

# MEMORANDUM

November 26, 2018

TO: Hannah L. Dye, Tetra Tech  
Evelyn M. Tidlow, Mountain Valley Pipeline

CC: Paul Friedman, Federal Energy Regulatory Commission  
Roger Kirchen, Virginia Department of Historic Resources  
Mike Pulice, Virginia Department of Historic Resources  
Megan Neylon, EQT  
Jim and Kathy Chandler, landowners  
Richard Caywood, Roanoke County  
Alison Blanton, Roanoke Valley Preservation Foundation  
A. Webb, Historical Society of Western Virginia  
Sonja Ingram, Preservation Virginia  
Betsy Merritt, National Trust for Historic Preservation  
John Eddins, Advisory Council on Historic Preservation  
Jerome Brooks, Virginia Department of Environmental Quality

SUBJECT: Request for maintenance of the culvert underneath Green Hollow Drive, a contributing resource inside the Bent Mountain Orchard Rural Historic District (BMORHD), and request for avoidance of use of Green Hollow Drive as a Mountain Valley Pipeline (MVP) access road

## ***Background***

This memorandum is offered in response to a letter to me dated October 23, 2018 from Hannah L. Dye, Project Architectural Historian, Tetra Tech, a firm working under contract for the MVP. The letter states that a team consisting of personnel from MVP, Tetra Tech, and SEARCH traveled to a site in Bent Mountain, VA where Green Hollow Drive crosses a tributary of Mill Creek. MVP had been alerted by Virginia Department of Environmental Quality (DEQ) to a complaint they received about this site from landowners, Jim and Kathy Chandler. Ms. Dye's letter summarizes her firm's understanding of the Chandlers' concerns, stating, "The property owners, Mr. and Mrs. Chandler, are concerned MVP project use of Green Hollow Road (Project ID AR-MVP-RO287) would impact the integrity of this historic resource." Her letter proceeds to summarize the findings of a National Register of Historic Places (NRHP) evaluation of this site by a team consisting of architects from SEARCH and Tetra Tech, as well as Ms. Dye herself, who is an architectural historian. This team's assessment was conducted in accord with the approved "Mountain Valley Pipeline Project Plan for Unanticipated Historic Properties and Human Remains," Ms. Dye said.

The letter describes the culvert underneath the site in question on Green Hollow Drive as having the following characteristics:

- the culvert is constructed of two reinforced concrete pipes (RCP), which may be repurposed material
- one of the pipes may have been damaged during removal from its original site
- the pipes show signs of pitting and cracking
- the culvert's overall structure length is approximately 26 feet
- the culvert carries the 7.8-foot wide Green Hollow Drive
- the structure does not feature any apron or wing walls
- the embankment material comprises recycled concrete slabs stacked vertically mixed with stone aggregate (rip rap)
- the culvert does not give the appearance of being more than 20 or 30 years old, due to the absence of signs of aging including "prominent cracks spanning from the inner to the outer diameter, brittle and flaking concrete, and rust stains bleeding through the concrete."

The letter states that, in light of the team's assessment summarized above, the culvert does not meet the 50-year age criterion for NRHP listing. The letter concludes:

"The resource is located within the previously recorded Bent Mountain Apple Orchard and Bent Mountain Rural Historic District. Tetra Tech recommends that the resource is not eligible for listing in the NRHP either individually or as a contributing resource to a larger historic resource or historic district."

### ***Response and two requests***

I appreciate the opportunity to provide commentary on the historicity of Green Hollow Drive, on impacts to Green Hollow Drive that have resulted from MVP clearing and construction during 2018, and on the planned use of Green Hollow Drive as a pipeline access road. My comments consist of items a through f, below.

- a. The segment of Green Hollow Drive where it crosses the Mill Creek tributary (i.e., the site of the "culvert" discussed in Ms. Dye's letter) is likely to be washed out by future storm events unless appropriate maintenance is conducted. During the exceptionally rainy summer and autumn months of 2018, this area received debris and sediment resulting from MVP's clearing of trees and wetlands and excavation on Bent Mountain. The map in **Attachment 1** (please see attached) illustrates that the area where the MVP crosses the Mill Creek tributary just west of U.S. 221 is downhill from surrounding portions of the MVP corridor. Thus the tributary has become the "catch basin" for the debris and runoff generated by a 5,000-foot segment of MVP clearing and construction. When trees and wetlands were cleared and trenches dug, the inevitable loosening of soil and ground cover was washed into the tributary during the dynamic rain events of 2018.



This debris and sediment washed into the culvert underneath Green Hollow Drive, located about one-half mile downstream from where the MVP crosses the tributary.

