, National Hydrography Dataset.

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.

Map Key

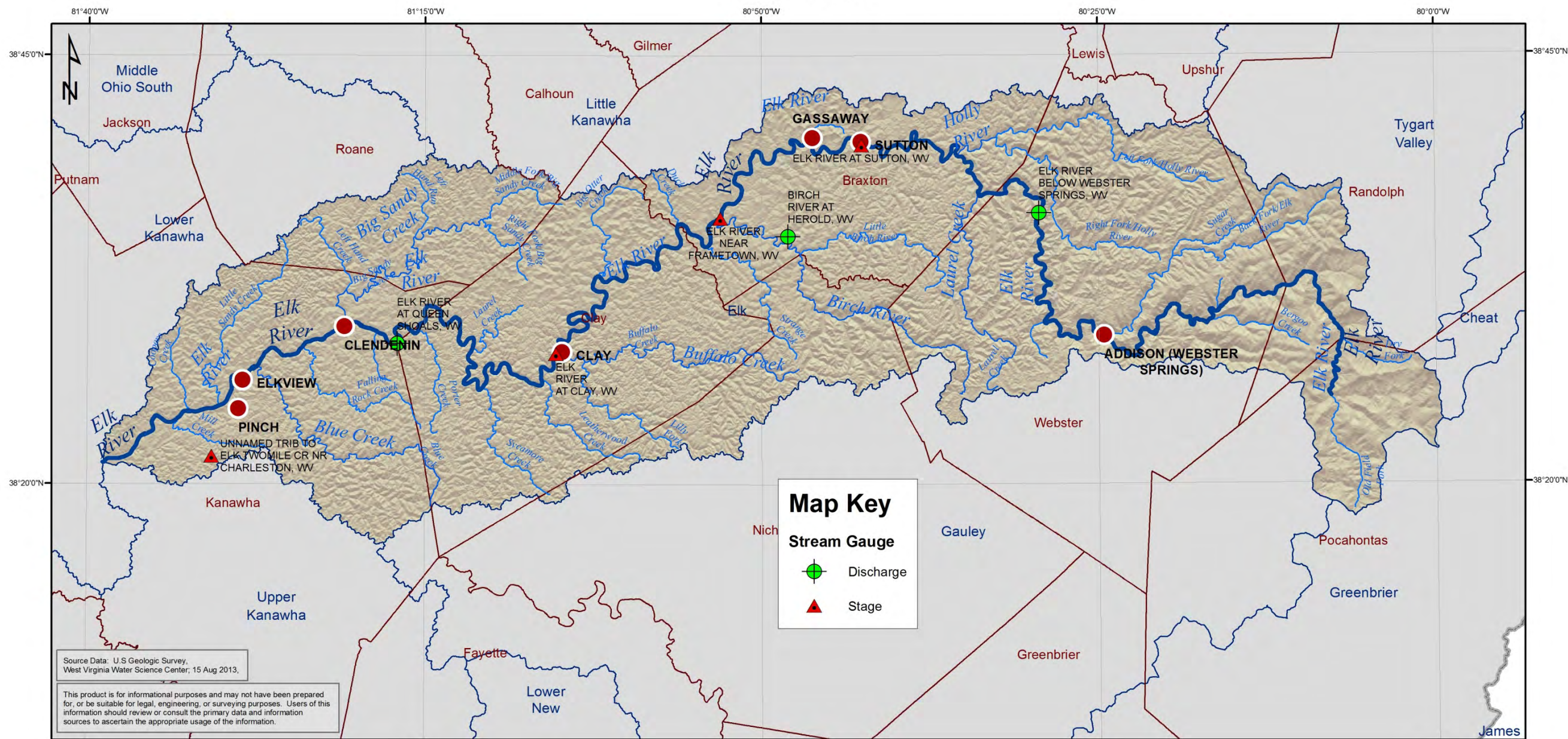
- HUC 8 River
- HUC 10 River
- HUC 12 River



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

Elk HUC-8 Watersheds

Stream Gauges





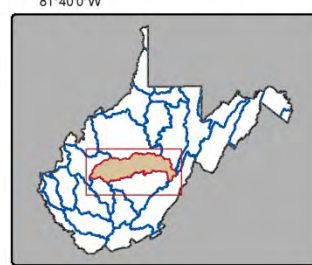
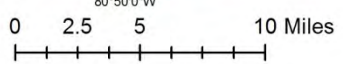
Source Data: U.S. Geologic Survey, West Virginia Water Science Center, 15 Aug 2013.





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Map Key

Stream Gauge

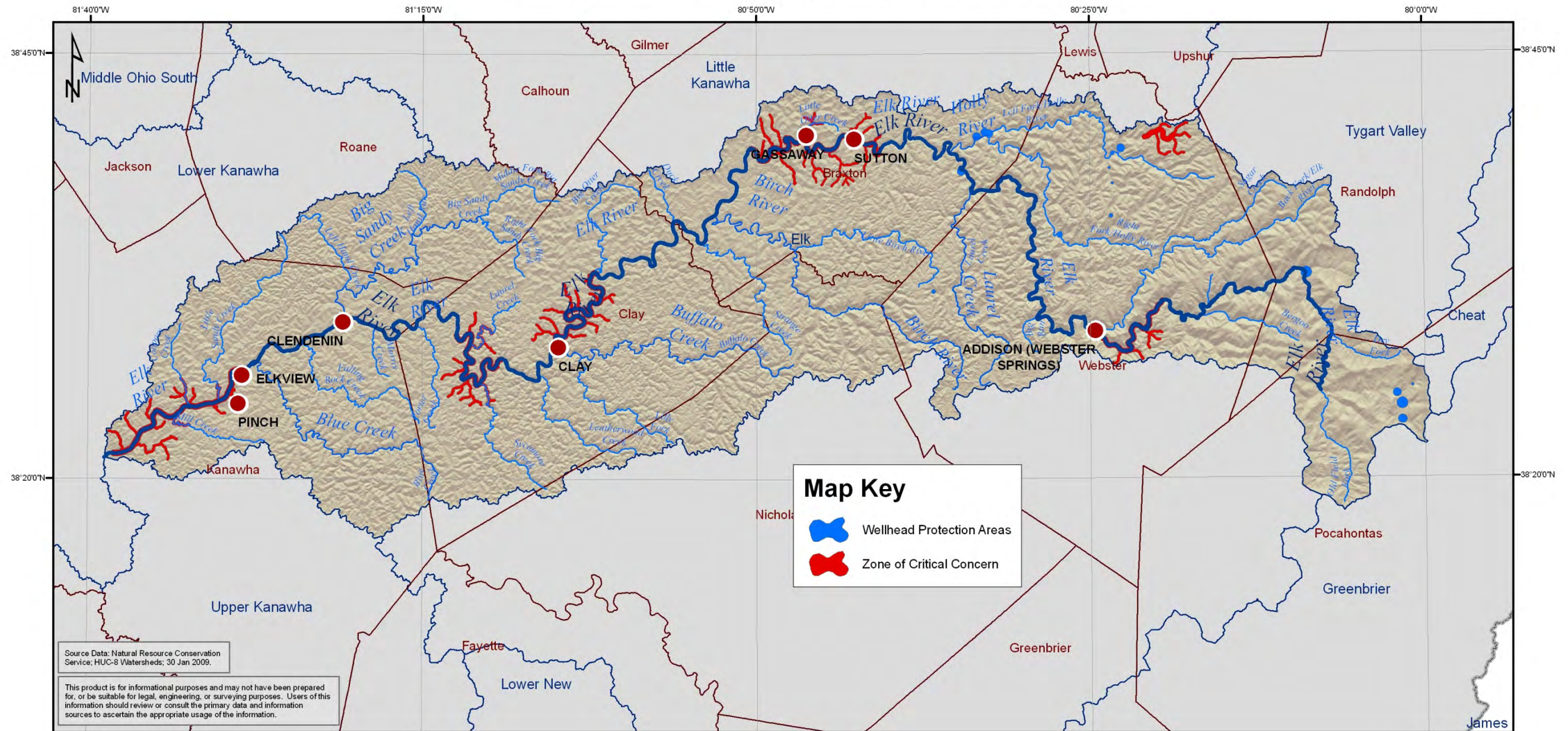
-  Discharge
-  Stage



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

Elk HUC-8 Watersheds

Source Water Assessment and Wellhead Protection Programs

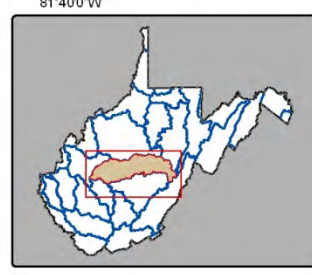
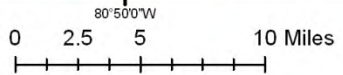


Source Data: Natural Resource Conservation Service; HUC-8 Watersheds; 30 Jan 2009.

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Map Key

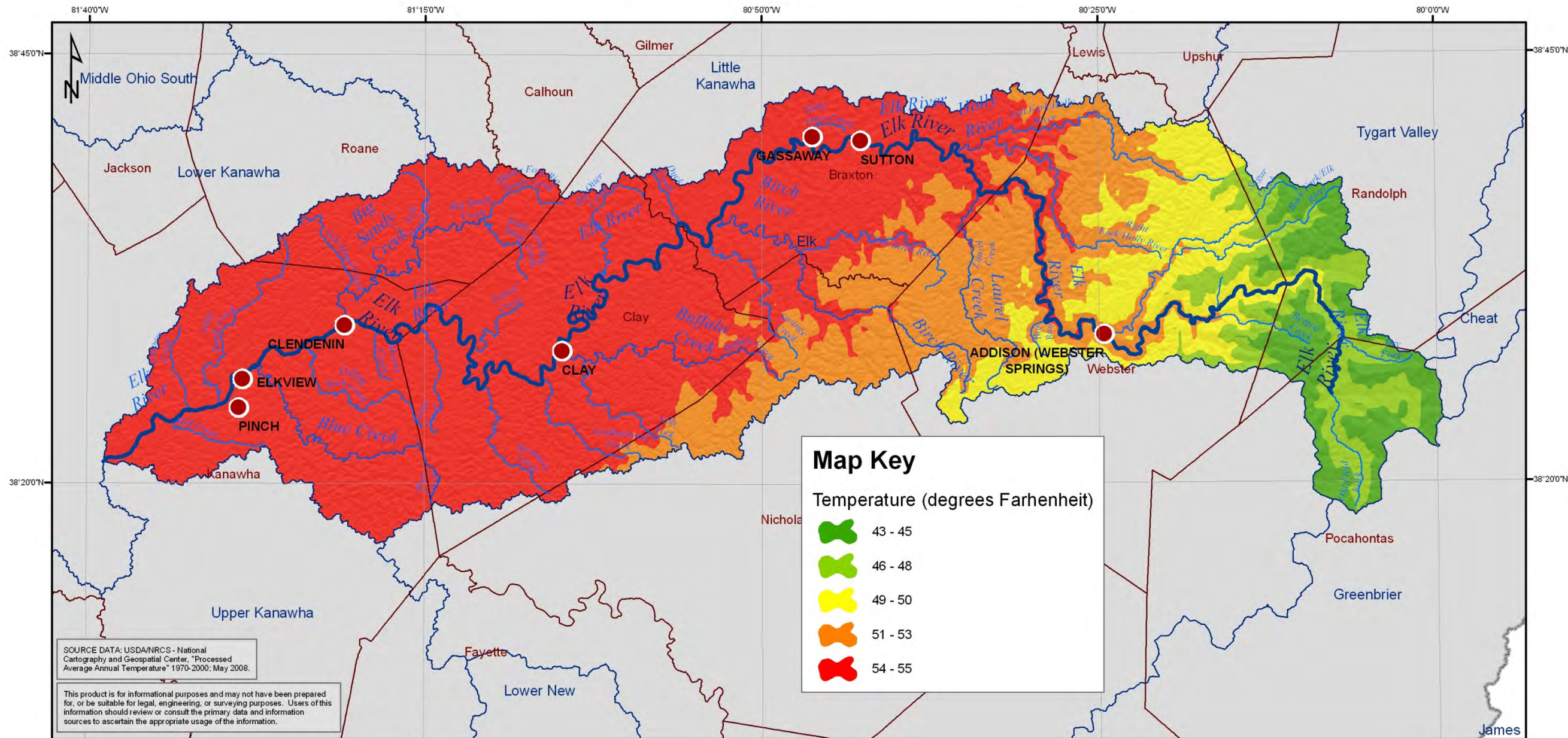
- Wellhead Protection Areas
- Zone of Critical Concern



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

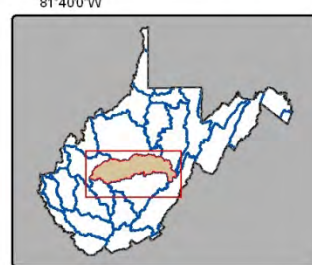
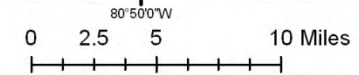
Elk HUC-8 Watersheds

Average Annual Temperature (1971-2000)



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

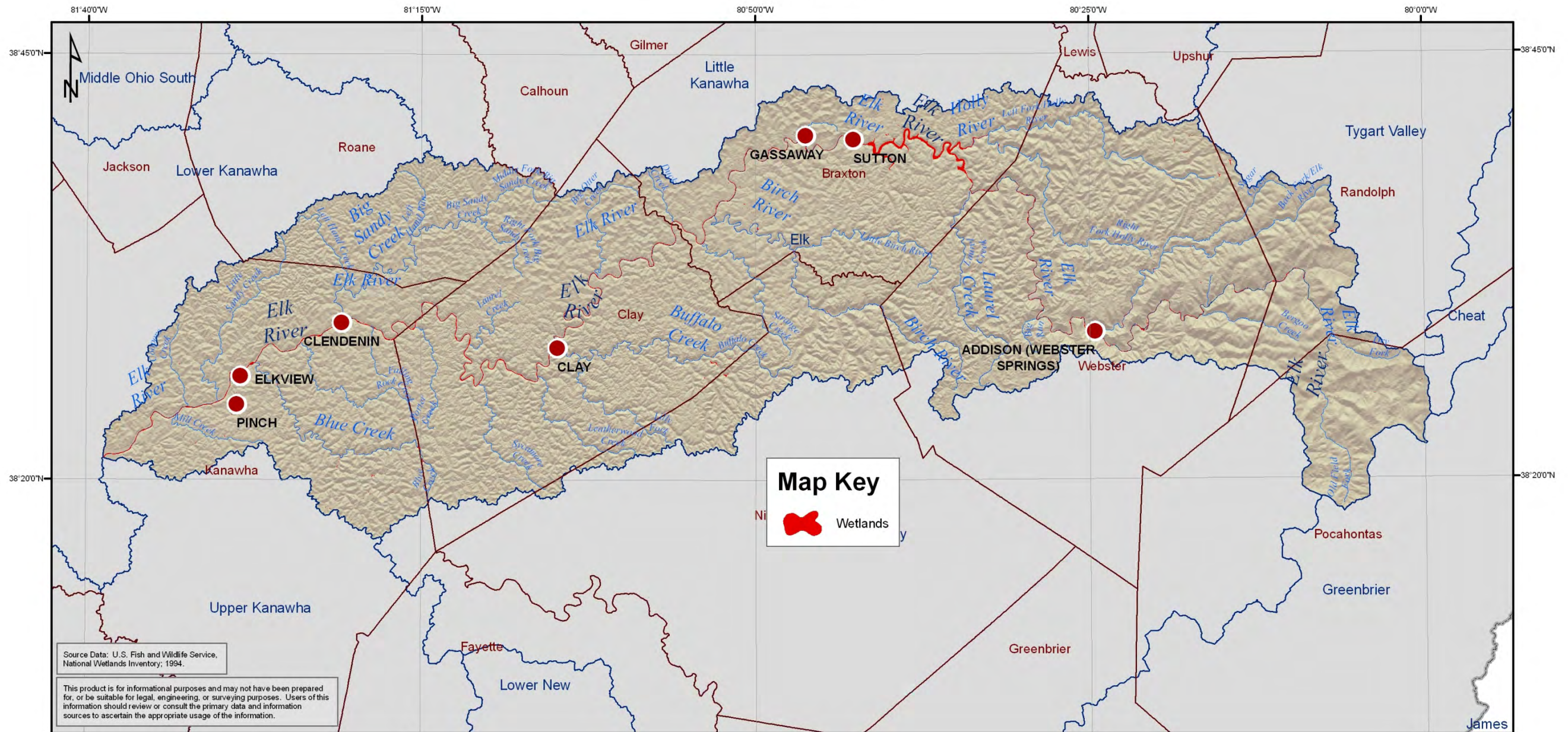
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Elk HUC-8 Watersheds

Wetlands

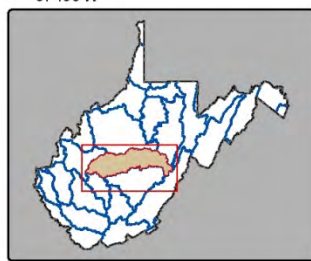
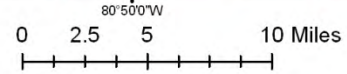


Map Key

- Wetlands

Source Data: U.S. Fish and Wildlife Service, National Wetlands Inventory; 1994.

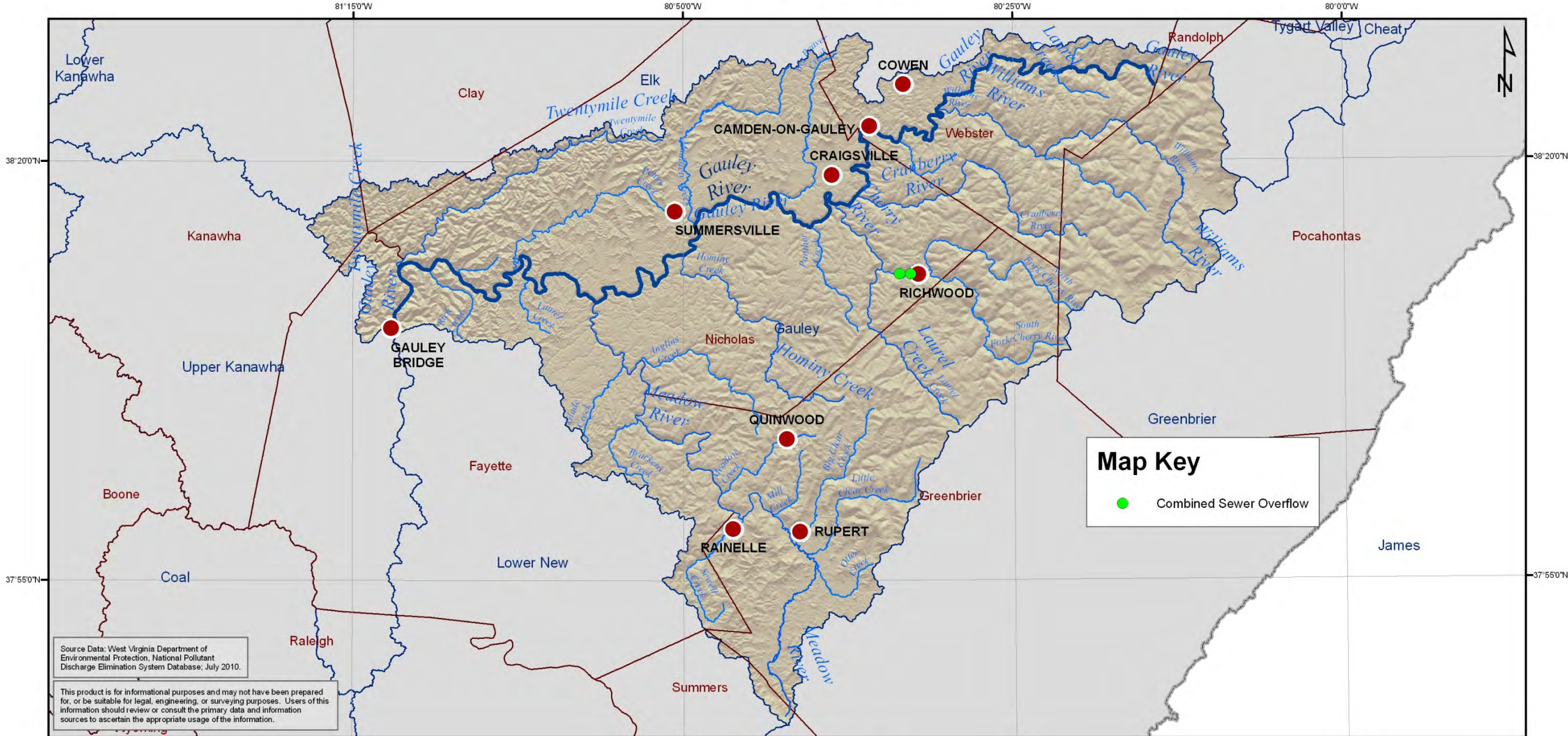
This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the appropriate usage of the information.



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

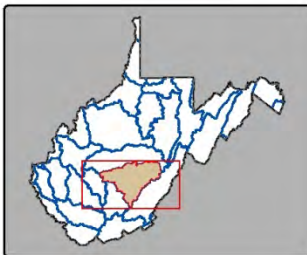
Gauley HUC-8 Watershed

Combined Sewer Overflow



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

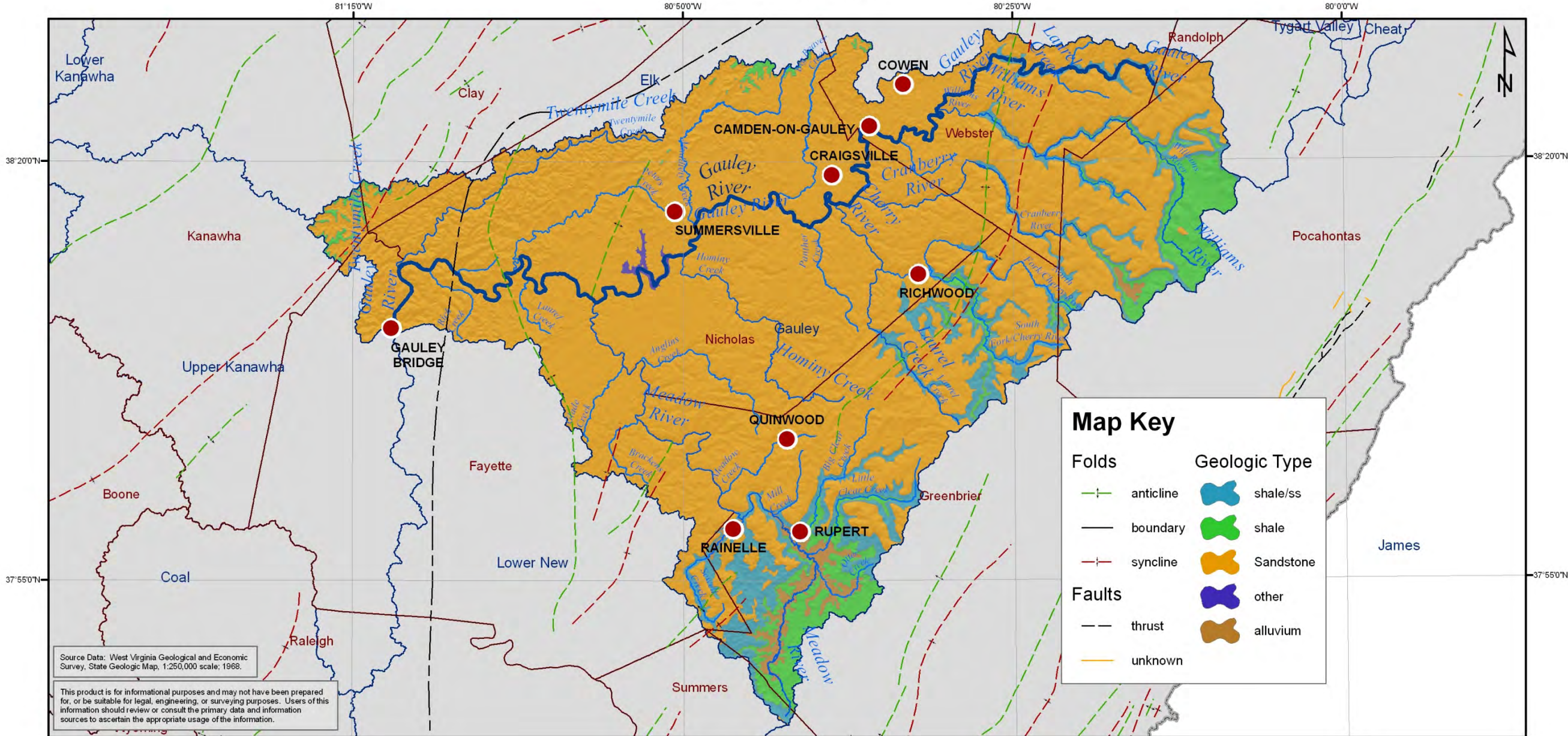
This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the appropriate usage of the information.



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

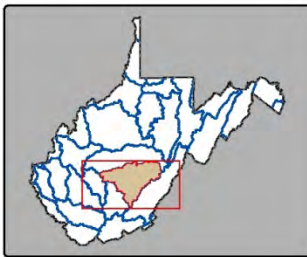
Gauley HUC-8 Watershed

Surface Geology



Source Data: West Virginia Geological and Economic Survey, State Geologic Map, 1:250,000 scale, 1968.

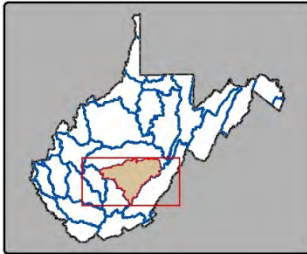
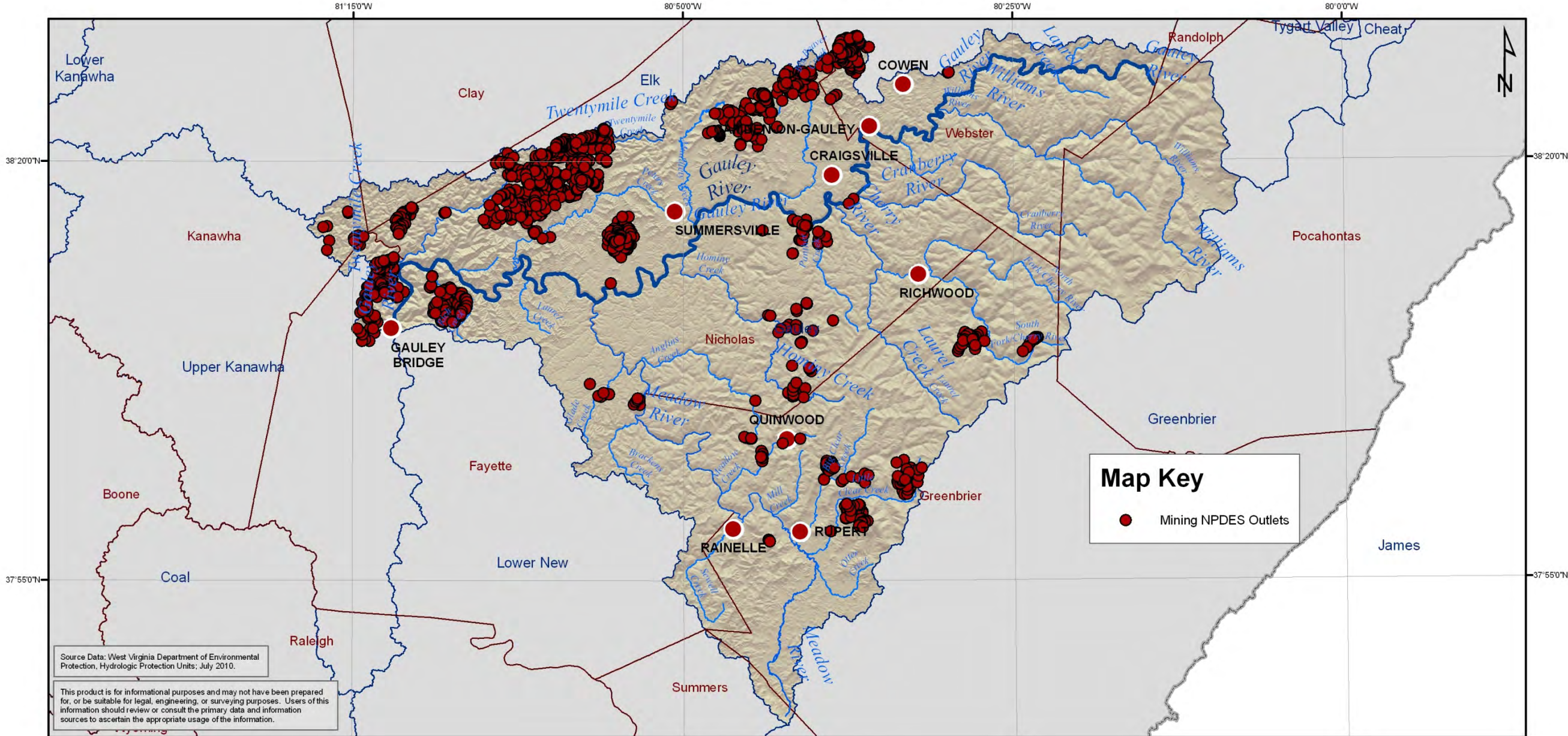
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Gauley HUC-8 Watershed

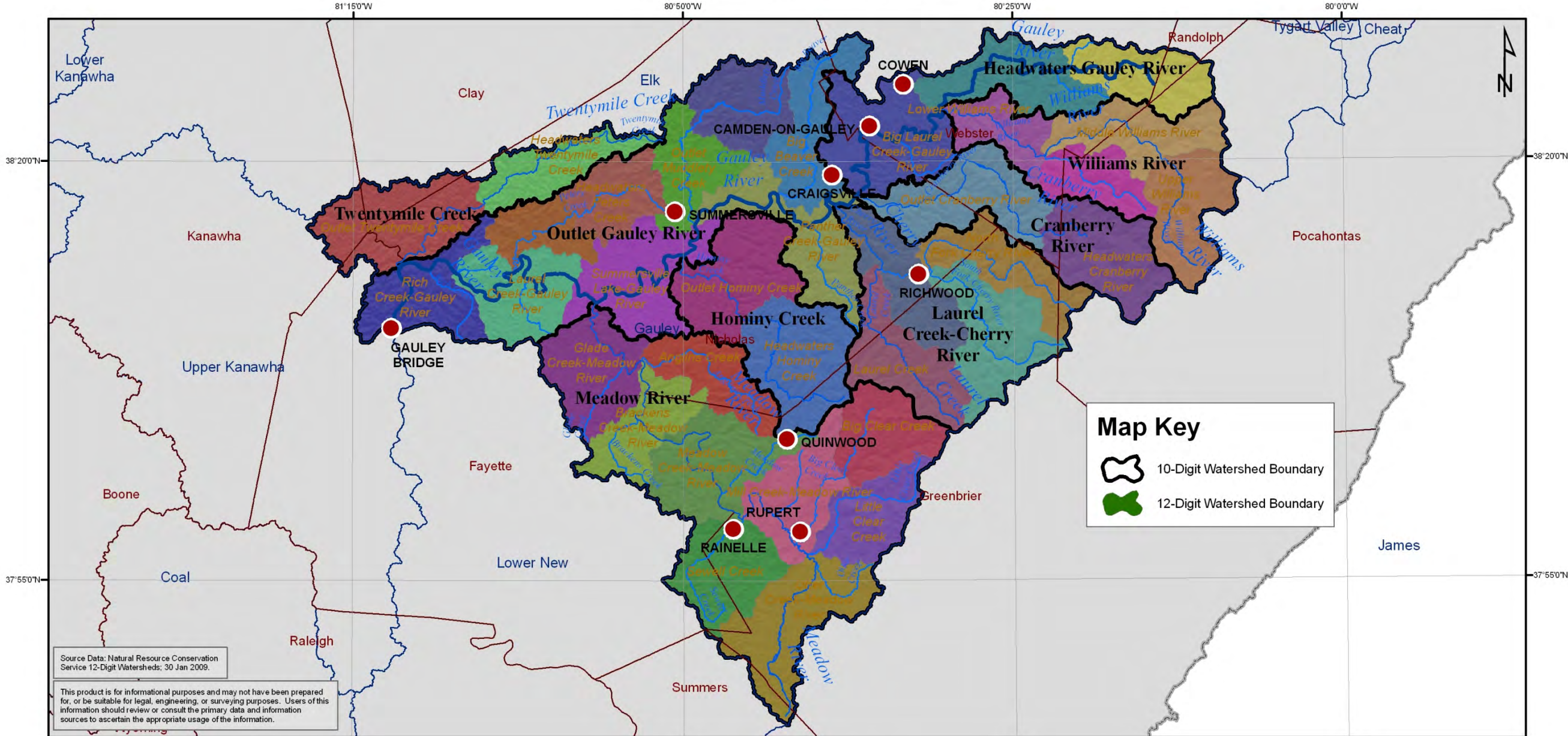
Mining Related NPDES Outlets



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

Gauley HUC-8 Watershed

HUC 10 and HUC 12 Watersheds

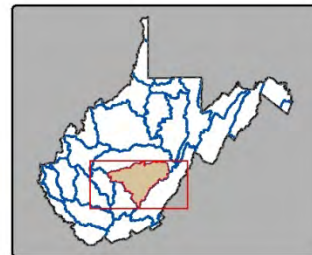
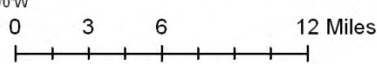


Map Key

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

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

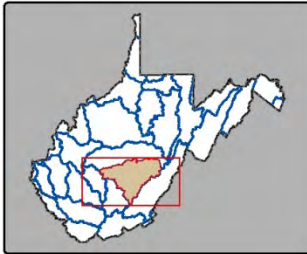
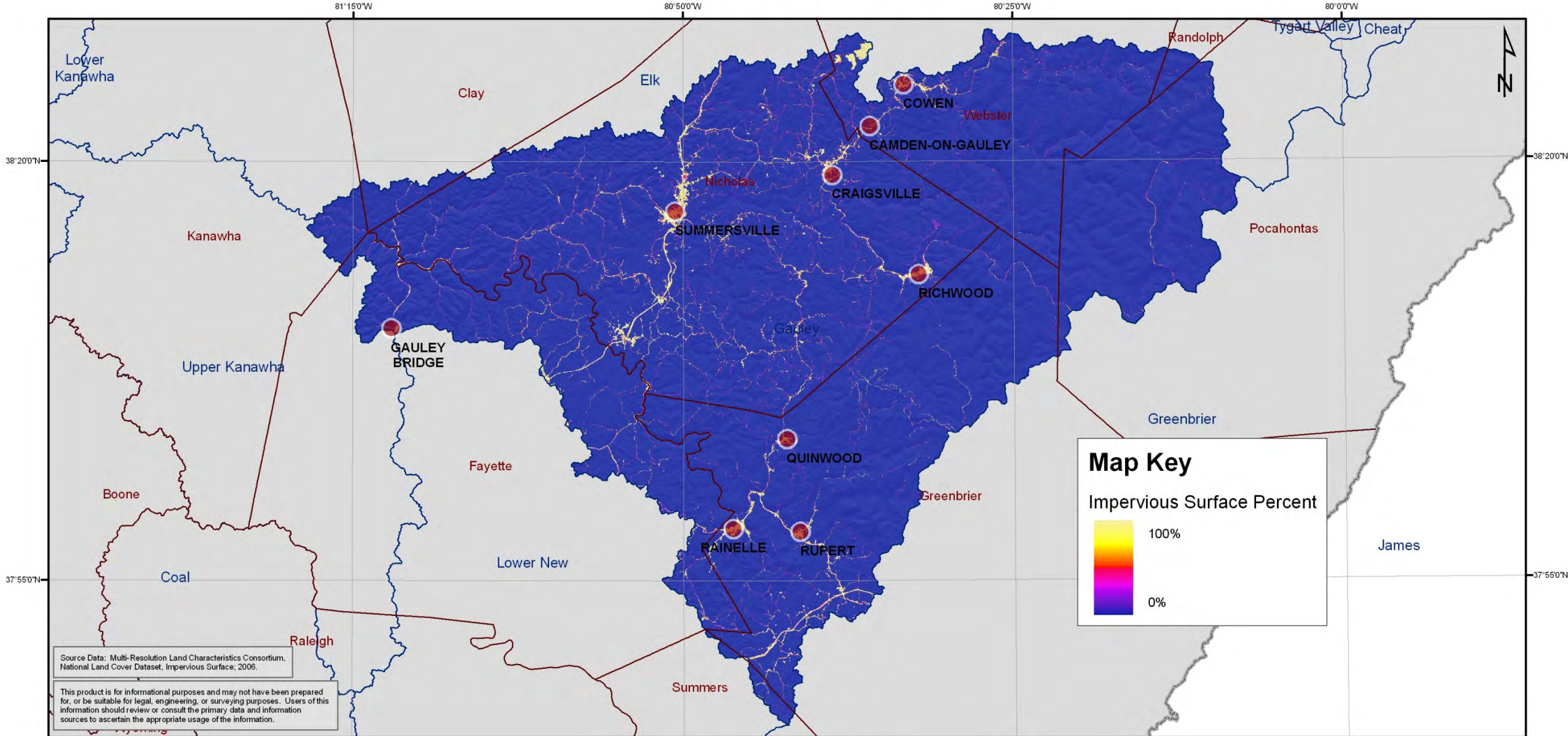
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- State Boundary
- 8-Digit Watershed Boundary
- County Boundary
- City/Town

Gauley HUC-8 Watershed

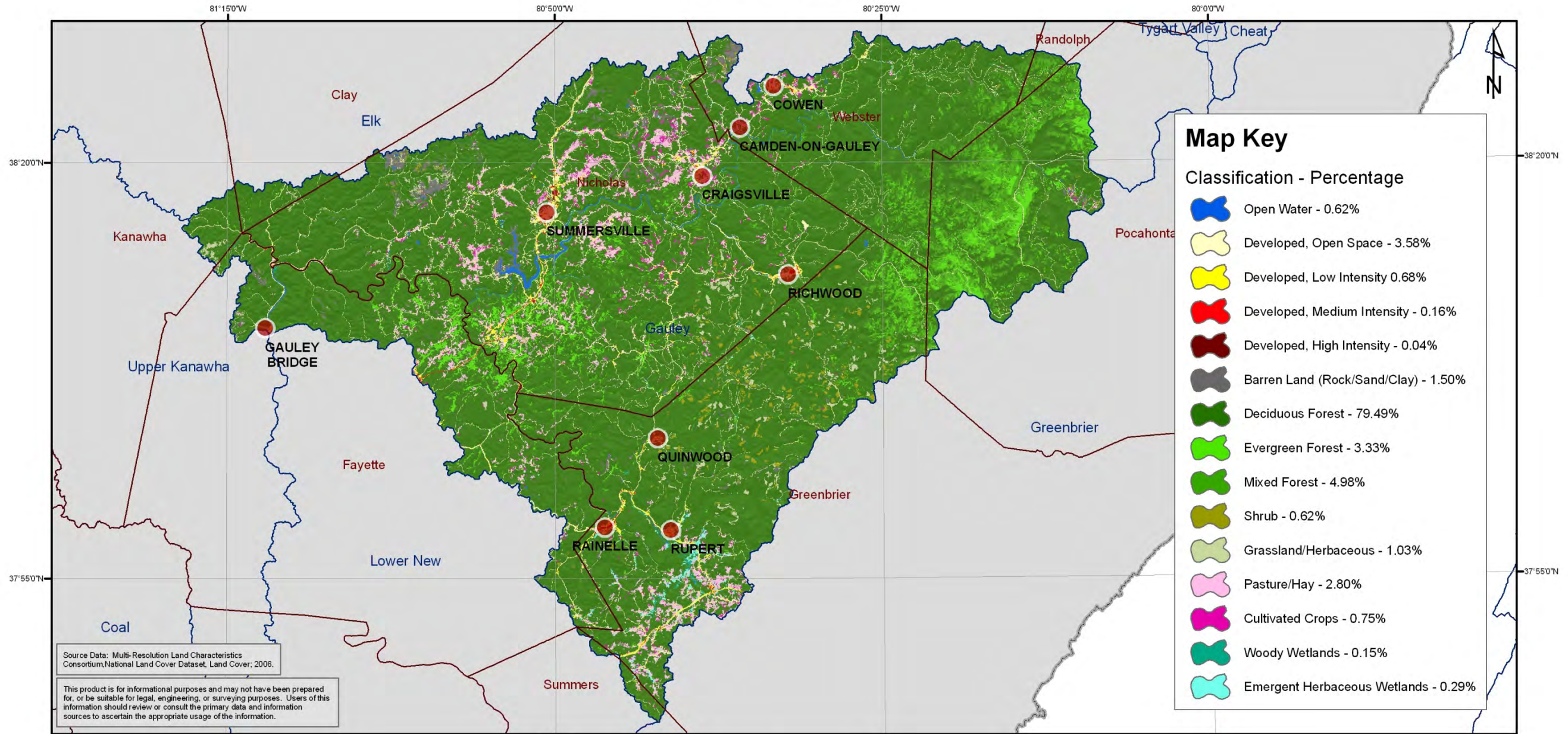
2006 Impervious Surfaces



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

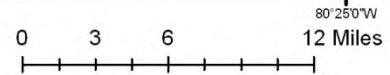
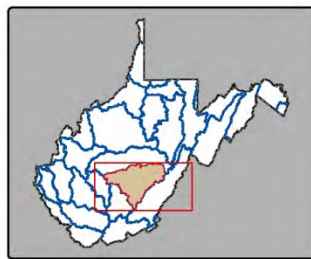
Gauley HUC-8 Watershed

2006 Land Cover



Source Data: Multi-Resolution Land Characteristics Consortium National Land Cover Dataset, Land Cover, 2006.

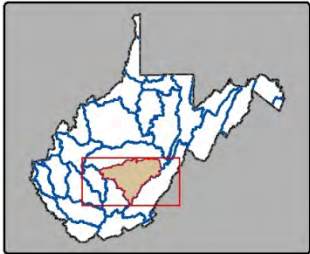
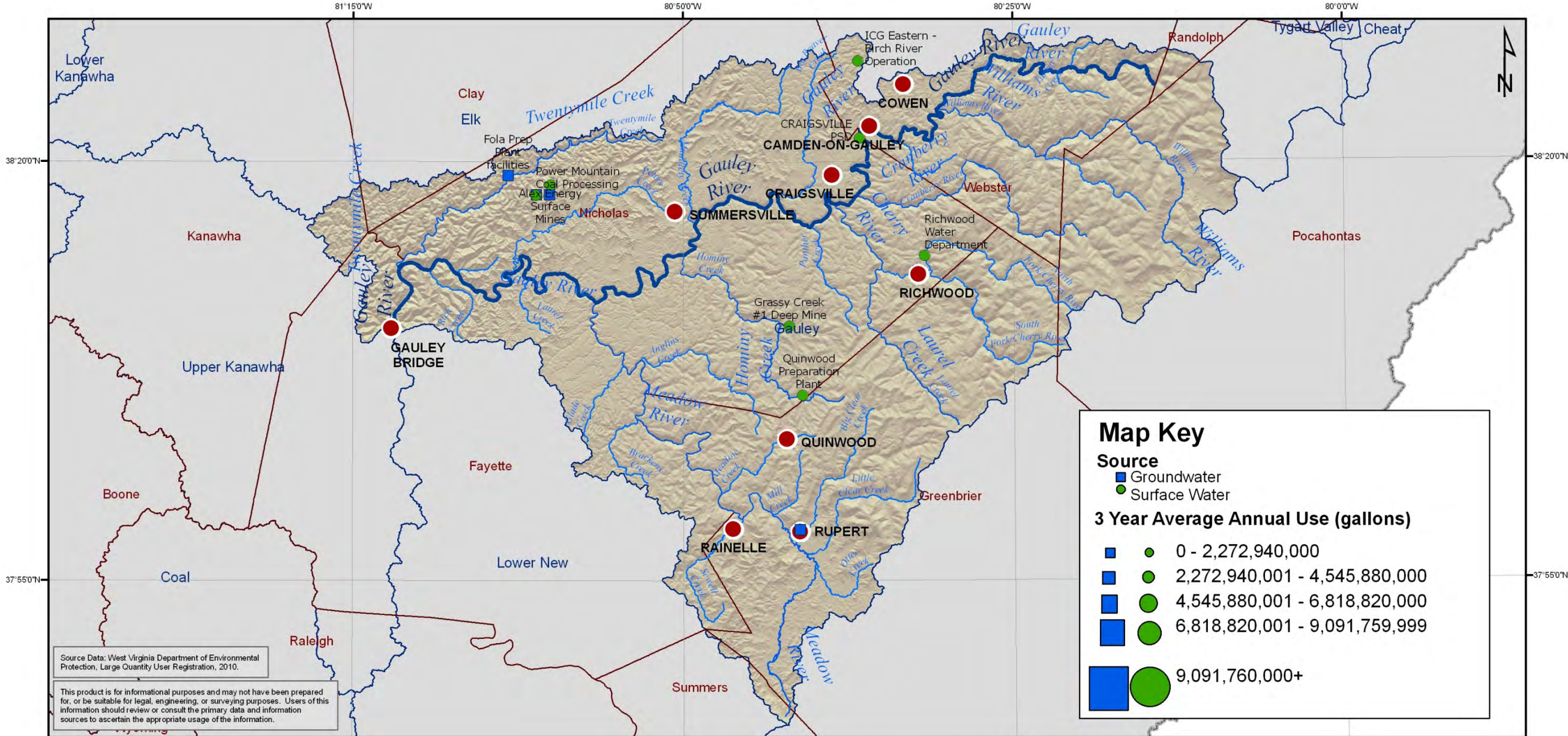
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Gauley HUC-8 Watershed

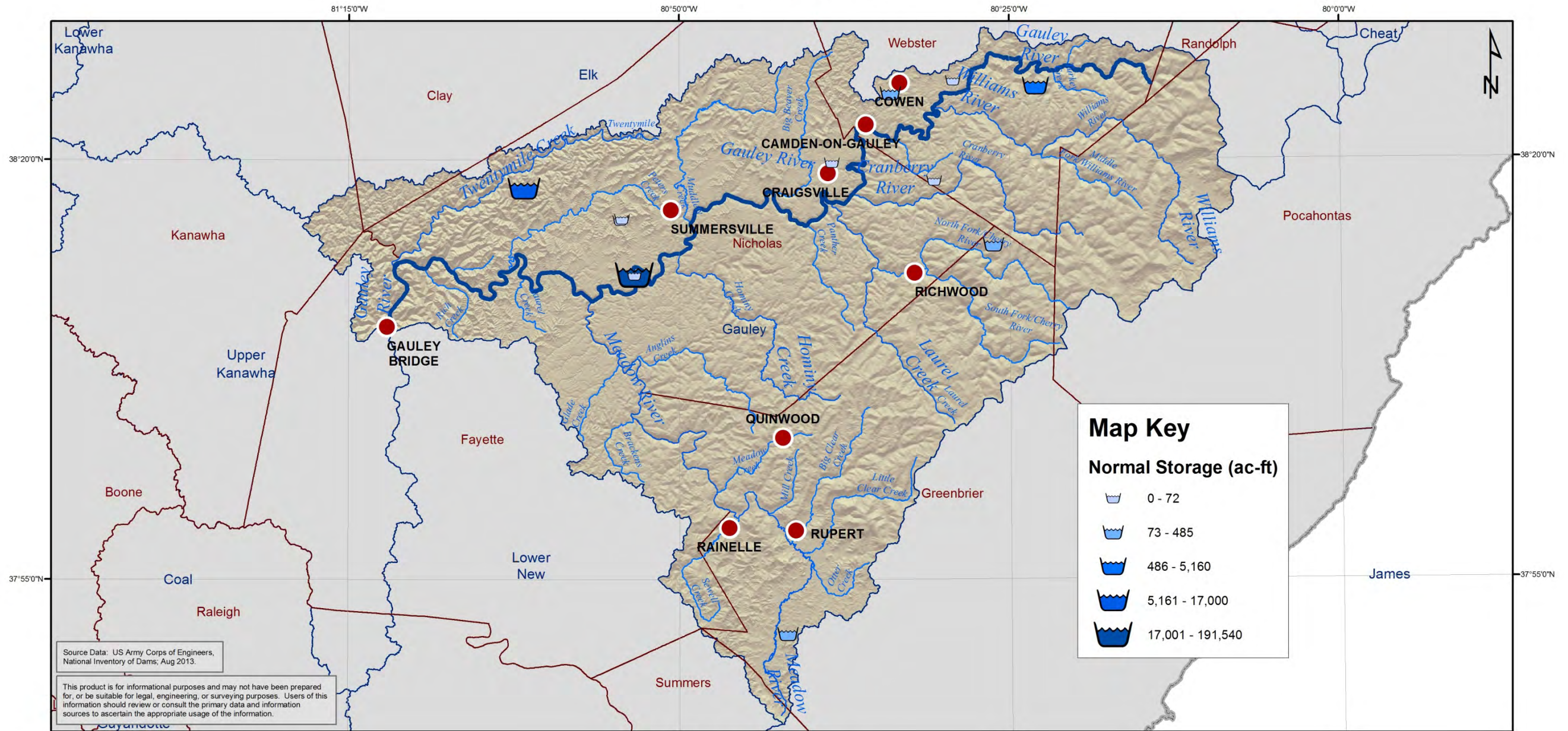
Large Quantity Users



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

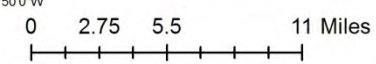
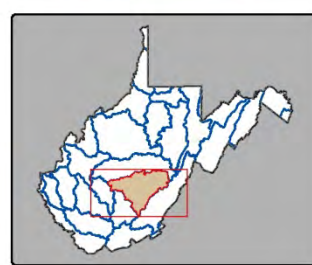
Gauley HUC-8 Watershed

Permitted Dams



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

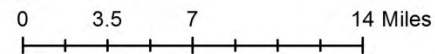
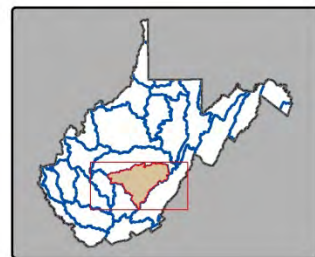
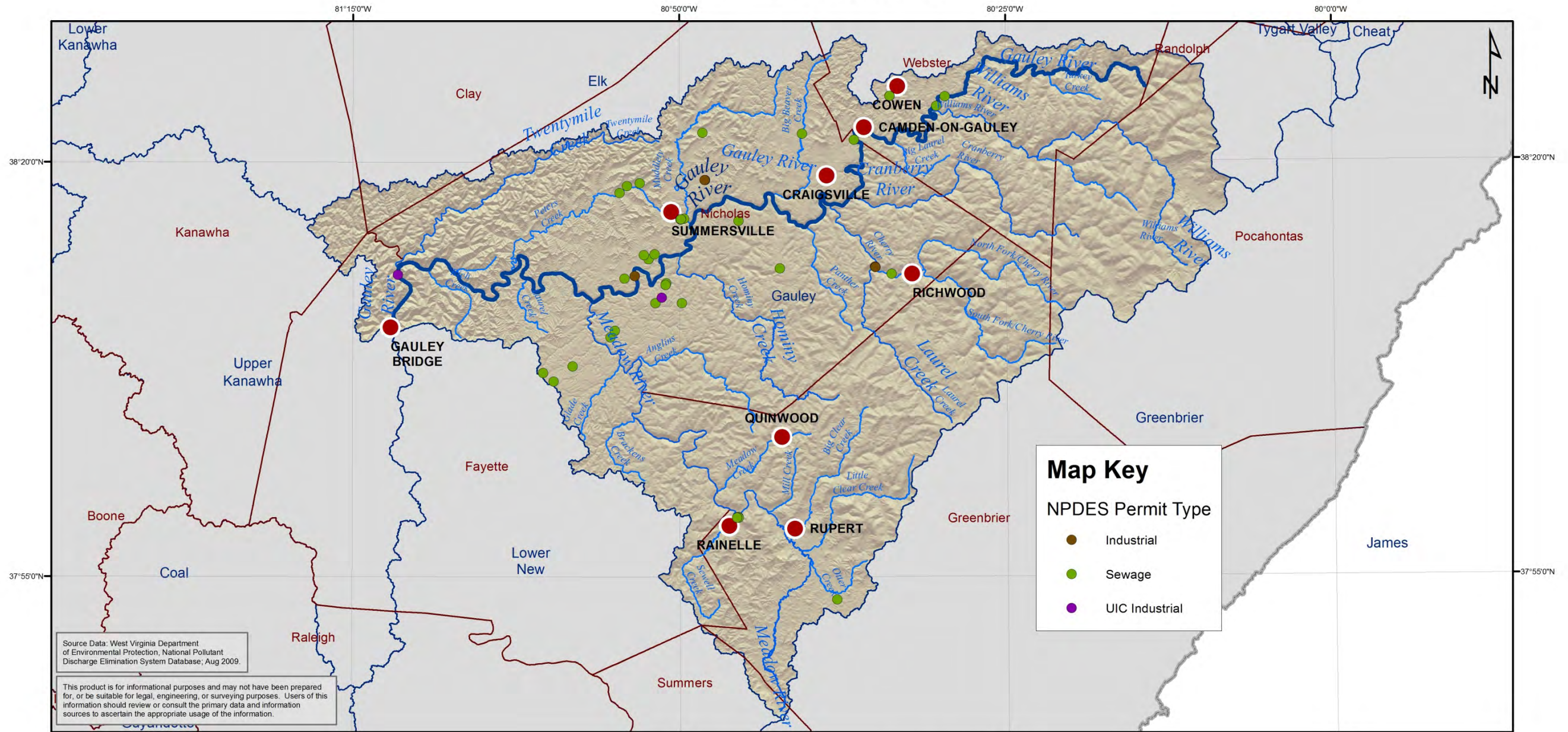
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Gauley HUC-8 Watershed

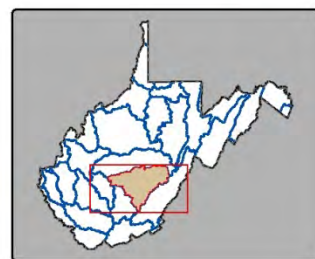
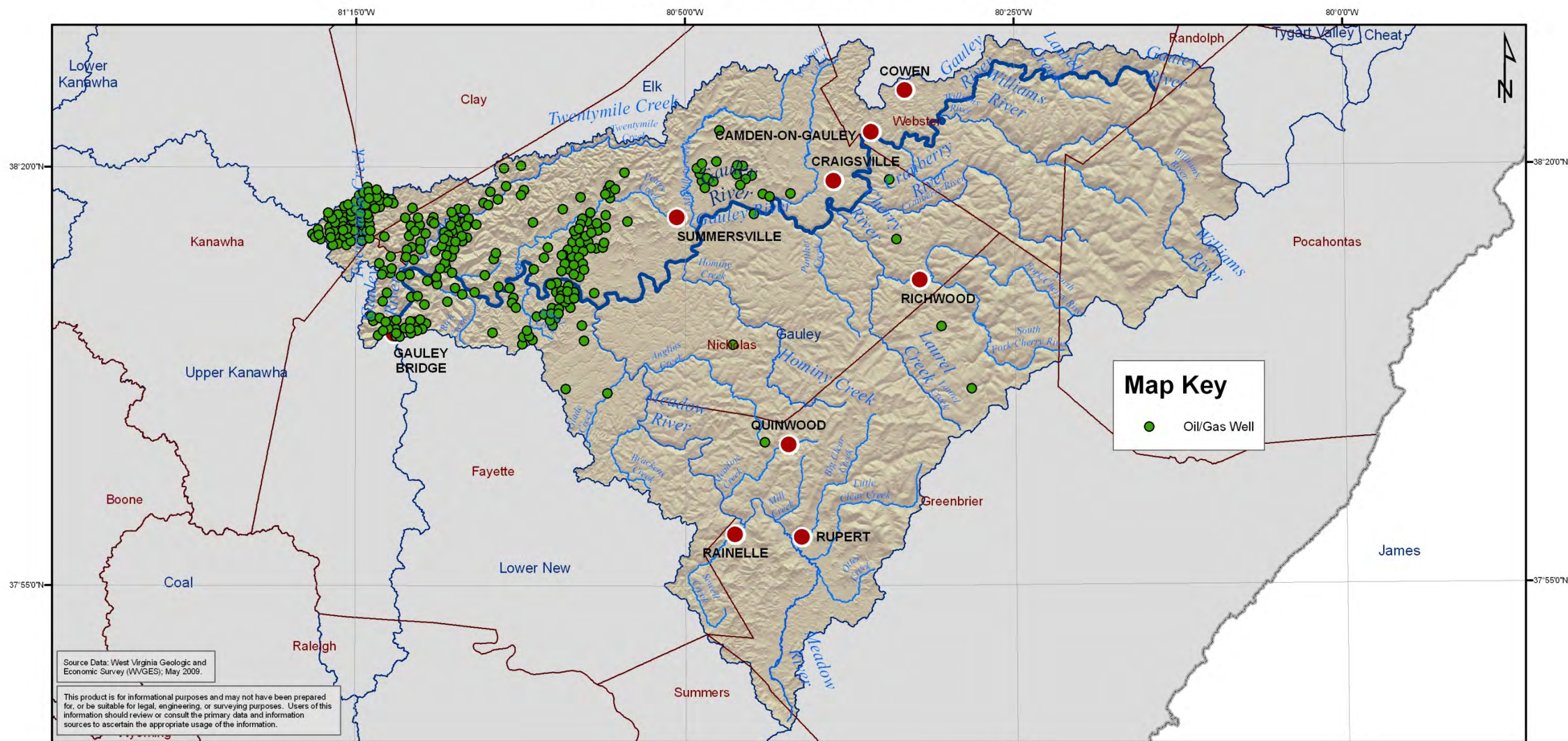
Non-Mining NPDES Outlets



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

Gauley HUC-8 Watershed

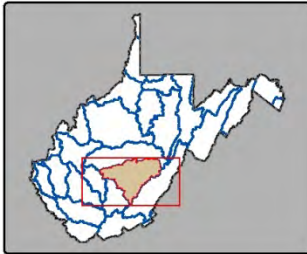
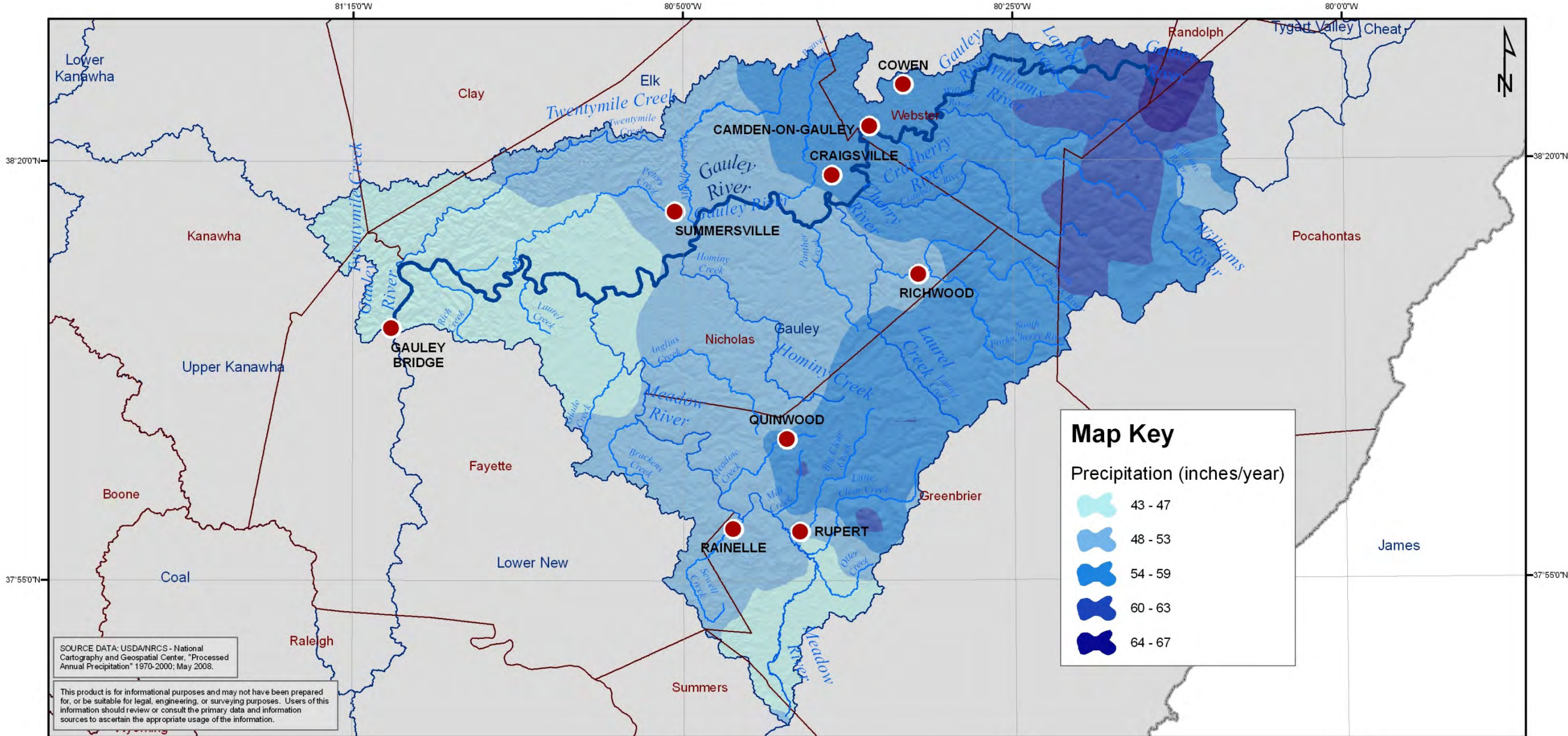
Well Logs with Gamma Rays and Water Shows



