Willis & Shirley Hall
7489 Back Valley Rd.
Lindside, WV 24951

USDA Forest Service
George Washington + Jefferson National Forests
MVP Project
5162 Valleypointe Parkway
Roanoke, VA 24019

Date: December 29, 2022

To: USDA Forest Service, George Washington and Jefferson National Forests, MVP Project, 5162 Valley Pointe Parkway, Roanoke, VA 24019

From: Shirley Hall, 7489 Back Valley Road, Lindside, WV 24951 (304) 772-4339

Re: Mountain Valley Pipeline (MVP) Project DSEIS

Since 2015, I have written many comment letters to multiple agencies regarding the Mountain Valley Pipeline and have received few replies. I am enclosing a few of those comment letters. I would appreciate these comment letters enclosed be included as part of the public record. Thank you for the opportunity to make comments.

I have come to the conclusion that no one wants to discuss the harm this pipeline is doing and can do to Monroe County, West Virginia. I even recall one report that put Monroe County, West Virginia in Virginia. Following are a few truths for you to consider.

See all the hazards DEIS has listed about the Giles County Seismic Zone (GCSZ) between MPs 165 to 230. Monroe County MP173.4 to MP195.4 is totally within the GCSZ. The Jefferson National Forest is also within the MPs 165 to 230.

DEIS Docket CP16-10-000
4.1.1.5 Geologic Hazards
Geologic hazards including seismicity (e.g., earthquakes), surface faults, soil liquefaction, landslides, flash flooding, karst terrain and subsidence, shallow bedrock, acid producing rocks and soils, and blasting were evaluated for the proposed projects. The conditions necessary for the development of other geologic hazards, including avalanches and volcanism, are not present in the area of the projects and therefore not discussed below…..Earthquakes, however, do occur in the eastern United States, primarily due to trailing edge tectonics and residual stress released from past mountain building events. The MVP pipeline would be in close proximity to the Giles County Seismic Zone (GCSZ), between MPs 165 to 230…..The GCSZ is considered seismically active and is defined by Bollinger and Wheeler (1988) by 12 earthquakes that span four orders of magnitude and two decades of time 1959 through 1980…..In addition, numerous microearthquakes (magnitude 2 or less) have occurred in the area of the GCSZ……Earthquake shaking alone does not pose a significant threat to the integrity of modern buried welded steel pipelines. In general, modern electric arc welded steel pipelines have not sustained damage during seismic events except due to permanent ground deformation, or traveling ground-wave propagation greater than or equal to a MMI of VIII (O'Rourke and Palmer, 1994)……The potential for soil liquefaction in the areas north and south of MPs 161 to 230 can be ruled out due to the low potential for a significant seismic event. However, soil liquefaction and lateral spreading hazards do exist along the MVP in the general area of the GCSZ where peak ground acceleration of

0.14 g could occur. A PGA of 0.14 depending on site conditions could be equivalent to a magnitude 5.0 earthquake (D.G. Honegger Consulting, 2015a).

4.1.2.3 Seismicity and Potential for Soil Liquefaction

The majority of the MVP is sited in an area with low probability of localized earth movements. However, in the area of the GCSZ, between about MPs 165 to 230, peak ground accelerations approach 14 percent of the force of g, and the potential for a magnitude 5.8 earthquake exists.....Soil liquefaction could also result if a significant seismic event were to occur. The potential for soil liquefaction exists mainly in the area of the GCSZ between MPs 165 and 230.... PGAs in this area are on the order of 0.14 g, and could produce an earthquake of magnitude MMI VI....Calculations by D.G. Honegger Consulting indicate that potential hazards exist for triggered slope displacement due to a higher potential for seismicity between MPs 161 and 230 should the length of soil displacement over the pipeline exceed 1,580 feet for parallel slopes.

According to D.G/ Honegger Consulting, soil liquefaction and lateral spreading hazards do exist along the MVP in the general area of the GCSZ where peak ground acceleration of 0.14 g could occur. A PGA of 0.14 depending on site conditions could be equivalent to a magnitude 5.0 earthquake . This GCSZ area covers all of Monroe County, West Virginia and the Jefferson National Forest.

Jefferson National Forest *4-77 Water Resources*

The portion of the project area within the Jefferson National Forest is underlain by the Valley and Ridge Regional Aquifer system.

Jefferson National Forest *Water Resources 4-106*

The MVP within the Jefferson National Forest would cross two watersheds (HUC-8): the Upper James, and the Middle New. The project would conduct 27 waterbody crossings within the Jefferson National Forest. All waterbodies would be crossed using dry open-cut methods (dam and pump or flume crossing). Table 4.3.2-11 lists the waterbodies that would be crossed within the Jefferson National Forest, along with the locations at which they would be crossed, their flow types, and FERC classifications. One waterbody that would be crossed, Craig Creek, is an NRI-listed waterbody and also contains habitat for threatened and endangered species. Threatened and endangered species are discussed in section 4.7.

4.7.3.3 Forest Service Locally Rare Species *Special Status Species 4-200*

In addition to sensitive species, the FS also selects locally rare species that, despite having secure populations on a range-wide basis, are present in low population numbers within a particular forest. The species are recognized by the FS as requiring appropriate management to maintain the populations within the forest. **The FS indicates that suitable habitat exists within the MVP area for a total of 151 locally rare species, including 3 mammals, 11 birds, 3 reptiles, 1 amphibian, 3 aquatic species, 17 terrestrial invertebrates, and 113 plants**. Appendix O-2 lists these species and their required habitats

Federal Lands *4-217 Land Use And Visual Resources*

The MVP pipeline route would be within 0.25 mile of the Peters Mountain Wilderness, Brush Mountain Wilderness, within 2.5 miles of Mountain Lake Wilderness, and within 7.5 miles of Brush Mountain East Wilderness. Each of these designated Wilderness Areas are part of the Jefferson National Forest.

Appalachian National Scenic Trail *4-221 Land Use And Visual Resources* **The MVP pipeline route would cross the ANST between about MPs 195.0 and 195.5, within the Jefferson National Forest....**..The Jefferson National Forest manages the ANST.(*4-249 Land Use And Visual Resources* - **At this location the trail is located on a narrow ridgetop, with steep forested slopes on either side**.)

There can be no good reasons given to the people that are and will be directly impacted by this pipeline. The only ones to profit from this are the investors. They are and will live far away from the mess they have made and will not be impacted negatively by their greed.

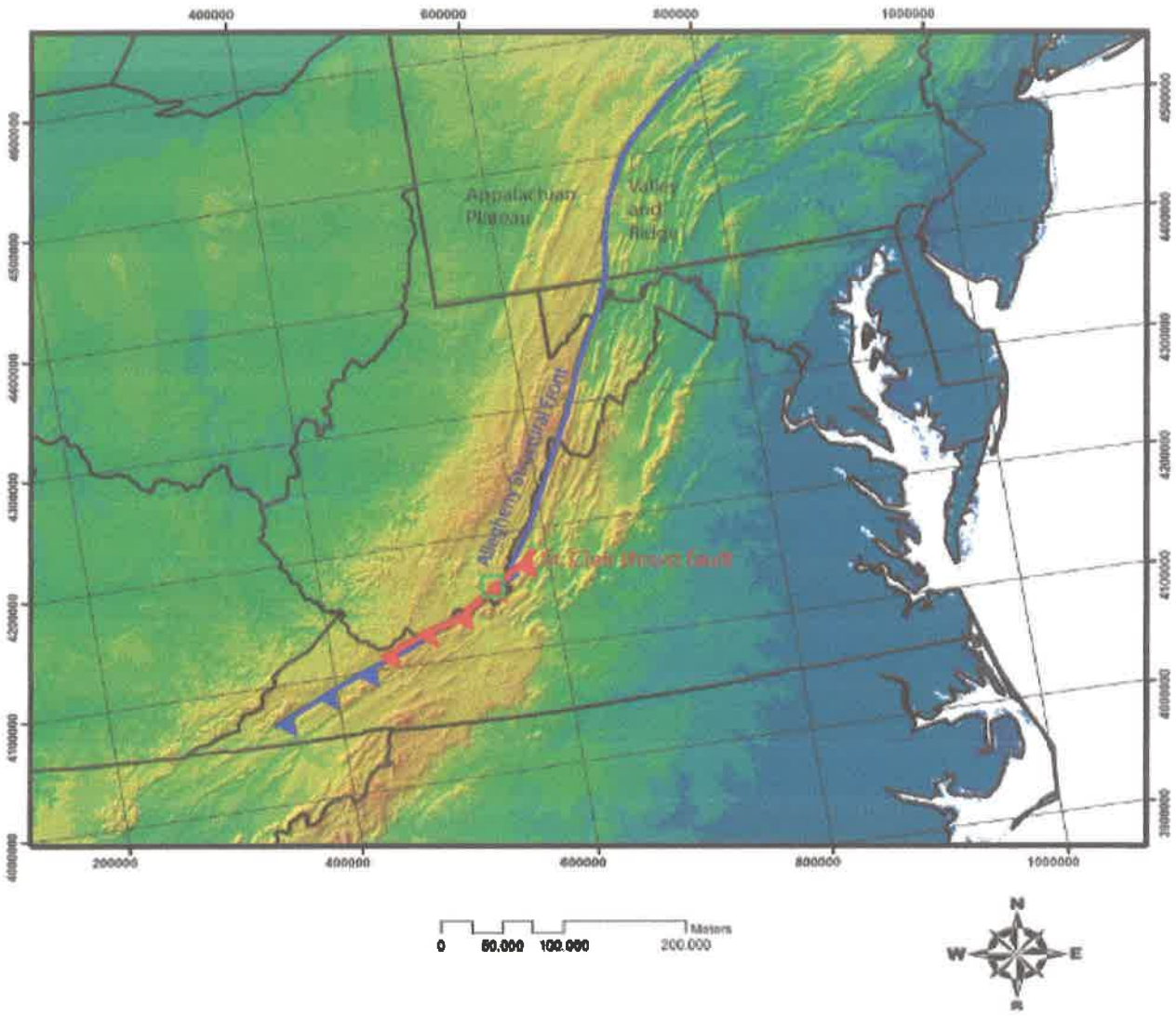
September 27, 2020

USDA Forest Service
George Washington and Jefferson National Forests
MVP Project
5162 Valleypointe Parkway
Roanoke, VA 24019

Attention: responsible official - Under Secretary of Agriculture, Natural Resources and Environment

I do not have an e-mail address or internet. Please reply by mail to Shirley and Willis Hall, 7489 Back Valley Road, Lindside, WV 24951. I am replying to the postcard I received concerning the Mountain Valley Pipeline (MVP) Project USDA Forest Service Draft Supplemental Environmental Impact Statement (GSEIS). Over time I have written many letters to you about MVP especially concerning mile markers MP 165 to MP 230. I am enclosing copies of some of these letters for your reconsideration. I received very few replies to my letters.

MVP should not be allowed to cross the GCSZ area (MP 165 to MP 230) anywhere. A scoping comment paper was mailed to FERC on June 2, 2015 containing information about the St. Clair Fault. The St. Clair Fault was not even mentioned in the original DEIS.



The following cumulative geologic hazards and environmental consequences are located between MP 165 to MP 230 called the GCSZ (Giles County Seismic Zone). This area covers Summers & Monroe Counties, West Virginia, Jefferson National Forest, Appalachian National Scenic Trail and Giles, Craig & Montgomery Counties, Virginia. The Allegheny Trail also intersects with the Appalachian National Scenic Trail in Monroe County. The following cumulative geologic hazards information is taken directly from the DEIS concerning the GCSZ:

4.1.2.3 Seismicity and Potential for Soil Liquefaction In the area of the GCSZ (Giles County Seismic Zone), between about **MPs 165 to 230**, peak ground accelerations approach 14 percent of the force of g, and the potential for a magnitude 5.8 earthquake exists…The potential for soil liquefaction exists mainly in the area of the GCSZ

4.1.2.4 Slopes and Landslide Potential The potential for landslides or slope failure could be triggered by seismicity from the GCSZ or from intense and/or prolonged rainfall events. *Geology 4-41* The areas that would be crossed within the Jefferson National Forest by the MVP contain slopes greater than 30 percent and the potential for landslides within the Jefferson National Forest would be moderate to high..

4.1.1.7 Jefferson National Forest Landslides are a dominant geologic process shaping Peters Mountain, Sinking Creek Mountain, and Brush Mountain. The largest known landslides in eastern North America are on the south flank of Sinking Creek Mountain…where the pipeline route would cross the Jefferson National Forest.

4.2.2.4 Slip-Prone Soils *Soils 4-68* Certain soil types such as shale or clay soils are more prone to slipping than other soils. Due to this increased potential for slipping, the probability of landslides is increased when constructing through slip prone soils. The Gilpin-Peabody complex, 35 to 70 percent slopes, Carbo, Faywood, Frederick, Nolichucky, Poplimento, and Sequoia soils are considered to be slip-prone. The MVP would affect about 17.5 acres… of these soils between **MP 172 and 196**. In Virginia 290.2 acres… of these soils would be affected from approximately **MP 196 to 235 (MP172 to 235)**

4.1.2.5 Karst Terrain Karst features, such as sinkholes, caves, and caverns can form as a result of the long-term action of groundwater on soluble carbonate rocks... The risk of the development of sinkholes along the pipeline is relatively high between about **MPs 171 and 237.**

4.1.1.5 Karst Topography In total, 94 instances of karst features were identified within Summers and Monroe Counties, WV and Giles, Craig, and Montgomery Counties, VA.