The situation we now face is that the culvert is completely clogged with debris and sediment. Now, during rain events, water from the tributary has nowhere to flow except over the surface of Green Hollow Drive. This situation is certain to destroy Green Hollow Drive in a short amount of time. Green Hollow Drive provides the only venue for vehicular access for a family residing inside the BMORHD.

We respectfully request that MVP clean the sediment and debris out the culvert to ensure that this family does not lose vehicular access to their home.

- b. Bent Mountain Orchard Rural Historic District (BMORHD) was named eligible for listing on the NRHP by Virginia Department of Historic Resources (VDHR) on October 12, 2017, as announced in an email to me from Mike Pulice, VDHR. A copy of Mike's email appears as Attachment 2 to the January 30, 2018 letter to FERC (attached).
- c. In the process of finding the BMORHD eligible for listing on the National Register, VDHR's staff evaluation committee ("ETeam") made the additional finding that "historic roads and/or road beds associated with the orchard industry can and should be considered contributing resources in the district, either collectively or separately." Please see this announcement in the October 12, 2017 email from Mike Pulice, attached. This designation as "contributing resource" applies to Green Hollow Drive, which appears in maps of the district dating from the district's period of historic significance, including the attached 1963 USGS topographic map (attachment 4 to the January 30, 2018 letter to FERC).
- d. This October 12, 2017 finding of Green Hollow Drive's eligibility by VDHR supersedes the June 27, 2016 statement in the Virginia Cultural Resources Information System, as quoted in Ms. Dye's letter, that Green Hollow Drive is ineligible for NRHP listing both individually and as a contributing element to a historic district.
- e. I have provided extensive documentation on the subject of Green Hollow Drive's historic eligibility to FERC, MVP, and Tetra Tech. This documentation includes the following accession numbers:
  - **accession # 20180130-5205** -- my letter to FERC dated January 30, 2018 (a copy of this letter is attached – see **Attachment 2**)
  - **accession # 20180105-5141** -- Preliminary Information Form (PIF) for the BMORHD and Addendum to the PIF, appearing as attachments to MVP's January 5, 2018 letter to FERC
  - **accession # 20170908-5122 (32389539)** -- Preserve Roanoke's comments on the Final Environmental Impact Statement (FEIS) for the MVP

- **accession # 20170908-5122 (32389307)** -- attachments to Preserve Roanoke's comments on the FEIS for the MVP

- f. As requested repeatedly since last September, I once again ask FERC, MVP and Tetra Tech to avoid the use of Green Hollow Drive as a pipeline access road. Green Hollow Drive has been named a contributing resource in the district. Any meaningful interpretation of Section 106 of the National Historic Preservation Act behooves FERC, MVP, and Tetra Tech to avoid the industrialization of Green Hollow Drive that is sure to result from its use as an access road during pipeline construction.

Please see photo (**Attachment 3**) of a rural road in West Virginia utilized as a pipeline access road during construction of the Stonewall Gathering Pipeline. The road was transformed by the weight of the heavy pipeline equipment. Local residents reported to me that use of this road required caution to avoid damaging vehicles in the very deep ruts. One can only imagine how such usage would visually transform Green Hollow Drive, threatening the historic eligibility of the entire BMORHD, in addition to creating hazards for families forced to use the road to access their homes.

In a Treatment Plan approved by FERC on March 13, 2018, MVP has proffered funding for the writing of a National Register nomination for the BMORHD. This un-asked-for and un-needed gift should not substitute for FERC/MVP's consideration of avoidance of Green Hollow Drive, a significant contributing resource inside the BMORHD.

Thank you for your consideration of the matters discussed in this memo.