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

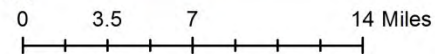
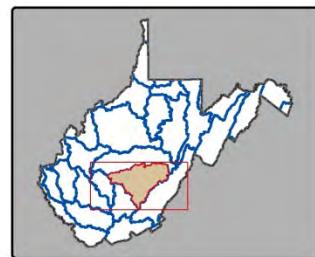
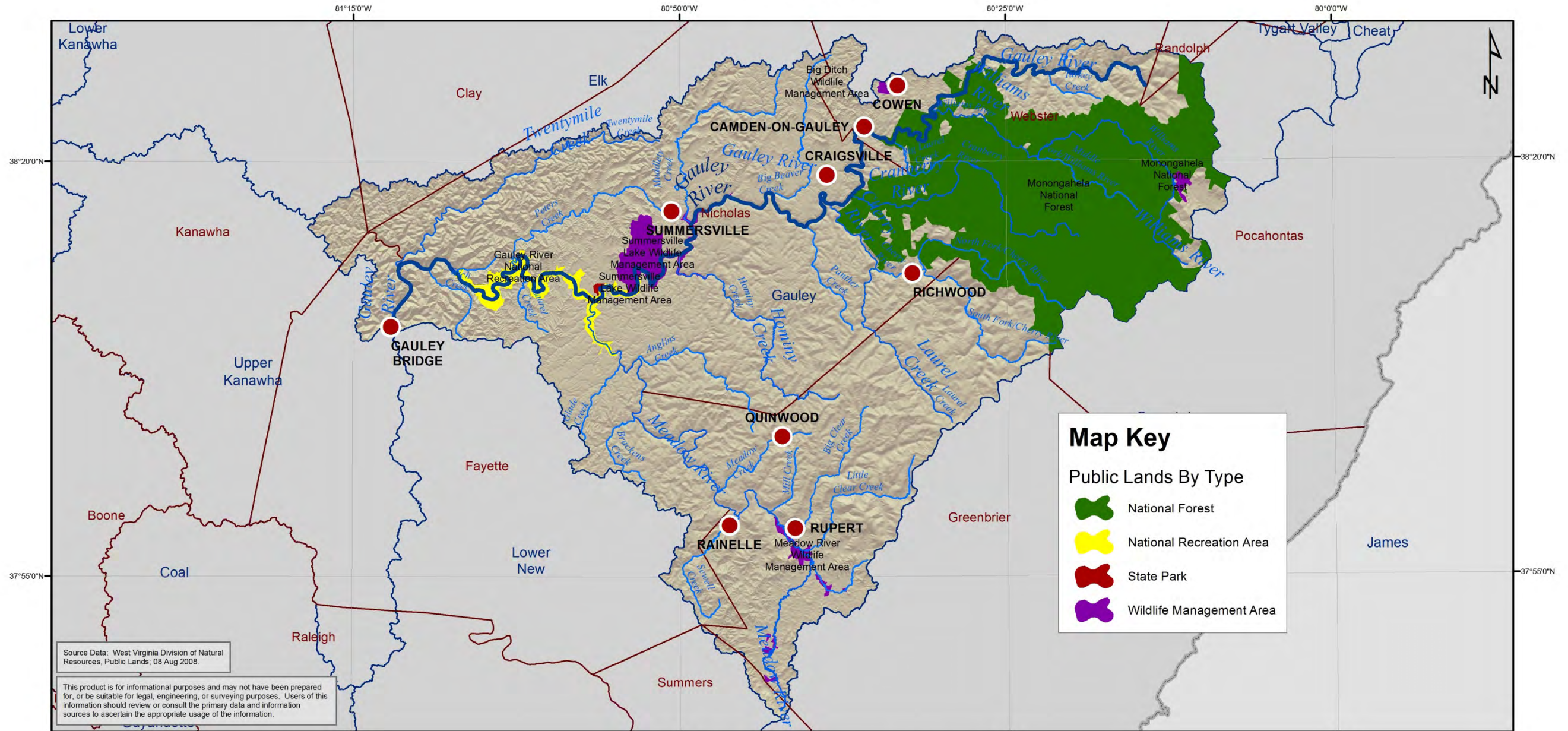
Gauley HUC-8 Watershed

Average Annual Precipitation (1971-2000)



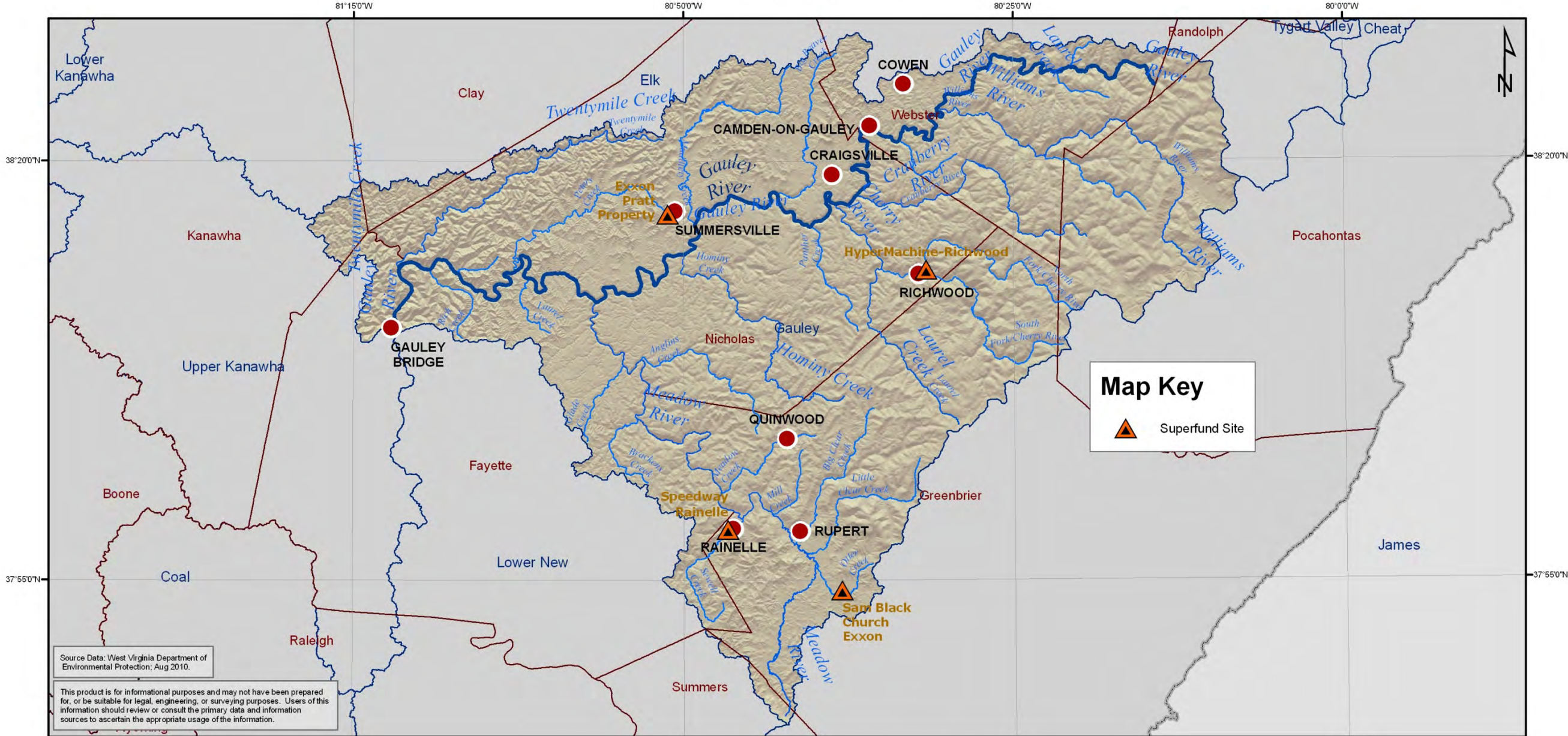
Gauley HUC-8 Watershed

Public Lands



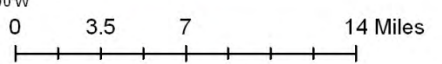
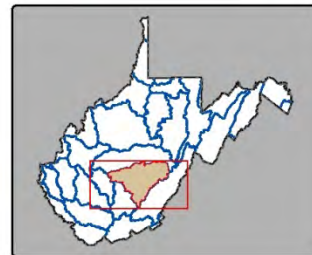
Gauley HUC-8 Watershed

Remediation Sites



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

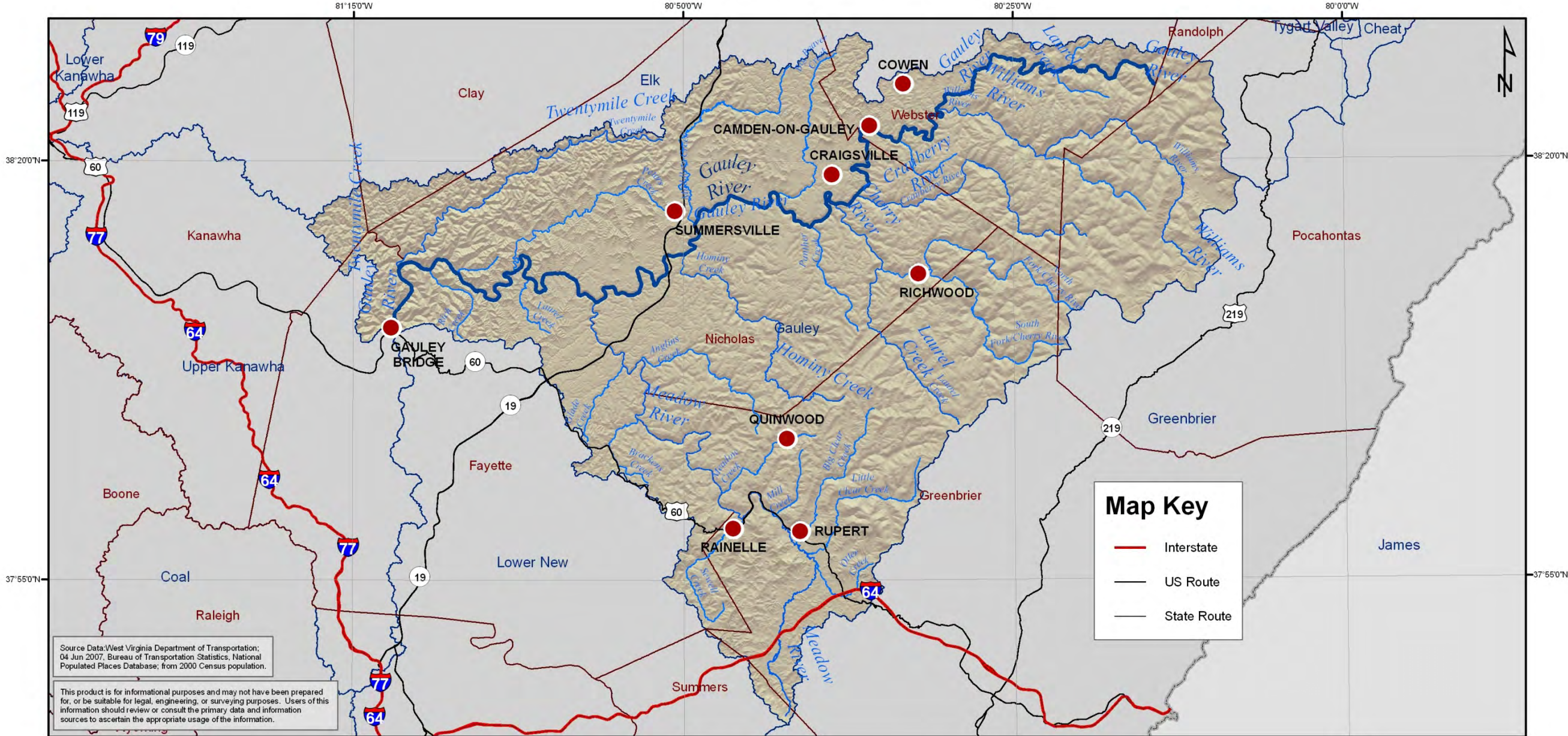
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town
- Superfund Site

Gauley HUC-8 Watershed

Major Roads and Cities

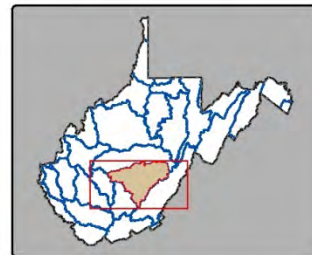
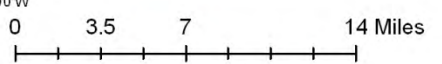


Source Data: West Virginia Department of Transportation; 04 Jun 2007, Bureau of Transportation Statistics, National Populated Places Database; from 2000 Census population.

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Map Key

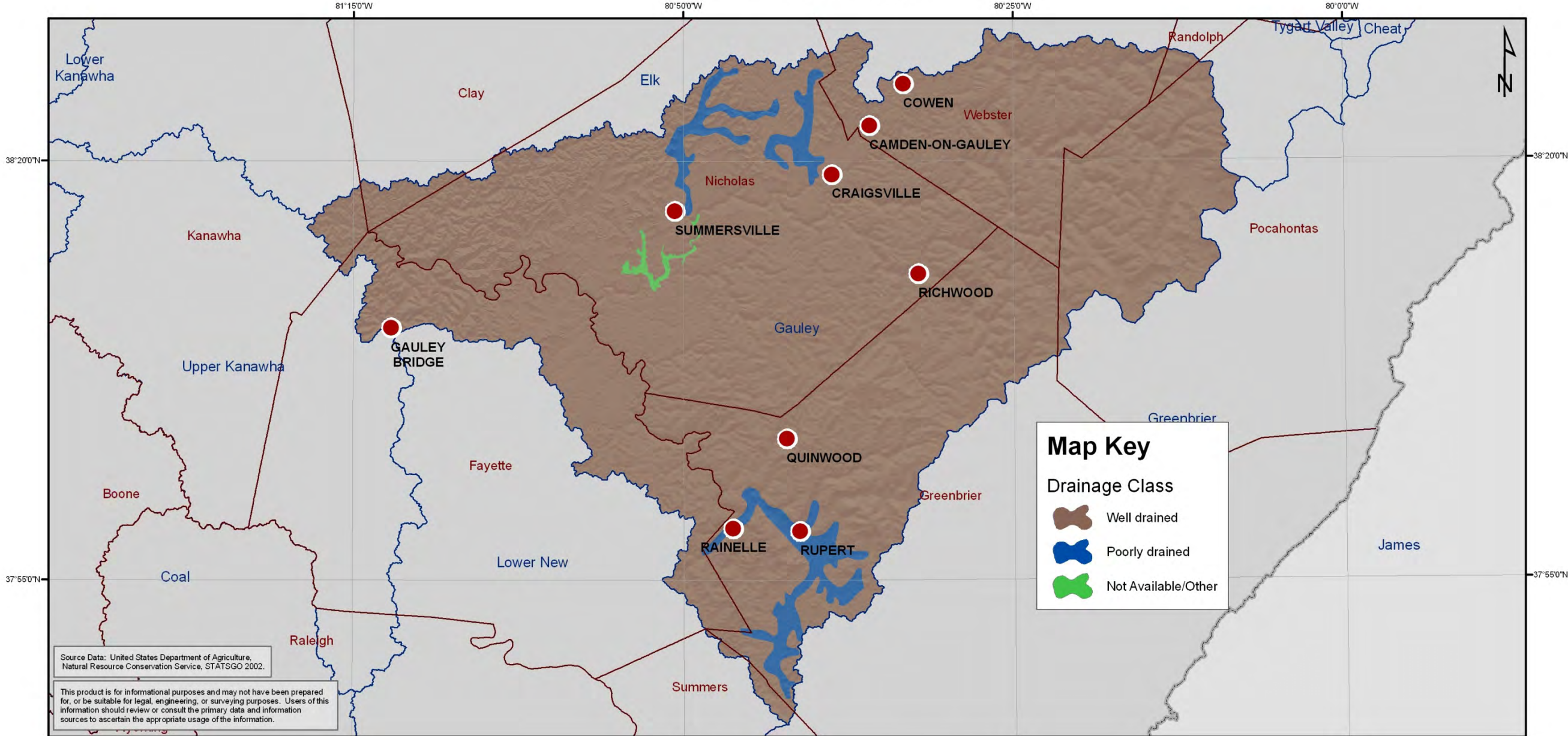
- Interstate
- US Route
- State Route



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

Gauley HUC-8 Watershed

Soil Drainage Classes



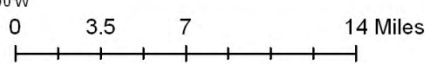
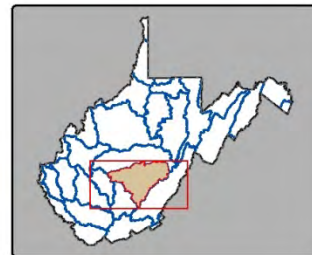
Source Data: United States Department of Agriculture, Natural Resource Conservation Service, STATSGO 2002.

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Map Key

Drainage Class

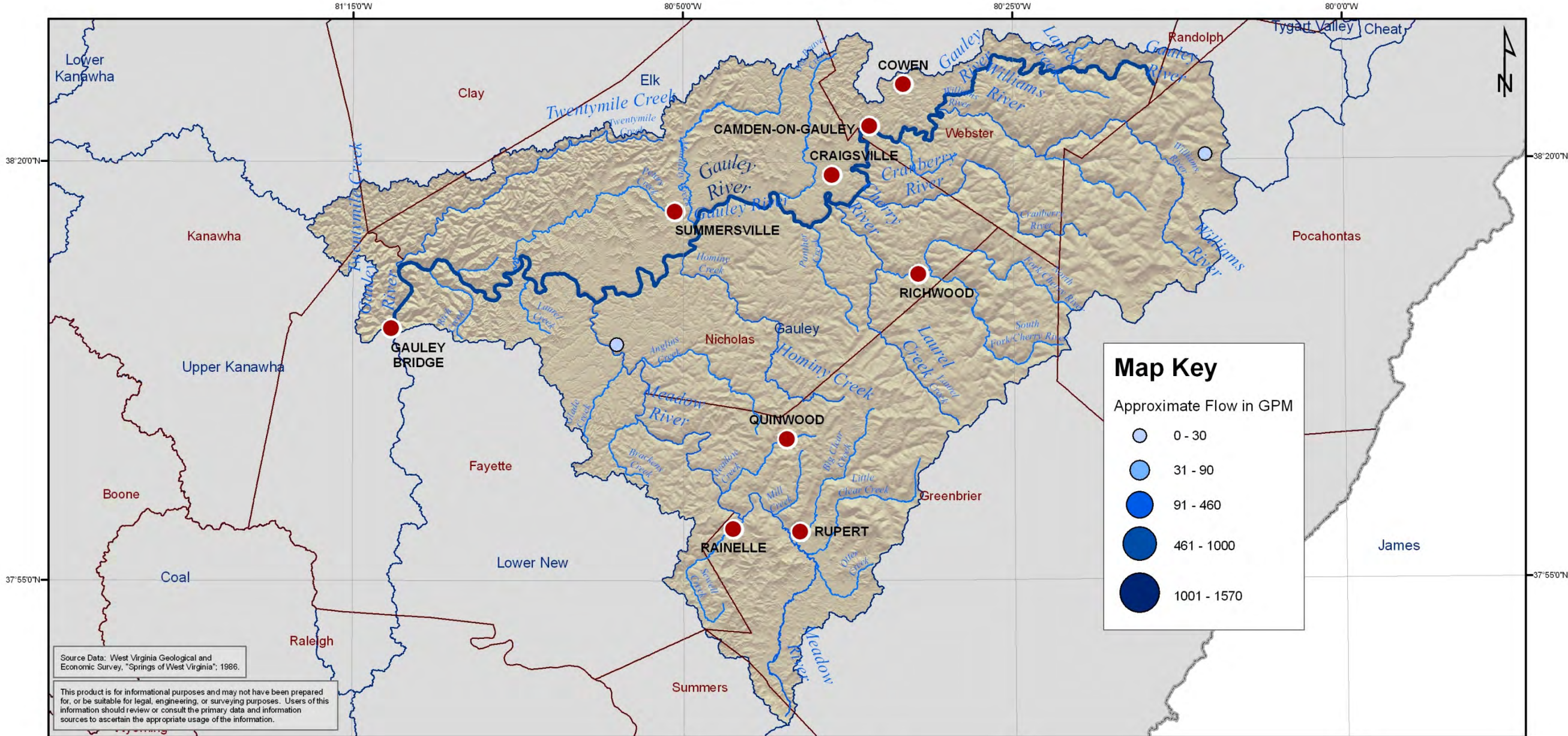
- Well drained
- Poorly drained
- Not Available/Other



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

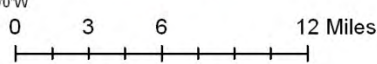
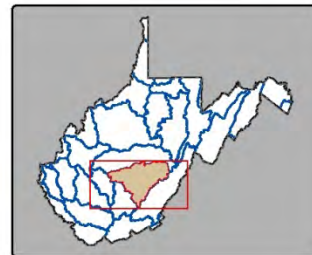
Gauley HUC-8 Watershed

Documented Springs



Source Data: West Virginia Geological and Economic Survey, "Springs of West Virginia", 1986.

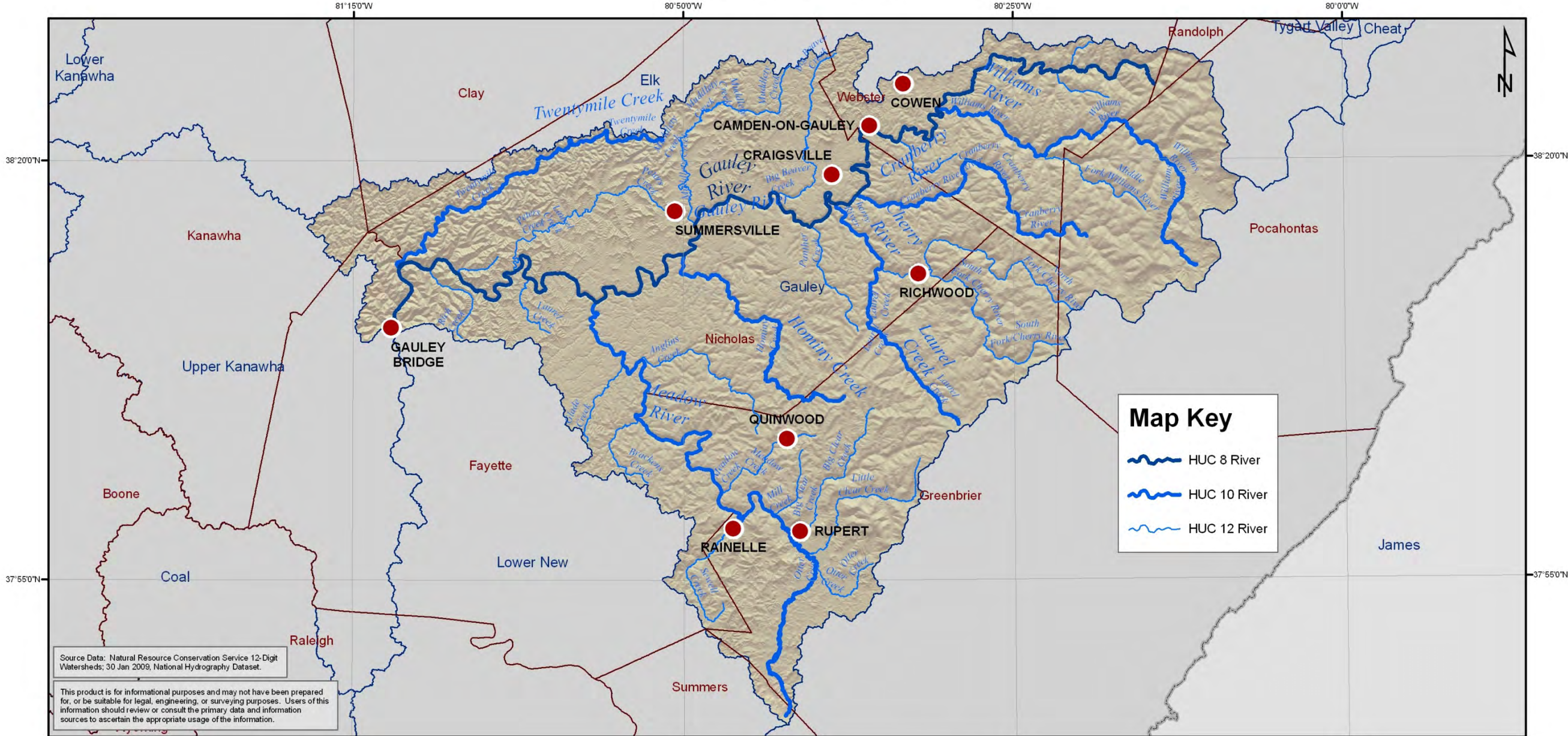
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

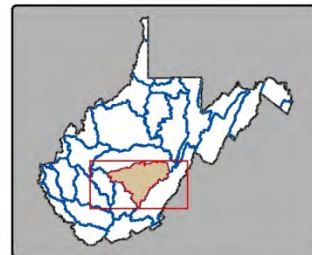
Gauley HUC-8 Watershed

Stream Connections



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

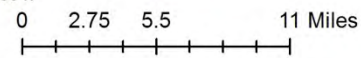
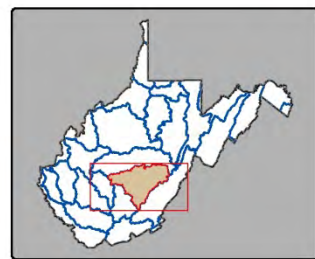
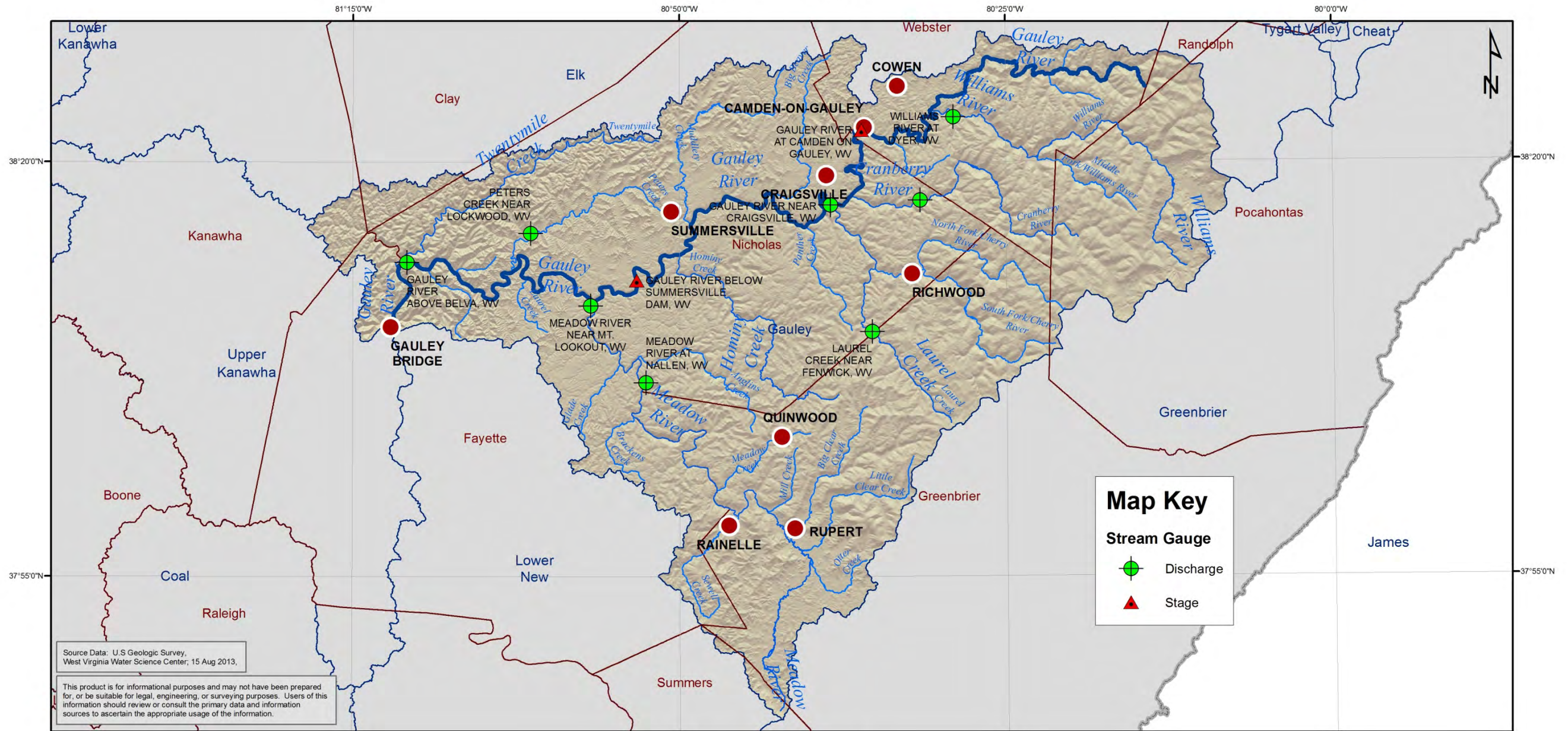
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-  State Boundary
-  County Boundary
-  8-Digit Watershed Boundary
-  City/Town

Gauley HUC-8 Watershed

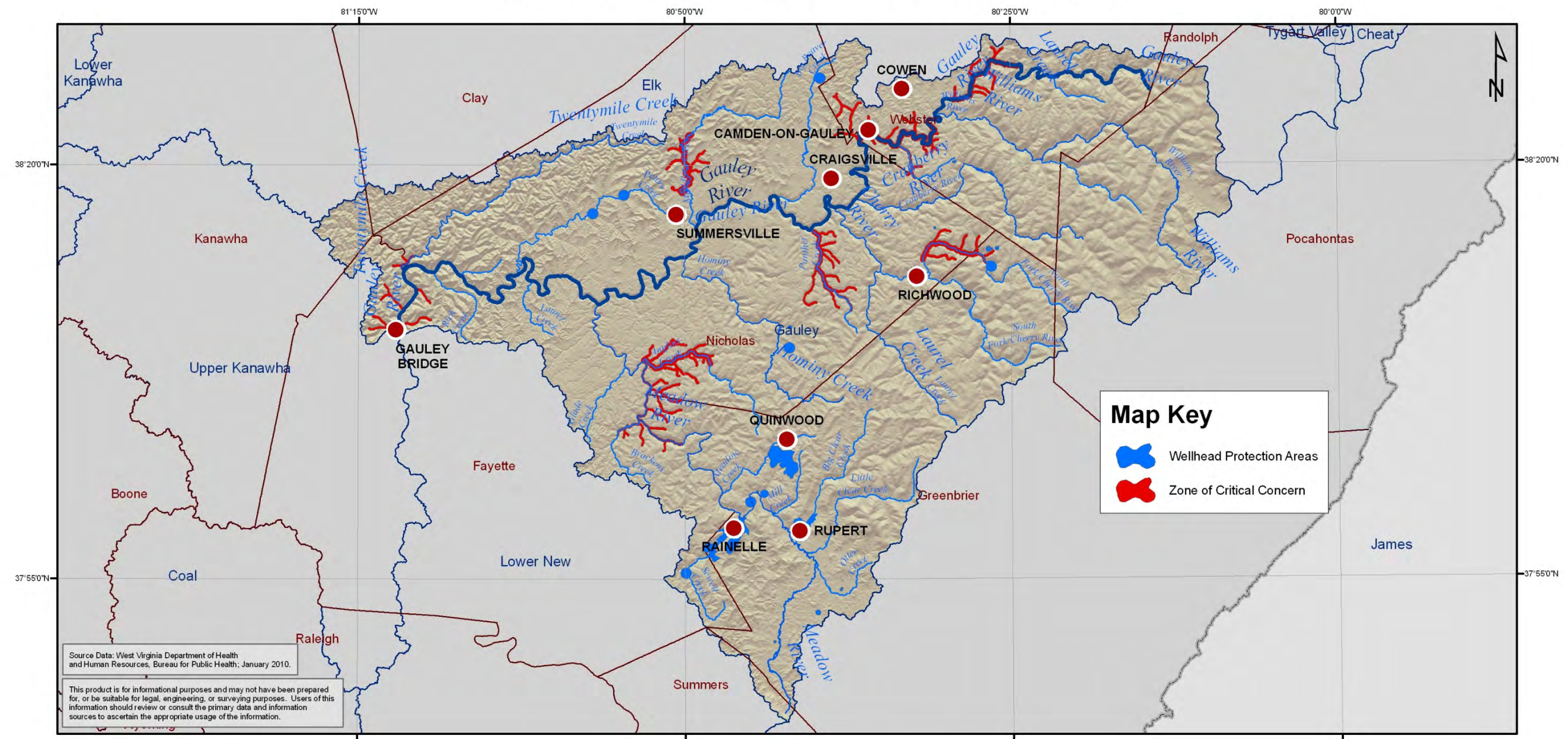
Stream Gauges



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

Gauley HUC-8 Watershed

Source Water Assessment and Wellhead Protection Programs

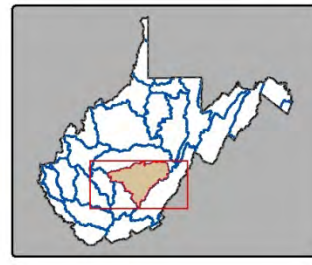
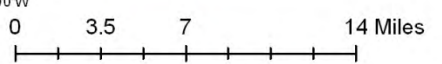


Map Key

- Wellhead Protection Areas
- Zone of Critical Concern

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

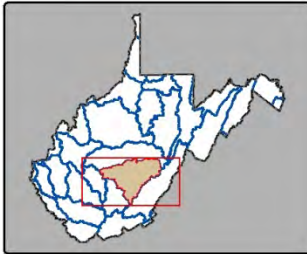
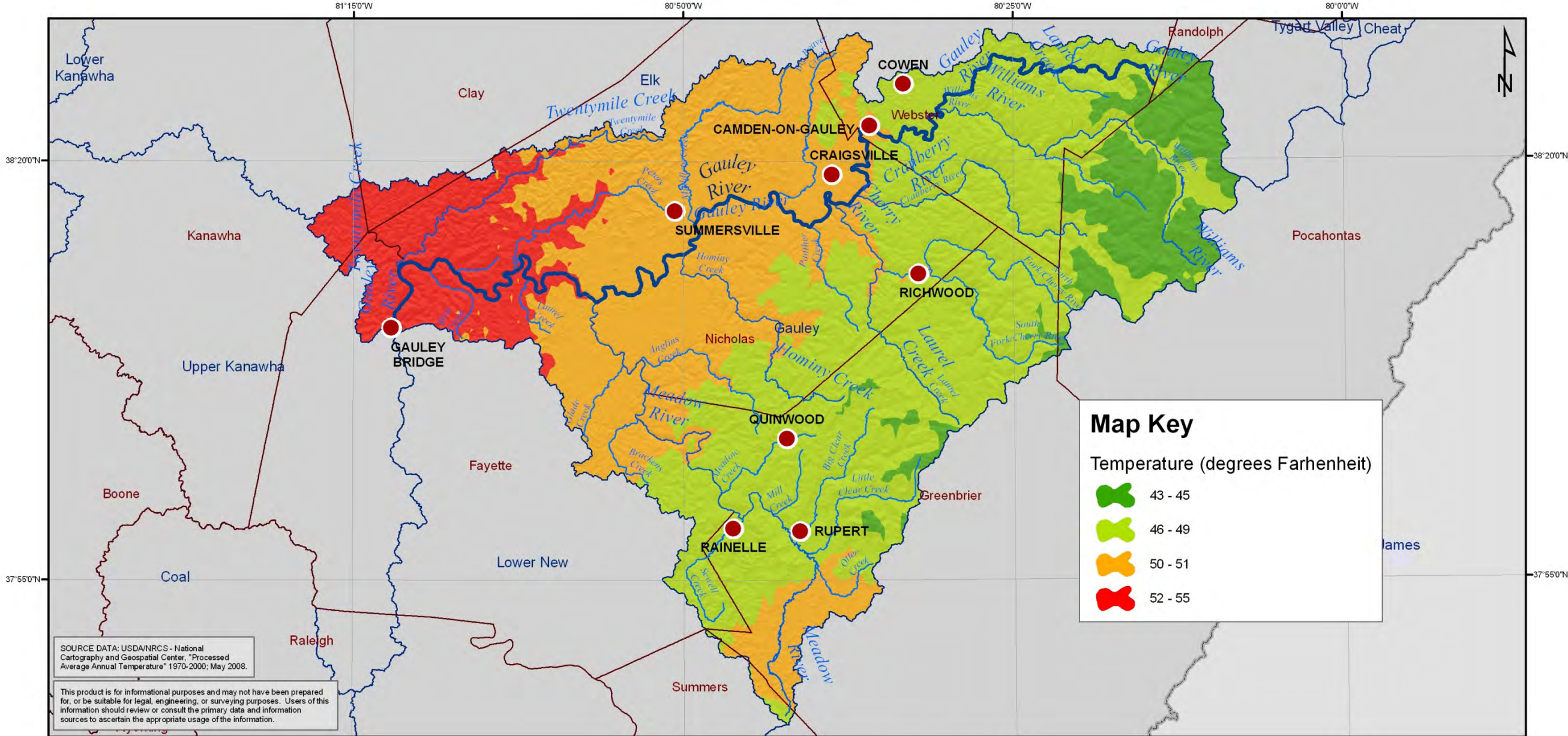
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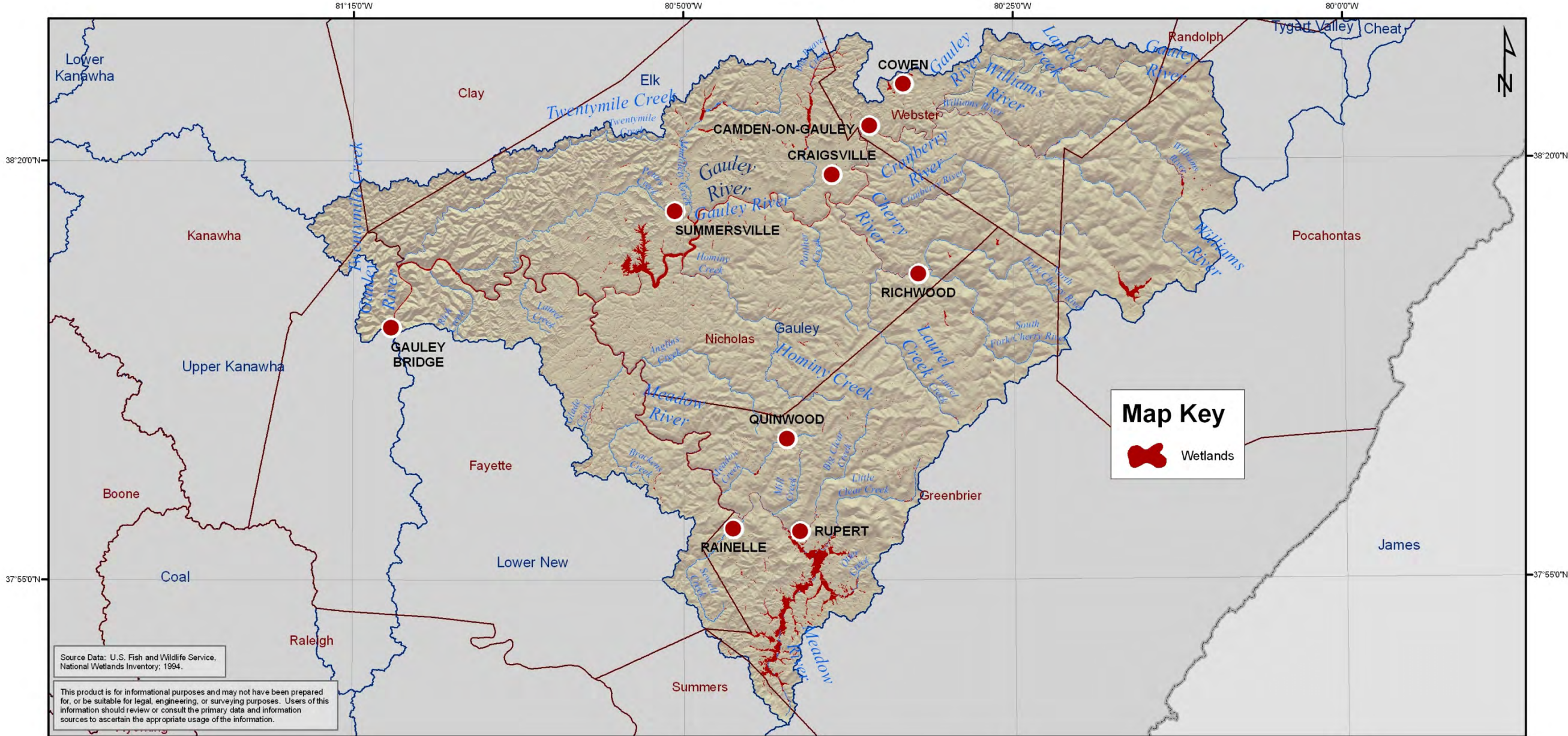
- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Gauley HUC-8 Watershed

Average Annual Temperature (1971-2000)



Gauley HUC-8 Watershed Wetlands

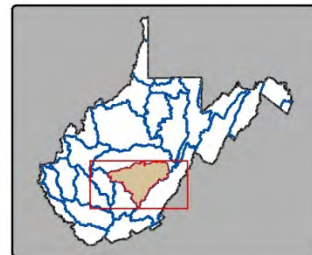
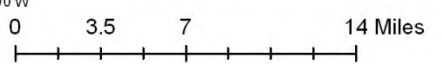


Source Data: U.S. Fish and Wildlife Service, National Wetlands Inventory; 1994.

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.