4.1.1.2 Bedrock Geology Karst terrain also occurs in the carbonate (limestone and dolostone) rocks found in the project area from approximate **MPs 170 to 237**.

4.3.1.1 Groundwater in Karst Terrain is present along the MVP pipeline route in Summers and Monroe Counties of West Virginia, as well as in Giles and Montgomery Counties of Virginia.

4.3.1.2 Blasting Blasting in areas of karst topography can create fractures in the rock, potentially changing groundwater flow, creating the potential for groundwater contamination, and temporarily affecting yield and increasing turbidity in nearby water wells and/or springs….

4.1.2 Environmental Consequences Geological hazards, such as seismic activity or landslides, may affect the integrity of the pipelines. The crossing of steep topography would present construction challenges; as would the crossing of shallow bedrock, acid producing rocks, and karst terrain.

MVP rejected their original route (alternative 1) due to insurmountable construction challenges as well as a high risk of slope failure and pipeline slips, once the pipeline was to be in operation. The current proposed route has 120 miles of steep slope, 122.8 miles of side slope and crosses 214.9 miles of shallow bedrock (table 3.4.2-1).

Sincerely,

Mrs. Shirley Hall
7489 Back Valley Road
Lindside, WV 24951
(304) 772-4339

Date: October 12, 2016

To: USDA Forest Service, Mountain Valley Pipeline Survey, 5162 Valley Pointe Parkway, Roanoke, VA 24019

From: Shirley Hall, Rt 1 Box 240F, Lindside, WV 24951 (304) 772-4339
New 911 address: 7489 Back Valley Road
Re: Mountain Valley Pipeline Project FERC/DEIS D0272 Docket CP16-10-000 & CP 16-13-000

Please refer to my letters to the USDA Forest Service dated March 25, 2015 and July 5, 2014 (copies attached). Following is information regarding hazards from the DEIS for Mountain Valley Pipeline. Please note that the Jefferson National Forest is within the
Giles County Seismic Zone (GCSZ).

TABLE 4.1.1-11 **Areas of Landslide Concern along the Mountain Valley Project**

Start	**End MP**	**Distance**	**Percent**	**Slope**	**Notes c/**
195.4	196.7	1800	18-26	No	Jefferson National
197.7	198.2	2300	18-35	No	Jefferson National Forest.

See all the hazards DEIS has listed about the Giles County Seismic Zone (GCSZ) between MPs 165 to 230. Monroe County MP173.4 to MP195.4 is totally within the GCSZ. The Jefferson National Forest is also within the MPs 165 to 230.

DEIS Docket CP16-10-000
4.1.1.5 Geologic Hazards
Geologic hazards including seismicity (e.g., earthquakes), surface faults, soil liquefaction, landslides, flash flooding, karst terrain and subsidence, shallow bedrock, acid producing rocks and soils, and blasting were evaluated for the proposed projects. The conditions necessary for the development of other geologic hazards, including avalanches and volcanism, are not present in the area of the projects and therefore not discussed below.....Earthquakes, however, do occur in the eastern United States, primarily due to trailing edge tectonics and residual stress released from past mountain building events. The MVP pipeline would be in close proximity to the Giles County Seismic Zone (GCSZ), between MPs 165 to 230.....The GCSZ is considered seismically active and is defined by Bollinger and Wheeler (1988) by 12 earthquakes that span four orders of magnitude and two decades of time 1959 through 1980.....In addition, numerous microearthquakes (magnitude 2 or less) have occurred in the area of the GCSZ.....Earthquake shaking alone does not pose a significant threat to the integrity of modern buried welded steel pipelines. In general, modern electric arc welded steel pipelines have not sustained damage during seismic events except due to permanent ground deformation, or traveling ground-wave propagation greater than or equal to a MMI of VIII (O'Rourke and Palmer, 1994).....The potential for soil liquefaction in the areas north and south of MPs 161 to 230 can be ruled out due to the low potential for a significant seismic event.

However, soil liquefaction and lateral spreading hazards do exist along the MVP in the general area of the GCSZ where peak ground acceleration of 0.14 g could occur. A PGA of 0.14 depending on site conditions could be equivalent to a magnitude 5.0 earthquake (D.G. Honegger Consulting, 2015a).

4.1.2.3 Seismicity and Potential for Soil Liquefaction
The majority of the MVP is sited in an area with low probability of localized earth movements. However, in the area of the GCSZ, between about MPs 165 to 230, peak ground accelerations approach 14 percent of the force of g, and the potential for a magnitude 5.8 earthquake exists.....Soil liquefaction could also result if a significant seismic event were to occur. The potential for soil liquefaction exists mainly in the area of the GCSZ between MPs 165 and 230.... PGAs in this area are on the order of 0.14 g, and could produce an earthquake of magnitude MMI VI....Calculations by D.G. Honegger Consulting indicate that potential hazards exist for triggered slope displacement due to a higher potential for seismicity between MPs 161 and 230 should the length of soil displacement over the pipeline exceed 1,580 feet for parallel slopes.

According to D.G/ Honegger Consulting, soil liquefaction and lateral spreading hazards do exist along the MVP in the general area of the GCSZ where peak ground acceleration of 0.14 g could occur. A PGA of 0.14 depending on site conditions could be equivalent to a magnitude 5.0 earthquake . This GCSZ area covers all of Monroe County, West Virginia and the Jefferson National Forest.

Sincerely,
Shirley Hall
Rt. 1 Box 240F **new 911 address:** 7489 Back Valley Road
Lindside, WV 24951
304-772-4339

December 14, 2016

Ms. Jennifer Adams
George Washington & Jefferson National Forest
5162 Valleypoint Parkway
Roanoke, Virginia 24019

Dear Ms. Adams, FERC Docket Nos.: CP16-10-000 and CP16-13-0000.

This letter regards the Proposed Amendments to the Forest Plan for the Jefferson National Forest included in the above project DEIS and unnamed future projects. You cannot legally increase the project area in this DEIS to include a new designated corridor that would be 500 feet wide for additional projects. The Applicants, Mountain Valley Pipeline, LLC and Equitrans, LP which is what this DEIS is about are requesting a 50-foot-wide easement.

If you choose to use this EIS to include a new utility corridor, NEPA calls for an examination of their impact in a single EIS. The environmental consequences of proposed actions must all be considered together in a single, programmatic EIS when their impacts will have a compounded effect on a region. This DEIS does not name or list or examine the impact of any other specific project other than MVP within the Jefferson National Forest. Therefore, to meet NEPA, FERC has to do another EIS if and when other projects want to cross the Jefferson National Forest. This EIS cannot be used for future projects. This EIS only covers a 50 foot wide easement for Mountain Valley Pipeline, LLC and Equitrans, LP FERC Docket Nos.: CP16-10-000 and CP16-13-000.

§ 1508.7 Cumulative impact. *Cumulative impact* is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can
result from individually minor but collectively significant actions taking place over a period of time.

The Draft Environmental Impact Statement (DEIS) for the MVP pipeline lists the following multiple cumulative impact hazards from mile marker **MP165 to MP237**. This area includes part of Summers County and all of Monroe County, West Virginia, all of the **Jefferson National Forest**, all of Giles County and part of Montgomery County, Virginia.

4.1.2.3 Seismicity and Potential for Soil Liquefaction *Geology 4-44* The majority of the MVP is sited in an area with low probability of localized earth movements. However, in the area of the GCSZ (Giles County Seismic Zone), between about **MPs 165 to 230**, peak ground accelerations approach 14 percent of the force of g, and the potential for a magnitude 5.8 earthquake exists… *4-45 Geology* The potential for soil liquefaction exists mainly in the area of the GCSZ between **MPs 165 and 230**

4.1.2.4 Slopes and Landslide Potential *Geology 4-46* The potential for landslides or slope failure could be triggered by seismicity from the GCSZ **(Mps 165 to 230)** or from intense and/or prolonged rainfall events. *4-41 Geology* The areas that would be crossed within the Jefferson National Forest by the MVP contain slopes greater than 30 percent and the potential for landslides within the Jefferson National Forest would be moderate to high..

4.1.1.7 Jefferson National Forest *Geology 4-40* Landslides are a dominant geologic process shaping Peters Mountain, Sinking Creek Mountain, and Brush Mountain. The largest known landslides in eastern North America are on the south flank of Sinking Creek Mountain (see section 4.1.2.4) where the pipeline route would cross the Jefferson National Forest (Schultz et al., 1986; Schultz and Southworth, 1989).

4.2.2.4 Slip-Prone Soils *Soils 4-68* Certain soil types such as shale or clay soils are more prone to slipping than other soils. Due to this increased potential for slipping, the probability of landslides is increased when constructing through slip prone soils. The Gilpin-Peabody complex, 35 to 70 percent slopes, Carbo, Faywood, Frederick,

Nolichucky, Poplimento, and Sequoia soils are considered to be slip-prone. The MVP would affect about 17.5 acres of the soils and complexes of these soils between **MP 172 and 196**. In Virginia 290.2 acres of these soils and complexes of these soils would be affected from approximately **MP 196 to 235** (note- **MP172 to 235)**

4.1.1.2 Bedrock Geology *4-5 Geology* Karst terrain also occurs in the carbonate (limestone and dolostone) rocks found in the project area from approximate **MPs 170 to 237**.

4.1.2.5 Karst Terrain *Geology 4-48* Karst features, such as sinkholes, caves, and caverns can form as a result of the long-term action of groundwater on soluble carbonate rocks (e.g., limestone and dolostone). The risk of the development of sinkholes along the pipeline is relatively high between about **MPs 171 and 237.**

Blasting *4-39 Geology* Blasting in areas of karst topography can create fractures in the rock, potentially changing groundwater flow, creating the potential for groundwater contamination, and temporarily affecting yield and increasing turbidity in nearby water wells and/or springs. Potential impacts on water wells, springs, wetlands, steep slopes, paleontological resources, nearby aboveground facilities, and adjacent pipelines and utility lines could result from blasting.

Blasting *4-39 Geology* The potential for blasting exists at all locations where shallow bedrock may be encountered.

TABLE 3.4.2-1 The Proposed Route would cross **214.9 miles of Shallow Bedrock**.

4-29 Geology Several locations were identified as having a high incidence of and high susceptibility for landslides within the vicinity of the MVP. About 151.7 miles (78 percent) of the MVP pipeline route in West Virginia is considered to have a high incidence of and high susceptibility to landslides. In Virginia, about 50.0 miles (47 percent) of the proposed alignment has a high incidence of and high susceptibility to landslides (see table 4.1.1-10).

TABLE 4.1.1-10 Landslide Incidence and Susceptibility along the Mountain Valley Project

The proposed pipeline would cross **201.7 miles of high incidence/high susceptibility of landslides.**

Over 2/3 of the pipeline length is along shallow bedrock that has a potential for blasting. Also 2/3 of the pipeline length is along an area of high incidence/high susceptibility of landslides.

The first route looked at by MVP was called Alternative Route 1. MVP determined Route Alternative 1 was unsuitable. "MVP determined that Route Alternative 1 represented insurmountable construction challenges, as well as a high risk of slope failure and pipeline slips, once the pipeline was to be in operation".

There are 120 miles of Steep Slopes and 122.8 of Side Slopes along the Proposed Route, the one chosen by MVP to be the best route. All areas within West Virginia represent insurmountable construction challenges, as well as a high risk of slope failure and pipeline slips, once a pipeline is to be in operation.

This DEIS has been written/presented in a way that people have to search and hope to find a real picture about any one area. And even then, the data conflicts at times. FERC should rule no action which would mean the proposed activity would not take place. That will send a clear message that some projects should not be built through the mountains of West Virginia. Protection of our water resources must start taking front and center attention. Many places are finding that when their water is contaminated, there is no quick fix or no fix at all.

Sincerely,

Shirley Hall
Rt. 1 Box 240F **new 911 address:** 7489 Back Valley Road
Lindside, WV 24951
304-772-4339

Copy also sent to: Joby Timm, Forest Supervisor
George Washington & Jefferson National Forest
5162 Valleypoint Parkway
Roanoke, Virginia 24019

March 10. 2015

Mr. Joe Hatton
United States Department of Agriculture
Natural Resources Conservation Service
1550 Earl Core Road, Suite 200
Morgantown, West Virginia 26505

Dear Mr. Hatton:

I am writing to you concerning proposed 42" frack pipelines currently being planned to run through West Virginia. I understand you have received a letter from the Mountain Valley Pipeline LLC (MVP) as part of their pre-filing process to FERC (Federal Energy Regulatory Commission). I live in Monroe County at the foot of Peter's Mountain. The top of Peter's Mountain is the division line between Virginia & West Virginia. I have parents, grandparents and great-grandparents buried in the Fortner Cemetery at the foot of Peter's Mountain. My culture is tied to this wonderful mountain. It provides safe, pure water to at least half the county's citizens. Many people living here (including myself) get their water from springs on Peter's Mountain. Public water plants (Peterstown, Union, Gap Mills) get their water from Peter's Mountain. The water from Peter's Mountain has been judged best tasting water in the world multiple times. Our county is a **karst habitat** with many caves and sinkholes, making our water sources very susceptible to contamination.

