

# INDIVIDUALS

## IND272 – Pamela L. Ferrante

20161128-5050 FERC PDF (Unofficial) 11/27/2016 7:42:29 PM

IND272-1  
cont'd

Mountain.<sup>13,14</sup> Early dye-trace studies have shown the general direction of groundwater through caves and karst terrain in the area to be easterly towards Slussers Chapel Cave.<sup>15</sup> No studies, however, had been conducted in the eastern section of Slussers Chapel Conservation Site until recently. Ongoing dye-trace studies on a recently uncovered open-throat sinkhole have shown water flow from the eastern boundary of the conservation site to Slussers Chapel Cave. Figure 3 shows the updated subterranean water flow in Slussers Chapel Conservation Site.

These new dye-trace studies validate the interconnectivity of the subterranean water conduits along the proposed Mount Tabor Variation route within Slussers Chapel Conservation Site including Slussers Chapel Cave.<sup>16,17</sup> These studies also validate the consistent recommendations from VDCR to avoid Slussers Chapel Conservation Site.<sup>8,12,18,19,20</sup> Consequently, the Mount Tabor Variation route does not avoid impacting the water flow to Slussers Chapel Cave as was previously thought. In fact this variation route will have a more profound negative environmental effect on Slussers Chapel Cave and Slussers Chapel Conservation Site. **Once again, the DEIS has been released prior to proper scientific evaluation of the proposed Mount Tabor Variation pipeline route and its potential effects on the environment.**

IND272-2

### Slussers Chapel Cave – Why Worry?

Hundreds of households rely on the fragile subterranean aquifer for their only water source through private wells. There is no public water service to this area. Groundwater protection in karst regions is crucial and is especially important as demands on water resources increase. MVP admits that groundwater is a “complex underground condition” and is “vulnerable to contamination”.<sup>21</sup> The need for buffer zones to protect karst features have been emphasized<sup>13</sup> and the purpose of Slussers Chapel Conservation Site is to protect “cave and karst associated element occurrences.”<sup>12</sup>

Disturbing the steep slope above Slussers Chapel Cave will not only affect the allogenic recharge/well water quality but also the quantity of water in this fragile karst region. Erosion from construction activities and the mandatory treeless right-of-way has the potential for increased runoff to contaminate the groundwater with sediment and coliform bacteria. **Clearly this is a public health concern.**

<sup>13</sup> FERC submittal 20160713-5029, Ernst H. Kastning, An Expert Report on Geologic Hazards in the Karst Regions of Virginia and West Virginia.

<sup>14</sup> FERC submittal 20160520-5051, Figure 2, DCR

<sup>15</sup> Fagan, J. and Orndorff, W., Karst Hydrology Investigations in the Cambrian Elbrook and Conococheague Formations of Pulaski and Montgomery Counties, Virginia, Proceedings from Second Appalachian Karst Symposium 2008. VDCR, Division of Natural Karst Heritage Program, 2008, p. 8.

<sup>16</sup> FERC submittal 20160908-5025, Jones

<sup>17</sup> FERC submittal 20160915-5081, Ferrante

<sup>18</sup> FERC submittal PF15-3 20150420-0068, DCR

<sup>19</sup> FERC submittal PF15-3 20150420-5031, DCR

<sup>20</sup> FERC submittal 20160520-5051, DCR

<sup>21</sup> FERC submittal 20151023-5035(30974878), Resource Report 2 – Water Use and Quality

IND272-2

See the response to comment IND2-2 regarding drinking water. See the response to comment CO14-3 regarding spills. See the response to comment IND92-1 regarding leaks. See the response to comment IND70-1 regarding erosion. The right-of-way would be restored as closely as possible to preconstruction contours and the cleared area would be revegetated. Mountain Valley would follow the procedures in the *Karst Mitigation Plan* to evaluate and mitigate impacts to karst features identified.

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## Conclusions

**The DEIS has failed to adequately consider adverse effects of the proposed Mount Tabor Variation pipeline on Slussers Chapel Cave.** The Mount Tabor Variation will not “*limit impacts on caves and other karst features*” as was recommended in the DEIS<sup>3</sup> but will have multiple negative environmental effects on Slussers Chapel Cave and Slussers Chapel Conservation Site. Proper and adequate evaluation of the Mount Tabor Variation route had not been performed at the time of the DEIS release. This lack of important information thus renders the **DEIS report incomplete and inaccurate that will result in disastrous environmental consequences for the fragile karst ecosystem.**

I oppose the construction of a pipeline in its entirety due to the inevitable damage to the environment along the pipeline path. I also recognize that FERC may approve this project against concerns of many citizens. I am also concerned about the potential negative environmental impact on Slussers Chapel Cave and Slussers Chapel Conservation Site. The VDCR has suggested a route that would avoid the Slussers Chapel concite completely. Because of the very valid concerns I have listed above involving the Mount Tabor Variation route, **I support the VDCR Slussers Chapel Conservation Site Avoidance Concept.**<sup>8</sup>

CC: U.S. Forest Service  
Virginia Department of Conservation and Recreation  
Cave Conservancy of the Virginias  
New River Land Trust

IND272-3

Section 4.1 of the final EIS was updated to address potential impacts to karst features along the Mount Tabor Variation. The Mount Tabor Variation was adopted to avoid karst features in the vicinity of the Mount Tabor Sinkhole Plain. Slussers Chapel Cave is located about a half mile to the south of the proposed Mount Tabor Variation alignment.

# INDIVIDUALS

## IND273 – Tina Smusz (on behalf of Jacob Hileman)

20161128-5053 FERC PDF (Unofficial) 11/27/2016 3:00:12 PM

October 23, 2016

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

Cc:  
Neil Kornze, Director  
BLM Washington Office  
1849 C Street, NW, Rm. 5565  
Washington, DC 20240

Joby Timm, Supervisor  
George Washington and Jefferson National Forests  
5162 Valleypointe Parkway  
Roanoke, VA 24019

Jennifer P. Adams, Special Project Coordinator  
George Washington and Jefferson National Forests  
5162 Valleypointe Parkway  
Roanoke, VA 24019

Dear Ms. Bose and Members of the Commission:

IND273-1

I am writing to articulate my strong and unconditional opposition to the four amendments to the Forest Service Plan proposed by FERC. While each amendment is individually and separately without merit, Proposed Amendment 1 is the most egregious and constitutes a serious violation of the basic social contract between FERC and us stakeholders.

Given the original Mountain Valley Pipeline has yet to be approved, I find it hard to believe the proposed amendment to vastly expand the amount of infrastructure – transporting as-yet-undefined materials – would even be considered by FERC. These amendments are irresponsible from a technical standpoint, and legally questionable given the obvious need for a new environmental impact statement to address changes of this magnitude. It is also politically irresponsible; this move suggests the original intention behind the pipeline project was always larger than stated publicly and proposed in the initial filings, and suggests a troubling degree of dishonesty and disregard for the totality of stakeholder concerns voiced in previous comment periods and through a multitude of public fora. In spite of the insistence on the part of FERC and Mountain Valley Pipeline that any disruptions to local communities would only be temporary and limited to the construction phase, Proposed Amendment 1 effectively guarantees disruptions in perpetuity for our communities.

IND273-1

The FS has worked with Mountain Valley to develop project design features, mitigation measures and monitoring procedures to minimize the impacts to the resources the plan amendments were designed to protect.

# INDIVIDUALS

## IND273 – Tina Smusz (on behalf of Jacob Hileman)

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As a member of the Mount Tabor Road community, I strongly oppose these amendments to the Forest Service Plan on moral grounds. Enacting these amendments will irrevocably harm the invaluable cultural resources we derive from the forest, streams, and tilled earth of the area. These amendments will also have lasting negative consequences on our more conventionally quantifiable property values, and disrupt many carefully planned retirements via loss of equity in homes near the route.

As a hydrologist, I condemn the brazen disregard for basic science and human health concerns evident in the four proposed amendments. Enacting these amendments will threaten not just the health of our soil and streams, but poses a lasting threat to our groundwater aquifers. Once contaminated, our aquifers may never return to their original quality during our lifetimes, and likely the damage will outlive our children and grandchildren.

The four proposed amendments constitute an unconscionable and unjustifiable burden on us stakeholders, and absolutely cannot be approved. I, therefore, reiterate my complete and unwavering objection to the amendments.

Respectfully,

Jacob Hileman, Ph.D.  
5555 Mount Tabor Road  
Catawba, VA 24070

# INDIVIDUALS

## IND274 – Tina Smusz

20161128-5150 FERC PDF (Unofficial) 11/28/2016 2:09:48 PM

Submission Description: (doc-less) Motion to Intervene of Tina Smusz under CP16-10-000.

Submission Date: 11/28/2016 2:09:48 PM

Filed Date: 11/28/2016 2:09:48 PM

Dockets  
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CP16-10-000 Application for Certificate of Public Convenience and Necessity and Related Authorizations.

Filing Party/Contacts:

Filing Party	Signer (Representative)
Other Contact (Principal)	-----
-----	-----
Individual	FERCSmusz@gmail.com

Basis for Intervening:  
IND274-1 I am a landowner whose well water is jeopardized due to pipeline route crossing aquifer serving this large rural neighborhood & I am a physician who is deeply concerned about health hazards presented by multiple gas pipelines near and through my county. The current MVP route goes through US Forest land - the same forest we see from our property.

IND274-2

IND274-1 Non-environmental Commission staff will make a determination on whether to grant a party’s out-of-time intervention request. Section 4.3.2.1 of the EIS discusses monitoring and testing of water wells within 150 feet of the proposed workspaces as well as testing of wells and springs within 500 feet of karst areas.

IND274-2 The potential health effects regarding methane are discussed in section 4.12 of the EIS.

# INDIVIDUALS

## IND275 – Torsten Sponenberg

28 November 2016

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

Dear Ms. Bose and Members of the Commission:

IND275-1

I wish to address the **Blake Preserve Variation** route in Montgomery County, Virginia, under consideration by the Mountain Valley Pipeline project (FERC Docket CP16-10). I realize that in October 2016, Mountain Valley’s preferred route shifted to the east of the Blake Preserve area to continue along a new route segment, the Mt. Tabor Variation. Nevertheless, the September 2016 DEIS discusses the Blake Preserve Variation as a route that remains under consideration and one which MVP could ultimately adopt.

LAND USE ON OUR FARM – The **Blake Preserve Variation** would cross our livestock farm. We have raised purebred livestock on our farm since 1992. Our farm is about 50% forested in mixed hardwoods and about 50% in permanent pasture. Since 1994 we have voluntarily placed our land, as have other nearby owners at various times and for varying time spans, in one of Montgomery County’s Agricultural and Forestal Districts. Our herd size fluctuates somewhat over the course of our production year, but rarely falls below 85-90 head. Our livestock have access to all acreage on our farm including the wooded areas, pastures and our driveway. A well, drilled in the vicinity of our house, serves our water needs and those of our livestock. The entire perimeter of our farm is fenced with multiple strands of high-tensile agricultural wire that is electrified. The Blake Preserve Variation route would cut two very wide swaths through our perimeter fence where the route enters and exits our farm. We do not know how our livestock could be kept on our property and away from the construction easement without fenced barriers. Any “temporary” fences built by Mountain Valley would have to be quite robust.

The Blake Preserve Variation is described in FERC’s DEIS (Sept. 2016) on pages 3-55 through 3-57. The Variation would diverge from the Proposed route at MP 223.1 by turning to the southeast along one segment of its path. It would then pivot to the northeast along a second segment of its path to rejoin the Proposed route at MP 223.9 (see Figure 3.5.1-9, p. 3-57). Stretches of both segments of this Variation cross our farm on Tax. I.D. parcels 019477 and 019476. These two stretches are discussed below.

IND275-2

SOILS AND VEGETATIVE COVER – The southeast-bound segment of the Blake Preserve Variation would approach us from neighbor Neily’s parcel and descend onto our parcel 019477. The **8E-Caneyville-Opequon-Rock outcrop complex, 25% to 60% slope soils** are the soils that are mapped on this parcel (Soil Survey of Montgomery County, Virginia, USDA Soil Conservation Service, 1985). **At or very near the base of this descent, the segment would cut through an**

IND275-1

The Mount Tabor Variation was adopted by Mountain Valley in October 2016 into its proposed pipeline route, which would result in the avoidance of the Blake Preserve.

IND275-2

The current proposed pipeline route avoids the Blake Preserve.

# INDIVIDUALS

## IND275 – Torsten Sponenberg

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IND275-2  
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**ephemeral spring** located in a narrow neck of the hollow. This spring served as a water source for the family who once lived in the hollow in the early-to-mid twentieth century. The second segment of the Variation route would pivot to the northeast at or very near this ephemeral spring and ascend parcel 019476 through the same steep soil and rock complex through which it descended. It would cross a ridgetop on which the **mouth of a cave is located**, about 750 feet south-southeast of the segment (I estimated this distance using the scale in Fig. 3.5.1-9). This cave mouth, though not itself mapped, is located close to our largest and deepest sinkhole which is clearly mapped along the ridge in Fig. 3.5.1-9 (p. 3-57). Near the narrow ridgetop at some locations on parcel 019476, the slope classification changes to 7% to 25% which places the soils in the **8D-Caneyville-Opequon-Rock outcrop complex**.

The USDA Soil Survey characterizes the erosion hazard for both soil map units 8D and 8E as “**severe**”, and surface runoff ranges from “**rapid**” to “**very rapid**”. These soils also have “**low strength**”. The available water capacity ranges from “**low to very low**”. For both slope classes, woodland use is the best use recommended and is the vegetative cover currently present. These slopes have been in woodland for at least 35 years. Because trees would not be permitted to grow in the pipeline’s permanent 50-foot easement, we do not know how other vegetative cover on the steep easement could be established and sustained because of “**low**” and “**very low**” available water capacity for plant growth. The “**severe**” erosion hazard and “**rapid to very rapid**” runoff rates on these slopes will only be exacerbated by thin vegetative cover, exposing the pipeline to erosive forces of water. Though tree growth in the construction easement areas alongside the permanent 50-foot easement would be permitted, it would take many years for any newly planted trees to reach maturity. **I find no plan offered by Mountain Valley in the DEIS to replant trees.** Meanwhile the steep slopes, robbed of protective tree canopies and soil stabilizing influences of tree root systems, would lie exposed to the cumulative erosive forces of snowmelt, rainfall and rapid runoff.

Table 10 of the Soil Survey, “Building Site Development”, rates the limitations for **shallow excavations** on this soil complex as “**severe**” due to depth to rock and slope (p. 120). For the Rock outcrop portion of the complex, **the rock outcrops are so severely limiting that no rating was given for shallow excavations.** Depth to bedrock ranges from 12 to 40 inches in the complex of Caneyville and Opequon soils (Table 16. “Soil and Water Features”, p. 155).

IND275-3

WATER RESOURCES – As stated above, the southeast-bound segment **would cut through an ephemeral spring located at or very near the bottom of the segment’s descent.** The point at which the segment would pivot to begin its ascent in a northeasterly direction is also at or near this spring. Excavations, and perhaps blasting, for the pipeline trench at or so near this ephemeral spring would severely damage it or destroy it. This would cause contamination and disruption of any associated or nearby subsurface water systems that are connected to its subsurface channel and fissure system. Of course, after construction has been completed, these damaged subsurface channels and fissures would continue to receive sediment and other contaminants carried by water infiltrating from the deeply disturbed soil above and around them. These contaminants could then be carried to associated subsurface water systems. Complex, integrated subsurface water systems are common throughout our karstic region as

IND275-3

The current proposed pipeline route avoids the Blake Preserve.

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## IND275 – Torsten Sponenberg

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the FERC and Mountain Valley already know. This ephemeral spring is one of **three springs** on our farm. A **spring-fed stream** runs near our western-most farm boundary, and it is also fed by a **spring-fed seep area** within the stream bed on our farm.

This ephemeral spring was shown to Mountain Valley's archaeologists and geologists during their surveys on our farm related to a **proposed permanent access road, MVP-MN-263, and its two associated additional temporary workspaces, MVP-ATWS-1153 and MVP-ATWS-1154.**

Part of the new construction for the access road is **routed directly over this spring.** This access road was originally intended to serve the construction of the Proposed route which crosses neighboring Neily and Henderson lands. Mountain Valley may consider building and using Access Road MVP-MN-263 to construct portions of the Blake Preserve Variation. Numerous negative effects on driveway and house access, land use, water resources and cultural resources would result from MVP's attempt to widen and construct this access road and its workspaces. These effects are discussed in my **Submittal 20160831-5290** of 31 Aug. 2016.

IND275-4

In addition to the cave and our largest, deepest sinkhole mentioned above, three other quite sizeable sinkholes exist on and near the ridgetop areas of our farm. They lie further south-southeast of the cave mouth. The cave mouth, largest sinkhole, and three sizeable sinkholes all occur in the ridgetop area above the steep slope that descends to Mill Creek. The western boundary of the Old Mill Cave Conservation Site lies directly across Mill Creek from the base of this steep slope. These springs, caves and sinkholes are all features of the karstic landscape in which our farm is situated.

I conclude, **as I have also done in Submittal 20160831-5290,** that this landscape and its waters are highly vulnerable to disruption and contamination by a construction project on the scale of MVP's pipeline. For the reasons described above related to the Blake Preserve Variation, and those related to the proposed Access Road discussed in my 31 Aug 2016 Submittal, **my husband and I strongly oppose the construction of the Blake Preserve Variation and Access Road through our farm.**

Sincerely,

Ms. Torsten Sponenberg

IND275-4

The current proposed pipeline route avoids the Blake Preserve.



# INDIVIDUALS

## IND276 – Thomas Bouldin

20161128-5167 FERC PDF (Unofficial) 11/28/2016 2:32:04 PM

To: Kimberly D. Bose, Secretary; Norman Bay, Chairman; Members of the Commission  
Federal Energy Regulatory Commission

From: Thomas Bouldin, Landowner and Intervenor, Pence Springs, West Virginia

Date: November 28, 2016

RE: Supplemental Data to Correct DEIS on Sedimentation Impacts

### ESTIMATING CUMULATIVE IMPACTS TO STREAMS

IND276-1

In this comment, I report calculations which I hope can clarify some long-standing obfuscations about the cumulative impacts of the Mountain Valley Pipeline on stream systems throughout the proposed route. The DEIS fails to explore this issue fully and effectively: previously reported data submitted by the Applicant does not provide the necessary information to resolve serious concerns. By defining "watersheds" unrealistically, by utilizing inappropriate criteria for defining context, and by systematically ignoring the structure of local watersheds and the cumulative effects of multiple crossings of streams within them, the authors of the DEIS have effectively obscured the dimensions of the damage that construction will entail for stream-complexes in the affected areas. **In order to illuminate the dimensions of the problem, I have compiled detailed assessments for a tributary of the New River, the Lick Creek watershed in Summers County, West Virginia, and recommend that a comparable study be developed for all the watersheds crossed by the MVP project.**

The significant issue of impacts to local watersheds affects the communities, farms and home sites along the entire MVP route. The treatment of the issue thus far has been entirely inadequate. I therefore ask that the issue be addressed in the context of the Draft Environmental Impact Statement with appropriate attention given to the standards of scientific reasoning. I further request that results of the research be reported in time for the public and cooperating agencies to evaluate the implications prior to any decision on the MVP application.

#### DEIS' Misrepresentation of Significant Impacts

FERC staff have chosen to define watersheds in a way that **minimizes as far as possible any appearance of significant impact**. In the DEIS, they argue that, because the MVP is such a large project, there is no need to analyze impacts on smaller scale resources. "The relatively large geographic scope of analysis utilized herein such as HUC 10 watersheds and AQCRs were based on scaling to the relatively large size of the two projects, which extend for 309 miles of new pipeline across three states..." (pg. 4-477 ff.) Using this strategy to obscure impacts on directly affected local watersheds by subsuming them into the larger HUC 10 (or AQCRs) watersheds, the DEIS can demonstrate that of the 4,557,727 acres of watershed crossed, the MVP and EEQ combined affect only .1% (6,533 acres). Similarly, by using the HUC 10 delineations, 6 local watersheds in Summers and Monroe Counties are combined into the "Wolf Creek-Greenbrier River watershed," covering 203,209 acres, of which the MVP impacts only

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IND276-1

The CEQ regulations for implementing NEPA, at 40 CFR 1508.7, defined cumulative impacts as: "impacts on the environment which result from incremental impact of the [proposed] action when added to other past, present, and reasonably foreseeable future actions." The HUC10 sub-watershed is defined within the EIS and is a reasonable geographic area to evaluate cumulative impacts from other projects. Waterbody specific crossing and impact data is provided in appendix F-1 Waterbodies Crossed by the Mountain Valley Pipeline Project and includes: waterbody ID; waterbody name; MP; flow regime; water type; top of bank width; length of pipeline crossing; temporary acres impacted; crossing method; FERC classification; fishery type; fish species; and time of year restrictions. Waterbody crossing methods, associated impacts, and mitigation measures are presented in section 4.3 of the EIS. No long-term impacts on surface waters are anticipated as a result of the projects. See the response to comment FA11-15 regarding turbidity and sedimentation.

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## IND276 – Thomas Bouldin

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356.7 acres (a mere .2%, although that is twice the average impact. See Table 4.13.1-1, pg. 4-478.)<sup>1</sup>

If, on the other hand, the DEIS had addressed the impacts to watersheds directly affected— for example, the 7,500 acre Lick Creek watershed<sup>2</sup>, FERC staff would have had to report far less satisfactory figures: despite the small percentage of the total acreage needed for the access roads, ATWS and the construction easement (about 46 acres, or .6% of the total—which, of course, is 6 times the average impact in the 'large-scale' comparison), the situation is starkly different. Approximately 5.06 of these acres are within streambeds; there are about 5,620 linear feet of streambank disrupted; and approximately 30 miles of stream are made vulnerable to erosion and sedimentation partly as a result of construction on slopes as steep as 70%.<sup>3</sup>

This abuse of context to secure the smallest percentages of impact is in direct defiance of the guidance provided in SNEPA 1508.27 (a): Here the National Environmental Policy Act states quite clearly that significance is to be viewed within the actual contexts of occurrence for the action being evaluated: "Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. Both short and long-term effects are relevant." While the MVP is projected to span 301 miles of mountainous terrain, its primary impacts on streams will be localized within smaller geological areas: the dendritic landscape of the Appalachian region produces small-scale watersheds where biological viability depends of the overall health of numerous contributing streams, ephemeral, intermittent, and perennial, each adding nutrients and discharged volume in seasonal variations. Destruction of any set of tributaries in the complex may undermine the overall health and viability of the mainstem streams (the ultimate beneficiaries of the watershed interconnections) most obvious to the public.

Clearly, FERC's choice of 'context' effectively makes impacts appear utterly insignificant. And clearly the choice is inappropriate by the definitions provided by NEPA.

<sup>1</sup> This pattern of argument figures prominently in other MVP documents, specifically in a deeply offensive claim that the project is unlikely to result in a 10% reduction in tourism because the pipeline affects less than .04% of the land in affected counties. (See Docket CP16-10, Document #20160624-5244, PUBLIC attachment C—in which MVP attempts to refute the Key-Log Economic study.) That is somewhat like saying the 9/11 terrorist attacks were insignificant because they only took out 2 of several million buildings in New York City.

<sup>2</sup> The 7500 acre figure includes the entire extent of the watershed from Red Spring and Keeney Mountains to the stream's confluence with the New River, about 8 miles below the area discussed in my calculations. The **entire** impact on the stream would have to include sedimentation from the four UNT's and mainstem of Red Spring Branch which are crossed by the MVP.

<sup>3</sup> The figures on Lick Creek are calculated using the DEIS figures for stream crossings, together with estimates generated by Indian Creek Watershed Association's Interactive Environmental Map.

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### DEIS' Refusal to Acknowledge Cumulative Effects

IND276-2

Further minimizing any measure of negative impact, the FERC staff have repeatedly refused to acknowledge the cumulative effects of multiple crossings within any given local watershed. These watersheds are nowhere represented in the materials of the DEIS **except as implied by the designation of unnamed tributary streams**: "UNT to Lick Creek" is the only clue admitting that whatever damage is done to the designated stream will also impact Lick Creek as the mainstem stream in the watershed. There is no mapping supplied with the DEIS to illustrate these interconnections, and there is no table charting the number of streams in a given complex which will share the accumulation of impacts (the Table of Waterbodies Crossed in Appendix F actually makes it more difficult to conceive the relevant interconnections by including large numbers of the 'crossing entries' that apparently do not involve actual crossings but appear to be somehow associated with workspaces bordering crossings).

**In fact, the majority of the 1,691 stream crossings reported by the DEIS<sup>4</sup> take place within only 61 local watersheds—each of these having at least 10 tributary crossings, and in the worst cases as many as 68 crossings of mainstem and tributary streams.** As is shown below, the implications of this pattern for the estimate of impacts is quite serious, and it is of grave concern that the FERC staff have "ignored" the effects on their depiction of damage to the environment. These misrepresentations must now be assumed to be the conscious and deliberate acts of the staff, since the failure of presentation—and the seriousness of the implications—have been reported to FERC repeatedly.<sup>5</sup>

### DEIS' Obfuscation in relation to Minimal Impacts

IND276-3

**As I have demonstrated previously,<sup>6</sup> the single most outrageous abuse of methodology in the DEIS is the refusal to quantify whatever it is that FERC intends to assert as a "minimal impact."** As I showed in the referenced comment, there are fairly straight-forward ways to demonstrate that a stream crossing can have minimal impact on the streambed *only if the approach is perpendicular to the flow of water in a straight reach of the stream.*

A similarly objective calculation could be derived for many other variables: including the sedimentation affecting streams being crossed by the MVP. Deriving an adequate measure, however, would require accurate data on a wide range of factors, including stream discharge rates in normal and exceptional flows, steepness of surrounding slopes, soil composition in the context of the crossing site, channel delineation, damages to stream-bed and stream-bank configurations, and depth of excavation. It is these kinds of analytic data that FERC simply refused to collect (or require of MVP)—and the result is to completely undermine any objective

<sup>4</sup> The materials submitted by MVP after release of the DEIS further complicate all these statements: the total number of entries in the Table of Waterbodies Crossed has increased to over 1800, although I am certain that the same pattern of heavily-affected watersheds remains typical of the data reported on October 20.

<sup>5</sup> See my comments to Docket CP16-10, #20160914-5031, #20160915-5109, #20161017-5077, #20161031-5012.

<sup>6</sup> Docket CP16-10, Document #20161017-5077.

IND276-2

Our cumulative impacts analyses for water resources were conducted on a watershed scale as discussed in section 4.13 of the EIS and as listed in detail in table 4.13.1-1, as depicted in the multiple figure images in figure 4.13-1, and as further assessed in appendix U. The proposed waterbody crossings associated with the MVP are listed in detail in appendix F.

IND276-3

We considered the cumulative effect of the proposed MVP and EEP in combination with other projects upon water resources in section 4.13 of the EIS.

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## IND276 – Thomas Bouldin

IND276-3  
cont'd judgment of whether or not a given stream is being subjected to a minimal impact: in the current situation of the DEIS, the Commissioners (and the public) have no choice but to simply take the staff's word for it. And clearly, we cannot do that; there is not sufficient scientific data or analyses to support the DEIS' claims that impacts will be minimal.

Among the most significant missing constructs for understanding minimal impacts from sedimentation is the lack of any sense of cumulative impacts within a watershed—the problem discussed earlier. FERC might well argue that a given crossing—undertaken with a great raft of mitigations—might have a 'minimal' impact (and indeed this is all they ever *do* argue in the DEIS). But **this says nothing at all about the effect of numerous other 'feeder' stream crossings contributing an ever-increasing amount of sediment to the mainstem stream in the watershed. One crossing may pose no significant problem, fifteen crossings may pose no great concern taken individually—but even the smallest impacts can add up to a total effect far beyond the original 'minimum'.** The following section of this comment will illustrate exactly how this can happen.

### IND276-4 **A Calculation of Sedimentation Impacts for Upper Lick Creek Watershed**

In previous comments, I have dealt in detail with the Lick Creek watershed in Summers County, West Virginia, describing the multiple crossings planned for the area, the extremely steep slopes surrounding the narrow valley, and various other dimensions of the MVP's impacts on the stream. In the present comment, for purposes of illustration, I provide a hypothetical estimate of sedimentation effects of the pipeline's construction on accumulating sedimentation in the mainstem stream above its confluence with Red Spring Branch. Using the most realistic estimated values I could locate for some of the significant variables, I have calculated what seems like a reasonable 'minimal impact'—and then show how **the structure of the watershed quickly overwhelms that minimal level of sedimentation.**

My illustration requires the following assumptions and initial definitions:

(1) **a minimal impact** on a given stream can be calculated as the predicted effects of a single crossing (including both the ROW trenching easement and such necessary workspace as is needed to install the pipe) together with whatever sedimentation is the unavoidable result of the 125' ROW clearing as the line approaches and departs from the crossing.