Map Key

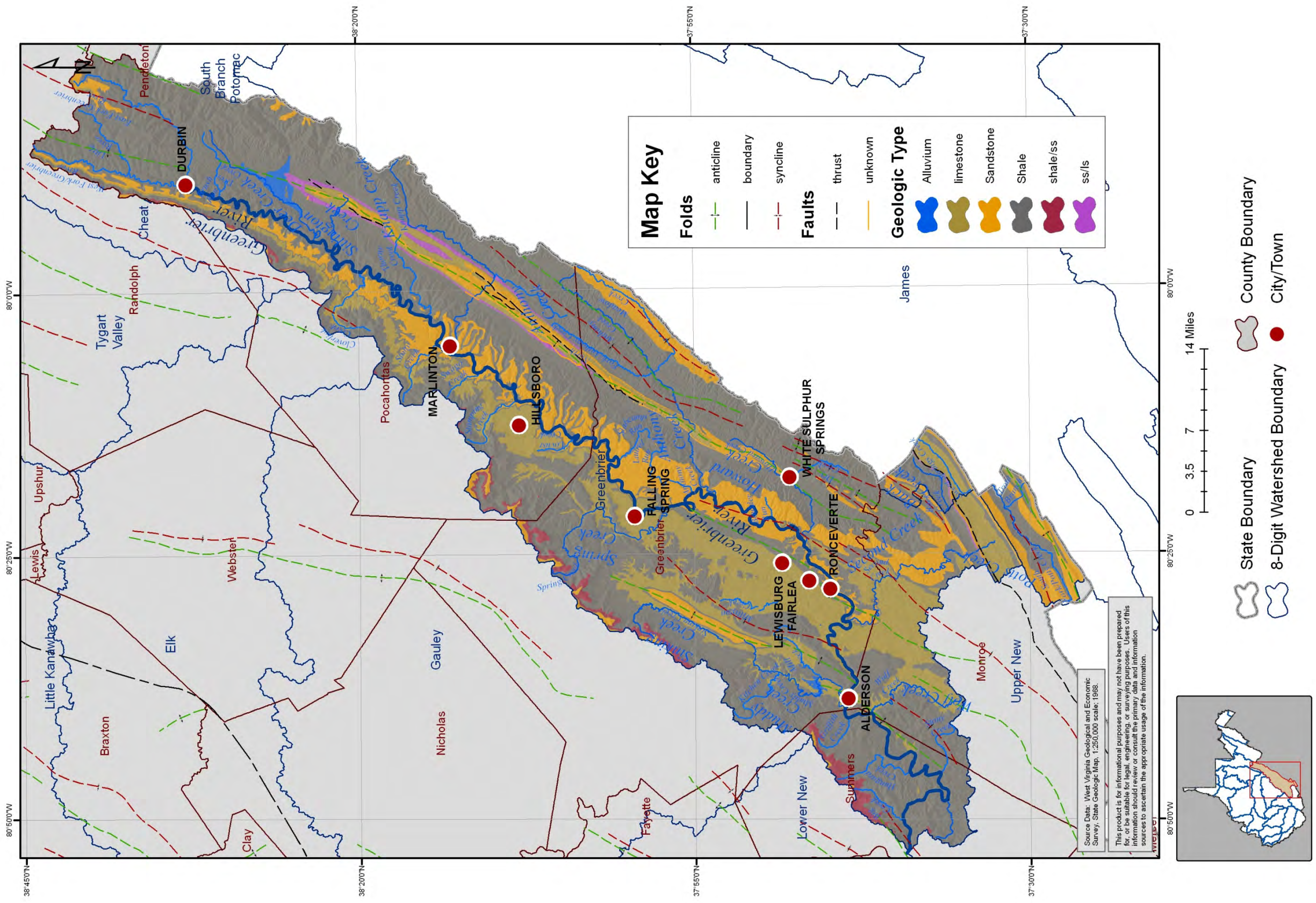
- Wetlands



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

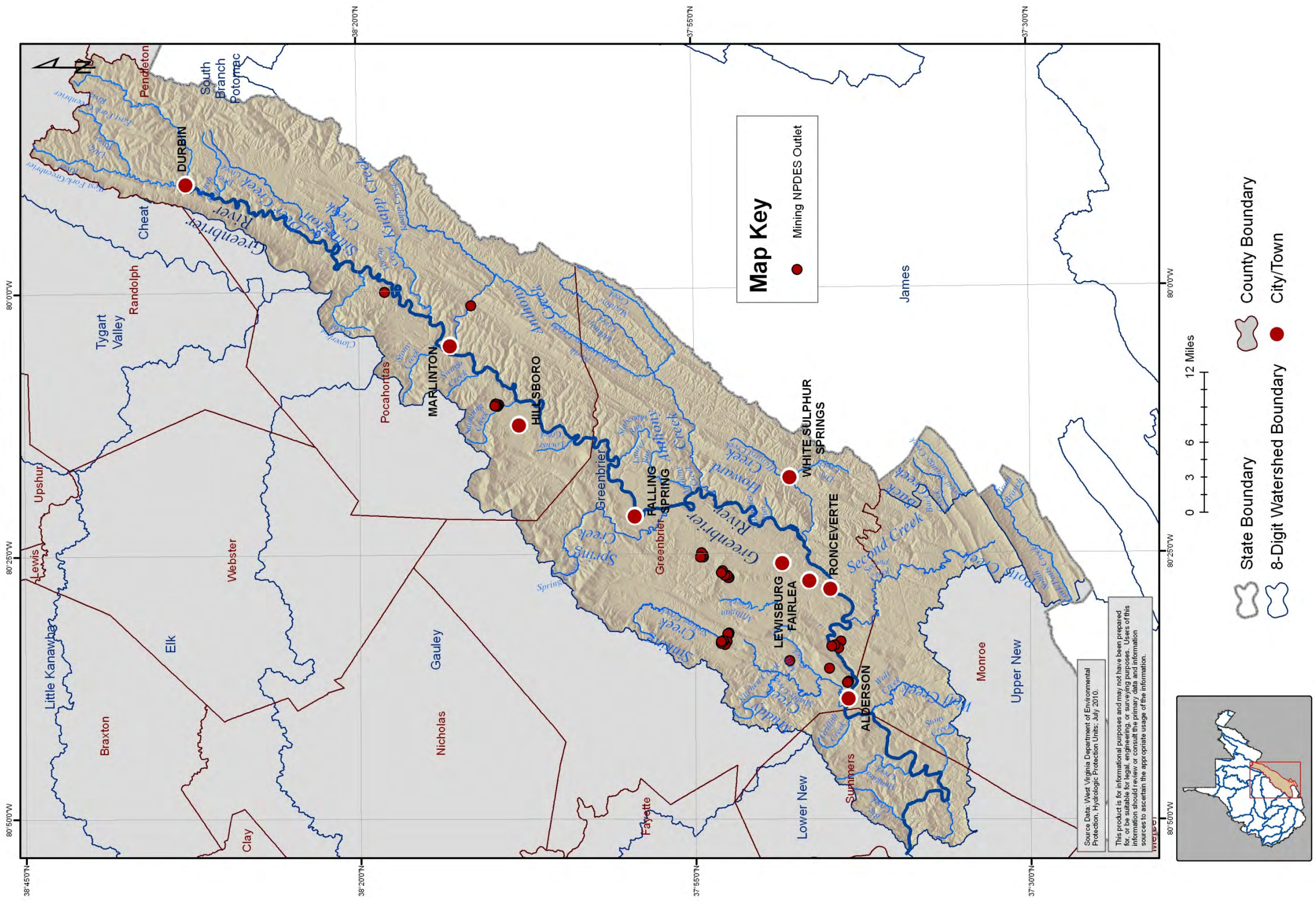
Greenbrier and James HUC-8 Watershed

Surface Geology



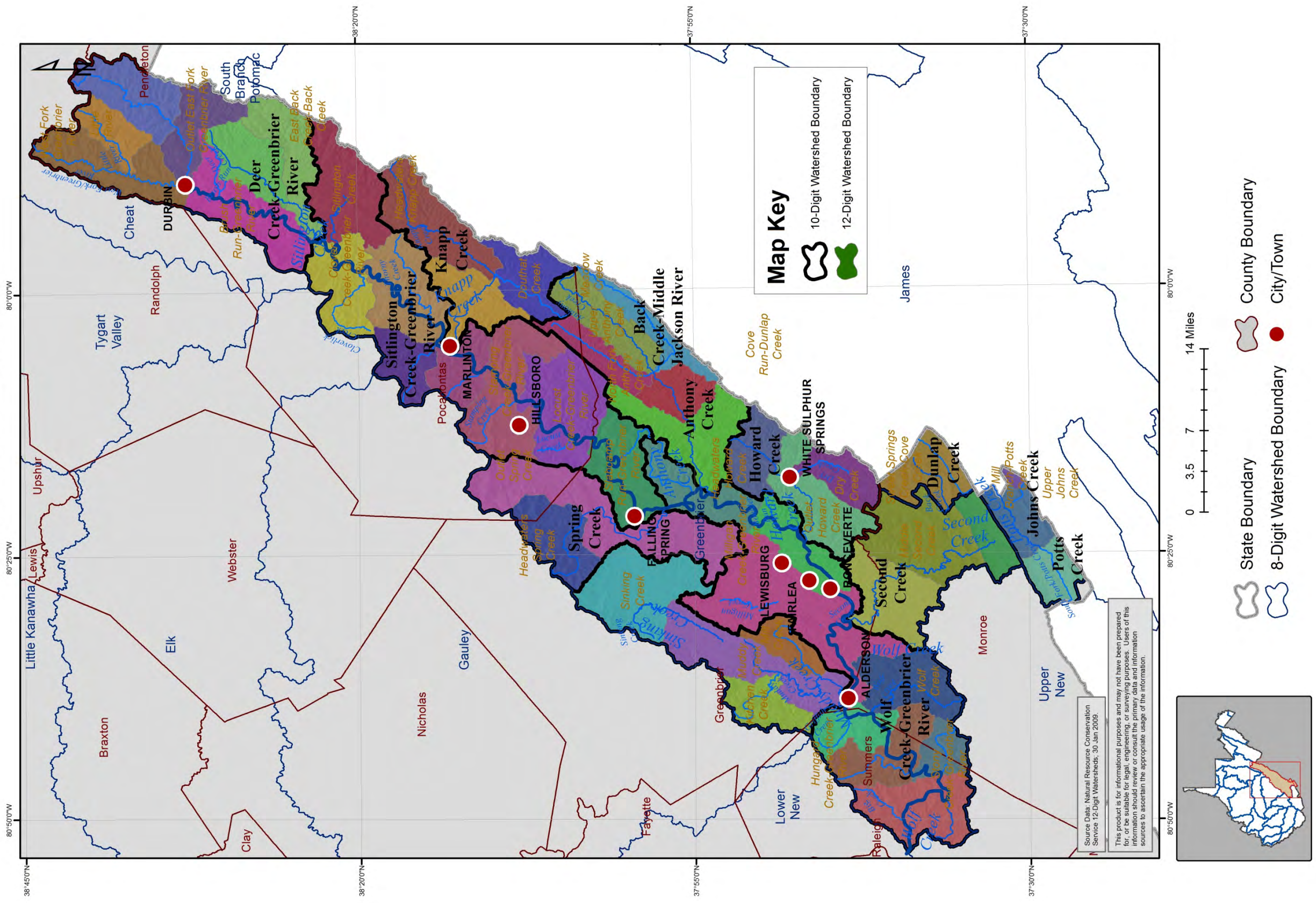
Greenbrier and James HUC-8 Watershed

Mining Related NPDES Outlets



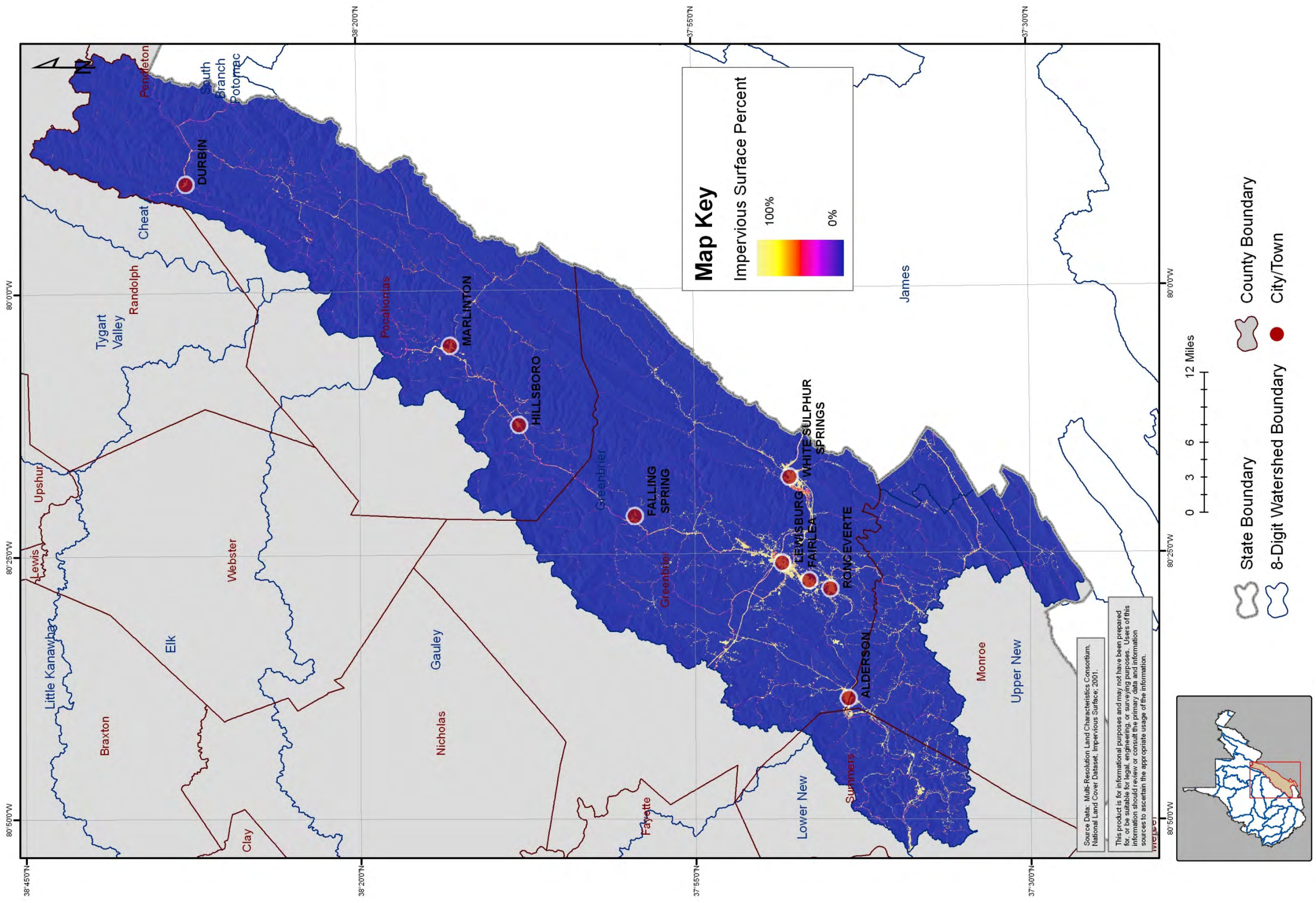
Greenbrier and James HUC-8 Watershed

HUC 10 and HUC 12 Watersheds



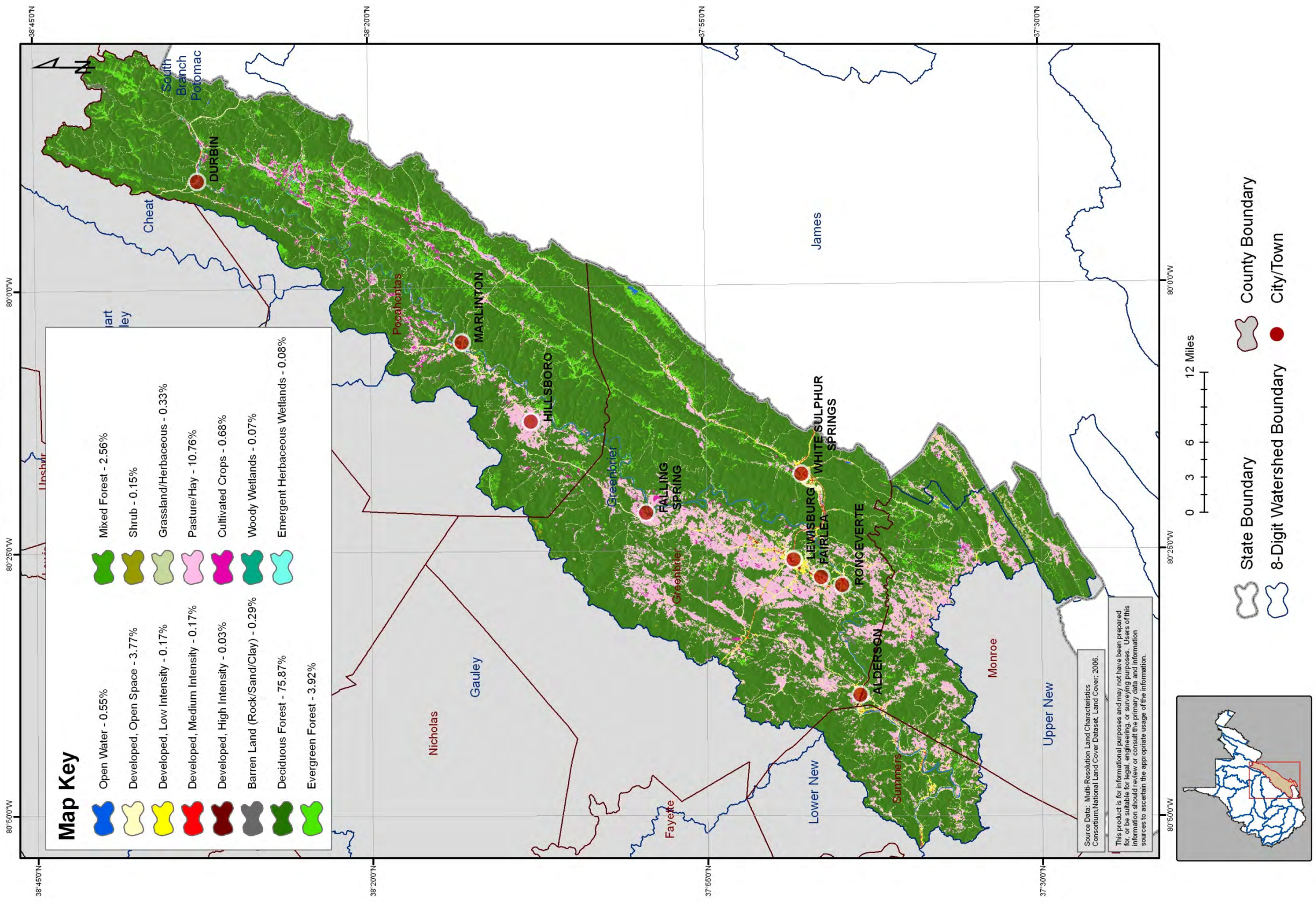
Greenbrier and James HUC-8 Watershed

2006 Impervious Surfaces



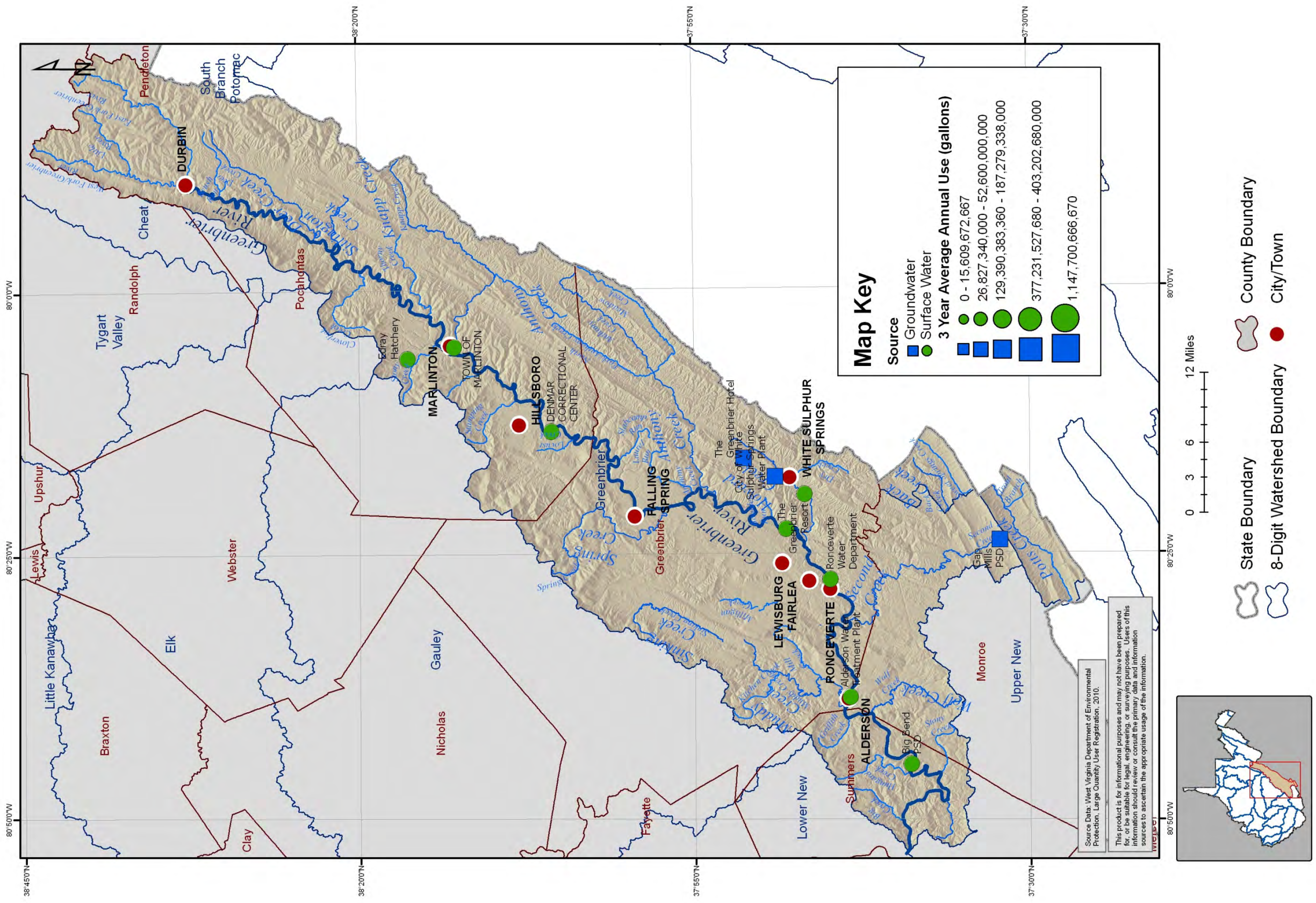
Greenbrier and James HUC-8 Watershed

2006 Land Cover



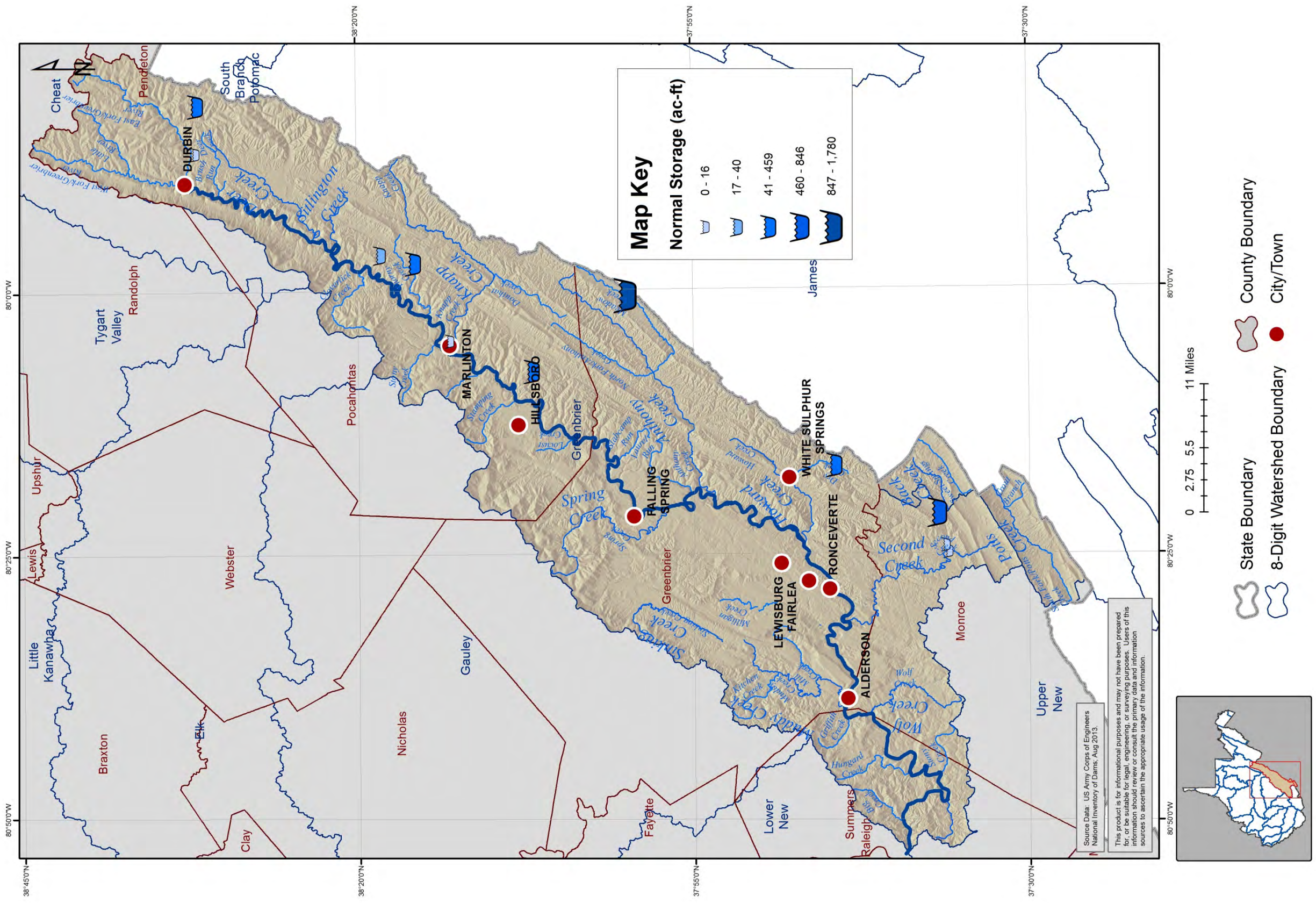
Greenbrier and James HUC-8 Watershed

Large Quantity Users



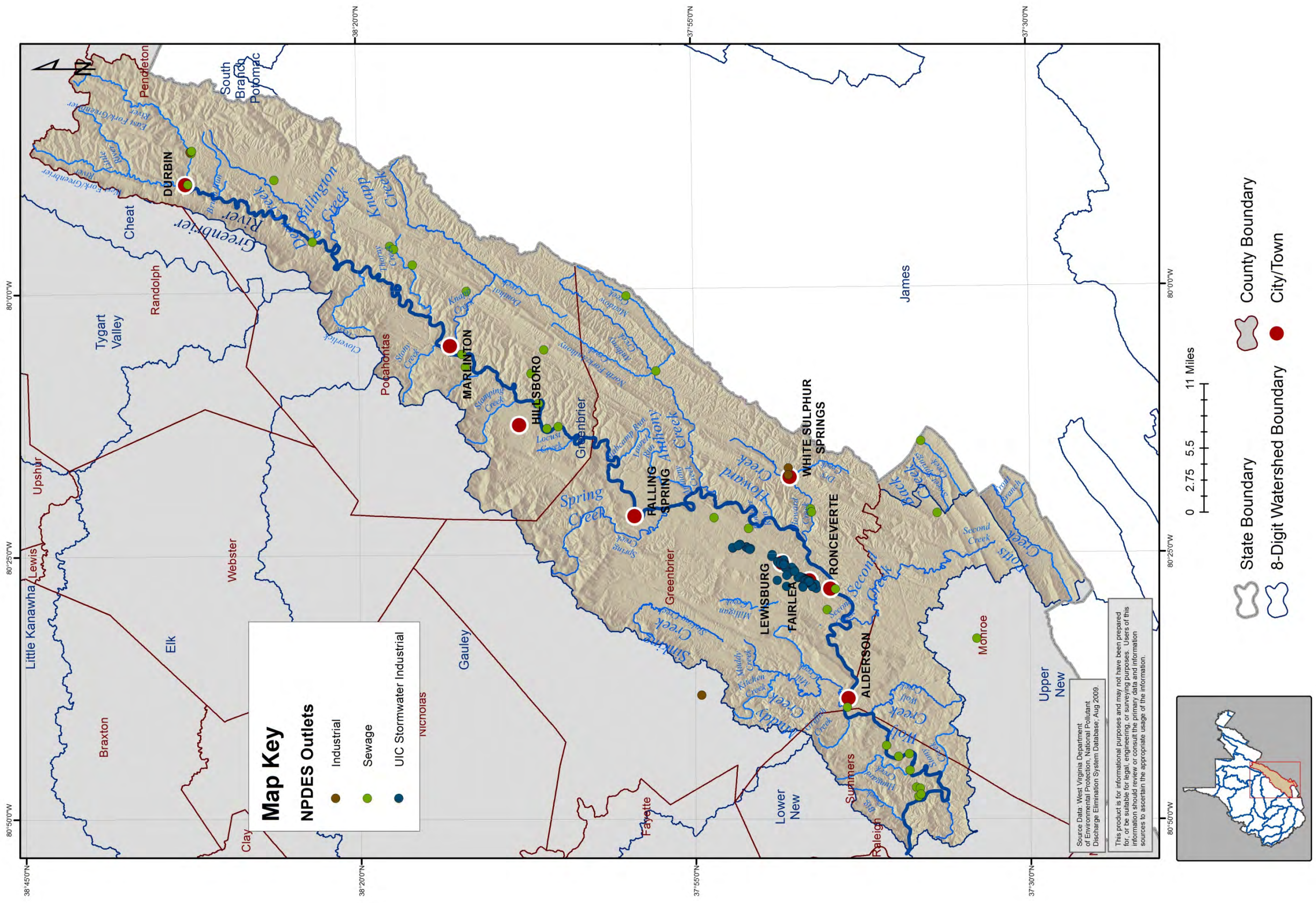
Greenbrier and James HUC-8 Watershed

Permitted Dams



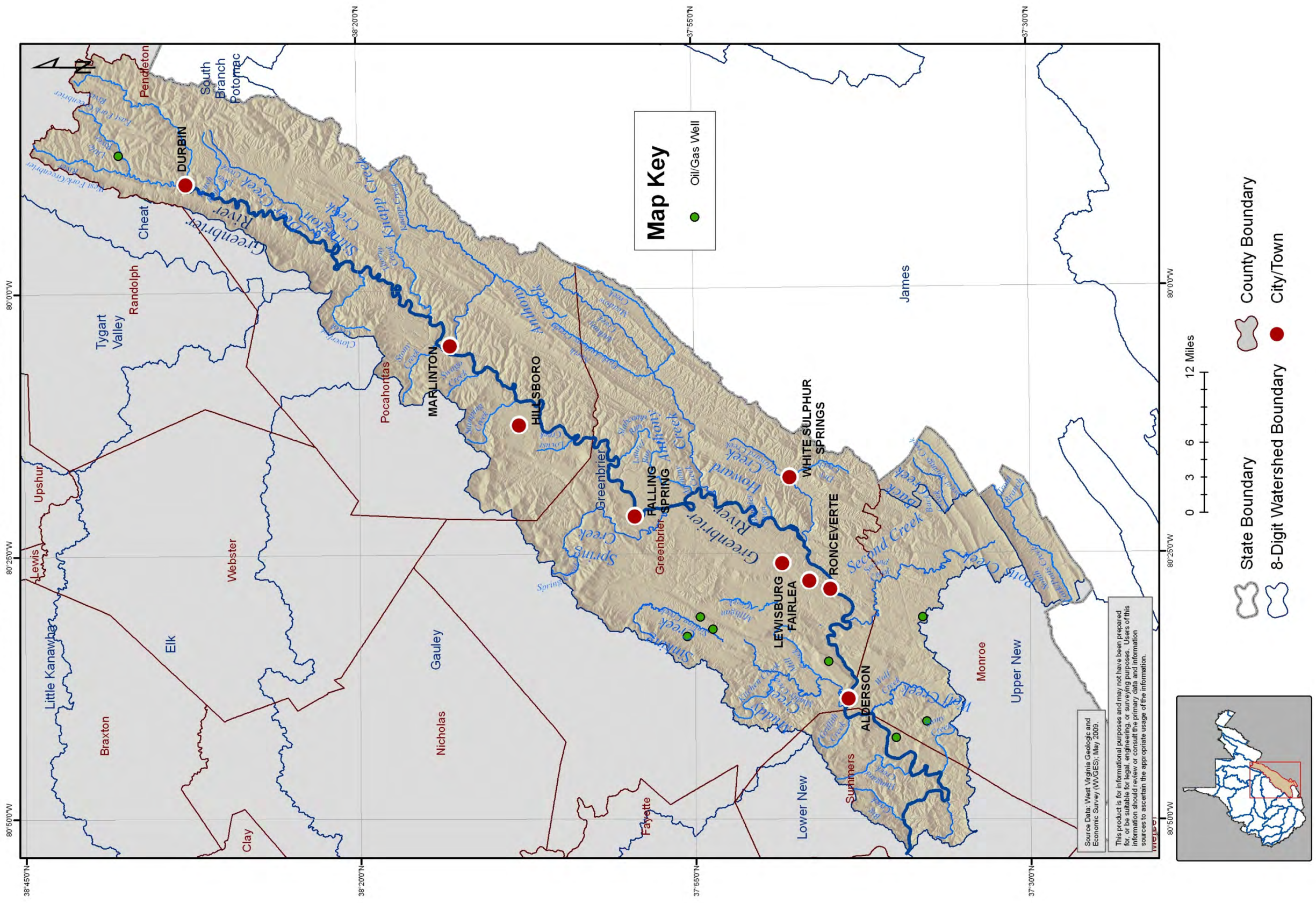
Greenbrier and James HUC-8 Watershed

Non-Mining NPDES Outlets



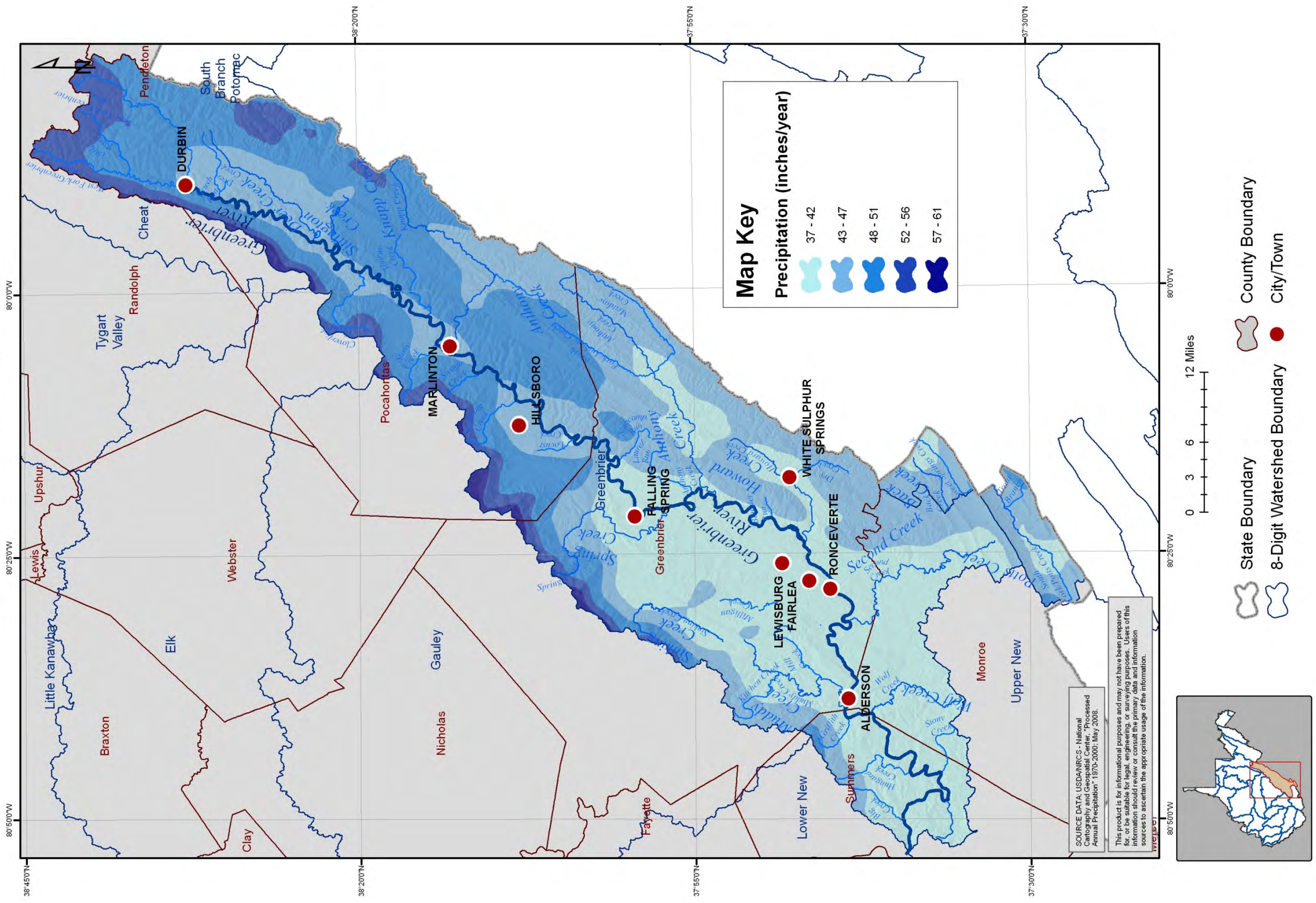
Greenbrier and James HUC-8 Watershed

Well Logs with Gamma Rays and Water Shows



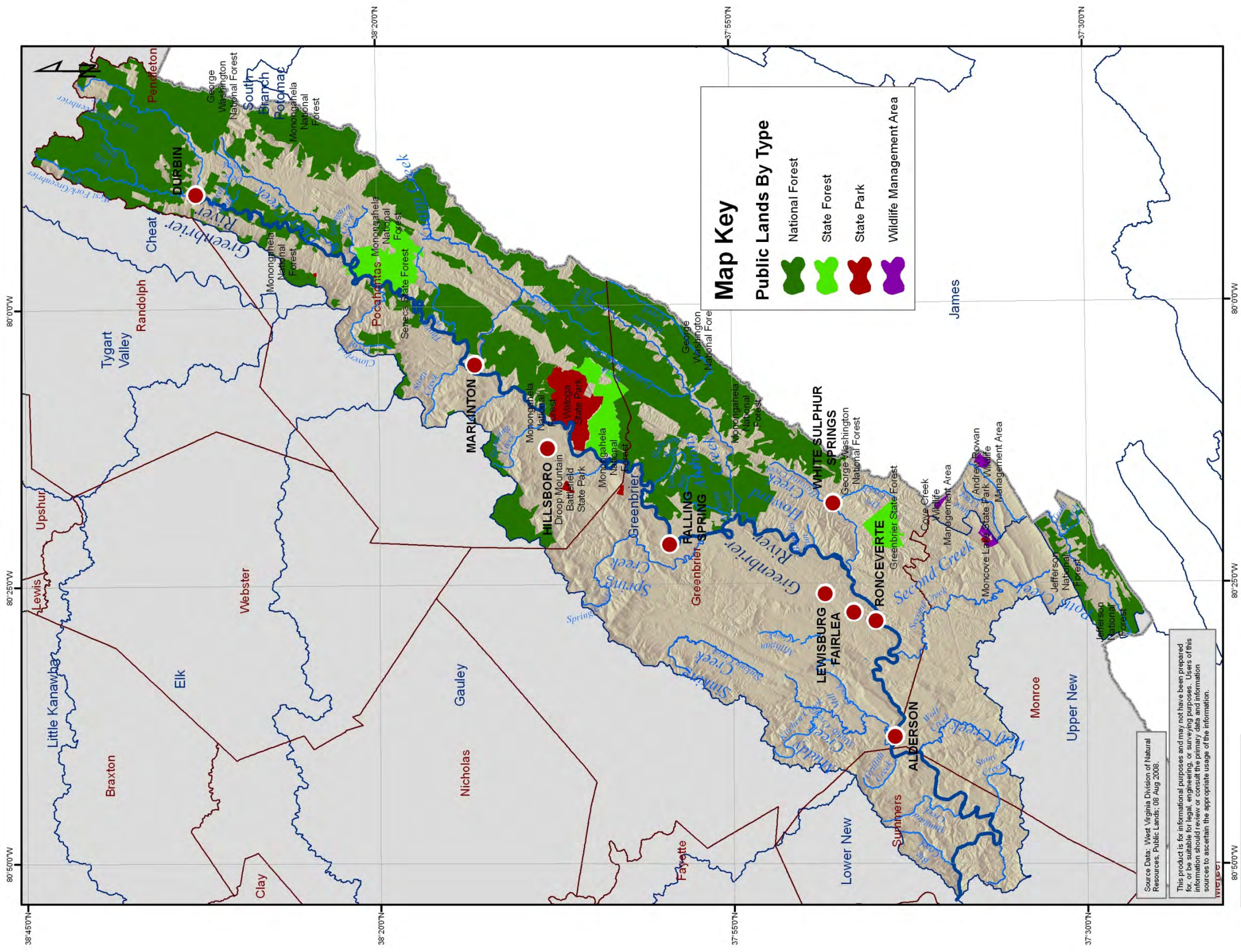
Greenbrier and James HUC-8 Watershed

Average Annual Precipitation (1971-2000)



Greenbrier and James HUC-8 Watershed

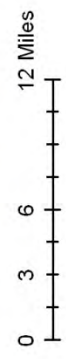
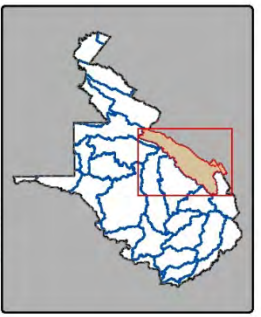
Public Lands



Map Key

Public Lands By Type

- National Forest
- State Forest
- State Park
- Wildlife Management Area



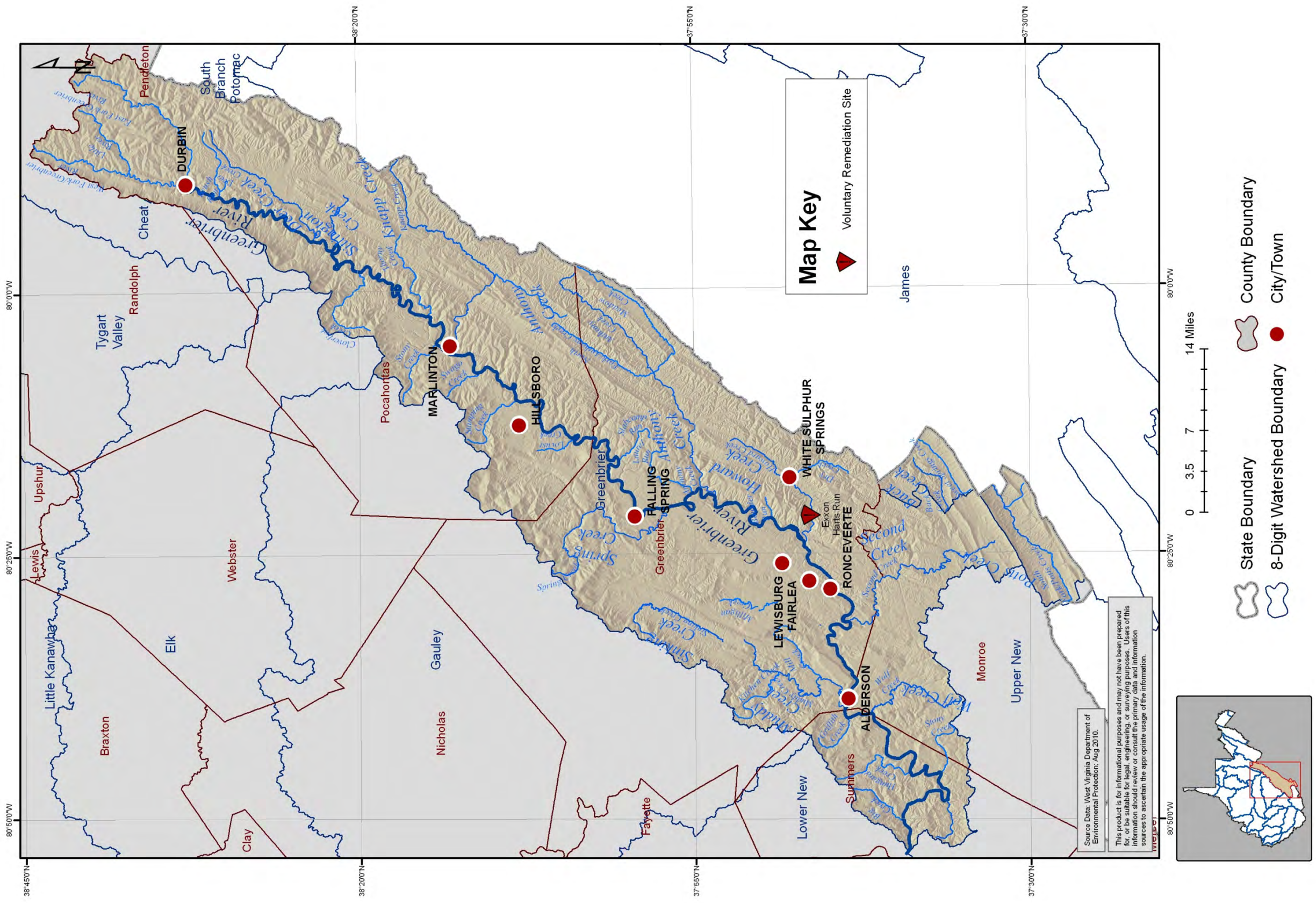
- State Boundary
- 8-Digit Watershed Boundary
- County Boundary
- City/Town

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

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.

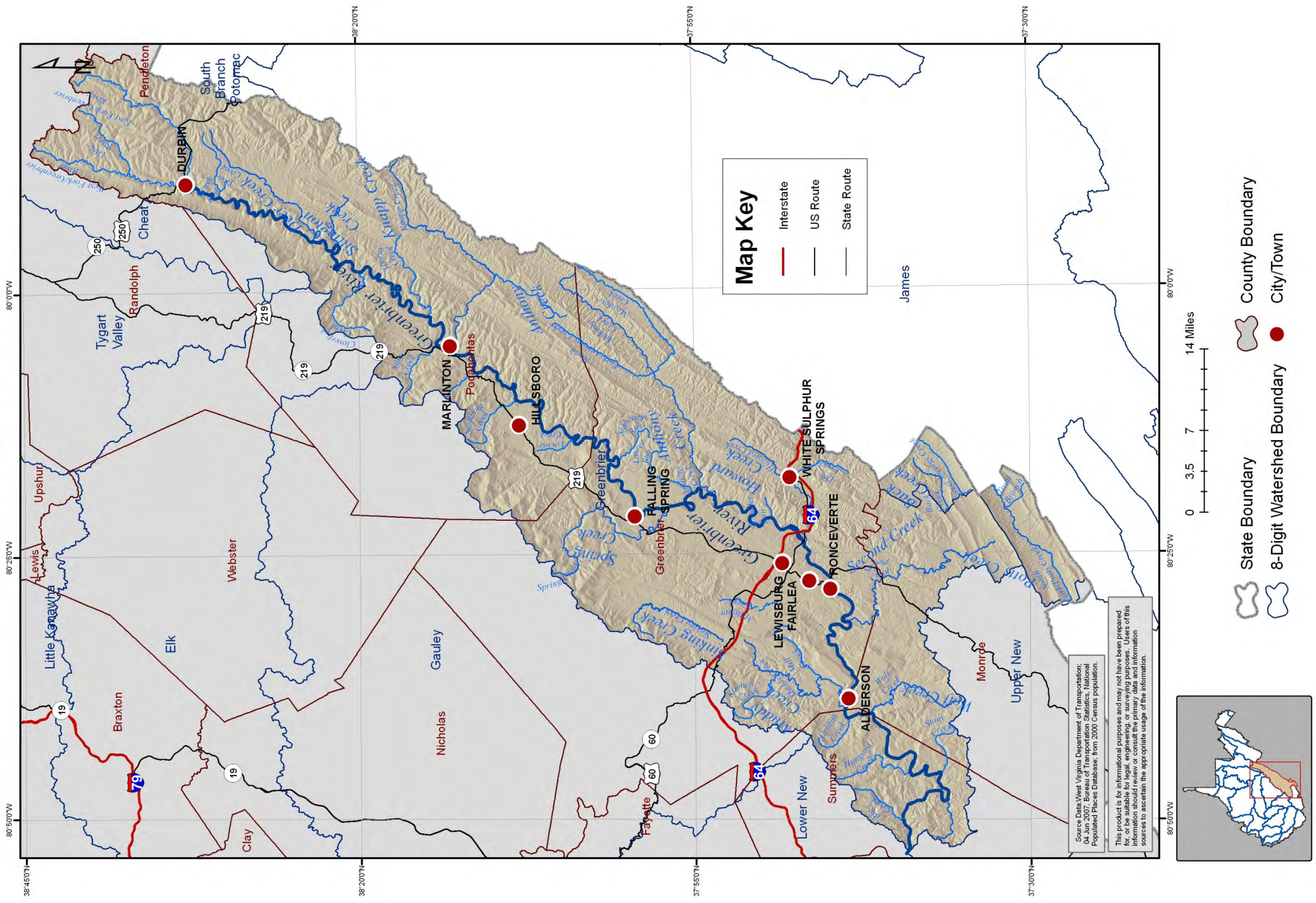
Greenbrier and James HUC-8 Watershed

Remediation Sites



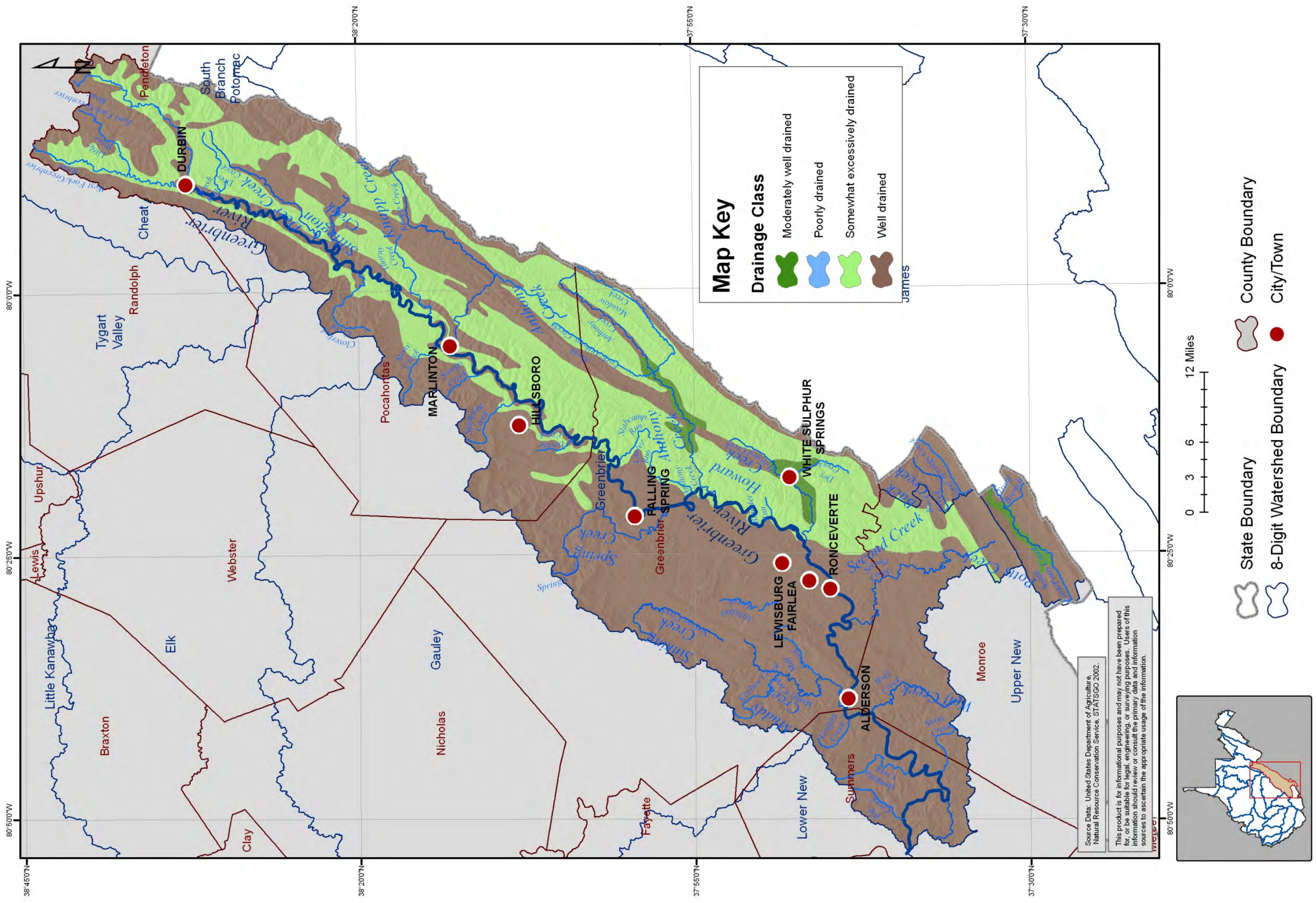
Greenbrier and James HUC-8 Watershed

Major Roads and Cities



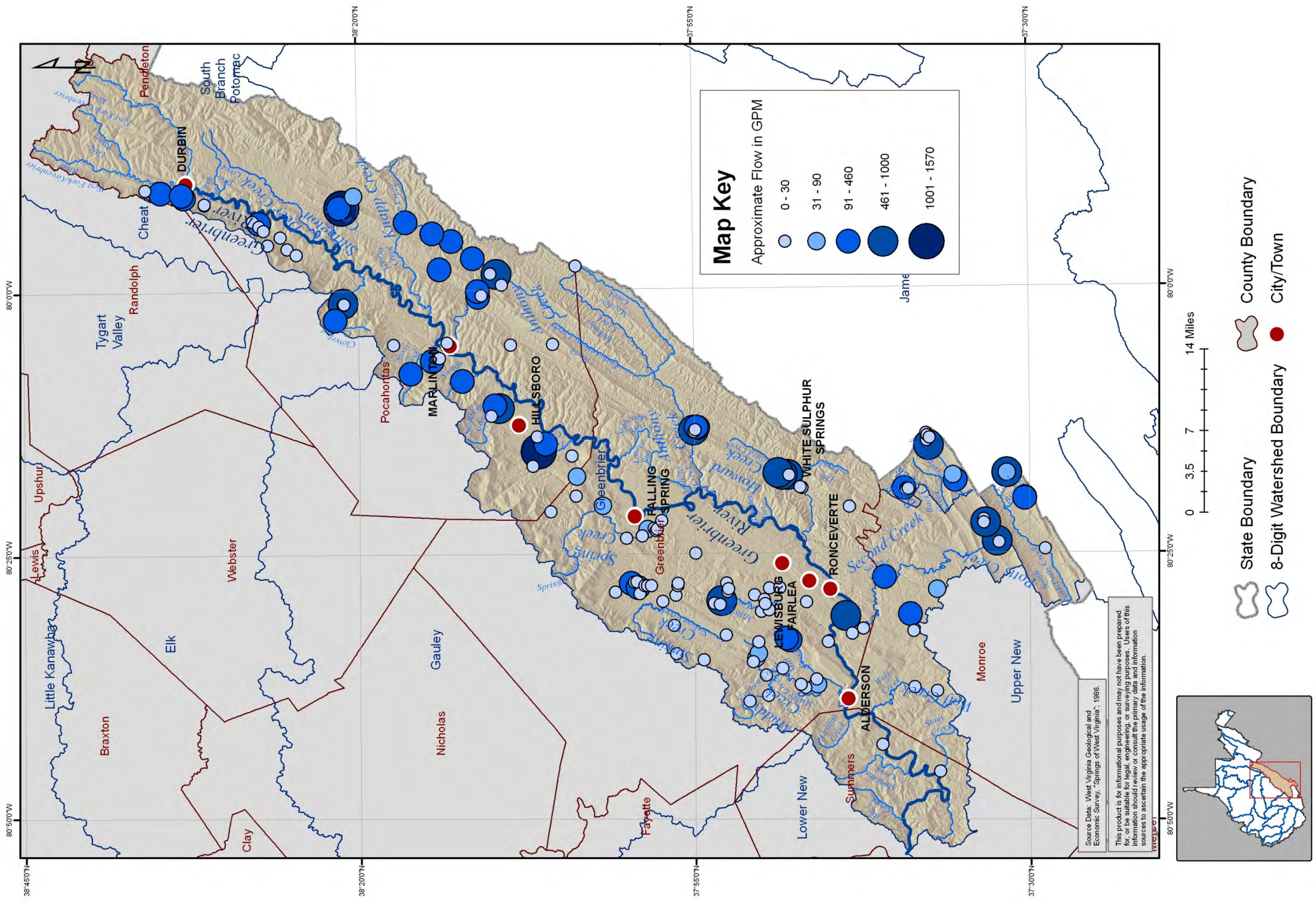
Greenbrier and James HUC-8 Watershed

Soil Drainage Classes



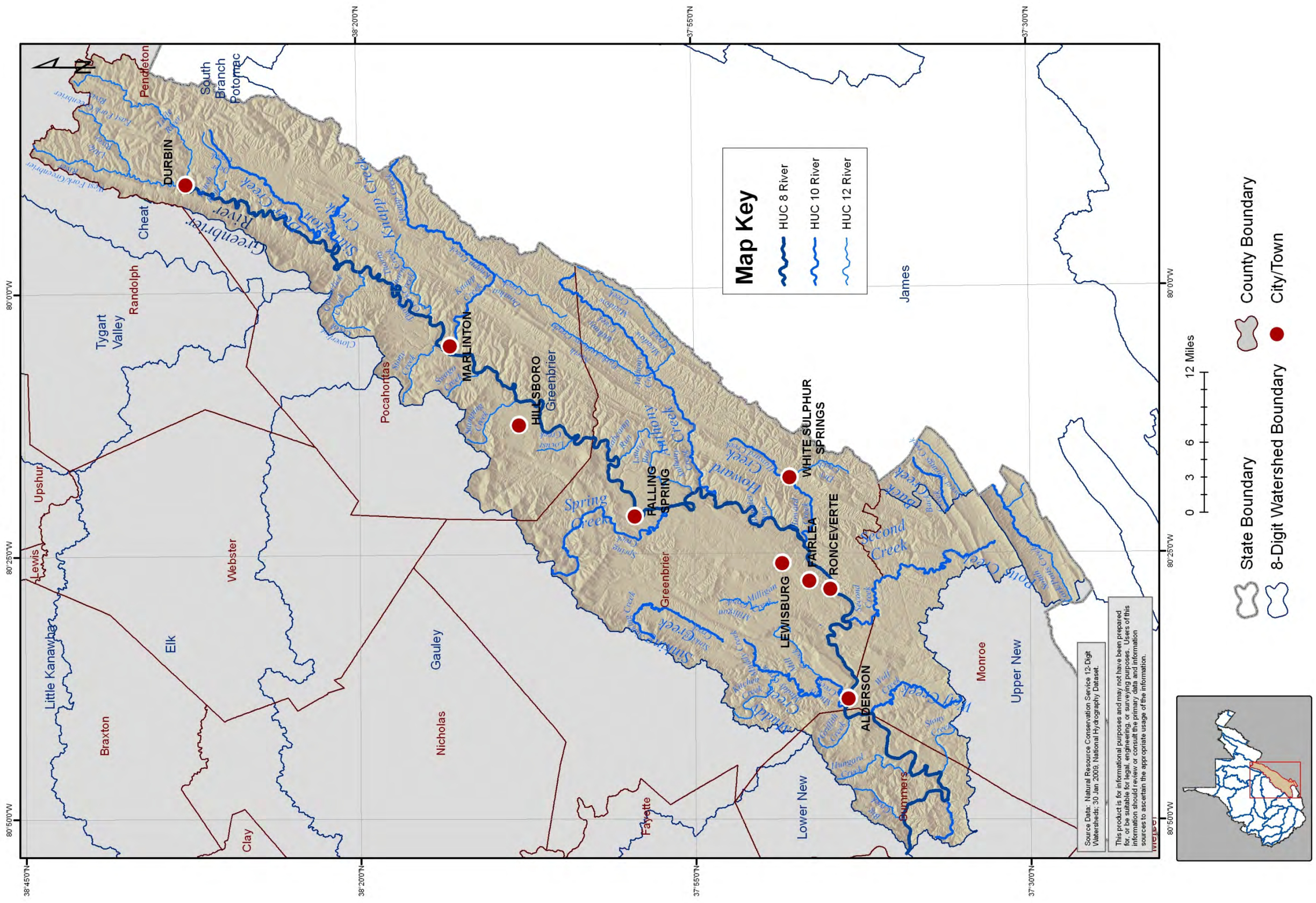
Greenbrier and James HUC-8 Watershed

Documented Springs



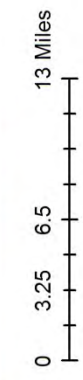
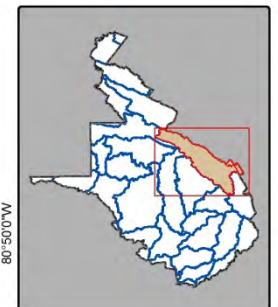
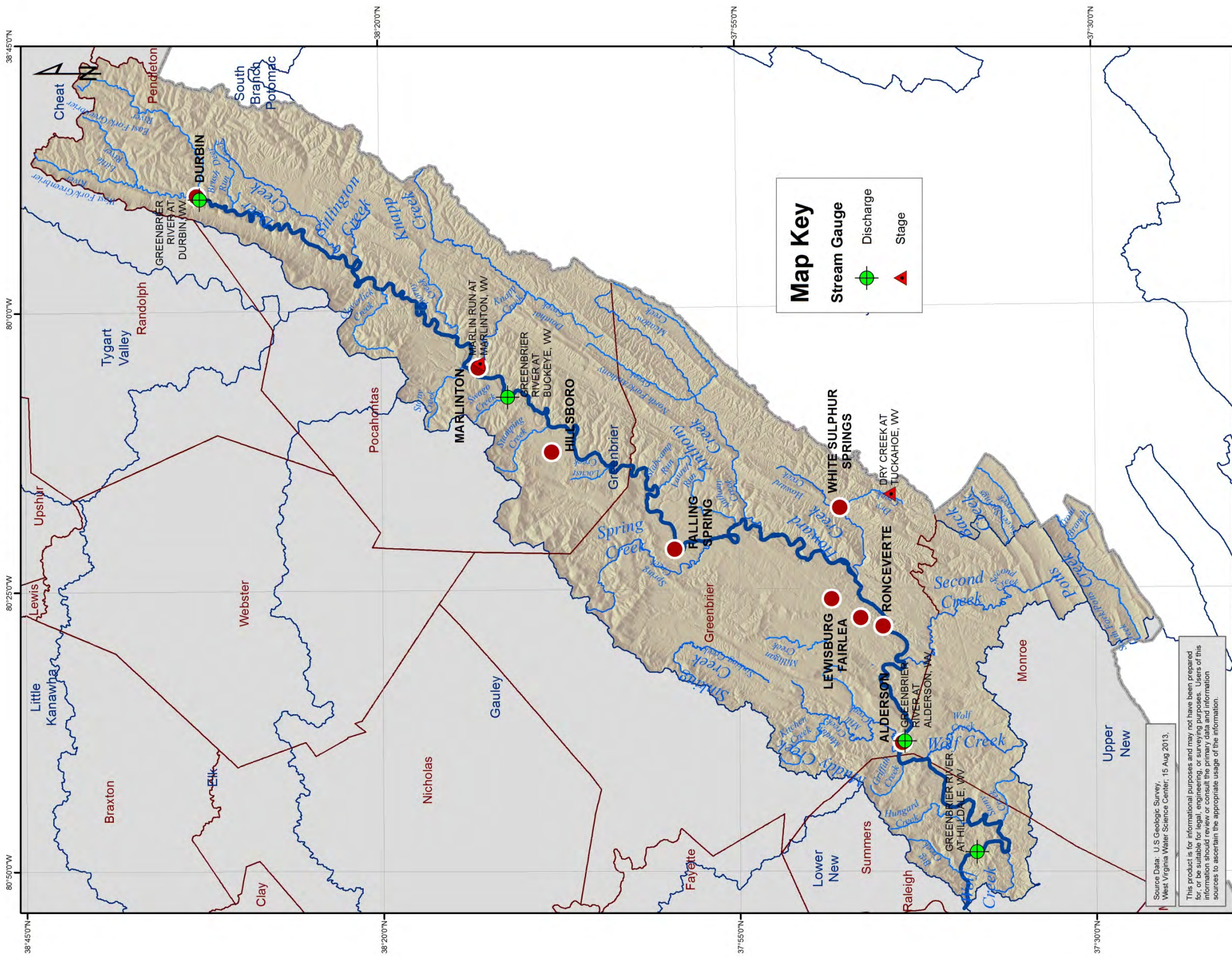
Greenbrier and James HUC-8 Watershed

Stream Connections



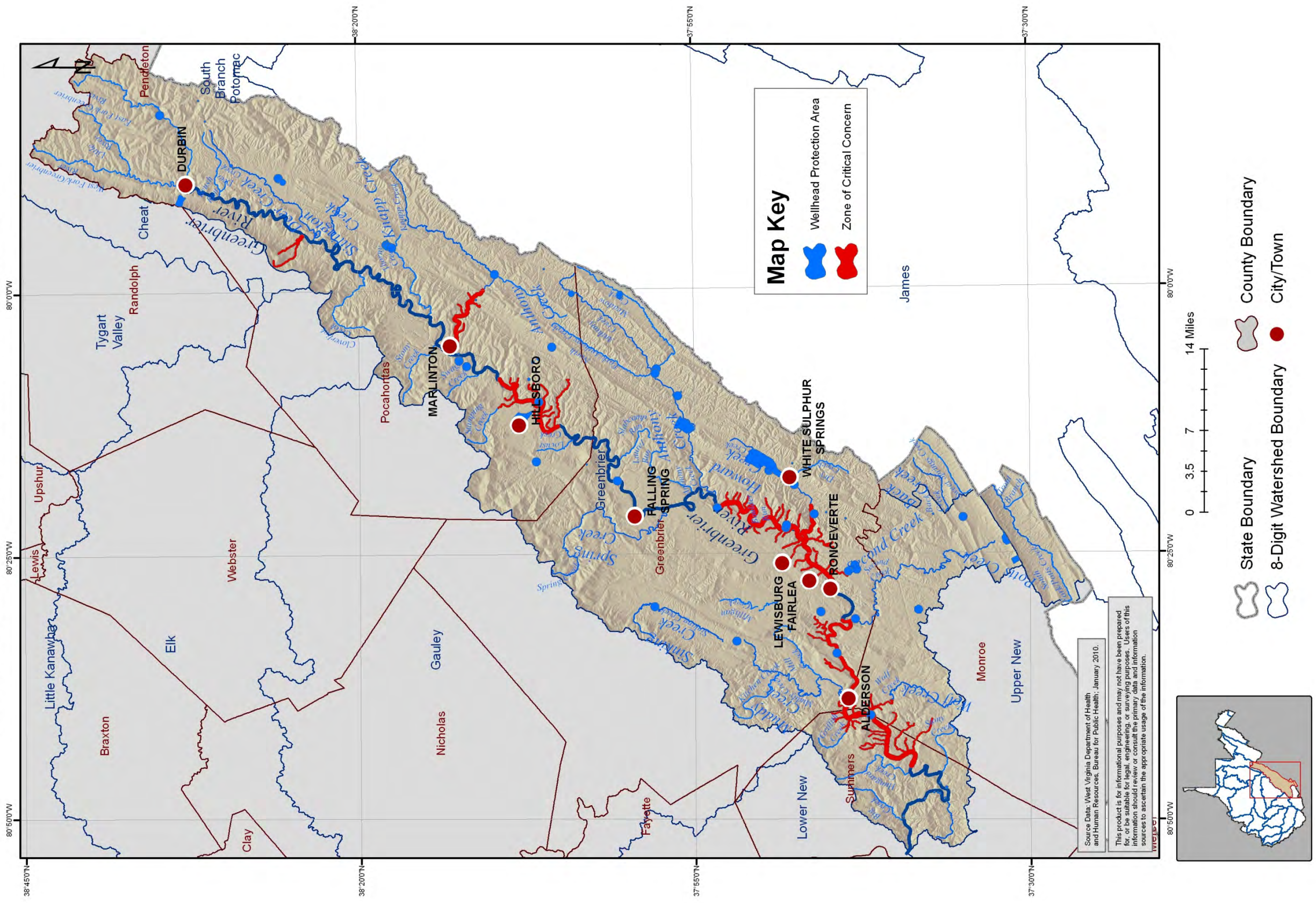
Greenbrier and James HUC-8 Watershed

Stream Gauges



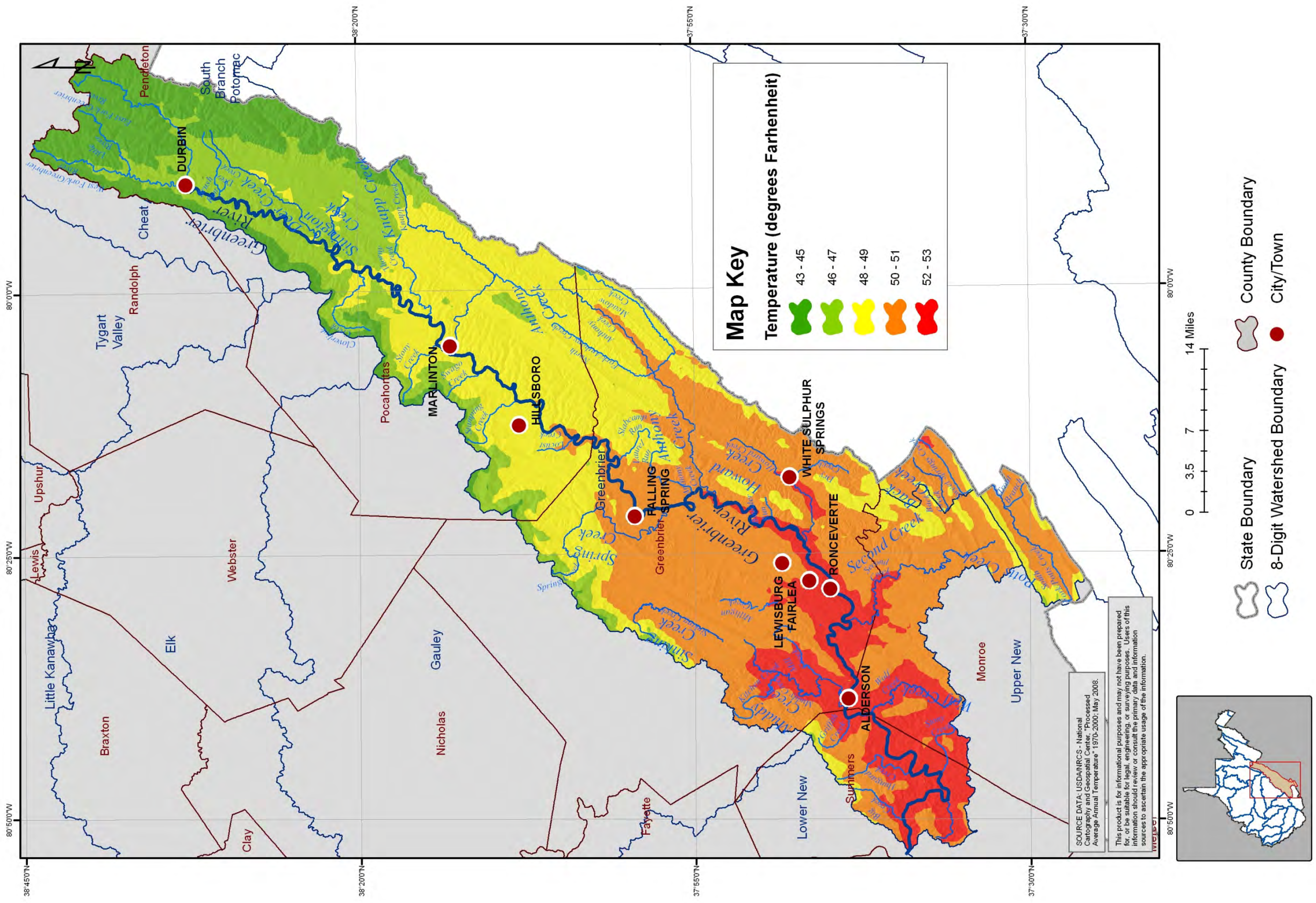
Greenbrier and James HUC-8 Watershed

Source Water Assessment and Wellhead Protection Programs



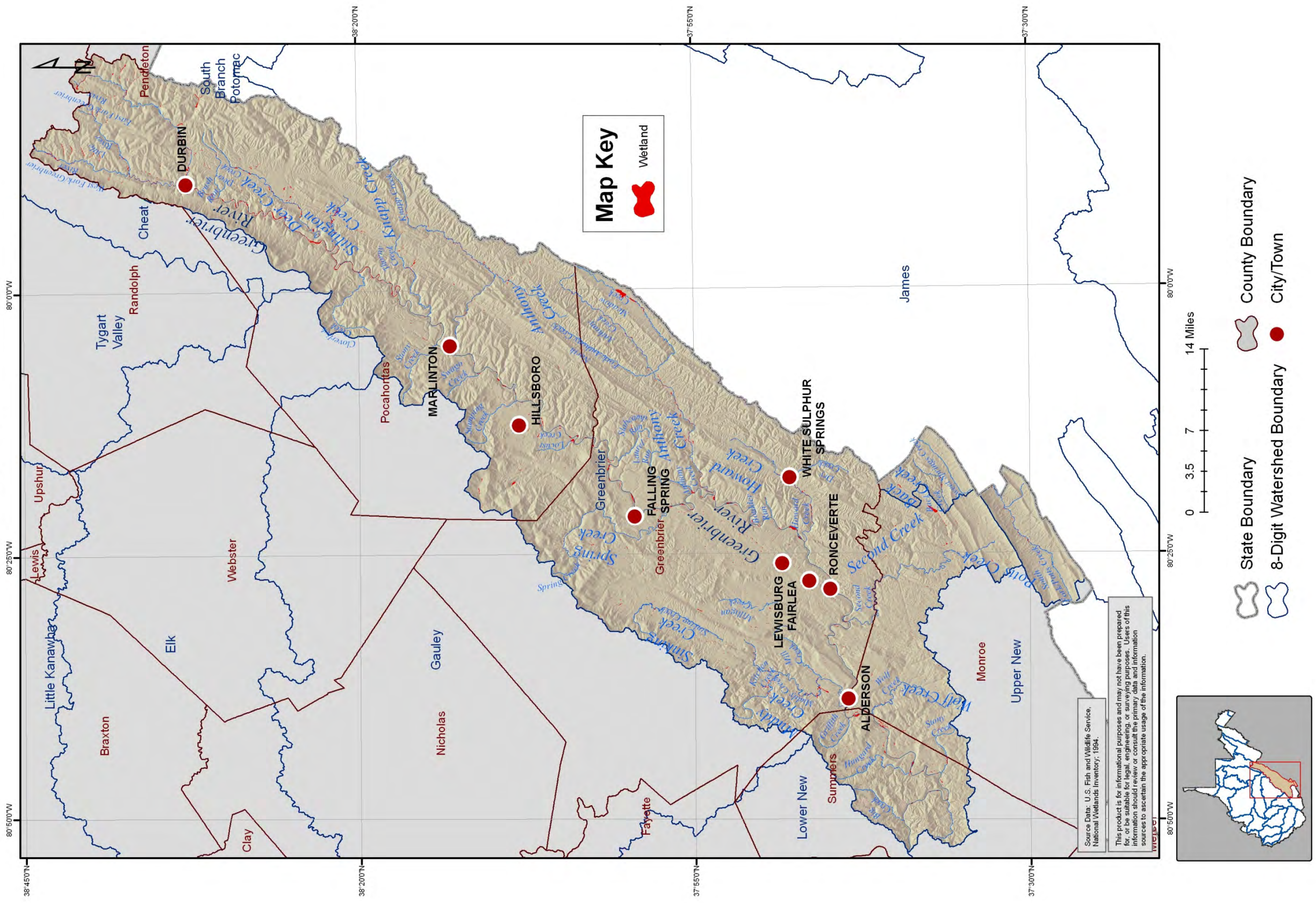
Greenbrier and James HUC-8 Watershed

Average Annual Temperature (1971-2000)