### **ATTACHMENTS**

**Attachment 1** – Map illustrating downstream effects of MVP clearing and construction in Bent Mountain, VA

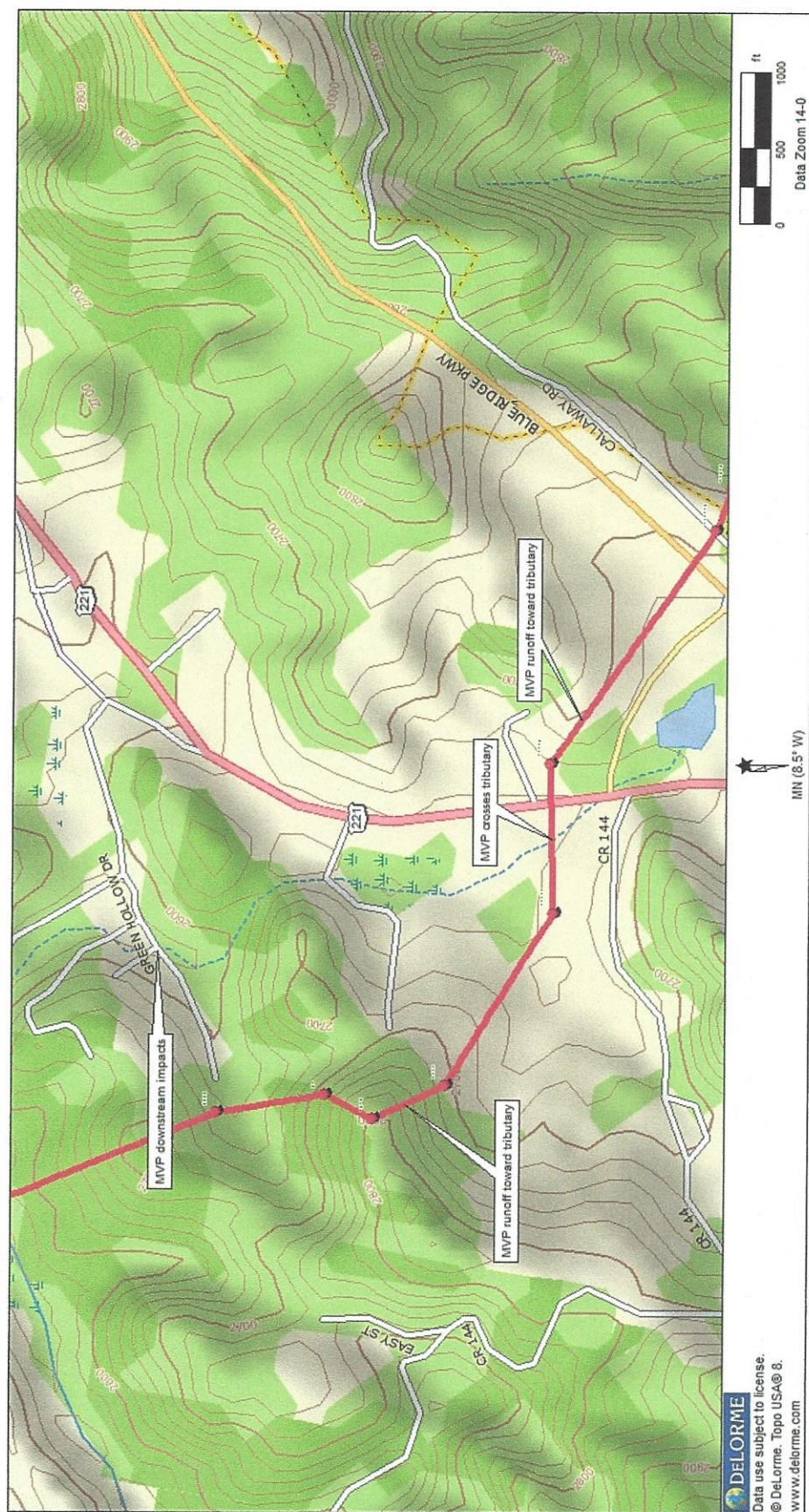
**Attachment 2** – Letter dated January 30, 2018 submitted to FERC by Ann Rogers requesting action to address effects of the MVP on the BMORHD and Green Hollow Drive. Attachments to this letter (attached hereto) include:

- (1) Table Cultural 3, excerpted from MVP's January 5, 2018 letter to FERC
- (2) Email from Mike Pulice, VDHR, announcing NRHP eligibility of the BMORHD, including a statement that historic orchard-servicing roads inside the district, including Green Hollow Drive, are contributing resources
- (3) Map of Green Hollow Drive and other historic orchard roads inside the BMORHD, excerpted from the PIF submitted to VDHR by Preserve Roanoke May 24, 2017
- (4) 1963 USGS topographic map showing Green Hollow Drive in the area containing the BMORHD

**Attachment 3** – photo of Stonewall Gathering Pipeline access road.



## Attachment 1



**MAP ILLUSTRATING MOUNTAIN VALLEY PIPELINE CONSTRUCTION IN BENT MOUNTAIN, ROANOKE COUNTY, VA**

This map illustrates the locus of Mountain Valley Pipeline (MVP) clearing and construction conducted in Bent Mountain, VA during 2018, including an area where the pipeline crosses a tributary of Mill Creek west of U.S. 221 (see map note, “MVP crosses tributary”). The same tributary flows underneath Green Hollow Drive through two cement drainage pipes, each approximately 2-3 feet in diameter, positioned about one-half mile downstream of the MVP crossing. Green Hollow Drive is a contributing resource in the NRHP-eligible Bent Mountain Orchard Rural Historic District. The drainage pipes have been 100% blocked by debris flowing downstream from the MVP clearing and construction (see map note, “MVP downstream impacts”). According to family members residing in the district during its period of historic significance, these drainage pipes have never before been 100% blocked by rain or storm runoff – this is a “first”. The blockage of the drainage pipes is causing water from the tributary to flow over the surface of Green Hollow Drive. Unless the drainage pipes are cleaned out, Green Hollow Drive will be destroyed by this stream flow.