Our wildlife here is also amazing and dependent on our pristine water and forested woodlands. Bear, deer, turkeys, wildcats, chicken hawks, eagles etc., live here with us. My husband and I have witnessed a mountain lion that looked like a lion out of Africa. It crossed the road in front of us. The road is at the foot of Peter's Mountain. Our county is so rural that we have no traffic lights in the entire county.

EQT Corporation and NextEra Energy Resources, LLC, developers of Mountain Valley Pipeline Project submitted a 238 page report to FERC called filing draft Resource Report No. 1 and the Summary of Alternatives considered for the Mountain Valley Pipeline Project that is in the pre-filing process. So far, they have considered two routes for this pipeline and are now working on a third route. The first was called Route Alternative 1 and the second was called Proposed Route. Attached is a copy of their map comparing the two proposed routes. The Route Alternative 1 was determined unsuitable. "MVP determined that Route Alternative 1 represented insurmountable construction challenges, as well as a high risk of slope failure and pipeline slips, once the pipeline was to be in operation".

In 2006, the Monroe County Commission created the Monroe County Planning Commission. In 2009, the Planning Commission developed the Monroe County Comprehensive Plan. Goal 1.4 of the plan is to manage slopeside development. It was determined that development on slopes from 15%-25% should be monitored closely particularly in karst terrain, and regulated as needed; development on slopes greater than 25% should be prohibited altogether. A color coded map (copy attached) shows percentage of slope for Monroe County. Much of Monroe County is color coded from 29% to 81% slope indicating development should be prohibited altogether. It is obvious from the MVP report that they have not given our "karst" habitat any consideration, thought or attention at all. There is no mention by MVP of "Karst" habitat within this 238 page report. The word "Karst" occurs only one time in the report (page 67) and that is in a letter to NextEra Energy from The Nature Conservancy in Richmond, Virginia.

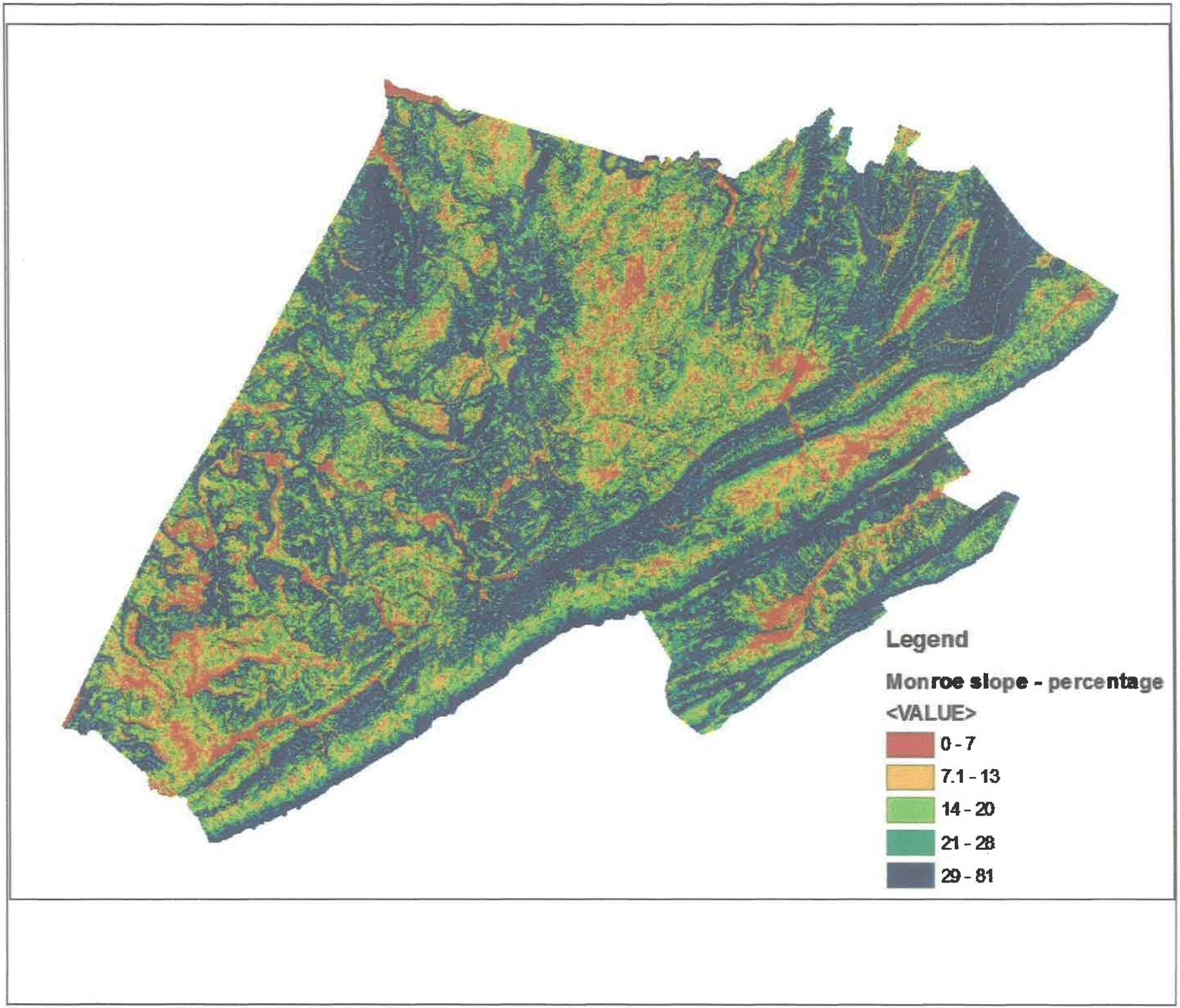
The Jefferson National Forest and Peter's Mountain Wilderness Area are located on Peters Mountain. Sections of the Appalachian Trail and Allegheny Trail run along the top of Peter's Mountain in Monroe County. This is a very special place. Attached is a map modified 10/2/2014 of Distribution of Federally Listed Threatened and Endangered Species in West Virginia released by the U.S. Fish and Wildlife Service. Please note that Monroe County has a large area of Habitat buffers around known occurrences of other federally listed species.

My husband and I searched for two years to find the place where we now live. We built a small cabin surrounded by a grove of Dogwood trees. We are both retired and had planned to live here until we die. We have a nice garden area and use no pesticides. We love where we live (photo enclosed). Our dream is small when compared to individual fortunes made by the big business of fracking and frack pipelines. Many others (many are elderly) within Monroe County feel the same as us about their homes and a great deal of stress is being put on all of us. Thank you for your consideration and please keep us in mind as you identify issues relating to fracking and 42" pipelines. My understanding is that these are to be the first of the large 42" size to be used and construction site will be as wide as a 6 lane highway. Our main road Route 219 (Seneca Trail) is a narrow 2 way road. We have no 4 lane highways (see map attached).

Sincerely,

Shirley Hall, Rt. 1 Box 240F, Lindside, WV 24951 (304) 772-4339 **New 911 address**: 7489 Back Valley Road

Encl: photo, maps: Comparison of two proposed routes, Monroe Slope percentage, Threatened and Endangered Species, Route 219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Monroe slope - percentage
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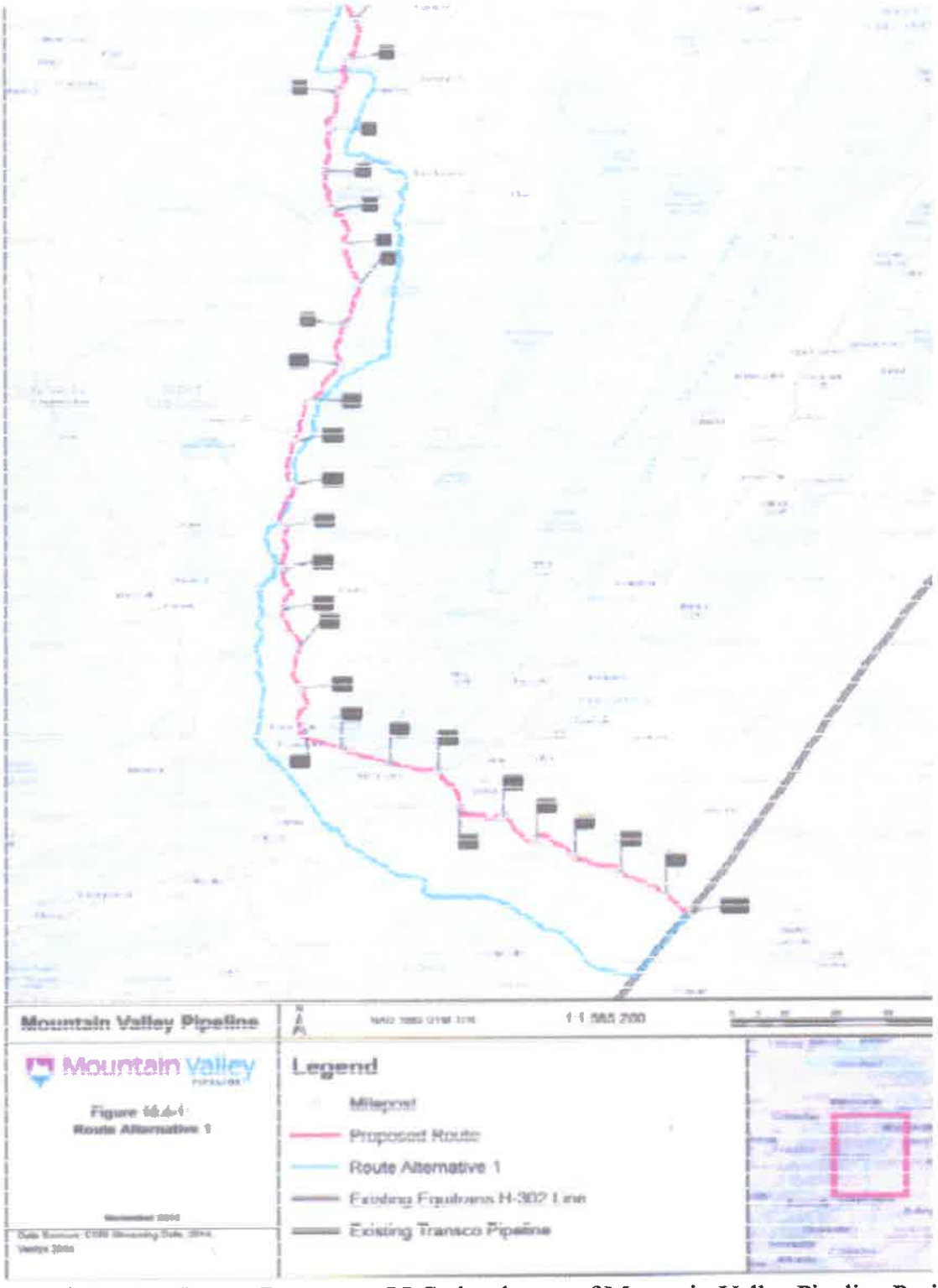
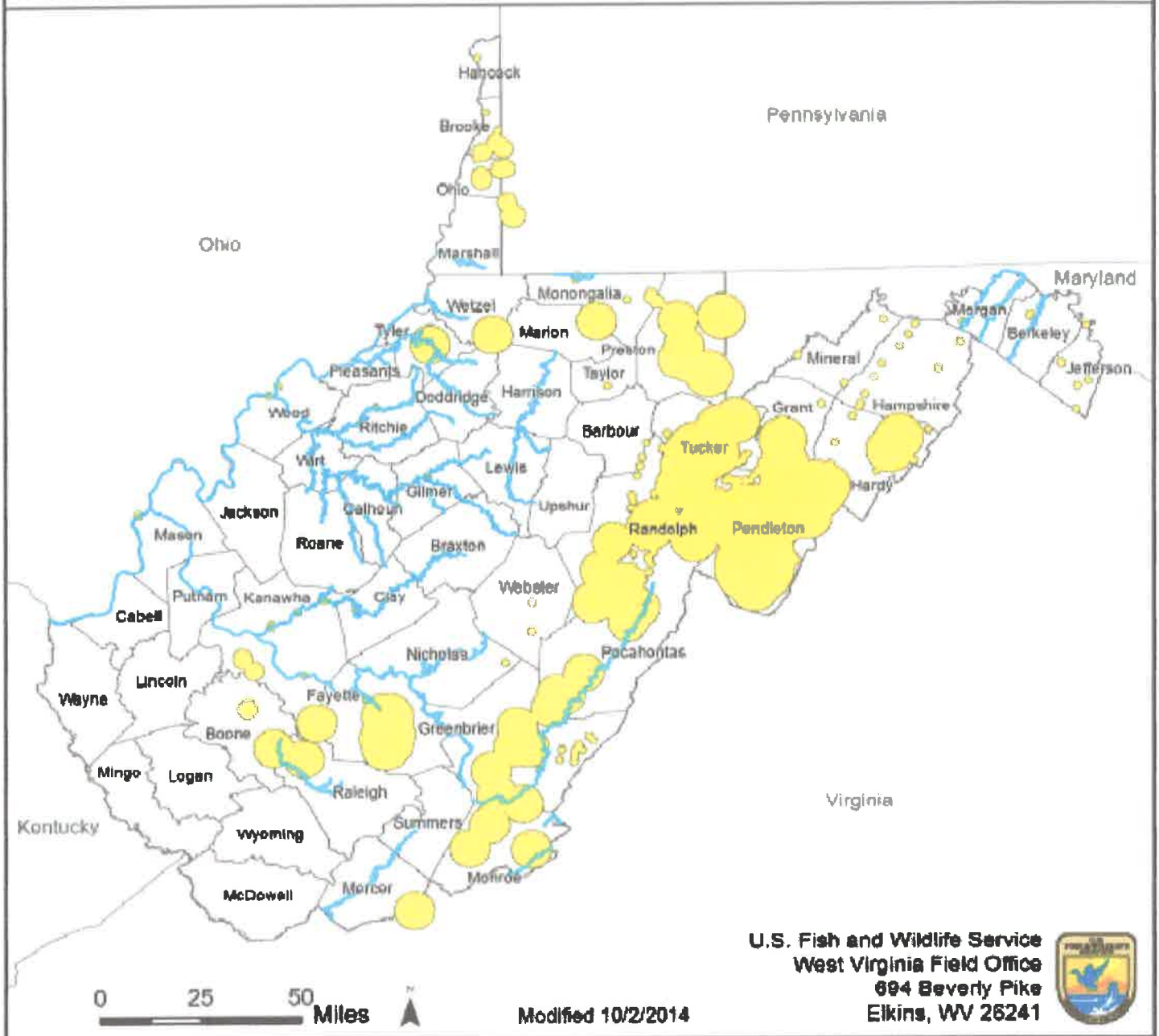
7.1 - 13
14 - 20
21 - 28
29 - 81