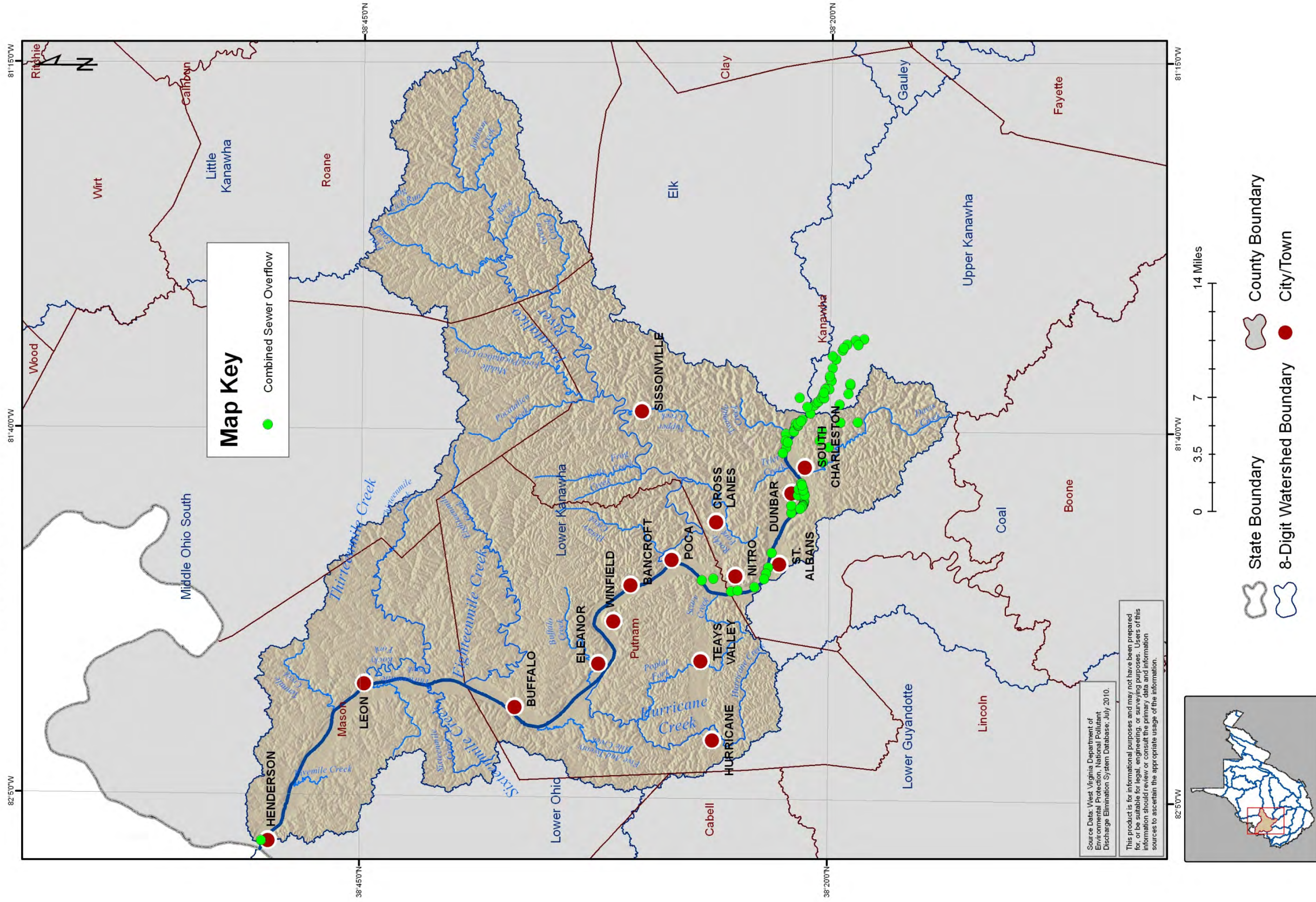
Greenbrier and James HUC-8 Watershed

Wetlands



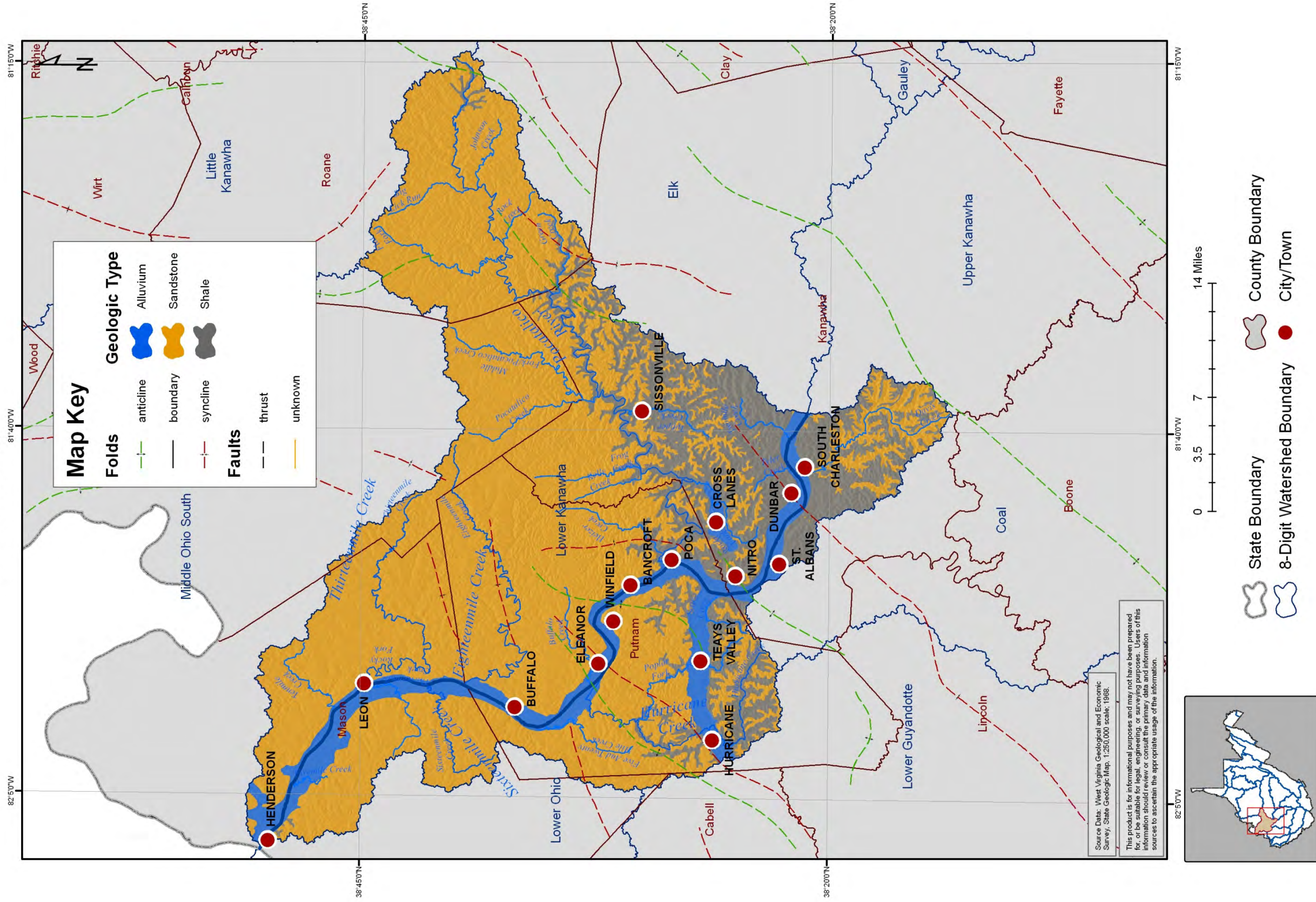
Lower Kanawha HUC-8 Watershed

Combined Sewer Overflow



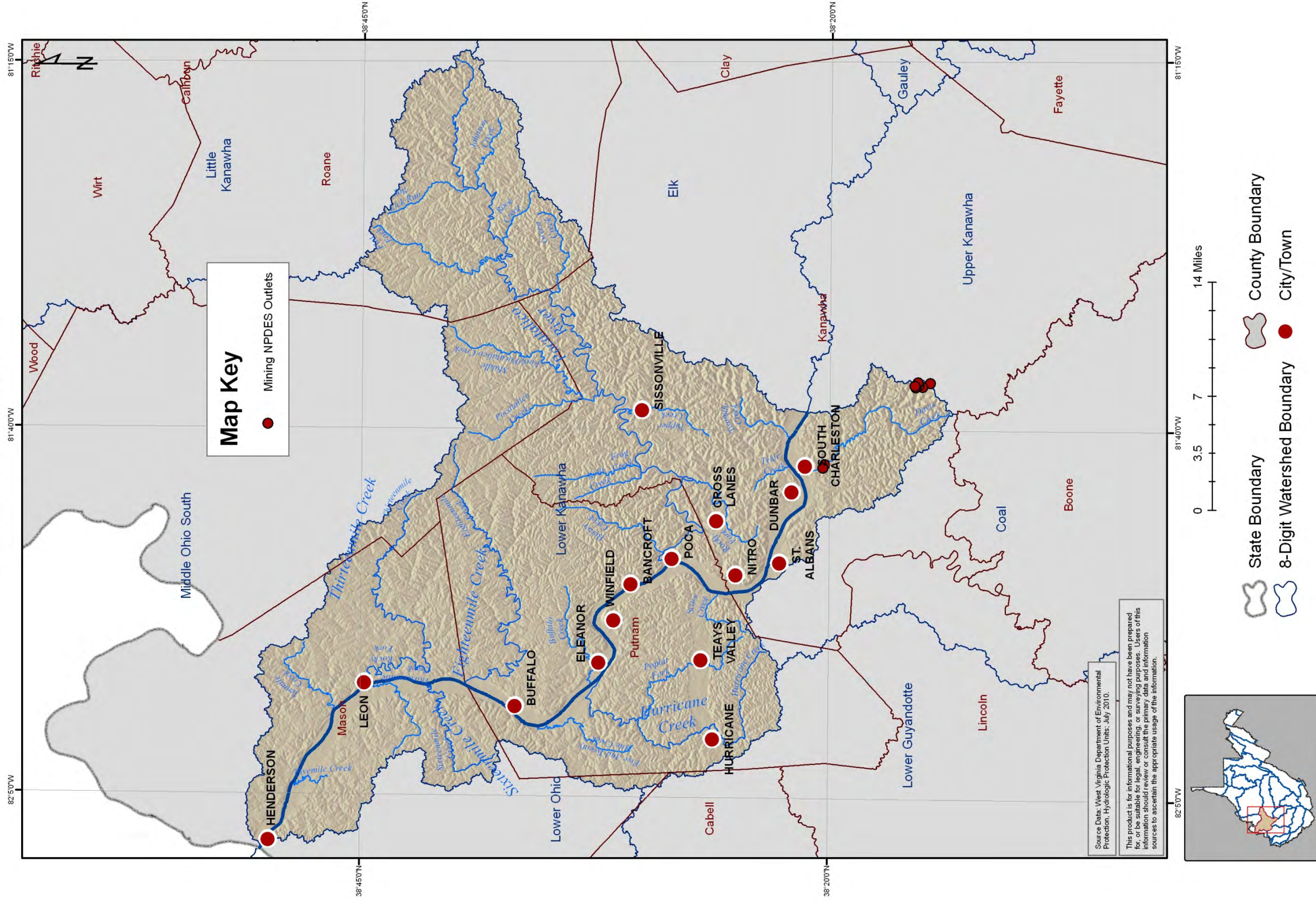
Lower Kanawha HUC-8 Watershed

Surface Geology



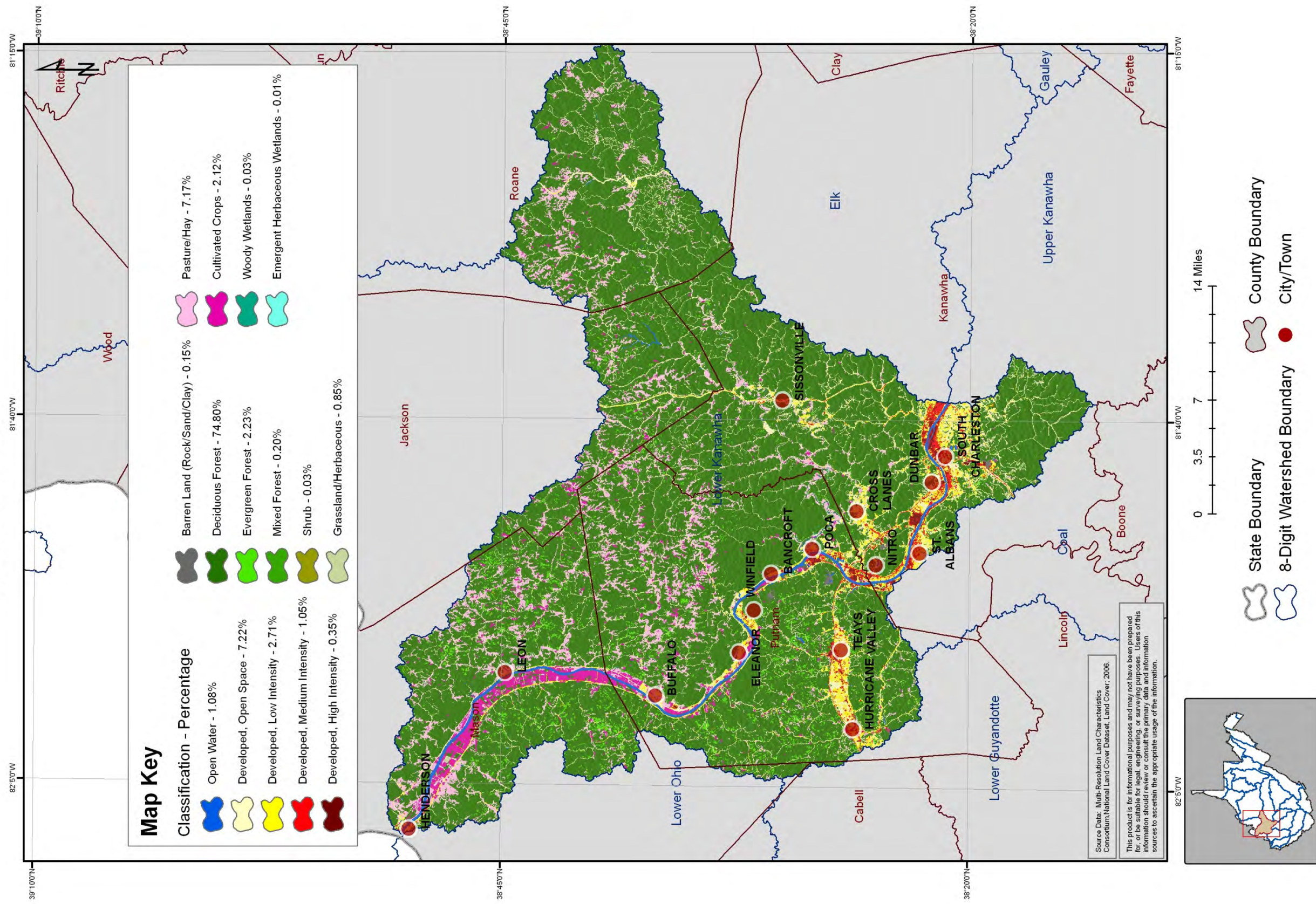
Lower Kanawha HUC-8 Watershed

Mining Related NPDES Outlets



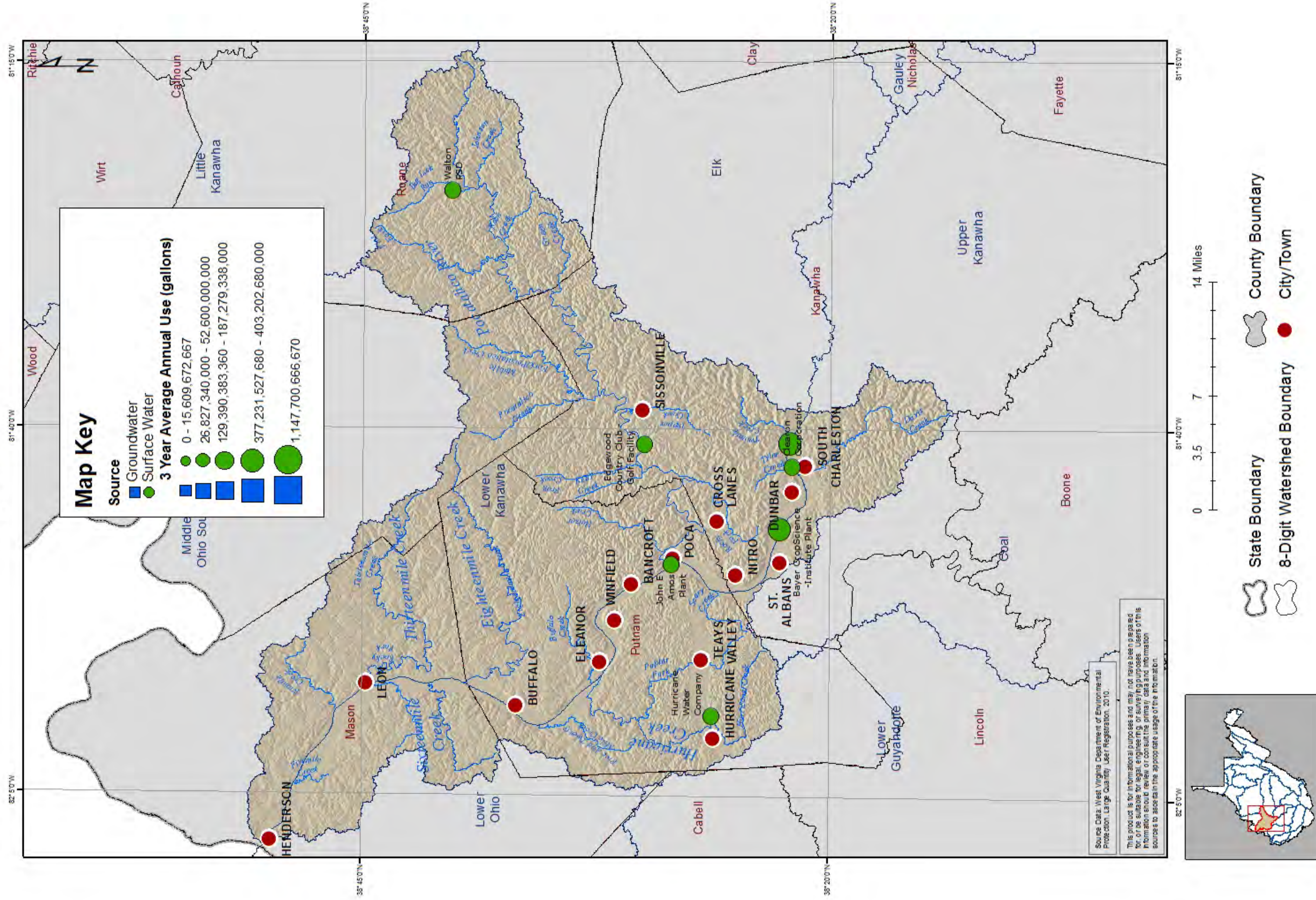
Lower Kanawha HUC-8 Watershed

2006 Land Cover



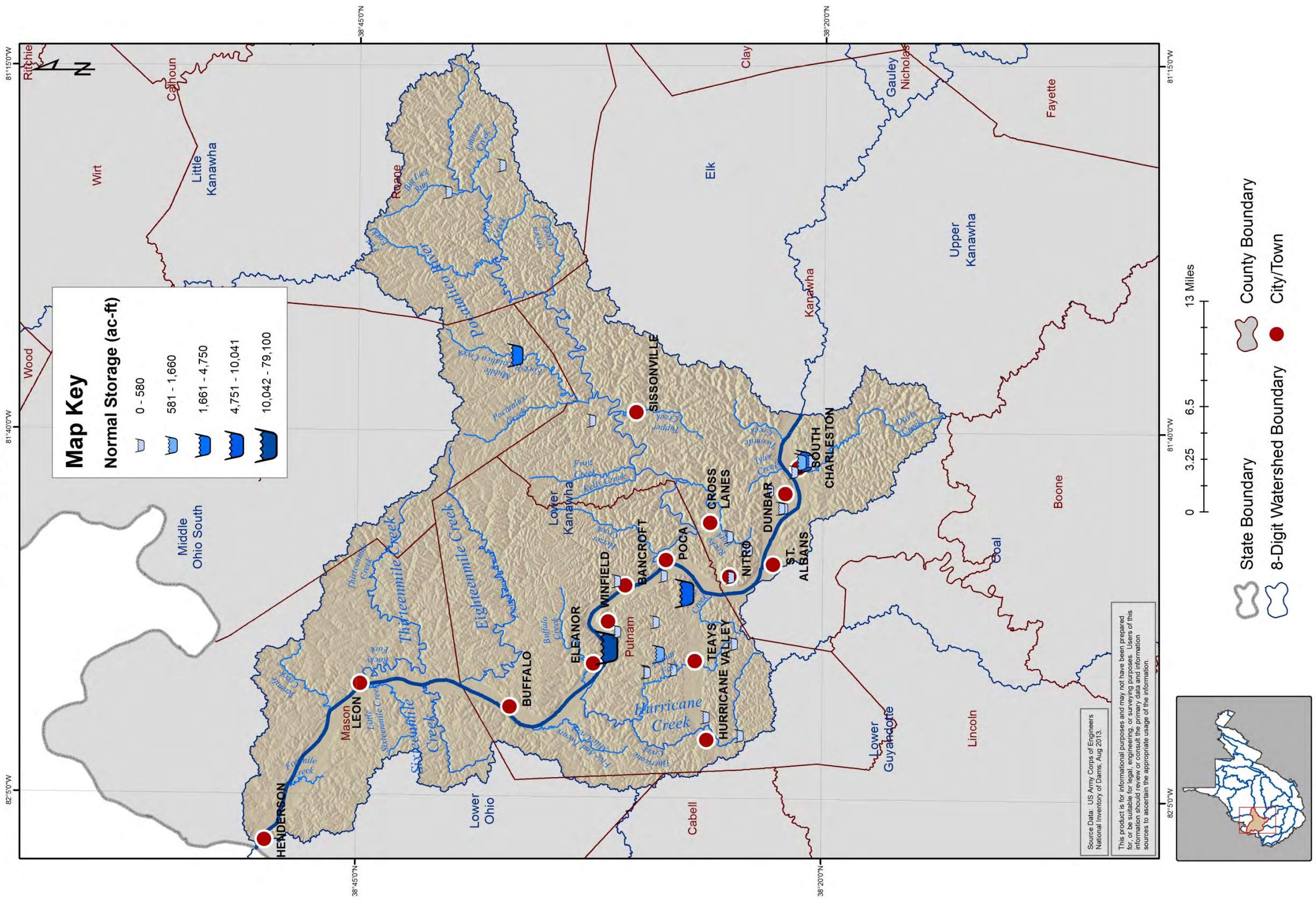
Lower Kanawha HUC-8 Watershed

Large Quantity Users



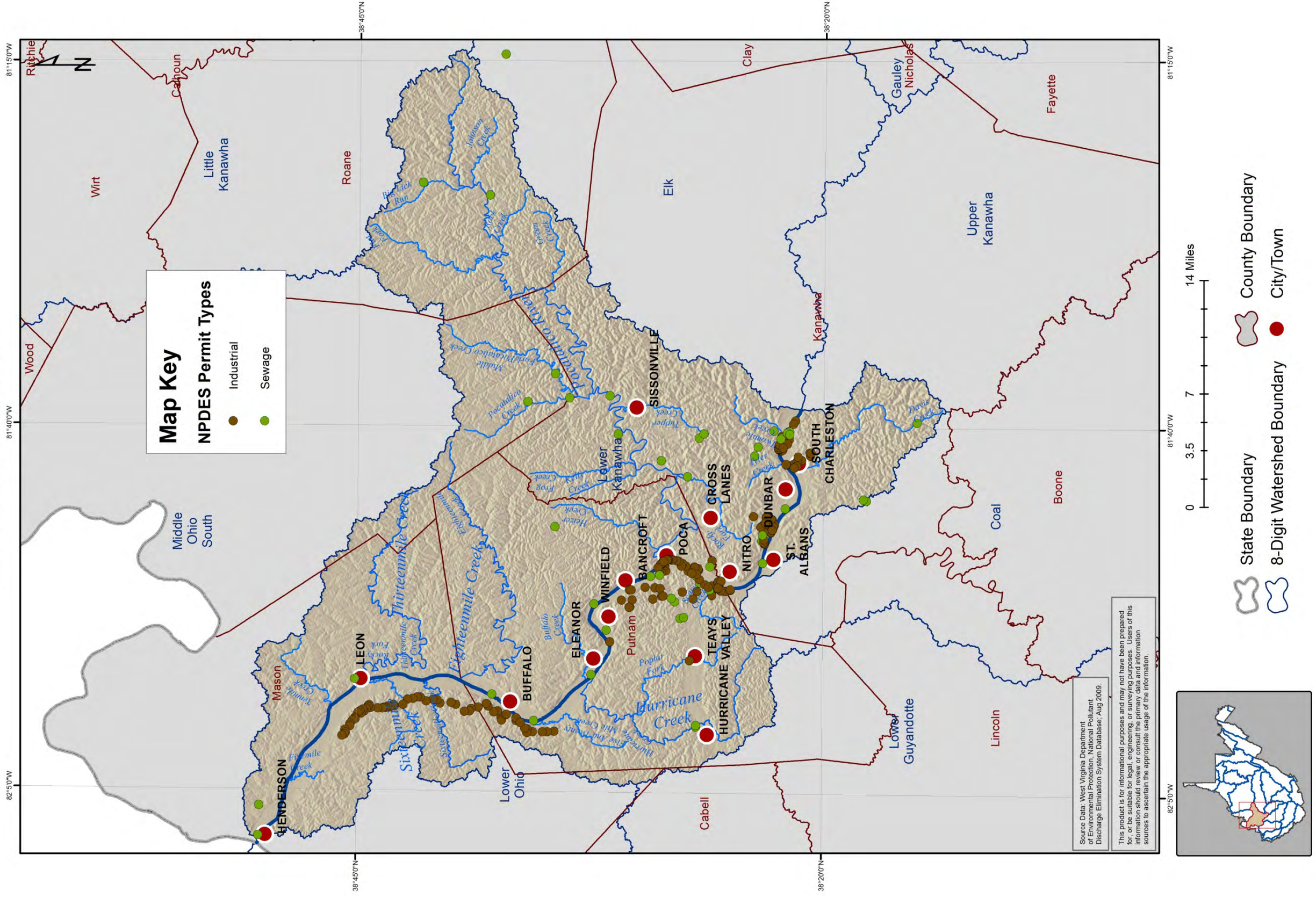
Lower Kanawha HUC-8 Watershed

Permitted Dams



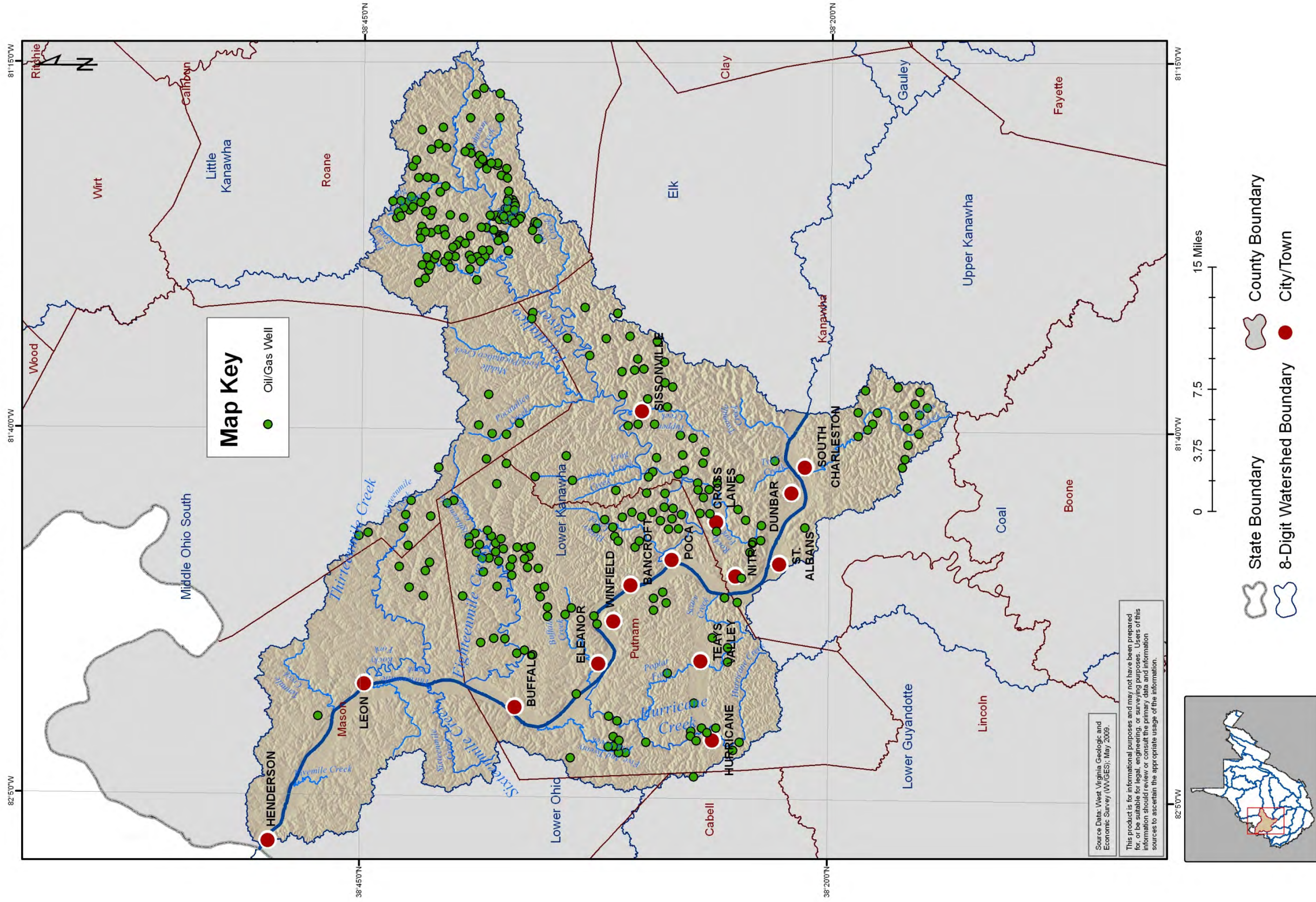
Lower Kanawha HUC-8 Watershed

Non-Mining NPDES Outlets



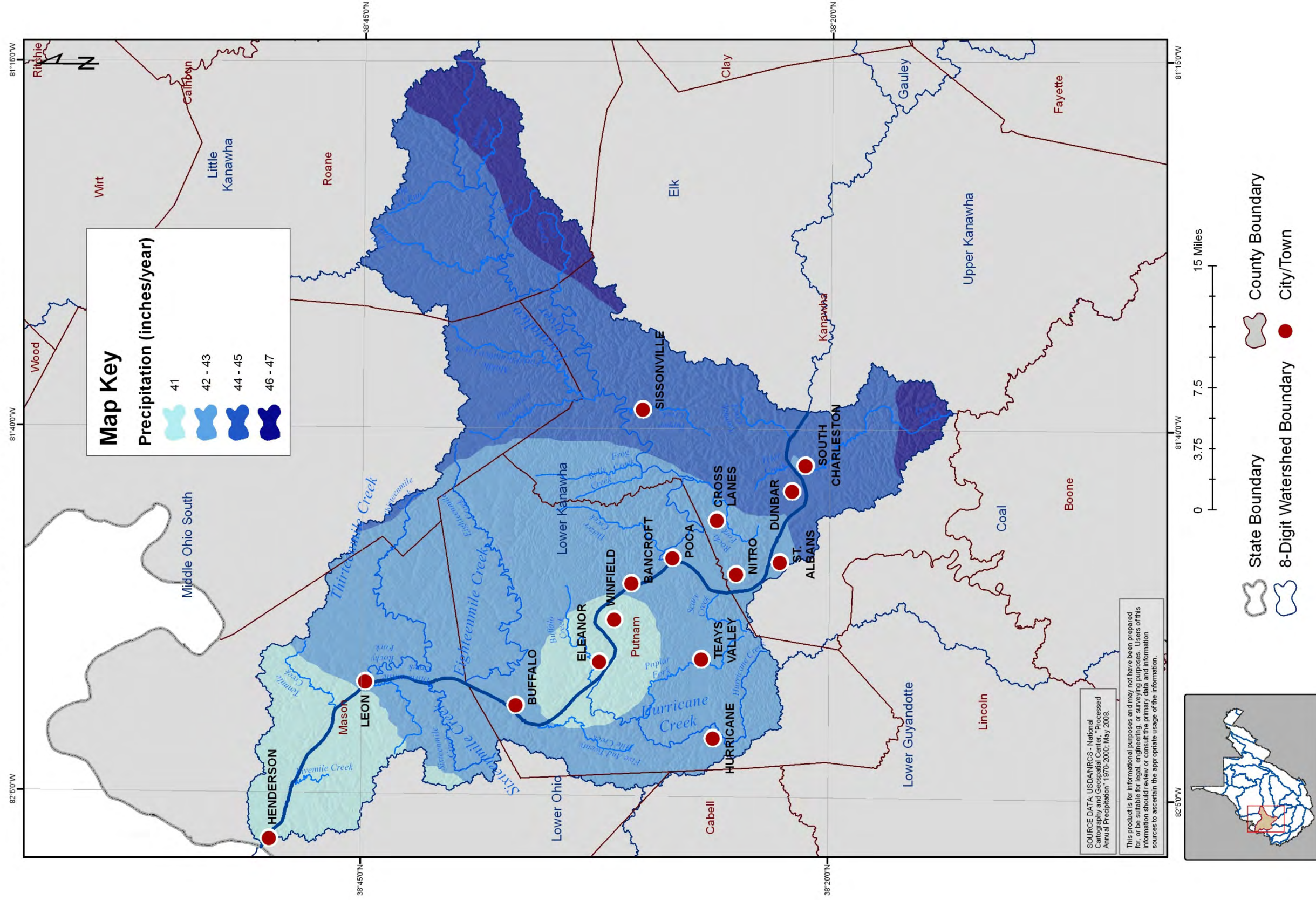
Lower Kanawha HUC-8 Watershed

Well Logs with Gamma Rays and Water Shows



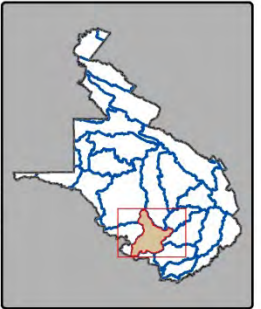
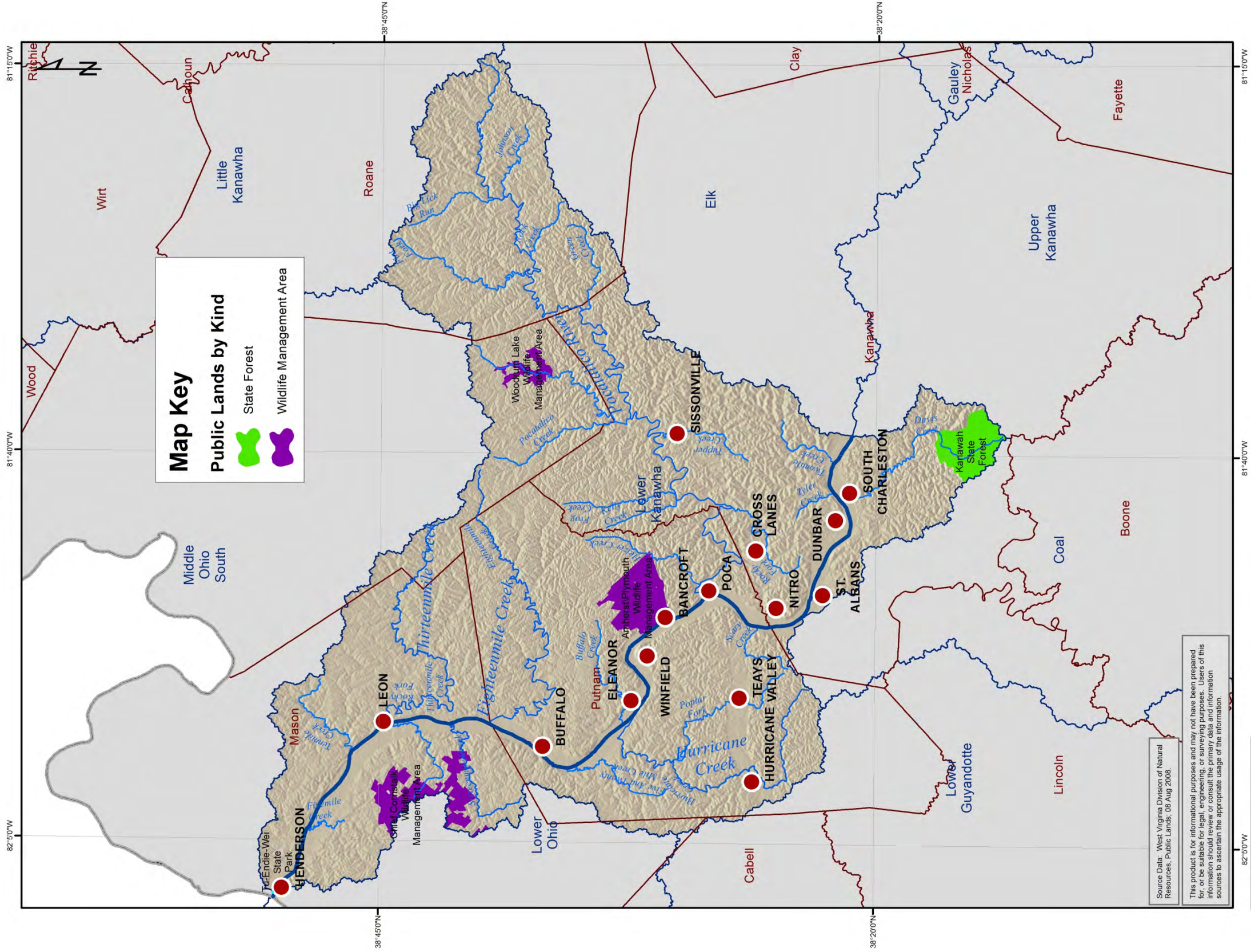
Lower Kanawha HUC-8 Watershed

Average Annual Precipitation (1971-2000)



Lower Kanawha HUC-8 Watershed

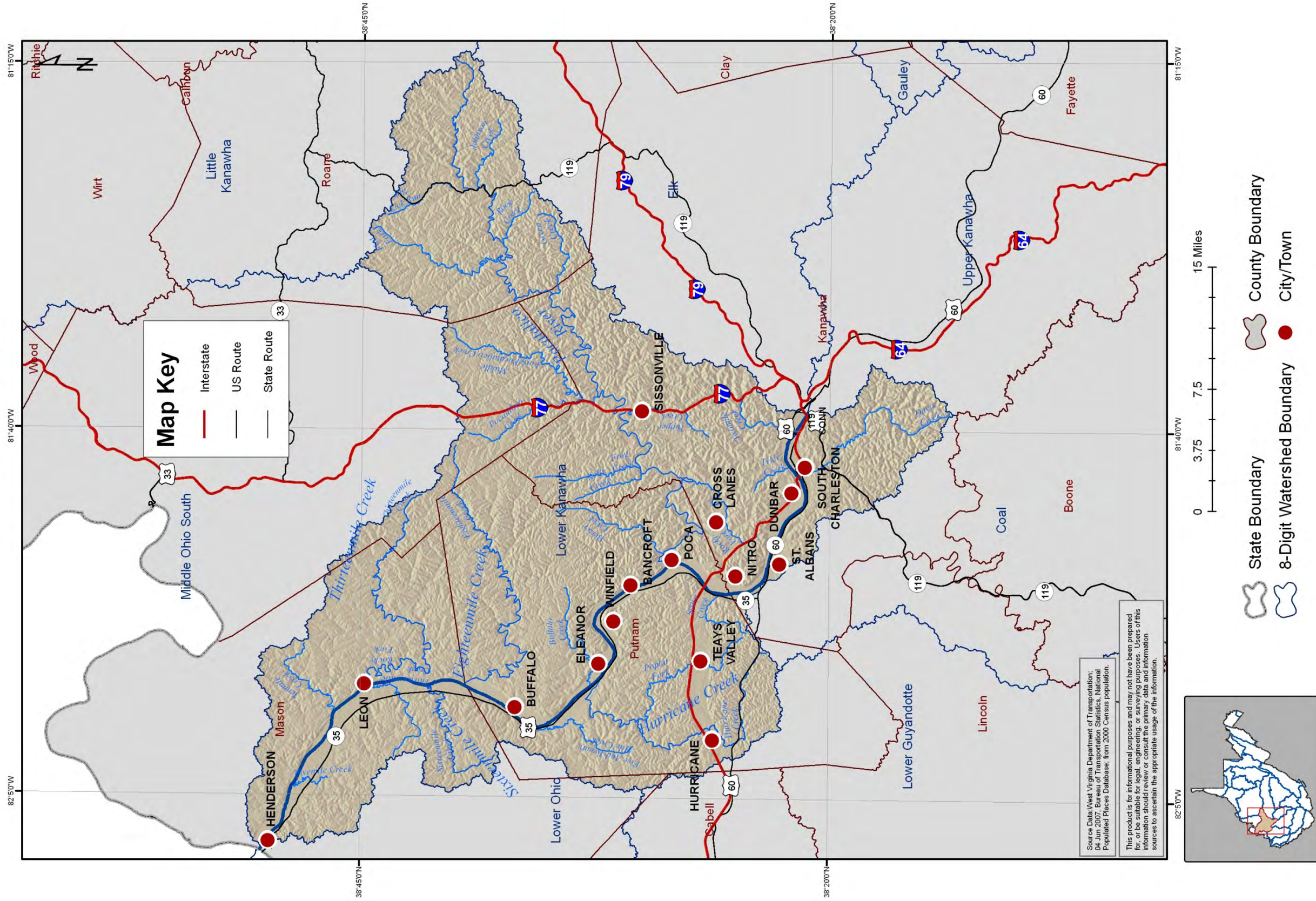
Public Lands



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

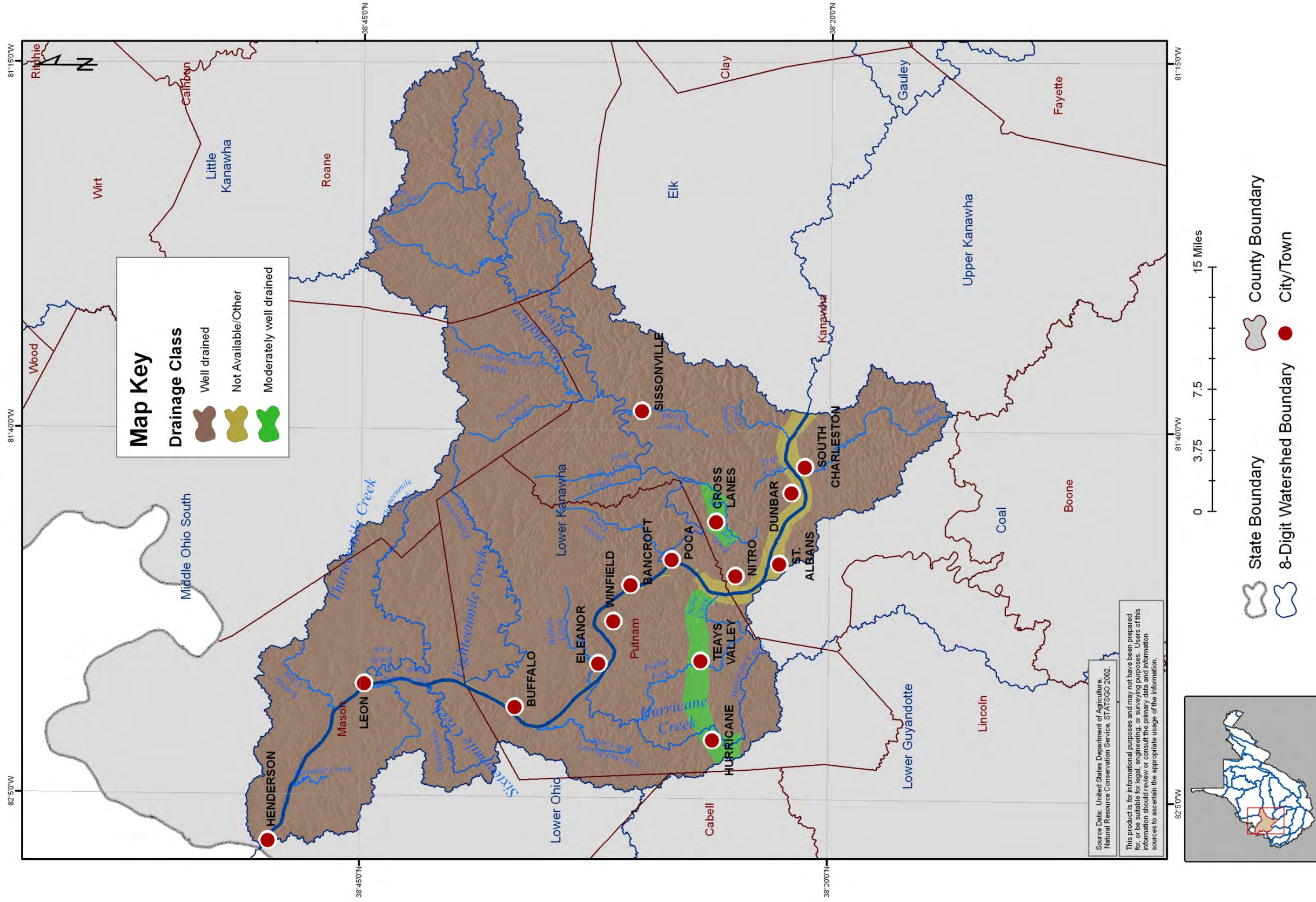
Lower Kanawha HUC-8 Watershed

Major Roads and Cities



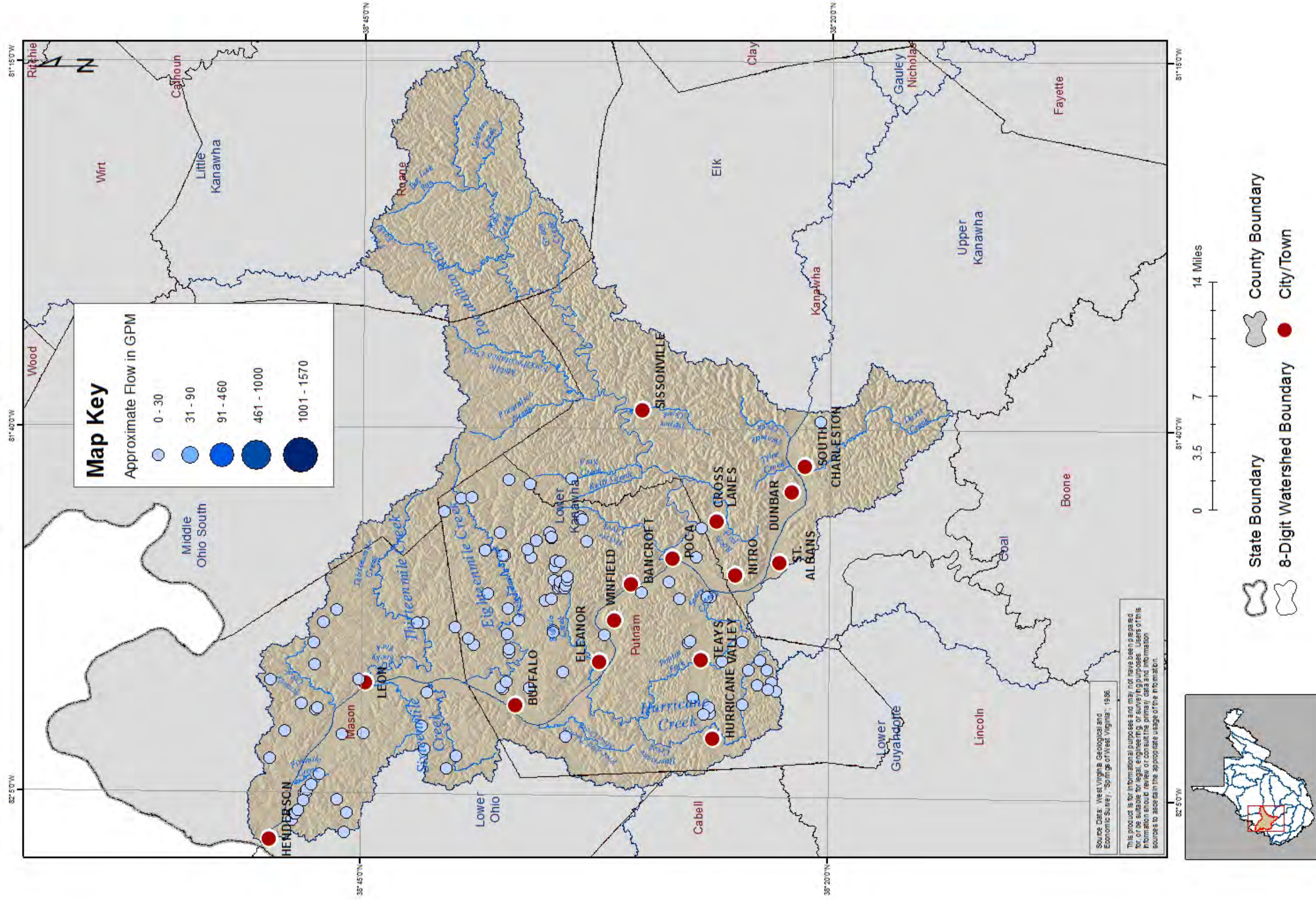
Lower Kanawha HUC-8 Watershed

Soil Drainage Classes



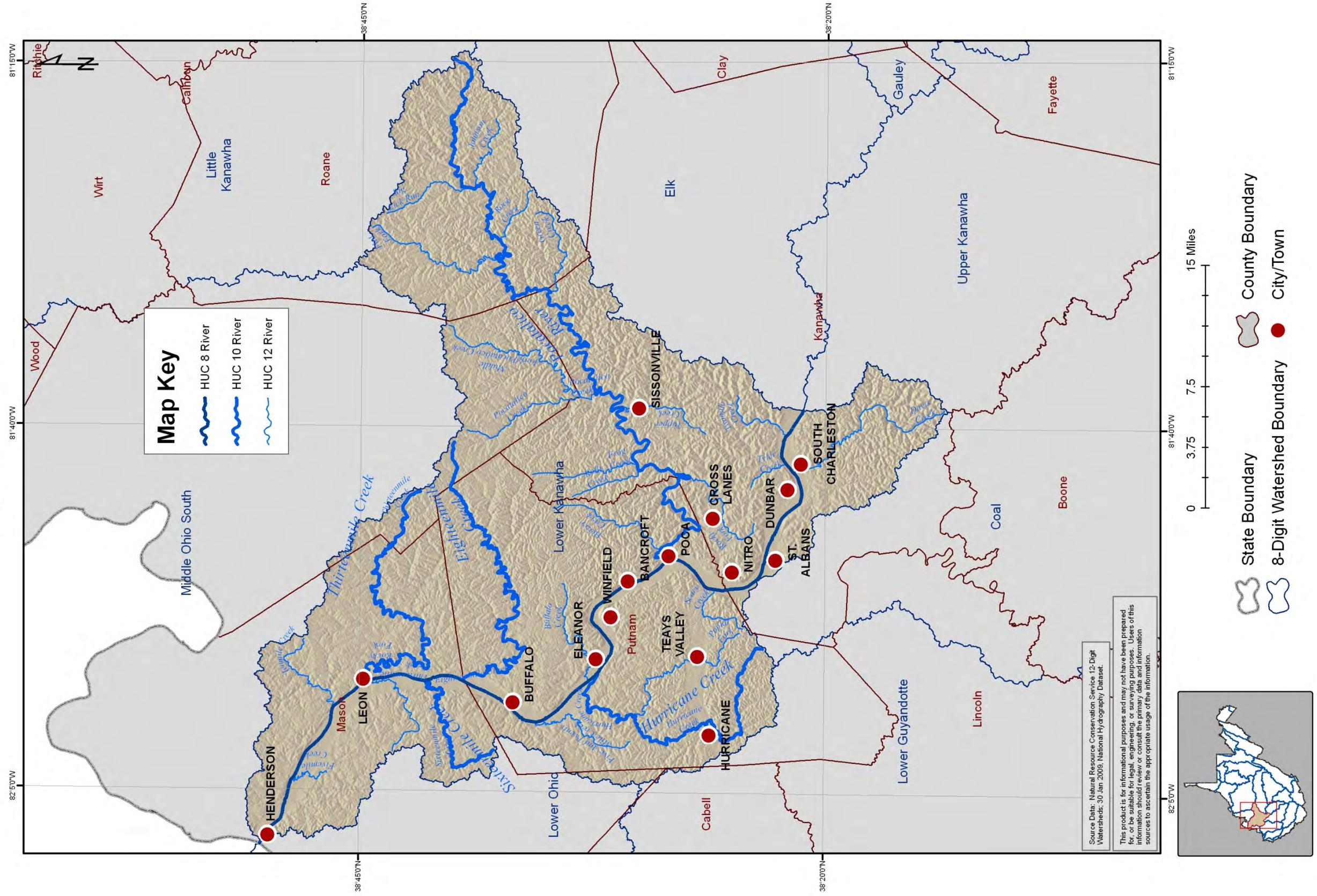
Lower Kanawha HUC-8 Watershed

Documented Springs



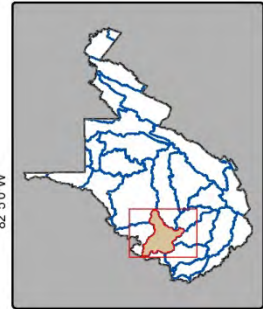
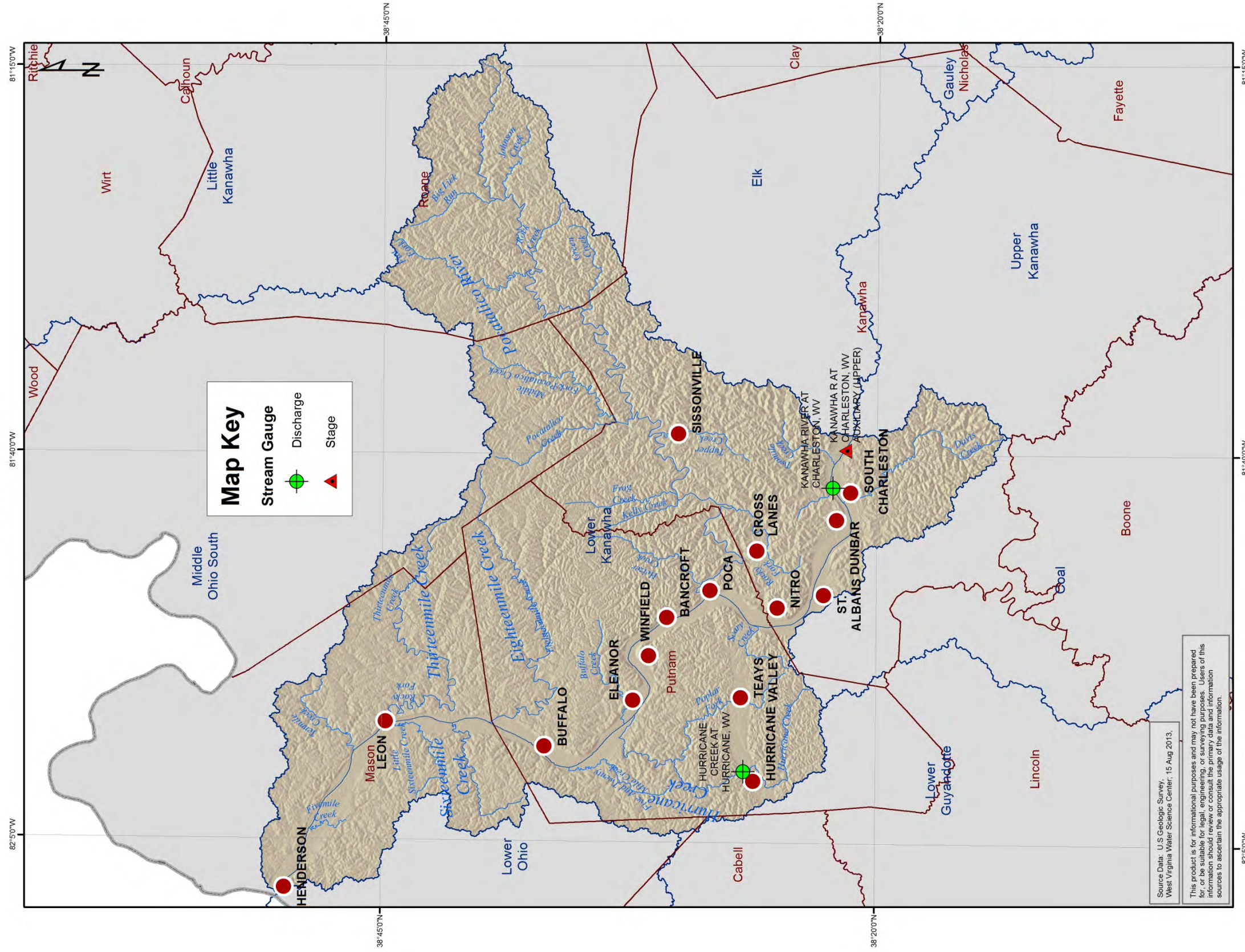
Lower Kanawha HUC-8 Watershed