(2) My **measure of slopes** derives from a comparison between MVP descriptions of slope in the docket for the application, as reported in my comment on Summers County, Docket CP 16-10, Document #20160809-5230. That document reports significant contradictions between MVP's two reports of slope—but given the broader categories applied here, those problems were resolved: I have not calculated the significant distinctions between slopes of 53% and 70% since both are above 40%.

IND276-4

The hypothetical estimation of sedimentation impacts is noted. See the response to comment FA11-15 regarding turbidity and sedimentation. Since Mountain Valley would cross all waterbodies using dry techniques, there would be a low potential for downstream sedimentation and turbidity. See the response to IND276-2.

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(3) An estimate of **potential sedimentation resulting from construction** activities can be made following the recommendations of US Department of Agriculture studies.<sup>7</sup> These estimates are as follows:

10% slopes 34 tons per acre per year

20% slopes 105 tons per acre per year

30% slopes 183 tons per acre per year

(4) Estimated slopes in the Lick Creek area exceed the three categories listed above, so I have used **two additional extremely conservative estimates** to make some of the necessary calculations:

<10% slope 30 tons per acre per year

40% or more 200 tons per acre per year

(5) Since the DEIS contains no demonstrations of **mitigation effectiveness**, I have stipulated a (highly) generous 90% success rate: that is, in every case, MVP's mitigation efforts will have prevented 90% of predicted sediment from impacting the stream being crossed. So for example, a fully mitigated acre of ROW construction on a 10% slope would bleed 3.4 tons of sediment into a stream during a full year of construction activity; a similar acre of ATWS would bleed 7.48 tons during the 29 months of construction activity.

(6) I have assumed that **direct construction impacts on streambeds will involve 19 days** (that being the estimated time MVP has provided for construction of a single mile of the pipeline—which I take to imply continued activities at the crossing site: the actual vulnerability of the crossing to increased sedimentation would realistically extend much longer depending on local conditions such as increased stream discharge caused by heavy rains.<sup>8</sup>) This results in a computation of trenching impacts (19 days) as occasioning only 5.2% of an annual impact.

<sup>7</sup> I obtained these estimates from Docket CP16-10, Document #20161114-5001, submitted by Dr. Bruce Zoecklein, a Virginia Tech Emeritus Professor. The US Department of Agriculture utilized the following variables in developing these general estimates: **slope percentage, slope length, soil type, rainfall, vegetation, and machine traffic**. These estimates provide a generalized estimate, and they do not account for effects of mitigation; however, Dr. Zoecklein refers the reader to a study reporting that even state-of-the-art mitigation techniques can fail. As I've stated, I have incorporated an estimated 'mitigation' allowance into my use of the figures.

<sup>8</sup> The DEIS claims that sedimentation effects will all be quite brief, lasting no longer than their prescribed period for trenching and installation—which, they assert, means between 24 and 48 hours. This is clearly nonsense: once stream flow returns to the surface of the trench and construction area, soil will be dissolved and carried off as sediment. There is no reason to believe that this process will end with the 19-day construction period: Forest Service comments suggest that it may take a prolonged period of time before the streambed settles into a new 'normal' for channelization and sedimentation.

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(7) For areas of construction involving **ATWS and Access Roads**, I have assumed that the **impacts of construction will occur throughout the 29 month construction period**<sup>9</sup> (again this seems a minimal estimate, since restoration efforts may be concluded within that time frame but restoration effects may not be in full force for much longer.)

(8) To gauge **estimated acreage**, I have used acreages reported by MVP in the October 20, 2016 addendum to the DEIS where these were available (e.g., for ATWS in the Lick Creek area, and for stream crossings in the Lick Creek drainage). I also consulted the MVP "Table of Intermediate and Major Waterbodies" (submitted as Docket CP16-10, Document #20160226-5404, Part 2, pg. 91ff) which listed crossing lengths associated with Access Road SU 200 and other crossings in the Lick Creek drainage. Where MVP provided no estimates, I have calculated acreage from estimated distances measured by the Indian Creek Watershed Association Interactive Environmental Map and from MVP's stated dimensions for the pipeline route (e.g., the 125' construction easement).

With these assumptions in mind, I offer the results of my calculations for the Upper Lick Creek watershed, which includes about 2,352.3 acres of steep hillsides and more-nearly-level bottom land, and which will see a total of 22 stream crossings besides the major crossing of Lick Creek by the pipeline, if the MVP should be approved. The pipeline ROW will traverse the watershed for a total of about 4 miles between MP 160.6 to MP 164.6, occupying about 60.6 acres, while ATWS and Access Road Construction will take up an additional 56 acres, resulting in a total demolition of about 4.95% of the total watershed acreage.<sup>10</sup>

### **(1) The Minimal Impact: One ROW Crossing at Milepost 162.5/6<sup>11</sup> with 90% mitigation**

If MVP's primary goal in planning were to locate a route that created minimal impacts to the environment, they would assure that no stream was crossed more than once, and that none of its tributary branches was crossed as well. However, such care has not been taken—and is not always possible in areas of convoluted dendritic topography where tributaries of various sizes descend from all sides into the deep hollows where the mainstem streams are formed. In the same way, the route designers would regularly choose crossing sites where slopes in the approach were the least steep and the associated valley the broadest. Both conditions would minimize the danger of additional sedimentation by slowing and dissipating sediment-heavy run-off during rain storms.

<sup>9</sup> The 29-month figure is found in the DEIS, Pg. 2-55.

<sup>10</sup> I must point out that these figures for the upper end of the Lick Creek drainage leave out of account the stream crossings in the Red Spring Branch drainage which flows into Lick Creek about 2 miles below the point where these estimates terminate. That drainage is approximately 1877 acres and includes an additional 4 stream crossings. From the confluence with Red Spring Branch, Lick Creek flows 2 miles down to the town of Green Sulphur Springs, turns, and follows a fairly straight-forward path 6 miles to the New River, that National Scenic River being the ultimate repository of all the sediment gathered along the way.

<sup>11</sup> All milepost designations used in this comment follow the designations in use prior to the most recent MVP submissions, which realigned all measures in the Lick Creek area by about ½ mile. FERC must design and implement some simple means of converting between these designations before the end of the comment period.

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In illustrating the cumulative effects of crossings within local watersheds, I have selected as the exemplar of minimal impact the primary ROW crossing of Lick Creek, which occurs between Milepost 162.5 and 162.6 (using the designations MVP provided prior to the most recent submission which altered the milepost designations by about ½ mile). This crossing occurs in a narrow valley between Red Spring Mountain to the north and Keeney Mountain to the south. **The valley floor itself is hardly 200 feet wide, descending to the west in a gentle slope between 8 and 16% (the latter is the figure reported by MVP), and the mountains on either side rising in 1000+ foot slopes, largely in excess of 50%. It is predictable that in such a context, sedimentation will be severe—even with the 90% mitigation we have postulated.**

While the short-term effects of trenching and laying the pipe may be minimal, the effects of the construction easement's disruption of the steep surrounding slopes are more significant.

**(a) Trenching Construction for Crossing Lick Creek:**

Stream Width: 15' Crossing Length: 77'<sup>12</sup> Area: .22 acres Slope: >40%

**Sediment: .23 ton** (over 19 days of activity)

**(b) Context of Slopes with 90% mitigation**

**Descent from Red Spring Mountain MP 161.9 – 162.55:**

Length of last ROW slope: 770' Easement: 125' Area: 2.2 acres Slope: >40%

**Sediment: 96.8 tons** (over 29 months of activity)

**Ascent of Keeney Mountain MP 162.6 – 163.2:**

Length of first ROW slope: 940' Easement: 125' Area: 2.7 acres Slope: >40%

**Sediment: 118.8 tons** (over 29 months of activity)

TOTAL SEDIMENTATION IN **MINIMAL IMPACT: 215.83 tons** in 29-month construction period

As already noted, the stream crossing design does not achieve a fully minimized impact in relation to the crossing because a perpendicular approach would not be possible here. Another issue is the steepness of surrounding slopes and their close proximity to the crossing site. **To illustrate the dimensions of the problem: had MVP located a site where slopes in the immediate vicinity of the crossing were only 10% (rather than over 40%), the sediment load from the construction easement descending Red Spring Mountain could have been reduced to only 17.9 tons rather than 96.8. Such a route change would clearly be an improvement in terms of achieving a truly minimal impact—we do not know whether MVP's route planners explored such options. For the preferred route's crossing of Lick Creek put forward in the**

<sup>12</sup> This figure is the one supplied by MVP in the "Table of Intermediate and Major waterbodies." That it so far exceeds the width of Lick Creek shows that the crossing is not perpendicular to the stream's flow—and in fact suggests that the design cannot achieve a truly minimal impact even in this dimension.

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**DEIS, therefore: the minimal impact from sedimentation is an added 215.83 tons over the 29 months of construction activity.**

### **(2) The Disaster of Cumulative Impacts: 22 Additional Crossings**

By refusing to admit the cumulative impacts that will occur within the Lick Creek watershed, FERC's staff have hidden an additional burden of sedimentation from 22 other crossings. This obfuscation makes the applicant look responsible and environmentally-friendly (after all, each crossing will minimize its impact through mitigations!). But the effect on the environment of Lick Creek is demonstrably beyond anything that can be termed objectively minimal.

That impact includes a number of different sources of sedimentation. First there is the trenching and other construction involved in getting the pipeline across the area. There are **six such ROW crossings in addition to the one at MP 162.5**. There are also **17 other stream crossings** described as involving either the three access roads planned for the area or other workspaces that intrude on riparian lands. **(Of these 17 crossings, 6 are of Lick Creek itself, where access road SU 200 ascends the stream toward the crossing site.)** Moreover, the **access roads** themselves will be a significant source of sedimentation where they require expansion or extension of existing county or private roadways. And then there are the numerous **ATWS sites**, whose acreage will be regularly-disrupted throughout the construction period. In what follows, I will deal with the calculated sedimentation from each of these sources.

a. **ROW trenching and construction:** 4 of the additional stream crossings for the ROW occur on slopes greater than 40%, 2 on slopes of 20%. The steeper slopes involve a total of .42 acres of streambed disruption, the gentler slopes .024 acre. Total Sedimentation predicted for the 19 days with 90% effective mitigation: **0.45 tons**.

b. **Additional crossings involving access roads and workspace:** 7 other crossings are listed in the DEIS materials but are not given specific crossing lengths. Only 2 of the 7 occur along slopes of 20%, the other 5 on slopes greater than 40%. Total acreage for the former is only .021 acre, while the steeper crossings involve a total of .362 acre of streambed. Total sedimentation predicted for these crossings involves acknowledging that they will be continually disrupted over the 29 months of construction; allowing for 90% mitigation: **16.46 tons**.

c. Below the main crossing of Lick Creek, the primary **streambed** source of sedimentation will arise from **damage caused by construction of access road SU 200**, which runs for about 1.7 miles from the end of county route 4 to the crossing site. **While a redesign of this road has reduced the number of streams crossed on the north side of Lick Creek, the new maps still reveal extensive stretches of the road that appear to actually run in the Lick Creek streambed.** These distances were reported in the "Table of Intermediate and Major Waterbodies Crossed" which allows the following computations. While the acreage of the 25-



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foot-wide streambed affected is considerable, the majority occur in relatively gentle 10% slopes of the streambed and valley floor, so sedimentation is less problematic than in steeper sloped sections. However, the access road disruption will continue (at least off and on) for 29 months, not just the 19 days of installation. Thus, by my own calculation, there will be about .32 acre of streambed disrupted here, resulting in a total sedimentation over the 29 months of about **2.61 tons**.

d. As noted with the calculation of minimal impact, every **ROW crossing** will also 'bleed' the **sediment from the surrounding slopes**. While some of these crossings take place in areas of substantial slope, they are at the foot of less severe hillsides. As a result, 3 of the crossings drain 1.5 acre areas of around 10% slope, one a 1.5 acre area of 20%, and one involves an extended slope of 2.01 acres in excess of 40%. But these construction sites are treated as eroding throughout the 29 month construction period as restoration efforts begin to take hold. Allowing for 90% mitigation effectiveness, these acres of ROW will contribute an additional load of **159.99 tons**.

e. **As shown, the related construction activities are responsible for a greater percentage of sedimentation than are the actual procedures of crossing the streams**. This is especially true of the **ATWS sites throughout the watershed**. While many of these border the mainline ROW construction, these yards will create the conditions for extensive erosion—and since streams are close by, in many cases the resulting sedimentation will ultimately affect Lick Creek seriously. As best I can tell from the MVP submissions, there are 16 ATWS areas planned for the Lick Creek watershed between Milepost 160.2 and 162.5. The majority (10) are on slopes of 20%, accounting for a total of 5.5 acres of disrupted land surface. While a smaller number (6) fall on slopes of more than 40%, they account for 5.2 acres. **Even with 90% effective mitigation, these ATWS will release 367.4 tons of sediment into the watershed**.

f. A problem of similar proportions involves the construction of the access roads. The three roads planned for the Lick Creek watershed are quite distinct from one another. SU 200, as already described, lies in the creek bed and surrounding riparian area. SU 199 on the other hand edges the ridge of Keeney Mountain, and while it runs along the rather moderate slopes of the ridgeline, whatever sediment is released through construction and operation of the roadway will flow down the steep sides of the mountain into the main watershed: the road crosses the headwater section of Lick Creek as well as two unnamed tributaries, so the path to the stream is wide open to roadbed erosion. The third access road in the watershed is SU 198 which climbs steep slopes to run the edge of Red Spring Mountain, crossing two tributaries of Lick Creek that flow to the stream from this northern angle.

The Access Roads are designed to follow existing roadways as much as possible, and I have had some difficulty in estimating the exact length and nature of additional construction that will be involved. The roads as mapped by Holland Engineering involve construction areas 40 feet wide, with the actual road being 25 feet in width. However, since a large part of the damage will come from operation of heavy machinery on the roads whether they are newly

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constructed, expanded, or simply the narrow one-lane county roads already in place, I have estimated acreage using approximate lengths of the road and the 40' construction zone. In the case of SU 200, I have subtracted the acreage of the streambeds calculated previously to avoid double-counting of that damage. Because the slopes vary considerably in the mountain ridge routes, I have used 20% for the calculations for SU 198 and 199, allowing for a 10% slope in SU 200. Total acreage for each road: SU 199—9.81 acres; SU 198—7.75 acres; SU 200—7.94 acres (excluding the .32 acre already accounted for above). **I calculate the additional sediment load resulting from creation and operation of these roads over the 29 months of construction as 506.82 tons.**

To sum up the results of these calculations of impacts through sedimentation directly resulting from construction:

<b>MINIMAL IMPACT</b>	<b>215.83 tons in 29 months</b>
<b>ADDED CUMULATIVE IMPACTS</b>	<b>1062.73 tons in 29 months</b>
a. ROW crossings	.45 ton
b. Other Crossings	16.46 tons
c. SU 200 streambed impact	2.61 tons
d. ROW slopes	159.99 tons
e. ATWS construction/operation	376.40 tons
f. Access Roads	506.82 tons
<b>TOTAL SEDIMENTATION</b>	<b>1278.56 tons over 29 months</b>

It is disturbing to realize that the calculated minimal impact on Lick Creek's sediment load would be only 16.8% of the projected total. That the total load is almost 6 times the minimal amount possible clearly suggests that the MVP lies well outside the range for "minimal impacts" on the stream environment in this case. And notice that these projections do not incorporate any figures for the continuing sedimentation that will occur as a result of changes in the stream channels that direct water with new force against the disrupted banks—although this, too, is a predictable result of construction for the pipeline. Nor have I tried to estimate other impacts on Lick Creek such as the rise in water temperature resulting from ROW and Access Road clearing of forested areas in the riparian zone, or decreased oxygen resulting from increased temperatures and increased turbidity. If these measures also exceed minimal levels by a factor of 6, Lick Creek is likely to suffer terribly; and if similar results are shown for the other 60 watersheds like Lick Creek, FERC would surely be justified in turning down the application on the grounds that impacts exceed minimal levels.

### The Dimensions of the Corrections Required

IND276-5

As noted earlier, Lick Creek is used here simply as an example to illustrate the problem of cumulative impacts. There are 61 watershed complexes along the MVP route where 10 or more (sometimes FAR more) streams are impacted by the ROW crossings, access roads, and work areas. In order to meet NEPA requirements for complete and accurate scientific information on environmental impacts, FERC staff and MVP have a lot of work to do.

Clearly my preliminary study has a number of shortcomings—many resulting from FERC's refusal to collect and analyze needed information. For instance, sedimentation throughout the watershed will be deeply affected by soil types in the ROW pathway and at crossing sites, by predictable patterns of rainfall, by actual discharge rates of the various streams involved, on the "density and extent of the turbidity plume" developing downstream of every crossing or disruption. **All this and more should be considered in rendering a final estimate—not just for Lick Creek but for all 61 of the affected watersheds.**

At the request of the Forest Service, MVP commissioned a somewhat more complete study of a small sample of streams in the Jefferson National Forest.<sup>13</sup> This study includes many of the variables lacking from my own, and yet my estimated sediment loads are not entirely out of reason by comparison to theirs. I am familiar with two of the streams evaluated in the MVP study, and both Rich Creek and Stony Creek are somewhat similar in size and flow to Lick Creek. MVP calculated an increase of 1300 tons (39.4% over background) for Rich Creek, and 2240 tons (65% increase) for Stony Creek. According to DEIS slope data, slopes for the mainstem of Lick Creek below the crossing site are somewhat similar to the terrain of Rich Creek, but slopes in the upper areas of the Lick Creek drainage are as steep as most of those in the upper Stony Creek drainage (with many areas well above 40%). Given that the MVP data do not allow for mitigation at all, please note that my estimates fall within the range proposed.

It is significant that the Forest Service evaluation of the MVP study<sup>14</sup> pointed up numerous methodological and interpretive problems, including an objection to MVP's claim that the resulting sedimentation would be only a temporary problem. The Forest Service commenter noted, "In the first sentence, the applicant makes the statement that the actions proposed would "temporarily" increase sediment yields. This is an incorrect premise and unfortunately is the foundation of the effects discussion. The applicant states that pipeline construction will generate sediment loads well above background, but treats the disturbance as a single-year occurrence. **The reality is that the sediment yields will continue to be elevated, decreasing over subsequent years to a new normal** that is dependent on the persistence of the waterbars and other structural BMPs and the cover and type of revegetation of the pipeline corridors." (bold emphasis supplied) It is precisely this 'reality' that we should all be concerned with—whether the water resources occur within the bounds of a National Forest or in the context of private property.

<sup>13</sup> This study was made public at the request of the Forest Service on July 25, 2016, Docket CP16-10, Document #20160725—5227.

<sup>14</sup> See Docket CP16-10, Document # 20160816—5247.

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See the response to comment FA11-15 regarding turbidity and sedimentation.

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I very much hope that FERC will require of itself and of EQT that these issues be taken seriously. **A principled commitment to scientific research and transparency in responding to these issues would uphold the tenets of NEPA. It would also go a long way toward redressing the assumptions of this DEIS that sedimentation is such an insignificant issue that EQT can wait to submit sedimentation estimates until just prior to construction. In other words, the projected estimates will not be subject to Cooperating Agency or citizen scrutiny.**

I want to protest that complicity here: with all its flaws, my layman’s preliminary study is likely to prove more illuminating than anything on the subject currently available in DEIS. If the Commission chooses not to improve on my materials, then this comment will stand as the definitive examination of the topic. The result will be that **on the critical issue of stream impacts, at least, there is sufficient proof that MVP does not meet the criterion of 'minimal impact on the environment' and the application should be denied. If, on the other hand, FERC decides to engage in more refined and detailed scientific analysis of the issue, then the review process for the DEIS must be adjusted or suspended until such time as the full study has been submitted for public review and evaluation.**

Appearing below is a Table and Map of the Lick Creek watershed prepared by Pamela C. Dodds, Ph.D., Licensed Professional Geologist, and author of the report: “Hydrogeological Assessment of Watershed Impacts Caused by Constructing the Mountain Valley Gas Pipeline Through Summers and Monroe Counties, West Virginia,” submitted by Indian Creek Watershed Association to Docket # CP16-10-000 on August 15, 2016.

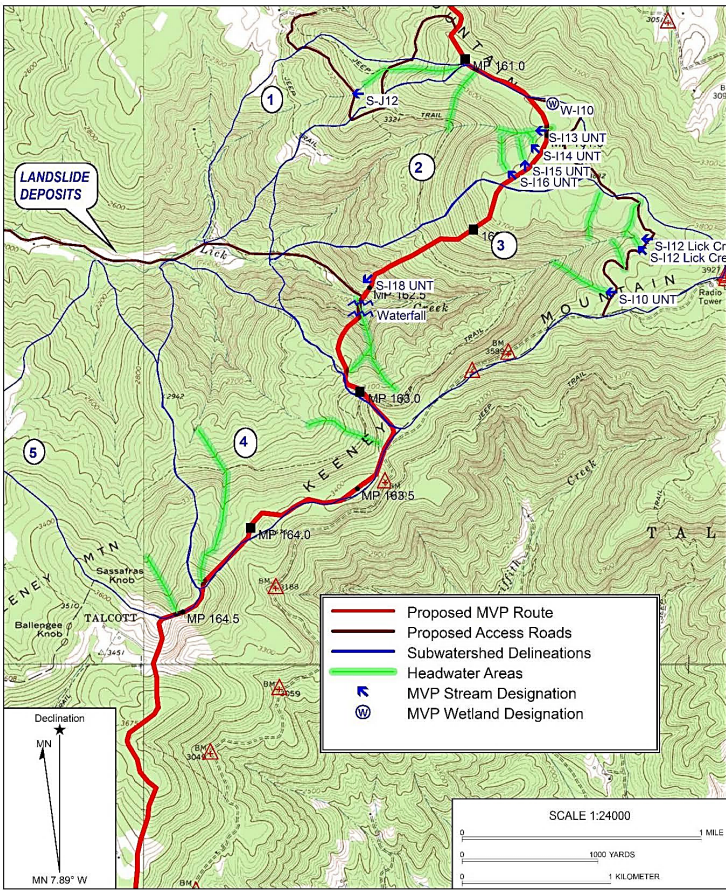
Area Identification	Description
Subwatershed 1 189 Acres	Proposed access road crosses the stream identified by MVP as “S-J12 – ephemeral UNT to Lick Creek” and also the headwater area of the stream. The proposed MVP route crosses the headwater area.
Subwatershed 2 399 Acres	Proposed MVP route crosses four streams identified by MVP as “S-I13 – intermittent UNT to Lick Creek”, “S-I14 – intermittent UNT to Lick Creek”, “S-I15 – intermittent UNT to Lick Creek”, and “S-I16 – intermittent UNT to Lick Creek”. The MVP designated intermittent UNTs are within headwater areas to Lick Creek. The MVP access road which connects with the main route near MP 161.3 crosses the MVP identified wetland “W-I10”.
Subwatershed 3 657 Acres	Proposed MVP route crosses MVP designated “S-I18 – perennial UNT to Lick Creek” and two headwater areas to Lick Creek, one with a photographed waterfall. The MVP access road which connects with the main route near MP 162.5 is located adjacent to Lick Creek. The MVP access road located west of Keeney Knob, extending to the main route at approximately MP 161.3 crosses Lick Creek at two locations designated by MVP as “S-I12 Lick Creek” and “S-I10 – ephemeral UNT to Lick Creek”, including 5 headwater areas.
Subwatershed 4 477 Acres	Proposed MVP route crosses 2 headwater areas to UNTs to Lick Creek.
Subwatershed 5 468 Acres	Proposed MVP route crosses 1 headwater area to UNT to Lick Creek.

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Respectfully submitted,  
Thomas Bouldin, Landowner and Intervenor  
Pence Springs, West Virginia

Cc: Ben Lockett, Senior Staff Attorney, Appalachian Mountain Advocates, Lewisburg, WV

# INDIVIDUALS

## IND277 – Tina Smusz (on behalf of Christopher Swann)

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

November 13, 2016

Re: Docket No. PF15-3-000; Proposed Mountain Valley Pipeline Project (MVP)

- IND277-1 Oil and gas operations contaminate our air, water, ground water and soil to the detriment of everyone and the benefit of a few. We need sustainable renewable energy not the trading of our environment for money. There must be some reason and sense applied to our way of life and energy resources and its impact on the future generations of the planet. FERC should not approve this pipeline until, or without, documenting all of the adverse effects of the pipeline and the hydraulic fracturing method recovering the gas to be transported in this pipeline. Each of the impacts that the evidence identifies as risks to human health and the environment from these activities must be properly disclosed and addressed. FERC should not absolve themselves of responsibility to investigate any and all issues relating to the consideration of this project by depending on the company or their hired consultants for adequate information. As a consultant I have seen the oil and gas company buy only the information they want and that makes their case. Close monitoring by FERC of the EIS is essential to acquiring complete and accurate information.
- IND277-2
- IND277-3 FERC should require MVP, EQT, NextEra, or the builder, owner and or operator of the proposed pipeline to spend a few pennies and also save a few as well. FERC should require that the design of the pipeline utilize the best technology that is available and provide a pipeline that:
- 1) does not leak (or at least could detect leaks before they were released to the environment using a double walled pipe with interstitial monitoring),
  - 2) does not have fugitive emissions that discharge to the environment but are collected and recovered,
  - 3) has sacrificial anodes to prevent corrosion of the pipe,
  - 4) construct blast walls in the entire trench and
  - 5) conduct periodic integrity testing on the pipe to detect corrosion before a catastrophic leak can occur just to name a few.
- Every gas station is required to have these safe guards (ok not blast walls) and this pipeline should also be required to have multiple safe guards. Every penny not spent to design and build an environmentally acceptable pipeline is a penny taken from all of us and given to the few who do not care about the places we live.
- IND277-4 Fracking causes water and air pollution as well as climate change. That is defined by the process and not whether or not the chemicals end up in your drinking water. Other animals need clean water too. Fracking destroys future beneficial uses of the aquifer by definition. This pipeline only encourages fracking and creates an additional mechanism to disperse the gas and fracking
- IND277-1 Renewable energy alternatives are discussed in section 3 of the EIS. See also the response to comment IND40-1 regarding renewable energy.
- IND277-2 See the response to comment IND2-3 regarding hydraulic fracturing. See the response to comment IND47-1 regarding preparation of the EIS.
- IND277-3 As discussed in section 4.12 of the EIS, the Applicants would design, construct, operate, and maintain the proposed facilities in accordance with the DOT's Minimum Federal Safety Standards in 49 CFR 192. Safeguards such as an integrity management plan, cathodic protection to prevent corrosion, and monitoring of the pipeline would be required.
- IND277-4 See the response to comment IND2-3 regarding hydraulic fracturing.

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## IND277 – Tina Smusz (on behalf of Christopher Swann)

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cont'd | chemicals into the environment via releases from the pipeline. Almost certainly, the company will build the cheapest pipeline that you allow them to build. They will search for every available way to tilt the playing field in order to siphon pennies at our expense.

IND277-5 | We cannot accept old pipeline technology that leaks, spills, and explodes. If NASA settled for that kind of cheap lousy design and operation we wouldn't have a space program. If NASA has one astronaut killed in an explosion they are held publically responsible and they would immediately fix that problem before they sent someone else into space! We should not have a pipeline operation with substandard design and operation either. They need to fix problems before the public gets injured or killed. There are thousands of accidents every year and hundreds of deaths and injuries attributed to faulty pipelines. NASA is not perfect but they address every accident so that it does not happen again, so should the designers of this pipeline. It seems that the oil and gas industry could take a few lessons from NASA, but they would have to spend some of those pennies they have been so diligently caching.

IND277-6 | The owner and operator of the pipeline should be required to compensate people for stealing their private property, contaminating the environment, ruining drinking water and reducing their quality of life. FREC must require the owner and the operator of the pipeline to have an adequate contingency fund to cover potential damage. I understand that the proposed pipeline will carry about  $2 \times 10^9$ , that's 2 billion, cubic feet per day of gas. If the company were to save, for example, \$0.001 (that's one tenth of a penny) per cubic foot they could generate  $\$2 \times 10^6$ , or \$2 million dollars per day to put into a fund to benefit those impacted by this project. The fund should be managed by a reputable third party and be used to compensate for the destruction of peoples' property, their lives, their heritage, their environment, their insurance (that they can no longer afford or obtain), their lost taxes, lost property values, environmental contamination and remediation, alternate water supply wells and treatment systems, health and environmental monitoring, medical expenses and closure of the pipeline when it is no longer in use, etc. The company must be required to provide the money for all of the costs and expenses incurred by the people that are impacted by the pipeline for the life of the project and its impact. Be sure to include everyone, not just those whose property they pilfered but all those whose property values are diminished, those who have to listen to the noise, or smell the operation, live in the blast zone, as well as whole communities whose economic, and cultural heritage will suffer and all the others that suffer so that the pipeline owner can get more pennies. At the rate of one tenth of penny collected that is in the example above, this would generate about \$22 billion over a thirty year period. The example rate could be adjusted to accurately reflect the ongoing damage, loss of vital surface and groundwater resources, pain and suffering, etc. for all of those people and the environments impacted by the project. It's only fair. These companies have a history of, after creating many problems, trying to save pennies rather than be responsible corporate citizens. If there is any money left over in the savings account after the project life then the remaining money should be used to support sustainable renewable energy so that another pipeline will never be needed.