EQT Corporation and NextEra Energy Resources, LLC, developers of Mountain Valley Pipeline Project has a website at MVP_draft_resource_report1_alternative_summary_FERC_filing_dec2014.pdf. map comparing (blue line) Route Alternative 1 compared to the Proposed Route (red line). page 8. **MVP determined that Route Alternative 1 (blue) represented insurmountable construction challenges, as well as a high risk of slope failure and pipeline slips, once the pipeline was to be in operation.** MVP then conducted a second routing evaluation identified as Proposed Route (red)..

Distribution of Federally Listed Threatened and Endangered Species in West Virginia[1, 2]

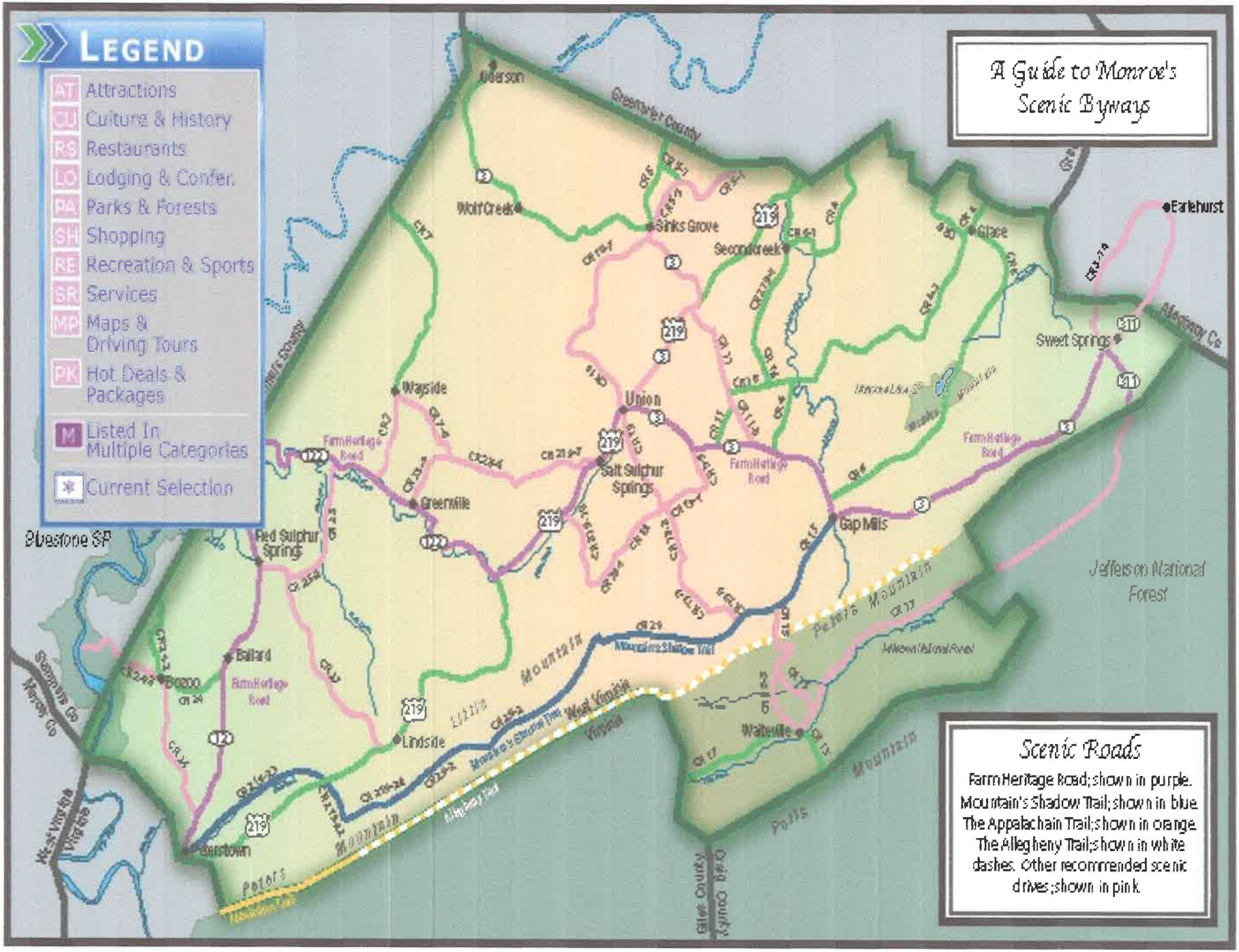


Waterways supporting federally listed aquatic species

Habitat buffers around known occurences of other federally listed species[2]

1. All forested areas in West Virginia are considered potential summer habitat for the endangered Indiana bat. Please contact this office regarding any projects, anywhere in the state, that will require clearing of 17 acres or more of forest.

2. Includes nest sites of bald eagles, which are not listed under the Endangered Species Act. However they continue to receive Federal protection under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.


LEGEND
AT Attractions
CU Culture & History
RS Restaurants
LO Lodging & Confer.
PA Parks & Forests
SH Shopping
RE Recreation & Sports
SR Services
MP Maps & Driving Tours
PK Hot Deals & Packages
M Listed In Multiple Categories
Current Selection
A Guide to Monroe's Scenic Byways
Scenic Roads
Farm Heritage Road; shown in purple.
Mountain's Shadow Trail; shown in blue.
The Appalachain Trail; shown in orange.
The Allegheny Trail; shown in white dashes. Other recommended scenic drives; shown in pink.
Union
Wayside
Greenville
Red Sulphur Springs
Salt Sulphur Springs
Gap Mills
Sweet Springs
Glace
Secondcreek
Sinks Grove
Wolf Creek
Lindside
Ballard
Peterstown
Waiteville
Bluestone SP
Jefferson National Forest
Peters Mountain
Farm Heritage Road

Our Mountain Home among the dogwoods

Driveway to our home in the Fall

Garden area in winter

We love where we live - It is a special place to us

November 9, 2016

Mr. Joe Hatton
United States Department of Agriculture
Natural Resources Conservation Service
1550 Earl Core Road, Suite 200
Morgantown, West Virginia 26505

Dear Mr. Hatton:

My name is Shirley Hall. I can be contacted at 304-772-4339. I have a RBA degree from Bluefield State College and an Associates Degree from Southern State Community College in Ohio majoring in Real Estate. I am and have been an active member of SAVE MONROE, Inc. I retired several years ago as Executive Director of The Monroe County Coalition for Children and Families where I had worked for over 20 years. During those 20 years, I came to know many Monroe County families and many Monroe County agencies, churches and local businesses. I have witnessed the generosity and caring given to families when they have suffered a loss and need help. I have lived other places and I feel blessed to be living here. I am a native Monroe Countian and can trace my ancestry back to 1810 in Monroe County (before there was a Monroe County). Monroe County is a special place and Peter's Mountain is exactly what is meant by the song words "Mountain Momma". I have many relatives that live here and feel the same as I do about Peter's Mountain. It is a sacred place to us.

I previously wrote to you March 10, 2015 concerning a proposed 42" frack pipelines currently being planned to run through West Virginia. The Federal Energy Regulatory Commission (FERC) has released the DEIS for Docket Nos CP16-10-000 and CP16-13-000. Over the next month, I plan to examine this DEIS and plan to send you important information about the Mountain Valley Project. This will include comments that I made during the scoping process and information contained in the Draft Environmental Impact Statement (DEIS). The first is about the St. Clair fault (an ancient thrust fault) that can actually be seen above ground in Monroe County and information about the Giles County Seismic Zone.

The St. Clair Fault is not mentioned within the DEIS. The Giles County Seismic Zone (GCSZ) is covered within the DEIS. The GCSZ is located between Mountain Valley Project mile marker 165 to 230. This area covers part of Summers County, West Virginia and all of Monroe County, West Virginia and all of the Jefferson National Forest and all of Giles County, Virginia and part of Montgomery, Virginia. The Jefferson National Forest to be crossed by this 42" frack gas pipeline is located within Monroe County, West Virginia and Giles County, Virginia. There is now serious talk about running a 500 foot corridor through the Jefferson National Forest. I visited the Forest Service in Roanoke several weeks ago. I asked if the MVP pipeline would cross the black bear habitat and the old growth forest. They said yes. These are protected habitats. I will send more information soon. Thank you.

Sincerely,

Shirley Hall
Rt. 1 Box 240F **New 911 address**: 7489 Back Valley Road
Lindside, WV 24951
304-772-4339

December 16, 2016

Mr. Joe Hatton
United States Department of Agriculture
Natural Resources Conservation Service
1550 Earl Core Road, Suite 200
Morgantown, West Virginia 26505

Dear Mr. Hatton:

Thank you for your letter of December 9, 2016. I have been sending you my concerns about the 42" MVP pipeline because they wrote to you October 13, 2014 requesting your assistance (see letter attached). I just wanted to share information within the DEIS with you. Following is information within the DEIS using NRCS including page number. A copy of my last letter to FERC is enclosed. This will probably be my last letter to you as the comment period for the DEIS ends December 22, 2016.

•Mountain Valley would have to dig a trench about ten feet deep to install its 42-inch diameter pipeline. Therefore, bedrock within 7 feet of the ground surface is considered shallow. Areas with shallow bedrock classifications were identified using the Natural Resources Conservation Service's **(NRCS)** Soil Survey Geographic Database (SSURGO) (USDA, 2015). The MVP pipeline route would traverse about 118 miles of shallow bedrock.

My note-**TABLE 3.4.2-1** The Proposed Route would cross **214.9 miles of Shallow Bedrock which is over 2/3 of the total route.**

•page *4-55 Soils* **4.2 SOILS 4.2.1 Affected Environment** The soils crossed by the MVP and the EEP were identified and assessed using various data sources including the SSURGO database. The SSURGO database is a digital version of the original county soil surveys developed by the USDA and the **NRCS** for use with GIS (USDA, 2015a). It provides the most detailed level of soils information for natural resource planning and management. The attribute data within the SSURGO database provide the proportionate extent of the component soils and their properties for each soil map unit. The MVP would cross 259 different soil map units in Virginia and West Virginia, primarily loams that have a wide variety of characteristics. The EEP pipeline segments would cross 40 soil types, the majority of which are loams having a variety of characteristics. Appendix N identifies by milepost the specific soil units that would be crossed.

•page *Soils 4-56* Areas identified as prime farmland are identified as lands that meet the "all prime farmland" or "farmland of statewide and local importance" criteria as determined by **NRCS**, SSURGO.

•page *Soils 4-58* As designated by the **NRCS**.

•page *4-59 Soils* The **NRCS** also recognizes unique farmlands and farmlands of statewide importance. Unique farmlands are defined as lands other than prime farmland that are used for production of specific high value food and fiber crops.

•page *4-63 Soils* The MVP would cross fifteen different soil types in the Jefferson National Forest, all of which are considered sandy loams and are well drained. Table 4.2.1-3 identifies that soils that would be crossed within the Jefferson National Forest and their limitations. Soil mapping, by the **NRCS**, for the Jefferson National Forest was completed by review of aerial imagery and has not been ground truthed.

•page *Soils 4-64* Areas identified as prime farmland are identified as lands that meet the "all prime farmland" or "farmland of statewide and local importance" criteria as determined by **NRCS**, SSURGO.

•page *4-215 Land Use And Visual Resources* The MVP would not cross any lands enrolled in the Agricultural Conservation Easement Program (ACEP), which is administered by the **NRCS**, or the Conservation Reserve Program (CRP), which is administered by the Farm Service Agency (FSA).