### MAP LEGEND

- red line = MVP clearing and construction conducted during 2018  
blue dotted line = tributary of Mill Creek



## Attachment 2

January 30, 2018

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

Dear Secretary Bose,

RE:     Need for Immediate Action to Address Effects of the Mountain Valley Pipeline on the  
          Bent Mountain Orchard Rural Historic District

With this letter, Preserve Roanoke requests that FERC take immediate action requiring Mountain Valley Pipeline, LLC (MVP) to issue an assessment of project-related effects for the Bent Mountain Orchard Rural Historic District (VADHR 080-5731) as requested in FERC's letter to MVP on December 26, 2017 (accession # 20171226-3020), utilizing new information provided below. MVP has failed to give adequate consideration to impacts to historic resources inside the Bent Mountain Orchard Rural Historic District in the planning of the proposed Mountain Valley Pipeline (MVP pipeline). Accordingly, any consideration of MVP's proposed "treatment plan" for the Bent Mountain Orchard Rural Historic District is premature until this issue is resolved.

### ***Background***

On December 26, 2017, FERC issued to MVP a letter titled "Post-Certificate Environmental Information Request #1" (accession # 20171226-3020). FERC's letter to MVP contained the following request:

Provide a copy of the inventory form for the Bent Mountain Apple Orchard Rural Historic District (DHR ID no. 80-5731), and a 7.5-minute USGS topographic map showing the district boundary in relation to the MVP pipeline centerline and ancillary proposed facilities (including access roads), together with an assessment of project-related effects conducted by an independent professional historian/archaeologist. Document that the effects assessment for the Bent Mountain Apple Orchard Rural Historic District was sent to Ann Rodgers and the VADHR for review, and file their comments on the report.

On January 5, 2018, MVP issued a response to FERC, titled "Responses to Data Requests" (accession # 20180105-5141). MVP's response to FERC's above-cited request appears on pages 19-22 of that response and in Attachments PCDR1 Cultural 3A, PCDR1 Cultural 3B, PCDR1 Cultural 3C, PCDR1 Cultural 3D, and PCDR1 Cultural 3E.

The following quotation is from page 19 of MVP's response:

As discussed below, because the VADHR has already commented that the proposed undertaking adversely impacts the Bent Mountain Apple Orchard Rural Historic District and Mountain Valley

Kimberly D. Bose, Federal Energy Regulatory Commission  
January 30, 2018  
Page 1

has already developed and circulated a Treatment Plan, an additional effects assessment for the Bent Mountain Apple Orchard Rural Historic District is not necessary or warranted.

On June 1, 2017, subsequent to Mountain Valley's submittal of the Criteria of Effects Report (May 2017), VADHR's National Register Evaluation Committee (Committee) met to evaluate the proposed 835-acre Bent Mountain Apple Orchard Rural Historic District (VADHR ID# 080-5731) as documented in the March 10, 2017, Preliminary Information Form (PIF) completed and submitted to VADHR by Ann Rogers of Preserve Roanoke. The PIF comprises an inventory of structures, buildings, and landscape features potentially contributing to the district, as identified by Ms. Rogers. A copy of the PIF for the Bent Mountain Apple Orchard Rural Historic District is provided as Attachment PCDR1 Cultural 3a. The Committee deferred making a recommendation pending receipt of additional information about the agricultural landscape and outbuildings associated with commercial orchard operations. In September 2017, additional documentation was submitted by Ms. Rogers for the proposed Bent Mountain Apple Orchard Rural Historic District (Attachment PCDR1 Cultural 3b). This information superseded the March 2017 PIF and included the addition of the word "Apple" to the proposed district's name and slightly different boundaries than originally proposed (approximately 870 acres).

The potentially contributing resources within the district identified by Mountain Valley during the Phase 1 historic architectural survey for the project (Master List resources) and the additional resources identified on the PIF are depicted on a map provided as Attachment PCDR1 Cultural 3c. Mountain Valley will avoid direct impacts on all identified potentially contributing historic resources as summarized in Table Cultural 3 below.

Table Cultural 3, cited above, lists 13 structures as "Potential Contributing Resources within the Bent Mountain Apple Orchard Rural Historic District (080-5731)". A copy of Table Cultural 3 is provided in **Attachment 1**. These 13 structures include ten structures having VADHR ID numbers, as well as three structures with VADHR ID numbers as yet unassigned.