IND277-5 | See the response to comment IND2-1 regarding safety.

IND277-6 | As discussed in section 4.8 of the EIS, the Commission prefers that Applicants obtain easements from landowners through mutually negotiated agreements. Those agreements should compensate landowners for the easement and establish a compensation mechanism for damages caused by construction and operation of the project facilities. The easement agreements can also include indemnification language, which means that the company, not the landowner, would be responsible for any damages or injuries resulting from pipeline construction and operation. See also the response to comment IND28-3 regarding responsibility.



# INDIVIDUALS

## IND277 – Tina Smusz (on behalf of Christopher Swann)

20161128-5175 FERC PDF (Unofficial) 11/28/2016 2:35:59 PM

IND277-7 | When the company removes forests for the pipeline they should be required to buy and preserve a comparable offset forest for conservation. The amount of forest replaced should equal or exceed what was destroyed as well as compensation for additional amount of forest needed to process the additional carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>) that will be released from the gas that they are burning and leaking. The drillers and the power producers should share the responsibility. This is a minimal display of the commitment to environmental stewardship that they tout in their corporate marketing literature.

IND277-8 | How exactly can a pipeline be built over the mountains and not create serious soil instability problems, erosion, stream contamination and continued and constant need for repair and upkeep over the steep terrain? It cannot. Silt fences are insufficient for such an application. I suggest that the pipeline construction be coordinated with the DOT and placed in the road median of an existing highway. MVP must be required to have a performance bond to cover all the contingencies that constructing such a pipeline would entail. The amount should be based on the total amount of the project. I do not think that MVP would build the pipeline if they were to be held responsible for their work. Citizens should not have to give up their land and quality of life

IND277-9 | in order for a few companies to export gas overseas. Export of gas must be prohibited.

IND277-10 | Considering the potential risk to humans, animals, and the environment, the responsible decision is not to approve this pipeline. If, however, it moves forward, you must require that the owner and operator of the pipeline be responsible for a properly constructed pipeline regardless of whether they buy it or build it. If MVP sells the pipeline to EQT, NextERA or whomever, then all of them must be held responsible for any and all construction deficiencies for the life of the project. The known fracking chemicals used and associated with this gas pipeline are dangerous. FERC must make the company divulge all chemicals that will or may be contained in this pipeline so that knowledge and resources can be applied to adequately address any emergency, medical situation or environmental release resulting from the pipeline.

IND277-11 | This pipeline is detrimental to everything in its path including the jurisdictions. No company should be able to steal our land and pollute our environment for their profit at our expense. We will gain no benefit and in fact we will be hurt economically and environmentally. The gas that would supply this pipeline will run out in a few years and we will have to convert to a sustainable energy source(s) anyway. The greenhouse gases generated will help to degrade our planet and diminish life. Water and environment are irreplaceable and needed by everyone.

IND277-12 | Clean water resources are much more valuable than the gas that is being extracted and that would be shipped through this pipeline. Demand for energy, and in this case natural gas, should not be a reason for building this pipeline. If you use this energy to grow the economy but cannot sustain the effects and the source of this energy then you will create a bigger problem. Reliance on more gas will make it worse. There are limits to growth and this will be exacerbated by using non-sustainable energy sources. Do not grow society based on a limited and destructive resource.

IND277-7 | As stated in the EIS, in considering the total acres of forest affected, the quality and use of forest for wildlife habitat, and the time required for full restoration in temporary workspaces, we conclude that the projects would have significant impacts on forest.

IND277-8 | See the response to comment LA1-4 regarding existing 42-inch-diameter natural gas pipelines, some in mountainous terrain. A highway collocation alternative was evaluated in section 3.4 of the EIS.

IND277-9 | See the response to comment IND277-6 regarding responsibility for damages.

IND277-10 | See the response to IND2-3 regarding export.

IND277-11 | Fuel, oil, and biocide are the chemicals that would be used during construction of the pipeline. Chemicals are not generally not used during operation of a natural gas pipeline. See the response to comment IND2-3 regarding hydraulic fracturing.

IND277-12 | See the response to CO2-1 regarding benefit of the MVP.

IND277-13 | Although it is difficult to accurately predict natural gas production trends over the long-term, according to the EIA, natural gas production from the Marcellus Shale and Utica, has increased substantially and fairly consistently each year since 2010. Graphs of these production areas can be viewed at: <http://www.eia.gov/petroleum/drilling/pdf/marcellus.pdf> and <http://www.eia.gov/petroleum/drilling/pdf/utica.pdf>. Before considering any interstate transportation project, an applicant would secure contracts for the natural gas from downstream shippers. Climate change, GHGs, and cumulative impacts are discussed in section 4.13.

IND277-14 | Restoration is discussed in section 2 of the EIS. Section 2.7 of the EIS provides an overview of future plans and abandonment.

# INDIVIDUALS

IND277 – Tina Smusz (on behalf of Christopher Swann)

20161128-5175 FERC PDF (Unofficial) 11/28/2016 2:35:59 PM

IND277-14  
cont'd

The quest for cheap energy will cost the water supply, collective health, and the environment. It is time to make a stand against the oil and gas industry's destruction of our planet for corporate greed. FERC must stop this pipeline now and forever.

If FERC is unwilling to deny this pipeline, then at a bare minimum it should require that all the land taken by this project or impacted by this project to be legally restored fully and returned to its rightful owner after it is no longer in use. Restoration means returning the property in the condition that it was taken with no environmental degradation. The pipeline must be cleaned and removed and recycled or properly closed in place as appropriate for any underground hazardous material conduit should be closed. The pipe will eventually rust away and the ground will settle and this would cause an environmental disaster if not addressed.

Thank you for your consideration of these comments.

Sincerely,

Christopher Swan, Ph.D, P.E.  
5510 Gallion Ridge Road  
Blacksburg, VA 24060

# INDIVIDUALS

## IND278 – Elaine Fleck

20161129-5037 FERC PDF (Unofficial) 11/28/2016 10:10:03 PM

Elaine Fleck, Roanoke, VA.

IND278-1

To whom it may concern,

I live in Roanoke, Virginia and have friends nearby who will be directly impacted by the Mountain Valley pipeline. The land they live on has been in their family for many generations and they are sickened by the fact that this pipeline will stretch across their backyard. I and my friends do not believe for a moment that this project will not effect the ground water and degrade rural communities. We will do everything we can to protect the land, water, and air and believe that this project does not serve our culture or community.

Thank you,

Elaine Fleck

IND278-1

Impacts on water resources, and measures to reduce those impacts, are discussed in section 4.3 of the EIS. Air quality impacts and proposed mitigation is discussed in section 4.11.1 of the EIS.

# INDIVIDUALS

## IND279 – Tina Smusz (on behalf of Emma Hileman)

20161129-5146 FERC PDF (Unofficial) 11/29/2016 11:56:57 AM

November 18, 2016

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

Cc:  
Neil Kornze, Director BLM  
Washington Office  
1849 C Street, NW, Rm. 5565  
Washington, DC 20240

Joby Timm, Supervisor  
George Washington and Jefferson National Forests  
5162 Valleypointe Parkway  
Roanoke, VA 24019

Dear Ms. Bose and Members of the Commission:

IND279-1

I am writing to voice my strong objections to the findings, or lack thereof, presented in the draft environmental impact statement (DEIS) for the Mountain Valley Pipeline (MVP) project. According to the DEIS, the only negative impact of the pipeline would be to forests. While it is true that our forests will be negatively impacted, the DEIS claims these impacts will be only temporary, and fails to address the myriad negative externalities that loss of forest of this magnitude will incur. MVP offers only ineffectual and temporary measures to limit soil erosion during and after construction.

IND279-2

In addition to polluting local waterways with sediment, including local drinking water aquifers, soil erosion poses a very real danger to the stability of the pipeline itself. Anyone who has hiked from valley floor to ridgeline knows that while the Appalachian Mountains may not be tall, they are incredibly steep. After removing all the vegetative cover from the corridor there will be nothing to hold the slope in place, leading to erosion of the very soil and rock supporting the pipeline.

IND279-3

What safeguards will MVP leave in place for dealing with any environmental damage incurred due to pipeline leaks or ruptures? It is impossible that MVP can provide a 100% guarantee that the pipeline will not leak, and indeed, pipeline spills are virtually a mainstay in the news nowadays. While FERC and MVP can hope for the best, it would be impractical and irresponsible not to plan for the worst. Once the pipeline project is complete, is it right to expect our rural town and county governments to bear the costs of cleanup and remediation? Given the remote regions the pipeline is slated to run through, how rapidly would it even be possible to deal with a breach? What level of support can our communities expect from the federal authorities and private entities that are seeking to require us to shoulder the burden of risk this pipeline presents?

IND279-1

The EIS actually stated that, in considering the total acres of forest affected, the quality and use of forest for wildlife habitat, and the time required for full restoration in temporary workspaces, the projects would have significant impacts on forest.

IND279-2

See the response to comment IND92-1 regarding erosion and sediment controls and flash flooding.

IND279-3

See the response to comment IND277-3 regarding safeguards. The proposed pipeline would transport natural gas rather than oil. The potential for an oil spill would be limited to equipment used during construction of the projects. As discussed in section 4.3 of the EIS, the Applicants would implement their respective SPCCPs during construction and operation to prevent, contain, and clean-up accidental spills.

# INDIVIDUALS

## IND279 – Tina Smusz (on behalf of Emma Hileman)

20161129-5146 FERC PDF (Unofficial) 11/29/2016 11:56:57 AM

IND279-4 The Appalachian Trail and Blue Ridge Mountains are unique and irreplaceable national treasures, and their global recognition makes tourism a mainstay of many local economies. Has FERC considered these potential losses in its assessments? Has FERC considered the fact that beyond those of us considered “local stakeholders,” the MVP is proposing to cross the Appalachian Trail which would expand the population of stakeholders to anyone using the AT? As a person who has thru-hiked the Appalachian Trail I can make testament to its positive influence on small towns in southwestern Virginia. It has also been a source of beauty and healing for many who have hiked its path in the area of Virginia where the MVP is being considered to cross. What would a loss of part of this trail mean to such a popular National Scenic Trail that thousands of people hike every year?

IND279-5 While a certain level of development is necessary in any society, it is equally true that we must also set aside and preserve land, which contributes as much, if not more, to our physical, emotional, and spiritual wellbeing. The Blue Ridge Mountains are one of the most spectacular natural features we have in the Eastern U.S., and their protection in perpetuity will bring far more benefits to our local and global communities than MVP ever will. The proposed pipeline can only negatively impact the economic wellbeing and health of our communities, and the subsequent methane and CO<sub>2</sub> emissions, coupled with the loss of carbon storage through deforestation along the corridor, greatly increase the ultimate scale of the pipelines impacts. Indeed, the pipeline proposal comes at a time when renewable energy is growing faster than ever both domestically and internationally, and makes it abundantly clear MVP is only intended to serve the short-term economic interests of its investors.

IND279-6 I cannot in any way support the DEIS put forth by FERC. In spite of its length, it fails to recognize even the most basic negative impacts of the pipeline, either overlooking them entirely or seeking to dispel them using wishful thinking rather than sound science and engineering principles. While I look forward to reviewing a revised draft of the EIS that addresses the issues raised herein and by other public commenter, it seems highly likely a thorough and honest assessment of MVP’s impacts would prevent it from ever being considered for construction in its current form and along its current route.

IND279-7 Respectfully,

Emma Hileman

5555 Mt. Tabor Rd.  
Catawba, VA 24070

IND279-4 As discussed in section 4.8 of the EIS, the pipeline would be bored underneath the ANST. Therefore, the trail would be available to hikers both during construction and operations.

IND279-5 Socioeconomics are discussed in section 4.9 of the EIS.

IND279-6 Air quality is discussed in section 4.11.1 of the EIS.

IND279-7 Renewable energy alternatives are discussed in section 3 of the EIS. See also the response to comment IND40-1 regarding renewable energy.

# INDIVIDUALS

IND280 – Sara Kviatkysky

Form Letter (see IND 246)

Federal Energy Regulatory Commission  
Kimberly D. Bose, Secretary  
888 First St. N.E. Room 1A  
Washington, DC 20426

ORIGINAL

FILED  
SECRETARY OF THE  
COMMISSION

2016 NOV 28 P 4:50

FEDERAL ENERGY  
REGULATORY COMMISSION

RE: Docket #CP16-10-000 (Mountain Valley Pipeline)

Ms. Bose,

As a lover of the Appalachian National Scenic Trail (A.T.) I am concerned about the proposed Mountain Valley Pipeline. This proposal would do serious and unavoidable damage to the Appalachian Trail. The A.T. is a source of peaceful rejuvenation for millions of Americans each year — to permit the Mountain Valley Pipeline to sully this national landmark would be a tragedy and an embarrassment to our country. The main reasons why the Federal Energy Regulatory Commission (FERC) should not allow the Mountain Valley pipeline to be permitted include:

- The location of the proposed crossing is a scenic and unbroken forested landscape with an immediately adjacent federally designated Wilderness area. The proposed project would significantly degrade the views visible from up to 100 miles of the Appalachian Trail, including some of Virginia's most iconic vistas — Angels Rest, Rice Fields and potentially McAfee Knob.
- The pipeline will travel through a designated seismic zone and over terrain that is considered extremely unstable. As the pipeline will run over multiple fragile natural resources — including multiple fresh water sources and protected forest areas — and near several communities, this presents a completely unnecessary and avoidable safety risk to people and the environment.
- In order to accommodate the visual and environmental damage that would be caused by the Mountain Valley Pipeline, the U.S. Forest Service agreed to lower the Jefferson National Forest Management Plan standards for water quality, visual impacts, the removal of old-growth forest, and the number of simultaneous projects passing through the borders of federally protected land. This unprecedented change is extremely reckless, as it would open the gates for future infrastructure projects to cause similar destruction.
- This project could have significant economic impacts on nearby communities, decreasing property values and depriving businesses of tourism dollars generated by Appalachian Trail hikers and visitors, who seek sections of the Trail unmarred by the impacts of energy infrastructure and other signs of construction.

I urge FERC to protect the Appalachian Trail and its surrounding landscape and communities. Please evaluate the comprehensive need for pipeline development to transport natural gas from the same Marcellus shale plays in a single Programmatic Environmental Impact Statement so that this infrastructure can be appropriately sited and the cumulative impacts to our National Parks, National Forests, and private lands can be understood before moving forward. It is FERC's responsibility to do the right thing — the alternative will be a turning point for the worse in an area that offers recreation and inspiration for millions of people.

Sincerely,



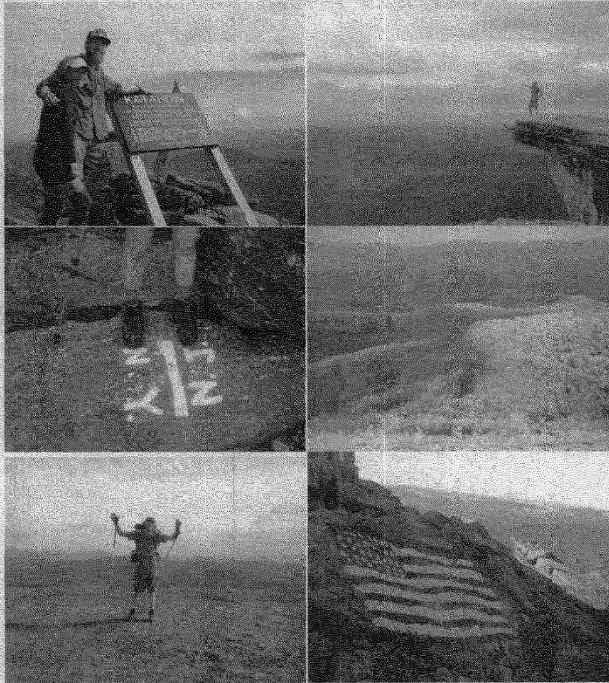
# INDIVIDUALS

IND280 – Sara Kviatkysky

## The AT

IND280-1

My husband and I thru-hiked the Appalachian Trail in 2009, and it was the most awesome experience ever. Before allowing a pipeline to go through these wonderful mountains I challenge you to go hike at least the state of Virginia. Allow yourself to experience the beauty, find your limits, learn about yourself, and discover the most important thing is just nature, food, shelter, and friendship. We were so happy and content to have everything we needed on our backs and be away from it all. Do not allow this experience to be taken away from future hikers. I hope our kids get to hike the AT and have the profound experience that we did. Please stand up to protecting Mother Nature. If you don't...who will?



*Had to be a better way*

IND280-1

See the response to comment IND279-4 regarding the ANST.

# INDIVIDUALS

## IND281 – Pat Curran Leonard

20161129-0035 FERC PDF (Unofficial) 11/28/2016

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

FILED  
SECRETARY OF THE  
COMMISSION  
2016 NOV 28 P 4:43  
FEDERAL ENERGY  
REGULATORY COMMISSION

November 19, 2016

FERC

Docket Number: PF15-3-000,  
CP16-10-000 or CP16-13-000  
[customer@ferc.gov](mailto:customer@ferc.gov)

ORIGINAL

Re: Opposition to the Mountain Valley Natural Gas Pipeline – Not a Public Need

IND281-1

**In an article dated November 17<sup>th</sup>, 2016 in the Roanoke Times titled:  
West Virginia Supreme Court sides with  
landowners in pipeline survey case**

[http://www.roanoke.com/business/west-virginia-supreme-court-sides-with-landowners-in-pipeline-survey/article\\_5b5f2361-2ed4-5e34-8214-e5ac9cf0c092.html](http://www.roanoke.com/business/west-virginia-supreme-court-sides-with-landowners-in-pipeline-survey/article_5b5f2361-2ed4-5e34-8214-e5ac9cf0c092.html)

This article by Duncan Adams last week, a ruling by the West Virginia Supreme Court in a 4-to-1 opinion agreed with an earlier ruling that stated Mountain Valley has failed to demonstrate that its pipeline project would serve as a public good. Many of us that will have to live in close proximity to the 42 inch, 301 mile natural gas pipeline agree that this pipeline will do nothing to benefit the public. The gas will be sold to the highest bidder on the open gas market. If that market is in another state or another country, that is where the gas will go.

IND281-2

The article also states what we in Virginia have known about our local and state government officials – they have expressed support to the project. They believe that the MVP pipeline will bring economic growth. The real growth will not come from putting unemployed Virginians to work, or offering good sustainable jobs to people that need it, rather the MVP project will bring local and state governments funding through fees, permits, taxation, and regulation.

How many new businesses have moved into Franklin County, VA with new manufacturing or a need to employ more than 30 new jobs? How many industries are natural gas ready? How much of natural gas infrastructure has been the catalyst that increased businesses into an area? Let's hear number, quantities, and dollars that were put into the local communities where natural gas has moved in?

IND281-3

This project as the article put it – “No eminent domain for private gain.” FERC – do the right thing for the people that have property rights that are being threatened. Do not approve MVP.

Pat Curran Leonard      4638 Dillons Mill Road      Callaway, VA 24065      540-929-5184

IND281-1

See the response to comment CO2-1 regarding benefits of the project. See the response to FA11-12 regarding need. See the response to IND2-3 regarding the fact that the MVP was not designed for export.

IND281-2

As discussed in section 4.9.2 of the EIS, during operation of the MVP, about 34 jobs, with an average annual salary of \$67,000 each, would be supported in Virginia. Mountain Valley would pay a total up to \$7.4 million annually in property and ad valorem taxes in Virginia (FTI Consulting, 2015b).

IND281-3

The U.S. Congress gave the power of eminent domain to companies that obtain a Certificate from the FERC.



# INDIVIDUALS

IND282 – Pat Curran Leonard

20161129-0034 FERC PDF (Unofficial) 11/28/2016

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

FILED  
SECRETARY OF THE  
COMMISSION

November 22, 2016

FERC

2016 NOV 28 P 4: 43

Docket Number: PF15-3-000,  
CP16-10-000 or CP16-13-000  
[customer@ferc.gov](mailto:customer@ferc.gov)

FEDERAL ENERGY  
REGULATORY COMMISSION

ORIGINAL

Re: Opposition to the Mountain Valley Natural Gas Pipeline – Fill Dirt

IND282-1

On page 4-89 of the DEIS it states: “Mountain Valley has not provided details regarding the permanent fill material that would be used in wetlands. In June 2016 we requested site-specific justification for the use of culverts and permanent fill within waterbodies and wetlands for permanent access roads. According to Mountain Valley, these culverts and permanent fill are necessary to provide workers safe access to the pipeline and associated facilities during construction, operation, and maintenance. However, it is not our practice to allow installation of permanent fill within waterbodies and wetlands. Therefore, we recommend that:

• **Prior to construction, Mountain Valley should file with the Secretary site-specific plans, including details regarding materials to be used and installation methods, for the use of permanent culverts and permanent fill in waterbodies and wetlands for access roads. Mountain Valley should include a detailed analysis of all reasonable alternatives to the use of culverts and permanent fill.”**

A number of issues with the above process and with a number of issues with the DEIS regarding details and unknown facts about the construction prior to approval. Why is FERC making a decision on this project without many of the details that impact the environment? Any other Virginia contractor would have to submit Shrink/Swell tests that a Geo-tech has to remediate of the compression and bearing on the soil. Local contractors have to meet the Shrink/Swell requirements of the county in Virginia. How is MVP getting away with not providing FERC these details but any other contractor would be required to submit before any construction to begin. Who at FERC will be monitoring this process for the proper fill materials? The report needs to name agencies and responsible parties.

The Shrink/Swell is not only an issue for permanent fill justification along wetlands but all along the pipeline route. Where can these reports be reviewed? What agency is responsible for monitoring these protocol?

FERC please do not approve this for profit money making MVP pipeline project which is not for public use.

Pat Curran Leonard

4638 Dillons Mill Road

Callaway, VA 24065

540-929-5184

IND282-1

See the response to comment IND209-1 regarding the permanent fill of wetlands.

**INDIVIDUALS**  
**IND283 – Pat Curran Leonard**

20161129-0045 FERC PDF (Unofficial) 11/28/2016

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

November 20, 2016

FILED  
SECRETARY OF THE  
COMMISSION

2016 NOV 28 P 4:44

ORIGINAL

FERC

Docket Number: PF15-3-000,  
CP16-10-000 or CP16-13-000  
[customer@ferc.gov](mailto:customer@ferc.gov)

FEDERAL ENERGY  
REGULATORY COMMISSION

Re: Opposition to the Mountain Valley Natural Gas Pipeline – Liability, Damages, Out of Business

IND283-1

Will FERC be the responsible party if EQT or MVP becomes bankrupt? In talking with my home-owners property insurer, it was discussed about the risk that having a natural gas pipeline placed adjacent to our property line would have on our assets including property value.

The DEIS talks about how MVP plans to address immediate issues or damages, water quality, and overall liability due to construction but it does not address the responsible party after construction is complete. Is FERC the backup responsible party if EQT/MVP are no longer able to support the project aftermath? Given the fact that FERC is the approving agency, with safety and being in a better financial position once approving the MVP project, it does appear FERC would be gaining a better position that without MVP.

What if future leaks in the pipeline damaged the water tables that support people that live along the proposed route? Where does the liability go if EQT is no longer a viable business? Who is responsible in 5 years, 10 years, 20 years?

What if cracks in foundations do not show damage immediately but a year later, or 5 years later or more? Who will be the responsible party to process a claim?

And while everyone today is stating the safety of a 42 inch 301 mile pressurized natural gas pipeline what if there is an emergency and there is damage to property, or loss of live? Who will be the responsible party if a claim needs to be made to make the property owners whole again? Not only during construction but in the future and for the lifetime of the pipeline?

FERC do not approve this very risky for profit business who is only out to make money not public good.

Pat Curran Leonard      4638 Dillons Mill Road      Callaway, VA 24065      540-929-5184

IND283-1

Insurance is discussed in section 4.9 of the EIS. See the response to comment IND28-3 regarding bankruptcy and financial responsibility. See the response to comment IND2-1 regarding safety. Air quality is addressed in section 4.11 of the EIS; and water quality in section 4.3. Safety is discussed in section 4.12.

# INDIVIDUALS

## IND284 – Emily Luhrs

20161130-5032 FERC PDF (Unofficial) 11/30/2016 12:01:43 AM

Emily Luhrs, Asheville, NC.

Dear Secretary Bose,

IND284-1

I am writing to ask that you exercise your authority to stop the proposed Mountain Valley Pipeline. As a concerned Western NC resident, this pipeline will undoubtedly affect VA residents and those of us in NC. Despite safety measures put in place for leaks, hazardous water pollution is a direct result of pipeline construction and use. Many leaks in pipelines go unnoticed until they've reached 1%, which is still impacting our environment in a tremendous way. In 2016, alternative energy is a completely viable option, ready and waiting for the government to assist in implementation, for jobs, energy independence, and working to clean the environment.

IND284-2

The pipeline will travel through a designated seismic zone and over terrain that is considered extremely unstable. As the pipeline will run over multiple fragile natural resources – including multiple fresh water sources and protected forest areas – and near several communities, this presents a completely unnecessary and avoidable safety risk to people and the environment.

IND284-3

IND284-4

Please evaluate the comprehensive need for pipeline development to transport natural gas from the same Marcellus shale plays in a single Programmatic Environmental Impact Statement so that this infrastructure can be appropriately sited and the cumulative impacts to our National Parks, National Forests, and private lands can be understood before moving forward. It is your responsibility to do the right thing – the alternative will be a turning point for the worse in an area that offers recreation and inspiration for millions of people.

Thank you for your review and consideration of this critical issue,

IND284-1

The potential for pipeline leakage is discussed in section 4.12. See the response to comment IND2-1 regarding safety.

IND284-2

Renewable energy alternatives are discussed in section 3 of the EIS. See also the response to comment IND40-1 regarding renewable energy.

IND284-3

Impacts on water resources, and measures to reduce those impacts, discussed in section 4.3 of the EIS. The EIS discusses seismic activity in section 4.1 and forested areas in section 4.4.

IND284-4

See the response to FA11-12 regarding need. Cumulative impacts are discussed in section 4.13 of the EIS.

**INDIVIDUALS**  
**IND285 – Pat Curran Leonard**

20161128-4007 FERC PDF (Unofficial) 11/28/2016

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

November 21, 2016

FILED  
SECRETARY OF THE  
COMMISSION  
2016 NOV 28 P 4:43  
FEDERAL ENERGY  
REGULATORY COMMISSION  
ORIGINAL

FERC  
Docket Number: PF15-3-000,  
CP16-10-000 or CP16-13-000  
customer@ferc.gov

Re: Opposition to the Mountain Valley Natural Gas Pipeline – Groundwater Use

IND285-1

On page 4-82 of the DEIS it states: "While Mountain Valley does not currently intend to use water from wells or groundwater sources for hydrostatic test water, it may have to supplement water from surface sources with water obtained from municipal sources. If groundwater is used to suppress dust, Mountain Valley would adhere to the measures outlined in its *Water Resources Identification and Testing Plan* to minimize, avoid, and mitigate (if applicable) any impacts on groundwater resources. Prior to hydrostatic water discharge activities, Mountain Valley and Equitrans would be required to obtain an NPDES General Permit and an NPDES Hydrostatic Test Discharge Permit from the WVDEP. Both applicants have submitted their applications for both permits, and the WVDEP has not yet responded. According to May 12, 2016 correspondence between the VDEQ and Mountain Valley, hydrostatic discharge activities in Virginia would be covered under the existing Virginia Pollutant Eliminations System General Permits VAC25-200-10 and VAG83 However, this permit is set to expire prior to the commencement of project construction, and changes to the permit or regulations may occur. According to the VDEQ, Mountain Valley should revisit the permit's applicability and coverage at that time."

It is November, 2016 in Southwest Virginia and we are in a drought situation. This lack of water has been happening more each year than anytime in the past. To reach in the DEIS that during construction MVP may have to supplement water from surface sources scares me to the point that FERC should demand where are sources of water going to come from? There is barely enough water running through the creeks around the proposed route to keep the grazing animals supplemented. By submitting permits – who from FERC or the VDEQ has come out to look at the waterways today, November, 2016 and see the water levels that MVP wants to pull from? The dry beds and fire risk that surround this community. FERC needs to see what is going on in the communities today instead of only looking at dated maps that do not represent the land and water resources along the route today. FERC owes that to the communities that will be effected by the decision that FERC will be responsible to make on the MVP project.