•page *N1-279 Appendix N-1* *N2-147 Appendix N-2* *N3-115 Appendix N-3* *N4-33 Appendix N-4* *Appendix N-5 N5-2* *Appendix N-6 N6-2* *N7-3 Appendix N-7* *N8-5 Appendix N-8* *Appendix N-9 N9-18* *N10-3 Appendix N-10*

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•page *Appendix V V-10* Natural Resources Conservation Service (NRCS). 2007. Scrub-shrub birds. United States Department of Agriculture NRCS Wildlife Habitat Council Fish and Wildlife Habitat Management Leaflet. Number 42. January 2007.

•page *Appendix V V-18*

•U.S. Department of Agriculture (USDA). 2015a. USDA Natural Resources Conservation Service **(NRCS)** Soil Survey Geographic (SSURGO) Soil Data Access. Available at:http://sdmdataaccess.nrcs.usda.gov/ Accessed May 2015.

•U.S. Department of Agriculture (USDA). 2015b. Prime & Other Important Farmlands Definitions from the Web Soil Survey. Natural Resources Conservation Service (NRCS). Available at: http://websoilsurvey.nrcs.usda.gov. Accessed May 2015.

•U.S. Department of Agriculture (USDA). 2016a. Agricultural Conservation Easement Program. Natural Resources Conservation Service.
Website:http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/easements/acep/. Accessed January 29, 2016.

•U.S. Department of Agriculture (USDA). 2016c. Stewardship Lands Easement Locations Public Viewer. Natural Resources Conservation Service. Website:
http://nrcs.maps.arcgis.com/apps/webappviewer/index.html?id=60cb4564f7b4461ca9a61fa224c066ba. Accessed January 29, 2016.

The enclosed letter to FERC concerns new requests within the DEIS for a 500 foot corridor through the Jefferson National Forrest for future projects. Also included in this letter is information covering multiple cumulative impact hazards from mile marker **MP165 to MP237**. This area includes part of Summers County and all of Monroe County, West Virginia, all of the **Jefferson National Forest**, all of Giles County and part of Montgomery County, Virginia. •Table 4.2.1-3 identifies that soils that would be crossed within the Jefferson National Forest and their limitations. Soil mapping, by the **NRCS**, for the Jefferson National Forest was completed by review of aerial imagery and has not been ground truthed.

Any corridor within the Jefferson National Forrest has the potential to create an environmental disaster.

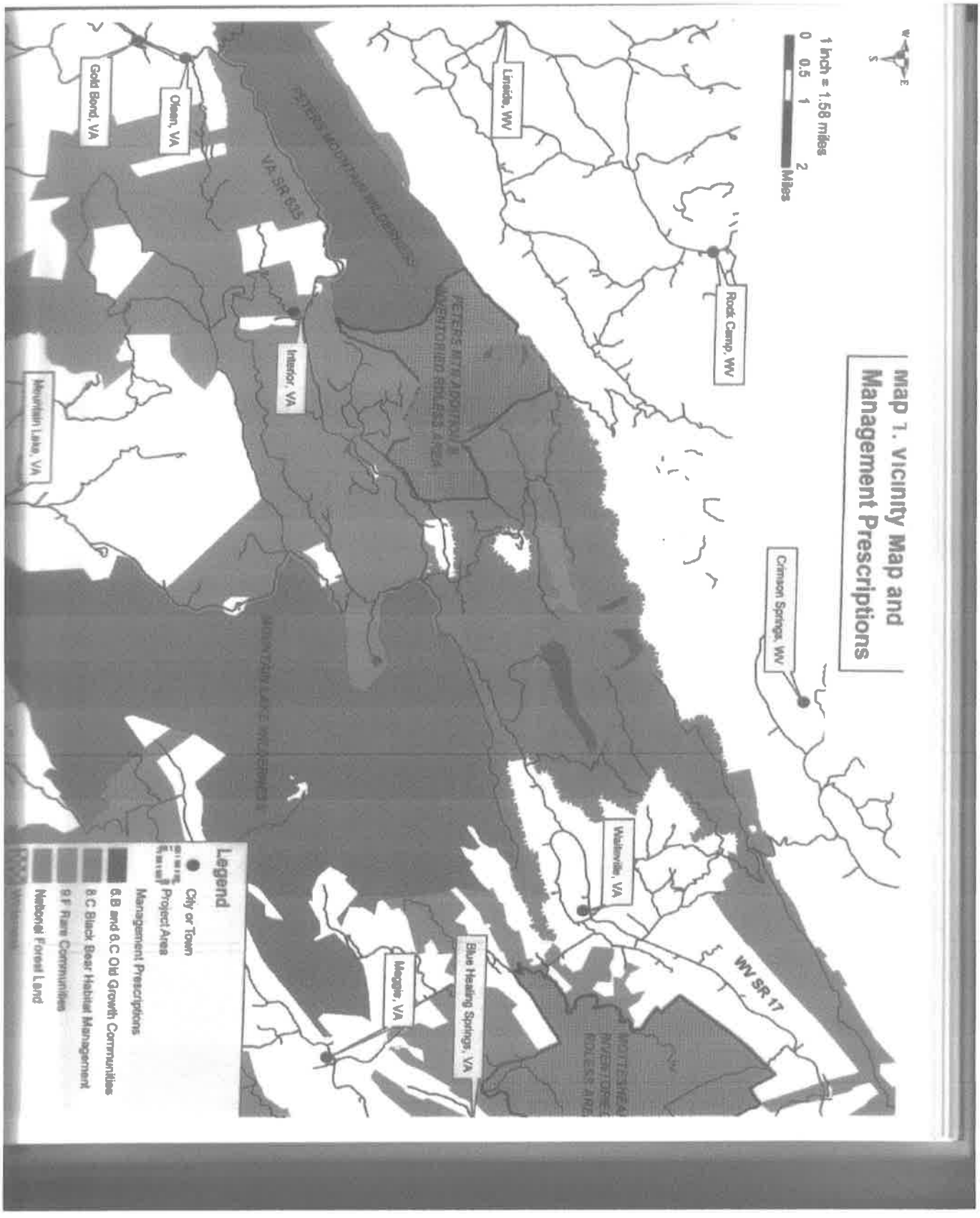
4-41 Geology The areas that would be crossed within the Jefferson National Forest by the MVP contain slopes greater than 30 percent and the potential for landslides within the Jefferson National Forest would be moderate to high.

Geology 4-40 The largest known landslides in eastern North America are on the south flank of Sinking Creek Mountain (see section 4.1.2.4) where the pipeline route would cross the Jefferson National Forest (Schultz et al., 1986; Schultz and Southworth, 1989).

Sincerely,

Shirley Hall
Rt 1 Box 240F **New 911 address**: 7489 Back Valley Road
Lindside, WV 24951
304-772-4339

Vicinity Map Management Prescriptions areas protected include:
Old Growth, Black Bear Habitat, Rare communities, National Forest Land, Wilderness Area



Date: October 12, 2016

To: USDA Forest Service, Mountain Valley Pipeline Survey, 5162 Valley Pointe Parkway, Roanoke, VA 24019

From: Shirley Hall, Rt 1 Box 240F, Lindside, WV 24951 (304) 772-4339

Re: Mountain Valley Pipeline Project FERC/DEIS D0272 Docket CP16-10-000 & CP 16-13-000

Please refer to my letters to the USDA Forest Service dated March 25, 2015 and July 5, 2014 (copies attached). Following is information regarding hazards from the DEIS for Mountain Valley Pipeline. Please note that the Jefferson National Forest is within the Giles County Seismic Zone (GCSZ).

TABLE 4.1.1-11 **Areas of Landslide Concern along the Mountain Valley Project**

Start	**End MP**	**Distance**	**Percent**	**Slope**	**Notes c/**
195.4	196.7	1800	18-26	No	Jefferson National
197.7	198.2	2300	18-35	No	Jefferson National Forest.

See all the hazards DEIS has listed about the Giles County Seismic Zone (GCSZ) between MPs 165 to 230. Monroe County MP173.4 to MP195.4 is totally within the GCSZ. The Jefferson National Forest is also within the MPs 165 to 230.

DEIS Docket CP16-10-000
4.1.1.5 Geologic Hazards
Geologic hazards including seismicity (e.g., earthquakes), surface faults, soil liquefaction, landslides, flash flooding, karst terrain and subsidence, shallow bedrock, acid producing rocks and soils, and blasting were evaluated for the proposed projects. The conditions necessary for the development of other geologic hazards, including avalanches and volcanism, are not present in the area of the projects and therefore not discussed below.....Earthquakes, however, do occur in the eastern United States, primarily due to trailing edge tectonics and residual stress released from past mountain building events. The MVP pipeline would be in close proximity to the Giles County Seismic Zone (GCSZ), between MPs 165 to 230.....The GCSZ is considered seismically active and is defined by Bollinger and Wheeler (1988) by 12 earthquakes that span four orders of magnitude and two decades of time 1959 through 1980.....In addition, numerous microearthquakes (magnitude 2 or less) have occurred in the area of the GCSZ.....Earthquake shaking alone does not pose a significant threat to the integrity of modern buried welded steel pipelines. In general, modern electric arc welded steel pipelines have not sustained damage during seismic events except due to permanent ground deformation, or traveling ground-wave propagation greater than or equal to a

MMI of VIII (O'Rourke and Palmer, 1994).....The potential for soil liquefaction in the areas north and south of MPs 161 to 230 can be ruled out due to the low potential for a significant seismic event. However, soil liquefaction and lateral spreading hazards do exist along the MVP in the general area of the GCSZ where peak ground acceleration of 0.14 g could occur. A PGA of 0.14 depending on site conditions could be equivalent to a magnitude 5.0 earthquake (D.G. Honegger Consulting, 2015a).

4.1.2.3 Seismicity and Potential for Soil Liquefaction

The majority of the MVP is sited in an area with low probability of localized earth movements. However, in the area of the GCSZ, between about MPs 165 to 230, peak ground accelerations approach 14 percent of the force of g, and the potential for a magnitude 5.8 earthquake exists.....Soil liquefaction could also result if a significant seismic event were to occur. The potential for soil liquefaction exists mainly in the area of the GCSZ between MPs 165 and 230.... PGAs in this area are on the order of 0.14 g, and could produce an earthquake of magnitude MMI VI....Calculations by D.G. Honegger Consulting indicate that potential hazards exist for triggered slope displacement due to a higher potential for seismicity between MPs 161 and 230 should the length of soil displacement over the pipeline exceed 1,580 feet for parallel slopes.

According to D.G/ Honegger Consulting, soil liquefaction and lateral spreading hazards do exist along the MVP in the general area of the GCSZ where peak ground acceleration of 0.14 g could occur. A PGA of 0.14 depending on site conditions could be equivalent to a magnitude 5.0 earthquake . This GCSZ area covers all of Monroe County, West Virginia and the Jefferson National Forest.

December 14, 2016

Joby Timm, Forest Supervisor
George Washington & Jefferson National Forest
4152 Valleypoint Parkway
Roanoke, Virginia 24019

Dear Mr. Timm, FERC Docket Nos.: CP16-10-000 and CP16-13-0000.

This letter regards the Proposed Amendments to the Forest Plan for the Jefferson National Forest included in the above project DEIS and unnamed future projects. You cannot legally increase the project area in this DEIS to include a new designated corridor that would be 500 feet wide for additional projects. The Applicants, Mountain Valley Pipeline, LLC and Equitrans, LP which is what this DEIS is about are requesting a 50-foot-wide easement.

If you choose to use this EIS to include a new utility corridor, NEPA calls for an examination of their impact in a single EIS. The environmental consequences of proposed actions must all be considered together in a single, programmatic EIS when their impacts will have a compounded effect on a region. This DEIS does not name or list or examine the impact of any other specific project other than MVP within the Jefferson National Forest. Therefore, to meet NEPA, FERC has to do another EIS if and when other projects want to cross the Jefferson National Forest. This EIS cannot be used for future projects. This EIS only covers a 50 foot wide easement for Mountain Valley Pipeline, LLC and Equitrans, LP FERC Docket Nos.: CP16-10-000 and CP16-13-000.

§ 1508.7 Cumulative impact. *Cumulative impact* is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The Draft Environmental Impact Statement (DEIS) for the MVP pipeline lists the following multiple cumulative impact hazards from mile marker **MP165 to MP237**. This area includes part of Summers County and all of Monroe County, West Virginia, all of the **Jefferson National Forest**, all of Giles County and part of Montgomery County, Virginia.

4.1.2.3 Seismicity and Potential for Soil Liquefaction *Geology 4-44* The majority of the MVP is sited in an area with low probability of localized earth movements. However, in the area of the GCSZ (Giles County Seismic Zone), between about **MPs 165 to 230**, peak ground accelerations approach 14 percent of the force of g, and the potential for a magnitude 5.8 earthquake exists… *4-45 Geology* The potential for soil liquefaction exists mainly in the area of the GCSZ between **MPs 165 and 230**

4.1.2.4 Slopes and Landslide Potential *Geology 4-46* The potential for landslides or slope failure could be triggered by seismicity from the GCSZ (**Mps 165 to 230)** or from intense and/or prolonged rainfall events. *4-41 Geology* The areas that would be crossed within the Jefferson National Forest by the MVP contain slopes greater than 30 percent and the potential for landslides within the Jefferson National Forest would be moderate to high..