Stream Connections



Lower Kanawha HUC-8 Watershed

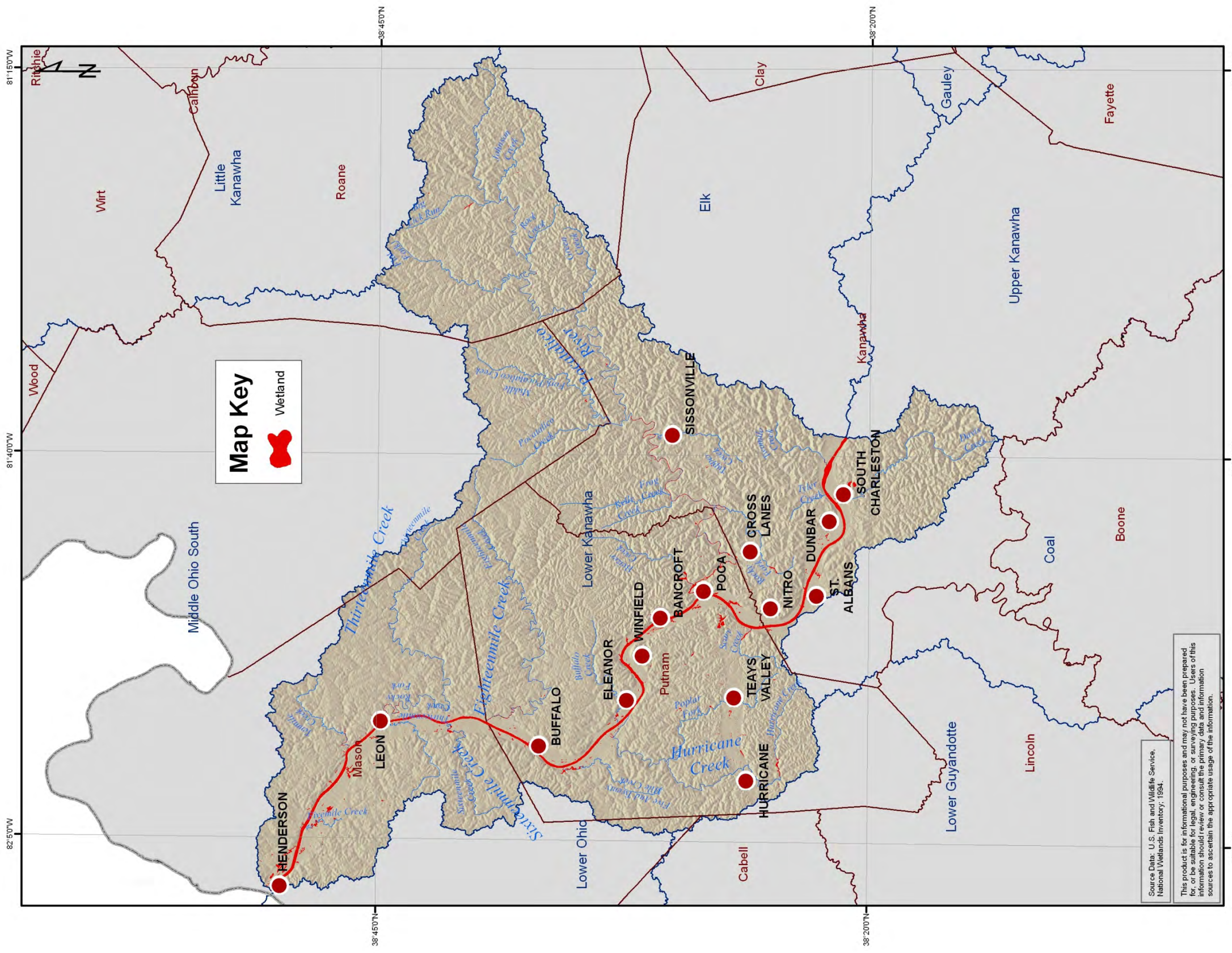
Stream Gauges



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

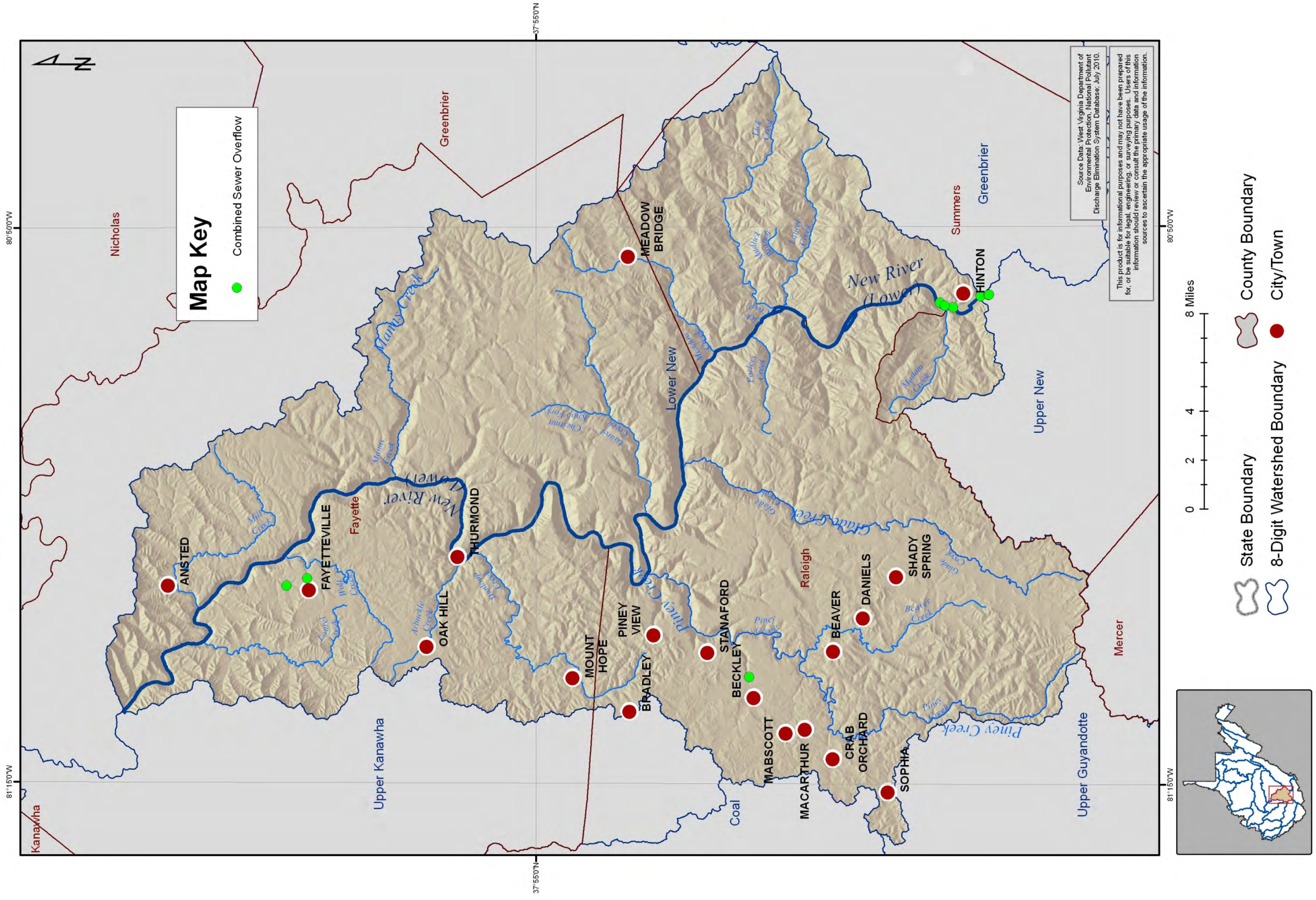
Lower Kanawha HUC-8 Watershed

Wetlands



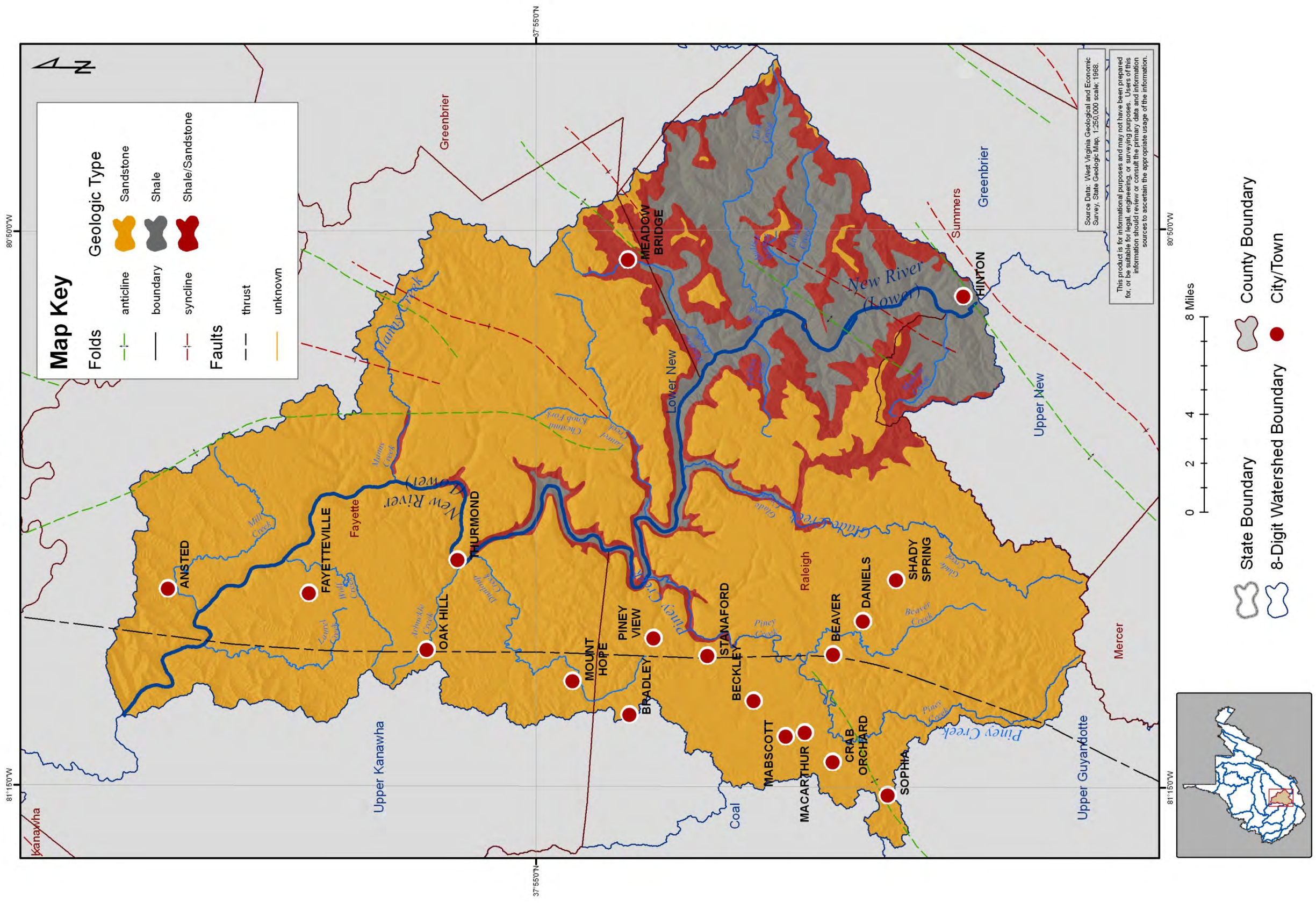
Lower New HUC-8 Watershed

Combined Sewer Overflows



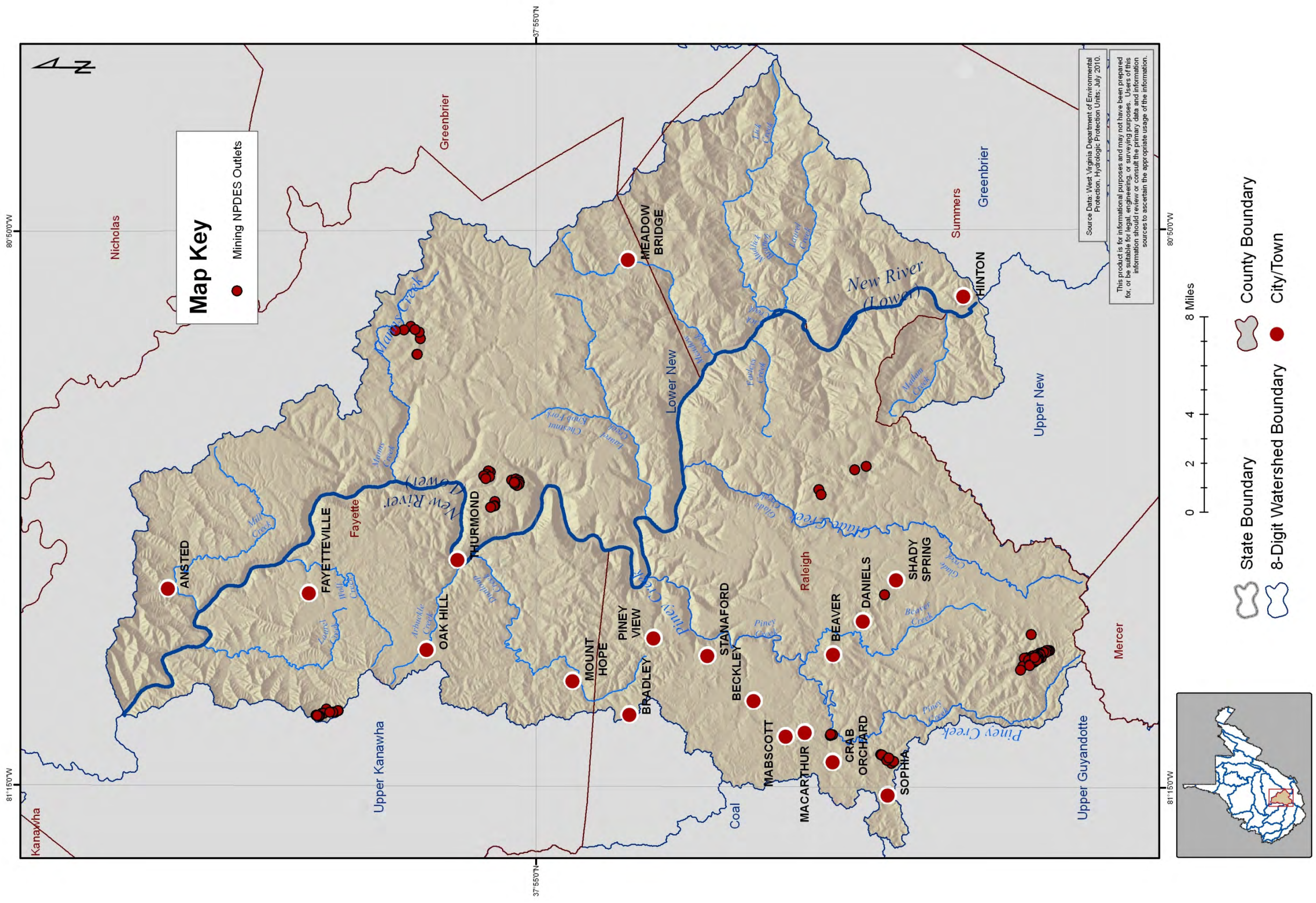
Lower New HUC-8 Watershed

Surface Geology



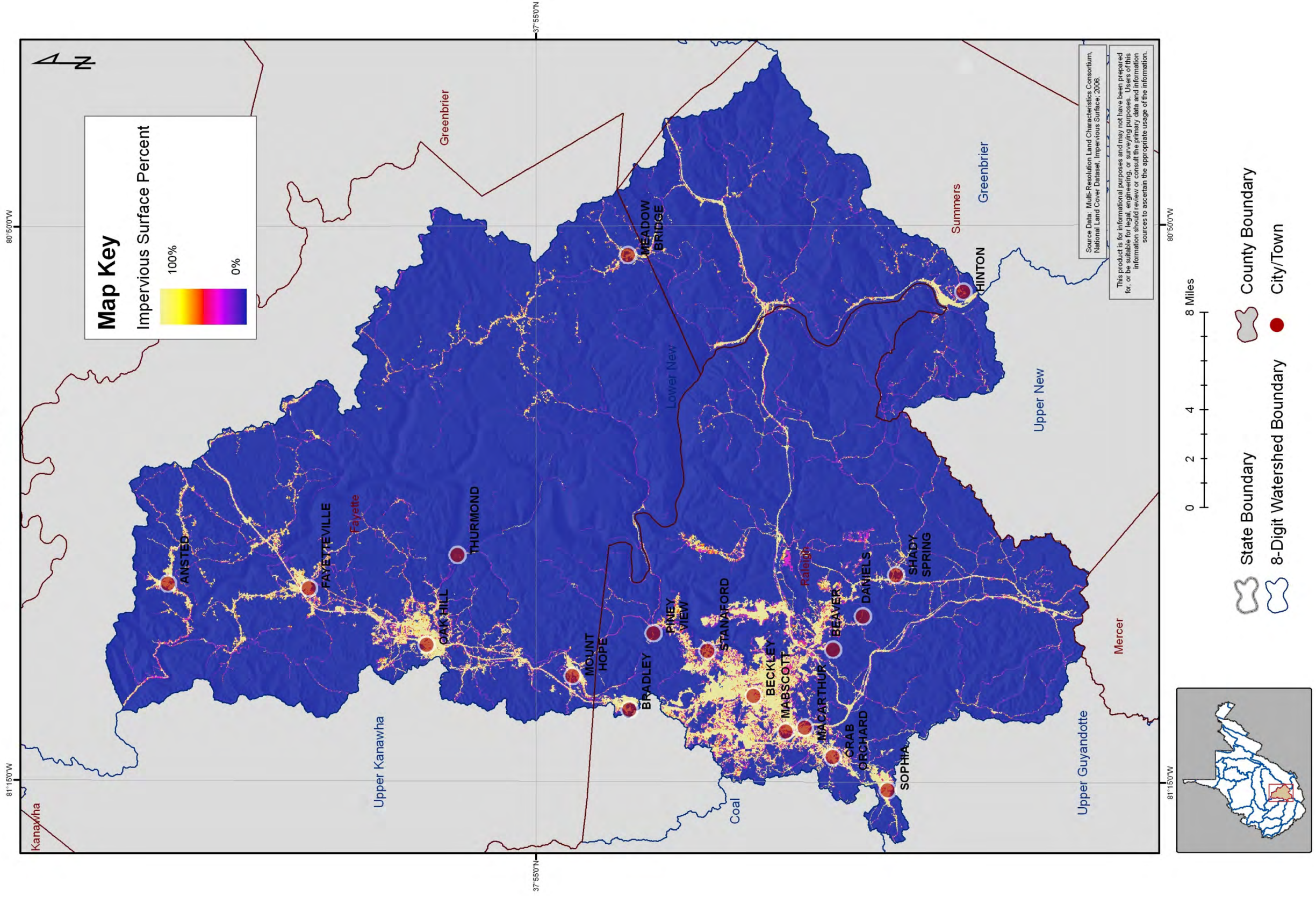
Lower New HUC-8 Watershed

Mining Related NPDES Outlets



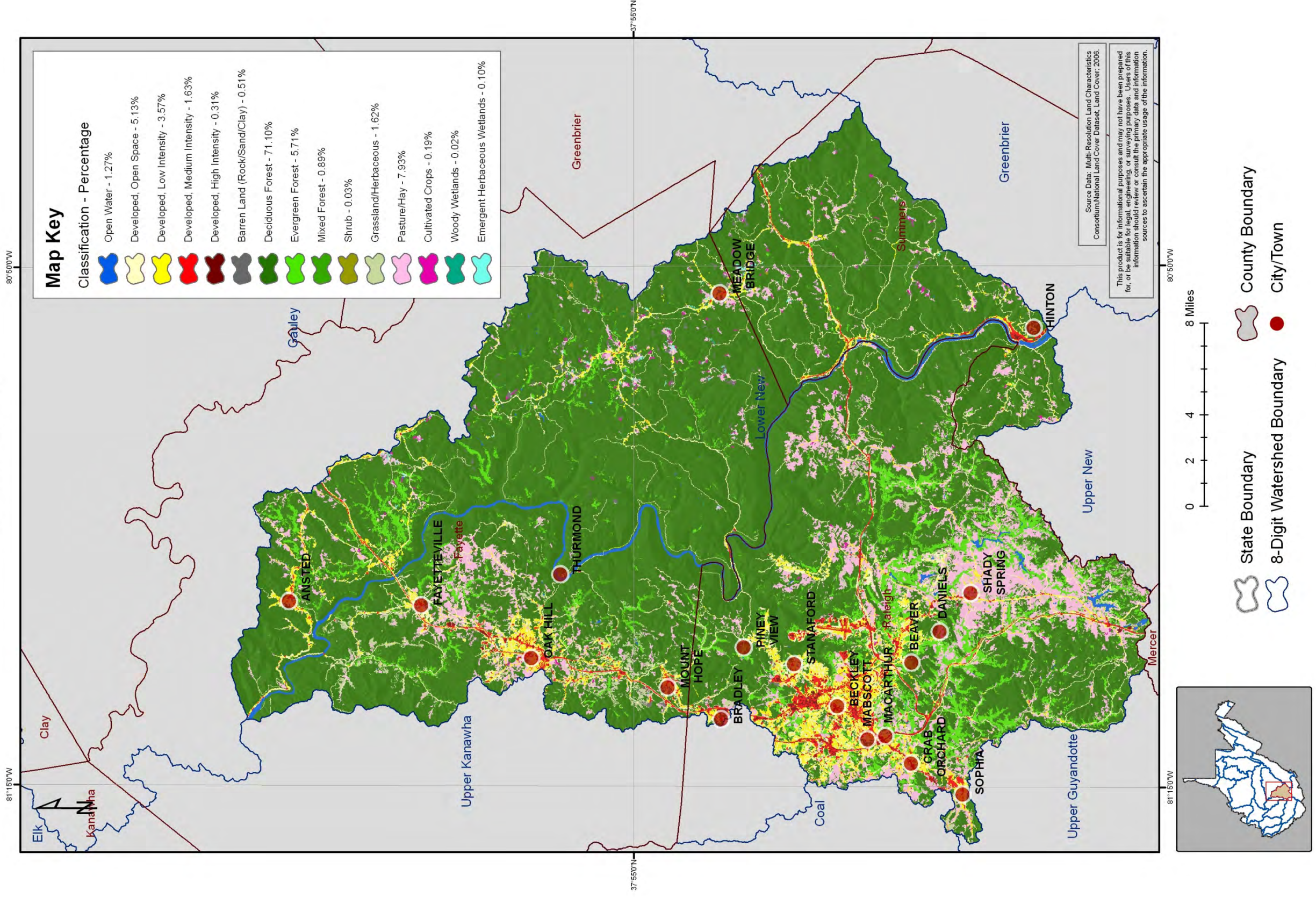
Lower New HUC-8 Watershed

2006 Impervious Surfaces



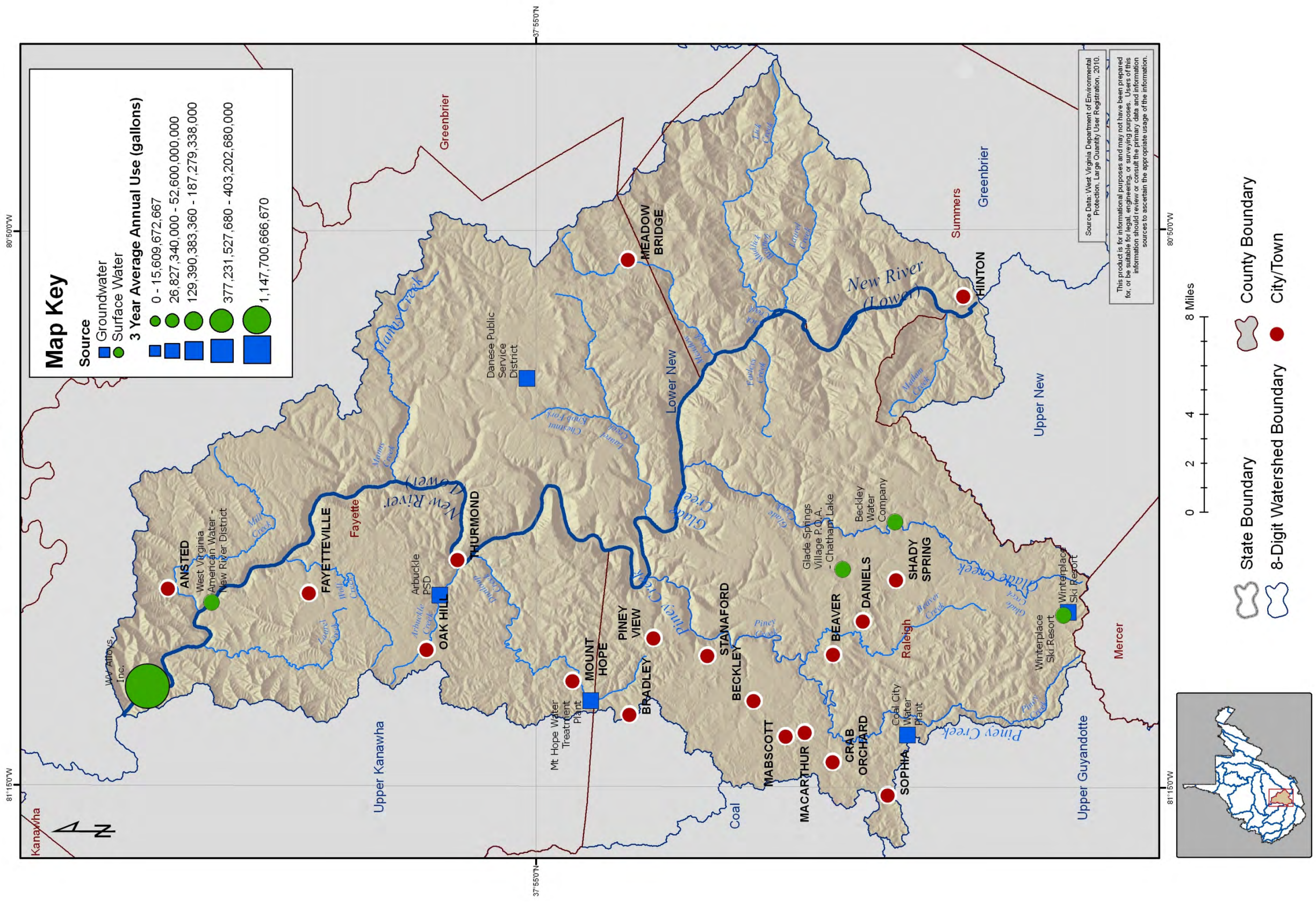
Lower New HUC-8 Watershed

2006 Land Cover



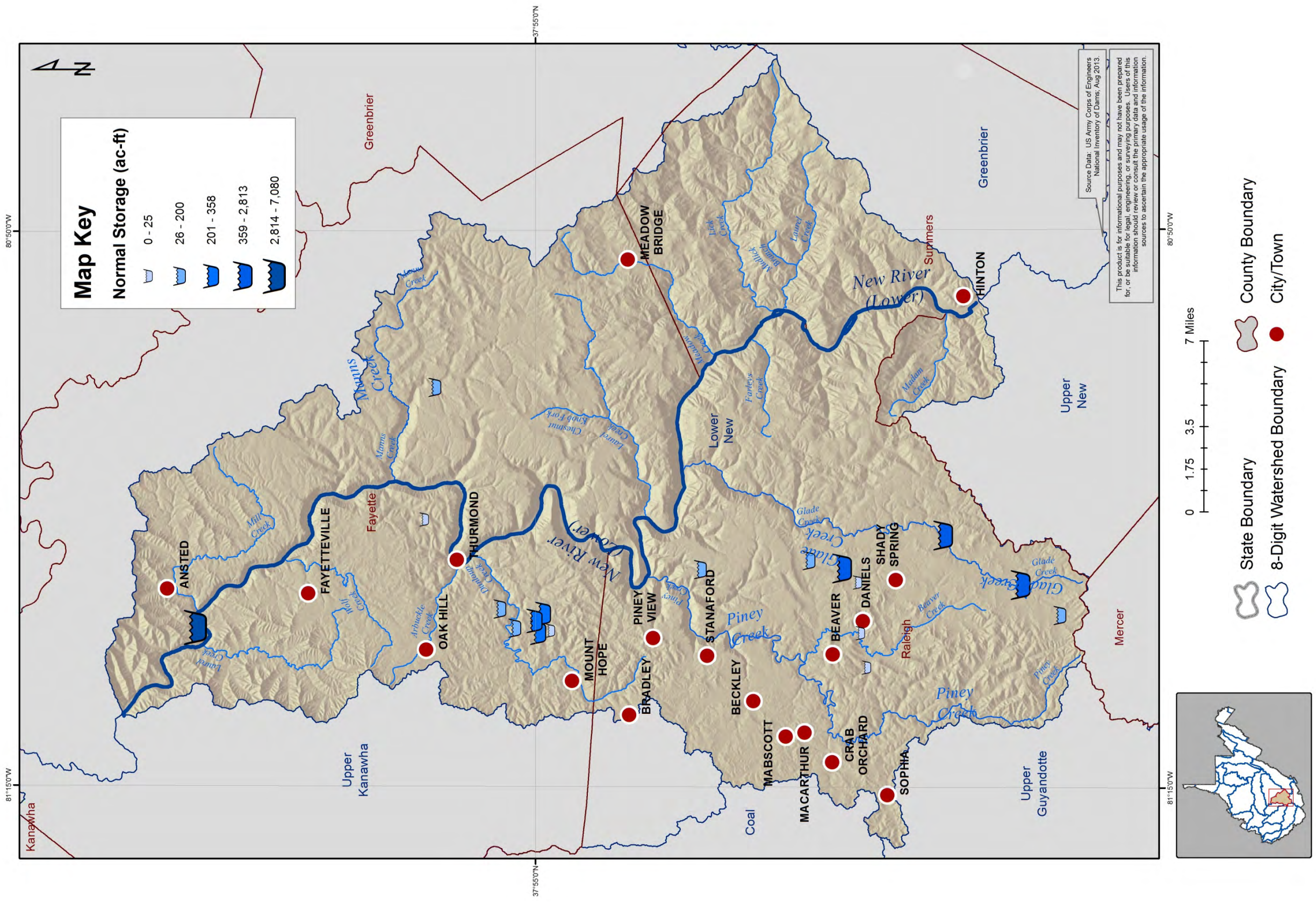
Lower New HUC-8 Watershed

Large Quantity Users



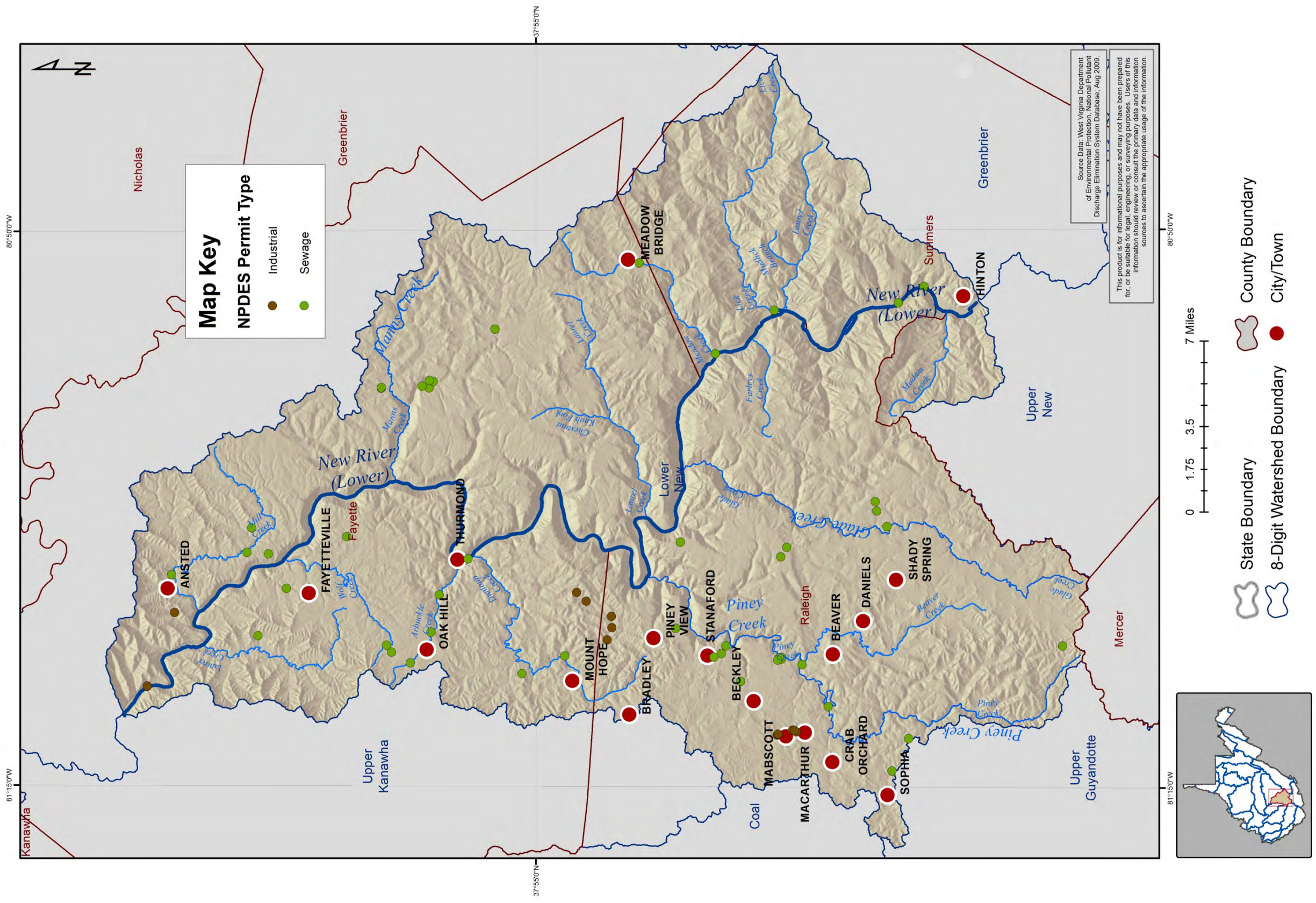
Lower New HUC-8 Watershed

Permitted Dams



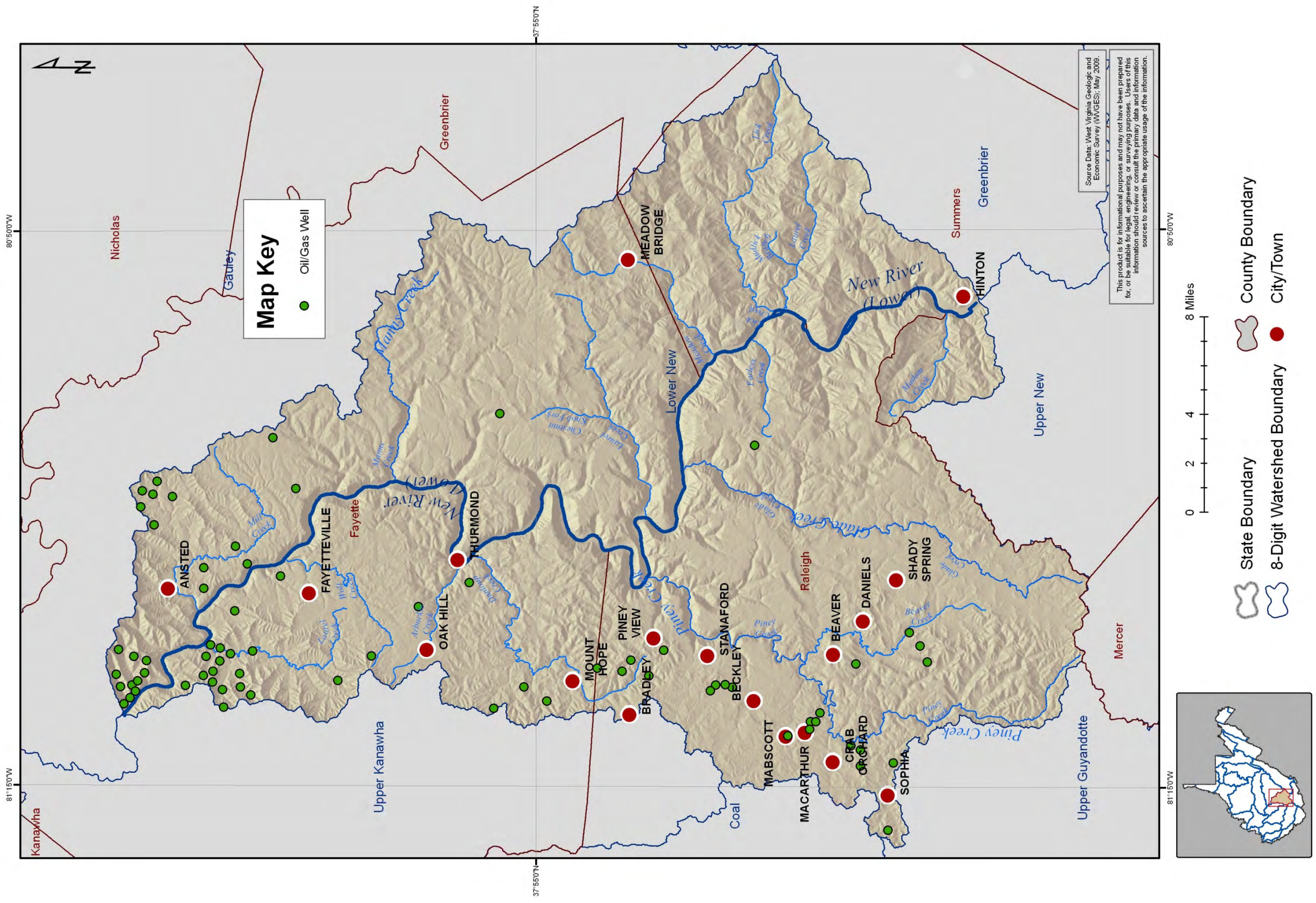
Lower New HUC-8 Watershed

Non-Mining NPDES Outlets



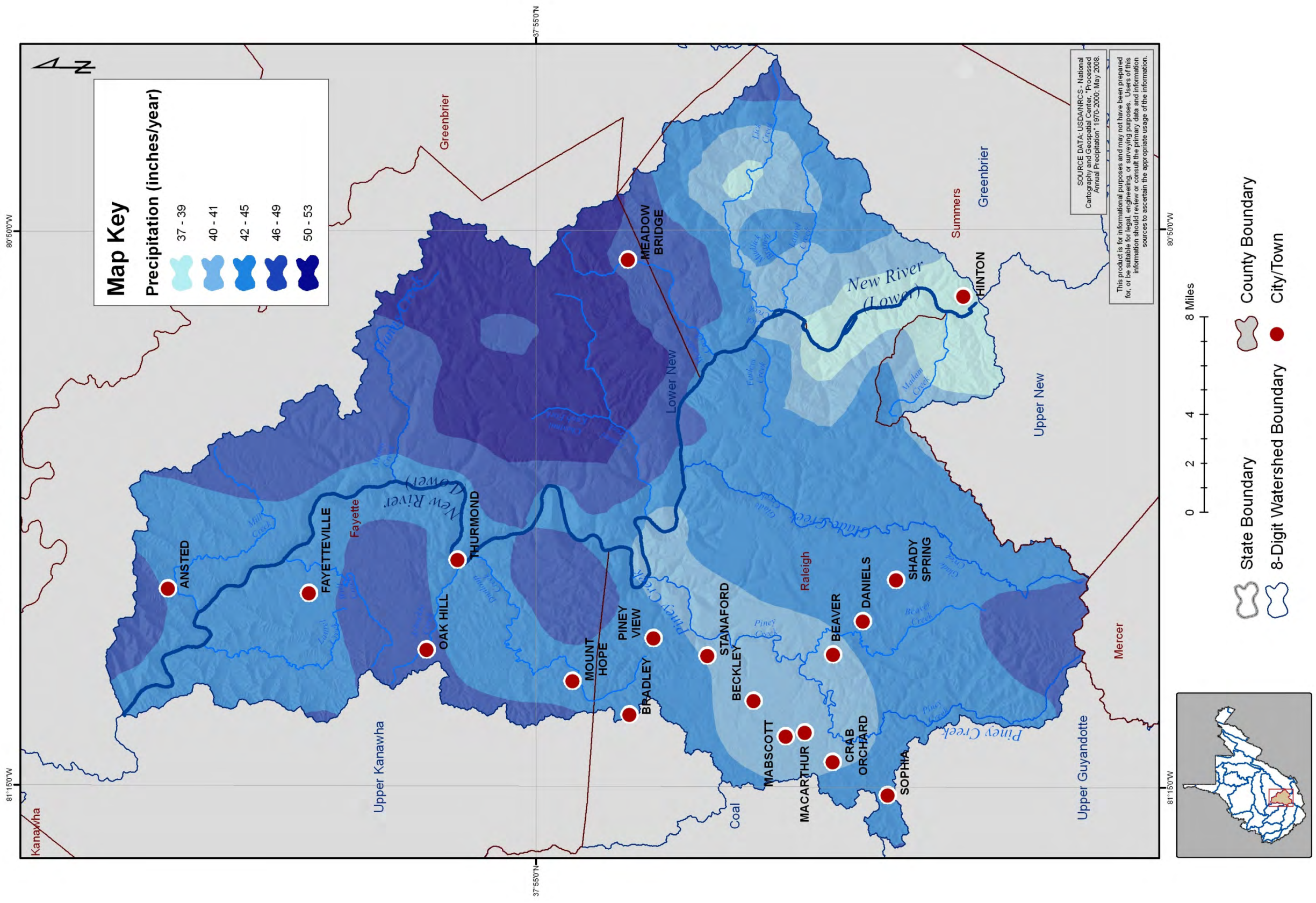
Lower New HUC-8 Watershed

Well Logs with Gamma Rays and Water Shows



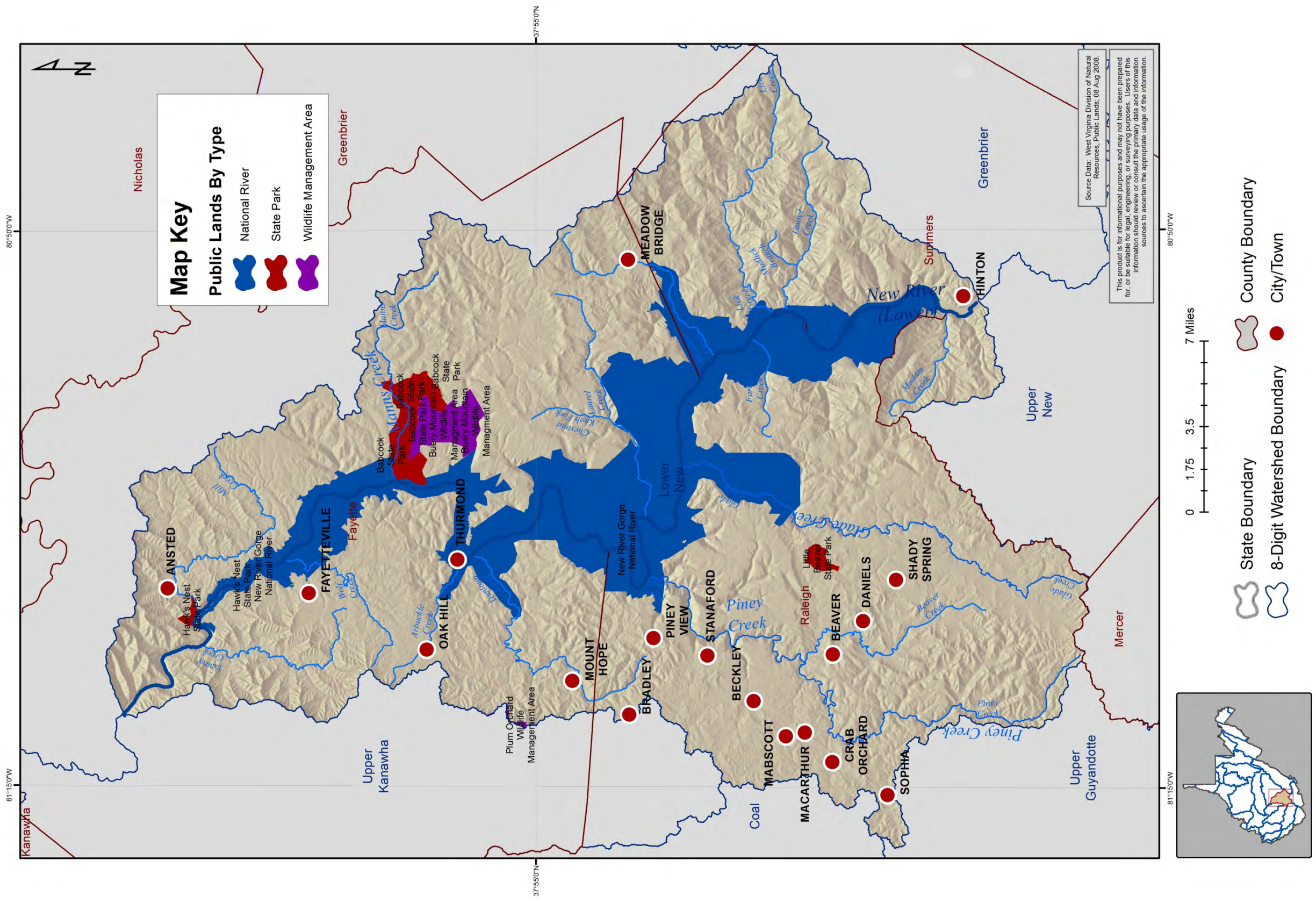
Lower New HUC-8 Watershed

Average Annual Precipitation (1971-2000)