Please do not choose business and money making for a private equity firm over rural land-owners that will bear the risks of the 42 inch gas pipeline today and far into the future.

Pat Curran Leonard      4638 Dillons Mill Road      Callaway, VA 24085      540-929-5184

IND285-1

Mountain Valley intends to obtain most of the water for hydrostatic testing from municipal sources. Section 4.3 in this final EIS has been revised to indicate that the Applicants would ensure that base stream flows are maintained during withdrawals. In addition, water usage for hydrostatic tests is non-consumptive because the test water would be discharged to nearby upland locations.

# INDIVIDUALS

## IND286 – Kara Jeffries

20161130-5158 FERC PDF (Unofficial) 11/30/2016 11:36:47 AM

Kara Jeffries, Blacksburg, VA.  
Dear Ms. Bose and Members of the Commission,

IND286-1

I am writing you today to express my opposition to the proposed right of way amendments for the Mountain Valley Pipeline. I realize my comments will come late in the process. It is my hope that you all see the risks involved in this project as too great a burden to put upon the communities along the proposed route. I oppose this pipeline project for the same reasons I oppose the amendments - the impact it will have on water quality, the taking of private lands for private profit and the misuse of public lands for private profit.

IND286-1

Impacts on water resources, and measures to reduce those impacts, discussed in section 4.3 of the EIS.

IND286-2

I live in a community adjacent to the pipeline's proposed path. We live atop a complicated network of karst topography. I know what happens upstream of my well and does affect my drinking water. Soil disturbance created by the construction of the pipeline will negatively impact wells and waterways in the areas surrounding construction and in areas where karst is present, far beyond. Allowing for an even larger area of potential disturbance, by increasing the right of way to 500 feet, will exponentially increase the risk to the cleanliness and safety of our water.

IND286-2

See the response to comment FA8-1 regarding the 500-foot-wide utility corridor on Jefferson National Forest. Karst is discussed in section 4.1 of the EIS; soils in section 4.2.

IND286-3

The Jefferson National Forest is a space designated for all of us. It is held to protect land and waterways. Permanent disruption of this space by a private company is an unacceptable use of the land. The path of the pipeline will fragment habitats. Silt from erosion will destroy delicate small stream ecosystems. An increase in size of the right of way will increase the damage to the ecology of the forest.

IND286-3

The Forest Service has worked with Mountain Valley to develop project design features, mitigation measures and monitoring procedures to minimize the effects on the resources the plan amendments were designed to protect.

I urge you not to approve these amendments. I urge you not to approve this project.

Thank you for taking my comments,

Kara Jeffries  
882 Coal Bank Hollow Rd  
Blacksburg, VA 24060

FEDERAL ENERGY REGULATORY COMMISSION  
NATIONAL ENVIRONMENTAL POLICY ACT REVIEW FOR THE  
MOUNTAIN VALLEY PROJECT & EQUITRANS EXPANSION PROJECT FILED  
DOCKET NOS. CP16-10-000 & CP16-13-000  
SECRETARY OF THE COMMISSION

ORIGINAL

2016 NOV 29 P 4:18  
FEDERAL ENERGY REGULATORY COMMISSION

PUBLIC SESSION COMMENT FORM

Comments can be: (1) left at the sign-in table, (2) mailed to the addresses below, or (3) filed electronically by following the instructions provided below.

Please send one copy referenced to Docket No. CP16-10-000 & CP16-13-000 to the address below.  
For Official Filing: Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE, Room 1A  
Washington, DC 20426  
Please see attached comments concerning steep slopes & side slopes & landslides  
To expedite receipt and consideration of your comments, the Commission strongly encourages electronic filing of any comments to this proceeding. See 18 CFR 385.2001(a)(1)(iii) and the instructions on the Commission's Internet web site at [www.ferc.gov](http://www.ferc.gov) under the "e-Filing" link and the link to the User's Guide. Before you can file comments you will need to create a free account, which can be created on-line.

COMMENTS: (Please print; use and attach an additional sheet if necessary)

IND287-1

Please see attached comments regarding steep slopes, side slopes & probability of landslides in Monroe County, West Virginia. Also attached are comments I made during the scoping process mailed to FERC on June 2, 2015

IND287-1

Construction on steep side slopes and the potential for landslides are addressed in section 4.1 of the EIS.

Commentor's Name and Mailing Address (Please Print)

Shirley Hall  
PO Box 240 F  
Lindside, WV 24951

# INDIVIDUALS

## IND288 – John Bevans

20161130-5354 FERC PDF (Unofficial) 11/30/2016 4:36:46 PM

JOHN BEVANS, BLACKSBURG, VA.

- IND288-1 | 1. We are within the Preston Forest blast zone so the value of our property will be substantially reduced, but without any compensation.
- IND288-2 | 2. We will be subjected to considerable construction traffic, noise and air pollution, plus potential damage to our well water.
- IND288-3 | 3. The roads will be damaged by the heavy trucks and most likely Montgomery County will have to repair them.
- IND288-4 | 4. We live on karst topology and are surrounded by steep unstable land: very dangerous for any pipeline installation and operation.
- IND288-5 | 5. The EIS does not indicate that MVP will fund a large Escrow Account to insure that accident damages are remedied. This is very important!
- IND288-6 | 6. We very much oppose the construction of the pipeline, particularly in or near Preston Forest, Montgomery County, Virginia.

- IND288-1 | See the responses to comment IND12-1 regarding property values. Safety is addressed in section 4.12 of the EIS.
- IND288-2 | Traffic is discussed in section 4.9.2 of the EIS. Air quality and noise are discussed in section 4.11 of the EIS. Impacts on wells is discussed in section 4.3.
- IND288-3 | As stated in section 4.9.2 of the EIS, during construction, Mountain Valley would inspect roads periodically and, if damages occur as a direct result of project-related activities, would repair them as appropriate and in accordance with the applicable permit and the Transportation Plan.
- IND288-4 | Impacts and mitigation measures for karst terrain is addressed in sections 4.1 of the EIS.
- IND288-5 | See the response to comment IND28-3 regarding bankruptcy and financial responsibility.
- IND288-6 | Comment noted.

# INDIVIDUALS

## IND289 – Carl E. Zipper

1 December 2016

To: Ms. Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission (FERC)  
Troy Andersen, US Fish and Wildlife Service (USFWS) Supervisory Fish & Wildlife Biologist,  
[troy\\_anderson@fws.gov](mailto:troy_anderson@fws.gov)  
Sumalee Hoskin, USFWS Fish & Wildlife Biologist, [sumalee\\_hoskin@fws.gov](mailto:sumalee_hoskin@fws.gov)  
Tiernan Lennon, USFWS - Elkins Field Office, [tiernan\\_lennon@fws.gov](mailto:tiernan_lennon@fws.gov)  
John Schmidt, USFWS Project Leader, West Virginia Field Office, [john\\_schmidt@fws.gov](mailto:john_schmidt@fws.gov)  
Cindy Schulz, USFWS Field Supervisor, Virginia Ecological Services,  
[cindy\\_schulz@fws.gov](mailto:cindy_schulz@fws.gov)  
Kim Smith, USFWS Fish & Wildlife Biologist, [kimberly\\_smith@fws.gov](mailto:kimberly_smith@fws.gov)  
Rene Hypes, Virginia Department of Conservation and Recreation (Va DCR),  
[rene.hypes@dcr.virginia.gov](mailto:rene.hypes@dcr.virginia.gov)

Re: Mountain Valley Pipeline proposal, Docket No. CP 16-10  
Draft Environmental Impact Statement  
Migratory Bird Conservation Plan

Dear Ms. Bose, members of the Commission, Ms. Hypes, and US FWS personnel:

I am writing to express concern with the Migratory Bird Conservation Plan (MBC Plan) that has been filed by Mountain Valley Pipeline LLC with the Federal Energy Regulatory Commission.<sup>1</sup> I am also concerned with the inadequacies of the Exotic and Invasive Species Control Plan<sup>2</sup>, also as filed by Mountain Valley Pipeline LLC, for reasons that include its relevance to the MBC Plan. My concerns extend to the Mountain Valley Project and Equitrans Expansion Project Draft Environmental Impact Statement (DEIS) which proposes the pipeline construction and environmental mitigation context for the MBC Plan and incorporates both the MBC Plan and the Exotic and Invasive Species Control Plan by reference.<sup>3</sup>

I submit these comments as an owner and manager of land within the project area<sup>4</sup> and as a Ph.D. scientist who has published peer-reviewed scientific articles that concern restoration of forest vegetation in previously forested but disturbed areas of the Appalachian mountains.<sup>5</sup>

<sup>1</sup> The Mountain Valley Pipeline proposal is being considered by FERC as Docket CP16-10. The Migratory Bird Conservation Plan is described in submittal 20161027-5212 to FERC Docket CP16-10 (starts on P. 31); and is enclosed with this letter as sent to USFWS and VaDCR personnel.

<sup>2</sup> The Exotic and Invasive Species Control Plan is described in submittal 20160718-5161, File 4, to FERC Docket CP16-10 (starts on P. 37) and is enclosed with this letter as sent to USFWS and VaDCR personnel.

<sup>3</sup> Mountain Valley Project and Equitrans Expansion Project Draft Environmental Impact Statement, as posted to FERC Docket CP16-10. Table 2.4-2 incorporates the various Plans by reference.

<sup>4</sup> I own and manage 31+ acres in Montgomery County, Virginia, located approximately 1 mile from the proposed corridor. The land is mostly forested (> 25 acres are forest). I manage the land for purposes that include maintenance of native forest plant communities; hence, my management includes invasive exotic plant species control and efforts to re-establish forest trees in canopy openings.

<sup>5</sup> See, for example:

Evans DM, CE Zipper, J Burger, B.Strahm, A Villamagna. 2013. Reforestation practice for enhancement of ecosystem services on a compacted surface mine: Path toward ecosystem recovery. *Ecological Engineering* 51: 16-23.

Fields-Johnson CW, CE Zipper, J Burger, D Evans. 2012. Forest restoration in steep slopes after coal surface mining in Appalachian USA: Soil grading and seeding effects. *Forest Ecology and Management* 270: 126–134.

Oliphant AJ, RH Wynne, CE Zipper, et al. 2016. Autumn olive (*Elaeagnus umbellata*) presence and proliferation on former surface coal mines in eastern USA. *Biological Invasions* doi:10.1007/s10530-016-1271-6

IND289-1

See the response to IND244-8. Section 4.4 has been revised to provide an updated discussion of Mountain Valley's revised *Migratory Bird Conservation Plan*.



IND289-1  
cont'd

I am communicating my concerns to each of you because the MBC Plan states that US Fish and Wildlife Service (USFWS) and Federal Energy Regulatory Commission (FERC) have entered into a Memorandum of Understanding (MOU) that requires FERC and USFWS to integrate

*“bird conservation principles, measures, and practices into agency actions”*

and to improve

*“habitat conditions for migratory birds on lands affected by energy projects”.*

As stated by the MBC Plan about the MOU:

*“FERC is obligated to require, as appropriate, applicants to mitigate negative impacts on migratory birds and their habitats by proposed actions.”*

I am concerned that the MBC Plan for Mountain Valley Pipeline falls short of those goals.

In a recent FERC filing, I have expressed my concerns about the MBC Plan, the Exotic and Invasive Species Control Plan, and related issues.<sup>6</sup> That filing provides extensive supporting detail including peer-reviewed literature citations. Here I am summarizing my concerns, and I refer you to that earlier filing for the supporting details.

**The MBC Plan Fails to Prescribe Active Reforestation for Temporary Workspaces.**

Temporary workspaces are areas that, when occurring in forest,<sup>7</sup> would be cleared of forest vegetation and used for construction purposes but then abandoned and not used for pipeline operation and maintenance. The MBC Plan notes that

*“The majority of the Project-specific [migratory bird species of concern] (16 of 25) rely on forested habitat. Nine of these species depend on and/or prefer large expanses of contiguous forest.”*

I am concerned that the MBC Plan fails to propose actions that would ensure restoration of productive native forest vegetation, such as is relied upon as habitat by 16 of the 25 migratory bird species of concern, in these areas.

Rapid and effective of native forest vegetation in temporary workspaces would improve *“habitat conditions for migratory birds”* that rely on forested habitat, and would *“mitigate negative impacts on migratory birds”* that rely on forested habitat. Yet, the MBC Plan fails to propose an active and effective reforestation measures for temporary workspaces in forested areas.

I have described how an effective reforestation program could be implemented in the prior filing.<sup>8</sup> In brief: elements of such a program would include

- decompaction of compacted soils, including those occurring on temporary road areas;

Zipper CE, JA Burger, CD Barton, JG Skousen. 2013. Rebuilding soils on mined land for native forests in Appalachia, USA. *Soil Science Society of American Journal* 77: 337-349.

Zipper CE, JA Burger, J McGrath, JA Rodrigue, GI Holtzman. 2011. Forest restoration potentials of coal mined lands in the eastern United States. *Journal of Environmental Quality* 40:1567-1577.

Zipper CE, JA Burger, JG Skousen, PN Angel, CD Barton, V Davis, JA Franklin. 2011. Restoring forests and associated ecosystem services on Appalachian coal surface mines. *Environmental Management* 47:751-765.

<sup>6</sup> Submittal 20161121-5051 to FERC Docket CP16-10. That filing is enclosed with this letter as sent to USFWS and VaDCR personnel. The MBC Plan's deficiencies are discussed in detail on pages p.20-23.

<sup>7</sup> The majority of areas proposed for disturbance by pipeline construction and operation occur in forest. According to DEIS Table 4.8.1-1, 6470 of the 8428 acres (77%) proposed for disturbance are currently forested.

<sup>8</sup> Submittal 20161121-5051 to FERC Docket CP16-10, p. 5-11.

IND289-1  
cont'd

- replacement of topsoil in areas lacking excessively steep slopes,
- active planting of forest trees of species similar to those of adjacent forest areas,
- effective control of invasive exotic species so as to prevent their establishment in reforestation areas,
- protection of planted trees from deer browse where necessary,
- and monitoring and follow-up measures.

For the purpose of re-establishing productive forest vegetation in temporary workspaces, similar in species composition to adjacent native forests, an active and effective reforestation program should be seen as a preferred alternative to the natural regeneration described by the DEIS and the MBC Plan because:<sup>9</sup>

- Soil conditions left by the construction process, unless mitigated, will hinder forest regeneration;
- Certain forms of herbaceous vegetation can hinder forest regeneration; but the DEIS fails to make it clear that such vegetation would not be established in temporary workspaces by seeding.<sup>10</sup>
- An active and effective reforestation program will restore forest cover more rapidly than will natural regeneration.
- Unlike natural regeneration, an active and effective reforestation program will ensure restoration of native forest cover. Given the nature of invasive exotic plant species that are common in the project area, the preference of many invasive exotic plant species for open canopies and forest edges such as are planned for disturbance areas, the capability of invasive exotic plants to disperse over landscapes via mechanisms that include wind, wildlife, and human traffic, and the intense deer-browse pressure that occurs in at least one portion of the project area: Reliance on natural regeneration cannot ensure restoration of native forest plant communities in all disturbed areas.

For the purpose of maintaining the species composition of forested areas adjacent to temporary workspaces, an active and effective reforestation program would be a preferred alternative to the natural regeneration described by the DEIS and the MBC Plan because:<sup>11</sup>

- Establishment and proliferation of invasive exotic plants can be expected to occur in temporary workspaces in the absence of such plan. Once established in temporary workspaces, certain of these invasive exotic plant species can be expected to disperse into adjacent forests - thus altering species composition and other attributes.

Temporary workspaces are of several types:

Access roads and work areas (671 acres in forested areas<sup>12</sup>): Most or all of these areas are not within the permanent right-of-way corridor. Hence, restoration of forest in these areas would eliminate some of the corridors and gaps that would be created in forested areas by the pipeline's construction.

<sup>9</sup> This information is reviewed with greater detail in Submittal 20161121-5051 to FERC Docket CP16-10, p. 5-11.

<sup>10</sup> The DEIS and the MBC Plan present contradictory information in this regard. The MBC Plan states that "native seed mixes" would be used for revegetation, but other DEIS sections describe different seeding practices. See Submittal 20161121-5051 to FERC Docket CP16-10, p. 19-20, p. 24

<sup>11</sup> This information is reviewed with greater detail in Submittal 20161121-5051 to FERC Docket CP16-10, p. 5-11.

<sup>12</sup> Data from DEIS, Table 4.4.2-1.

# INDIVIDUALS

## IND289 – Carl E. Zipper

IND289-1  
cont'd

Reforestation of temporary access roads and work areas will reduce adverse effects to forested habitat by reducing forest fragmentation. As noted by the DEIS:

*"Fragmentation generally affects birds by creating dispersal barriers, resulting in smaller suitable microhabitats, smaller population sizes, and edge effects".<sup>13</sup>*

Reforestation of temporary access roads and work spaces would reduce adverse effects to habitat of the sixteen migratory bird species of concern that *"rely on forested habitat"*. Reforestation of temporary access roads and work areas would be especially beneficial to the nine migratory bird species of concern that *"depend on and/or prefer large expanses of contiguous forest"*. According to the MBC Plan:<sup>14</sup>

*"The Project crosses a total of 93 Core Forest Areas (39 in West Virginia; 54 in Virginia) and, following construction, creates 657 fragments (360 in West Virginia; 297 in Virginia) (Table 10, Appendix B) ... Once previously forested, temporary construction areas have regenerated as forest, the total number of fragments will amount to 467."*

In other words, reforestation of temporary access roads and work areas would reduce forest fragmentation by nearly 1/3. Of the various types of habitat required by migratory bird species that occur in the project area, *"large expanses of contiguous forest"* are arguably most at risk; and the DEIS proposes to create severe fragmentation of those *"large expanses of contiguous forest"* that are in place today along the proposed pipeline route. A practicable and reasonable measure to reduce that fragmentation – active and effective reforestation of temporary access roads and work areas – is available; yet the MBC Plan, the DEIS, and the applicant fail to propose that measure.

Areas within the pipeline construction corridor but outside of the permanent right-of-way (3645 acres<sup>15</sup>): Where the pipeline is constructed through forest, a deforested corridor of 125 feet in width would be established along most of the pipeline's length; the DEIS and the application state that the corridor may be wider in some places if additional width is needed for construction. A permanent right-of-way, 50 feet in width, would be maintained for the pipeline's operation and maintenance, leaving a ≥75-foot width of temporary workspace available for reforestation.

The DEIS describes edge effects:

*"Edge effects can cause interactions between species that nest in the interior of forests and species that inhabit surrounding landscapes, typically lowering the reproductive success of the interior species."<sup>16</sup>*

*"The distance an edge effect extends into a woodland is variable, but most studies suggest at least 300 feet ... Edge effects within this distance could include a change in available habitat for some species due to an increase in light and temperature levels on the forest floor and the subsequent reduction in soil moisture; such changes may result in habitat that would no longer be suitable for*

<sup>13</sup> DEIS, Section 4.5.2.2 Forest Fragmentation and Edge Effects on Wildlife, p.4-161+ (p.398+ of 781).

<sup>14</sup> MBC Plan, p. 16.

<sup>15</sup> Data from DEIS, Table 4.4.2-1.

<sup>16</sup> DEIS, Section 4.5.2.2 Forest Fragmentation and Edge Effects on Wildlife, p.4-161+ (p.398+ of 781).

# INDIVIDUALS

## IND289 – Carl E. Zipper

IND289-1  
cont'd

*species that require these specific habitat conditions, such as salamanders and many types of plants.*<sup>17</sup>

Additional edge effects documented by scientific literature include changes of plant species composition within forested areas.<sup>18</sup>

Rapid and assured re-establishment of native forest vegetation in the within-corridor temporary workspaces would reduce the extent of non-cleared forest vegetation that would be subject to edge effects. Hence, rapid and assured re-establishment of native forest vegetation in the within-corridor temporary workspaces would benefit the 16 migratory bird species occurring within the project area that "*rely on forested habitat.*" I consider it reasonable to expect that a narrowing of the deforested corridor's width from 125 feet to 50 feet would also reduce the distance of edge-effect extension into the adjacent forest, although I have not documented that expectation scientifically.

The MBC Plan proposes to establish scrub/shrub habitat within the corridor temporary workspaces as a "*buffer of shrubs between the open ROW and the forest provide a habitat-transitional zone and reduces the appearance of a 'hard' edge.*" However, the MBC Plan provides no analysis of the buffer distance that would be needed to reduce the "hard edge" effect.

Also, the DEIS states that:

*"The Applicants would also allow the rights-of-way adjacent to a 10-foot-wide strip over the pipeline to grow as scrub-shrub habitat so as to provide a more gradual transition between the pipeline corridor and the surrounding forested habitat."*<sup>19</sup>

The MBC Plan, however, fails to clarify if the extent of scrub/shrub to be established within the 50-foot permanent right-of-way would be adequate as a hard-edge buffer, or if additional scrub/shrub buffer would be needed to provide optimal habitat for migratory birds.

Also, the MBC Plan states:<sup>20</sup>

*"Forest is the predominant land cover impacted by the Project with approximately 1,799.74 hectares (4,447.26 ac) affected by construction (69.9% of Project-specific impacts), and 646.66 hectares (1,597.93 ac) permanently converted to grass/scrub shrub within the operation ROW."*

Also, the MBC Plan claims that the "natural regeneration" of temporary workspaces

*"will temporarily create an additional 1,151.13 hectares (2,844.51 ac) of shrub/scrub habitat that will be allowed to mature into forested habitat. Wildlife managers recommend creation of such an edge to provide a gradual transition between grassland-type habitats and forest. This area can provide nesting and foraging habitat for a number of migratory birds, such as blue-winged warblers*

<sup>17</sup> DEIS, Section 4.5.2.2 Forest Fragmentation and Edge Effects on Wildlife, p.4-161+ (p.398+ of 781).

<sup>18</sup> Harper KA et al. 2005. Edge influence on forest structure and composition in fragmented landscapes. Conservation Biology 19: 768-782.

<sup>19</sup> DEIS, p. 4-163 (p. 400 of 781).

<sup>20</sup> MBC Plan, p. 15.

# INDIVIDUALS

## IND289 – Carl E. Zipper

IND289-1  
cont'd

*and prairie warblers that prefer shrub/scrub habitat and the forest-edge interface.*<sup>21</sup>

As noted above, the MBC Plan fails to state why scrub/shrub habitat within the permanent right-of-way corridor should be not be considered as an adequate "soft edge" for adjacent forest. Also, the MBC Plan fails to state if or why the 1598 acres of "*grass/scrub shrub*" habitat to be created within the permanent right-of-way would be inadequate for the migratory birds "*that prefer shrub/scrub habitat and the forest-edge interface*"; and why additional temporary (but long lasting) scrub/shrub should be preferred over the more-rapid and assured re-establishment of native forest plant communities that would occur through an active and effective reforestation program.

IND289-2

**The MBC Plan Fails to Prescribe Measures that Would Control Invasive Exotic Species in Disturbed Areas:**

As discussed in detail in the FERC filing, the proposed Exotic and Invasive Species Control Plan is totally inadequate.<sup>22</sup> That Plan's Table 1 lists 288 "*Non-Native/Invasive Plant Species with the Potential to Occur Along the Project Route*", 46 of which are classified as "highly invasive". I own and manage ~30 acres (mostly upland forest, but with herbaceous vegetation areas and forest edge) within close proximity of the project route, and I have found 10 of those highly invasive species on my property alone. In other words: Invasive exotic plants are a serious concern within the project area.

The MBC Plan is worse than inadequate with respect to invasive exotic plants. Despite its emphasis on "regeneration" as a means of re-establishing forest vegetation, it fails to even mention "exotic" or "invasive" plants, much less describe a method for dealing with them. As I interpret the term "regeneration", it describes re-establishment of plant communities occurring prior to disturbance, e.g. native forest plants in areas where the pipeline's construction disturbs forests comprised of native plants. Yet, neither the MBC Plan nor the Exotic and Invasive Species Control Plan describe measures to ensure that plants establishing within "regenerating" areas would be native.

Should management of previously forested but disturbed areas fail to limit and control invasions by exotic plants, it is likely that multiple exotic species would become established in the disturbance areas and would disperse through the pipeline corridor and into adjacent forests,<sup>23</sup> altering those forests' species composition and suitability as habitat for migratory birds. It is also quite possible that the invasive exotic plants would suppress natural regeneration of forest plant communities within parts of the temporary workspace areas.<sup>24</sup> Also, as noted by the DEIS:

*"... the creation of permanently maintained, herbaceous and shrub open corridors following nearly the full length of the MVP and the EEP rights-of-way would also create new movement corridors for many species of wildlife."*<sup>25</sup>

<sup>21</sup> MBC Plan, p.18.

<sup>22</sup> Submittal 20161121-5051 to FERC Docket CP16-10, p. 11-17.

<sup>23</sup> Submittal 20161121-5051 to FERC Docket CP16-10, p. 11-17.

<sup>24</sup> Submittal 20161121-5051 to FERC Docket CP16-10, p. 11-12. In addition to the information so posted, see: Flory SL & K Clay, 2010, Non-native grass invasion suppresses forest succession. *Oecologia* 164:1029-38. The article concerns *Microstegium vimineum*, which is described as "highly invasive", and as "observed in the project area" by the Exotic and Invasive Species Control Plan's Table 1.

<sup>25</sup> DEIS, p. 4-162 (p. 399 of 781).

IND289-2

Invasive species are addressed in an updated section 4.4 of the final EIS. See also the response to comment IND343-1 regarding invasive species.

# INDIVIDUALS

## IND289 – Carl E. Zipper

IND289-2  
cont'd

Since wildlife are a primary means for invasive exotic species dispersal, it is likely that the disturbed area corridors would facilitate dispersal of invasive exotic species from areas where they are already established along the pipeline route into areas that are currently interior forest and where such species are not present.

I consider the above to be problematic and contradictory to MBC Plan goals while presuming that native migratory bird conservation strategies emphasize establishment of habitat with native plant species.

IND289-3

**The MBC Plan Fails to Describe Adequately the Plant Community Types that are Proposed as Migratory Bird Habitat for Disturbed Areas:**

The MBC does give general descriptions of those plant community types: It states that scrub/shrub communities will be established as temporary communities in temporary work spaces, and claims that those communities would be replaced by forest as regeneration progresses. However, the MBC Plan does not describe plant species that would be re-established by seeding within disturbed areas.<sup>26</sup>

More importantly, the MBC Plan fails to describe the intended nativity for the plant communities that would develop in those temporary workspaces: Do the Plan's developers intend for those plant communities to be comprised of native plants? The Plan is proposed for the purpose of establishing habitat for native migratory birds: Are native plants desired for that purpose? Or would establishment and proliferation within disturbed areas of invasive exotic plants that are compatible with certain migratory bird species be considered as consistent with the MBC Plan's purpose?

Should it be the MBC Plan's intent to establish migratory bird habitat with native plants, the MBC Plan is inadequate. Numerous invasive exotic plants occur within the project area, and neither the MBC Plan, Exotic and Invasive Species Control Plan, nor the DEIS propose plans or procedures to limit establishment of invasive exotic plants within disturbed areas. In the absence of such measures, I would consider it likely that invasive exotic plants would invade, become established, and proliferate within disturbed areas – and, by extension, within other areas such as adjacent forest.

Should it be the MBC Plan's intent to establish migratory bird habitat with invasive exotic species as plant-community components, that should also be stated; and that intent should be justified within the legal framework that seeks to avoid, when possible, and to minimize otherwise adverse effects of pipeline construction.<sup>27</sup>

Enabling uncontrolled establishment of invasive exotic plant species within areas disturbed by pipeline construction, for migratory bird habitat purposes or otherwise, would create adverse effects. The pipeline traverses large tracts of "Core Forest" areas; enabling invasive exotic plant species establishment within the corridor would have potential to further impact those Core Forest areas, as certain invasive exotic plants, if established within disturbed areas, would have potential to move into adjacent forest.<sup>28</sup> Certain invasive exotic plants are dispersed by birds;<sup>29</sup> establishment of such species within disturbed areas would be especially problematic in this

<sup>26</sup> The plan states that "native" herbaceous plant species would be seeded; and that "native" shrub species would be either seeded or planted; but it does not state the species.

<sup>27</sup> National Environmental Policy Act, Section 102; and FERC, Certification of New Interstate Natural Gas Pipeline Facilities, FERC Docket No. PL99-3-000. Statement of Policy issued September 15, 1999

<sup>28</sup> For further detail, see Submittal 20161121-5051 to FERC Docket CP16-10, p. 11-17, p. 23.