4.1.1.7 Jefferson National Forest *Geology 4-40* Landslides are a dominant geologic process shaping Peters Mountain, Sinking Creek Mountain, and Brush Mountain. The largest known landslides in eastern North America are on the south flank of Sinking Creek Mountain (see section 4.1.2.4) where the pipeline route would cross the Jefferson National Forest (Schultz et al., 1986; Schultz and Southworth, 1989).

4.2.2.4 Slip-Prone Soils *Soils 4-68* Certain soil types such as shale or clay soils are more prone to slipping than other soils. Due to this increased potential for slipping, the probability of landslides is increased when constructing through slip prone soils. The Gilpin-Peabody complex, 35 to 70 percent slopes, Carbo, Faywood, Frederick, Nolichucky, Poplimento, and Sequoia soils are considered to be slip-prone. The MVP would affect about 17.5 acres of the soils

and complexes of these soils between **MP 172 and 196**. In Virginia 290.2 acres of these soils and complexes of these soils would be affected from approximately **MP 196 to 235** (note- **MP172 to 235**)

4.1.1.2 Bedrock Geology *4-5 Geology* Karst terrain also occurs in the carbonate (limestone and dolostone) rocks found in the project area from approximate **MPs 170 to 237**.

4.1.2.5 Karst Terrain *Geology 4-48* Karst features, such as sinkholes, caves, and caverns can form as a result of the long-term action of groundwater on soluble carbonate rocks (e.g., limestone and dolostone). The risk of the development of sinkholes along the pipeline is relatively high between about **MPs 171 and 237.**

Blasting *4-39 Geology* Blasting in areas of karst topography can create fractures in the rock, potentially changing groundwater flow, creating the potential for groundwater contamination, and temporarily affecting yield and increasing turbidity in nearby water wells and/or springs. Potential impacts on water wells, springs, wetlands, steep slopes, paleontological resources, nearby aboveground facilities, and adjacent pipelines and utility lines could result from blasting.

Blasting *4-39 Geology* The potential for blasting exists at all locations where shallow bedrock may be encountered.

TABLE 3.4.2-1 The Proposed Route would cross **214.9 miles of Shallow Bedrock**.

4-29 Geology Several locations were identified as having a high incidence of and high susceptibility for landslides within the vicinity of the MVP. About 151.7 miles (78 percent) of the MVP pipeline route in West Virginia is considered to have a high incidence of and high susceptibility to landslides. In Virginia, about 50.0 miles (47 percent) of the proposed alignment has a high incidence of and high susceptibility to landslides (see table 4.1.1-10).

TABLE 4.1.1-10 Landslide Incidence and Susceptibility along the Mountain Valley Project

The proposed pipeline would cross **201.7 miles of high incidence/high susceptibility of landslides.**

Over 2/3 of the pipeline length is along shallow bedrock that has a potential for blasting. Also 2/3 of the pipeline length is along an area of high incidence/high susceptibility of landslides.

The first route looked at by MVP was called Alternative Route 1. MVP determined Route Alternative 1 was unsuitable. "MVP determined that Route Alternative 1 represented insurmountable construction challenges, as well as a high risk of slope failure and pipeline slips, once the pipeline was to be in operation".

There are 120 miles of Steep Slopes and 122.8 of Side Slopes along the Proposed Route, the one chosen by MVP to be the best route. All areas within West Virginia represent insurmountable construction challenges, as well as a high risk of slope failure and pipeline slips, once a pipeline is to be in operation.

This DEIS has been written/presented in a way that people have to search and hope to find a real picture about any one area. And even then, the data conflicts at times. FERC should rule no action which would mean the proposed activity would not take place. That will send a clear message that some projects should not be built through the mountains of West Virginia. Protection of our water resources must start taking front and center attention. Many places are finding that when their water is contaminated, there is no quick fix or no fix at all.

Sincerely,

Shirley Hall
Rt. 1 Box 240F
Lindside, WV 24951
304-772-4339

December 14, 2016

Ms. Jennifer Adams
George Washington & Jefferson National Forest
4152 Valleypoint Parkway
Roanoke, Virginia 24019

Dear Ms. Adams, FERC Docket Nos.: CP16-10-000 and CP16-13-0000.

This letter regards the Proposed Amendments to the Forest Plan for the Jefferson National Forest included in the above project DEIS and unnamed future projects. You cannot legally increase the project area in this DEIS to include a new designated corridor that would be 500 feet wide for additional projects. The Applicants, Mountain Valley Pipeline, LLC and Equitrans, LP which is what this DEIS is about are requesting a 50-foot-wide easement.

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Sincerely,

Shirley Hall
Rt. 1 Box 240F
Lindside, WV 24951
304-772-4339

December 14, 2016

Mr. Randy Dye
West Virginia Division of Forestry
1900 Kanawha Boulevard East
Charlestom. WV 25305

Dear Mr. Dye, FERC Docket Nos.: CP16-10-000 and CP16-13-0000.

This letter regards the Proposed Amendments to the Forest Plan for the Jefferson National Forest included in the above project DEIS and unnamed future projects. You cannot legally increase the project area in this DEIS to include a new designated corridor that would be 500 feet wide for additional projects. The Applicants, Mountain Valley Pipeline, LLC and Equitrans, LP which is what this DEIS is about are requesting a 50-foot-wide easement.

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4.1.1.2 Bedrock Geology *4-5 Geology* Karst terrain also occurs in the carbonate (limestone and dolostone) rocks found in the project area from approximate **MPs 170 to 237**.

4.1.2.5 Karst Terrain *Geology 4-48* Karst features, such as sinkholes, caves, and caverns can form as a result of the long-term action of groundwater on soluble carbonate rocks (e.g., limestone and dolostone). The risk of the development of sinkholes along the pipeline is relatively high between about **MPs 171 and 237.**

Blasting *4-39 Geology* Blasting in areas of karst topography can create fractures in the rock, potentially changing groundwater flow, creating the potential for groundwater contamination, and temporarily affecting yield and increasing turbidity in nearby water wells and/or springs. Potential impacts on water wells, springs, wetlands, steep slopes, paleontological resources, nearby aboveground facilities, and adjacent pipelines and utility lines could result from blasting.

Blasting *4-39 Geology* The potential for blasting exists at all locations where shallow bedrock may be encountered.

TABLE 3.4.2-1 The Proposed Route would cross **214.9 miles of Shallow Bedrock**.

4-29 Geology Several locations were identified as having a high incidence of and high susceptibility for landslides within the vicinity of the MVP. About 151.7 miles (78 percent) of the MVP pipeline route in West Virginia is considered to have a high incidence of and high susceptibility to landslides. In Virginia, about 50.0 miles (47 percent) of the proposed alignment has a high incidence of and high susceptibility to landslides (see table 4.1.1-10).

TABLE 4.1.1-10 Landslide Incidence and Susceptibility along the Mountain Valley Project

The proposed pipeline would cross **201.7 miles of high incidence/high susceptibility of landslides.**

Over 2/3 of the pipeline length is along shallow bedrock that has a potential for blasting. Also 2/3 of the pipeline length is along an area of high incidence/high susceptibility of landslides.

The first route looked at by MVP was called Alternative Route 1. MVP determined Route Alternative 1 was unsuitable. "MVP determined that Route Alternative 1 represented insurmountable construction challenges, as well as a high risk of slope failure and pipeline slips, once the pipeline was to be in operation".

There are 120 miles of Steep Slopes and 122.8 of Side Slopes along the Proposed Route, the one chosen by MVP to be the best route. All areas within West Virginia represent insurmountable construction challenges, as well as a high risk of slope failure and pipeline slips, once a pipeline is to be in operation.

This DEIS has been written/presented in a way that people have to search and hope to find a real picture about any one area. And even then, the data conflicts at times. FERC should rule no action which would mean the proposed activity would not take place. That will send a clear message that some projects should not be built through the mountains of West Virginia. Protection of our water resources must start taking front and center attention. Many places are finding that when their water is contaminated, there is no quick fix or no fix at all.

Sincerely,

Shirley Hall
Rt. 1 Box 240F
Lindside, WV 24951
304-772-4339

December 14, 2016

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

Dear Ms. Bose, FERC Docket Nos.: CP16-10-000 and CP16-13-0000.

This letter regards the Proposed Amendments to the Forest Plan for the Jefferson National Forest included in the above project DEIS and unnamed future projects. You cannot legally increase the project area in this DEIS to include a new designated corridor that would be 500 feet wide for additional projects. The Applicants, Mountain Valley Pipeline, LLC and Equitrans, LP which is what this DEIS is about are requesting a 50-foot-wide easement.

If you choose to use this EIS to include a new utility corridor, NEPA calls for an examination of their impact in a single EIS. The environmental consequences of proposed actions must all be considered together in a single, programmatic EIS when their impacts will have a compounded effect on a region. This DEIS does not name or list or examine the impact of any other specific project other than MVP within the Jefferson National Forest. Therefore, to meet NEPA, FERC has to do another EIS if and when other projects want to cross the Jefferson National Forest. This EIS cannot be used for future projects. This EIS only covers a 50 foot wide easement for Mountain Valley Pipeline, LLC and Equitrans, LP FERC Docket Nos.: CP16-10-000 and CP16-13-000.

§ 1508.7 Cumulative impact. *Cumulative impact* is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

The Draft Environmental Impact Statement (DEIS) for the MVP pipeline lists the following multiple cumulative impact hazards from mile marker **MP165 to MP237**. This area includes part of Summers County and all of Monroe County, West Virginia, all of the **Jefferson National Forest**, all of Giles County and part of Montgomery County, Virginia.

4.1.2.3 Seismicity and Potential for Soil Liquefaction *Geology 4-44* The majority of the MVP is sited in an area with low probability of localized earth movements. However, in the area of the GCSZ (Giles County Seismic Zone), between about **MPs 165 to 230**, peak ground accelerations approach 14 percent of the force of g, and the potential for a magnitude 5.8 earthquake exists… *4-45 Geology* The potential for soil liquefaction exists mainly in the area of the GCSZ between **MPs 165 and 230**

4.1.2.4 Slopes and Landslide Potential *Geology 4-46* The potential for landslides or slope failure could be triggered by seismicity from the GCSZ **(Mps 165 to 230)** or from intense and/or prolonged rainfall events. *4-41 Geology* The areas that would be crossed within the Jefferson National Forest by the MVP contain slopes greater than 30 percent and the potential for landslides within the Jefferson National Forest would be moderate to high..

4.1.1.7 Jefferson National Forest *Geology 4-40* Landslides are a dominant geologic process shaping Peters Mountain, Sinking Creek Mountain, and Brush Mountain. The largest known landslides in eastern North America are on the south flank of Sinking Creek Mountain (see section 4.1.2.4) where the pipeline route would cross the Jefferson National Forest (Schultz et al., 1986; Schultz and Southworth, 1989).

4.2.2.4 Slip-Prone Soils *Soils 4-68* Certain soil types such as shale or clay soils are more prone to slipping than other soils. Due to this increased potential for slipping, the probability of landslides is increased when constructing through slip prone soils. The Gilpin-Peabody complex, 35 to 70 percent slopes, Carbo, Faywood, Frederick, Nolichucky, Poplimento, and Sequoia soils are considered to be slip-prone. The MVP would affect about 17.5 acres of the soils

and complexes of these soils between **MP 172 and 196**. In Virginia 290.2 acres of these soils and complexes of these soils would be affected from approximately **MP 196 to 235** (note- **MP172 to 235)**

4.1.1.2 Bedrock Geology *4-5 Geology* Karst terrain also occurs in the carbonate (limestone and dolostone) rocks found in the project area from approximate **MPs 170 to 237**.

4.1.2.5 Karst Terrain *Geology 4-48* Karst features, such as sinkholes, caves, and caverns can form as a result of the long-term action of groundwater on soluble carbonate rocks (e.g., limestone and dolostone). The risk of the development of sinkholes along the pipeline is relatively high between about **MPs 171 and 237.**

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The first route looked at by MVP was called Alternative Route 1. MVP determined Route Alternative 1 was unsuitable. "MVP determined that Route Alternative 1 represented insurmountable construction challenges, as well as a high risk of slope failure and pipeline slips, once the pipeline was to be in operation".

There are 120 miles of Steep Slopes and 122.8 of Side Slopes along the Proposed Route, the one chosen by MVP to be the best route. All areas within West Virginia represent insurmountable construction challenges, as well as a high risk of slope failure and pipeline slips, once a pipeline is to be in operation.

This DEIS has been written/presented in a way that people have to search and hope to find a real picture about any one area. And even then, the data conflicts at times. FERC should rule no action which would mean the proposed activity would not take place. That will send a clear message that some projects should not be built through the mountains of West Virginia. Protection of our water resources must start taking front and center attention. Many places are finding that when their water is contaminated, there is no quick fix or no fix at all.