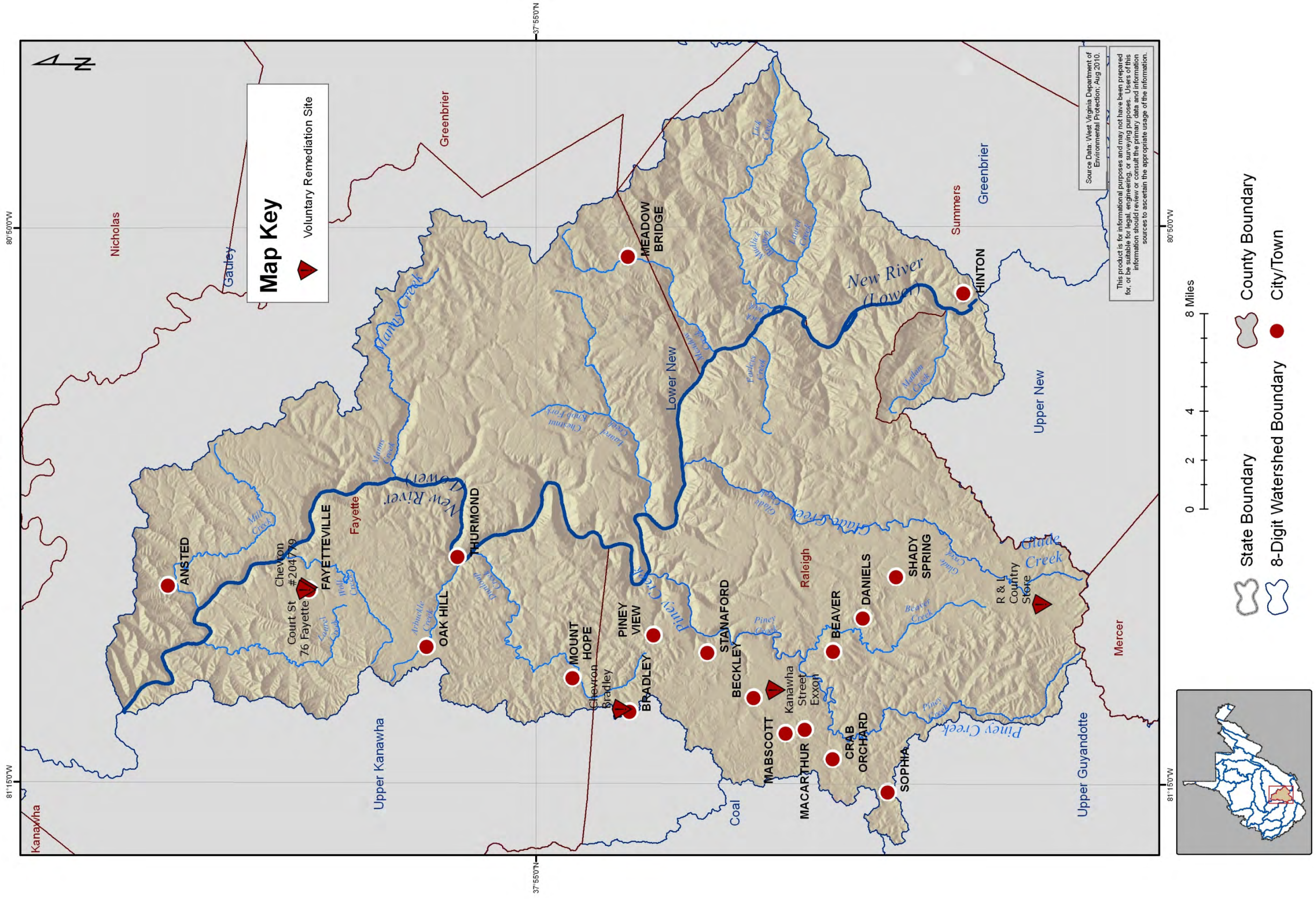
Lower New HUC-8 Watershed

Public Lands



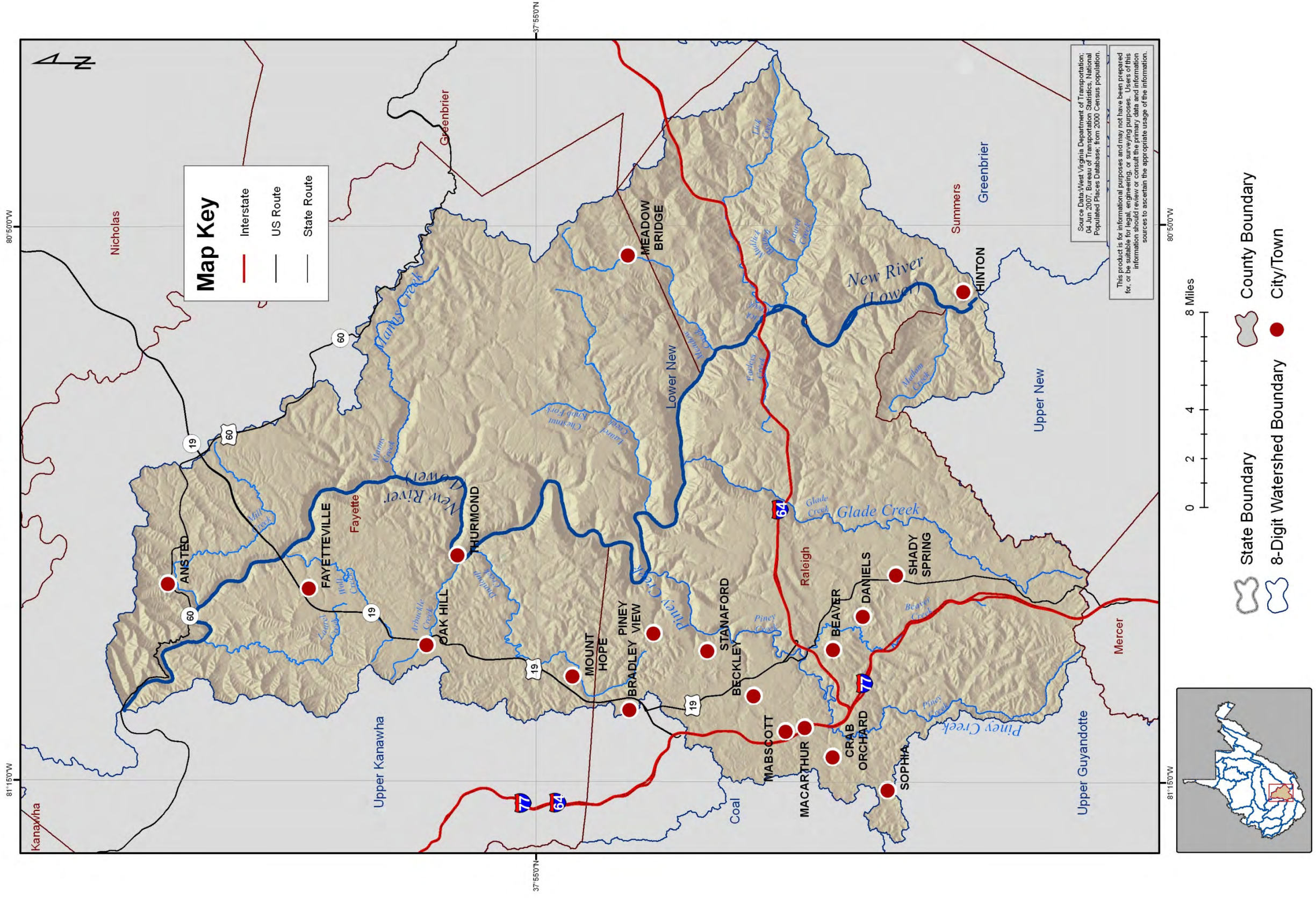
Lower New HUC-8 Watershed

Remediation Sites



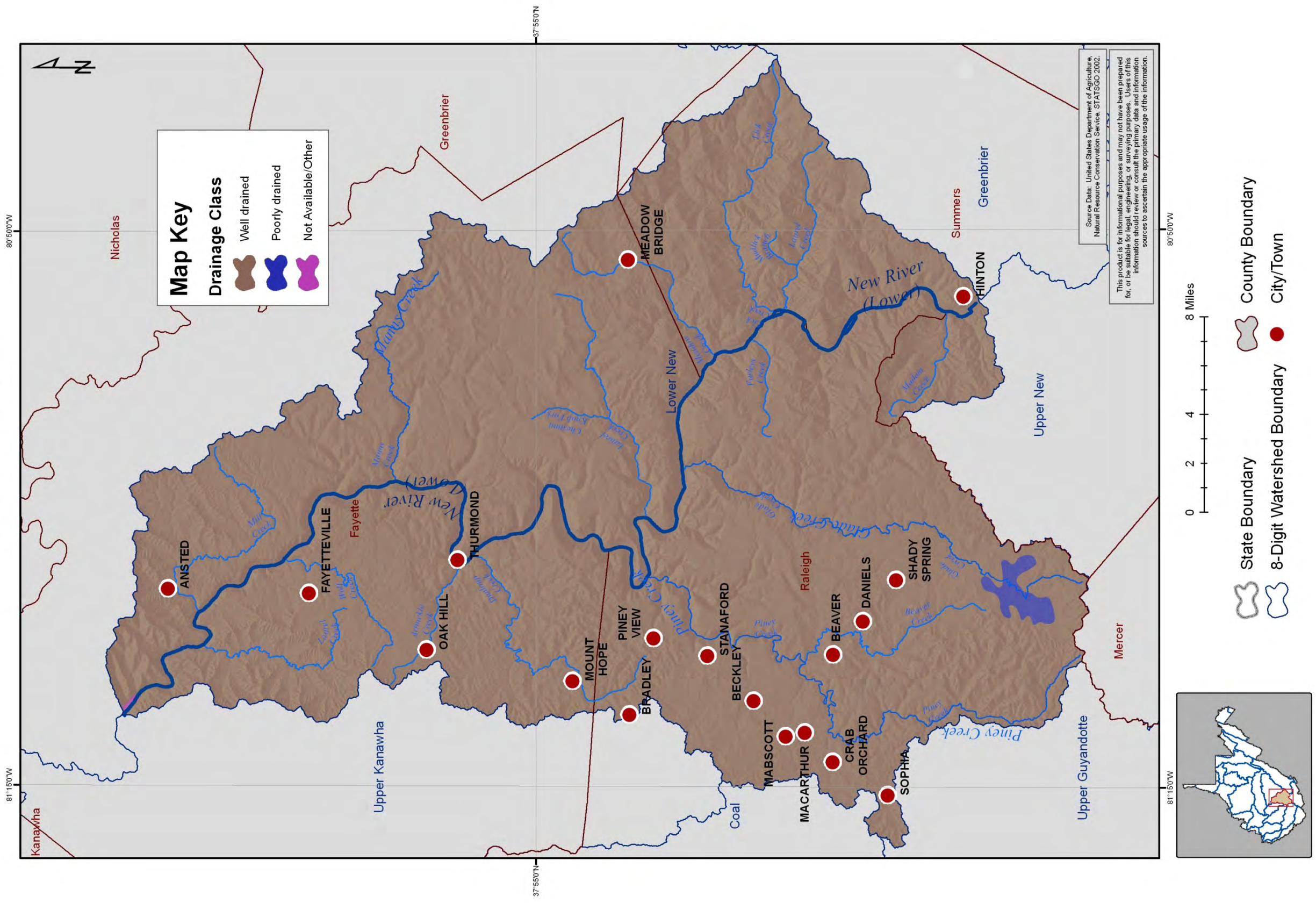
Lower New HUC-8 Watershed

Major Roads and Cities



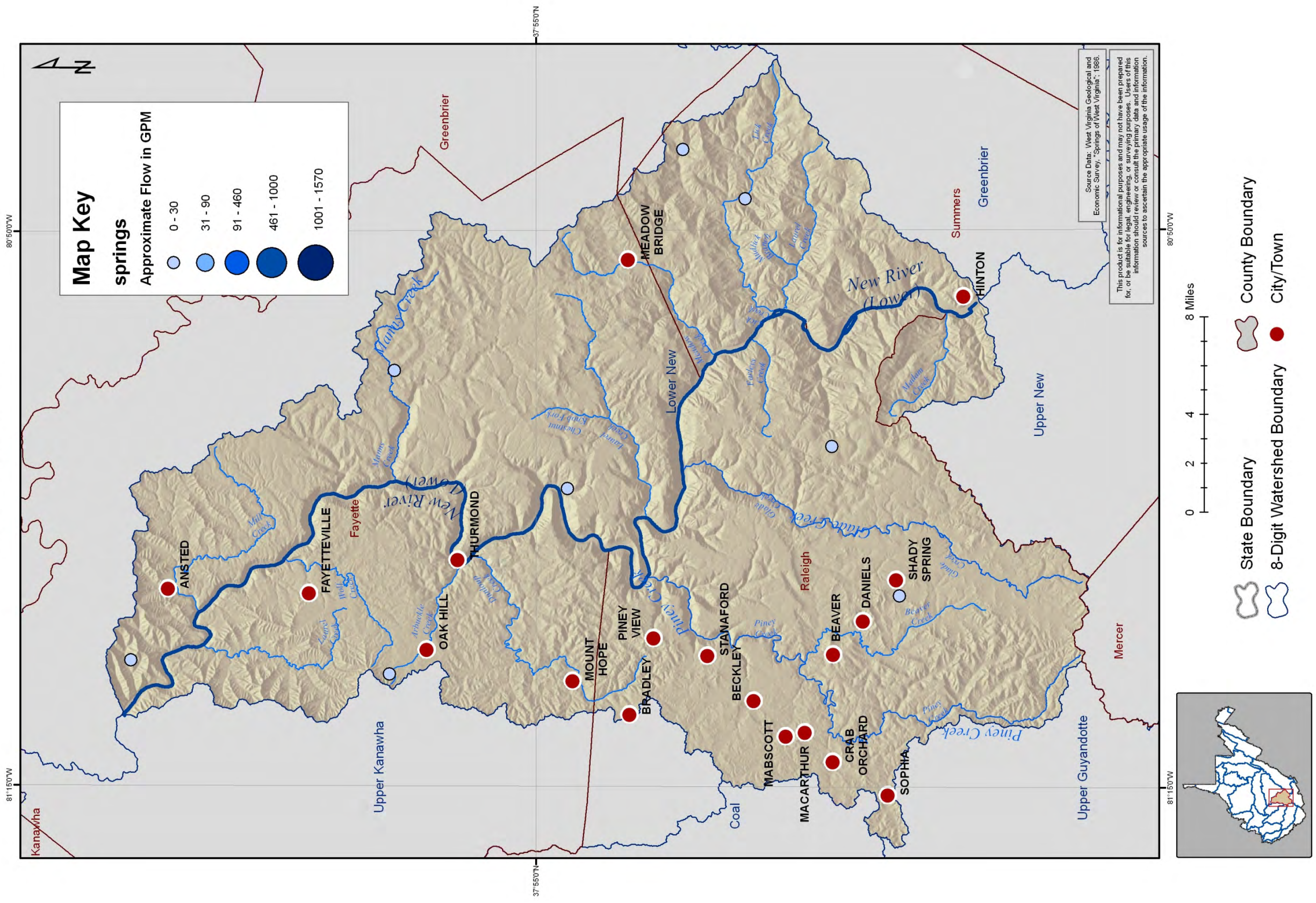
Lower New HUC-8 Watershed

Soil Drainage Classes



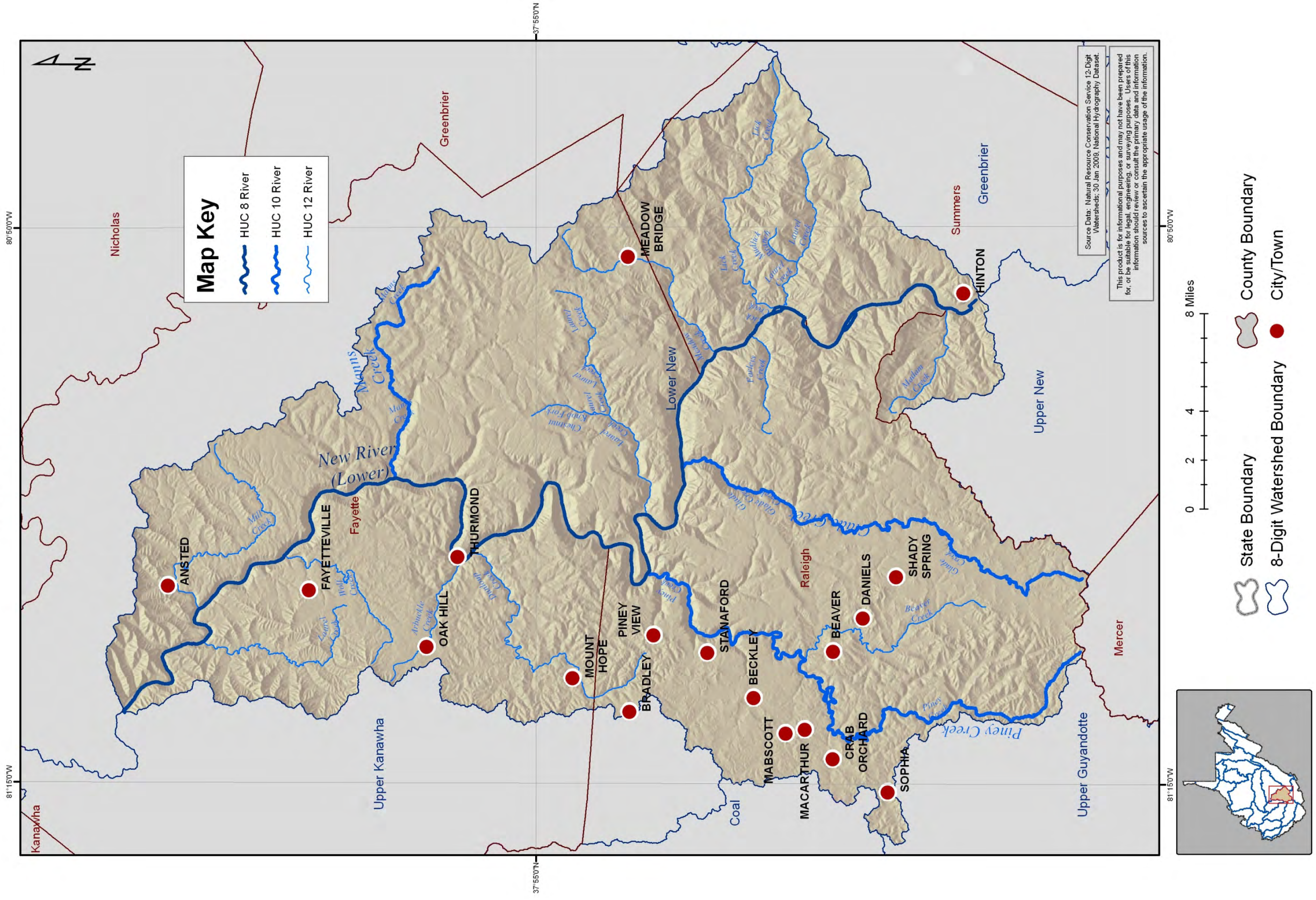
Lower New HUC-8 Watershed

Documented Springs



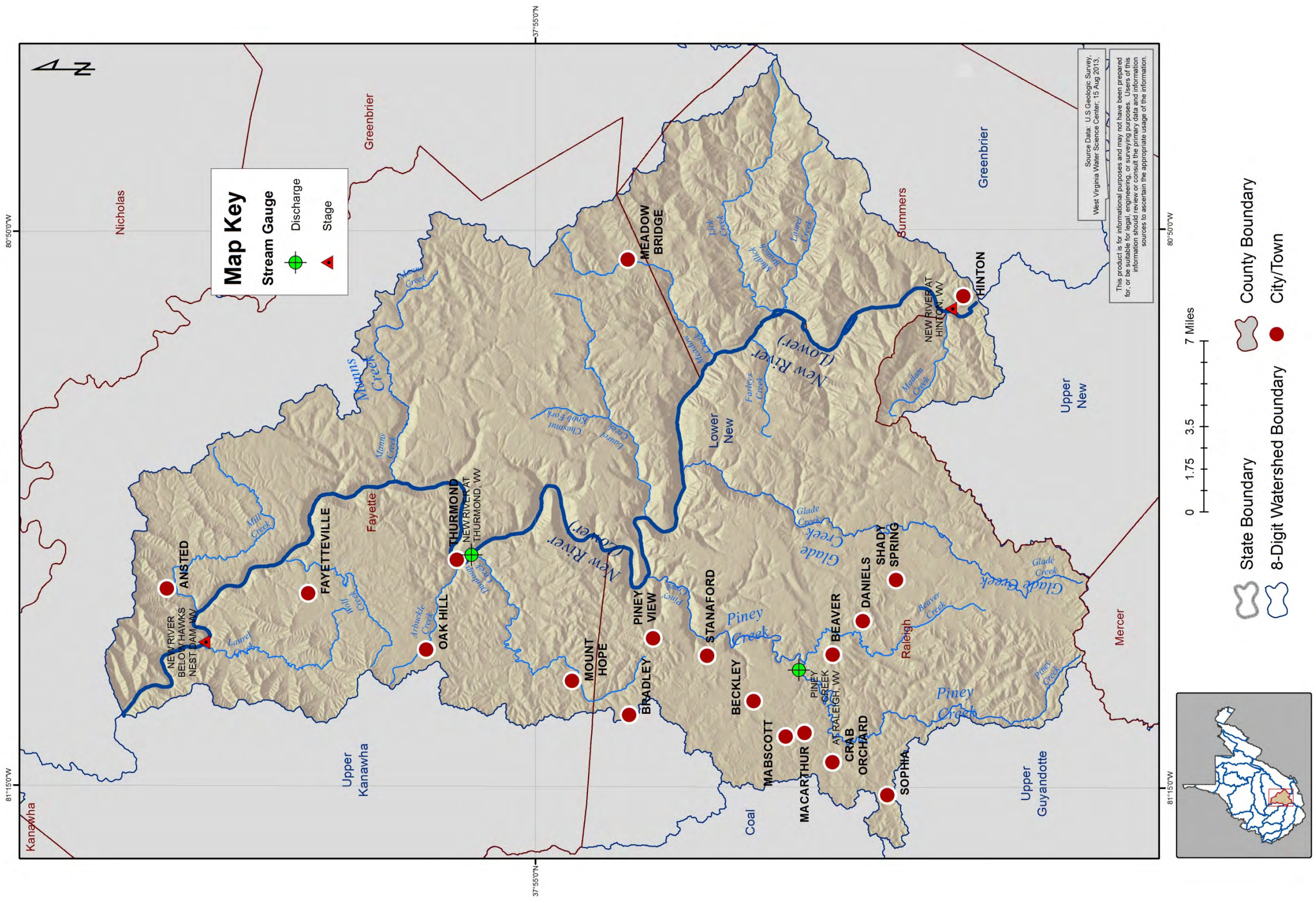
Lower New HUC-8 Watershed

Stream Connections



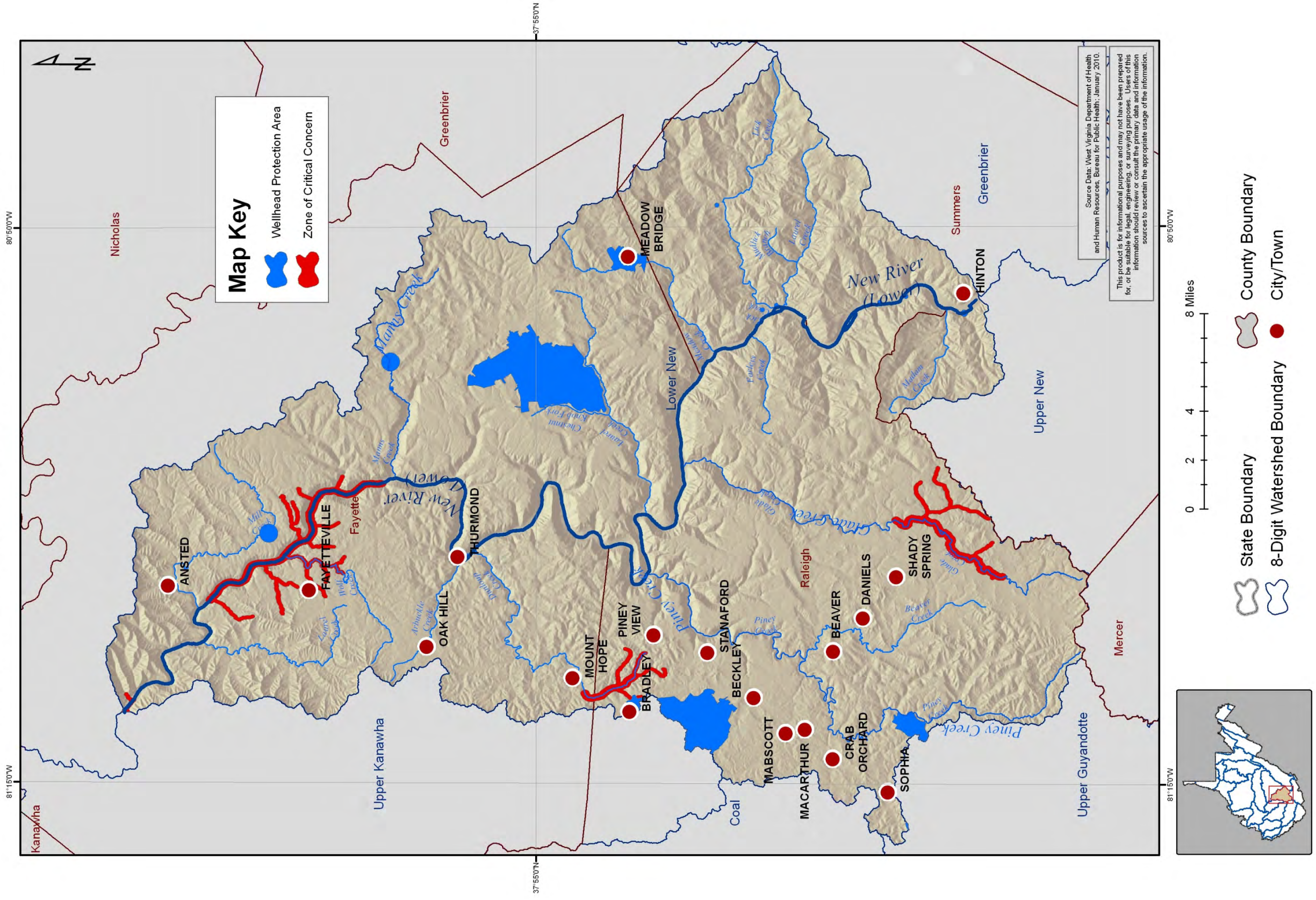
Lower New HUC-8 Watershed

Stream Gauges



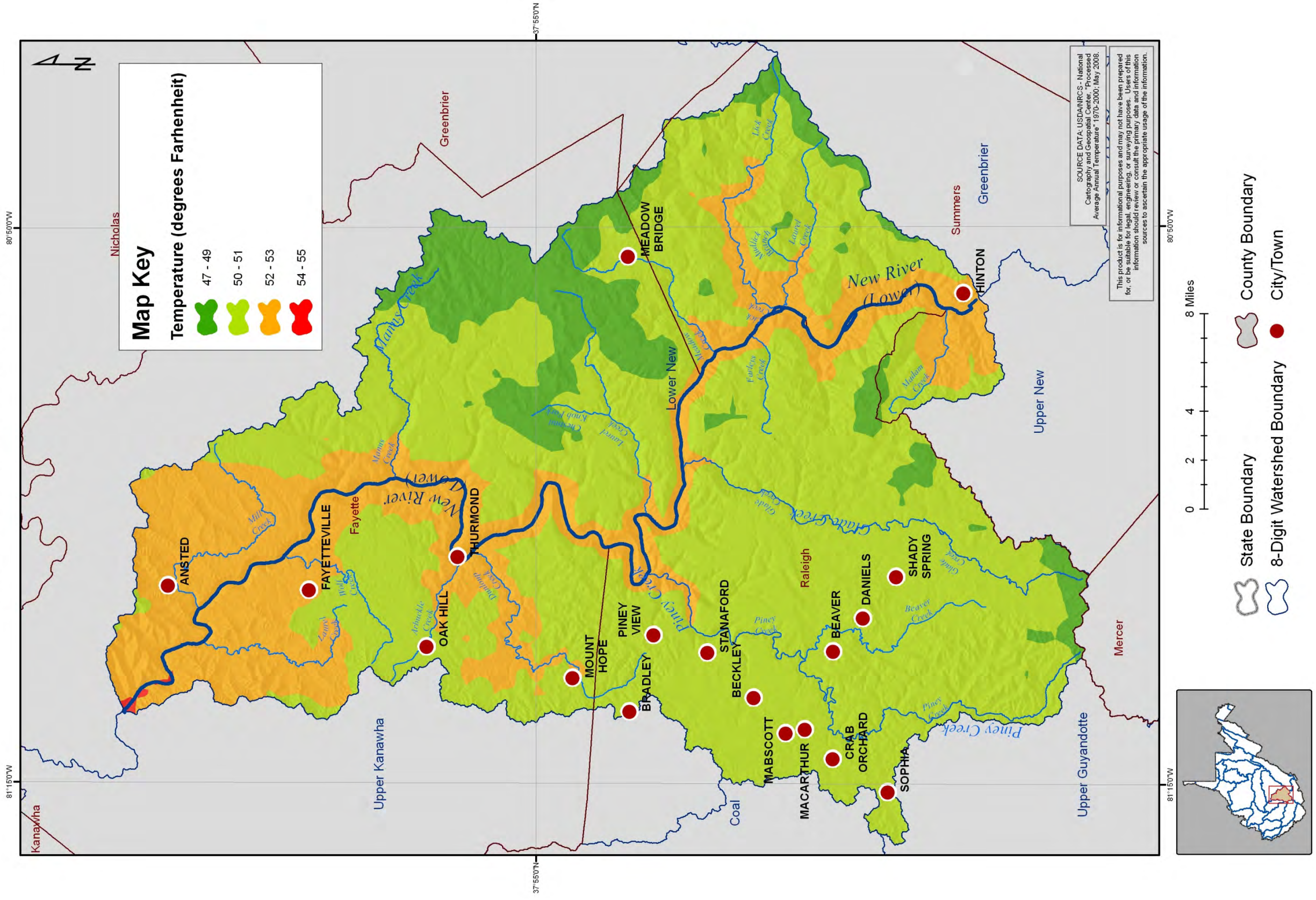
Lower New HUC-8 Watershed

Source Water Assessment and Wellhead Protection Programs



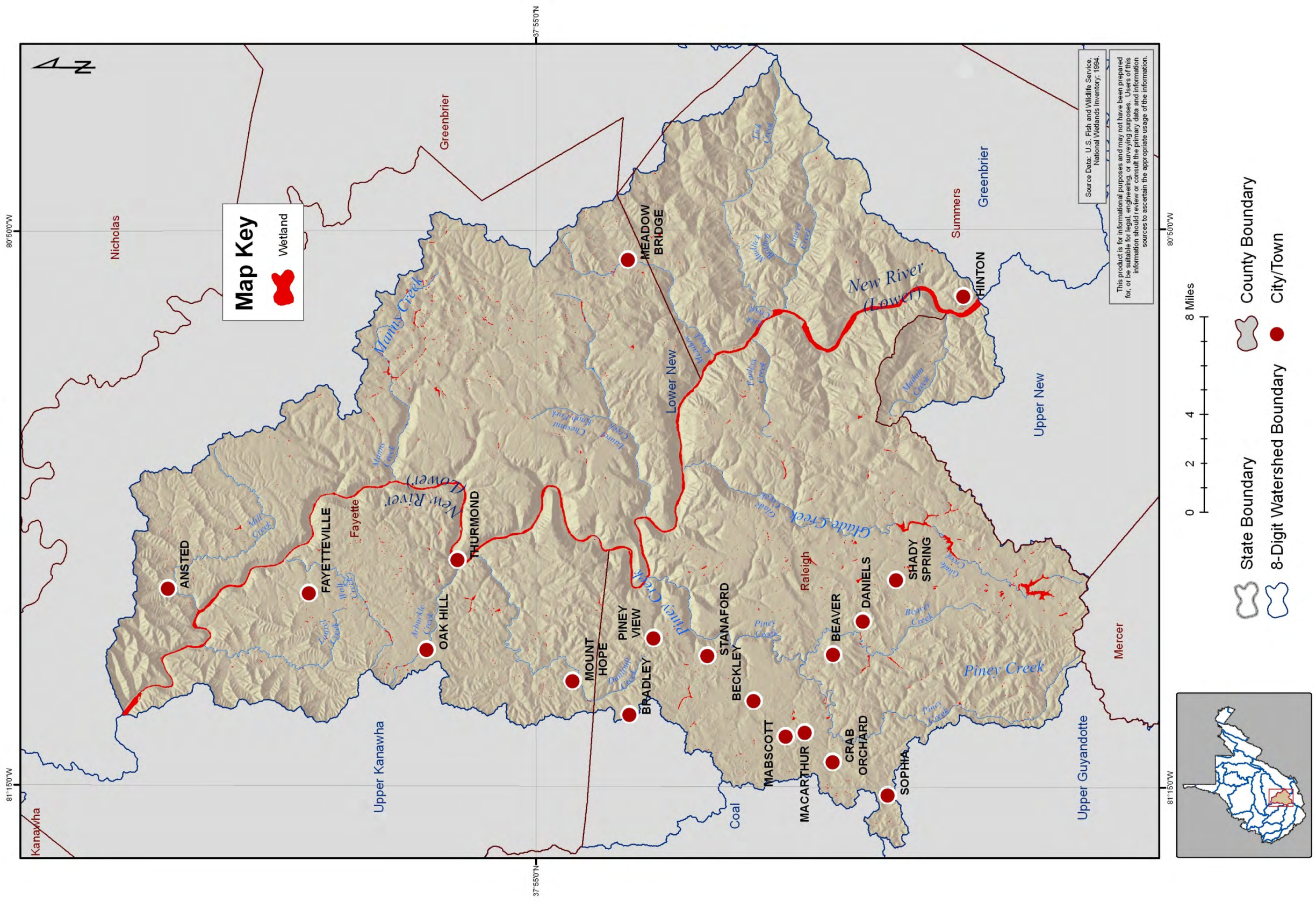
Lower New HUC-8 Watershed

Average Annual Temperature (1971-2000)



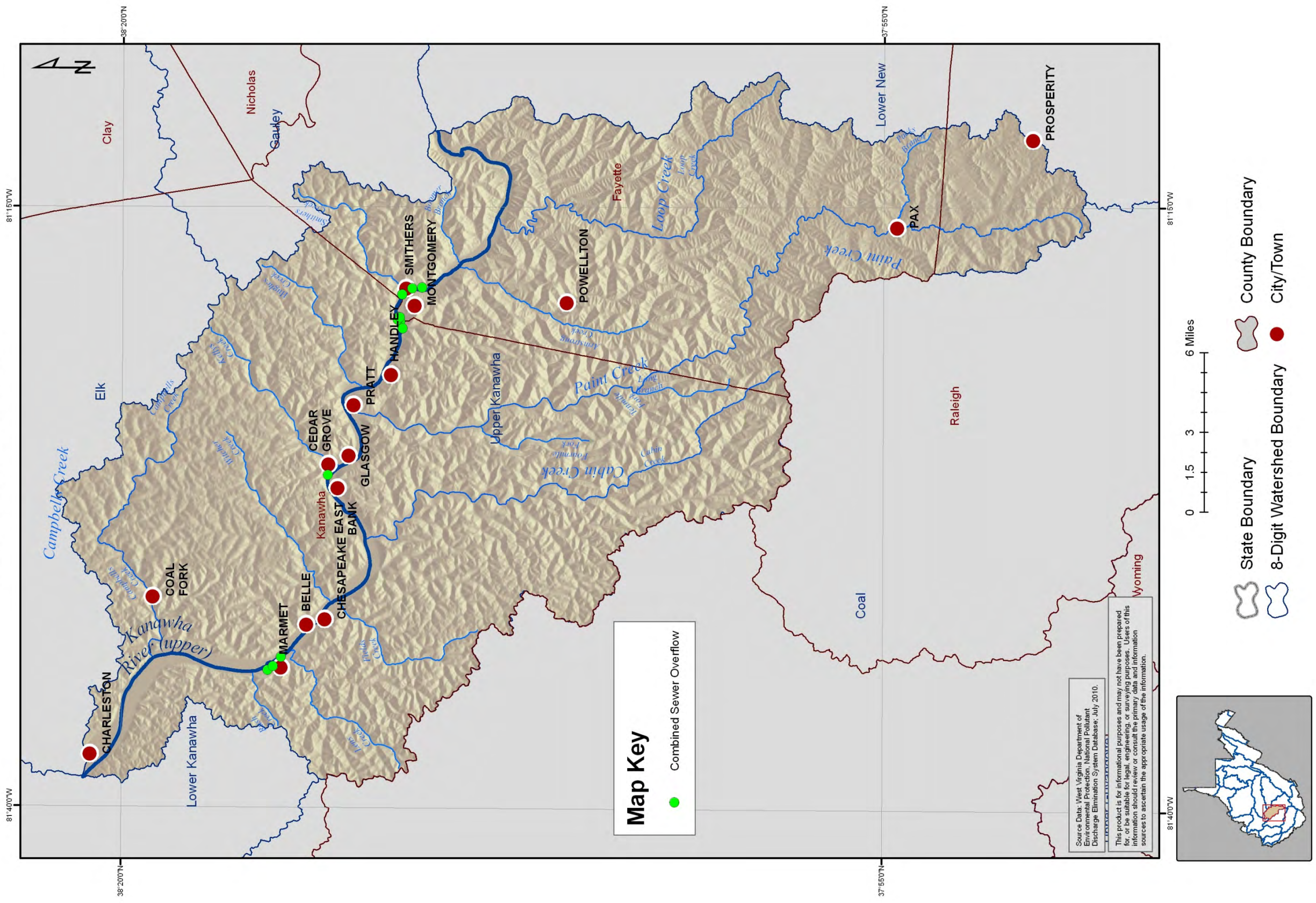
Lower New HUC-8 Watershed

Wetlands



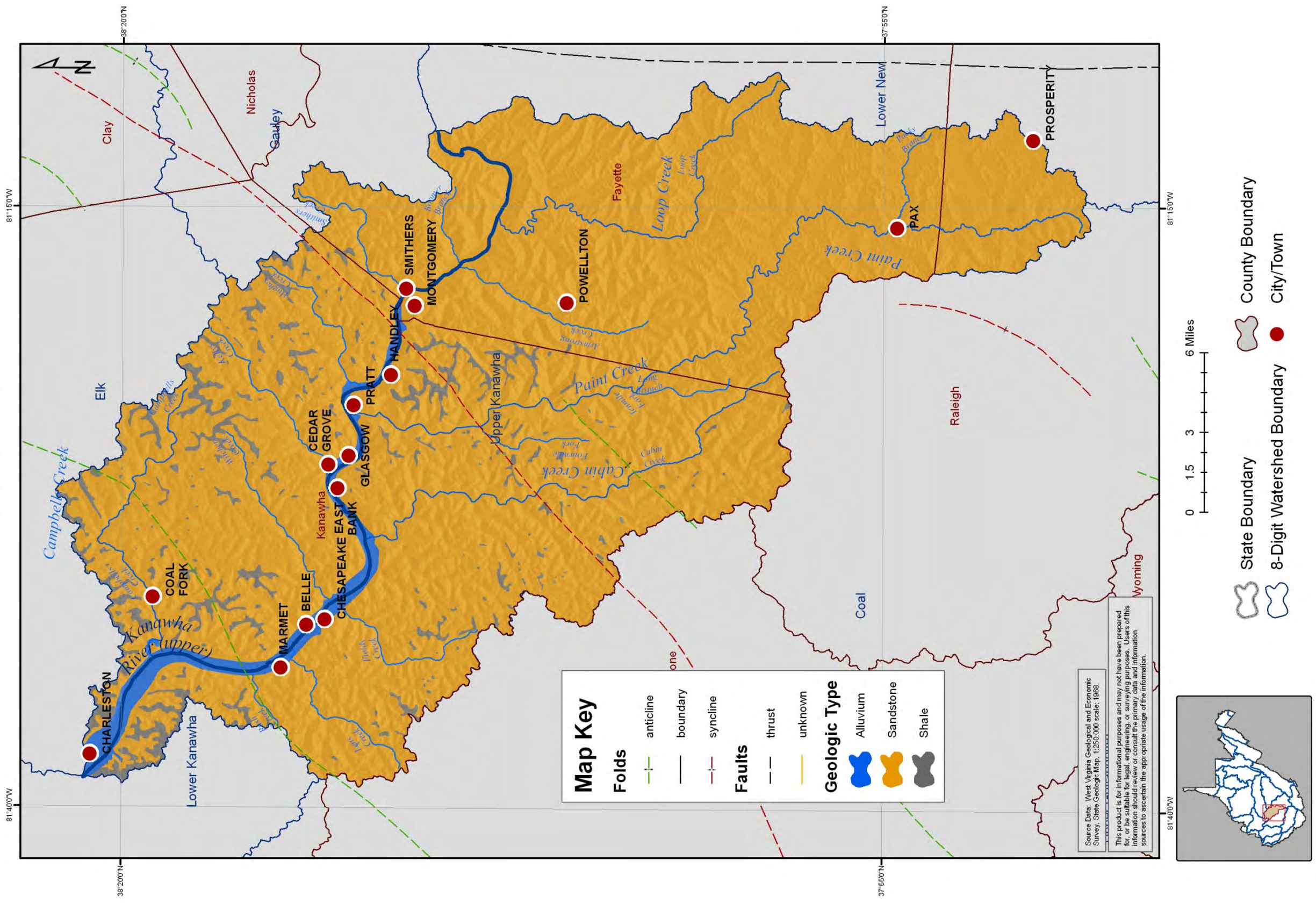
Upper Kanawha HUC-8 Watershed

Combined Sewer Overflows



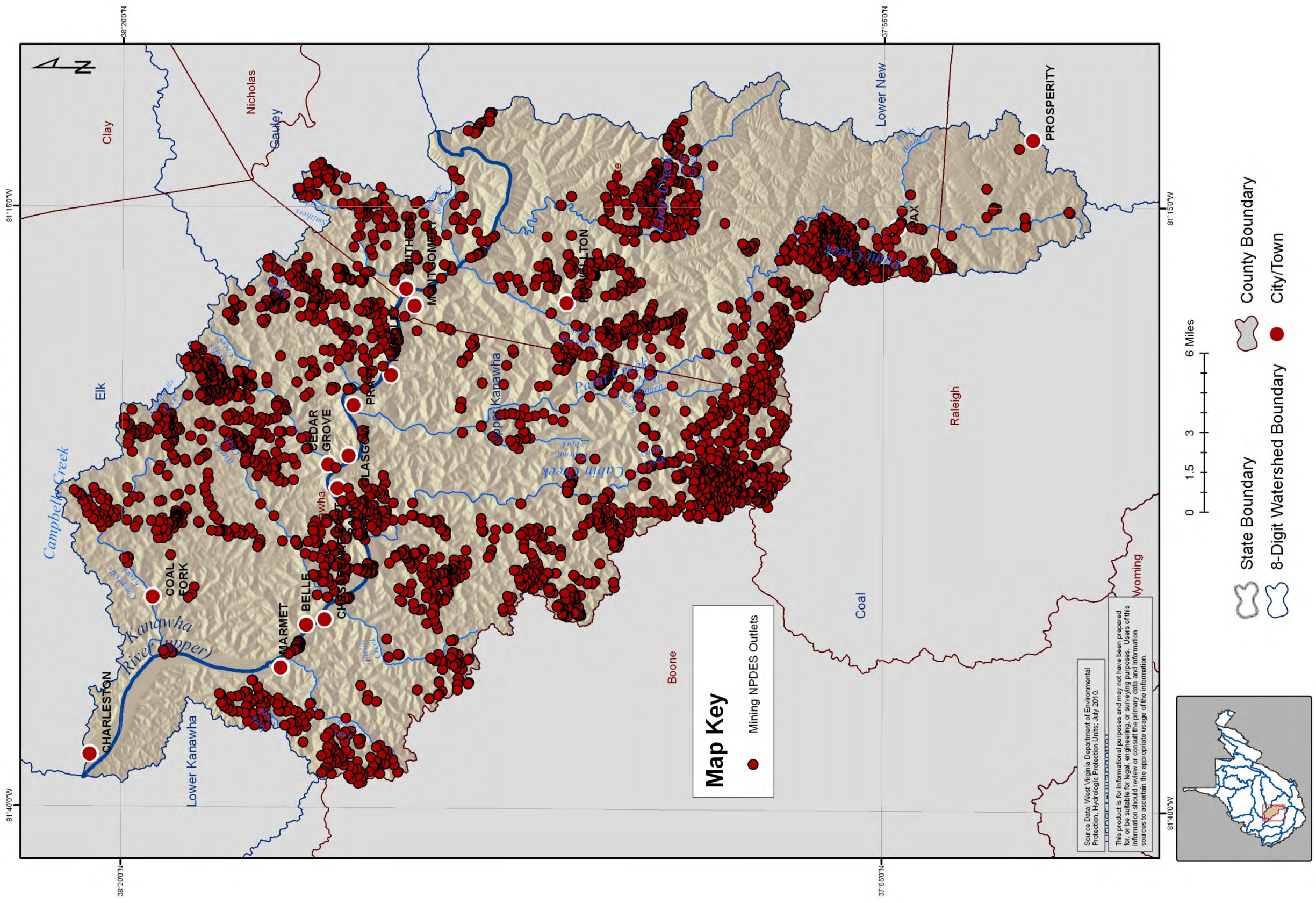
Upper Kanawha HUC-8 Watershed

Surface Geology



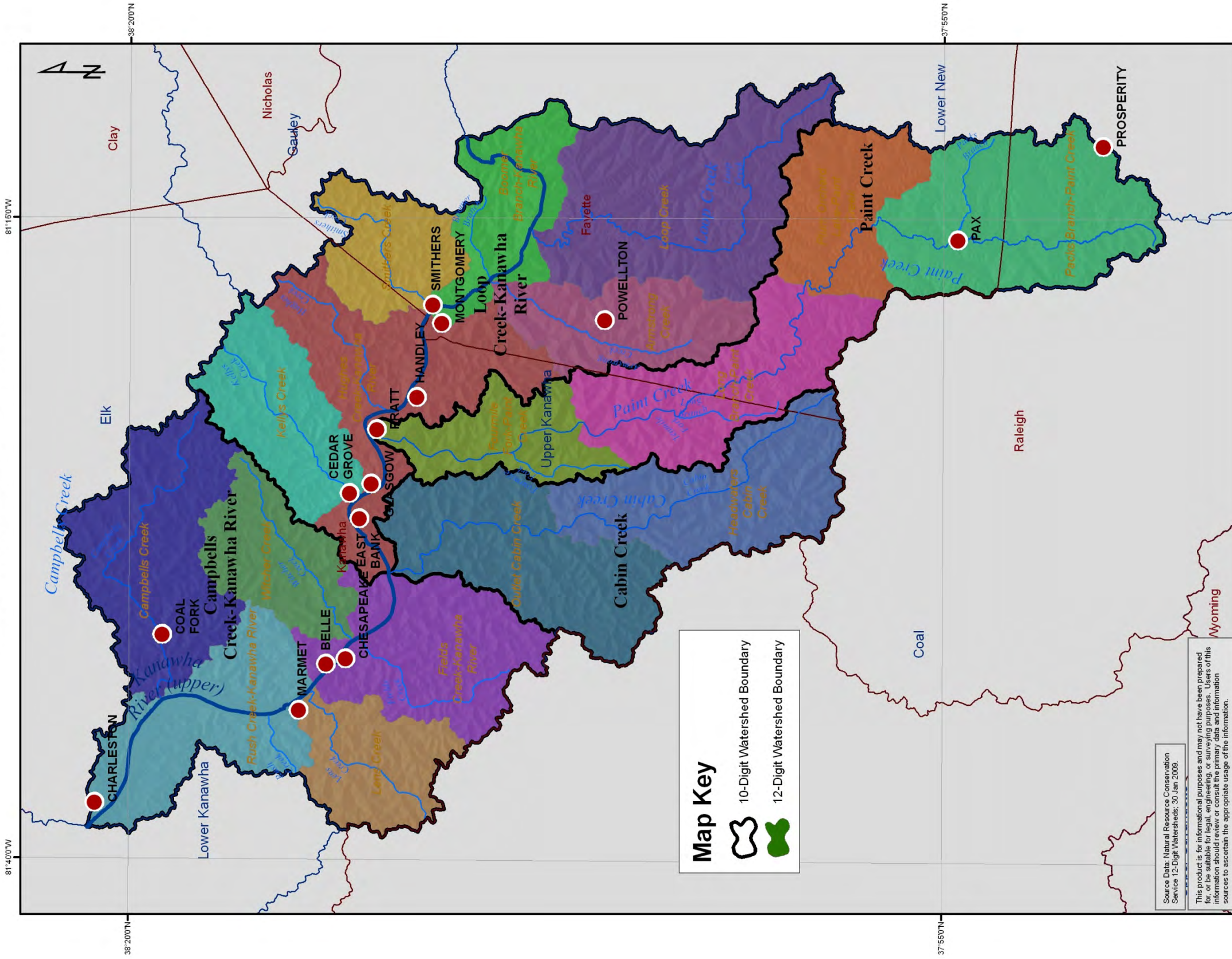
Upper Kanawha HUC-8 Watershed

Mining Related NPDES Outlets



Upper Kanawha HUC-8 Watershed

HUC 10 and HUC 12 Watersheds



Map Key

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

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

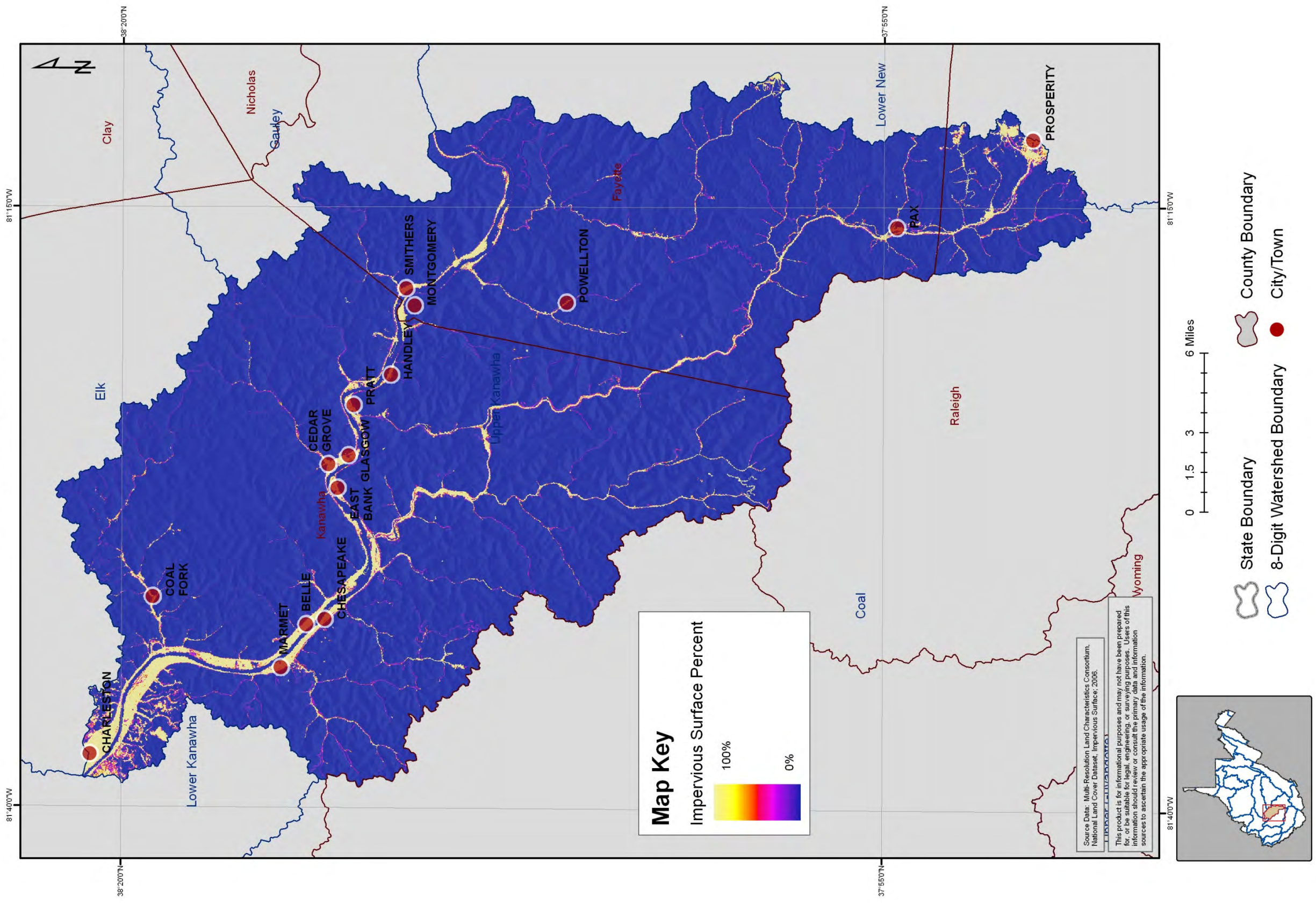
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0 1.5 3 6 Miles

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

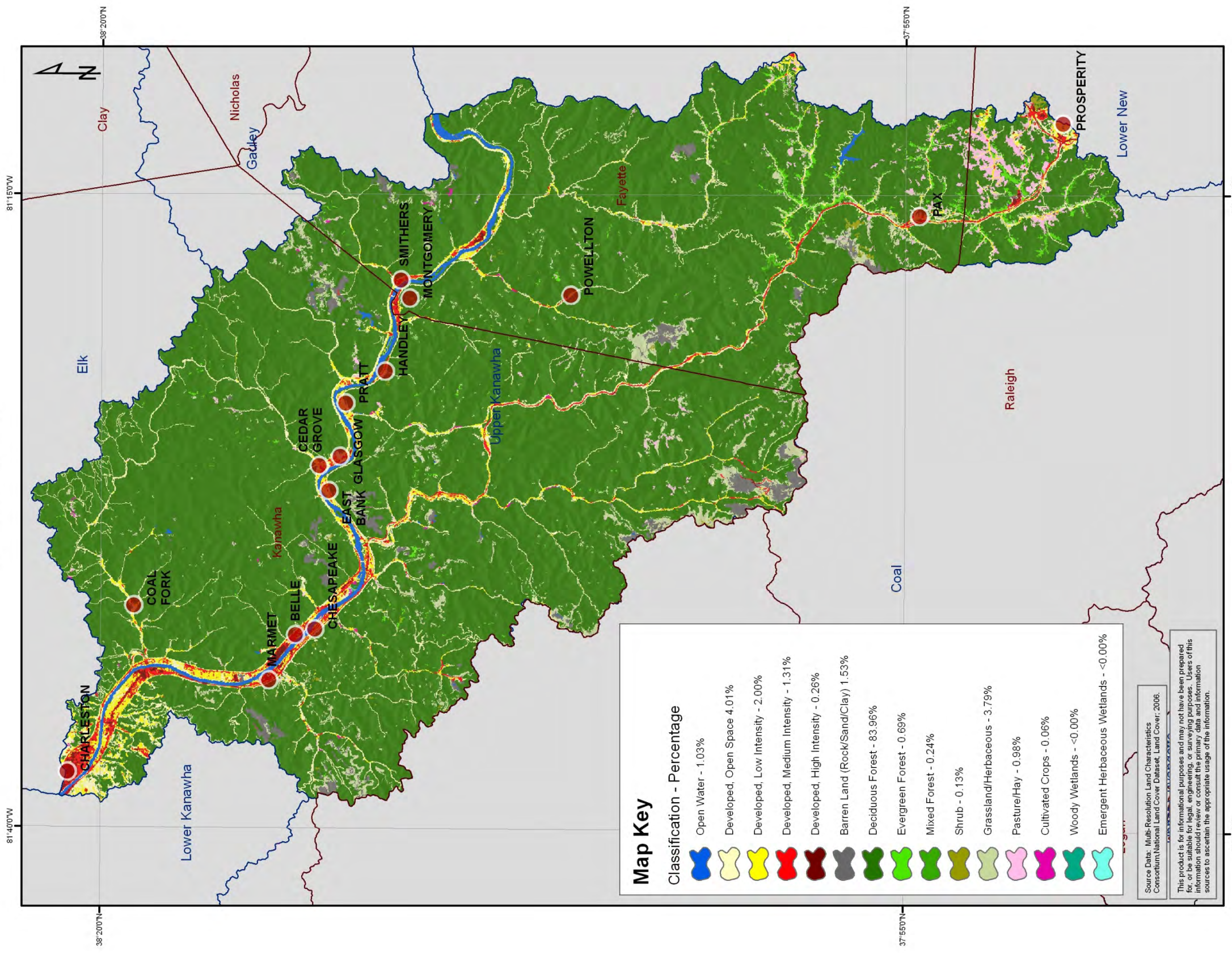
Upper Kanawha HUC-8 Watershed

2006 Impervious Surfaces



Upper Kanawha HUC-8 Watershed

2006 Land Cover



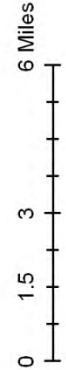
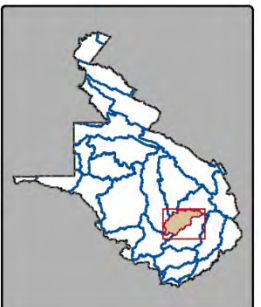
Map Key

Classification - Percentage

	Open Water - 1.03%
	Developed, Open Space 4.01%
	Developed, Low Intensity - 2.00%
	Developed, Medium Intensity - 1.31%
	Developed, High Intensity - 0.26%
	Barren Land (Rock/Sand/Clay) 1.53%
	Deciduous Forest - 83.96%
	Evergreen Forest - 0.69%
	Mixed Forest - 0.24%
	Shrub - 0.13%
	Grassland/Herbaceous - 3.79%
	Pasture/Hay - 0.98%
	Cultivated Crops - 0.06%
	Woody Wetlands - <0.00%
	Emergent Herbaceous Wetlands - <0.00%

Source Data: Multi-Resolution Land Characteristics Consortium/National Land Cover Dataset, Land Cover, 2006.

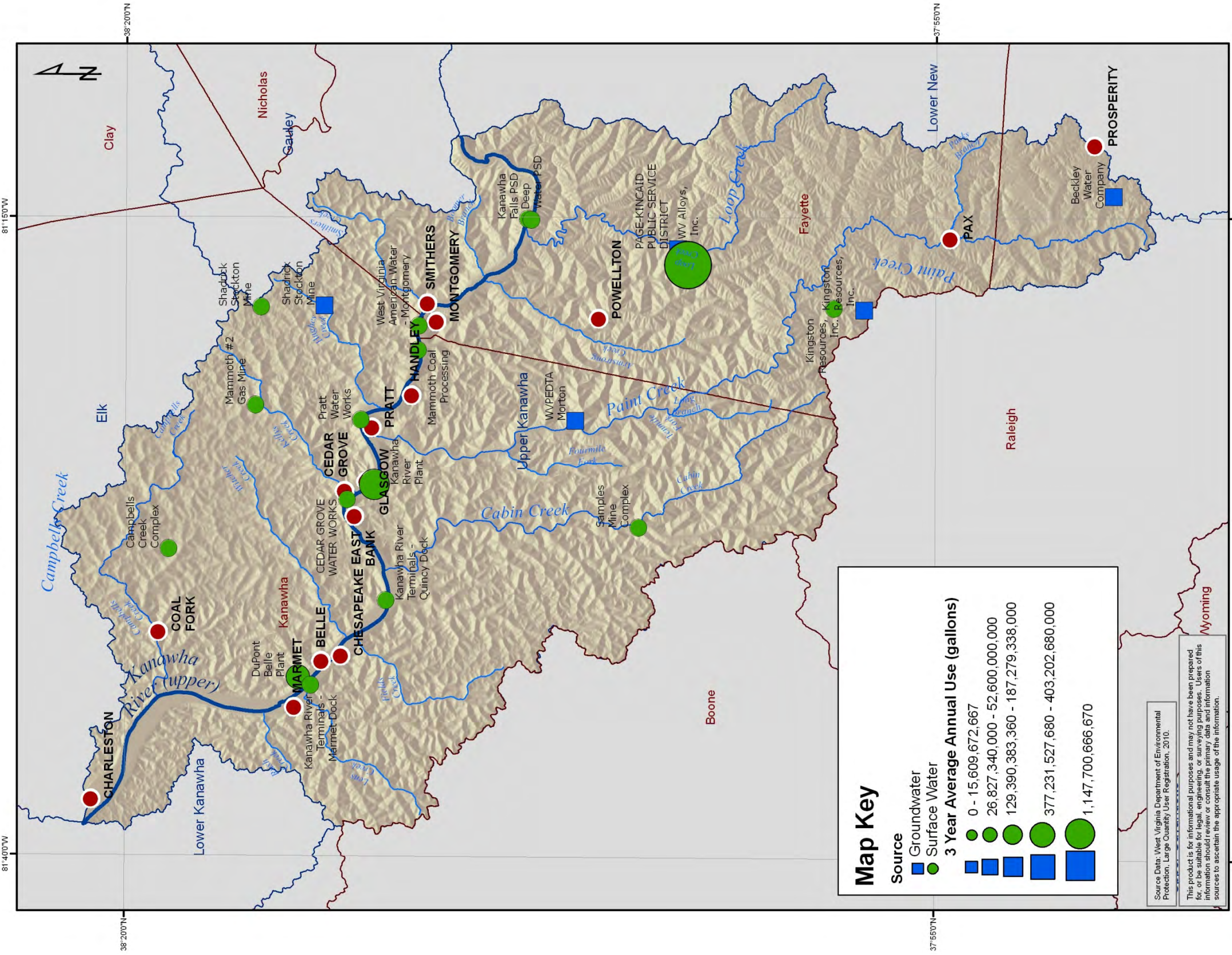
This product is for informational purposes and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the appropriate usage of the information.



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

Upper Kanawha HUC-8 Watershed

Large Quantity Users



Map Key

Source

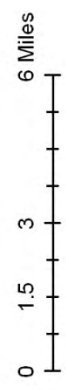
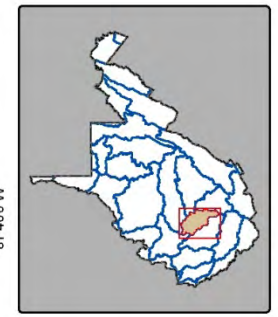
- Groundwater (Blue Square)
- Surface Water (Green Circle)

3 Year Average Annual Use (gallons)

- 0 - 15,609,672,667 (Small Green Circle)
- 15,609,672,667 - 26,827,340,000 (Medium Green Circle)
- 26,827,340,000 - 52,600,000,000 (Large Green Circle)
- 52,600,000,000 - 129,390,383,360 (Very Large Green Circle)
- 129,390,383,360 - 187,279,338,000 (Large Green Circle)
- 187,279,338,000 - 377,231,527,680 (Very Large Green Circle)
- 377,231,527,680 - 403,202,680,000 (Large Green Circle)
- 403,202,680,000 - 1,147,700,666,670 (Very Large Green Circle)

Source Data: West Virginia Department of Environmental Protection, Large Quantity User Registration, 2010.

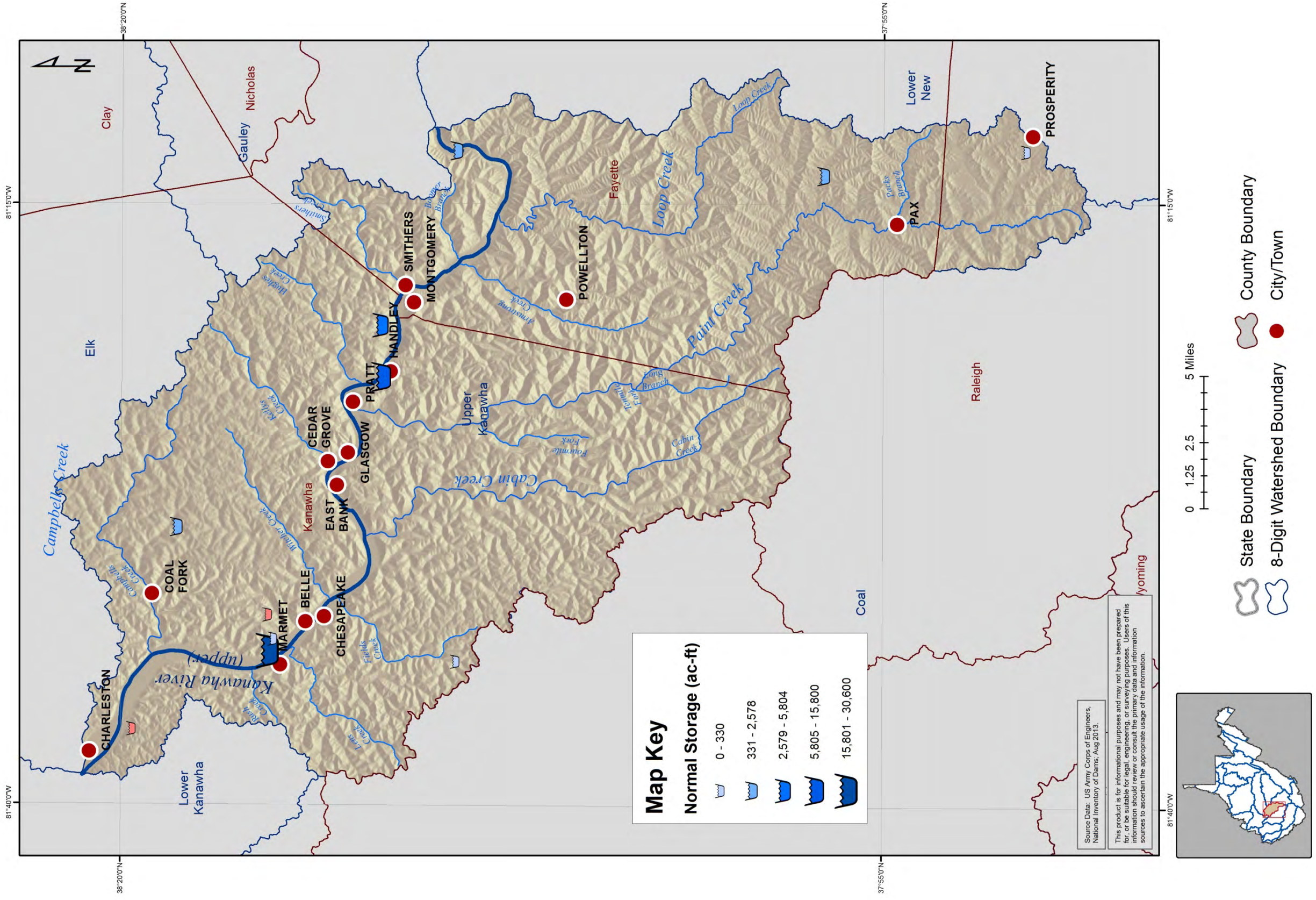
This product is for informational purposes and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the appropriate usage of the information.



- State Boundary (Red dashed line)
- 8-Digit Watershed Boundary (Blue outline)
- County Boundary (Grey outline)
- City/Town (Red dot)

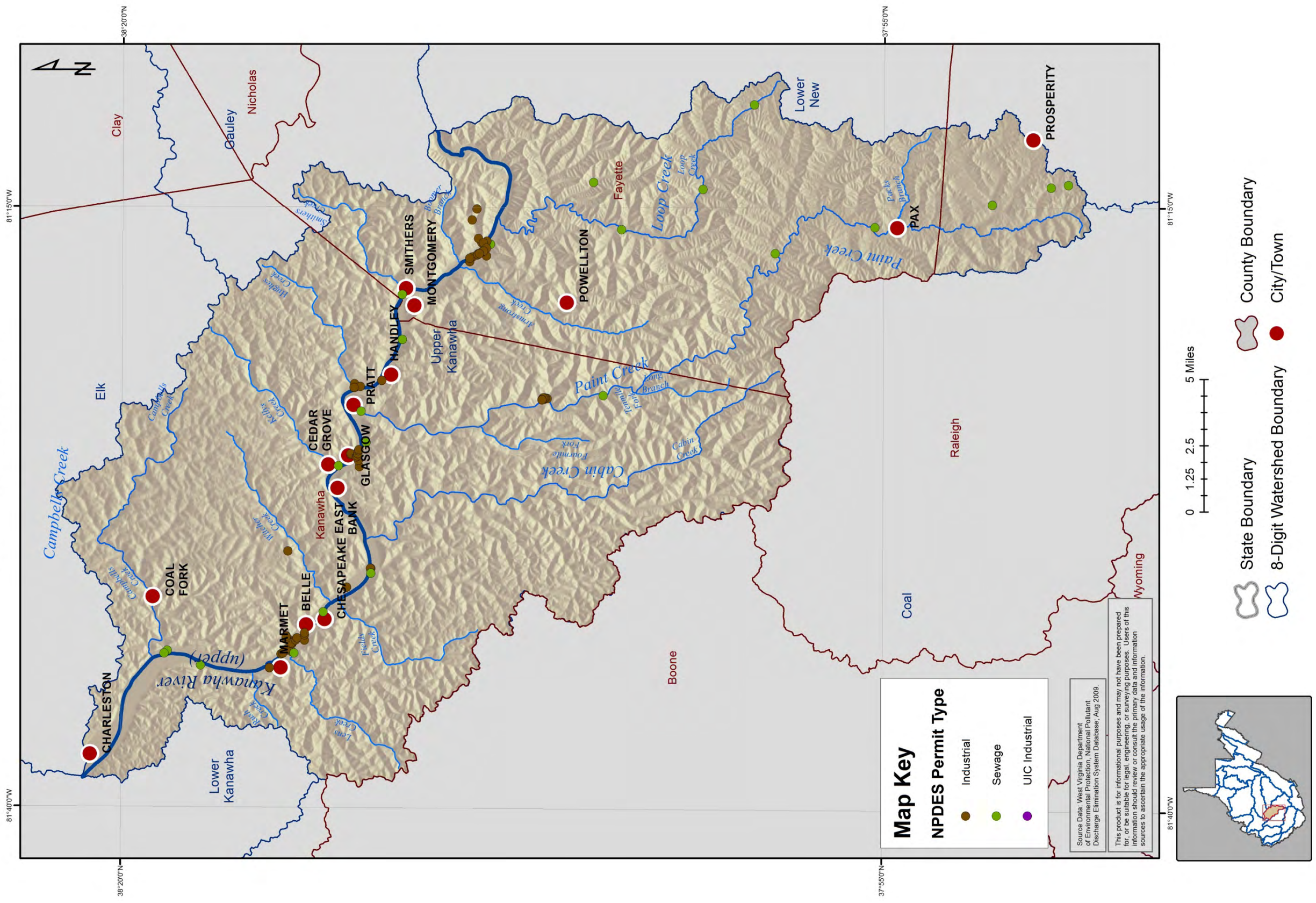
Upper Kanawha HUC-8 Watershed

Permitted Dams



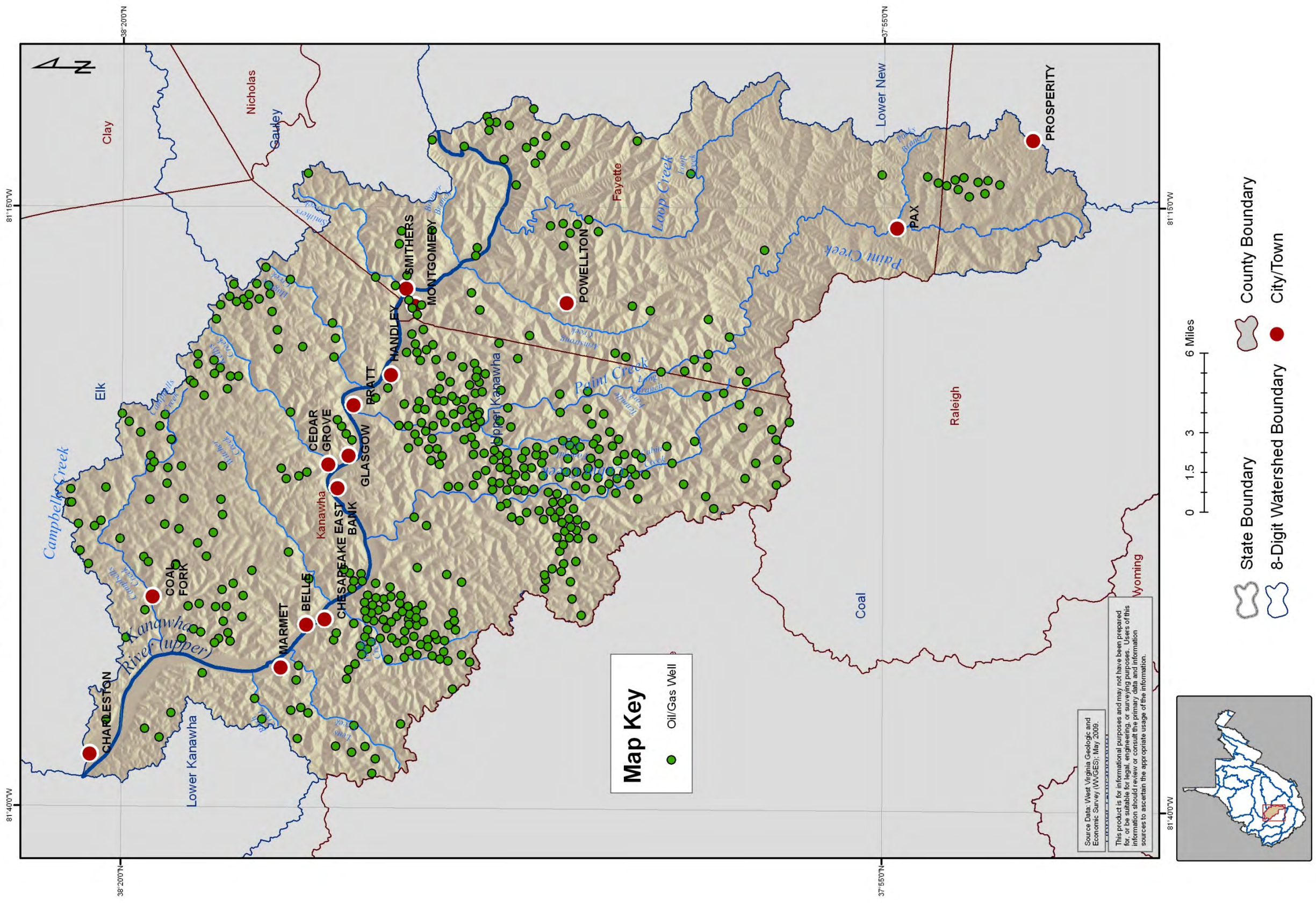
Upper Kanawha HUC-8 Watershed

Non-Mining NPDES Outlets



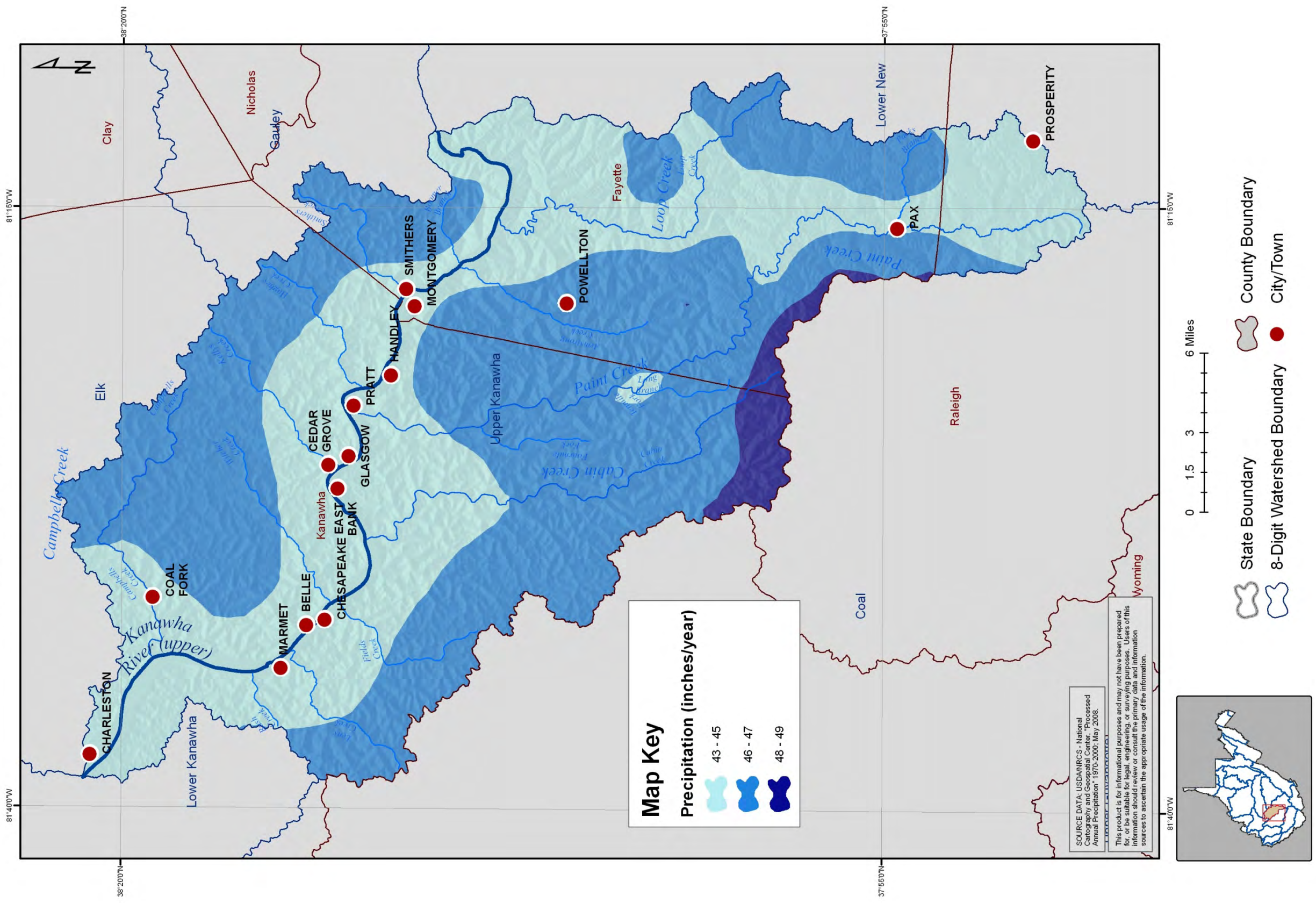
Upper Kanawha HUC-8 Watershed

Well Logs with Gamma Rays and Water Shows



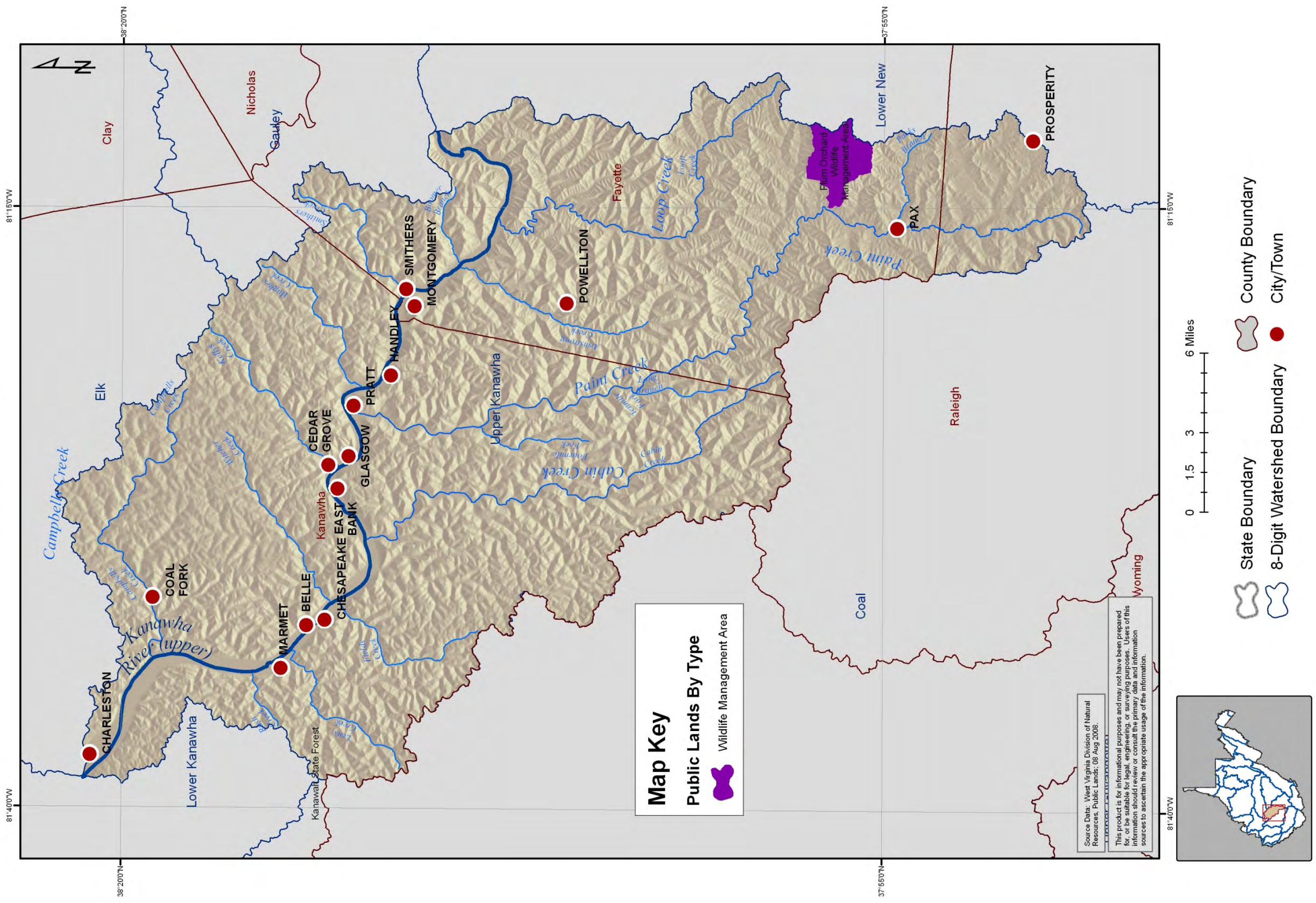
Upper Kanawha HUC-8 Watershed

Average Annual Precipitation (1971-2000)