<sup>29</sup> For further detail, see Submittal 20161121-5051 to FERC Docket CP16-10, p. 11-17, p. 11-14 and p.23,

IND289-3

Mountain Valley's *Migratory Bird Conservation Plan* indicates that native plant species would be seeded during restoration. Mountain Valley is partnering with the Wildlife Habitat Council regarding native seed mixes and integrated vegetation management. Sections 4.4 and 4.5 of the final EIS have been updated as appropriate.

# INDIVIDUALS

## IND289 – Carl E. Zipper

IND289-3 | context, given that the MBC Plan proposes revegetation strategies with the intent of providing  
cont'd | habitat for migratory birds.

IND289-4 | **The MBC Plan Contains Misleading Statements:**

On p. 15, the MBC Plan states:

*"Impacts due to construction to more than two-thirds of the area (1,717.52 hectares [4,244.1 ac]) are temporary and the area will recover to forested conditions if left undisturbed (Table 2, Appendix B)."*<sup>30</sup>

If the term "forest" is intended to mean "native forest", then the above statement is highly misleading – and is false if also intended to describe the full 4,244.1 acre area that is referenced. Exotic invasive plants of multiple species are common in the project area.<sup>31</sup> Neither the MBC Plan, the Exotic and Invasive Species Control Plan, nor anything else within or referenced by the DEIS prescribe invasive exotic species controls that have any likelihood of being effective. Hence, revegetation procedures proposed by the DEIS are likely to enable invasive exotic species to establish in some temporary workspaces initially, to disperse from those areas as time progresses; and, hence, to interfere with re-establishment of native forest plant communities via "natural regeneration."

I use this statement as an example. Other statements within the MBC Plan also allege that natural regeneration will restore forest while failing to note the likelihood that invasive exotic plant species would become established in regenerating areas, that some of these species have potential to suppress native forest generation, and that some of these species have potential to persist in areas where forest trees also become established. .

### **Concluding Statement**

I have described above my concerns with the Mountain Valley Pipeline project with specific reference to the Migratory Bird Conservation Plan. These concerns are directly related to more general issues that concern National Environmental Policy Act (NEPA) compliance. Federal regulations implementing NEPA state that:

*"Federal agencies shall, to the fullest extent possible ... Use all practicable means, consistent with the requirements of the Act and other essential considerations of national policy, to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions upon the quality of the human environment."*<sup>32</sup>

Clearly, the Mountain Valley Pipeline application, as described by the DEIS, fails to comply with that requirement as practicable means to reduce adverse effects to forest resources are available but are not proposed. The concerns which I have expressed above with respect to the MBC Plan are directly related and connected to this larger issue.<sup>33</sup>

I am a registered intervenor in the Docket CP16-10 proceedings, and I am sending these comments to the full service list via e-mail as per FERC policies.

<sup>30</sup> MBC Plan, p. 15.

<sup>31</sup> MBC Plan, Table 1.

<sup>32</sup> 40 CFR 1500.2

<sup>33</sup> As documented in submittal 20161121-5051 to FERC Docket CP16-10.

IND289-4 | Invasive species are addressed in an updated section 4.4 of the EIS. See also the response to comment IND343-1 regarding invasive species. We conclude that the invasive species control measures discussed in the EIS would be adequate.

# INDIVIDUALS

IND289 – Carl E. Zipper

With regards,



Carl E. Zipper  
Blacksburg VA 24060

Cc: US Forest Service, [comments-southern-georgewashington-jefferson@fs.fed.us](mailto:comments-southern-georgewashington-jefferson@fs.fed.us)  
US Bureau of Land Management, [vcraft@blm.gov](mailto:vcraft@blm.gov), [mliberat@blm.gov](mailto:mliberat@blm.gov)  
Barbara Rudnick, USEPA, [Rudnick.Barbara@epa.gov](mailto:Rudnick.Barbara@epa.gov)  
Edward Boling, Council of Environmental Quality, [Edward\\_A\\_Boling@ceq.eop.gov](mailto:Edward_A_Boling@ceq.eop.gov)



# INDIVIDUALS

IND290 – Earl and Fern Nichols

ORIGINAL

Earl and Fern Echols  
362 Bluegrass Trail  
Newport, VA 24128  
(540) 599-7437

FILED  
SECRETARY OF THE  
2016 NOV 30 P 3:42  
FEDERAL ENERGY  
REGULATORY COMMISSION

February 23, 2016

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

REVISED LETTER Re: Docket PF15-3-000 - Mountain Valley Pipeline

Dear Ms. Bose:

Some of the content of this letter was presented at the public FERC concern meeting in Roanoke. However, some content has been added or edited. We are also including the transcript from our Roanoke session in which Mr. Paul Friedman continuously interrupted what we had understood was our three-minute session to voice our concerns. We had not understood this was a debate session.

Original letter here, with edits and additional information following at the end.

I'm writing to express my concern over the Mountain Valley Pipeline whose route is going directly through the Village of Newport. In recent months, we learned that there would be an access road going through our property. Much to our relief, we were later told the road had moved onto an adjoining property.

On October 28, we were shocked and amazed to learn that although the road has been moved off of our property, the pipeline route has now been relocated with in feet of our home. We were informed by Mr. Rick Elmore of Coates that if this route is indeed chosen, we will lose our home and have to relocate!

I, Earl, am 80 years old, and my wife, Fern, is 76. We have lived in Newport all of our lives, and in our current location since 1969. I am in poor health and suffer greatly from diabetes. Fern is a breast cancer survivor. Since learning of the potential pipeline activities, both of our health has been greatly affected.

The house they are proposing to take is more than a house—it is our home. We have raised three children here. This is home to our children and their spouses, our 6 grandchildren and their spouses (as well as 2 step grandchildren), as well as our 6 great grandchildren.

We are close to our physicians, church, and shopping facilities. We have no desire to move nor can we imagine anywhere else being home.

I am a veteran of the US Army. My wife and I have worked hard for a living and our home is paid for. We cannot afford to move and start over, nor do we want to.

IND290-1

IND290-1

Mountain Valley representatives have indicated to FERC staff that it is highly unlikely that landowners would be relocated out of their homes during project construction. Mr. Friedman did not interrupt you during your oral comments at the Roanoke session, but answered questions you raised, and provided you the full time to comment. He indicated in response to your questions that while the company may seek to acquire an easement across your property, it would probably not seek to purchase your house. He also indicated that it was not uncommon for pipelines to be located in proximity to houses, and that pipelines can be operated safely, as supported in section 4.12 of this EIS. Section 4.10 of the EIS indicates that construction work areas would be about 44 feet from the Echols' house. Residence-specific mitigation plans are attached in appendix H in this EIS. The Greater Newport Rural Historic District is discussed in section 4.10.

# INDIVIDUALS

IND290 – Earl and Fern Nichols

IND290-1  
cont'd

In addition to this being a person catastrophe, this will be devastating the to the close-knit community of Newport. It makes absolutely no sense to anyone (other than the pipeline company) to bring this infrastructure through a well-established historical district.

We respectfully ask you to review all other possibilities before destroying our home and our community.

Sincerely,

Earl and Fern Echols

*Earl Echols*

*Fern Echols*

**Additional Information:**

We are submitting photos showing the close proximity to both our home and the downtown Newport Community, including the Newport-Mt. Olivet United Methodist Church.

We have been in contact with Mr. Rick Elmore of Coates, the person acquiring land for MVP right of way. He has confirmed that, despite FERC's "reassurance" that we will not have to move, that he has had to relocate individuals for this purpose in the past. We are confused and concerned as to what is in the plans for our property, and no one is giving us any answers.

We have been in contact with our state representative, Morgan Griffith. He and his staff have been very responsive and we hope he can help us get some answers. The stress of not knowing what is going to happen to us and our home is creating a lot of worry and health concerns for me and my wife.

We ask that someone PLEASE meet with us to let us know what is going on so that we can plan accordingly.

# INDIVIDUALS

## IND291 – Tunis McElwain

20161201-5118 FERC PDF (Unofficial) 12/1/2016 10:21:06 AM

Tunis McElwain, Bokeelia, FL.  
Ms. Kimberly Bose, Secretary  
Federal Energy Regulatory Commission

RE: Cp-16-10 MVP, Webster County, WV

Dear Ms. Bose:

IND291-1

This letter is in reference to my family's property in Webster County, WV that has been in the McElwain family since the Revolutionary War. My ancestors fought in the Revolutionary War and the War of 1812 and were given property in what is now West Virginia as payment for their services. There has been a McElwain in military service to our Country in virtually every conflict since the Revolutionary War. The property in question is in the James McElwain living trust. James McElwain Sr. is a Korean War veteran and was born on the property. We manage the property for timber as a family from various states but we have family members currently residing in Webster County. The emotional attachment to the property is tremendous and we are not simply out of state investors.

Thank you for listening to my previous comments concerning the McElwain family cemetery. Based on the current alignments it appears that the cemetery is no longer in danger of being directly impacted by the pipeline. We have concerns about additional cultural resources on the property, including old home sites, and have expressed those concerns to FERC and the Mountain Valley Pipeline representatives. We would appreciate the opportunity to review the cultural resource surveys or speak with an Archaeologist. My requests for copies of surveys have not been responded to by FERC or the MVP people. I have allowed the MVP representatives on my property on multiple occasions as a good faith measure but my requests for copies of surveys conducted have fallen on deaf ears. If necessary we will file a FOIA request from FERC to obtain this information.

The main reason for this letter is to let you know that my family feels the footprint of the pipeline is disproportionate to the impact of surrounding landowners. The proposed route of the pipeline will bisect the property and then run along a ridge top to avoid adjacent land owned by a timber company. In addition to the bifurcation of our property currently managed for timber, an access road is proposed that would render two frontage lots useless. The concerns we have include: a landslide damaging timber that could result from work along a ridgetop that is no more than 2 feet wide in places, ability to cross the pipeline with heavy machinery to harvest timber, additional access to our property by trespassers, and impacts to the value of the property. We feel we have been targeted as out of state landowners and are bearing an unusually large burden associated with the pipeline. As a regulatory agency please ask MVP to look closer at alternatives and decrease the impact on our property. Specifically, ask them to remove the proposed access road that would cross our property and impose additional stabilization efforts.

IND291-1

See the response to comment FA14-1 regarding the commenter's parcel. Mountain Valley indicated, in a filing on February 17, 2017 (response to our January 26, 2017 EIS question Cultural Resources 20 e), that their cultural resources consultant surveyed the McElwain property and did not identify any historic structures in the APE. Table 3.5.3-2 of the EIS presents Mountain Valley's response to the landowner's request for an alternative route across his tract.

# INDIVIDUALS

## IND291 – Tunis McElwain

20161201-5118 FERC PDF (Unofficial) 12/1/2016 10:21:06 AM

IND291-1  
cont'd

We have been working in good faith with MVP but have eroding confidence in their ability to negotiate with us in good faith. Our preference would be for the pipeline to avoid our property but we are not naïve enough to think we could stop the pipeline. Instead we have retained an attorney to represent us in an attempt to protect our interests. Please encourage MVP to deal with all landowners equitably. The McElwain family property in question is identified as:

Glade District, Webster County, WV. Book 286, page 375 and page 191.  
Tax ID #'s 4-4M-44.8, 4-4M-44.7, 4-4M-44.6, and 4-4M-44.5.

Thank you for your time a consideration concerning the proposed MVP project.

Sincerely,

Tunis W McElwain

# INDIVIDUALS

IND292 – Thomas Bouldin

To: Kimberly D. Bose, Secretary; Norman Bay, Chairman; Members of the Commission  
Federal Energy Regulatory Commission

From: Thomas Bouldin, Landowner and Intervenor, Pence Springs, West Virginia

Date: December 1, 2016

Re: DEIS Inaccuracies and Contradictions Regarding Groundwater Impacts

Docket # CP16-10-000: Mountain Valley Pipeline

IND292-1 In completing other analyses and comments for Docket # CP16-10 regarding the Draft Environmental Impact Statement for the Mountain Valley Pipeline application, I have discovered a number of seemingly inaccurate and/or contradictory statements in FERC's Draft Environmental Impact Statement concerning potential MVP impacts on groundwater. I submit my concerns here in the expectation that they will be fully and reasonably addressed prior to the release of any further version of the Draft Environmental Impact Statement for the application, and that the public will be provided sufficient time to review and evaluate the results prior to the closing of the comment period.

#### Failure to Use Information from Geologic Analysis

The authors of the DEIS are regularly guilty of failing to make use of technical information contained in descriptive sections of the text. On the subject of groundwater impacts there is an especially serious instance of this failure. The discussion of geology suggests the possibility that extensive blasting along the route in West Virginia could be especially problematic given the geology of groundwater movements in the area.

The discussion of groundwater resources (Section 4.3.1, pg. 4-69) begins (without introduction or justification) with a table of *Aquifers Crossed by the MVP*. However, on the third page of the discussion, under the heading of **Appalachian Plateau Regional Aquifer System** (pg. 4-71), the DEIS describes an important geologic trait of the area: "With the exception of the sandstone aquifers, primary porosity and permeability are for all practical purposes negligible and groundwater flow is predominately through secondary permeability such as bedding planes, bedrock fractures and joints, and in carbonate bedrock through fractures enlarged by dissolution of bedrock (solution openings)." **Table 4.3.1—1 (pg. 4-69) indicates that the first 195 miles of the MVP route (that is, almost the entire route within West Virginia) lie within the Plateau region; and while the table lists areas involving sandstones, much of the region's lithography is primarily siltstone, shale, limestone and coal. This seems to imply that in much of the route through West Virginia, groundwater flow is predominately through bedding planes, fissures, fractures and seeps.** (As will become clear, it is problematic that the DEIS has not gone into greater detail concerning these geological distinctions, since we have no precise sense of the extent of the secondary permeabilities which in part delimit the extent of the impacts discussed.)

IND292-1

See comment LA5-1 regarding the preparation of the draft EIS. All comments received during the comment period (including the referenced comment from Dr. Dodds) were addressed by FERC staff in the final EIS as applicable. Groundwater flow patterns and mitigation are discussed in section 4.3.1 of the EIS and in appendix L. Appendix M (Shallow Bedrock) has been updated in the final EIS. As stated in sections 2, 4.1, and 4.2 of the EIS, Mountain Valley would first attempt to rip bedrock. Any required blasting would be conducted in accordance with all federal, state, and local regulations, and Mountain Valley's *General Blasting Plan*.

# INDIVIDUALS

## IND292 – Thomas Bouldin

IND292-1  
cont'd

Docket # CP16-10 includes expert testimony not acknowledged in the DEIS from Dr. Pamela C. Dodds—licensed professional geologist with long-standing professional experience and knowledge of the Appalachian Plateau—which asserts that such groundwater flow is especially vulnerable to disruption and re-direction from blasting and other violent forms of excavation.<sup>1</sup> Yet the DEIS provides no estimates of the extent of blasting required along the route—and, in fact, has not provided the data needed to make such estimates. The DEIS Appendix M listing depth to bedrock (from which one might infer the extent of blasting likely to be required) provides no more than a list of areas where bedrock is less than 7 feet beneath the surface. **By my own calculation, Appendix M identifies 78.9 miles of shallow bedrock as thus defined in West Virginia, and another source (the Indian Creek Watershed Association Interactive Environmental Map) suggests that around 40.6 miles of the route (close to 21%) traverse terrain where bedrock is between 0 and 56 inches of the surface.** The DEIS (by design, it appears) makes it difficult to ascertain how much of the 40 miles of this *extremely shallow* bedrock occurs within the steep terrain that Dr. Dodds identifies as supporting crucial headwater streams. **This is an issue that the FERC staff should not be allowed to ignore any longer, for in these areas extensive blasting is far more likely to be intensely damaging. The DEIS needs to be supplemented with a thorough and detailed examination of depth to bedrock which is then used to make far more precise estimates of potential damage to groundwater movements by construction activities such as blasting.**

### Incomplete Data Concerning Impacts on Shallow Groundwater

IND292-2

Early comments to the pre-filing docket for the application raised the issue of the pipeline's potential impact on the movement of groundwater in areas where seasonal water tables are close to the surface.<sup>2</sup> The DEIS minimizes concerns for this problem, acknowledging only "temporary, minor, and localized impacts...in areas with shallow groundwater" (Section 4.3.1.3 pg. 4-84). An earlier discussion in the DEIS of possible environmental consequences similarly trivializes the issue, suggesting that "construction activities may temporarily affect shallow near-surface aquifers..." by "altering overland water flows and groundwater recharge," and by increasing turbidity and sedimentation (pg. 4-78). However the text never addresses the issue of the pipeline's blocking or redirecting sub-surface water flows as the issue has been framed by stakeholders.

There are two serious problems with the DEIS treatment: first, there is no indication of how wide-spread the problem may be. There is no estimate of the mileage of the route that confronts areas of predictably shallow groundwater. Estimates of Karst Terrain on page 4-78-79 do not serve the purpose, as impacts on karst terrain are not identical with effects on other forms of shallow groundwater. There is also no acknowledgment that seasonal variations in depth to groundwater can be extreme in some sections of the route. On our own property in Summers County there have been periods of spring snowmelt and periods of sustained rainfall

<sup>1</sup> See Dr. Pamela Dodds' report, "Hydrogeological Assessment of Watershed Impacts Caused by Constructing the MVP Through Summers and Monroe Counties, WV," Docket # CP16-10, Document #20160815-5135.

<sup>2</sup> See for example, Docket # PF-15-3, Documents #20150928-5282, and #21050417-5306.

IND292-2

The discussion of shallow groundwater and karst terrain has been updated in section 4.3.1 of the final EIS.

# INDIVIDUALS

## IND292 – Thomas Bouldin

IND292-2  
cont'd

when the water table along the slopes into which our home faces was within 1 ½ feet of the surface for weeks at a time.

Furthermore, there is no acknowledgment in the DEIS of the extent to which an impermeable barrier almost four feet in diameter will impact the flow of sub-surface water throughout the landscapes crossed by the pipeline. It is one thing to acknowledge that construction activities like blasting, trenching, and grading can disrupt soils at a distance from the site, and can lead to sedimentation and turbidity in shallow aquifers (pg. 4-78). But landowners are rightly concerned about the ways the compacted soils of the trench and construction easement, and the impervious pipeline itself, will affect the flow of water to and through their property. **I have found no meaningful examination of this issue in the DEIS and the conclusions drawn on page 4-84 do nothing to reassure me that FERC has even conceived of the problem. That FERC suggests (pg. 4-75) examining water wells within 150 feet of construction (500 feet in karst terrain) is a completely inadequate response to this issue: there is no evidence offered that such distances are of anything other than bureaucratic significance. It is scientific evidence that is required.**

IND292-3

### Contradictions Concerning Groundwater Movement and Slope Mitigation

Landowners in affected areas have also expressed considerable concern for ways in which the trench, workspaces, and the pipeline itself will be likely to re-direct the **movement of subsurface waters in areas of steep slopes**, in areas of vulnerable soils where sub-surface damages can result in serious problems of erosion. The DEIS argument concerning impacts on groundwater essentially denies that the pipeline's installation and operation will have any significant effects on the movement of subsurface water: such an issue is never mentioned. But this dismissal of the problem seems contradicted by other passages discussing related issues.

Nothing in the DEIS discussion of groundwater issues mentions the problem of groundwater movement in steep hillsides, where the ROW trench will serve as a conduit for the downhill movement of subsurface water. This problem is of considerable importance throughout the route, although the DEIS frustrates an understanding of its significance by suppressing any tabulation reporting steep slopes crossed by the MVP. Nonetheless, **according the data in Appendix K, slopes in excess of 30% constitute approximately 106.4 miles (a little over 35% of the route's total length),<sup>3</sup> and of these, 25.7 miles involve slopes 55% or greater. Thus there is ample opportunity for the trench to move subsurface water in destructive ways.**

While the DEIS does not address this issue, if the movement of sub-surface waters through the trench is not a significant problem, why does MVP's Erosion and Sedimentation Control Plan<sup>4</sup> describe installation of **trench plugs** within the trench? According to a U.S. Army

<sup>3</sup> These figures are from a hand tabulation of the data in the Appendix K.

<sup>4</sup> See Docket # CP16-10, Document #20160226-5404, Part 1.

IND292-3

A discussion of the subsurface flow of groundwater has been updated in section 4.3.1 of the final EIS. Trench breakers would be used to limit subsurface water flow along the pipeline, as discussed in sections 2.4, 4.1, 4.2, and 4.3 of the EIS.

# INDIVIDUALS

IND292 – Thomas Bouldin

IND292-3  
cont'd

Corps of Engineers publication ("AIM Project ESC Plan, Revised 2013-10-08"),<sup>5</sup> such structures are "intended to **slow subsurface water flow and erosion** along the trench and around the pipe in sloping terrain" (Section 3.5.8.1, emphasis supplied). These underground dams within the trench are placed closer together depending on the severity of slope, and it is recommended that they be made of concrete where slopes exceed 30%. Clearly, then, pipeline engineering professionals are concerned about controlling subsurface water movement brought about by the pipeline's installation—even if the DEIS would deny it is a problem. It becomes clear that, in fact, the pipeline's presence does seriously affect the flow of subsurface waters. The implications of this fact for private landowners' property and water sources—wells, springs, and ponds— must be given detailed attention by the FERC staff in evaluating impacts of the project. **What is needed is a full and straight-forward analysis of this issue from FERC as part of a revised DEIS—including empirical measures of the effectiveness of this mitigation strategy—and, more importantly, an analysis of the effects on surrounding areas of the displacement of the water entrapped by the plugs.**

## CONCLUSION

Once again, I must emphasize the amount of research that remains for FERC staff to complete: data collection, analysis, and interpretation. **The effects of the pipeline on groundwater resources is a crucial issue:** if substantial damages take place—or if water movements are seriously transformed—the pipeline's construction can have **severe impacts on local landowners' water supplies and their agricultural activities**, and thereby on the **local economy**. **Staff responsible for the DEIS must make timely amends for these errors and omissions, produce the needed materials, and distribute the revisions to the cooperating agencies and the public as quickly as possible.** The later the revisions are available, the more likely it will be that the DEIS will require a major extension of schedule.

Respectfully submitted,

Thomas Bouldin

Cc: Ben Luckett, Senior Attorney, Appalachian Mountain Advocates, Lewisburg, WV

<sup>5</sup> This plan can be accessed at <http://www.nae.esace.army.mil/Portals/74/docs/regulatory/publicn>. The trench plugs are illustrated in Appendix A, figures 14, 16, and 17.



# INDIVIDUALS

## IND293 – Kim Marche Menier

20161202-5041 FERC PDF (Unofficial) 12/1/2016 10:52:06 PM

Kim Marche Menier, Blacksburg, VA.

Dear Ms. Bose,

I am writing to you as both a resident within the proposed evacuation zone of the Mountain Valley Pipeline, and as a medical anthropologist who has personally lived through a similar experience in Flower Mound, Texas in 2007-2009.

Personally, I think of myself as a member of a community first and an individual landowner second. As an anthropologist, I am trained to review the benefits and drawbacks to the community at large before making decisions that will impact us. To that end, I have carefully considered the potential benefits that the local community might receive by hosting this pipeline:

1. Jobs: there may be some temporary local jobs created during the build period
2. Local business revenue: local hospitality businesses (lodging, dining) may see added revenues during the build period
3. Export revenue: this effort will help to balance the US import/export balance
4. Tourism: people may travel to our area to see what is going on (OK, this is a stretch, but I want to be thorough)

These benefits must be considered against the potential drawbacks associated with a building project of this kind:

1. Health implications: as a medical anthropologist specializing in medical commerce, it is both my interest and job to observe how commerce impacts the medical health of a community. As a resident of Flower Mound, Texas whose property was fracked in 2008, I have tracked the general health decline in that area since the fracking was completed. Breast cancer rates have tripled and there is significant evidence of a marked increase in childhood leukemia and brain cancer. Flower Mound has been designated a "cancer cluster" area as of 2010.
2. Significant financial risk: to my knowledge, families residing within the blast and evacuation zones will not receive compensation, although it is clear the buildout of a pipeline would substantially reduce the property values of homes within the zones. My home was recently appraised for \$1,028,000 but after consulting with a realtor, I have been told I will be "lucky" to get \$850,000 because of the concerns that the pipeline has created already.
3. Long term economic impact: while there may be some temporary jobs created initially, there is no evidence that this project will bring long term employment opportunities or revenue streams to the local economy. Additionally, it does not appear that either Montgomery County or its municipalities will be able to collect tax revenues from the project. In fact, the county and possibly the towns will face many non-recoupable costs related to this build.
4. Quality of life: While in Texas, I was persuaded to allow fracking and associated pipeline construction on my property because "there would be great benefits to my town and neighbors once gas was pumped". There

IND293-1

IND293-2

IND293-3

IND293-4

IND293-1

See the response to comment CO2-1 regarding benefits. See the response to comment IND2-3 regarding export and hydraulic fracturing. The MVP pipeline would transport natural gas; the project does not involve fracking, which is a exploration and production method regulated by states (not FERC). Mountain Valley does not propose to export natural gas as LNG.

IND293-2

See the response to comment IND12-1 regarding property values.

IND293-3

As stated in section 4.9 of the EIS, operation of the MVP would result in 88 direct and indirect jobs. As stated in table 4.9.2-3, Montgomery County would collect about \$1.7 million in ad valorem taxes annually.

IND293-4

The EIS addresses air quality, including dust control, and noise in section 4.11. Section 3 of the EIS examined the use of existing pipelines as an alternative.

# INDIVIDUALS

## IND293 – Kim Marche Menier

20161202-5041 FERC PDF (Unofficial) 12/1/2016 10:52:06 PM

IND293-4  
cont'd

was blasting, pounding and the sound of large construction vehicles 10-12 hours each day and pump noise 24 hours a day. Thick mud covered the roads. The dust and debris was so bad at times that we could not stay in the house overnight. The fracking activity required much more water than was originally anticipated, and our water table was depleted forcing our community to have to bring in city water. And this construction site was limited; I'm quite afraid that the proposed pipeline construction "fallout" will be an order of magnitude worse because it covers a much greater area. Sadly, not one foot of gas has been tapped at the Flower Mound site because the commodity price has been so depressed. In other words, there are already miles and miles of pipeline sitting absolutely idle because gas is not worth pumping right now. Overcapacity of infrastructure in our country is an overlooked but very real scenario at the moment. It begs the question, "Why is MVP so anxious to build more invasive infrastructure at this time?"

IND293-5

5. Challenging building environment - There are numerous karst areas including sinkholes, unstable slopes and other physical components in our immediate area which make building dangerous and continued maintenance even more precarious. It is widely believed that pipeline built over and into certain of these terrain areas will be abandoned as "unmaintainable" at some point after installation. This is not acceptable; it is reckless for all involved.

IND293-6

6. Negative cultural impact: While it is our nature as business people to conduct commerce, I must point out that the cultural damage that will occur as a result of this pipeline is critically important. Long term residents of this area have endured many hardships over the years due to poverty, geographic isolation, underdevelopment and lack of representation. The installation of this pipeline is seen as one more indignity that people will be forced to endure because they have come to see themselves as powerless. The fact that the EIS also contains a provision to potentially create a mammoth 500 ft. utility corridor means that the potential building and destruction of our community may never end. There is no silver lining to a scenario like this.

IND293-7

In summary, the building of this project is unnecessary at best given the glut of gas pipeline capacity already built and waiting in this country. At its worst, it is a show of complete disrespect towards a group of people who consider their land and property to be central to the very definition of who they are.

It is your obligation to demonstrate that this project will, indeed, be in the "public good" of those who will be making tremendous sacrifices to host this apparatus. I hope you will take up this responsibility with the special attention and vigor it deserves, but most importantly provide the residents with some sense of hope - namely the real benefits that are necessary to demonstrate "pubic good".

Very truly yours,

Kim Marche Menier

- IND293-5 Karst and steep slopes are discussed in section 4.1 of the EIS. See also the response to comment LA1-4 regarding existing 42-inch-diameter natural gas pipelines.
- IND293-6 Cultural resources are discussed in section 4.10 of the EIS. See the response to comment FA8-1 regarding a 500-foot-wide utility corridor on the Jefferson National Forest.
- IND293-7 See the response to comment FA11-12 regarding need.

# INDIVIDUALS

## IND294 – Maury W. Johnson

20161205-5154 FERC PDF (Unofficial) 12/4/2016 7:13:56 AM

December 4, 2016

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

Dear Ms. Bose and Members of the Commission:

IND294-1 I am writing to express concern with the Migratory Bird Conservation Plan (MBC Plan) that has been filed by Mountain Valley Pipeline LLC with the FERC. I am also very concerned with the inadequacies of the Exotic and Invasive Species Control Plan, also as filed by MVP LLC, for many reasons including its relevance to the MBC Plan. I raise these concerns as a farm/land owner and manager of land within the pipeline construction area, and as a former educator who has studied and explored my area for many years.