Sincerely,

Shirley Hall
Rt. 1 Box 240F
Lindside, WV 24951
304-772-4339

March 25, 2015

Mr. Tom Speaks, Forest Supervisor, Jefferson National Forest
USDA Forest Service Mountain Valley Pipeline Survey Comments
5162 Valleypointe Parkway
Roanoke, VA 24019

Dear Mr. Speaks:

I am writing to you concerning proposed 42" frack pipelines currently being planned to run through West Virginia. I request that the United States Forest Service reject the application from Mountain Valley Pipeline to survey in the Jefferson National Forest. I live in Monroe County at the foot of Peter's Mountain. The top of Peter's Mountain is the division line between Virginia & West Virginia. I have parents, grandparents and great-grandparents buried in the Fortner Cemetery at the foot of Peter's Mountain. My culture is tied to this wonderful mountain. It provides safe, pure water to at least half the county's citizens. Many people living here (including myself) get their water from springs on Peter's Mountain. Public water plants (Peterstown, Union, Gap Mills) get their water from Peter's Mountain. The water from Peter's Mountain has been judged best tasting water in the world multiple times. Our county is a **karst habitat** with many caves and sinkholes, making our water sources very susceptible to contamination.

Our wildlife here is also amazing and dependent on our pristine water and forested woodlands. Bear, deer, turkeys, wildcats, chicken hawks, eagles etc., live here with us. My husband and I have witnessed a mountain lion that looked like a lion out of Africa. It crossed the road in front of us. The road is at the foot of Peter's Mountain. Our county is so rural that we have no traffic lights in the entire county.

EQT Corporation and NextEra Energy Resources, LLC, developers of Mountain Valley Pipeline Project submitted a 238 page report to FERC called filing draft Resource Report No. 1 and the Summary of Alternatives considered for the Mountain Valley Pipeline Project that is in the pre-filing process. So far, they have considered two routes for this pipeline and are now working on a third route. The first was called Route Alternative 1 and the second was called Proposed Route. Attached is a copy of their map comparing the two proposed routes. The Route Alternative 1 was determined unsuitable. "MVP determined that Route Alternative 1 represented insurmountable construction challenges, as well as a high risk of slope failure and pipeline slips, once the pipeline was to be in operation".

In 2006, the Monroe County Commission created the Monroe County Planning Commission. In 2009, the Planning Commission developed the Monroe County Comprehensive Plan. Goal 1.4 of the plan is to manage slopeside development. It was determined that development on slopes from 15%-25% should be monitored closely particularly in karst terrain, and regulated as needed; development on slopes greater than 25% should be prohibited altogether. A color coded map (copy attached) shows percentage of slope for Monroe County. Much of Monroe County is color coded from 29% to 81% slope indicating development should be prohibited altogether. It is obvious from the MVP report that they have not given our "karst" habitat any consideration, thought or attention at all. There is no mention by MVP of "Karst" habitat within this 238 page report. The word "Karst" occurs only one time in the report (page 67) and that is in a letter to NextEra Energy from The Nature Conservancy in Richmond, Virginia.

The Jefferson National Forest and Peter's Mountain Wilderness Area are located on Peter's Mountain. Sections of the Appalachian Trail and Allegheny Trail run along the top of Peter's Mountain in Monroe County. This is a very special place. Attached is a map modified 10/2/2014 of Distribution of Federally Listed Threatened and Endangered Species in West Virginia released by the U.S. Fish and Wildlife Service. Please note that Monroe County has a large area of Habitat buffers around known occurrences of other federally listed species.

My husband and I searched for two years to find the place where we now live. We built a small cabin surrounded by a grove of Dogwood trees. We are both retired and had planned to live here until we die. We have a nice garden area and use no pesticides. We love where we live (photo enclosed). Our dream is small when compared to individual fortunes made by the big business of fracking and frack pipelines. Many others (many are elderly) within Monroe County feel the same as us about their homes and a great deal of stress is being put on all of us. Thank you for your consideration and please keep us in mind as you identify issues relating to fracking and 42" pipelines. My understanding is that these are to be the first of the large 42" size to be used and construction site will be as wide as a 6 lane highway. Our main road Route 219 (Seneca Trail) is a narrow 2 way road. We have no 4 lane highways (see map attached). Trucks & heavy equipment will pollute our clean air, ruin our roads and greatly disturb our peace and quiet.

Sincerely, Shirley Hall, Rt. 1 Box 240F, Lindside, WV 24951 (304) 772-4339
Encl: photo, maps: Comparison of two proposed routes, Monroe Slope percentage, Threatened and Endangered Species, Route 219

Date: July 5,2015

To: USDA Forest Service, Mountain Valley Pipeline Survey, 5162 Valleypointe Parkway, Roanoke, VA 24019

From: Shirley Hall, Rt 1 Box 240F, Lindside, WV 24951 (304) 772-4339

Re: Mountain Valley Pipeline Project FERC Docket #PF 15-3 and 3 other pipelines planning to go through Monroe County, West Virginia and Fracking

As I understand it, the USDA Forest Service exists to protect our wilderness areas from encroachment of outside destructive forces. Fracking and 42" pipelines fit that description. The bear habitat is especially susceptible to disruption of their environment. We rarely saw bears anywhere near our home. We saw only 3 black bears within a 20 year period. However, within the last 2 months, we have seen 3 black bears within a 2 mile radius of our home. It is my belief that they are being forced to abandon their mountain environment due to human activities on Peter's Mountain. I don't know if you have started your timbering projects, building of pads and burning on Peter's Mountain. If you have, it stands to reason that you are driving the bears out of their habitat instead of enhancing their habitat.

I also understand that you should be doing a thorough EIS process before you allow surveying. Please advise if you have done an EIS and what that entails. Old growth forest is rare and should receive special consideration. My Uncle showed me a Red Oak that was over 19 feet in diameter on the side of Peter's Mountain. I hope there are others like this and that they are allowed to remain where they are as they are.

Following is a copy of a letter I sent you in February. I have a deep attachment to Peter's Mountain. My mother's surname was Cole and I have great great grandparents buried in the Fortner Cemetery at the foot of Peter's Mountain.

There are not too many unspoiled areas left in America. Water is a most precious commodity. If any pipeline or fracking is allowed to happen in Monroe County, we stand to lose a great deal, including our beautiful, scenic unspoiled views and our precious pure water.

Please protect our wilderness areas from encroachment of this outside destructive force. Thank you.

Date: February 5, 2015

To: USDA Forest Service, Mountain Valley Parkway. Comments, 5162 Valleypointe Parkway, Roanoke, VA

From: Shirley Hall, Rt 1 Box 240F, Lindside, WV 24951 (304) 772-4339 (Distinguished Mountaineer)

Re: Mountain Valley Pipeline Project FERC Docket #PF 15-3 and 3 other pipelines planning to go through Monroe County, West Virginia and Fracking

I am writing to you asking for your help. I love West Virginia and in particular Monroe County. I have a deep rooted and passionate attachment to this beautiful county. We are under attack by big business wanting to build what is now 4 separate frack gas pipelines through Monroe County. The Mountain Valley Pipeline Project has submitted their pre application to the Federal Energy Regulatory Commission (15-3) to install a 42" diameter frack gas pipeline through West Virginia. The pipeline would go through Monroe County, up Peter's Mountain into Giles County, Virginia. The top of Peter's Mountain is the divide between West Virginia and Virginia.

Please do not allow MVP to perform a survey or build a pipeline in the Jefferson National Forest.

Personally, I am a West Virginia native. I was born at the hospital in Ronceverte (Greenbrier County) in 1947. My parents lived just outside Rock Camp, Monroe County. My father was a logger and was injured by a rotten tree limb that fell and broke his back leaving him paralyzed from the waist down. He was confined to a wheelchair and died 4years later. My father did not give up even in a wheelchair. He had a fruit and vegetable stand in Rock Camp. He rigged his truck so he could drive it to pick up the fruit and vegetables. My father was a true mountaineer. In retrospect, these first 8 years of my life were some of my happiest. After my father died, my mother moved us to inner city Cleveland, Ohio so she could work and support us. Needless to say, this was a drastic change for an 8 year old. I went from a 2 room school house (grades 1 thru 12) to a huge elementary school with about 40 children in a classroom. I was ridiculed by the teacher for the way I spoke. My long a and e as in the and a should be a short a and e. She constantly corrected me and so I just shut up. I came to know what discrimination is. It also gave me a lifetime of empathy for West Virginians and especially those in poverty. I remember the feeling of safety and peace when we would return for a visit. The mountains, especially Peter's Mountain, gave me an almost spiritual feeling of contentment. I finally returned to my mountain in 1992. I was most fortunate to get a position as Director of the Monroe County Coalition for Children and Families (Family Resource Network). Monroe was one of the first five Family Resource Networks in West Virginia. I retired in 2012 after over 20 years in that position. I was able to help many families and be involved in projects to make their lives easier. We still have many families in deep poverty in West Virginia. In 2012 Governor Tomlin named me as a Distinguished Mountaineer. I am deeply honored for this distinction. Although I am now retired, I am still a concerned citizen.

The fracking of West Virginia has the probability of becoming just as destructive as mountain top removal has been. Monroe County is a "karst" habitat with the majority of water supply to county residents coming from springs on Peter' Mountain. Many county residents still utilize wells or springs as private sources of household water. The susceptibility of karst to contamination, and the uncertainly of the direction and interconnections of underground flow, create particular vulnerability in regard to the county's central limestone belt. Red Sulphur Public Service District (PSD), based in Peterstown, serves the largest customer base. Their water source is obtained from three springs arising near the base of Peters Mountain. Union uses a Peters Mountain spring located about 8 miles east of the town, and also a local well. The Gap Mills Public Service District water source is also a

Peters Mountain spring at the headwaters of Second Creek. Our local County Commission through a local Planning Committee developed a Comprehensive Plan for Monroe County in 2009. I went through this plan and found a lot of information dealing with protection of our water. Attached is a summary including the page the information is taken from.

EQT Corporation and NextEra Energy Resources, LLC, developers of Mountain Valley Pipeline Project has a website at MVP_draft_resource_report1_alternative_summary_FERC_filing_dec2014.pdf
Attached is a map comparing (blue line) Route Alternative 1 compared to the Proposed Route (red line). They have determined that Route Alternative 1 (blue line) represented insurmountable construction challenges, as well as a high risk of slope failure and pipeline slips, once the pipeline was to be in operation. The following information is taken from page 8. "Based on a review of desktop constructability, prior easement agreements, use of existing rights-of-way, and length, a set of corridor segments that together created an end-to-end route was identified as the highest ranking corridor and was selected for further study. The potential route was sited to minimize or avoid potential impacts on known sensitive biological and cultural resources, protected lands, wetlands and waterbodies, and floodplains. The route identified after this initial review was considered MVP's initial preferred route and is considered in this Summary of Alternatives as Route Alternative 1. Additionally, land personnel were engaged to contact landowners to request land access and GPS survey permission to further evaluate the pipeline route from the ground. Initial flight reconnaissance and ground check revealed that much of the route that followed existing overhead electric transmission line rights-of-way was along severe side slopes. While the overhead transmission lines span significant areas of slide slope, these areas would be required to be crossed directly by the pipeline. As a result of this next phase of route analysis, **MVP determined that Route Alternative 1 represented insurmountable construction challenges, as well as a high risk of slope failure and pipeline slips, once the pipeline was to be in operation.** As a result, MVP conducted a second routing evaluation to identify the most suitable route. That evaluation ultimately resulted in identification of the preferred pipeline route (Proposed Route)." This MVP report does not address KARST habitat and does not use the word karst one time in the above report. Monroe County is a karst habitat and our water supply is at risk of irreversible damage.

The Proposed Route which they are now pursuing is no different. Within the Monroe County Commission Comprehensive Plan, this was addressed. This was taken from page 23 - ***Manage slopeside development.*** Development on slopes from 15%-25% should be monitored closely particularly in karst terrain, and regulated as needed; development on slopes greater than 25% should be prohibited altogether. Attached is a map (mostly in blue) of Monroe County indicating slope percentage. As you can see, a great deal of slope in Monroe County is over 29%.