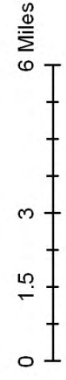
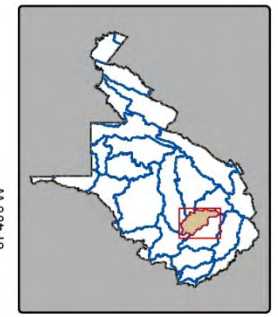
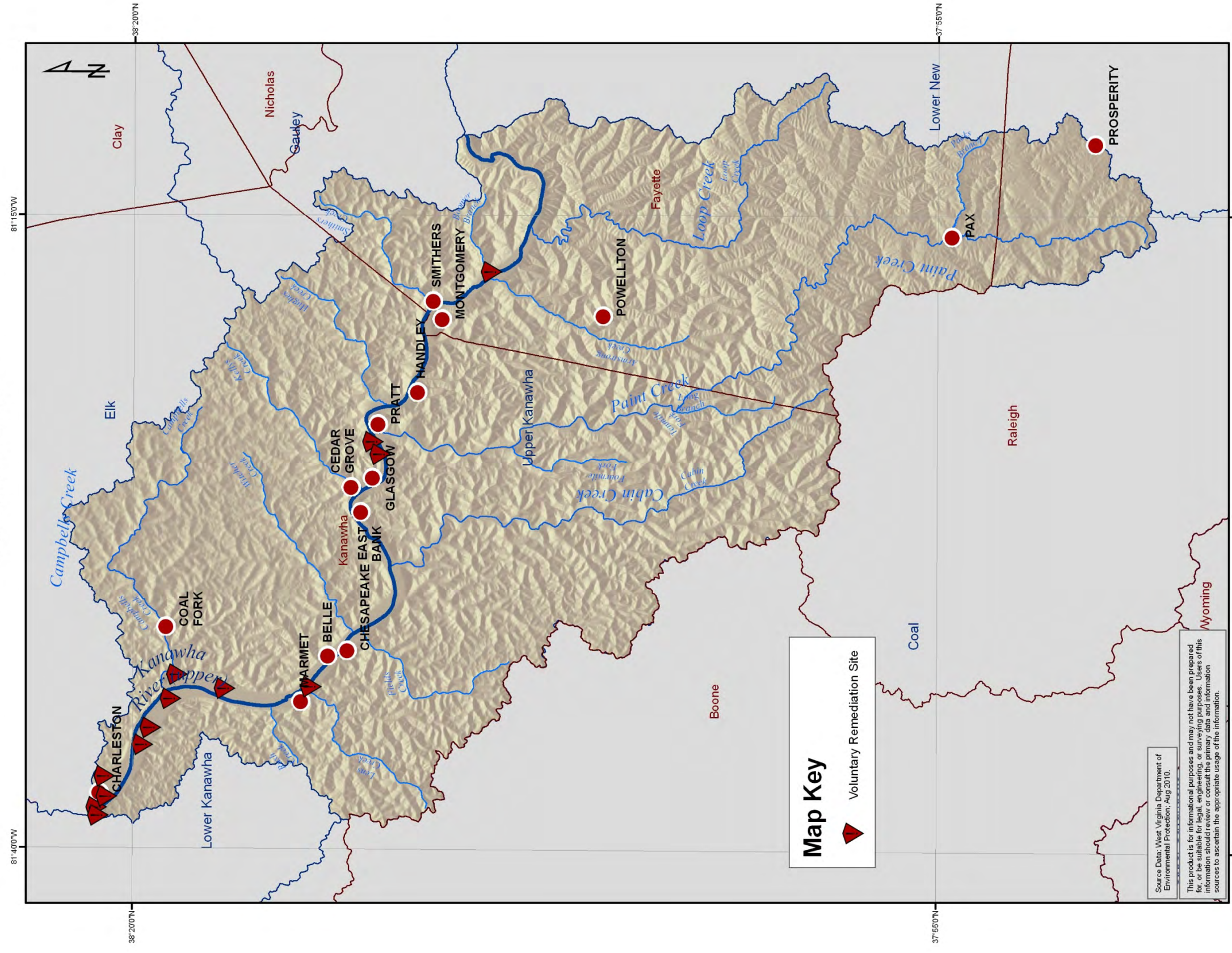
Upper Kanawha HUC-8 Watershed

Public Lands



Upper Kanawha HUC-8 Watershed

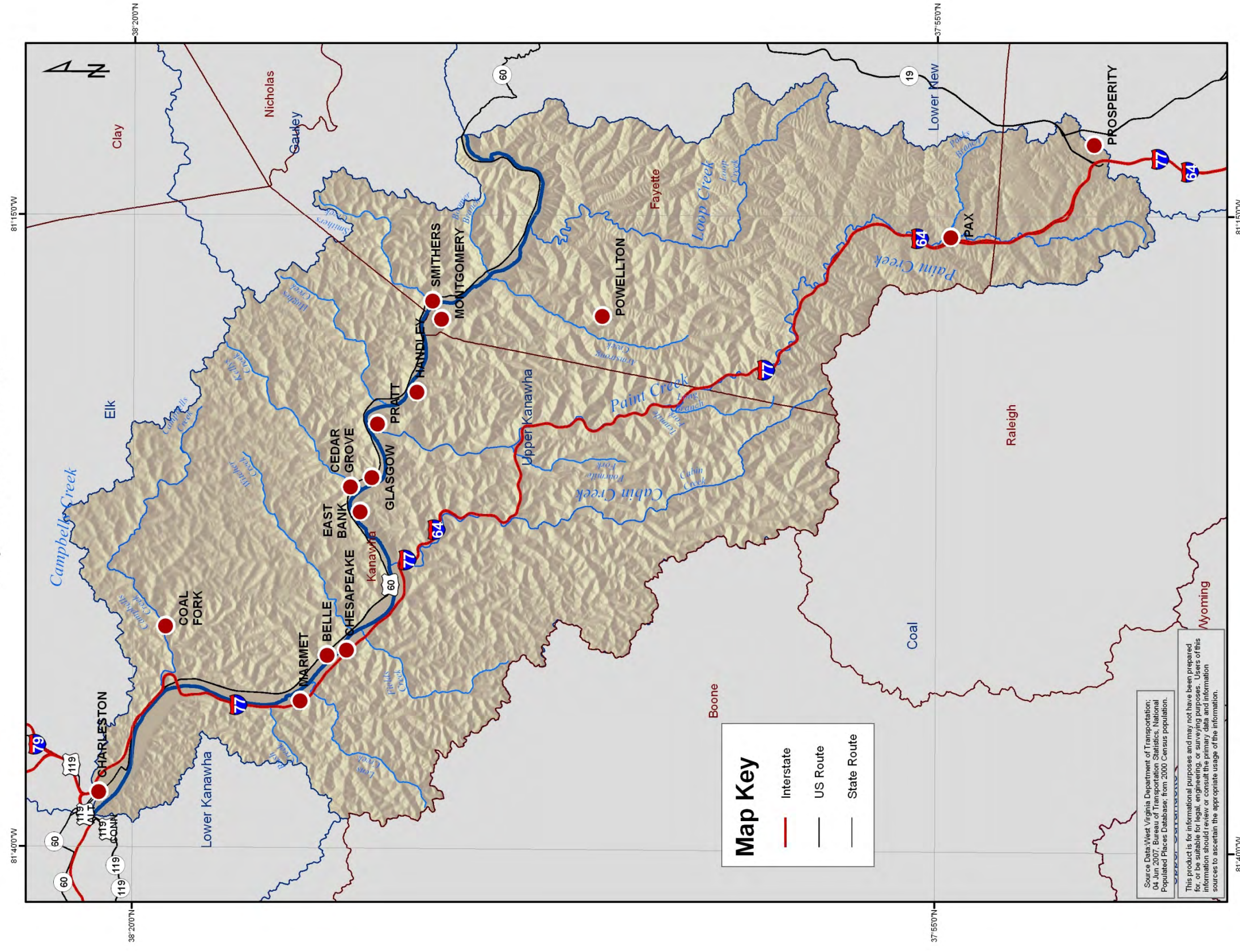
Remediation Sites



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

Upper Kanawha HUC-8 Watershed

Major Roads and Cities

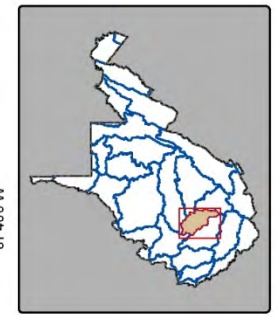


Map Key

- 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.

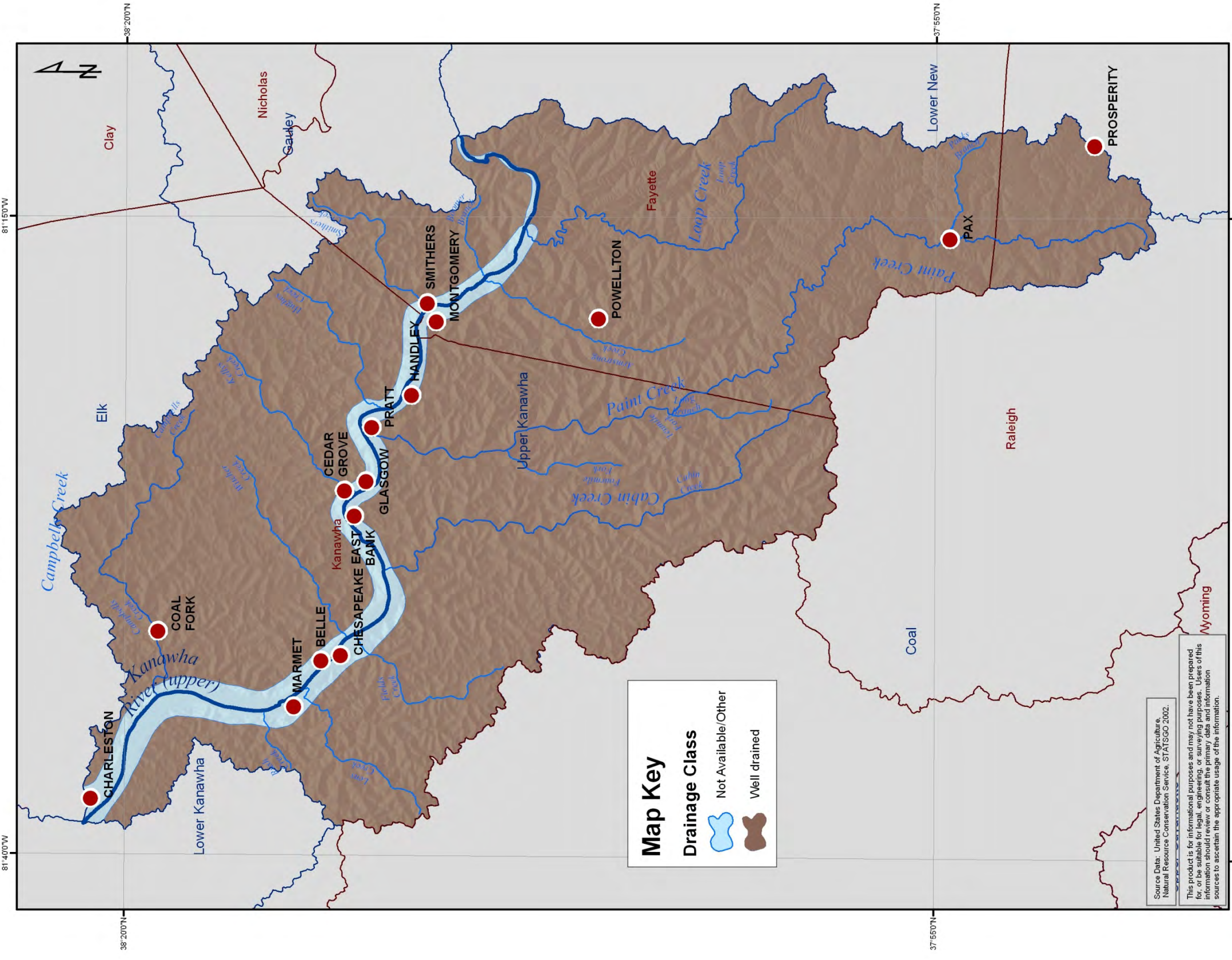
This product is for informational purposes and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the appropriate usage of the information.



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


Upper Kanawha HUC-8 Watershed

Soil Drainage Classes



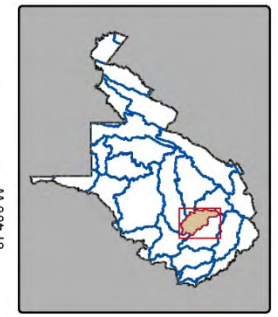
Map Key

Drainage Class

-  Not Available/Other
-  Well drained

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

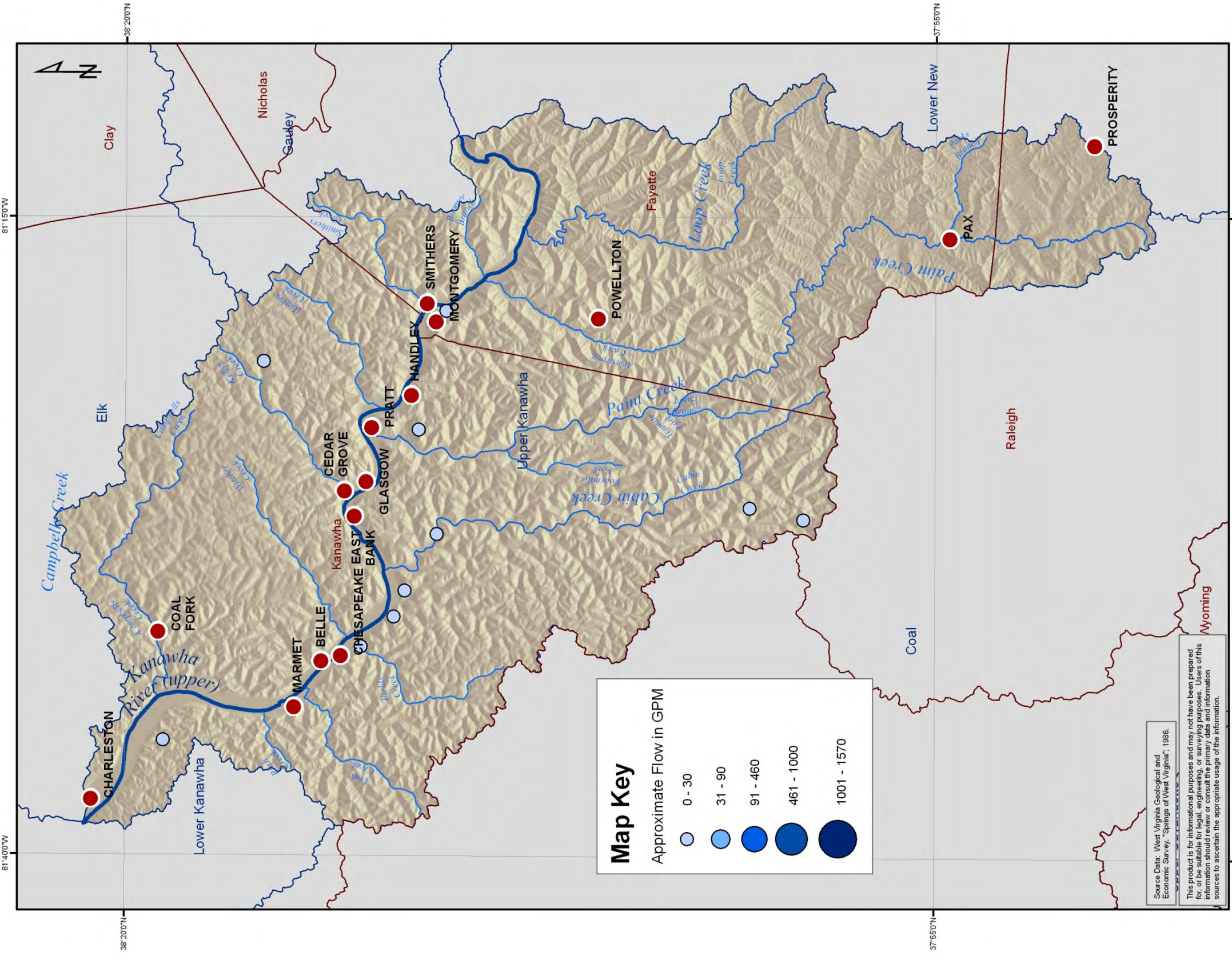
This product is for informational purposes and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the appropriate usage of the information.



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

Upper Kanawha HUC-8 Watershed

Documented Springs



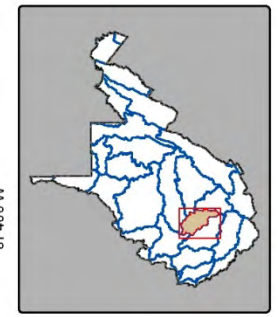
Map Key

Approximate Flow in GPM

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

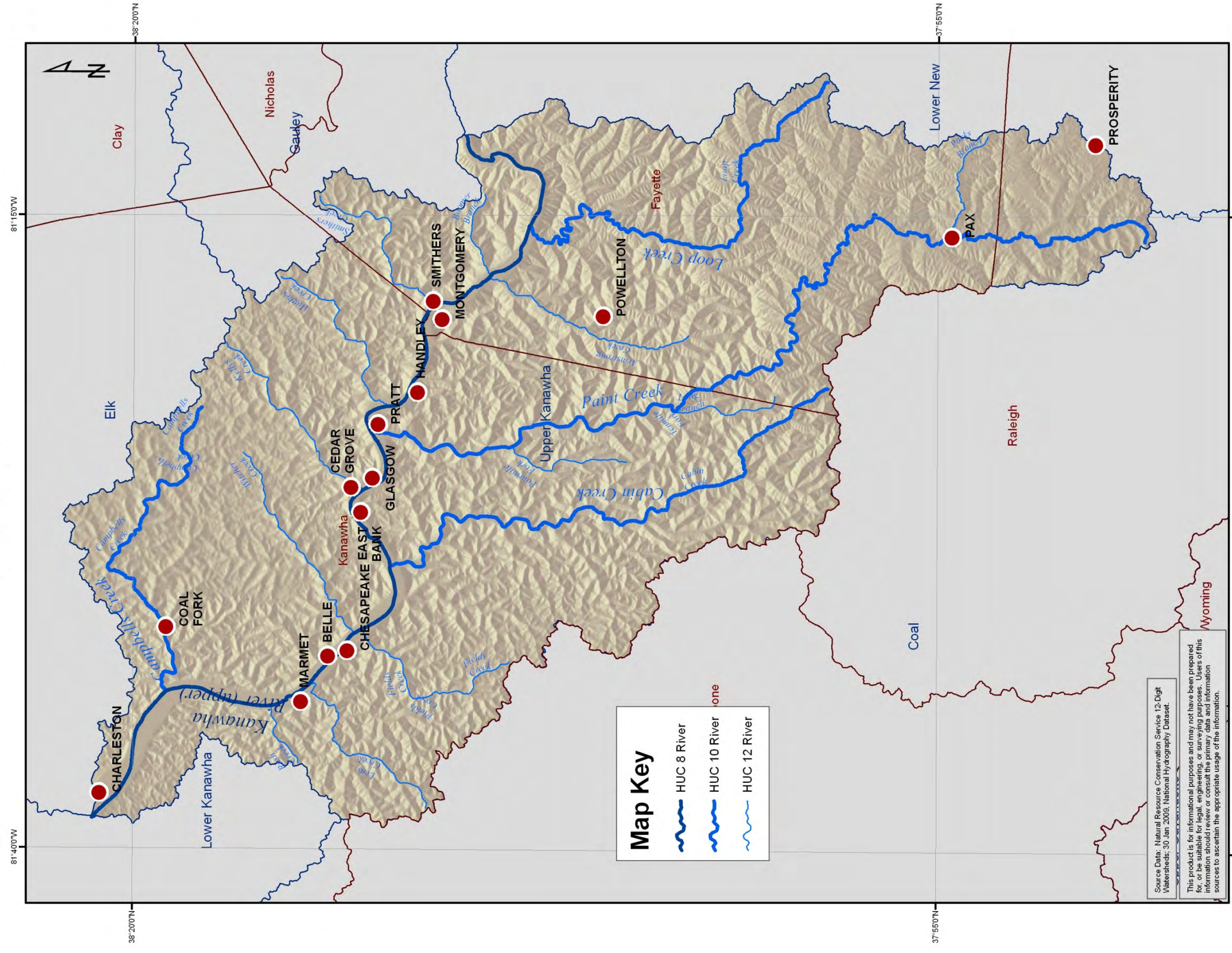
Source Data: West Virginia Geological and Economic Survey, "Springs of West Virginia", 1966.

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.



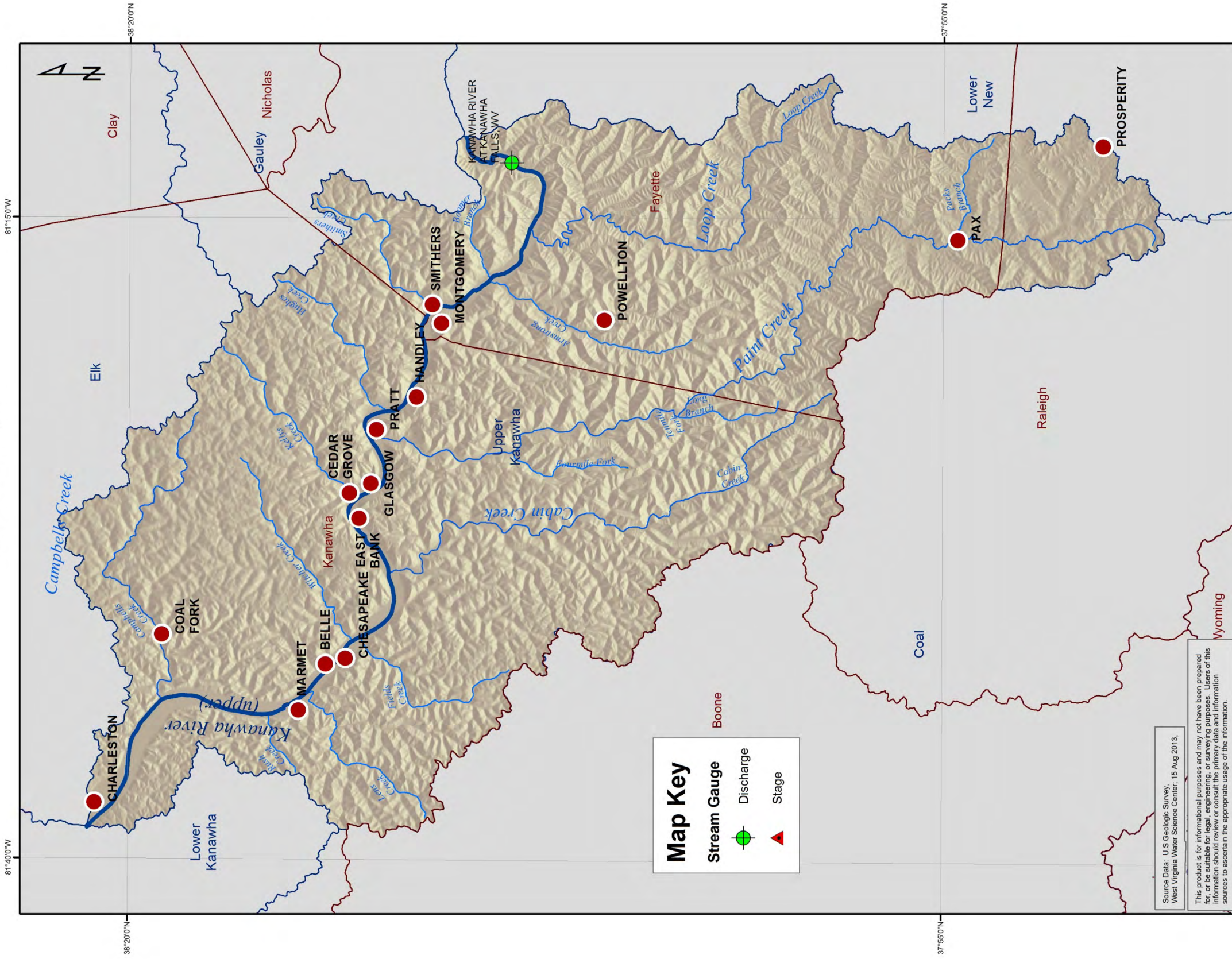
Upper Kanawha HUC-8 Watershed

Stream Connections



Upper Kanawha HUC-8 Watershed

Stream Gauges

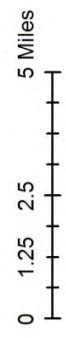
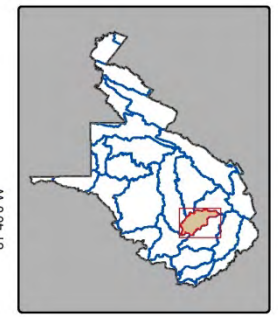


Map Key

- Stream Gauge
- Discharge (Green circle with crosshair)
- Stage (Red triangle)

Source Data: U.S. Geologic Survey, West Virginia Water Science Center, 15 Aug 2013.

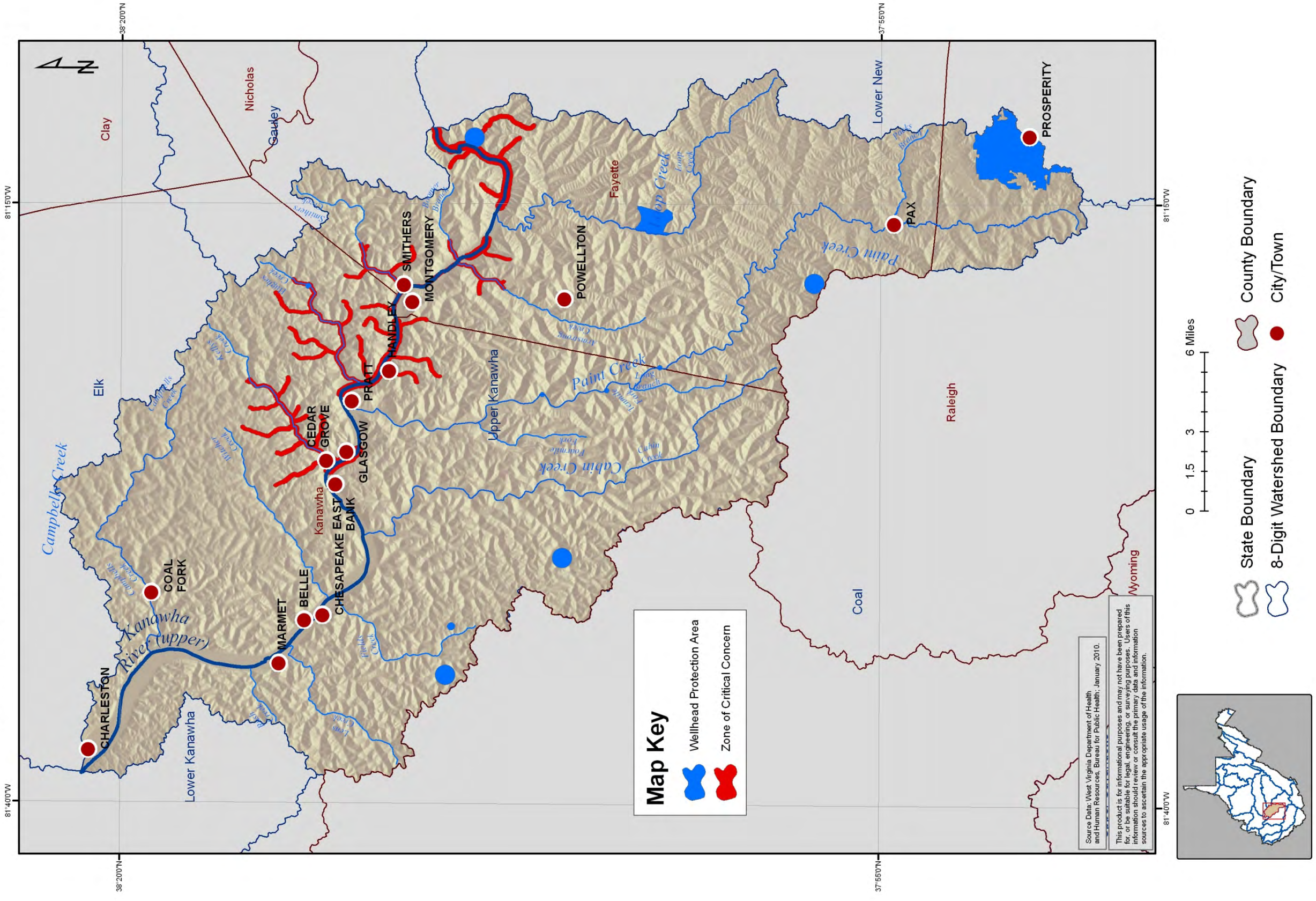
This product is for informational purposes and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the appropriate usage of the information.



- State Boundary (Red outline)
- 8-Digit Watershed Boundary (Blue outline)
- County Boundary (Brown outline)
- City/Town (Red dot)

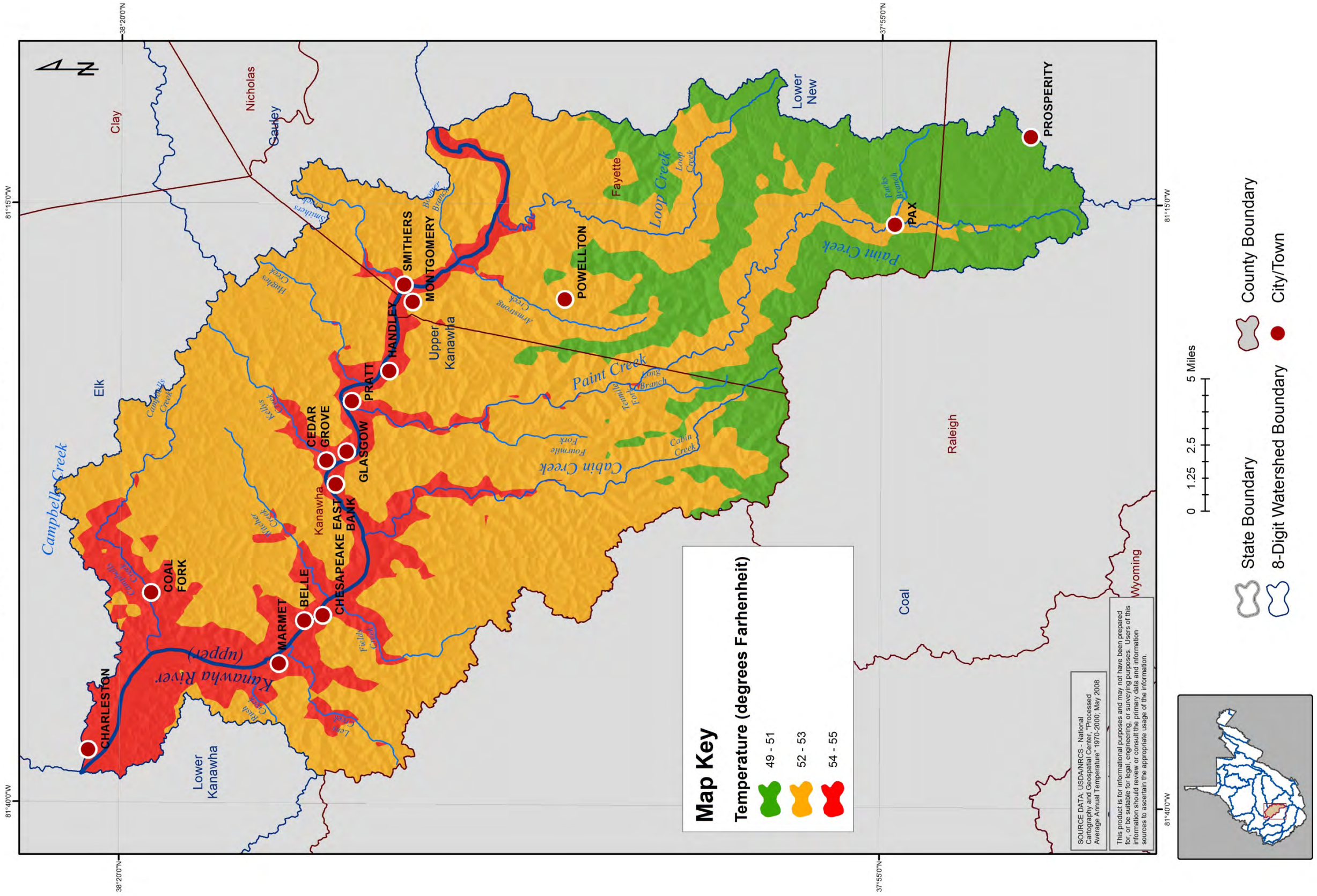
Upper Kanawha HUC-8 Watershed

Source Water Assessment and Wellhead Protection Programs



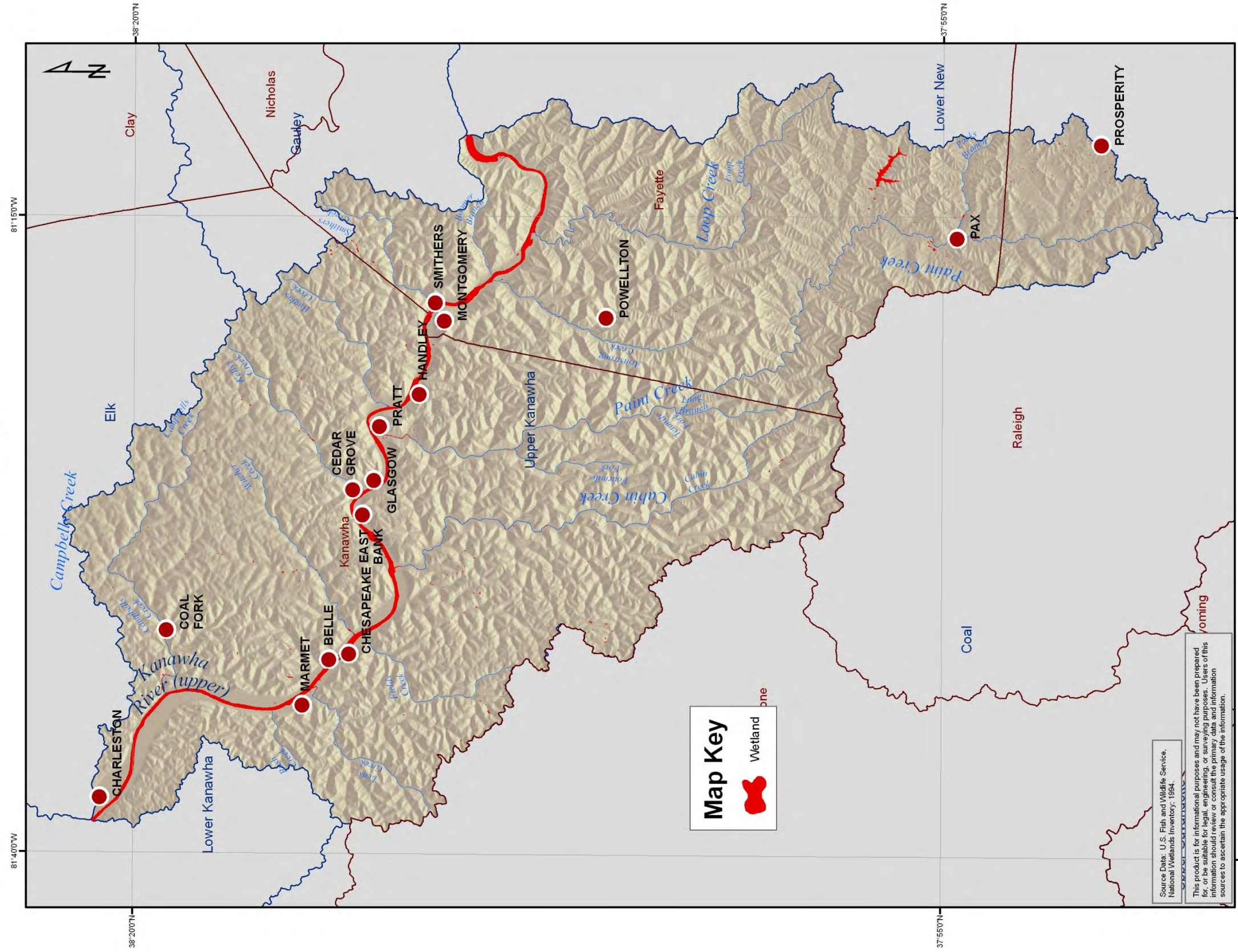
Upper Kanawha HUC-8 Watershed

Average Annual Temperature (1971-2000)



Upper Kanawha HUC-8 Watershed

Wetlands

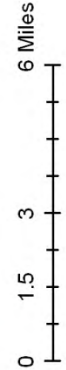
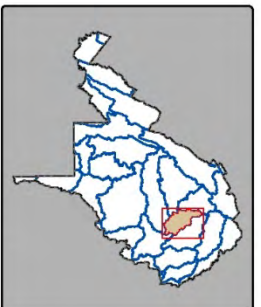


Map Key

- Wetland

Source Data: U.S. Fish and Wildlife Service, National Wetlands Inventory: 1984.

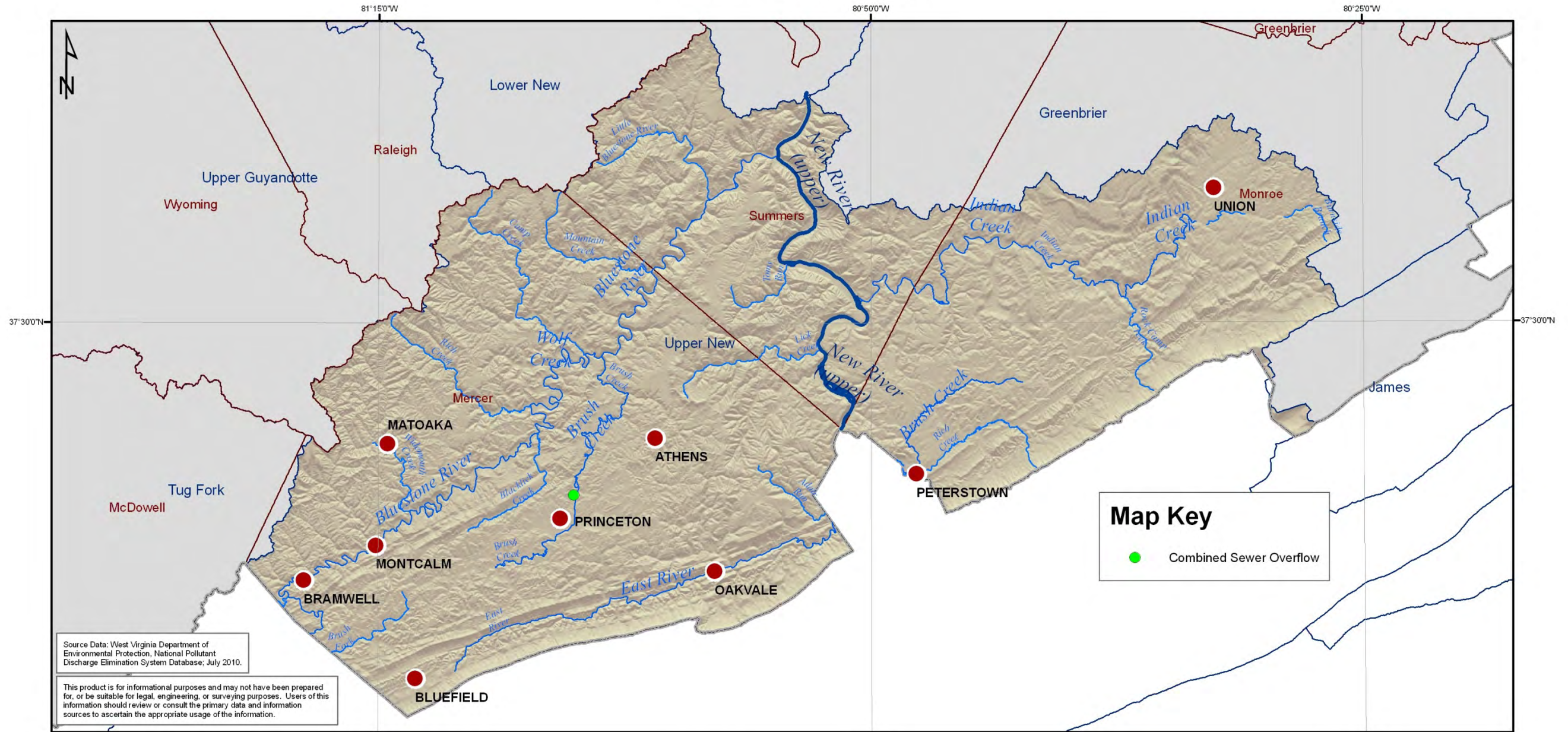
This product is for informational purposes and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the appropriate usage of the information.



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

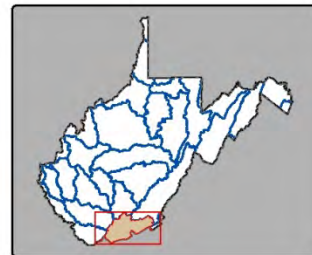
Upper New HUC-8 Watershed

Combined Sewer Overflow



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

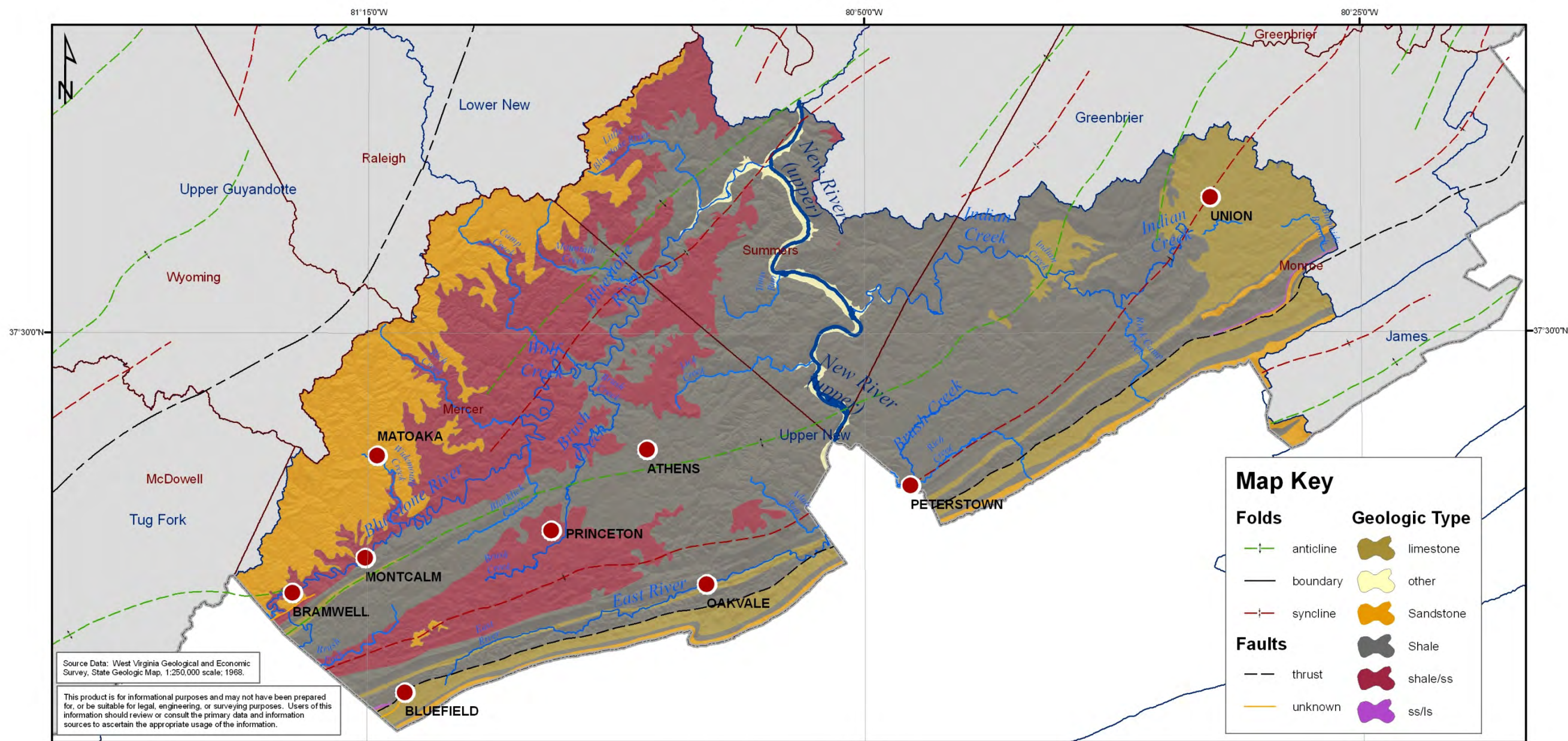
This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the appropriate usage of the information.



- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town
- Combined Sewer Overflow

Upper New HUC-8 Watershed

Surface Geology

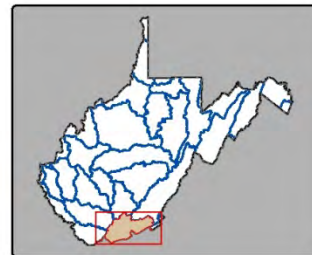
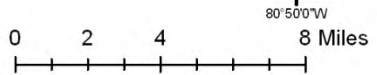


Source Data: West Virginia Geological and Economic Survey, State Geologic Map, 1:250,000 scale, 1968.

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.

Map Key

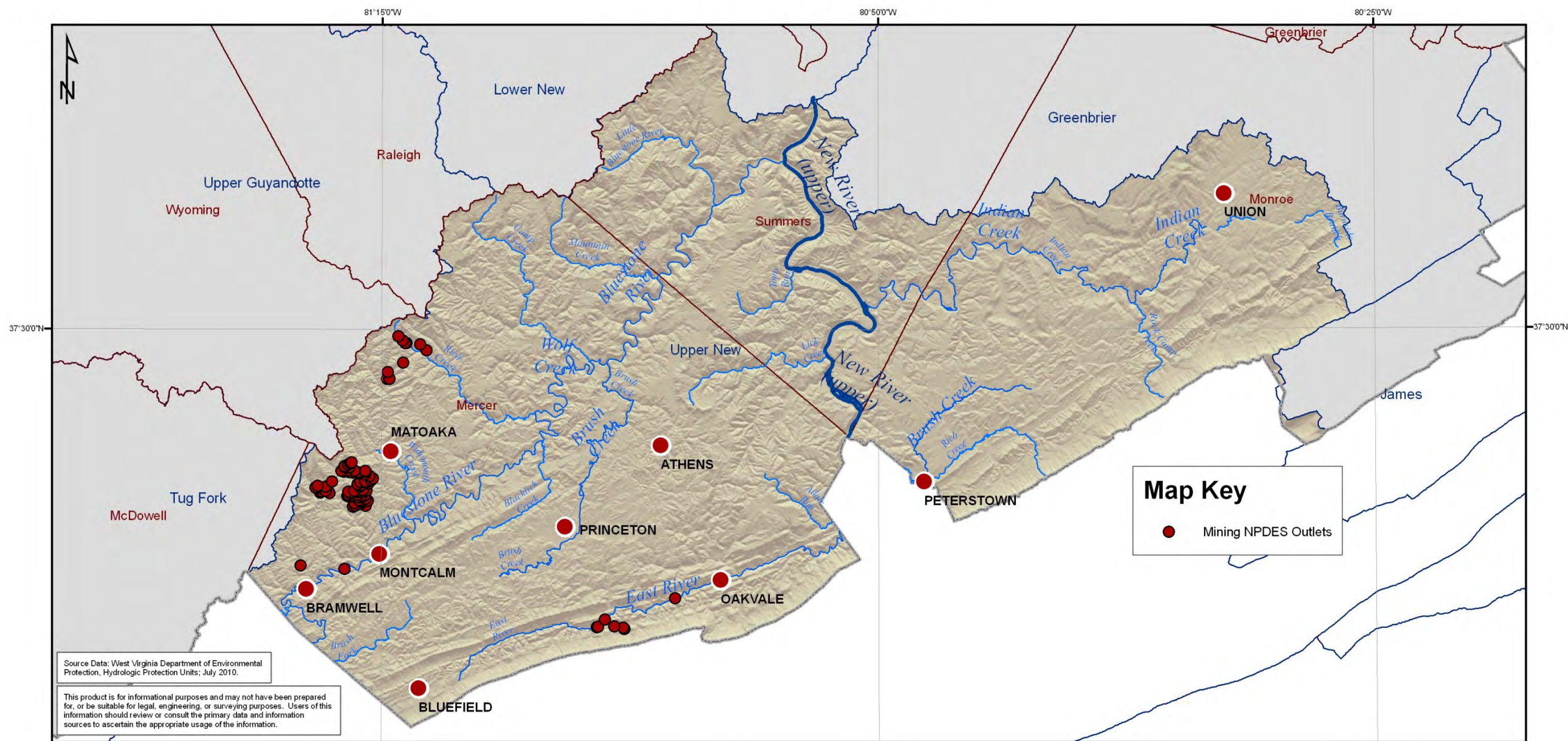
Folds	Geologic Type
anticline	limestone
boundary	other
syncline	Sandstone
Faults	Shale
thrust	shale/ss
unknown	ss/ls



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

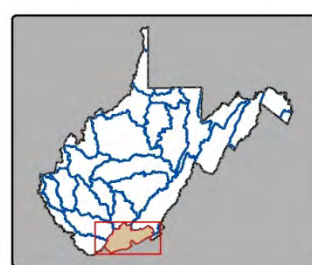
Upper New HUC-8 Watershed

Mining Related NPDES Outlets



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

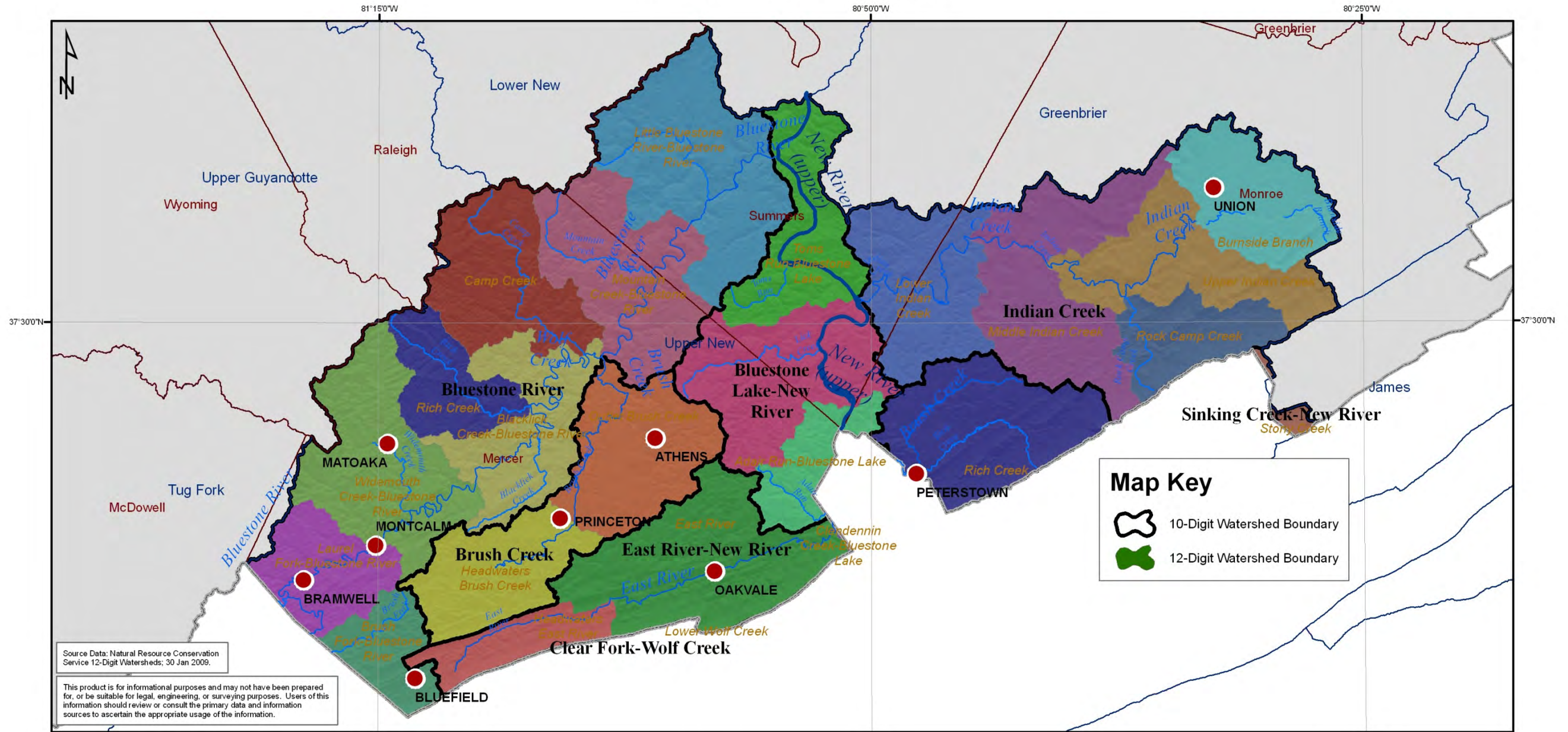
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Upper New HUC-8 Watershed

HUC 10 and HUC 12 Watersheds

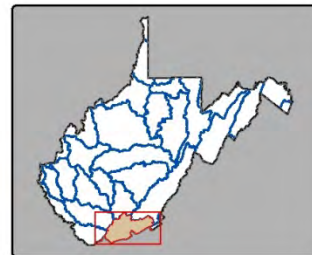
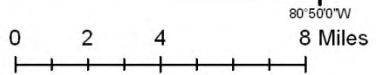


Map Key

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

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

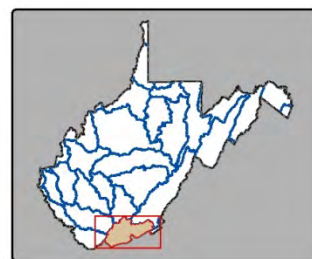
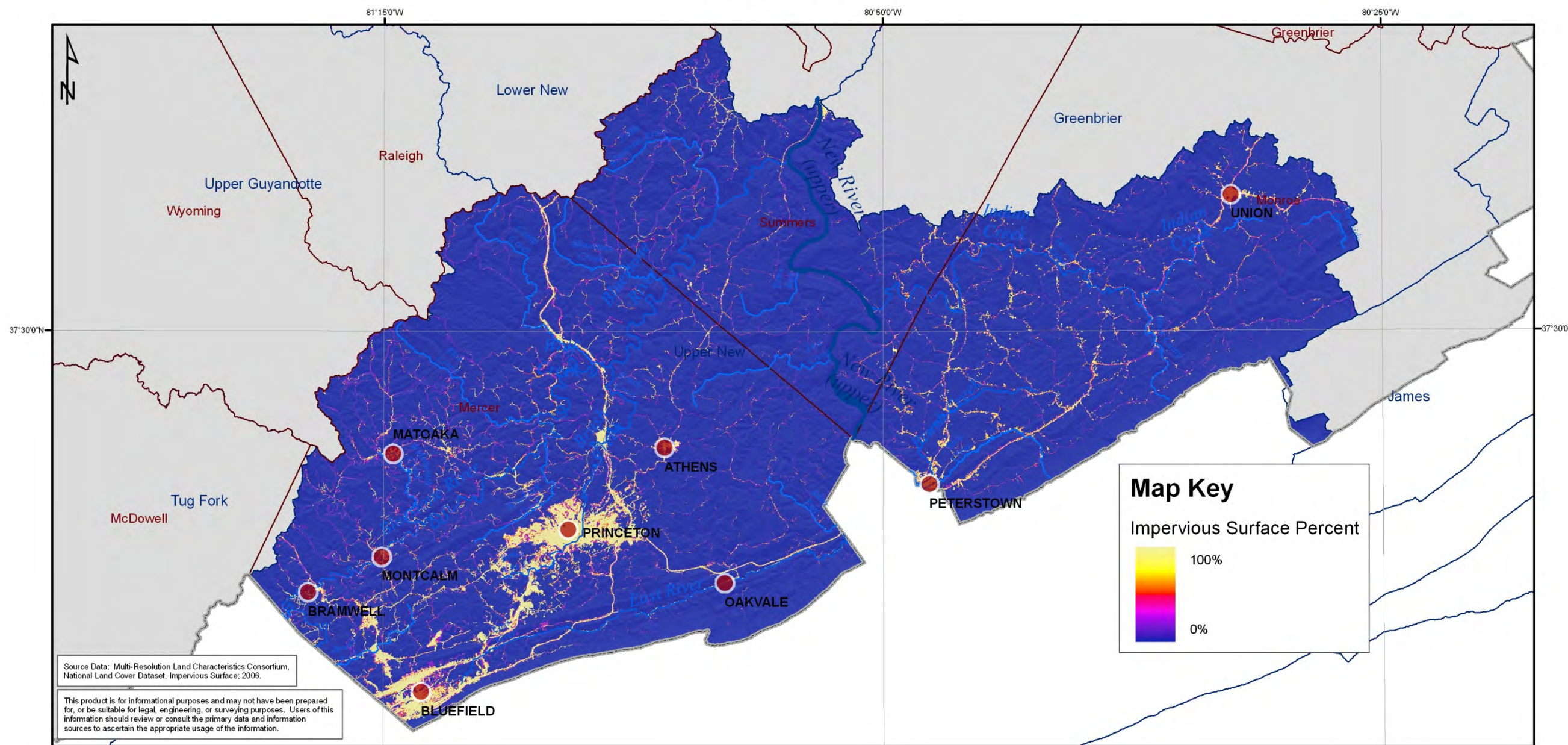
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Upper New HUC-8 Watershed

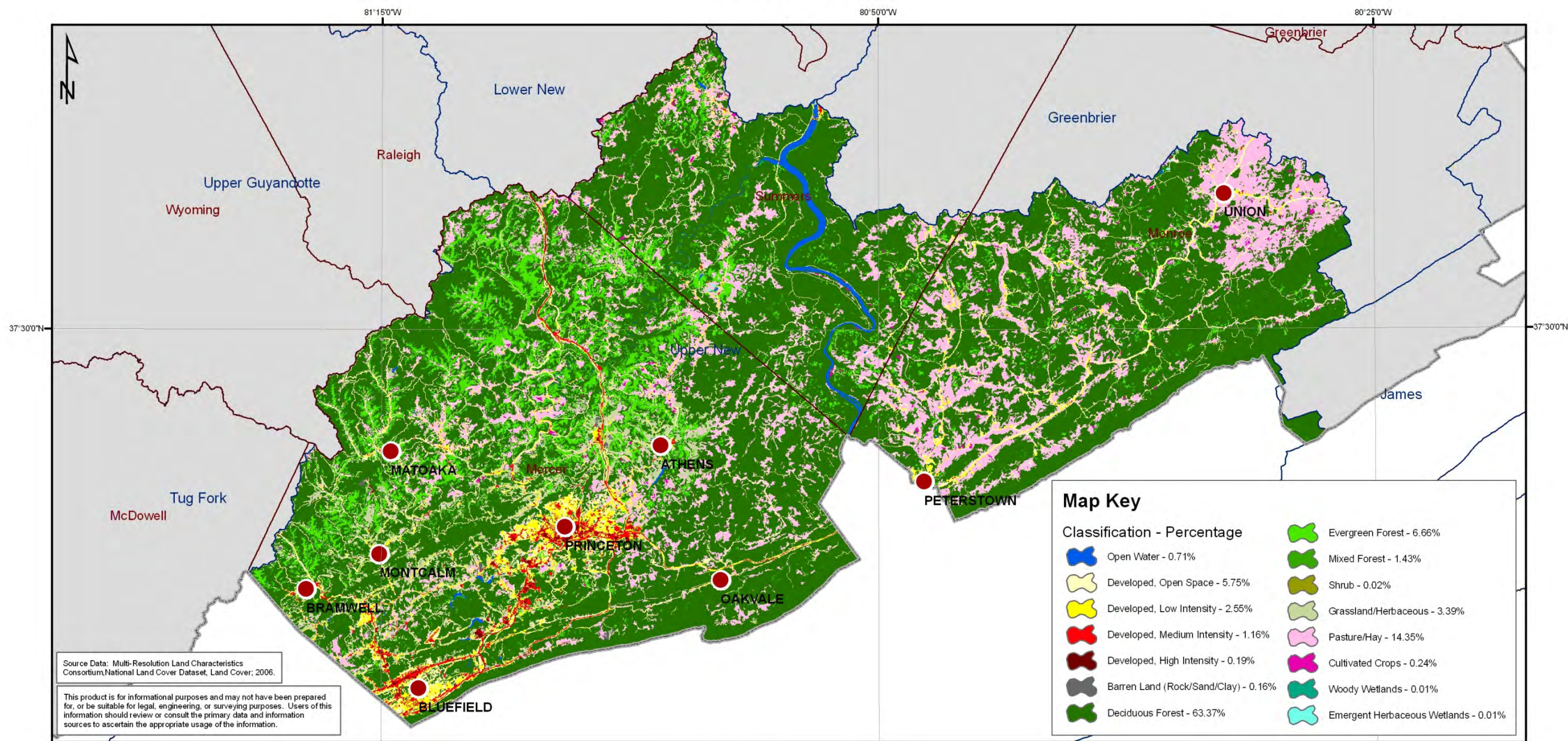
2006 Impervious Surfaces



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

Upper New HUC-8 Watershed

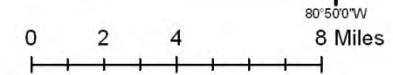
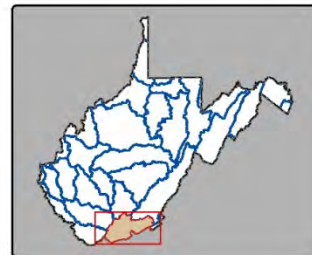
2006 Land Cover



Source Data: Multi-Resolution Land Characteristics Consortium National Land Cover Dataset, Land Cover, 2006.