I am communicating my concerns to each of you because the MBC Plan states that US Fish and Wildlife Service (USFWS) and FERC have entered into a Memorandum of Understanding (MOU) that requires FERC and USFWS to integrate: *“bird conservation principles, measures, and practices into agency actions”* and to improve *“habitat conditions for migratory birds on lands affected by energy projects”*. As stated by the MBC Plan about the MOU: *“FERC is obligated to require, as appropriate, applicants to mitigate negative impacts on migratory birds and their habitats by proposed actions.”*

I am also concerned that the MBC Plan for MVP project falls short of those goals. I believe the MBC Plan fails to prescribe active reforestation for temporary workspaces. Temporary workspaces are areas that, when occurring in forest, would be cleared of forest and all vegetation, such as pipe storage, staging areas, equipment parking areas, construction corridors, temporary right of ways, or any other area used for construction purposes but then abandoned and not used for pipeline operation and maintenance. The MBC Plan notes that *“The majority of the Project-specific [migratory bird species of concern] (16 of 25) rely on forested habitat. Nine of these species depend on and/or prefer large expanses of contiguous forest.”*

I have concerns that the MBC Plan fails to propose actions that would ensure restoration of the type of productive native forest vegetation, such as is relied upon as habitat by 16 of the 25 migratory bird species of concern, in these areas. Also I have concerns about invasive species which appear not be adequately addressed by the Invasive Species Control Plan. One concern is the statement in the MBC Plan is the assertion that rapid and effective restoration of native forest vegetation in temporary workspaces would improve *“habitat conditions for migratory birds” that rely on forested habitat, and would “mitigate negative impacts on migratory birds” that rely on forested habitat.* Yet, I do not believe the MBC Plan has presented an active and effective reforestation plan or measures for temporary workspaces in forested areas.

Recently, a friend and fellow intervenor Carl Zipper a Ph.D. peer reviewed scientist from Blacksburg VA and instructor at a Virginia Tech University, filed the following regarding this issue and I would like to submitted his comments as part of my filings as he has done much research on this issue.

“I (Carl Zipper) have described how an effective reforestation program could be implemented in the prior filing (Submittal 20161121-5051 to FERC Docket CP16-10, p. 5-11.)

IND294-1

We have requested that Mountain Valley revise its *Migratory Bird Conservation Plan*. Invasive species are discussed in section 4.4 of the EIS. See the response to comment FA15-5 regarding forest impacts. Our responses to Mr. Zippers’ letter can be viewed at IND289.

# INDIVIDUALS

## IND294 – Maury W. Johnson

20161205-5154 FERC PDF (Unofficial) 12/4/2016 7:13:56 AM

IND294-1  
cont'd

In brief, elements of such a program would include:

- decompaction of compacted soils, including those occurring on temporary road areas;
- replacement of topsoil in areas lacking excessively steep slopes,
- active planting of forest trees of species similar to those of adjacent forest areas,
- effective control of invasive exotic species so as to prevent their establishment in reforestation areas,
- protection of planted trees from deer browse where necessary,
- and monitoring and follow-up measures.

For the purpose of re-establishing productive forest vegetation in temporary workspaces, similar in species composition to adjacent native forests, an active and effective reforestation program should be seen as a preferred alternative to the natural regeneration described by the DEIS and the MBC Plan because: (This information is reviewed with greater detail in Submittal 20161121-5051 to FERC Docket CP16-10, p. 5-11)

- Soil conditions left by the construction process, unless mitigated, will hinder forest regeneration;
- certain forms of herbaceous vegetation can hinder forest regeneration; but the DEIS fails to make it clear that such vegetation would not be established in temporary workspaces by seeding. The DEIS and the MBC Plan present contradictory information in this regard. The MBC Plan states that “native seed mixes” would be used for revegetation, but other DEIS sections describe different seeding practices. (See Submittal 20161121-5051 to FERC Docket CP16-10, p. 19-20, p. 24)
- An active and effective reforestation program will restore forest cover more rapidly than will natural regeneration.
- Unlike natural regeneration, an active and effective reforestation program will ensure restoration of native forest cover. Given the nature of invasive exotic plant species that are common in the project area, the preference of many invasive exotic plant species for open canopies and forest edges such as are planned for disturbance areas, the capability of invasive exotic plants to disperse over landscapes via mechanisms that include wind, wildlife, and human traffic, and the intense deer browse pressure that occurs in at least one portion of the project area: Reliance on natural regeneration cannot ensure restoration of native forest plant communities in all disturbed areas.

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For the purpose of maintaining the species composition of forested areas adjacent to temporary workspaces, an active and effective reforestation program would be a preferred alternative to the natural regeneration described by the DEIS and the MBC Plan because: (This information is reviewed with greater detail in Submittal 20161121-5051 to FERC Docket CP16-10, p. 5-11)

Establishment and proliferation of invasive exotic plants can be expected to occur in temporary workspaces in the absence of such plan. Once established in temporary workspaces, certain of these invasive exotic plant species can be expected to disperse into adjacent forests - thus altering species composition and other attributes.

Temporary workspaces are of several types:

*Access roads and work areas (671 acres in forested areas--Data from DEIS, Table 4.4.2-1.):* Most or all of these areas are not within the permanent right-of-way corridor. Hence, restoration of forest in these areas would eliminate some of the corridors and gaps that would be created in forested areas by the pipeline's construction.

Reforestation of temporary access roads and work areas will reduce adverse effects to forested habitat by reducing forest fragmentation. As noted by the DEIS:

*"Fragmentation generally affects birds by creating dispersal barriers, resulting in smaller suitable microhabitats, smaller population sizes, and edge effects".* (DEIS, Section 4.5.2.2 Forest Fragmentation and Edge Effects on Wildlife, p.4-161+ (p.398+ of 781). Reforestation of temporary access roads and work spaces would reduce adverse effects to habitat of the sixteen migratory bird species of concern that *"rely on forested habitat"*. Reforestation of temporary access roads and work areas would be especially beneficial to the nine migratory bird species of concern that *"depend on and/or prefer large expanses of contiguous forest"*.

According to the MBC Plan (MBC Plan, p. 16): *"The Project crosses a total of 93 Core Forest Areas (39 in West Virginia; 54 in Virginia) and, following construction, creates 657 fragments (360 in West Virginia; 297 in Virginia) (Table 10, Appendix B) ... Once previously forested, temporary construction areas have regenerated as forest, the total number of fragments will amount to 467."*

In other words, reforestation of temporary access roads and work areas would reduce forest fragmentation by nearly 1/3. Of the various types of habitat required by migratory bird species that occur in the project area, *"large expanses of contiguous forest"* are arguably most at risk; and the DEIS proposes to create severe fragmentation of those *"large expanses of contiguous*

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forest” that are in place today along the proposed pipeline route. A practicable and reasonable measure to reduce that fragmentation – active and effective reforestation of temporary access roads and work areas – is available; yet the MBC Plan, the DEIS, and the applicant fail to propose that measure.

*Areas within the pipeline construction corridor but outside of the permanent right-of-way (3645 Acres (Data from DEIS, Table 4.4.2-1.): Where the pipeline is constructed through forest, a deforested corridor of 125 feet in width (**which could grow to over 500 feet if a utility corridor is established through the National Forest or additional pipelines are laid adjacent to this pipeline**) would be established along most of the pipeline’s length; the DEIS and the application state that the corridor may be wider in some places if additional width is needed for construction. A permanent right-of-way, 50 feet in width (**or wider in the future**), would be maintained for the pipeline’s operation and maintenance, leaving a ≥75-foot width of temporary workspace available for reforestation.*

The DEIS describes edge effects:

*“Edge effects can cause interactions between species that nest in the interior of forests and species that inhabit surrounding landscapes, typically lowering the reproductive success of the interior species.” (DEIS, Section 4.5.2.2 Forest Fragmentation and Edge Effects on Wildlife, p.4-161+ (p.398+ of 781). “The distance an edge effect extends into a woodland is variable, but most studies suggest at least 300 feet ... Edge effects within this distance could include a change in available habitat for some species due to an increase in light and temperature levels on the forest floor and the subsequent reduction in soil moisture; such changes may result in habitat that would no longer be suitable for species that require these specific habitat conditions, such as salamanders and many types of plants.” (DEIS, Section 4.5.2.2 Forest Fragmentation and Edge Effects on Wildlife, p.4-161+ (p.398+ of 781).*

Additional edge effects documented by scientific literature include changes of plant species composition within forested areas. (Harper KA et al. 2005. Edge influence on forest structure and composition in fragmented landscapes. Conservation Biology 19: 768-782.) Rapid and assured re-establishment of native forest vegetation in the within-corridor temporary workspaces would reduce the extent of non-cleared forest vegetation that would be subject to edge effects. Hence, rapid and assured re-establishment of native forest vegetation in the within-corridor temporary workspaces would benefit the 16 migratory bird species occurring within the project area that “rely on forested habitat.” I consider it reasonable to expect that a narrowing of the deforested corridor’s width from 125 feet to 50 feet would also reduce the distance of edge-effect extension into the adjacent forest(**unless additional pipelines or power lines are constructed adjacent to**

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*this pipeline, which is probable*), although I have not documented that expectation scientifically

The MBC Plan proposes to establish scrub/shrub habitat within the corridor temporary workspaces as a *"buffer of shrubs between the open ROW and the forest provide a habitat transitional zone and reduces the appearance of a 'hard' edge"*. However, the MBC Plan provides no analysis of the buffer distance that would be needed to reduce the "hard edge" effect.

Also, the DEIS states that:

*"The Applicants would also allow the rights-of-way adjacent to a 10-foot-wide strip over the pipeline to grow as scrub-shrub habitat so as to provide a more gradual transition between the pipeline corridor and the surrounding forested habitat."* (DEIS, p. 4-163 (p. 400 of 781).

The MBC Plan, however, fails to clarify if the extent of scrub/shrub to be established within the 50-foot permanent right-of-way would be adequate as a hard-edge buffer, or if additional scrub/shrub buffer would be needed to provide optimal habitat for migratory birds.

Also, the MBC Plan states: (MBC Plan, p. 15)

*"Forest is the predominant land cover impacted by the Project with approximately 1,799.74 hectares (4,447.26 ac) affected by construction (69.9% of Project-specific impacts), and 646.66 hectares (1,597.93 ac) permanently converted to grass/scrub shrub within the operation ROW."*

Also, the MBC Plan claims that the "natural regeneration" of temporary workspaces *"will temporarily create an additional 1,151.13 hectares (2,844.51 ac) of shrub/scrub habitat that will be allowed to mature into forested habitat. Wildlife managers recommend creation of such an edge to provide a gradual transition between grassland-type habitats and forest. This area can provide nesting and foraging habitat for a number of migratory birds, such as blue-winged warblers and prairie warblers that prefer shrub/scrub habitat and the forest-edge interface."* (MBC Plan, p.18.)

As noted above, the MBC Plan fails to state why scrub/shrub habitat within the permanent right-of-way corridor should be not be considered as an adequate "soft edge" for adjacent forest.

Also, the MBC Plan fails to state if or why the 1598 acres of *"grass/scrub shrub"* habitat to be created within the permanent right-of-way would be inadequate for the migratory birds *"that prefer shrub/scrub habitat and the forest-edge interface"*; and why additional temporary (but long lasting) scrub/shrub should be preferred over the more-rapid and assured re-establishment of native forest plant communities that would occur through an active and effective reforestation program.

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***The MBC Plan Fails to Prescribe Measures that Would Control Invasive Exotic Species in Disturbed Areas:***

As discussed in detail in the FERC filing, the proposed Exotic and Invasive Species Control Plan is totally inadequate. (Submittal 20161121-5051 to FERC Docket CP16-10, p. 11-17.) That Plan's Table 1 lists 288 "*Non-Native/Invasive Plant Species with the Potential to Occur Along the Project Route*", 46 of which are classified as "highly invasive". I (Carl Zipper) own and manage ~30 acres (mostly upland forest, but with herbaceous vegetation areas and forest edge) within close proximity of the project route, and I have found 10 of those highly invasive species on my property alone. *(I, Maury J ohnson, own 150+ acres of upland forest and I have found a similar number of invasive species on my own property in close proximity to the proposed project route across this land).*

In other words: Invasive exotic plants are a serious concern within the project area. The MBC Plan is worse than inadequate with respect to invasive exotic plants. Despite its emphasis on "regeneration" as a means of re-establishing forest vegetation, it fails to even mention "exotic" or "invasive" plants, much less describe a method for dealing with them. As I (Carl Zipper) interpret the term "regeneration", it describes re-establishment of plant communities occurring prior to disturbance, e.g. native forest plants in areas where the pipeline's construction disturbs forests comprised of native plants. Yet, neither the MBC Plan nor the Exotic and Invasive Species Control Plan describes measures to ensure that plants establishing within "regenerating" areas would be native.

Should management of previously forested but disturbed areas fail to limit and control invasions by exotic plants, it is likely that multiple exotic species would become established in the disturbance areas and would disperse through the pipeline corridor and into adjacent forests, (Submittal 20161121-5051 to FERC Docket CP16-10, p. 11-17) altering these forests' species composition and suitability as habitat for migratory birds. It is also quite possible that the invasive exotic plants would suppress natural regeneration of forest plant communities within parts of the temporary workspace areas. (Submittal 20161121-5051 to FERC Docket CP16-10, p. 11-12. In addition to the information so posted, see: Flory SL & K Clay, 2010, Non-native grass invasion suppresses forest succession. *Oecologia* 164:1029-38. The article concerns *Microstegium vimineum*, which is described as "highly invasive", and as "observed in the project area" by the Exotic and Invasive Species Control Plan's Table 1.)

Also, as noted by the DEIS:



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*"... the creation of permanently maintained, herbaceous and shrub open corridors following nearly the full length of the MVP and the EEP rights-of-way would also create new movement corridors for many species of wildlife."* (DEIS, p. 4-162 (p. 399 of 781).

Since wildlife are a primary means for invasive exotic species dispersal, it is likely that the disturbed area corridors would facilitate dispersal of invasive exotic species from areas where they are already established along the pipeline route into areas that are currently interior forest and where such species are not present.

I (Carl Zipper) consider the above to be problematic and contradictory to MBC Plan goals while presuming that *native* migratory bird conservation strategies emphasize establishment of habitat with *native* plant species.

***The MBC Plan Fails to Describe Adequately the Plant Community Types that are Proposed as Migratory Bird Habitat for Disturbed Areas:***

The MBC does give general descriptions of those plant community types: It states that scrub/shrub communities will be established as temporary communities in temporary work spaces, and claims that those communities would be replaced by forest as regeneration progresses. However, the MBC Plan does not describe plant species that would be reestablished by seeding within disturbed areas. (The plan states that "native" herbaceous plant species would be seeded; and that "native" shrub species would be either seeded or planted; but it does not state the species.)

More importantly, the MBC Plan fails to describe the intended nativity for the plant communities that would develop in those temporary workspaces: Do the Plan's developers intend for those plant communities to be comprised of native plants? The Plan is proposed for the purpose of establishing habitat for native migratory birds: Are native plants desired for that purpose? Or would establishment and proliferation within disturbed areas of invasive exotic plants that are compatible with certain migratory bird species be considered as consistent with the MBC Plan's purpose?

Should it be the MBC Plan's intent to establish migratory bird habitat with native plants, the MBC Plan is inadequate. Numerous invasive exotic plants occur within the project area, and neither the MBC Plan, Exotic and Invasive Species Control Plan, nor the DEIS propose plans or procedures to limit establishment of invasive exotic plants within disturbed areas. In the absence of such measures, I (Carl Zipper) would consider it likely that invasive exotic plants would invade, become established, and proliferate within disturbed areas – and, by extension, within other areas such as adjacent forest.

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Should it be the MBC Plan's intent to establish migratory bird habitat with invasive exotic species as plant-community components, that should also be stated; and that intent should be justified within the legal framework that seeks to avoid, when possible, and to minimize otherwise adverse effects of pipeline construction. (National Environmental Policy Act, Section 102; and FERC, Certification of New Interstate Natural Gas Pipeline Facilities, FERC Docket No. PL99-3-000. Statement of Policy issued September 15, 1999) Enabling uncontrolled establishment of invasive exotic plant species within areas disturbed by pipeline construction, for migratory bird habitat purposes or otherwise, would create adverse effects. The pipeline traverses large tracts of "Core Forest" areas; enabling invasive exotic plant species establishment within the corridor would have potential to further impact those Core Forest areas, as certain invasive exotic plants, if established within disturbed areas, would have potential to move into adjacent forest. (For further detail, see Submittal 20161121-5051 to FERC Docket CP16-10, p. 11-17, p. 23.) Certain invasive exotic plants are dispersed by birds; (For further detail, see Submittal 20161121-5051 to FERC Docket CP16-10, p. 11-17, p. 11-14 and p.23.) establishment of such species within disturbed areas would be especially problematic in this context, given that the MBC Plan proposes revegetation strategies with the intent of providing habitat for migratory birds.

***The MBC Plan Contains Misleading Statements:***

On p. 15, the MBC Plan states: "*Impacts due to construction to more than two-thirds of the area (1,717.52 hectares [4,244.1 ac]) are temporary and the area will recover to forested conditions if left undisturbed (Table 2, Appendix B).*" (MBC Plan, p. 15.) If the term "forest" is intended to mean "native forest", then the above statement is highly misleading – and is false if also intended to describe the full 4,244.1 acre area that is referenced. Exotic invasive plants of multiple species are common in the project area. (MBC Plan, Table 1.) Neither the MBC Plan, the Exotic and Invasive Species Control Plan, nor anything else within or referenced by the DEIS prescribe invasive exotic species controls that have any likelihood of being effective. Hence, revegetation procedures proposed by the DEIS are likely to enable invasive exotic species to establish in some temporary workspaces initially, to disperse from those areas as time progresses; and, hence, to interfere with re-establishment of native forest plant communities via "natural regeneration." I (Carl Zipper) use this statement as an example. Other statements within the MBC Plan also allege that natural regeneration will restore forest while failing to note the likelihood that invasive exotic plant species would become established in regenerating areas,

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that some of these species have potential to suppress native forest generation, and that some of these species have potential to persist in areas where forest trees also become established.

**Concluding Statement:**

I (Carl Zipper) have described above my concerns with the Mountain Valley Pipeline project with specific reference to the Migratory Bird Conservation Plan. These concerns are directly related to more general issues that concern National Environmental Policy Act (NEPA) compliance.

Federal regulations implementing NEPA state that:

*"Federal agencies shall, to the fullest extent possible ... Use all practicable means, consistent with the requirements of the Act and other essential considerations of national policy, to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions upon the quality of the human environment."* (40 CFR 1500.2)

Clearly, the Mountain Valley Pipeline application, as described by the DEIS, fails to comply with that requirement as practicable means to reduce adverse effects to forest resources are available but are not proposed. The concerns which I have expressed above with respect to the MBC Plan are directly related and connected to this larger issue. (As documented in submittal 20161121-5051 to FERC Docket CP16-10.)

**As registered intervenor and affected landowner in the Docket CP16-10-000 proceedings, I am whole heartedly in agreement with Dr. Zipper's analysis and conclusions. I am sending these comments to the full service list via e-mail as per FERC policies. I am also sending these comments to other relevant persons and agencies.**

Sincerely,

Maury W. Johnson  
3227 Ellison Ridge  
Greenville, WV 24945

CC:

Jennifer P. Adams, Special Project Coordinator --GW & Jefferson National Forests  
5162 Valleypointe Parkway Roanoke, VA 24019 - [jenniferpadams@fs.fed.us](mailto:jenniferpadams@fs.fed.us)  
Troy Andersen, US Fish and Wildlife Service (USFWS) Supervisory Fish & Wildlife Biologist,  
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Janet L. Clayton, Wildlife Diversity Biologist, WV DNR, Wildlife Resources Sec. [janet.l.clayton@wv.gov](mailto:janet.l.clayton@wv.gov)  
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Barbara Douglas, USFWS – Elkins Field Office, [barbara\\_douglas@fws.gov](mailto:barbara_douglas@fws.gov)  
Tiernan Lennon, USFWS - Elkins Field Office, [tiernan\\_lennon@fws.gov](mailto:tiernan_lennon@fws.gov)

John Schmidt, USFWS Project Leader, West Virginia Field Office, [john\\_schmidt@fws.gov](mailto:john_schmidt@fws.gov)  
Cindy Schulz, USFWS Field Supervisor, Virginia Ecological Services, [cindy\\_schulz@fws.gov](mailto:cindy_schulz@fws.gov)

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Kim Smith, USFWS Fish & Wildlife Biologist, [kimberly\\_smith@fws.gov](mailto:kimberly_smith@fws.gov)

Rene Hypes, Virginia Department of Conservation and Recreation (VA DCR), [rene.hypes@dcr.virginia.gov](mailto:rene.hypes@dcr.virginia.gov)

# INDIVIDUALS

IND295 – Maury W. Johnson

20161205-5156 FERC PDF (Unofficial) 12/4/2016 7:21:04 AM

December 4, 2016

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

Dear Ms. Bose and Members of the Commission,

IND295-1

As a follow up to my comments made on November 3<sup>rd</sup> at the Peterstown (Monroe County) WV DEIS “listening session”, I would like to call your attention to a major flaw and disregard of the law in FERC’s Draft Environmental Impact Statement for the Mountain Valley Pipeline. According to NEPA section §1502.14 (a) of NEPA guidance, FERC is required to “*rigorously explore and objectively evaluate all reasonable alternatives*” and present the results of this analysis to both the public and to cooperating agencies. **These results must be as accurate and complete as possible in the DEIS:** furthermore, section §1502.9 (a) requires that a draft statement “*must fulfill and satisfy to the fullest extent possible the requirements established for final statements.*” Furthermore, FERC itself is publicly committed to the notion that the Commission shall act on proposals for gas infrastructure **only after** assuring that a pipeline can built safely and with very **minimal environmental impact**.

The DEIS for the Mountain Valley Pipeline project repeatedly asserts that impacts to the environment will be “*minimal*” or “*only temporary*”. For the life of me I can find absolutely no place in the draft where minimal impacts are defined and/or assigned any kind of measure to be able to make this statement. There is absolutely no relevant data to support FERC’s and MVP’s assertions that impacts with be either minimal or temporary. Instead I submit that the impacts will be grotesque, severe and permanent, especially in the area of Peters Mountain, the National Forest, the Narrows of Hans Creek, the Appalachian Nations Scenic Trail (Appalachian Trail) and the pristine areas of Summers, Monroe, Giles and Craig Counties. (Just in case you have not seen this I will post the ANST letter at the end of this letter as well a video link about Monroe County I want them to be included in the record). Therefore these omissions require immediate and thorough review and corrections. **If the DEIS is allowed to go forward without correction, none of the judgments issued in the document will bear any since of reality or truth.**

Whenever there is evidence that an impact exceeds the established minimum, FERC/MVP is required to look for an alternative that will have less or no impact. That is only reason why you conduct an environmental impact study anyway. NEPA section §1502.14 “*Alternatives including the proposed action*” states “*This section is the heart of the environmental impact statement....it should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision-maker and the public.*”

It is a pretty well known that any stream crossing that is more than 30% in excess of the width of the stream will substantially exceed “minimal impact”. Using this estimate, the DEIS data reported in Appendix F-1 show that slightly over 21% of the MVP stream crossings reported exceed this minimal impacts in terms of the area of streambed to be disturbed. Also, the report of crossing lengths for ROWs

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Alternatives are addressed in section 3 of the EIS. “Temporary” impacts were defined in section 4 (page 4-1), together with a definition of “significant” impacts. Based on our extensive experience with pipeline stream crossings, we disagree with the commentor’s statement that stream crossings more than 30 percent in excess of the width of the stream will exceed minimum impact. There is currently more than 300,000 miles of natural gas transmission lines within the United States crossing a multitude of streams. If the project is approved by the Commission, Mountain Valley could conduct surveys in areas previously denied, and place the new data into the public record for this proceeding.

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is incomplete (about 22% of the entries lack the data) so the actual figure is almost certainly higher. An example of this is the Hans Creek crossing in Monroe County; MVP people have never laid eyes on this stream. What may even be worse is that among the **237 crossings previously reported by MVP for intermediate and major streams, 185 (78%) are at least twice the stated stream width.** FERC and MVP face a daunting task in analyzing appropriate alternatives for their numerous "non-minimal" stream impacts.

IND295-2

In the light of these facts and others in submission by many others it would appear that FERC has several REQUIRED ACTIONS FOR STAFF to complete:

First, there is a needs to **assemble data on the full range of potential impacts identified in the DEIS.** Each requires careful analysis and research. The first part of this should be a **general abstract of possibility**, and then as a **site-specific occurrence** that would be a result of construction for the MVP.

Next, FERC staff must **compile a table of minimal impacts** for all the identifiable direct and indirect effects of the MVP proposal, and any other relevant discussion of impacts and any statement of its significance. It must utilize this minimal impact data in arguing that the predicted impact will be acceptable.

If specific routing decisions resulting in greater-than minimal impacts, **FERC or MVP must identify alternative ways** to achieve the same site-specific purpose. For example, the steep slopes encountered, like those on Peters Mountain might necessitate a completely different route, or a stream crossing that would damage the stream due to its approach or the method of crossing such as open trench might need to be revised to tunneling under the stream, such as is the case with the Greenbrier River in Summers County and/or Indian Creek in Monroe County. This might require selection of a different site upstream or downstream or total change of route in place of the **"preferred"** or chosen one--and thus some additional changes in the pipeline's routing.

To just make a blanket statement, as is so often done in the DEIS for the MVP; **That the problems or impacts do not exist or will somehow miraculously be mitigated is a dereliction of duty by FERC.**

FERC should **develop summative tables of the extent to which each given route preference and alternative route involves choices that exceed minimal impact standards.** Such information, if presented in a parallel table form, would come as close as possible to the NEPA requirement that the EIS **"present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision-maker and the public."**

In its current form, the DEIS is horribly inadequate to meet the requirements established in this proposal. Also, in its current form, the numerous claims and total omission of some relevant issues and lack of incomplete surveying of some fragile areas like the 'Narrows of Hans Creek' in Monroe County make the statement that **..."impacts are temporary, minimal or insignificant"** are based solely on the preferences and needs of the authors of the DEIS. This tends to reflect the self-interest of the applicant and a conflict of interest between FERC and MVP. It make the DEIS for the Mountain Valley Pipeline appear not be based on empirical evidence and reasoning. In addition, similar problems need to be addressed in regard to other aspects of the DEIS argument: for example, claims of the efficacy of mitigation, none of which is validated by real evidence or measures of effectiveness in the situations on

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See the response to comments LA5-1 and IND47-1 regarding preparation of the EIS. Data submitted after the release of the draft EIS was included in the final EIS. The public had a substantial period of time (almost two months) to comment on the supplemental data filed by Mountain Valley in October 2016. Those data, in many cases, were submitted to address data gaps referenced in the draft EIS.

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the ground that will be faced by the MVP in many areas, with relation to crossing streams, karst, steep slopes, impact on historical sites, communities and areas with endangered species. Also its claims of safety, which could be supported empirically with calculations from risk assessment research are very suspect and in some cases totally bogus.

THE DEIS for the MVP in its current form, falls exceptionally short of the requirements established for this project. As written, the numerous (false or exaggerated) claims that impacts are temporary, minimal or insignificant are baseless and appears (again) to be solely made to meet the preferences and needs of the authors of the DEIS or MVP LLC. It does not appear to be based on anything resembling real or empirical evidence, data or reasoning. In addition, similar problems need to be addressed in regard to other aspects of the DEIS argument: for example, claims of the efficacy of / or miraculous mitigation, none of which is validated by empirical or reasoned measures or facts on the ground of the situations directly related to the site-specific conditions faced by the MVP.

It appears to most readers of the DEIS, that it was rushed into release long before FERC had compiled the necessary data to justify the document's central claims, and seemingly even before staff had developed the conceptual framework for a reasoned argument. It seems clear that FERC's best path of action is to retract the existing draft and wait until a thorough revision is completed before initiating public review.

Even since its release in September, EQT or MVP has released and submitted several hundred if not thousands of new documents, many of which only spawn new questions and provide no real answers. How could a DEIS be drafted, much less be released with incomplete data?

Moreover, much of the data contained in the DEIS and subsequent data releases from EQT or MVP has been disjunctive, incomplete or totally baffling. FERC staff must produce the requested data in accurate and useable form and provide the results to both the public and all cooperating agencies prior to any further decisions or actions being taken. The present account of environmental damages is incomplete and seriously misleading without an objective measure of the minimal impacts that could be achieved. No valid environmental assessment can be undertaken without this data.

Sincerely,

Maury W. Johnson  
3227 Ellison Ridge  
Greenville, WV 24945

Attachments: AT Letter and Video Link to be part of the record.