I believe there are many reasons why fracking and the pipelines should be banned all together. The only positive I can see is for making a few people very rich from the sale of the fracked gas. Unfortunately, fracking and the pipelines will decrease property values for all residents. The state's homeownership rate is very high when compared to the national average, and Monroe's rate (84.5%) is higher than most of WV. So Monroe County has one of the highest rates of home ownership in the country. This indicates a stable and a strong sense of community. We are Mountaineers and we will fight to keep our beautiful county intact. Any help or information you can give us is greatly appreciated. My cousin Patricia "Cookie" Cole and many other relatives living in Monroe County and I have a deep love and attachment for Peter's Mountain. Our great-grandparents are buried in the Fortner Cemetery at the foot of Peter's Mountain. Thank you, Shirley Hall

Attachment

The Monroe County Commission appointed a Monroe County **Planning** Commission in 2006 to develop a Comprehensive Plan for Monroe County, West Virginia. The following statements are included within this 2009 Comprehensive Plan in regard to Monroe County springs and karst, public highways, rare/endangered species and erosion and slope slide.

page 6 Peter's Mountain, running along the southeastern border of the county, contains thousands of these springs and is the source for most of the county's drinking water. ....development cannot come at the cost of the integrity of their water or their quality of life.

page 15 A significant portion of Monroe County is underlain by geology and landforms generally defined as "karst," typified by limestone outcrops, caves, sinkholes and springs. Because these features often provide direct conduits from the surface to groundwater, runoff contaminants dramatically increase the risk of widespread health and environmental impacts.1 Underground karst aquifers can contain complex, dendritic channels and tunnels, creating large fluctuations in water levels in springs and wells. (footnote) 1 George Veni, et al, Living with Karst, A Fragile Foundation, 9 (American Geological Institute, 2001). 2 West Virginia State Code §22-12-4. This code provides the WV Environmental Quality Board (and subsequently WVDEP) with the authority to "set standards more restrictive than the maximum contaminant levels where it finds that such standards are necessary to protect drinking water use where scientifically supportable evidence reflects factors unique to West Virginia or some area thereof, or to protect other beneficial uses of the groundwater."

page 18 Peter's Mountain aquifer is of considerable importance; currently supplying three public water systems, two commercial water operations, and many households through use of private springs.

page 19 Many county residents still utilize wells or springs as private sources of household water. The susceptibility of karst to contamination, and the uncertainly of the direction and interconnections of underground flow, create particular vulnerability in regard to the county's central limestone belt.

page 30 Compared to many areas, water quality, air quality, and general condition of the environment are considered favorable within Monroe County as evidenced by the county being placed on lists as one of the most desirable counties in which to live. Water: Based on surveys conducted by the Exploratory Committee on County Planning, water resources are considered very important by many residents of the county. This is perhaps not surprising, since county assets in this regard are somewhat unique. Dozens of deep springs in the county bring forth water which has in some cases been underground for decades, and often, is exceptionally pure. Several mineral springs exist within the county. Some are true "warm springs" and are naturally carbonated. An unusually high percentage of local residents still use private sources (springs or wells) for household water.

page 38 A high priority of many Monroe residents is the protection of water quantity from both surface and groundwater sources. Streams and rivers in Monroe are an essential component of the local economy and **culture.** For multiple generations, streams in Monroe have been utilized for agricultural operations, historic mills, and as a source for public drinking water. The value of these resources cannot be overstated.

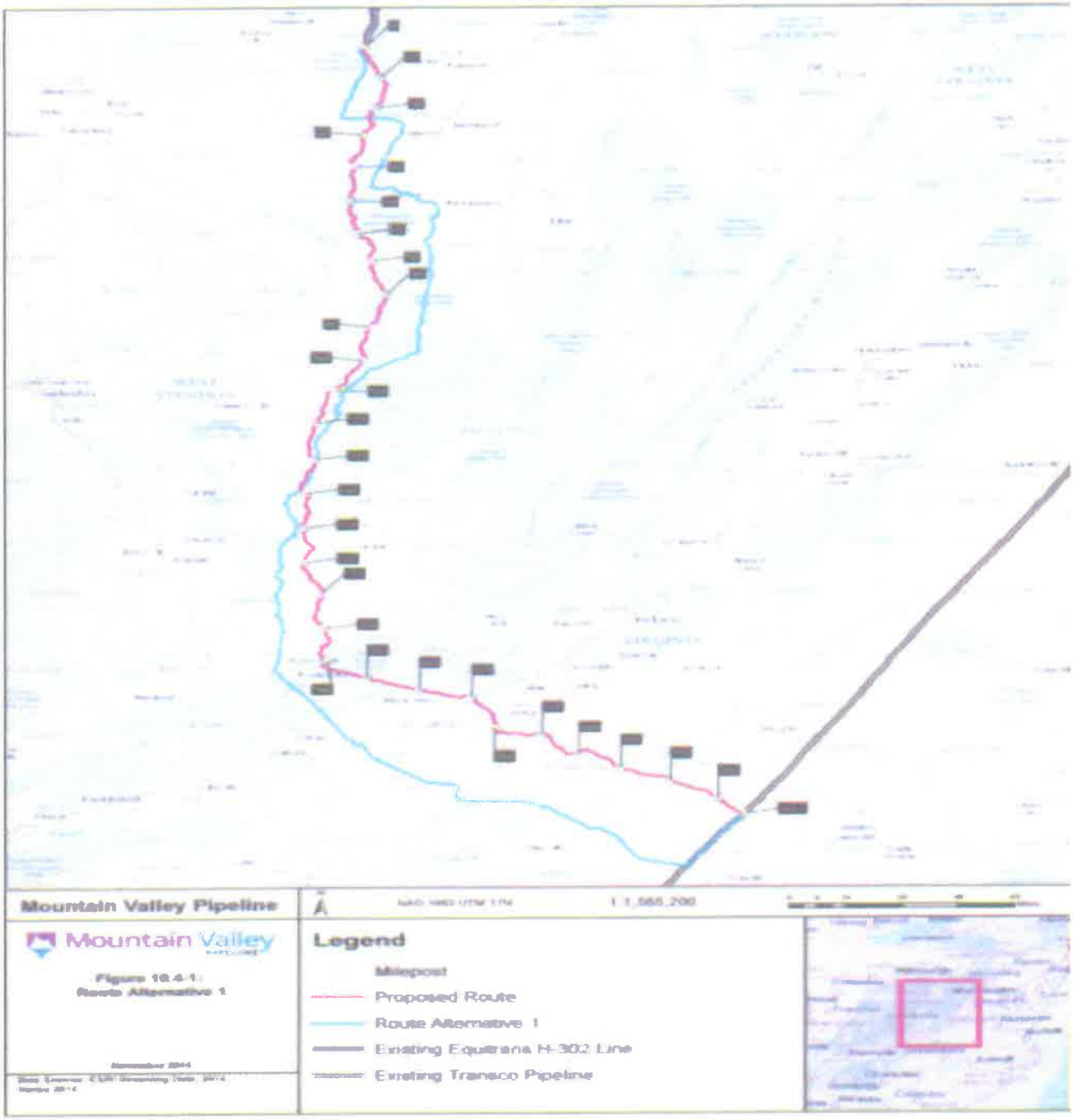
page 43 Utilize existing Monroe County Voluntary Farmland Protection Program (FPP)- Farmland protection boards, as noted in a previous chapter, have the authority and management systems in place to develop specific conservation easements. Since prime farmland is often found on karst terrain and contain springs and seeps, several of the existing county boards already identify the potential for water resource protection as a prioritization criterion.

page 44 Marcellus Shale Gas Drilling and Groundwater Protection-Public feedback has indicated that there is concern with the potential impact of oil and gas drilling activities as a result of Marcellus Shale gas production. This is a legitimate concern in that there have been a number of environmental problems associated with drilling in other areas of the country. The process of drilling and recovering natural gas in this activity requires the usage of millions of gallons of water per well and the contamination of that water with byproducts which may be potentially hazardous.

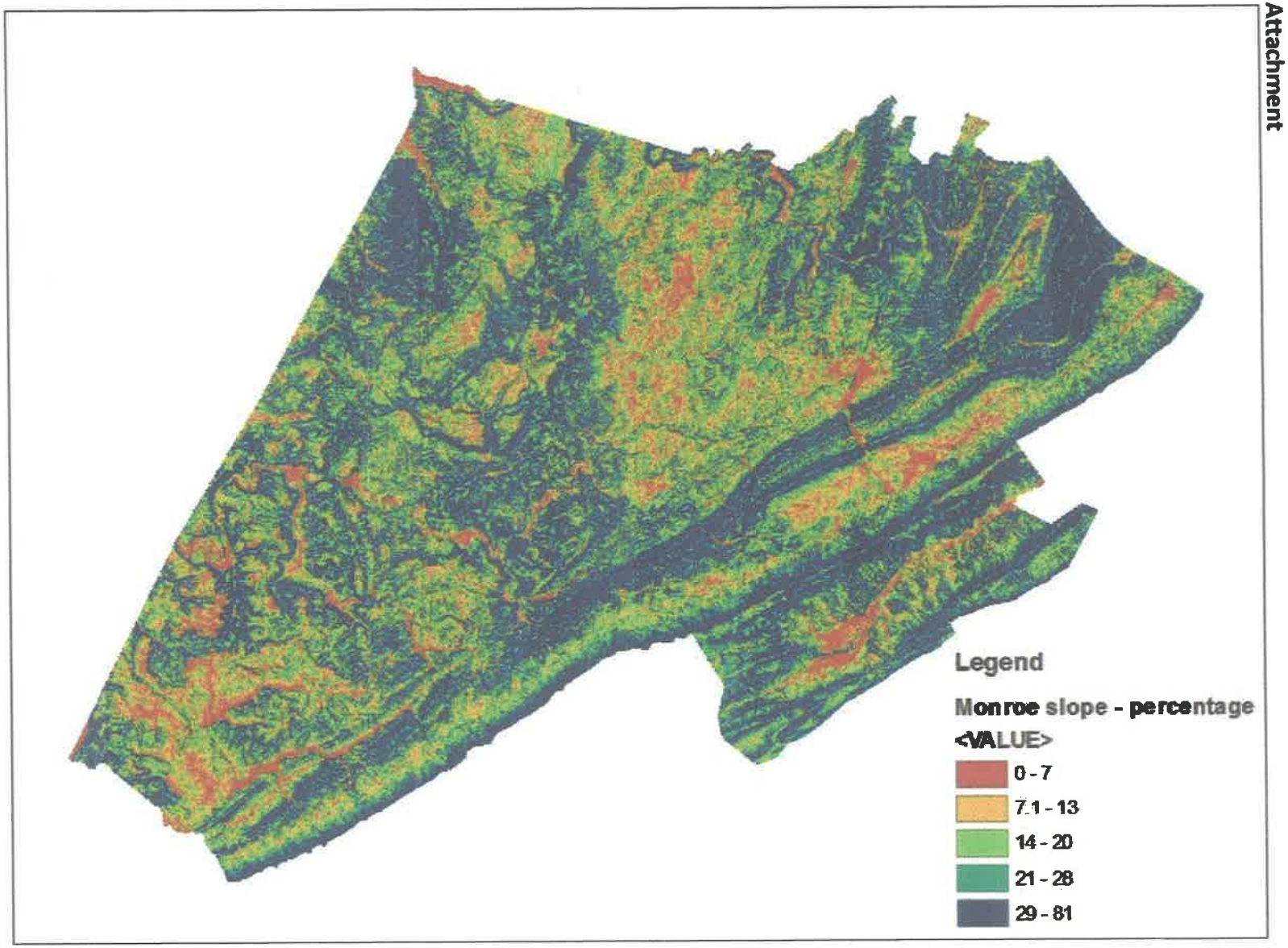
page 82-83 Red Sulphur Public Service District (PSD) Water is obtained from three springs arising near the base of Peters Mountain. Union uses a Peters Mountain spring located about 8 miles east of the town, and also a local well. The Gap Mills Public Service District provides water-only service to the residents of the Gap Mills community. Its source is also a Peters Mountain spring at the headwaters of Second Creek.
page 86 Planning for Future Infrastructure Development-In regard to public water and sewer, countywide public service may not be particularly suitable to local terrain; water quality may not equal that already available from private sources; and countywide service would likely be counterproductive in regard to established goals of limited sprawl and maintenance of rural character. Expansion of infrastructure should be undertaken with the utmost sensitivity to scenic viewsheds, ecosystems, and established goals of preservation of rural atmosphere and open space.
page 88 Priorities-Priority should be given to assessing immediate risks to adequate electric, telephone, water, and emergency communications services, and taking what actions are available to minimize such risks.
page 108 Promote the creation of additional recreational opportunities for county residents and visitors, and encouraging growth of the tourism industry as a means of economic opportunity- Monroe is blessed with an abundance of pastoral and mountain landscapes, clean streams, and historic structures. All of these characteristics lend themselves to recreation and tourism opportunities.
page 115 Existing state and local regulations pertaining to clean water, litter control, and public eyesores (abandoned cars, dumps, derelict buildings) are also important. One great potential draw for tourists considering a visit to Monroe County is the area's pristine natural character. Clean streams, and clean farmland and woodland also enhance potential of enjoyment for local recreationists.
page 124 (1) Hard Infrastructure: ◊ Water, including treatment, distribution, and supply (2) Soft Infrastructure ◊open space and recreation. (3) Green (natural) Infrastructure: ◊ soils◊ topography◊ geology◊ water◊ climate◊ flood and drainage If a community's environment is degraded it becomes less livable and less marketable.
page 125 Manage environmental impacts of development at the local level to promote health and safety and adequate living conditions of all residents. As discussed throughout the Comprehensive Plan, protection of natural resources, and particularly water resources, are of primary concern of Monroe residents.
page 63 Public Highways-Lane width on the county's primary routes is not adequate to comfortably accommodate the size of modern commercial trucks
page 75 Small rural country roads have a value and charm of their own, and local examples contribute to the overall atmosphere of the county. Narrow, winding roads also contribute to slower driving speeds, and in most cases, accidents which do occur on such roads are less severe than on major highways.
page 33 Wildlife: A rich diversity of wildlife is found within the borders of Monroe County, including some rare or endangered species such as the Northern Flying Squirrel, James River Spiny Mussel, Bald and Golden Eagle, and various bat species. `
page 23 Manage slopeside development- Development on steep slopes can have a significant detrimental affect on soils and water quality. Development on slopes from 15%-25% should be monitored closely particularly in karst terrain, and regulated as needed; development on slopes greater than 25% should be prohibited altogether. (added-a map shows a great deal of Monroe County greater than 25%)

(added from Soil Survey Series 1960, No.23)-a St. Clair fault line is at the base of Little Mountain which runs parallel to Peter's Mountain.

Attachment



Attachment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Monroe slope - percentage
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0 - 7
7.1 - 13
14 - 20
21 - 28
29 - 81