### ***Historic orchard roads have been extensively documented for MVP and FERC***

Preserve Roanoke has provided extensive documentation of the presence of a network of historically significant dirt and gravel roads inside the Bent Mountain Orchard Rural Historic District.

Descriptions, maps and photos of these historic roads appear in the PIF, portions of which are included in MVP's January 5 letter to FERC (accession # 20180105-5141) as Attachment PCDR1 Cultural 3A.

Descriptions, maps, and photos of the historic roads also appear in the Addendum to the PIF, which is referenced in MVP's January 5 letter as "additional documentation" and included in its entirety in Attachment PCDR1 Cultural 3B, as appended to MVP's January 5 letter to FERC (accession # 20180105-5141).



Moreover, this network of historic orchard roads was described extensively in Preserve Roanoke's comments on the Final Environmental Impact Statement for the MVP, submitted to FERC on September 8, 2017. Please see:

- (i) comments at accession # 20170908-5122 (32389539) and
- (ii) attachments to the comments at accession # 20170908-5122 (32389307).

### ***Historic orchard roads are contributing resources***

On October 12, 2017, Mike Pulice, Architectural Historian, Virginia Department of Historic Resources, emailed me announcing the unanimous decision on the part of the Virginia Department of Historic Resources staff evaluation committee to approve the Bent Mountain Orchard Rural Historic District as eligible for listing on the National Register of Historic Places. The email states that, in the October 12 meeting of the evaluation committee, Mr. Pulice had made an inquiry whether the historic orchard roads inside the Bent Mountain Orchard Rural Historic District should be considered contributing resources. Mr. Pulice's email states that the committee found that "historic roads and/or road beds associated with the orchard industry can and should be considered contributing resources in the district, either collectively or separately."

Mr. Pulice's email appears as **Attachment 2**.

With this statement on the part of the Virginia Department of Historic Resources staff evaluation committee that the historic roads and/or roadbeds associated with the orchard industry are contributing resources in the district, we must now consider MVP's failure to recognize them or acknowledge their status as contributing resources inside the Bent Mountain Orchard Rural Historic District.

### ***Orchard roads have been excluded from MVP's list of contributing resources***

In Table Cultural 3, appearing on page 20 (PDF page 27) of MVP's January 5, 2018 letter to FERC (accession # 20180105-5141), MVP provides a list of what it considers the contributing resources inside the Bent Mountain Orchard Rural Historic District. The list does not contain any of the historic orchard roads.

The absence of the orchard roads from MVP's list of contributing resources inside the Bent Mountain Orchard Rural Historic District is perplexing, given the fact that the PIF and the Addendum to the PIF, both of which MVP attached to its January 5 letter (accession 20180105-5141), are replete with discussion of the roads, their location, their history, and their relevance to the historic Bent Mountain orchard industry.

The PIF contains:

- text describing the historic orchard roads and their significance on pages 2, 3, and 7
- four maps clearly and explicitly depicting the historic orchard roads
- three photos depicting the historic orchard roads.



The Addendum contains:

- text describing the historic orchard roads and their significance on pages 1, 25, 26, 27, and 28
- one map depicting the historic orchard roads
- four photos depicting the historic orchard roads.

MVP's letter of January 5, 2018 (accession # 20180105-5141) does not recognize the orchard roads: (1) as topics of discussion within the PIF and Addendum, both of which are attached to the letter; (2) as features inside the Bent Mountain Orchard Rural Historic District, or (3) as contributing resources inside the district. In fact, MVP's letter is totally silent on the orchard roads.

In light of the fact that the orchard roads are prominently and explicitly featured in documents attached to MVP's letter of January 5 (Attachment PCDR1 Cultural 3A and Attachment PCDR1 Cultural 3B), the absence of any recognition or discussion of the orchard roads in the text of MVP's January 5 letter is a genuine concern.

***Historic orchard road has been earmarked as an MVP pipeline access road***

The failure of MVP to acknowledge the significance of the historic orchard roads inside the Bent Mountain Rural Historic District is even more perplexing in light of the fact that one of the principal historic orchard roads, Green Hollow Drive, has been identified by MVP as a pipeline access road.

Below we provide a map from MVP's January 5, 2018 letter to FERC (accession # 20180105-5141) showing the MVP pipeline access road MVP-RO-287 superimposed on Green Hollow Drive. Neither the map nor the accompanying text discusses the road's historic significance.