<https://www.youtube.com/watch?v=qUogzISAIPc>

CC: Jennifer P. Adams, Special Project Coordinator  
George Washington and Jefferson National Forests  
5162 Valleypointe Parkway  
Roanoke, VA 24019

(AT Letter is page 5 and 6, page 4 is blank)

# INDIVIDUALS

## IND296 – Maury W. Johnson

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December 4, 2016

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

Dear Ms. Bose and Members of the Commission:

Subject: MVP CP16-10 -000 Bureau of Land Management Amendments

I am a land owner affected by the proposed Mountain Valley Pipeline (MVP), Docket # CP16-10-000.

IND296-1

Regarding the MVP DEIS Section 4.8.2.6 (proposed amendments 1 through 4 to the Jefferson National Forest Plan): I am opposed to the granting of the ROW changes to the Land Resource Management Plan (LRMP), as requested in the NOIA. For MVP to construct and operate a pipeline across federal lands managed by the U.S. Forest Service (USFS) and the United States Army Corps of Engineers, a designation of a "utility corridor" in the JNF would be required if the application is to be approved.

National Forest Service land is **for ALL Americans**. Preservation of our heritage, our rights, our water and our natural resources provided by the Forest is a privilege of all citizens and not something that should be given away to a corporation for financial profit.

I urge that you consider the amendments with due caution for how they will impact the future of the Jefferson National Forest. Public input is essential, and should not be ignored by the Bureau of Land Management, the Army Corp of Engineers, or the USFS.

I wholeheartedly agree with Pam Ferrante's recent statement to FERC, the JNF and the BLM:

*"The proposed amendments are disturbing and all due caution should be considered for how they will impact the future of the Jefferson National Forest (JNF) and generations to come. The USFS motto is "Caring for the Land and Serving People" and the mission of the USFS is to "sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations". Allowing the pipeline to be constructed within the Jefferson National Forest (JNF) would violate the trust citizens have placed in our government to protect and steward a national treasure. This proposed pipeline crosses numerous delicate ecosystems, karst regions, and mountainsides and private properties. Decisions made by the USFS concerning the land they oversee will also impact communities in the area.*

*The proposed Amendments would permit MVP to exceed restrictions on soil and riparian corridor conditions, which is not acceptable. The environmental regulatory protections that are already in place for federally protected forest land and watershed areas should not be ignored or over-ridden.*

IND296-1

The Forest Service has worked with Mountain Valley to develop project design features, mitigation measures and monitoring procedures to minimize the effects on the resources the plan amendments were designed to protect, not only for those resources on NFS lands, but also adjacent lands. See the response to comment FA8-1 regarding Amendment 1.



# INDIVIDUALS

IND296 – Maury W. Johnson

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*In fact, these regulatory protections should be more stringent for such a project instead of the minimal environmental protections that now exist. The removal of old growth trees within the construction corridor is inexcusable. They are symbols of our heritage and should be treasured, not cut down. They are part of a unique ecosystem that the USFS is meant to preserve, not be allowed to be destroyed forever. Allowing MVP to avoid the environmental controls mandated by NEPA strictly for a for-profit company and in total disregard of the environment and the effects on citizens is inexcusable.*

*The pipeline and the gas transported will provide no additional benefits to the citizens in this area but it will have a detrimental impact on the environment affecting all citizens for generations to come. There are many questions as to the need for this pipeline. Pipelines already in existence need proper maintenance to improve efficiency of transport and prevent ongoing environmental pollution. It appears the purpose of the MVP pipeline is for the sole interest of a few private corporations to make a 12% profit at the expense of our National Forest. This plan certainly does not serve the people nor does it meet the needs for future generations.*

*In accomplishing their mission and vision, the USFS states they use an “ecological approach” and the “best scientific knowledge” along with “listening to people” in making decisions. Consideration of public input is critical and should not be ignored by the USFS or the Bureau of Land Management. The “people” have spoken. They have expressed their respect and concerns for the National Forest and its fragile ecosystem. They realize not only the potential catastrophic changes that could occur in the immediate future but also in years to come if this pipeline is constructed in the National Forest.*

*FERC must respect the National Forest, a treasure owned by the citizens, and allow it to be conveyed to generations in its most pristine and natural state. An error in judgment today could impact generations to come in the future.”*

Recreation and tourism are critical to many communities, especially in the counties of Monroe, WV, and Giles and Craig counties in VA. A prime reason many people come here is for health, wellbeing and relaxation. The income that is generated by tourism, which is possibly the largest economic driver in Monroe County WV, would be severely impacted by a pipeline corridor across the county, Peters Mountain and the Jefferson National Forest. The proposed corridor would have a **very severe negative impact on that industry in the county/region.**

Appropriate land and natural resource management is vital to our country. The loss of the forested land and the corresponding ecosystem is alarming. Our National Forest land contains old growth trees, grasslands, road less / wilderness areas that support many species, critical habitats for threatened and endangered species, and many unique water bodies (rivers, creeks, lakes). Preservation, not destruction, is the keyword that the BLM, USFS and AMCOE should be putting into practice. We must reserve our entire remaining unspoiled and pristine environment for future generations; anything less would be unconscionable and an environmental crime.

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While each amendment is individually and separately without merit, Proposed Amendment 1 is the most egregious and constitutes a serious violation of the basic social contract between FERC and us, the stakeholders.

### **Plan Amendment 1 –**

I strongly oppose the proposed management prescription (Rx) 5-C Designated Utility Corridors from these Rx's: 4J, 6C, and 8A1. The land allocation would be 500 feet, except as it crosses the Appalachian National Scenic Trail (ANST) and Peter's Mountain Wilderness.

A 500-foot ROW is ridiculous. Everyone can comprehend the length of a football field. This ROW would be nearly **twice** the length of a football field! The ROW would be the initial step for future expansion, with the potential for more pipelines, electrical lines, water lines, etc., to be constructed. It should be clear that FERC is only reviewing a single applicant at this time and is not looking farther ahead for the possibility of these multiple uses within this utility corridor and the potential for more detrimental environmental impacts in the future. The USFS needs to protect the JNF from not only the immediate environmental impacts of this pipeline but possible future pipelines and other utilities..

**The future impact of establishing a 500-foot ROW through both public and private land cannot be foreseen in establishing a precedent for further activity.** The impact of the entire width of the designated corridor and whether that conflicts with the LRMP must be evaluated, as well as the impacts to private landowners within that same corridor.

This proposed amendment would not only create a "Utility Corridor" across the JNF, but would also create a "Pipeline/Utility Corridor Access Alley" in Monroe, Summers, and Greenbrier Counties, WV and Montgomery, Craig, Alleghany and Roanoke Counties, VA. The damage done by this "Access Alley" across these counties would be severe, but the greatest impacts would be to private landowners in counties on each end of this corridor, as all future projects would have to traverse these areas to enter and leave the corridor across the National Forest Lands.

Many landowners in these adjacent counties could become nothing more than custodians of the utilities; i.e., they can only "grow" pipelines in their land, make their land useless for anything else.

FERC restricts its review to the single applicant and not "future" possibilities of multiple uses of a utility corridor. Recent proposed legislation, House Resolution 2295, indicates that the future of locating pipelines and conducting environmental reviews will be streamlined. This will affect many landowners, Cultural Areas, and Historic Districts. The impact of the entire width of the designated corridor and whether that conflicts with the LRMP must be evaluated, as well as the impacts to private landowners within that same corridor.

Another intervenor comment asked the following question which needs to be addressed " Who will remove or mitigate the metal pipeline(s) in 20, 30 or 40 years or more from now when the pipes start to corrode and breakdown?"

# INDIVIDUALS

## IND296 – Maury W. Johnson

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### IND296-2 (Project Only) Amendment 2 –

I oppose the proposal to permit exceptions to the soil and riparian corridor conditions. I believe that Peters Mountain Wilderness Area, The Appalachian National Trail, Mystery Ridge, Brush Mountain Wilderness and Road-less Areas, the Old Growth Forest, Sinking Creek and Craig's Creek could suffer substantial damage with the construction. I find it objectionable to allow the construction of the MVP pipeline to exceed restrictions on soil and riparian corridor conditions. These exceptions in the fragile forest should not be allowed. MVP should comply with the current restrictions in place regarding soil and riparian corridor conditions and not be allowed to exceed them. I stress that the riparian buffer zones along streams in the JNF should remain intact to minimize adverse effects to the water bodies. Furthermore, I firmly believe that if soil conditions are exceeded, both ascending and descending Peters Mountain, Sinking Creek Mountain, and Brush Mountain, it will cause siltation of the water bodies below, damaging critical habitats and drinking water sources. The descent from Brush Mountain, Slussers Chapel Conservation Site in Montgomery County VA would likely be negatively affected by exceptions to the soil conditions. Slussers Chapel Cave, has a B3 significance ranking for a rare millipede and isopods. Peters Mountain also has numerous endangered and rare species in its confines.

IND296-2 See the response to comment FA10-1 regarding Amendment 2. See the response to comment CO74-7 regarding crossing Craig Creek and Brush Mountain.

### IND296-3 Amendment 3

This amendment, like all the others, would allow the removal of old growth trees within the construction corridor. Ancient woodlands have attained unique ecological features because they have not been disturbed. They are a *rare natural resource*, and could never be replaced once destroyed. To destroy these marvelous trees would be reprehensible. This great National resource should not be sacrificed for an industry's private gain. The existing regulations are sufficient and should not be changed to remove more old growth trees. It would also have many of the same detrimental effects as have all the proposed amendments. *The LRMP should not be amended as Proposed in Amendment 3.*

IND296-3 See the response to comment FA10-1 regarding Amendment 3.

### IND296-4 Amendment 4

The LRMP should not be amended as requested in Proposed Amendment 4 to allow the MVP pipeline to cross the Appalachian National Scenic Trail on Peters Mountain. The Appalachian Trail is so vital to the identity of our area and its economy. Allowing the Scenic Integrity Objective to change from High to Moderate near the crossing of the most famous and prestigious national scenic trail in the U.S. is inconceivable. A recent statement released by the ANST said: *“Our own analysis concurs with the statements of the United States Forest Service and suggests that the proposed Mountain Valley project represents a serious threat to the scenic value of the A.T. well beyond the scope of similar projects - as many as 19 prominent AT vistas may be severely impacted from this project, many of them viewing impacts as they occur on USFS land. As a result, the assessment of cumulative impacts to the AT is drastically insufficient. The scope of cumulative impact must be based on the nature of the impacted resource, not the proposed project. In ascribing an arbitrary geographic scope for this DEIS of 100 miles...”*

IND296-4 See the response to comment FA10-1 regarding Amendment 4. The remaining comments are noted.

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## IND296 – Maury W. Johnson

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ANST went on to say “*These amendments would not only be unprecedented, but would significantly erode the value of the Appalachian Trail which the public has spent millions to protect. Amending the plan in the ways proposed would negatively impact prescription areas protecting the Appalachian Trail, Wilderness, Old Growth Forest, Inventoried Roadless areas and fragile successional habitats. Further, it would require the establishment of a new 5c utility corridor directly adjacent to Federally Designated Wilderness, leading up to the AT’s doorstep in a location that is currently wild and pristine.*”

The Appalachian Trail, America’s first National Scenic Trail, was initially envisioned in 1921 and first completed by citizens in 1937. It is maintained by volunteers nationwide, who have devoted thousands of hours and millions of dollars to its upkeep and maintenance. It is America’s most beloved trail. We should respect the natural beauty of our land and protect it for future generations.

I fear the Jefferson National Forest and its fragile ecosystems will be so irreparably damaged by the construction of MVP that it will never be whole again. Decisions made about the forest will have adverse consequences to water resources both inside and outside of the forest as well as impact nearby privately owned land. The Forest Service’s actions could enslave private landowners to pipelines forever. They certainly do not deserve to become hostages.

Since the Mountain Valley Pipeline project has not yet been approved, I find it hard to believe the proposed amendments which would vastly expand the amount of infrastructure – transporting as-yet-undefined materials – would even be considered by FERC. These amendments are irresponsible from a technical standpoint, and legally questionable, given the obvious need for a new environmental impact statement to address changes of this magnitude. It is also politically irresponsible: this move suggests the original intention behind the pipeline project was always larger than stated publicly and proposed in the initial filings. It suggests a troubling degree of dishonesty and disregard for the totality of stakeholder concerns voiced in previous comment periods and through a multitude of public forums. In spite of the insistence on the part of FERC and Mountain Valley Pipeline that any disruptions to local communities would only be temporary and limited to the construction phase, Proposed Amendment 1 effectively guarantees disruptions in perpetuity for our communities.

As a citizen of Monroe County WV USA, I strongly oppose these amendments to the Forest Service Plan on moral, ethical and scientific grounds. Enacting these amendments will irrevocably harm the invaluable cultural resources we derive from the forests, streams, and other fragile areas of the National Forest. These amendments will also have lasting negative consequences on our more conventionally quantifiable property values, and disrupt many carefully planned retirements via loss of equity in homes near the route.

As a college educated person who has farmed my entire life, and who has a vast knowledge of hydrology and other natural resources of the area, I strongly condemn the utter disregard for basic science and human health concerns evident in the four proposed amendments. Enacting

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## IND296 – Maury W. Johnson

IND296-4  
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these amendments will threaten not just the health of our soil and streams, but poses a lasting threat to our groundwater aquifers and human health. Once contaminated, our aquifers will *never* return to their original quality, depriving our children, grandchildren and great grandchildren of this resource. It also poses a threat to many endangered and rare species found in and near the JNF.

The four proposed amendments constitute an unconscionable and unjustifiable burden on us, the citizens and stakeholders, and absolutely must not be approved. I, therefore, implore the United States Forest Service, the Army Corp of Engineers and the Bureau of Land Management not to grant a right-of-way in response to the MVP application.

Respectfully,

Maury W. Johnson  
3227 Ellison Ridge  
Greenville, WV 24945

Neil Kornze, Director  
BLM Washington Office  
1849 C Street, NW, Rm. 5565  
Washington, DC 20240

Joby Timm, Supervisor  
George Washington and Jefferson National Forests  
5162 Valleypointe Parkway  
Roanoke, VA 24019

Jennifer P. Adams, Special Project Coordinator  
George Washington and Jefferson National Forests  
5162 Valleypointe Parkway  
Roanoke, VA 24019

Tony Cook, USFS Southern District Regional Forest Supervisor  
Forest Service-USDA  
1720 Peachtree Road, NW  
Room 861 N  
Atlanta, GA 30309

U.S. Army Corps of Engineers Headquarters	U.S. Army Corps of Engineers South Atlantic Division	US Army Corps of Engineers Huntington District
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# INDIVIDUALS

## IND296 – Maury W. Johnson

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IND296-4 cont'd	<b>441 G Street NW</b> <b>Washington, DC 20314-1000</b>	<b>600 Forsyth St. SW</b> <b>Atlanta, GA 30303-8801</b>	<b>502 Eighth Street</b> Huntington, WV 25701
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Monroe County Commission  
PO Box 350  
Union, WV 24983

**OTHER OFFICIALS:**

US Senator Joe Manchin	WV State Senator elect Kenny Mann
US Senator Shelly Moore Capito	WV State Senator Ron Miller
US Congressman Evan Jenkins	WV Delegate Roy Cooper
WV Governor, Earl Ray Thomblin	WV Delegate George Ambler
VA Governor Terry McAuliffe	WV Delegate Ray Canterbury
WV Governor Elect Jim Justice	WV Delegate John D O;Neal IV

# INDIVIDUALS

## IND297 – Bill Dooley

20161205-5192 FERC PDF (Unofficial) 12/4/2016 4:27:55 PM

Bill Dooley  
President, Preston Forest Homeowners Association  
4793 Preston Forest Drive  
Blacksburg, VA 24060

December 4, 2016

Joby Timm, Forest Supervisor  
George Washington and Jefferson National Forests  
5162 Valleypointe Parkway  
Roanoke, VA 24019

Re: Amendments to the Land Resource Management Plan and the proposed Mountain Valley Pipeline crossing of the Inventoried Roadless Area adjacent to the Brush Mountain Wilderness

Dear Supervisor Timm:

IND297-1

I am writing in reference to the September mailing request for comments on the proposed actions of the US Forest Service in response to the right-of-way (ROW) grant application submitted by Mountain Valley Pipeline (MVP) to construct and operate a natural gas pipeline across the Jefferson National Forest (JNF). The first proposed amendment (Proposed Amendment 1) is to reallocate 56 acres from Rx 4J-Urban/Suburban Interface of an Inventoried Roadless Area (IRA) to a Management Prescription 5C-Designated Utility Corridor. The proposed Rx 5C land allocation would be 500 feet wide with two exceptions: 1) the area where the pipeline crosses Rx 4A – Appalachian National Scenic Trail Corridor would remain in Rx 4A; and 2) the new 5C area would not cross into Peters Mountain Wilderness so the Rx 5C area would be less than 500 feet wide along the boundary of the Wilderness.

The proposed route would traverse through the Inventoried Roadless Area in the Jefferson National Forest directly adjacent to the Brush Mountain Wilderness. If approved, the route would place a 500-foot-wide utility corridor next to the wilderness. The pipeline proposes to clear a minimum 125-foot construction right-of-way, a 50-foot cleared permanent right-of-way, and access roads required to build and maintain the pipeline. This major industrial infrastructure development would result in serious degradation of the exceptional scenic value of the region; permanently damage mature, undeveloped forests and fragment the extraordinary forests around the Brush Mountain Wilderness area. The IRA and Wilderness Area on Brush Mountain are inseparably connected both physically and visually – breaking that connection will be extremely detrimental to both. Moreover, the pipeline will climb the steep and rugged topography through the Inventoried Roadless Area which guarantees erosion both during and after construction. The Inventoried Roadless Area serves a critical function in helping protect the watershed for Craig's Creek at the bottom of the mountain and **NO** mitigation plan will eliminate the excessive sediment loads that will result.

The residents of the Preston Forest community are gravely concerned about the negative impacts the Mountain Valley Pipeline and proposed Amendment 1 will have on this treasured forest and wilderness. This unspoiled and tranquil forest which are enjoyed by countless hikers, bikers, hunters and runners alike will be negatively impacted for decades to come if Amendment 1 is approved. It is of utmost importance that the integrity of the Inventoried Roadless Area be maintained as an extension of the Brush Mountain Wilderness. We **oppose** the granting of the ROW changes to the Land Resource Management Plan (LRMP) for this forest, including the designation of a utility corridor in the JNF, which would be required if the application is approved.

IND297-1

See the response to comment FA8-1 regarding Amendment 1.  
See the response to comment CO74-7 regarding crossing Craig Creek and Brush Mountain.

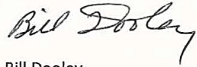
# INDIVIDUALS

## IND297 – Bill Dooley

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IND297-2 ***Additionally, the Preston Forest community requests that the U.S. Forest Service undertake an evaluation of the 4J Urban/Suburban Interface which is a part of the Brush Mountain Roadless Area to determine its suitability for a 1B Wilderness Study Area which is a designation more in keeping with the spirit of the Roadless Rule.***

Respectfully Submitted,



Bill Dooley  
President, Preston Forest Homeowners Association

CC: Clyde Thompson, Forest Supervisor  
Monongahela National Forest  
200 Sycamore Street  
Elkins, WV 26241

Tony Tooke, Regional Forester for the Southern Region  
USDA-Forest Service  
1720 Peachtree Street  
Atlanta, GA 30309

IND297-2

The requested conversion of the Brush Mountain IRA to a recommended wilderness study area is beyond the scope of this project.



# INDIVIDUALS

## IND298 – Maury W. Johnson

20161205-5227 FERC PDF (Unofficial) 12/5/2016 9:14:59 AM

December 5, 2016

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

Dear Ms. Bose and Members of the Commission:

IND298-1

I am writing this in support of, and addition to, a filing submitted by Matthew W. Fellerhoff, Strauss Troy Co., LPA, on behalf of, The Greater Newport Rural Historic District Committee (File Date: October 24, 2016) regarding "Areas of Potential Effect (APE)."

In their filing they had a section titled, "**The MVP Application is Still Substantially Incomplete and Incorrect**". It noted the following: *"As noted in numerous previous filings, the MVP application fails to meet FERC's own natural gas siting and maintenance requirements. For example, the "pipeline and electric transmission facilities construction" section of 18 CFR § 380.15(e)(2) requires the following: In locating proposed facilities, the project sponsor shall, to the extent practicable, avoid places listed on, or eligible for listing on, the National Register of Historic Places; natural landmarks listed on the National Register of Natural Landmarks; officially designated parks; wetlands; and scenic, recreational, and wildlife lands. If rights-of-way must be routed near or through such places, attempts should be made to minimize visibility from areas of public view and to preserve the character and existing environment of the area."*

I would submit that in addition to the objection they outlined in their letter, that my own property in Monroe County, WV would be eligible for protection by Section 106 of the National Preservation Act. In subsequent comments and filings I have submitted evidence that my property along with some surrounding property most likely was used by Native Americans for many centuries. I submitted pictures of artifacts found either on my property or on nearby property to back up this assertion. I also showed these artifacts to the archeological survey crew who conducted the Archeological Survey for MVP across my property in October of 2015. They agreed that I had very significant artifacts. I have asked for a phase one archeological survey, but have had no response. None of this information was reported in the DEIS.

I also presented a few pieces of pre-historic artifacts to the survey crew who said it would be appropriate to request a paleo-archeological survey. Which I did, still no response or mention in the DEIS.

I want to renew those requests and have submitted those pictures again.



IND298-1

It is typical for cultural resources data to be incomplete until access to the entire pipeline route can be obtained and surveys conducted (some areas may not be accessible until after a Certificate [if approved] is issued and eminent domain can be used to obtain access to parcels previously denied by specific landowners). The environmental condition included in section 4.10 and 5.2 was included to cover that contingency.

The FERC has never previously received a letter from Mr. Johnson requesting a copy of the cultural resources survey report covering his property in Monroe County, West Virginia. If Mr. Johnson would like to see that report, he must sign a confidentiality form with Mountain Valley. We requested (in our January 26, 2017 EIR) that Mountain Valley provide Mr. Johnson with an opportunity to sign such an agreement and obtain copies of cultural resources survey reports covering his property. In a February 17, 2017 filing, Mountain Valley indicated (in response to Cultural Resources question 18 of our EIR) that its cultural resources consultant inventoried Mr. Johnson's land and recorded three isolated finds in the APE (46ME293, 294, 295) which were evaluated as not eligible for the NRHP.

The ANST is discussed in section 4.8 of the EIS. The final EIS has been updated to discuss supplemental visual impacts analyses. Cumulative impacts were discussed in section 4.13 of the draft EIS.

Cultural Attachment was addressed in section 4.10 of the final EIS. The findings of ACE were adopted by FERC staff, and not dismissed. The ACE report is already in the public record for this proceeding.

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# INDIVIDUALS

## IND298 – Maury W. Johnson

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I will also submit one more example where this *section of 18 CFR § 380.15(e)(2)* is being violated.

The Appalachian Trail Conservancy, in an official letter submitted on November 3, 2016, made the following statement about the DEIS and potential impacts of the proposed MVP route on the Appalachian National Scenic Trail: *“Contrary to comments by the Appalachian Trail Conservancy and the United States Forest Service months prior to the publication of the DEIS, FERC claims that the proposed Mountain Valley Project would have no visual impact to the Appalachian Trail. Our own analysis concurs with the statements of the United States Forest Service and suggests that the proposed Mountain Valley project represents a serious threat to the scenic value of the A.T. well beyond the scope of similar projects - as many as 19 prominent AT vistas may be severely impacted from this project, many of them viewing impacts as they occur on USFS land.*

*As a result, the assessment of cumulative impacts to the AT is drastically insufficient. The scope of cumulative impact must be based on the nature of the impacted resource, not the proposed project. In ascribing an arbitrary geographic scope for this DEIS of 100 miles, FERC avoids properly documenting cumulative impacts to the Appalachian Trail while admitting that other proposed pipeline projects on the National Forest would, without question, contribute to cumulative impacts. The issue of cumulative impacts is especially important to the AT given the nature of long distance hiking. “*

There could be no great violation of this section than the severe impact and harm that would be caused to the Appalachian Trail, --“America’s Most Beloved Trail.”

\_\_\_\_\_

The filing submitted by Matthew W. Fellerhoff , Strauss Troy Co., LPA , on behalf of, The Greater Newport Rural Historic District Committee (File Date: October 24, 2016) regarding “Areas of Potential Effect (APE) also stated: **MVP’s Section 106 APE Does Not Include Evaluation of Adverse Effects on Cultural Attachment or Cultural Landscapes** (p. 21).

### **“Cultural Attachment”**

*“The APE fails to address the issue of the recent conclusion by MVP’s Cultural Attachment Consultant, Applied Cultural Ecology, (ACE) that the entire Peters Mountain Study Area comprises a cultural landscape as it relates to cultural attachment, an area that includes the entirety of the Greater Newport Rural Historic District.<sup>40</sup> Previous studies have indicated that damage to cultural attachment is not mitigatable.<sup>41</sup> The study appears to support the proposition that the Peters Mountain vicinity, including lands outside the National Forest boundary, constitute one or more traditional cultural landscapes eligible as such for the National Register of Historic Places.<sup>42</sup> MVP has proposed no APE within which to analyze effects on this landscape and the cultural attachments it reflects”.*

*“MVP responded to the ACE report with a dismissive letter ignoring the conclusions of its own expert cultural anthropologists.<sup>43</sup> On August 30, 2016, the Committee filed the expert report of Dr. Thomas King, historic preservation consultant, former Advisory Council on Historic Preservation (ACHP), and co-author of National Preservation 38 Traditional Cultural Properties to augment the ACE report conclusions and the “systematically misguided” cultural resource evaluations of MVP and its consultants.<sup>44”</sup>*

# INDIVIDUALS

## IND298 – Maury W. Johnson

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<sup>40</sup> FERC Docket CP16-010-000 20160127-5356(31190466) MVP Public Attachments 10 of 10, Response to EIR RRA-30, pp. 2-3 and 47.

<sup>41</sup> FERC Docket CP16-010-000 20151023-5124 The Scientific Validity of Cultural Attachment as a Social Phenomenon and the Basis for an "All Lands" Approach in NEPA Decision-making, James Kent Associates, pp. 4, 18 and 40.

<sup>42</sup> National Park Service Bulletin 38 Guidelines for Evaluating and Documenting Traditional Cultural Properties <http://www.nps.gov/nr/publications/bulletins/pdfs/nrb38.pdf> accessed February 15, 2016.

<sup>43</sup> FERC eLibrary 20160127-5356 Letter to Paul Friedman, FERC January 26, 2016, pp. 2-5.

<sup>44</sup> FERC eLibrary 20160830-5133."

In the 1990's a proposed power line proposed to cross over Peters Mountain in Monroe County WV and Craig County VA, through National Forest land prompted a "Cultural Attachment Study" by the USFS. It was determined that this was a very real issue in the area of Peters Mountain and the power line project was moved elsewhere. When MVP was presented with this issue, they just scoffed at the idea. Ultimately, they relented on the idea and were directed to engage **independent experts**. They employed the services of **Applied Cultural Ecology LLC. Ginny Bengston, M.A. and Dr Rebecca L. Austin, Ph.D, are noted experts from Sun Valley, Nevada on issues related to cultural landscapes and attachments**. I was the first contact person for their site visit to the area last November (2015) due to this relationship I have remained in contact with them and when the DEIS was submitted and I found out that they had not seen the conclusions, arranged for them to get a copy of those conclusions. I know they expressed to me that they felt that their work was, like everything else submitted that was not to the liking of MVP, summarily dismissed without merit.

The conclusions of the APE Cultural Assessment study, said in short that there should a further intensive study of the area of Peters Mountain THAT IS NOT CONFINED TO THE NATIONAL FOREST LANDS BUT INCLUDES ADJACENT LANDS IN MONROE COUNTY WV, CRAIG AND GILES COUNTY VA, before any project including MVP should be approved. I am going to resubmit the entire report again in hopes that someone at FERC will actually read it.

I am also going to request that the United States Forest Service employ ACE LLC to complete a full comprehensive study on this issue, just as they did in the 1990's. Since FERC does not seem interested in protecting this resource, maybe the Forest Service will be.

Sincerely,

Maury W. Johnson  
3227 Ellison Ridge  
Greenville, WV 24945

CC: Andrew Downs, ANST Regional Director  
Susan Pierce, Deputy State Historic Preservation Officer (WV)  
Joby Timm, Supervisor, George Washington and Jefferson National Forests  
Jennifer P. Adams, Special Project Coordinator, George Washington and Jefferson National Forests

# INDIVIDUALS

## IND299 – Maury W. Johnson

20161205-5229 FERC PDF (Unofficial) 12/5/2016 9:23:43 AM

December 5, 2016

Ms. Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission (FERC)  
888 First Street, N.E.  
Washington, DC 20426

Dear Ms. Bose and Members of the Commission,

IND299-1

I am writing this letter to voice my concern that should the Mountain Valley Pipeline be approved that additional pipelines would soon follow and totally devastate a beautiful pristine area where I live. As an affected land owner, I have been presented an offer by MVP for not just one but two pipeline easements. Most of the people who have signed easements have that condition in their contract. Therefore, by failing to consider this, the DEIS has failed to consider the full range of adverse effects that would be caused to resources and people within the project area by the Mountain Valley Pipeline. Therefore the current DEIS is irrelevant and should be revised.