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.

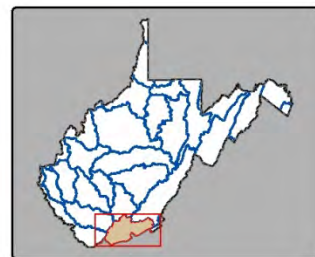
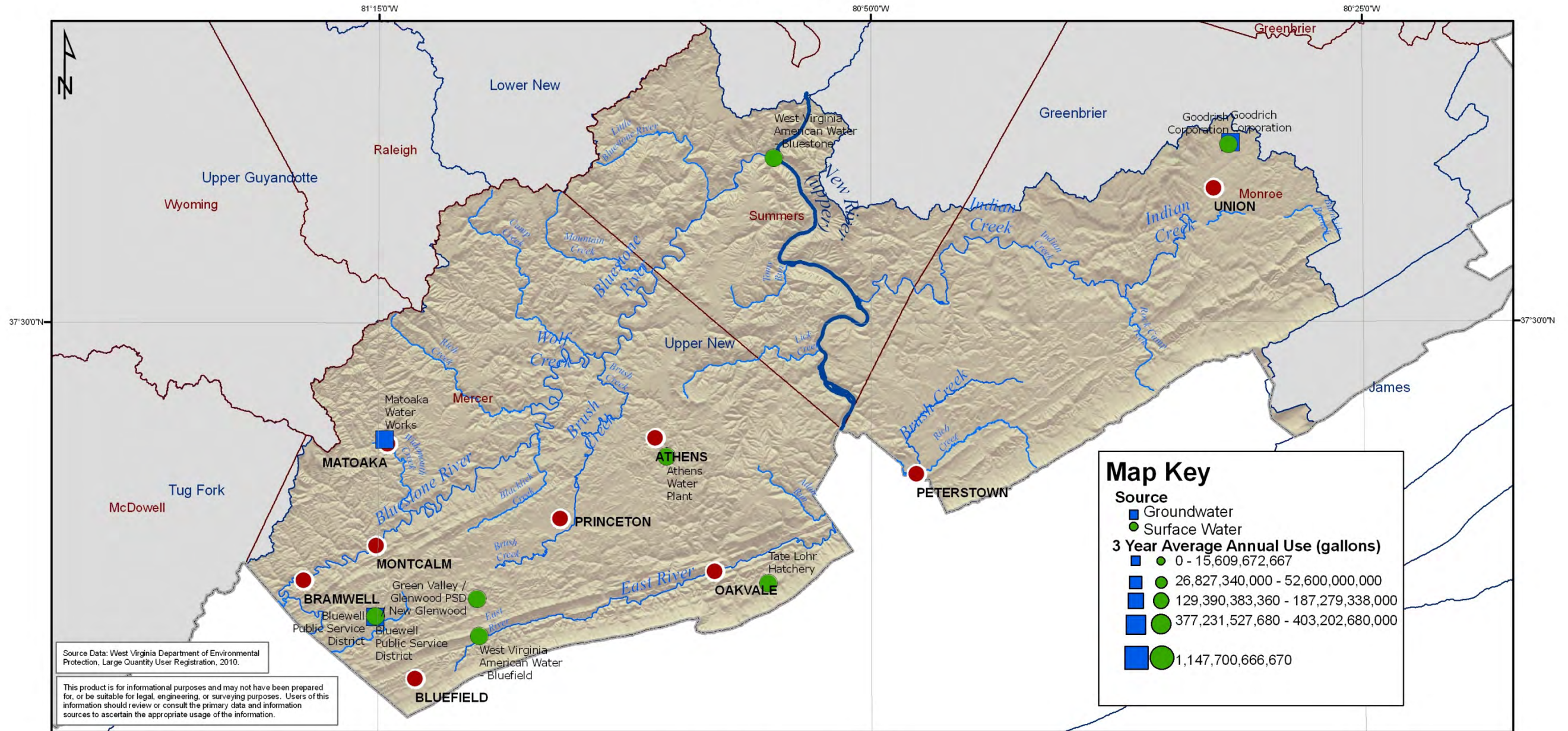
Classification - Percentage	
	Open Water - 0.71%
	Developed, Open Space - 5.75%
	Developed, Low Intensity - 2.55%
	Developed, Medium Intensity - 1.16%
	Developed, High Intensity - 0.19%
	Barren Land (Rock/Sand/Clay) - 0.16%
	Deciduous Forest - 63.37%
	Evergreen Forest - 6.66%
	Mixed Forest - 1.43%
	Shrub - 0.02%
	Grassland/Herbaceous - 3.39%
	Pasture/Hay - 14.35%
	Cultivated Crops - 0.24%
	Woody Wetlands - 0.01%
	Emergent Herbaceous Wetlands - 0.01%



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

Upper New HUC-8 Watershed

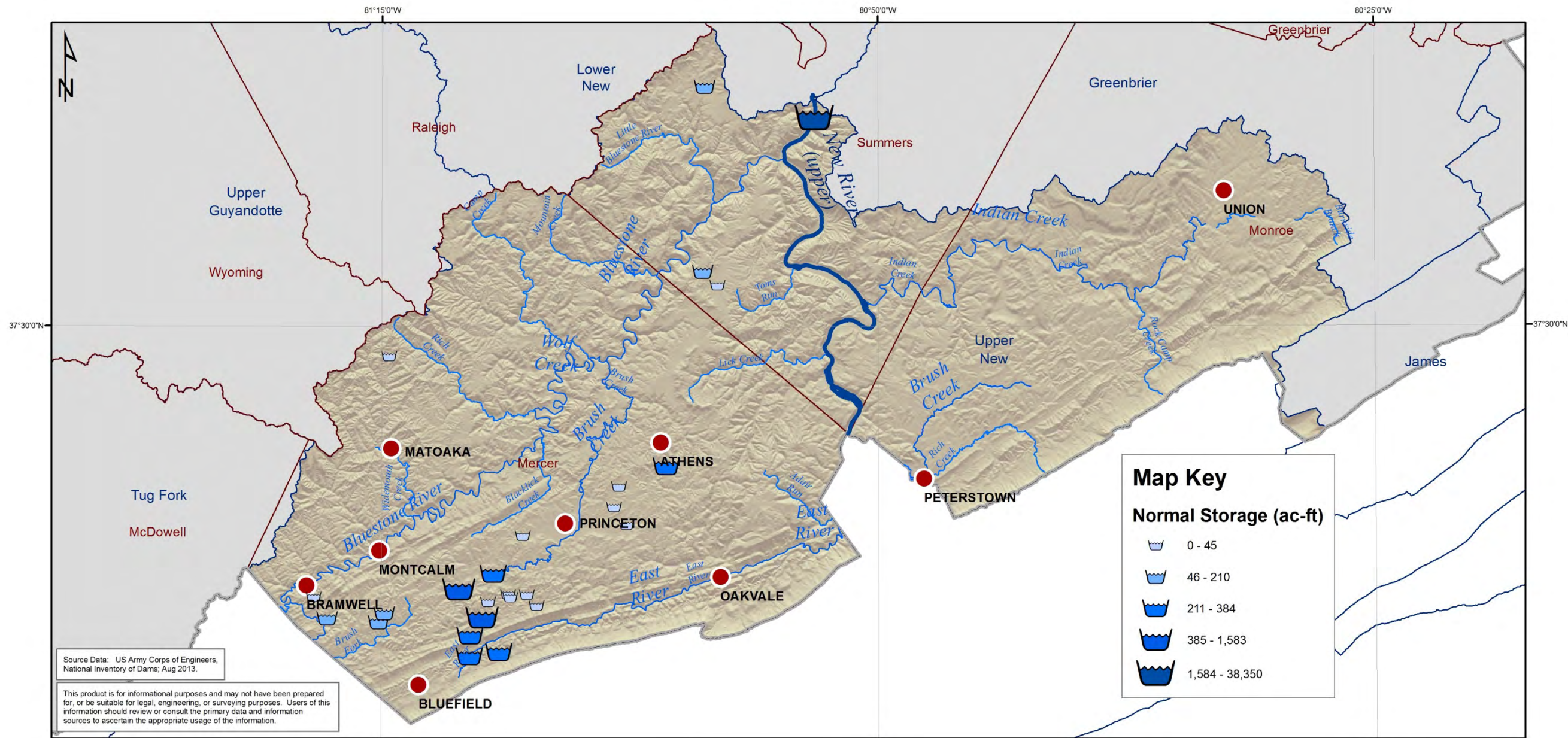
Large Quantity Users



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

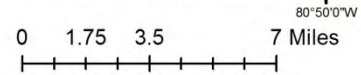
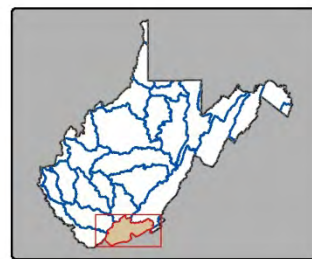
Upper New HUC-8 Watershed

Permitted Dams



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

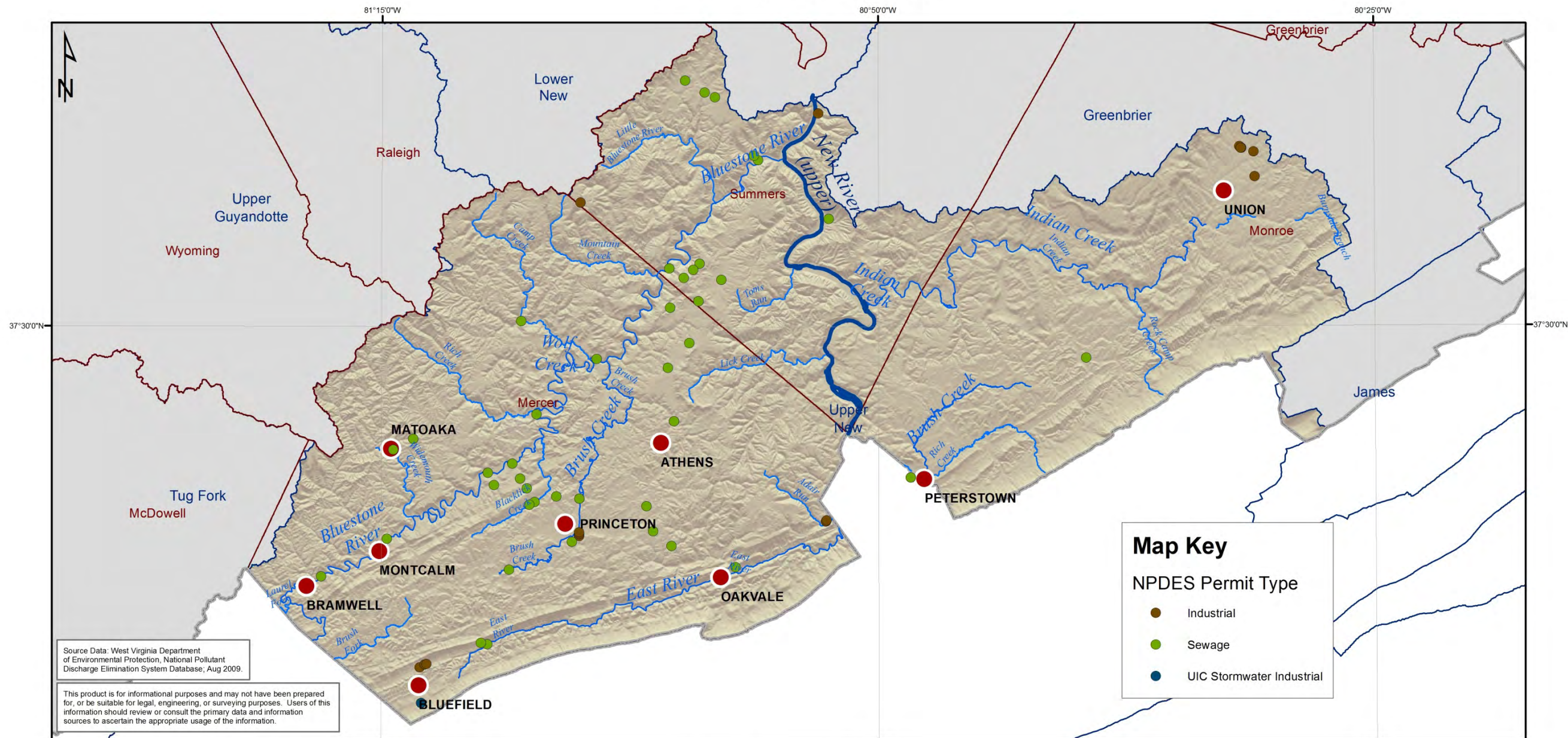
This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the appropriate usage of the information.



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

Upper New HUC-8 Watershed

Non-Mining NPDES Outlets



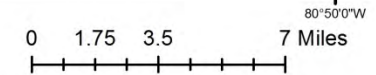
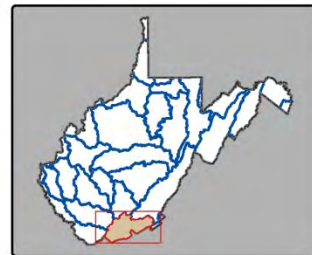
Source Data: West Virginia Department of Environmental Protection, National Pollutant Discharge Elimination System Database; Aug 2009.

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Map Key

NPDES Permit Type

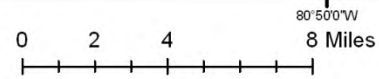
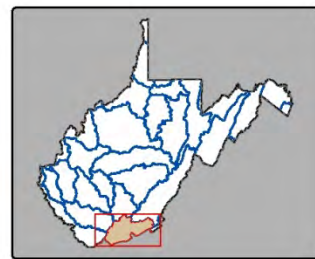
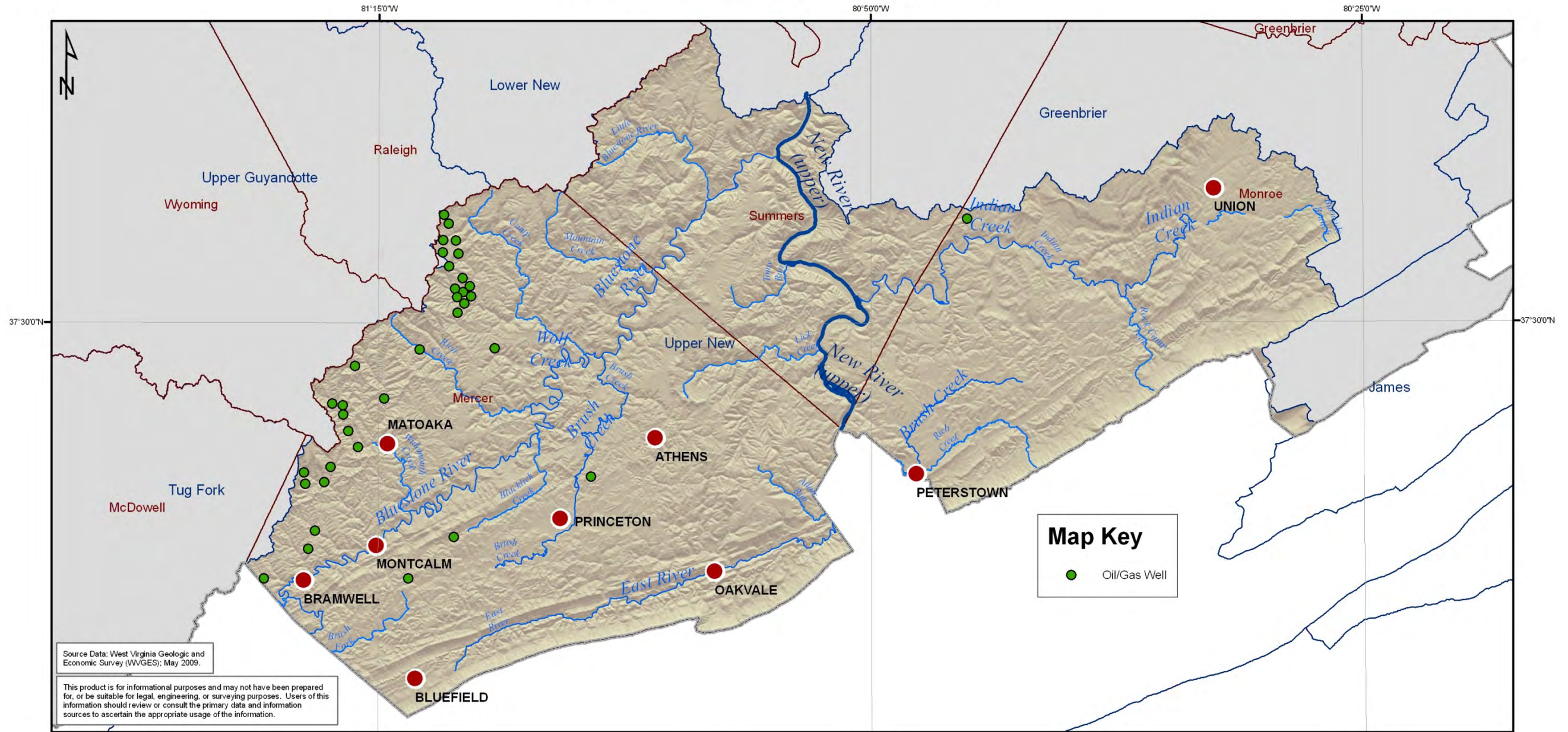
- Industrial
- Sewage
- UIC Stormwater Industrial



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

Upper New HUC-8 Watershed

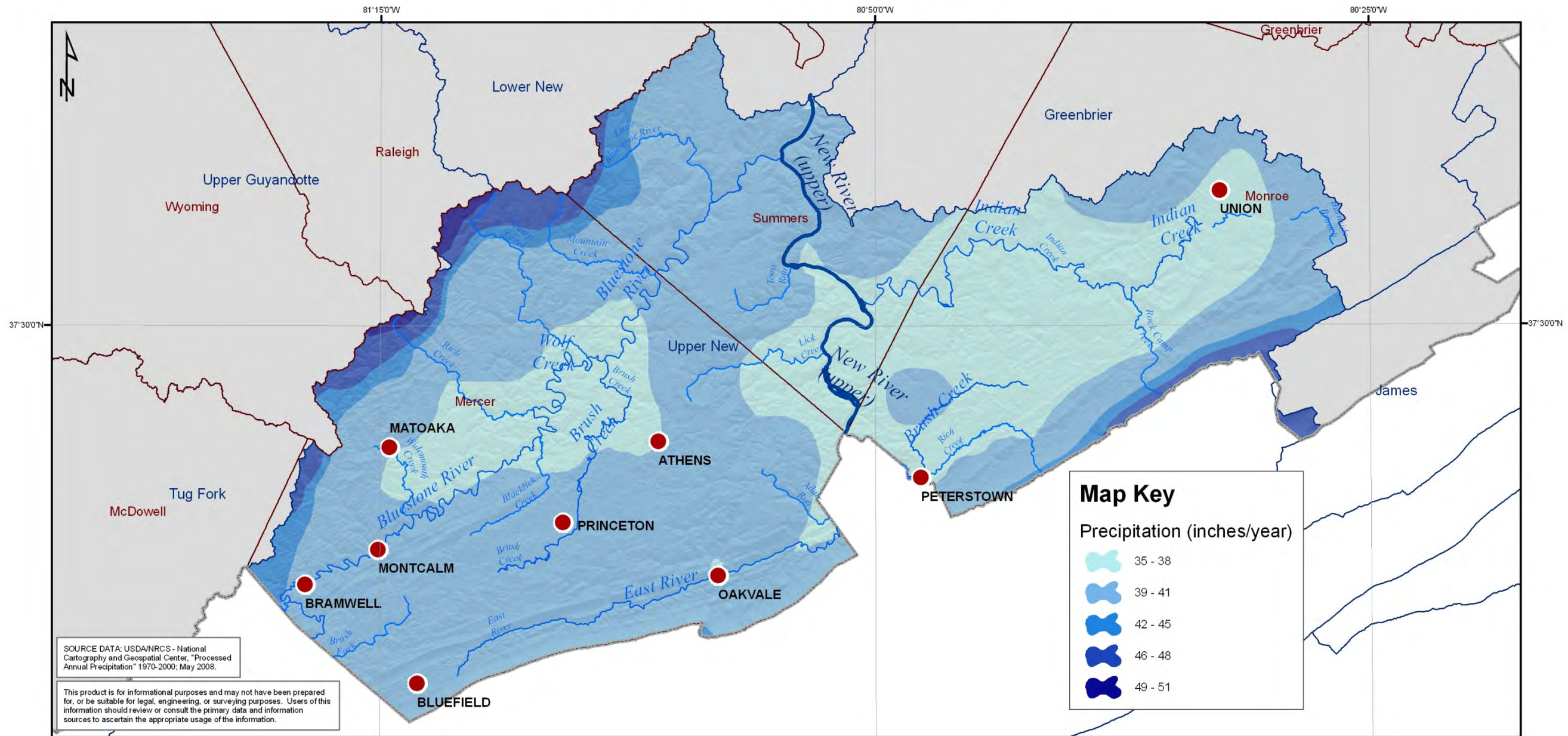
Well Logs with Gamma Rays and Water Shows



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

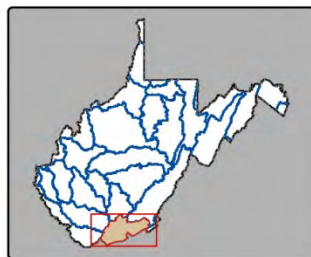
Upper New HUC-8 Watershed

Average Annual Precipitation (1971-2000)



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

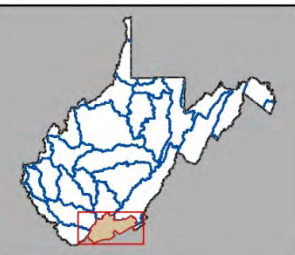
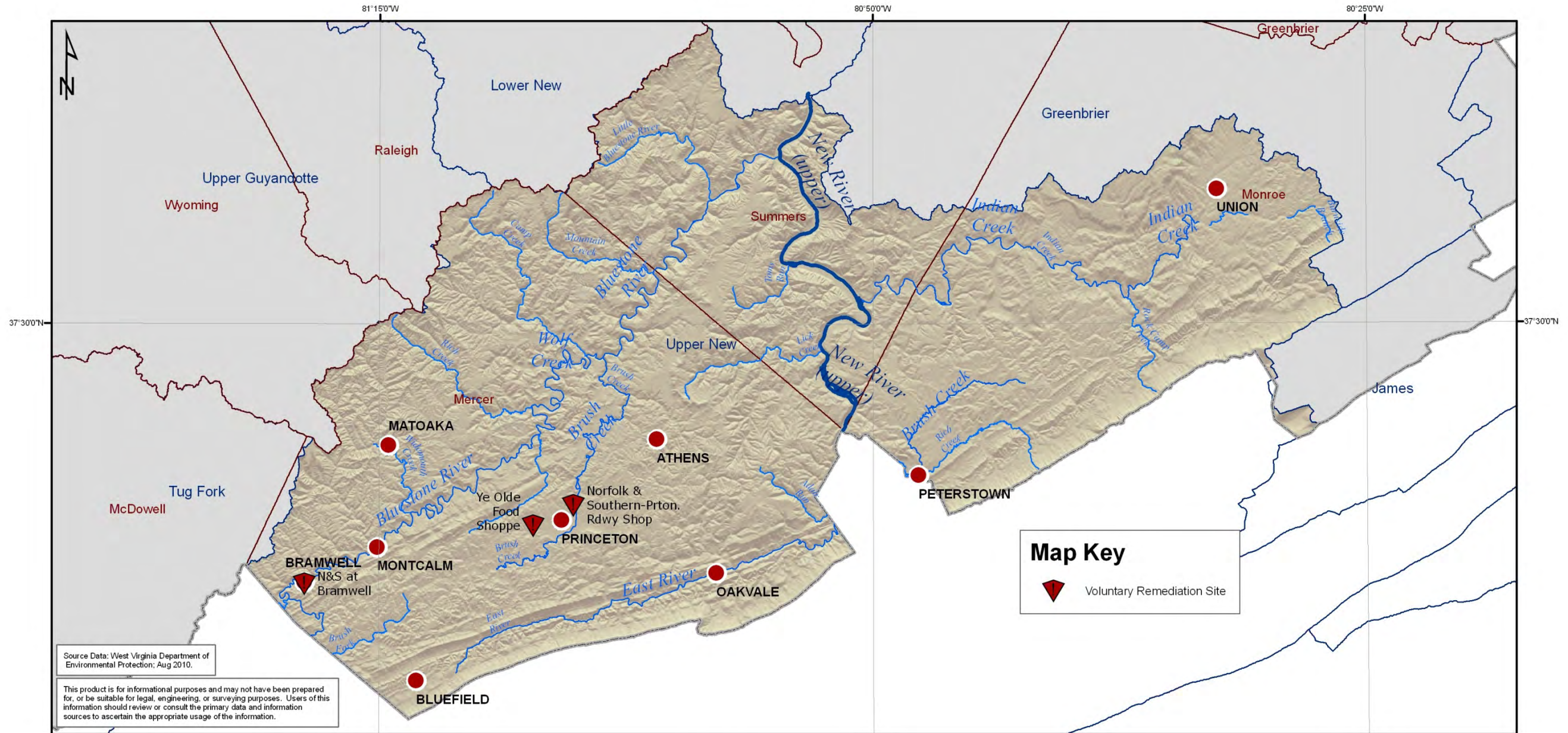
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Upper New HUC-8 Watershed

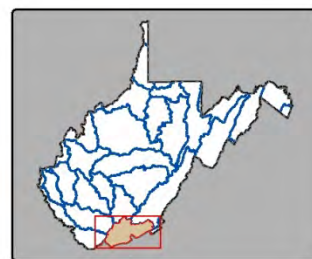
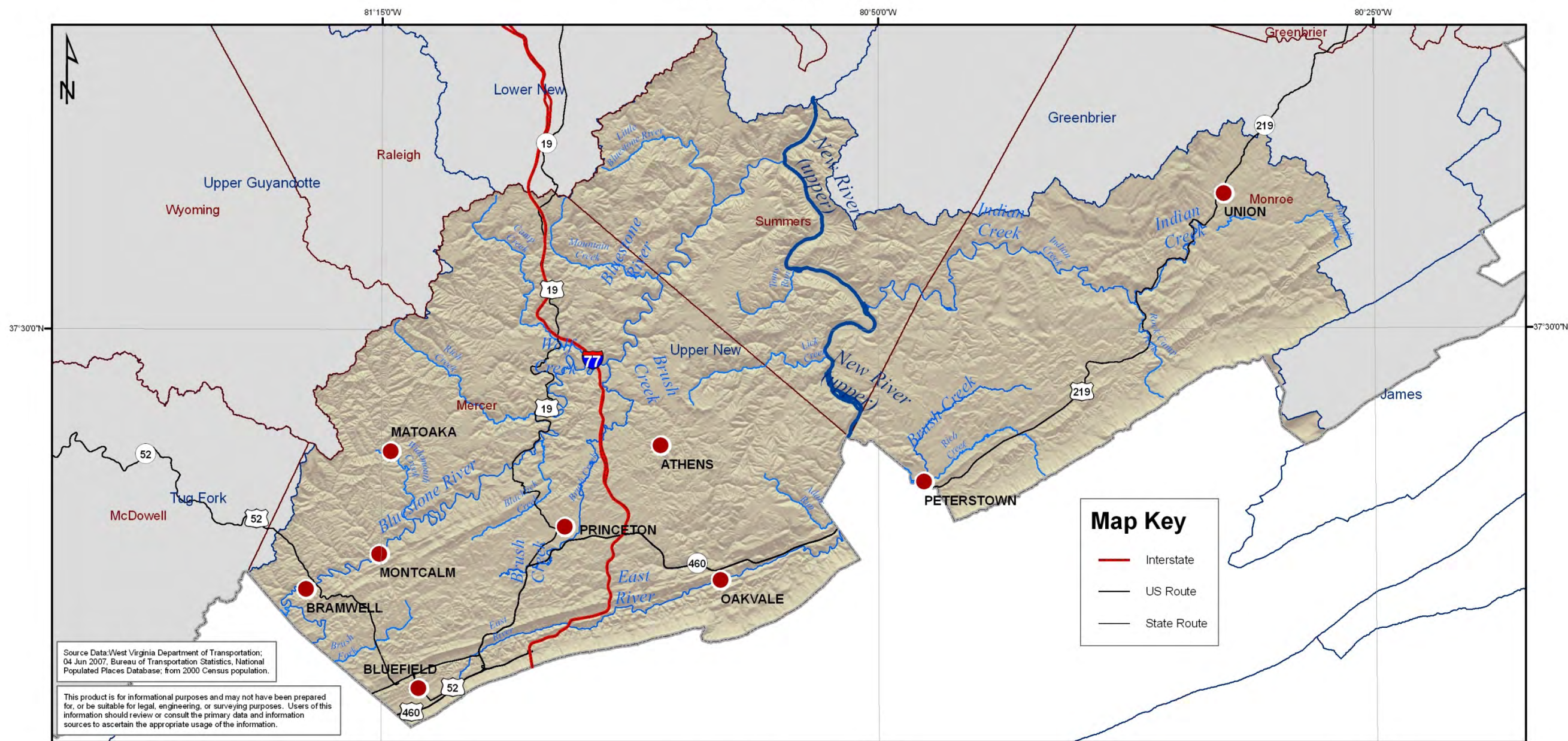
Remediation Sites



- State Boundary
- 8-Digit Watershed Boundary
- County Boundary
- City/Town
- Voluntary Remediation Site

Upper New HUC-8 Watershed

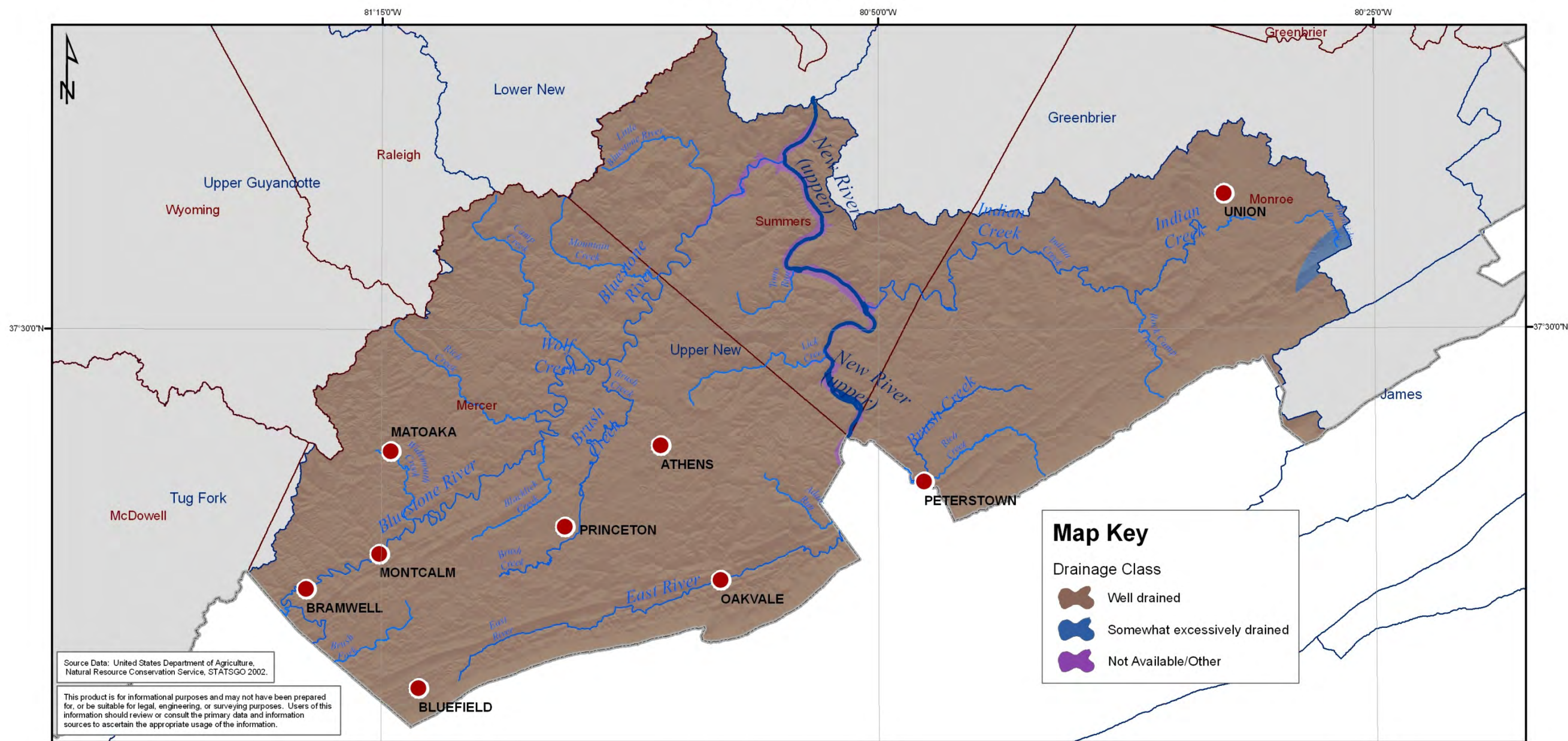
Major Roads and Cities



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

Upper New HUC-8 Watershed

Soil Drainage Classes






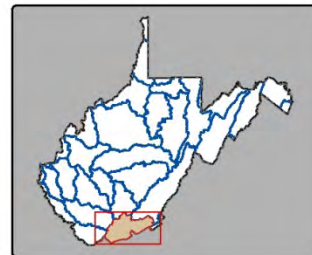
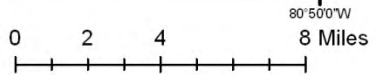
Source Data: United States Department of Agriculture, Natural Resource Conservation Service, STATSGO 2002.

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.

Map Key

Drainage Class

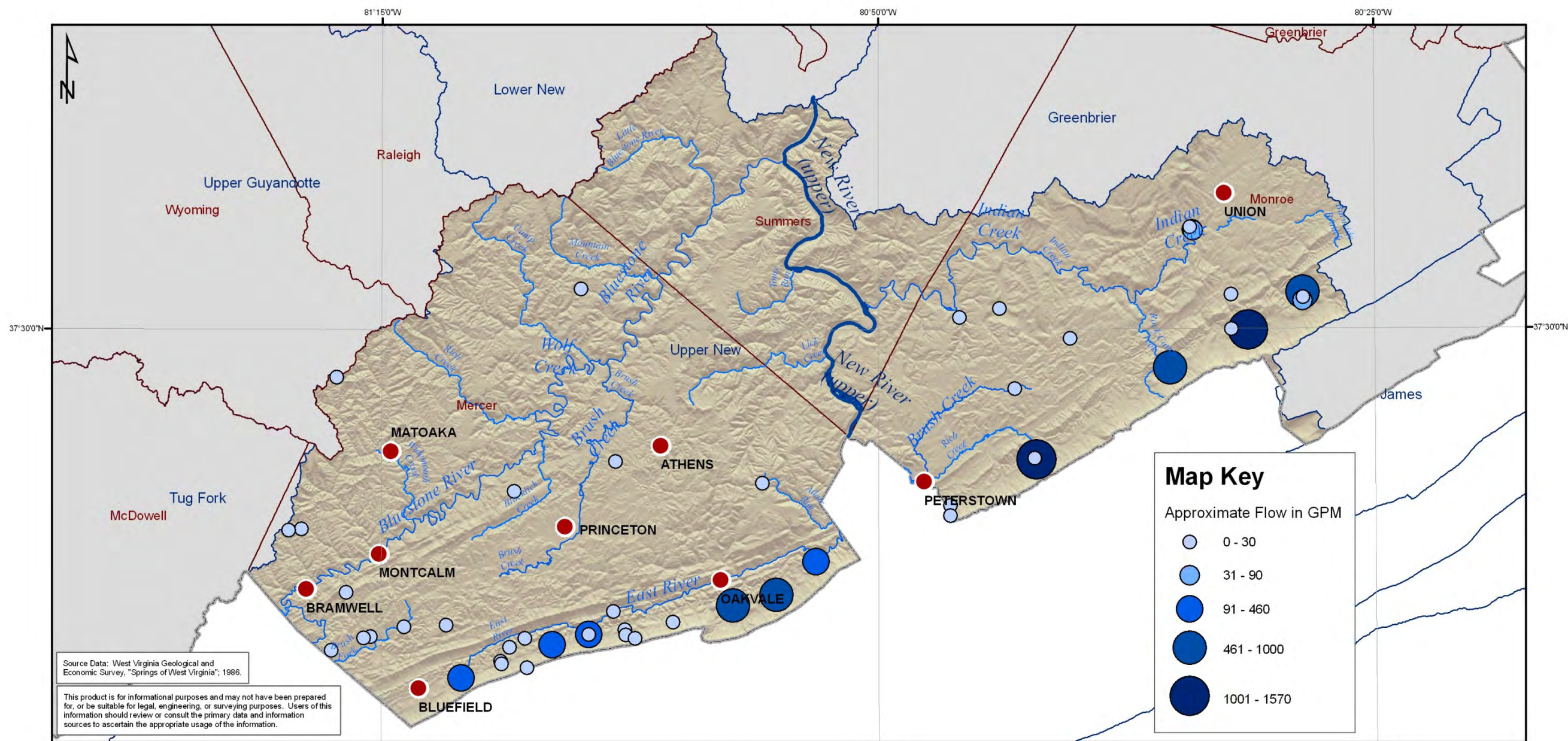
-  Well drained
-  Somewhat excessively drained
-  Not Available/Other



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

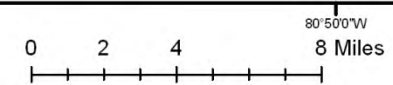
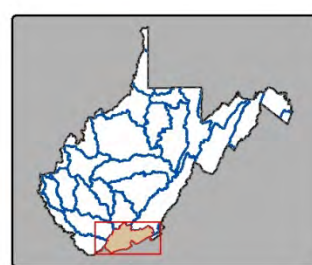
Upper New HUC-8 Watershed

Documented Springs



Source Data: West Virginia Geological and Economic Survey, "Springs of West Virginia", 1986.

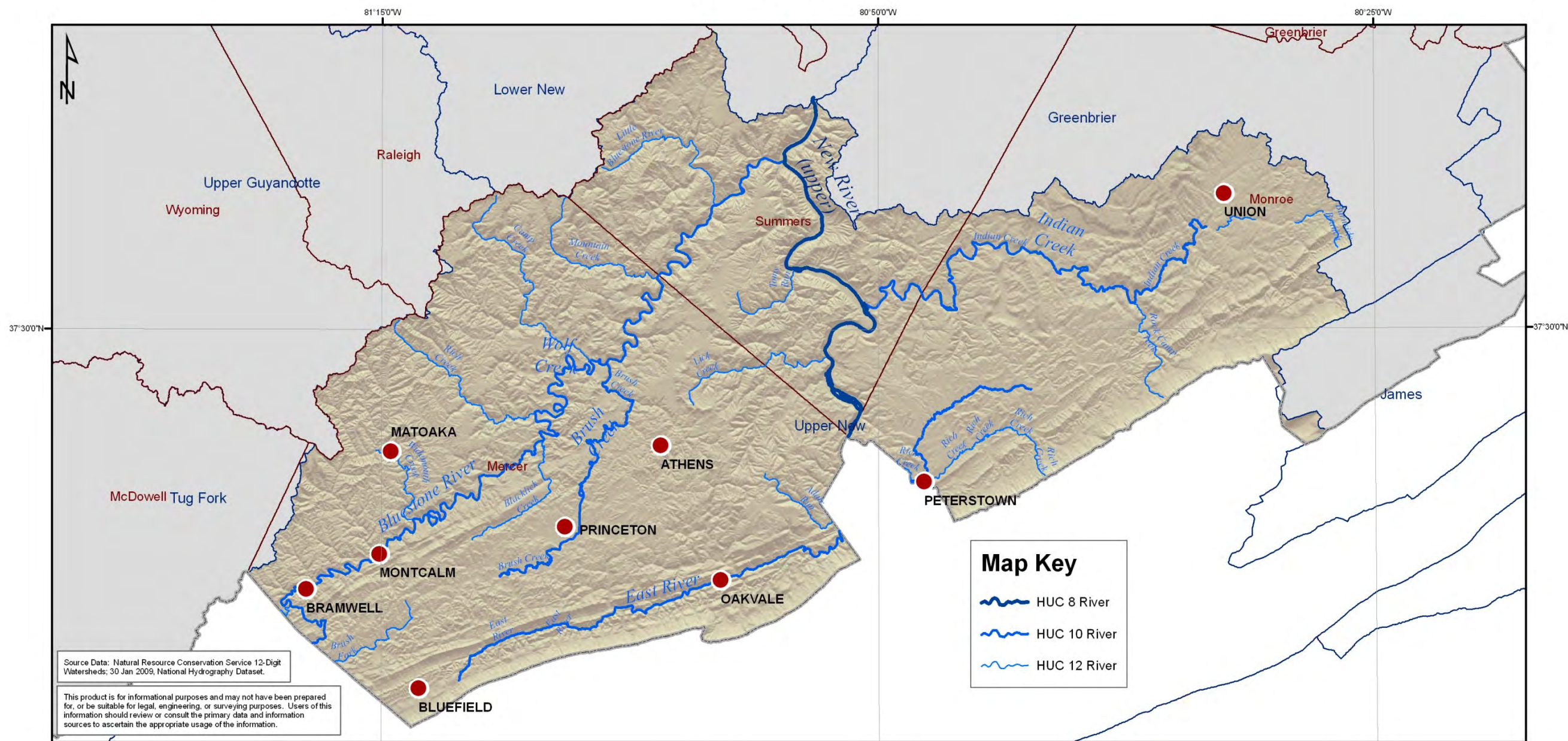
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- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town

Upper New HUC-8 Watershed

Stream Connections

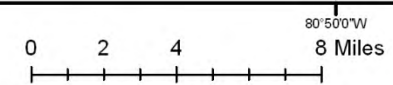


Source Data: Natural Resource Conservation Service 12-Digit Watersheds; 30 Jan 2009, National Hydrography Dataset.

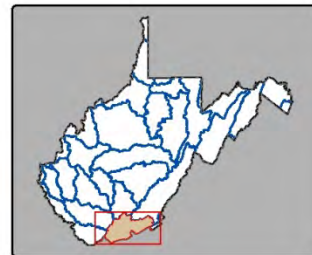
This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the appropriate usage of the information.

Map Key

- HUC 8 River
- HUC 10 River
- HUC 12 River

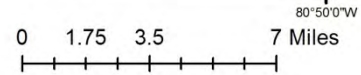
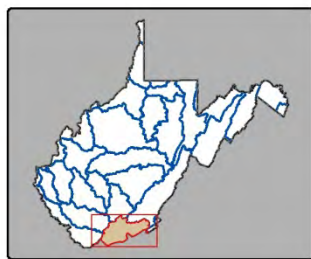
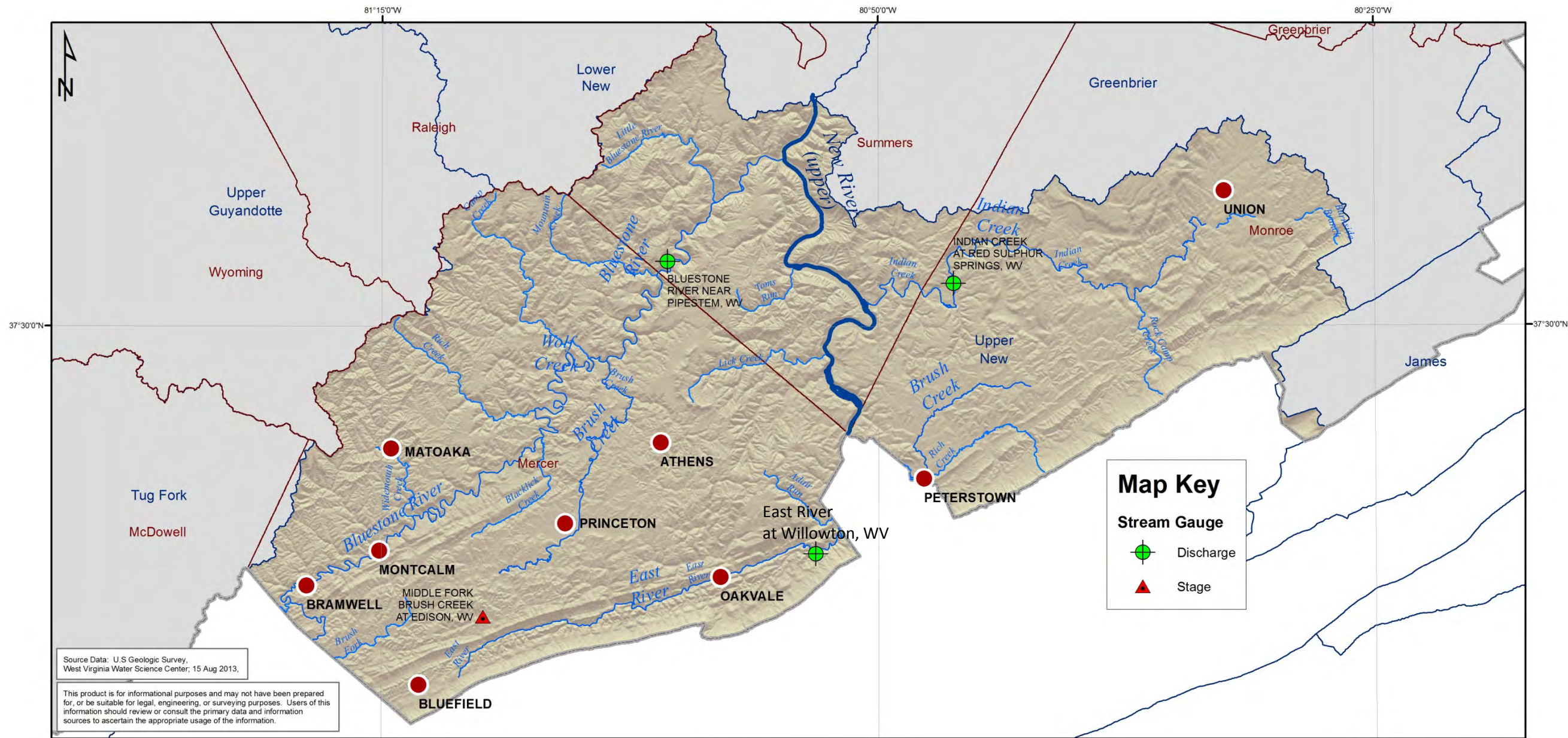


- State Boundary
- County Boundary
- 8-Digit Watershed Boundary
- City/Town



Upper New HUC-8 Watershed

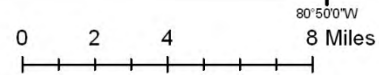
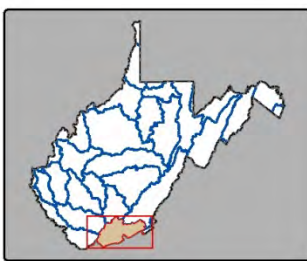
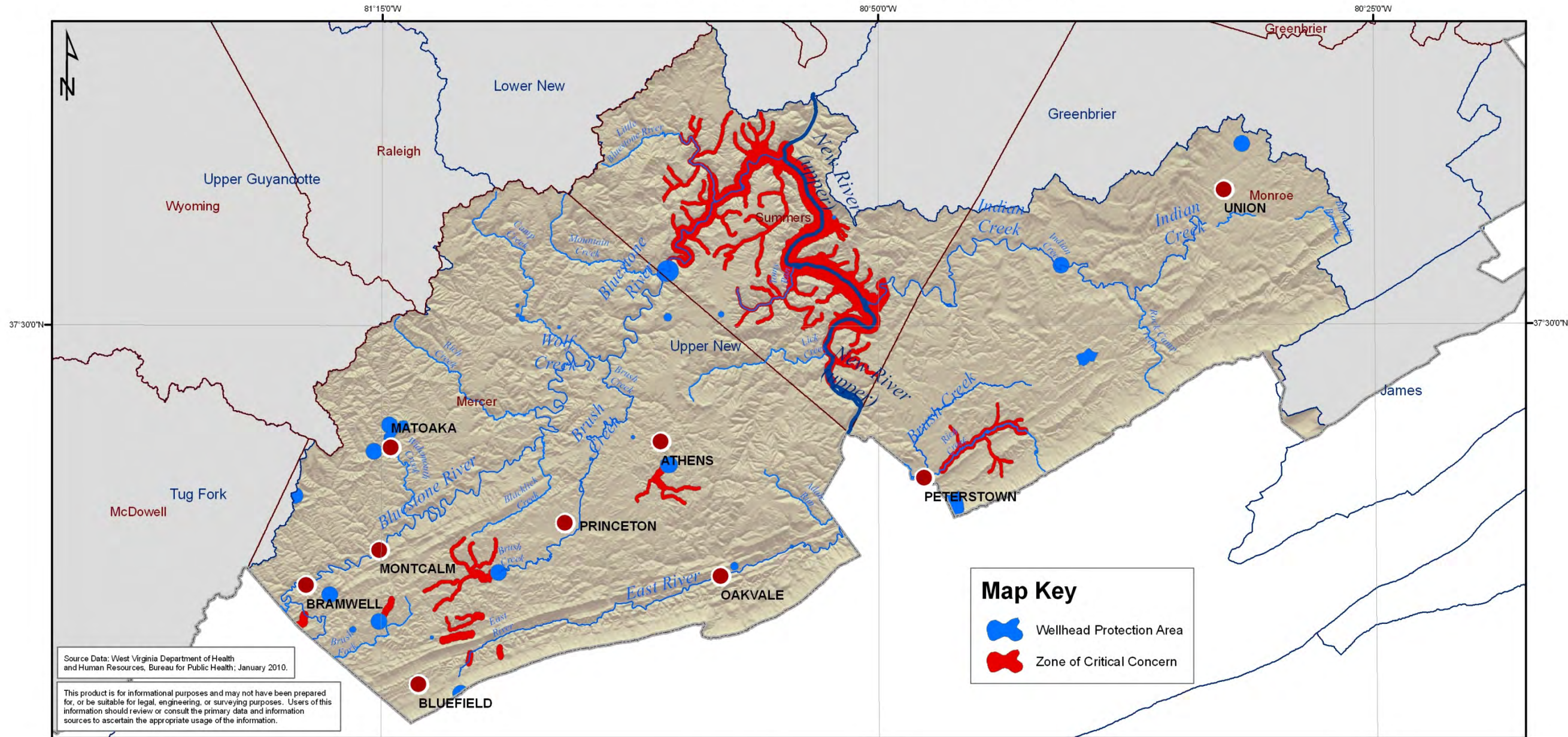
Stream Gauges



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

Upper New HUC-8 Watershed

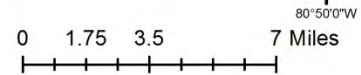
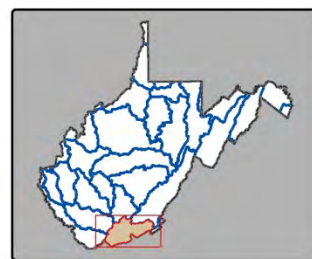
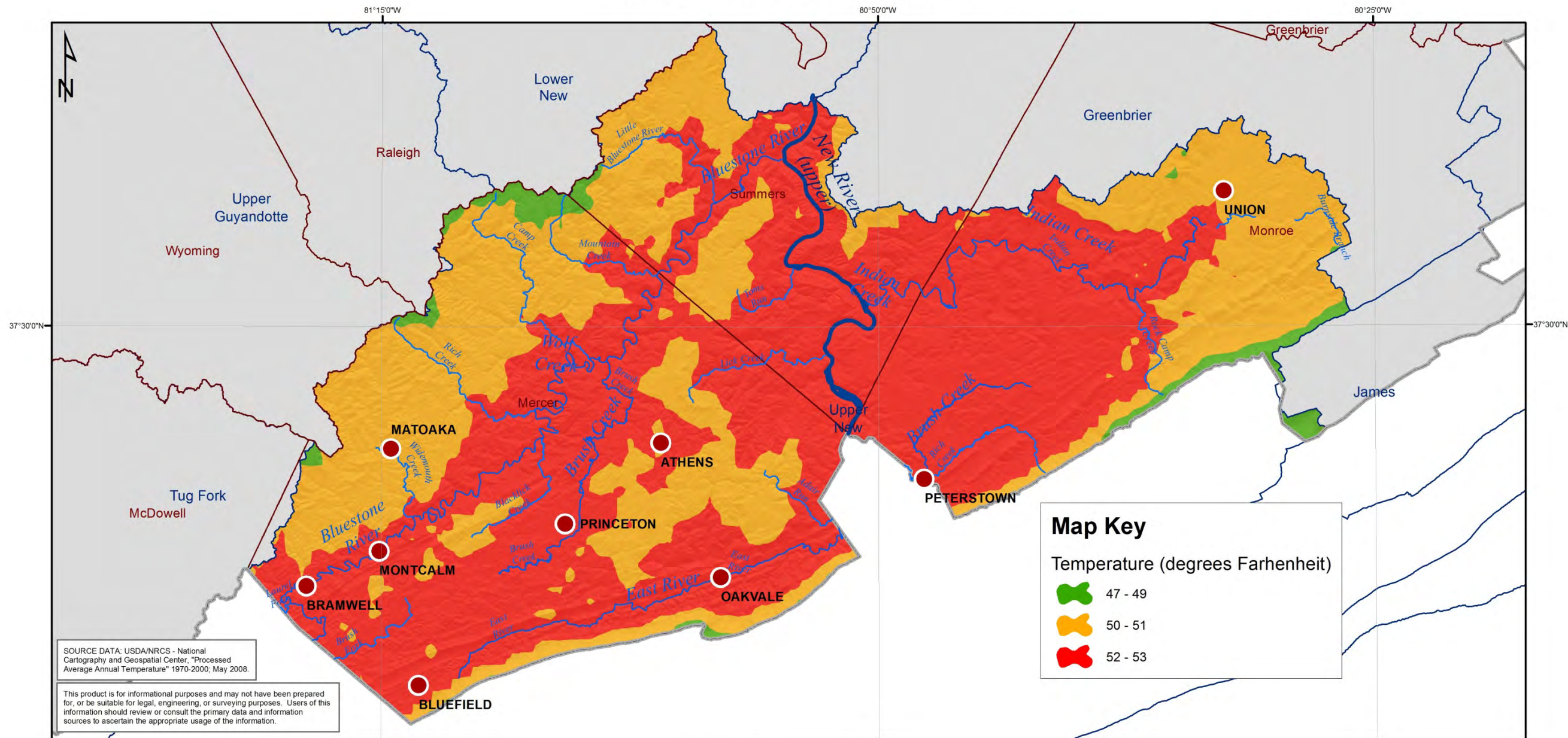
Source Water Assessment and Wellhead Protection Programs



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

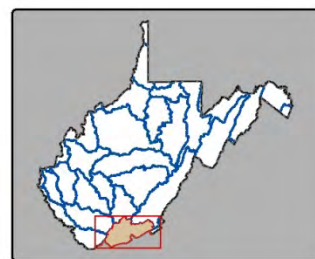
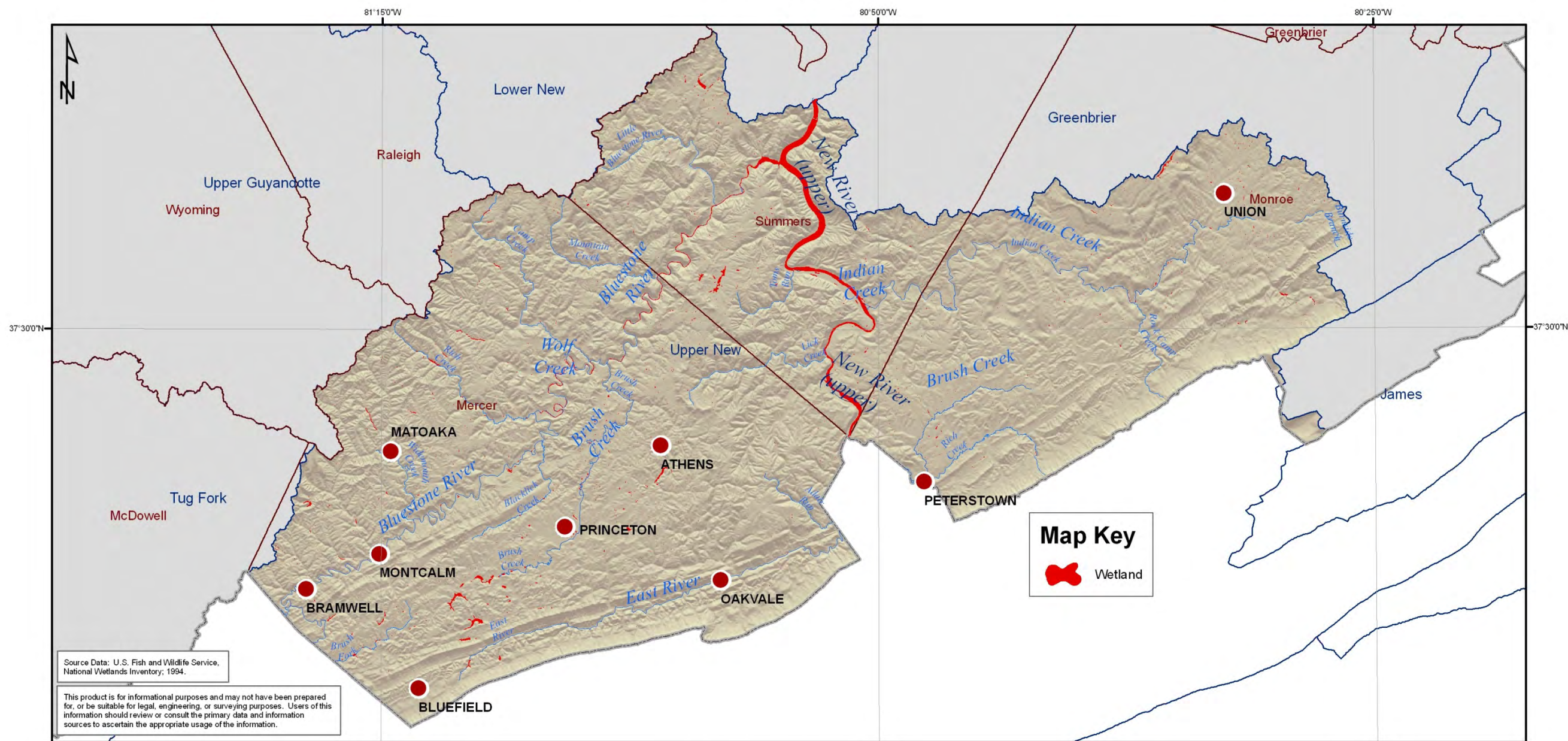
Upper New HUC-8 Watershed

Average Annual Temperature (1971-2000)



Upper New HUC-8 Watershed

Wetlands



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