MVP pipeline access road "MVP-RO-287 TEMPORARY" is superimposed on Green Hollow Drive, one of the historic orchard roads inside the Bent Mountain Orchard Rural Historic District. Image source: MVP letter to FERC of January 5, 2018 (accession # 20180105-5141), Attachment PCDR1 Cultural 3D, page 98

Green Hollow Drive, the road identified in the map above as an MVP pipeline access road, is discussed repeatedly throughout the PIF and the Addendum as a contributing feature in the network of historic roads inside the Bent Mountain Orchard Rural Historic District. Please see **Attachment 3**, a map which was submitted as part of the PIF.

The map in **Attachment 3** and three other maps depicting the historic road network inside the Bent Mountain Orchard Rural Historic District were excluded from the version of the PIF attached to MVP's January 5 letter to FERC in Attachment PCDR1 Cultural 3a. The reason for this exclusion is not explained in MVP's letter.

In addition, please see **Attachment 4**, a page from the Addendum with the heading, "Maps and photos showing historic road network that served the BMAORHD orchardists during the period of historic



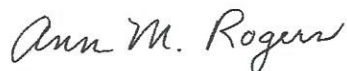
The absence of any discussion of Green Hollow Drive and the other orchard roads in the body of MVP's letter of January 5 poses serious questions as to the objectivity and integrity of the Section 106 process as conducted by MVP, in light of MVP's plans to use Green Hollow Drive as an MVP pipeline access road.

***Requested action***

We respectfully request that FERC take immediate action requiring MVP to issue an assessment of project-related effects for the Bent Mountain Orchard Rural Historic District, as previously requested by FERC, utilizing new information described in this letter. Until this issue is resolved and these adverse effects are recognized, it is premature for FERC or the consulting parties to consider MVP's proposed "treatment plan" for the Bent Mountain Orchard Rural Historic District.

Thank you for your prompt attention to this request.

Sincerely,



Ann M. Rogers  
Section 106 Coordinator, Blue Ridge Environmental Defense League  
Member, Preserve Roanoke  
Member, Roanoke County Pipeline Advisory Committee

cc:

Mountain Valley Pipeline, LLC  
Virginia Department of Historic Resources  
Advisory Council on Historic Preservation  
National Trust for Historic Preservation  
County of Roanoke

Attachments:

1. Table Cultural 3, excerpted from MVP's January 5, 2018 letter to FERC (accession # 20180105-5141)
2. Email from Mike Pulice, Virginia Department of Historic Resources, October 12, 2017
3. Map of Green Hollow Drive, excerpted from PIF submitted to Virginia Department of Historic Resources by Preserve Roanoke May 24, 2017
4. Maps and photos showing historic road network that served BMORHD orchardists during the period of historic significance

**Mountain Valley Pipeline, LLC  
Mountain Valley Pipeline Project  
Docket No. CP16-10-000**

**Response to Post Order Environmental Information Request  
Issued by FERC December 26, 2017**

**Table Cultural 3**

<b>Potential Contributing Resources within the Bent Mountain Apple Orchard Rural Historic District (080-5731)</b>					
<b>Resource Name</b>	<b>VADHR ID</b>	<b>Nearest IP Mile Post</b>	<b>Nearest Project Feature</b>	<b>Distance to Nearest Project Feature (approx. ft.)</b>	<b>Distance to Centerline (approx. ft.)</b>
William Hale frame house (Homestead remnant/ruins)	Not yet assigned	245.2	ACCESS ROAD - TEMPORARY WORK SPACE	12	1654
Edith Hale and Bill Hall House	Not yet assigned	245.3	ACCESS ROAD - TEMPORARY WORK SPACE	114	267
Millet (Vest) House	Not yet assigned	244.5	ACCESS ROAD - TEMPORARY WORK SPACE	123	468
Cabin (Hale Cabin remnant/ruins)	080-5677-0006	245.2	TEMPORARY WORKSPACE LIMITS-PIPELINE	40	81
House	080-5677-0001	244.9	TEMPORARY WORKSPACE LIMITS-PIPELINE	2976	3069
Logan Place Farm	080-0495	244.9	TEMPORARY WORKSPACE LIMITS-PIPELINE	1516	1610
House	080-0494	244.6	TEMPORARY WORKSPACE LIMITS-PIPELINE	2082	2156
House (Tazewell Price Home, Les Landes)	080-0487	245.3	ATWS	426	1882
Service Station	080-5654	245.9	ACCESS ROAD - TEMPORARY WORK SPACE	518	2399
Lawrence Cemetery	080-5326	244.1	ACCESS ROAD - TEMPORARY WORK SPACE	1304	2455
House	080-5669	244.1	ACCESS ROAD - TEMPORARY WORK SPACE	1756	2915
Conner Cemetery	080-5148	246	ACCESS ROAD - TEMPORARY WORK SPACE	331	4302
Henry-Gregory House	080-5677-0008	244.1	ACCESS ROAD - TEMPORARY WORK SPACE	50	1001



## ATTACHMENT 2

**Subject:** Bent Mtn Orchard RHD - good news!  
**From:** Pulice, Michael (DHR) (Michael.Pulice@dhr.virginia.gov)  
**To:** amelvin3@verizon.net;  
**Date:** Thursday, October 12, 2017 11:51 AM

Hi Ann,

I presented your addendum to the original PIF to the DHR staff evaluation committee (ETeam) this morning. Their unanimous decision was that the proposed rural historic district (RHD) is eligible for the state and National Registers. So next, I will present the information to the State Review Board on December 14<sup>th</sup> in Richmond. Their decision will make it official, once and for all, that the district is eligible for both registers. I am confident that they will agree with the evaluation committee. Congratulations on your hard work finally paying off!

A couple notes from the ETeam discussion:

- 1) Any known prehistoric or historic archaeological sites should be included and discussed in a register nomination for the district. The district can have two separate periods of significance, such as 3000 BC - 500 AD and 1890 - 1972.
- 2) Historic roads and/or road beds associated with the orchard industry can and should be considered contributing resources in the district, either collectively or separately.

That's it! Let me know if you have any questions.

Mike

Mike Pulice

Architectural Historian

Western Regional Office

Community Services Division

Virginia Department of Historic Resources

962 Kimc Lane

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1/29/2018

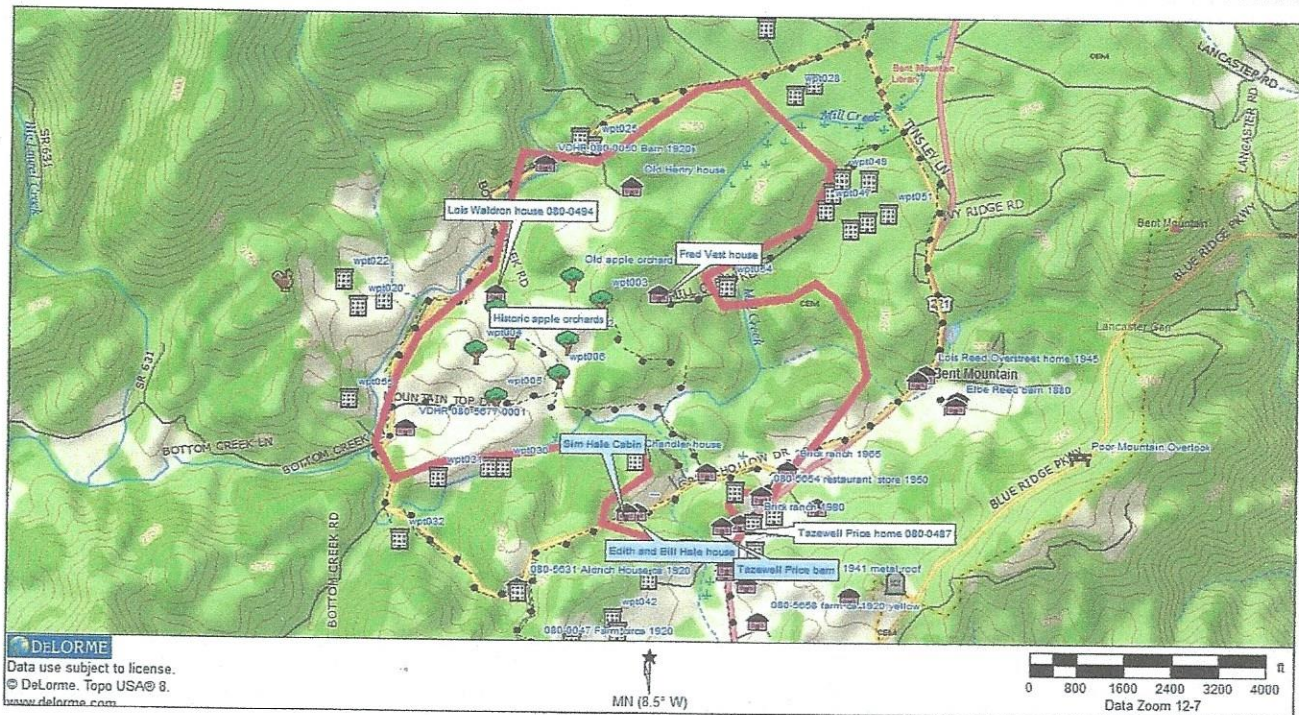
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Salem, VA 24153

Phone: 540-387-5443

[www.dhr.virginia.gov](http://www.dhr.virginia.gov)





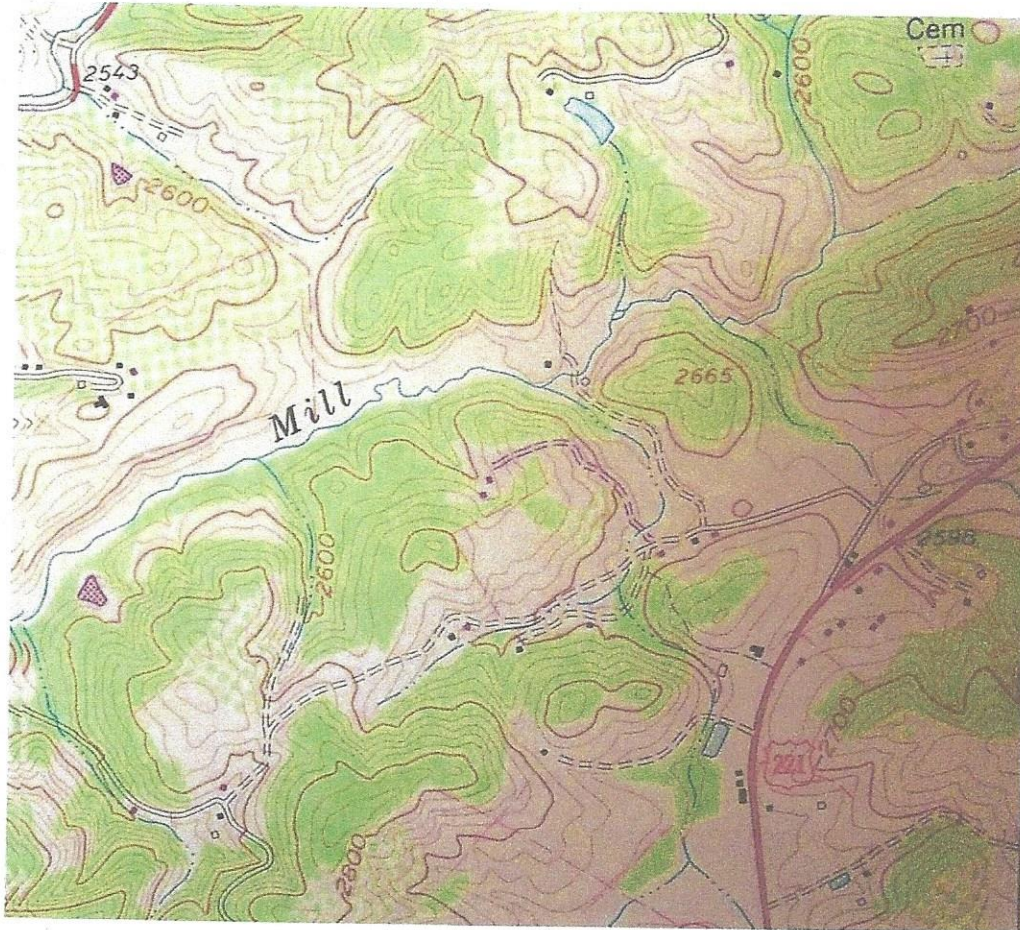
The network of roads serving the Bent Mountain Apple Orchard Rural Historic District included what we are calling the “Circumnavigator”, marked on the map as . . . . .

It includes portions of present-day Rocky Road, Bottom Creek Road, as well as the historic Bent Mountain Turnpike. Additionally, it contained a road that followed present-day Green Hollow Drive past the home of William M. Hale and westward through what is now forest, past properties and dwellings established by Hale's children, including the Sim Hale cabin and the home of Edith Hale and her husband, Bill Hall. The Green Hollow Drive Segment terminated at present-day Rocky Road.



**(8) Maps and photos showing historic road network that served the BMAORHD orchardists during the period of historic significance**

The BMAORHD contains an extant network of dirt and gravel roads that were used during the period of historic significance to support the orchardists' transportation of apple crops to the nearest apple barn or market. We found evidence of the road network inside the district in a 1963 USGS topographic map.



The intersection of present-day Green Hollow Drive with U.S. 221 is shown in this 1963 map as part of the dirt/gravel road network serving the BMAORHD.



*Map 2: 1963 USGS topographic map showing network of unpaved roads serving BMAORHD*



### Attachment 3

This photo was taken during a tour of Stonewall Gathering Pipeline construction sites conducted by local residents during July, 2015. This rural road in West Virginia was used as a pipeline access road during construction and critically damaged as a result of that usage. Local residents reported damage to the undersides of their vehicles resulting from having to navigate the deep ruts.