I see no evidence that FERC has considered the likelihood that approving the Mountain Valley Pipeline would draw other pipelines to the area. It is imperative that FERC must consider the potential for Mountain Valley Pipeline's approval and construction to draw additional pipelines to the project area. FERC policy encourages use of existing corridors for new pipelines. If Mountain Valley Pipeline is constructed, that would create an existing corridor that would be expanded and draw additional pipelines into the area.

Another project has been proposed for the project area, the so-called Appalachian Connector, with a route that would run roughly parallel to the Mountain Valley Pipeline, if it were to be constructed. It is pretty apparent that collusion between Mountain Valley Pipeline LLC and other unnamed pipeline company or companies concerning the so-called Appalachian Connector or other possible pipeline projects exist, based on the following:

Submittal 20150828-5050(30844494) to FERC Docket PF 15-3. See also "Mountain Valley Pipeline acquires easements from regional residents for natural gas transmission pipeline", Roanoke Times, 11 September 2016. Land records filed at courthouses in counties along the potential right-of-way contain clauses allowing a second pipeline within the purchased easement area. For example, land record filed in Giles County, Virginia, on 4/7/2016 that lists Mountain Valley Pipeline LLC (MVP) as Grantee includes the following clause 7" "... Grantor does hereby give, grant, and convey unto Grantee, its successor and assigns, a further right at any time or from time to time, to lay, maintain, operate, renew, alter, improve, protect, repair, and remove one additional pipeline ... as it may desire within the right of way and easement area. The additional pipeline to be laid approximately parallel to the first line laid and shall be considered a Pipeline as the term is used herein." Also the ROW agreement presented and rejected by me in the fall of 2015 also has this same provision. Similar or identical terms are included in multiple land records recently filed which list Mountain Valley Pipeline LLC as the Grantee. Such records can be provided to FERC or to a court of law upon request.

Adding to my concern is the fact that Mountain Valley Pipeline has been offering to property owners easement-purchase agreements that would allow it to construct "one additional pipeline", despite not having proposed such to FERC. I have friends who are on the preferred route for the Atlantic Coast Pipeline and they have been presented ROW agreements that ask to purchase easements that allow only one pipeline. The proposal to purchase multiple pipelines easements, when only one pipeline is proposed is highly irregular in the industry as far as I can determine.

IND299-1

If approved, the FERC would only allow one natural gas pipeline to be built by Mountain Valley (see recommended condition 4 in section 5.2 of the EIS). See the response to comment IND241-1 regarding induced natural gas exploration and production. The Appalachian Connector is not a real project and does not have to be considered as a foreseeable action in our discussion of cumulative impacts in section 4.13 of the EIS.

# INDIVIDUALS

## IND299 – Maury W. Johnson

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IND299-1  
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I firmly believe that MVP LLC is attempting to use FERC authority to gain an easement in excess of what is needed for a single pipeline, and that MVP's current efforts to obtain easements that would allow multiple pipelines should be considered collectively as a strong indicator that a second pipeline is being planned for the proposed Mountain Valley Pipeline route.

In evaluating the Mountain Valley Pipeline application, FERC should recognize the likelihood that Mountain Valley Pipeline's construction, if approved would likely draw at least one additional pipeline into the project area. The DEIS does not consider that possibility, thus expanding the disturbance and adverse effects. FERC should recognize the likelihood of a second pipeline and revise the DEIS.

Sincerely,

Maury W Johnson  
3227 Ellison Ridge  
Greenville, WV 24945

CC: Jennifer P. Adams, Special Project Coordinator  
George Washington and Jefferson National Forests  
5162 Valleypointe Parkway  
Roanoke, VA 24019

# INDIVIDUALS

## IND300 – Maury W. Johnson

20161205-5231 FERC PDF (Unofficial) 12/5/2016 9:34:59 AM

December 5, 2016

Ms. Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission (FERC)  
888 First Street, N.E.  
Washington, DC 20426

Dear Ms. Bose and Members of the Commission,

Re: In Support of DEIS Comment Submitted by Pamela Ferrante: Emergency Responders  
[a request for critical emergency services data], Document #20160907-5211  
Docket CP16-10: Mountain Valley Pipeline project

*In support of the comments in Docket CP 16-10, Document # 20160907-5211 and #20161027-5034.*

I am writing these comments with the knowledge that the DEIS repeats statements by the Applicant—apparently without checking the statements for accuracy. The issue being addressed in the comments concerns the question of safety related to responding to fire and casualties which could occur from a rupture of a major gas transmission line. The basis and sources for the Applicant's claims and estimates of distance from potential pipeline rupture to local fire departments, etc. are never provided. FERC's willingness to publish such material undermines the claim that the DEIS represents serious scientific analysis of the actual impacts of the proposal.

As Ms. Pamela L. Ferrante, DVM, PhD, EMT of Montgomery County VA notes in her October 25, 2016 comments concerning Emergency Responders, FERC requested full information on emergency services [including all emergency responders, their equipment, the amount of labor available, their labor status (whether full-time or volunteer), and an analysis of the capabilities for each unit for fighting potential gas pipeline explosions and secondary fires.] This request was filed with MVP on August 11, 2015; about two months after Thomas Bouldin from Summers County WV made it in a submitted comment (20150615-5225) on June 15, 2015. The Applicant apparently took until January 19, 2016 to respond and that response is entirely inadequate, as Ms. Ferrante points out.

Mr. Bouldin's comment further supports Ms. Ferrante's articulate request that EQT (as Agent) be required to answer FERC's original request for information. I totally agree with both Mr. Bouldin and Ms. Ferrante that the clarifications must be submitted long before the end of the comment period on the DEIS—or that the comment period be sufficiently extended in order for citizens to have the needed time to process and evaluate the numerous additions to the DEIS that are being requested in relation to this and so many other issues.

Again I must say that I totally agree with both Mr. Bouldin and Ms. Ferrante that in its current form, the Applicant's "answer" is incomplete and profoundly misleading—and this misinformation is simply repeated by the FERC staff in the Draft Environmental Impact Statement. (The DEIS forwards EQT/MVP's response on page 4-467.) To say that the most inaccessible parts of the route are within 8 miles of the nearest fire station is a bold evasion of the point (and, as best I can determine, is not accurate). Let's take rural Monroe County WV for example—and request that SOMEONE on the FERC staff check out the other counties along the MVP route. It is totally incorrect that Ellison's Ridge, Hans Creek, Wayside, Peters Mountain or some other areas of Monroe County along the MVP route is within 8 miles of any fire station in either Monroe or Summers County. These areas mentioned are considerably

IND300-1

IND300-1

See the response to comment IND2-1 regarding safety. See the response to comment IND18-2 regarding emergency plans. See the response to LA3-1. We will not be producing a supplemental draft EIS; but this final EIS addresses comments on the draft. The No Action Alternative is discussed in section 3 of the EIS.

# INDIVIDUALS

## IND300 – Maury W. Johnson

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IND300-1  
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beyond the 8-mile range. However, mileage estimates obscure the fact that a fire truck from any volunteer fire station in the area would have to ascend the construction easement/ROW along prolonged steep slopes in order to areas on Ellison's Ridge and Peters Mountain, if they could even access the area by road which is the case with Peters Mountain. (There are only forest service roads and old logging roads into Peters Mountain). Any fire or rescue operation coming from any fire department would have to traverse one-lane mountain roads, private roads and trails in steep mountainous terrain to access Peters Mountain and Ellison's Ridge.

In all likelihood, given road access to this area, firefighters would be forced to attempt fighting any fire using aerial resources to extinguish or contain secondary blazes. However, at present the DEIS contains no discussion of the availability of such resources. **Rural fire departments do not have the resources for the kind of intensive emergency response needed to preserve life and property in the event of a major rupture and explosion that could potentially affect thousands of acres of forestland in Monroe County alone. A fire in Peters Mountain would jeopardize hundreds of acres of National Forest land and numerous endangered species, including the Peters Mountain Mallow which is down to just a few plants anywhere I the world and their habitat is not too far from the pipeline corridor.**

<https://www.bing.com/images/search?q=peters+mountain+mallow&id=3E5ACA05D5460CD07005B293F608230BEDC16C59&FORM=IQRBA>

Peter's Mountain Mallow is known only from a single population on Peters Mountain in Giles County, Virginia, near Monroe County WV above the New River at The Narrows. This species was first discovered in 1927. It is a perennial herb that grows up to 3.5 feet tall and has large, pink, odorless flowers two inches in diameter.

<https://www.fws.gov/northeast/pdf/PetersMountainMallow.pdf>

More offensive than the underestimates of distance, MVP's reported mileages say nothing whatsoever about the **condition of the roads involved**: almost all are single lane, with many sections where two oncoming vehicles can hardly pass one another. Most contain numerous hairpin curves, many along steep banks and long steep slopes. I am fairly experienced driver on the roads in the Monroe County as well as the surrounding areas. I was the Monroe County Attendance Director for many years and had to travel these roads frequently, as well as living on one of the mentioned roads (Ellison's Ridge Road) 15 to 30 mph would be a maximum speed in the few straight stretches. Some roads may allow some speeds of 30 to 40 mph in a few sections. An average speed of 15 to 20 mph would be pushing the limit of safety for a large vehicle-especially if evacuation traffic were encountered. This means that it would take at least 30 minutes for a Volunteer Fire Department or Rescue Squad from Monroe or Summers County to reach some of these areas, if it is possible at all. Judging by the expert commentary quoted in Thomas Bouldin's previous comment, a major fire from a 42-inch pipeline gas rupture would require far more than one local fire department to begin combating the secondary blazes that could result.

It is also important to note that the Lindsie Volunteer Fire Department is in the "High Impact Zone" and could be vaporized in an explosion in their area. This is the Fire Department closest to James Monroe High School, Monroe County, West Virginia's only high school. The high school is also in peril from this pipeline.



# INDIVIDUALS

## IND300 – Maury W. Johnson

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It is **NOT POSSIBLE** given the county roads leading to the Peters Mountain Ellison's Ridge or Wayside areas that sufficient numbers of first responders could arrive and begin effective work within twenty minutes—which is the maximum time frame suggested by both the pipeline engineer and pipeline engineering professional association. (This statement was quoted in a submission by Thomas Bouldin and should be part of the FERC record.) The claim that safety is only 8 miles away is all too typical of the Applicant's attitude (sanctioned here in the DEIS by FERC) toward any negative effects of the proposal: minimize the danger, trivialize the concern, and go on as though nothing of importance had been broached. The corporate entities proposing the MVP—and the regulatory agency charged with assuring the safety of the public—need to get seriously professional about the safety issues and inherent dangers of routing a 42" high-pressure gas pipeline through the mountainous terrain of West Virginia and Southwest Virginia. If the corporations—and their regulators—want to share the profits from such an undertaking they must also be willing to underwrite the costs of protecting the affected citizens from the obvious dangers implicit in the project. **The DEIS is an inappropriate place for their continued public-relations rhetoric, and the lack of serious attention to significant environmental and safety issues raised by citizens and agencies since the project's inception does not bode well.**

**There has been failures of Critical Judgment and Documentation in the DEIS for the MVP.**

Where the Applicant's statements are self-serving and utterly unconvincing, the statements included in the DEIS are even more damaging to FERC's image as a regulatory agency. The discussion of the issue in the DEIS (pages 4-466-467) is essentially a cluster of public relations' assertions, completely without substance. There are three issues that are especially offensive and I request that they be addressed and thoroughly revised in any further edition of the DEIS.

I am horrified by FERC staff's repetition of the incorrect and disingenuous claims by the Applicant of the "8 Mile" proximity of the route to fire departments. FERC staff must provide a detailed mapping of the route and the locations of these departments to justify any such claim by EQT, and as requested in the comment from Thomas Bouldin's in 2015, that mapping must accurately reveal the carrying capacity of the various roads delineated, so that a reader can realistically estimate the actual travel times involved. **FERC is required by NEPA with assuring that statements to the public are accurate and demonstrate that the agency has performed the needed environmental analyses.** FERC is not charged with forwarding to the public data from the applicant which has not been substantiated by further critical review.

To fulfill the expectations of NEPA, FERC staff must move beyond the trivializing opening sentence of the section: "We received comments" expressing concerns about "the potential for forest fires to occur from a pipeline accident." **The EIS must provide a far more sensitive and complete discussion of landowner concerns for the issue of safety.**

Finally, I would like to say that I completely agree with the submission made by Pamela L. Ferrante, DVM, PhD, EMT of Montgomery County VA made on October 25<sup>th</sup>, 2016.

I am including it in my comments here:

"In preparing the DEIS, FERC failed to address the significant concerns raised in my previously submitted comments on September 7, 2016, Submittal #20160907-5211, regarding emergency responders. In this letter I questioned MVP's evaluation of the preparedness of local emergency responders along the proposed pipeline route through West Virginia and Virginia.

This was not addressed in the DEIS report released on September 16, 2016. This issue should have been clarified in the DEIS report since FERC, itself, had asked MVP for this information previously and did not

# INDIVIDUALS

## IND300 – Maury W. Johnson

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IND300-1  
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receive it. FERC had requested MVP on two occasions, August 11, 2015 and again on December 24, 2015, to include "an analysis of existing emergency responders, equipment, labor, status (full-time or volunteer), and capability along the pipeline route" (Submittal # 20151224-3000, p. 46). FERC clearly asked MVP to include in their analysis of emergency responders:

- 1) Existing emergency responders;
- 2) Equipment available;
- 3) Labor force;
- 4) Status of the labor force (full-time or volunteer);
- 5) Capabilities of the responders.

MVP's response on January 19, 2016 (Submittal #20160119-5076, p. 340 and pp. 803-804) was inadequate, completely ignoring the FERC's request. MVP, to this date, has not supplied the requested information to FERC and FERC, on the other hand, has not requested MVP to provide this analysis. If I have no problem understanding what was clearly requested by FERC, why did MVP have a problem? More importantly, why did FERC accept MVP's inadequate response?

I will reiterate my concerns with the inadequate MVP response. A more-detailed account can be read in my letter of September 7, 2016, Submittal #20160907-5211. The response given by MVP did **not** include all emergency responders, only fire agencies. Emergency Medical Service (EMS) agencies, which are often a separate entity, were not listed. Even with this omission, MVP did not even assess the equipment or labor force of the responders they did list. For the capabilities of these agencies, MVP blatantly gave a blanket statement that they "are trained and qualified in their respective disciplines to respond to emergency situations". This is a very generic statement. MVP's assessment should be specific for firefighters' and emergency medical service providers' specific certifications. This information is needed for proper funding and training of all emergency responders, including fire fighters and EMS agencies, along the proposed pipeline route.

Isn't the safety of the residents in the communities affected by this proposed pipeline important?  
If FERC asked MVP for this information why didn't they receive it and, if they did not receive it, why didn't FERC demand to receive it?

Shouldn't this raise a red-flag?

### CONCLUSION:

Why did FERC ask MVP to provide this information in the first place on August 11, 2015 and why did FERC ask again for this information on December 24, 2015. FERC must have felt it was important. Citizens living in the communities affected by the proposed pipeline feel this information is critical. This information is pertinent and many citizens want this information provided **now**, prior to any confirmation of this pipeline.

Why isn't MVP providing information specifically and clearly requested by FERC?

Why isn't FERC demanding this information instead of allowing a vapid, generic answer with no substance?

What other information has MVP either not answered or not answered truthfully?

Why hasn't the United States Forest Service required this information in relation to its resources in the JNF? (They should not go forward with their analysis until they receive all pertinent information).

# INDIVIDUALS

## IND300 – Maury W. Johnson

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IND300-1  
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We certainly can't trust FERC to be the "watchdog" over MVP. Because of the unaddressed concerns I have identified above, and other significant information gaps that have been noted by other commenters and cited within the DEIS document itself, I request that the FERC issue a new DEIS with complete and corrected information, so that the public has an opportunity to assess and comment on the potential impacts of the project prior to the issuance of the Final Environmental Impact Statement (FEIS). I am very disappointed FERC did not recognize the concerns of citizens but bent over backward to accommodate a \$3 to 3.5 billion project involving a 303-mile pipeline being constructed through remote, mountainous areas of West Virginia and Virginia. If FERC does not issue a new DEIS, **I request FERC choose the *No Action Alternative*.**

Sincerely,

Maury W. Johnson  
3227 Ellison Ridge  
Greenville, WV 24945

CC: Jennifer P. Adams, Special Project Coordinator  
George Washington and Jefferson National Forests  
5162 Valleypointe Parkway  
Roanoke, VA 24019

# INDIVIDUALS

## IND301 – Thomas Bouldin

20161205-5233 FERC PDF (Unofficial) 12/5/2016 9:54:53 AM

To: Kimberly D. Bose, Secretary;  
Norman Bay, Chairman; Members of the Commission  
Federal Energy Regulatory Commission

From: Thomas Bouldin, Landowner and Intervenor, Pence Springs, West Virginia

Date: December 5, 2016

Re: Docket # CP16-10-000: Mountain Valley Pipeline

IND301-1 Comment: DEIS reveals 'Significant' Flaws: NEPA and the Determination of Significant Impacts

I submit the following comment in light of the inclination of the DEIS (and the Applicant) regularly to deny significant impacts—but also to withhold any detailed discussion of their evidence. Not only does the DEIS customarily deny significant impacts of the MVP project, it fails even to supply an operational definition of key terms (as does the MVP application).

I have explored the National Environmental Policy Act concerning the definition of "significant" as the word is used in such phrases as "no significant impacts on the environment are anticipated." Section 1508.27 is devoted to understanding significance, stating that the term requires reflecting on two criteria: context and intensity. As to context, NEPA requires that significance must be defined and estimated in the context of where an action actually occurs, rather than some broader or more abstract notion of context: "the effects in the locale rather than in the world as a whole."

I have examined the nine clauses of §1508.27 (b). I quote each in turn with relevant illustrations drawn from my reading of the DEIS. Given that the MVP scores a nine out of nine, I would say that the MVP has a good chance of maximizing 'significant impacts' as these are referenced within the National Environmental Policy Act.

***§1508.27 (b) Intensity. This refers to the severity of impact. Responsible officials must bear in mind that more than one agency may make decisions about partial aspects of a major action. The following should be considered in evaluating intensity:***

IND301-2 (1) *Impacts that may be both beneficial and adverse. A significant effect may exist even if the federal agency believes that on balance the effect will be beneficial.*

The DEIS does not acknowledge—much less analyze—the possibility that the MVP can have negative impacts on the economies of the affected regions. The Key-Log study, "Economic Costs of the Mountain Valley Pipeline—Effects on Property Values, Ecosystem Services, and Economic Development in Virginia and West Virginia" (Docket # CP16-10, Document #20160531-5236) makes clear that there are modes of analysis possible that project quantitative estimates of adverse effects. In place of analysis, the DEIS reiterates the claims of benefits made by EQT's consultant, FTI, to publicize the project. FERC consultants and staff seem more committed to

1

IND301-1 See comment CO16-1 regarding the FERC decision-making process and compliance with NEPA.

IND301-2 Section 4.9 of the EIS addresses economic issues, including the KeyLog study.

# INDIVIDUALS

## IND301 – Thomas Bouldin

IND301-2 cont'd providing a positive image of the MVP project than with providing critically important complete and accurate information to decision makers and the public. By failing to analyze potentially adverse effects, the DEIS fails to meet NEPA expectations expressed in this clause.

IND301-3 (2) *The degree to which the proposed action affects public health or safety.*  
The DEIS presents no quantitative evidence that a 42' high-pressure pipeline can be safely installed in terrain such as that required by the proposed route. None of the tables summarizing safety data in sections 4.12.2 or 4.12-3 (Tables 4.12-2-1, 4.12.2-2, 4.12.2-3, or 4.12.2-3-1, or 4.12.2.2) is directly relevant to the circumstances of the MVP. (See pages 4—468-472.)  
The DEIS does not provide quantitative measures for individual hazards to the pipeline's integrity (karst terrain, seismic activity, slope percentages for extended lengths of installation, etc.), nor for the synergies among multiple variables presenting threats to the line's integrity (e.g., seismic effects in karst terrain where acid soils may have weakened the pipeline).  
Relevant studies would need to assess the long-term viability of a similarly-sized pipeline installed in terrain of demonstrably-similar hazards. It is not clear that such pipelines exist in the U.S., and there are no relevant data quoted in the DEIS. Without such demonstrations of effects, any conclusion that the pipeline can be safely installed is an expression of faith rather than a scientific assurance.

IND301-4 (3) *Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.*  
The MVP's proposed route is in close proximity to numerous important instances of all the following:  
**\* Historic and Cultural Resources:** The DEIS lists 97 specific instances (Table 4.10.9—1, pp. 4—374-382), acknowledging that 33 should be avoided (34%) and indicating the need for additional tests or information on 58 (59.7%). (It should be noted that claims by FERC to have identified potential impacts to these resources—and that most impacts are insignificant—have proven highly controversial and have been disputed by expert professional testimony, including issues of the APE, the definitions of cultural districts, and the concept of 'cultural attachment'.)

IND301-5 **\* Park Lands:** The MVP will cross through or close to 4 wildlife management areas in West Virginia (with potential impacts to water resources that flow into/out of these areas); 5 designated wilderness, roadless, or natural preservation areas in Virginia; **the Blueridge Parkway; the Appalachian National Scenic Trail; 15 other designated special-use natural areas; and the Jefferson National Forest.** (The projected impacts in the Jefferson National Forest so far exceed accepted standards that FERC has proposed

IND301-3 See the response to comment IND2-1 regarding safety. The potential health effects regarding methane are discussed in section 4.12 of the EIS.

IND301-4 Cultural resources are discussed in section 4.10 of the EIS. The section concluded that the Section 106 process has not been completed at this time, and includes a recommendation for additional studies. We have determined that 220 of the newly recorded archaeological sites and 107 of the historic architectural sites in the direct APE for the MVP, outside of Historic Districts, are not eligible for the NRHP, and are not significant. No expert professionals have disputed our findings. In fact, the SHPOs agree with our determinations, and the definitions of the APE.

IND301-5 Recreational use, including a discussion of the ANST and the BRP, are provided in section 4.8 of the EIS.

# INDIVIDUALS

## IND301 – Thomas Bouldin

IND301-5  
cont'd | significant relaxations in these standards so that the MVP can be approved by the Forest Service.)

IND301-6 | \* **Prime Farmland:** Total acreage impacted: 2735.73 acres [note: impacts are identified in Appendix N, but only WV's ROW acreage has been totaled by DEIS staff. By my calculation, **ROW acreage:** 1883.4 acres (WV: 1,077.1 acres; VA: 806.3 acres); **ATWS acreage** (both states) 453.5 acres; **Access Roads acreage** (both states): 399.1. (ROW acreage in prime farmland is approximately 41% of the total acreage for the construction easement.)

IND301-7 | \* **Wetlands:** MVP would affect 548 wetlands in facilities, ATWS and Access Roads, and an additional 126 in the pipeline route itself (pg. 4—119). Total acreage directly damaged by construction would be about 37.91 acres (Table 4.3.3—1, pg. 1-118.). (So severe are some of the proposed intrusions into wetlands that MVP has asked for variances in the requirements to justify their construction—see section 4.3.3.3 pg. 4—128. The need to request such changes reveals that the impacts of the proposed route are 'significant'.)

IND301-8 | \* **Scenic Rivers:** Streams crossed that are listed in the National Rivers Inventory: 3 in WV; 1 in VA. **This account excludes potential impacts to a National Scenic River, the New River: the MVP crosses numerous tributary streams both large (e.g., the Gauley, the Greenbrier) and small (e.g., Lick Creek in Summers County, WV; Clendennin Creek in the Jefferson National Forest). It also omits 2 Tier III streams in Virginia (Bottom Creek and Little Stony Creek); and 2 Virginia Significant Rivers which are affected by multiple crossings of mainstem and tributary flows.** While the wild and scenic streams (National Rivers Inventory) are singled out as worth noting, there are numerous other waterbodies crossed by the project that deserve special protections or concern: major recreational sites such as the Gauley River in West Virginia, numerous trout streams in West Virginia and Virginia, and many other streams that are locally significant to the health, recreation, and aesthetic pleasure of local populations and recreational tourists. To read the DEIS, you would not know that such critical resources lie in the path of the Mountain Valley Pipeline.

IND301-9 | \* **Ecologically Critical Areas:** The *Indian Creek Watershed Association Interactive Environmental Map* displays classifications developed by the Department of Natural Resources in WV which reveal that a total of 87.6 miles of the MVP route in the state pass through areas of especially significant biodiversity: Areas of globally significant biodiversity: 56 miles; Area of high global significance: 22.3 miles; area of outstanding significance: 9.3 miles. (These are distributed throughout the route, with the higher levels of significance being largely concentrated in Webster, Greenbrier, Summers, and Monroe Counties.)

IND301-6 | See the response to comment IND332-1 regarding farming. As stated in section 4.2.2 of the EIS, the applicants would minimize impacts to prime farmlands by segregating topsoil, removing rock, and decompacting soils.

IND301-7 | The estimation of the amount of impacts (in acres) to wetlands has been updated in the final EIS using the best available information. Our cooperator for the development of this EIS, the COE, will verify the Applicants' data regarding wetlands

IND301-8 | Streams and watersheds are discussed extensively in section 4.3 of the EIS and in appendix F.

IND301-9 | Resources within the Jefferson National Forest that may be affected by the MVP are discussed throughout section 4 of the EIS. The pipeline route would avoid the Peters Mountain Wilderness and Brush Mountain Wilderness within the Jefferson National Forest.

# INDIVIDUALS

## IND301 – Thomas Bouldin

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IND301-10

*(4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.*

The sheer volume of stakeholder input to the Dockets for the MVP should serve as proof that the proposal is intensely controversial. In addition, the project has been officially opposed by numerous organizations at the local, statewide, and national levels. Materials submitted by the Applicant to the Docket have been disjointed and difficult to navigate. Requests were filed by Indian Creek Watershed Association (WV) and Preserve Craig (VA) supported by 15 organizations and 367 individuals for the FERC to require MVP to submit a Comprehensive Amended application under CP16-10 (# 20160509-5043; Original request # 20160419-5119). That request reads, in part:

“As affected property owners and organizations, we deserve a clearly navigable version of the application that fully integrates the changes that have been made since it was originally filed. Additionally, we are asking for a schedule that allows the stakeholders ample time to review the new comprehensive version as well as provides them with an opportunity to correct MVP inaccuracies or omissions in that version BEFORE the Federal Energy Regulatory Commission completes its process of preparing the DEIS. We are asking the FERC to protect the public interest. To allow the MVP application to continue in its current disjointed state poses an undue burden on the stakeholders who are trying to understand the potential consequences of this pipeline on the environment.”

A request by an individual landowner to postpone release of the DEIS (Docket # CP16-10, Document #20160914-5031) was endorsed by 9 West Virginia and Virginia organizations. Following the DEIS' premature release, 27 organizations signed on to an objection requesting either a heavily revised DEIS or a supplemental form of the document (Docket # CP16-10, Document #20161019-5061). These organizations included: the Allegheny Defense Project, Appalachian Mountain Advocates, Appalachian Voices, Chesapeake Climate Action Network, Friends of Nelson, Friends of the Lower Greenbrier River, Greenbrier River Watershed Association, Heartwood, Indian Creek Watershed Association, Mountain Lakes Preservation Alliance, Natural Resources Defense Council, Ohio Valley Environmental Coalition, Preserve Giles County, Preserve Greenbrier County, Preserve Monroe, Preserve Montgomery County Virginia, Preserve Newport Historic Properties, Protect Our Water, Heritage, Rights (POWHR), Save Monroe, Sierra Club, Summers County Residents Against the Pipeline, The Border Conservancy, Virginia Chapter of the Sierra Club, West Virginia Chapter of the Sierra Club, West Virginia Highlands Conservancy, West Virginia Rivers Coalition, and Wild Virginia.

IND301-11

*(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.*

As has been pointed out repeatedly throughout the application process, there has never been a pipeline the size of the MVP built through such mountainous terrain which even the DEIS describes as "deeply dissected (and) rugged" (pg. 4-3). FERC has presented absolutely no empirical evidence to suggest that the potential threats have been measured and assessed by relevant studies. Thus impacts are uncertain and may indeed involve risks the extent of which cannot currently be estimated.

4

IND301-10

The final EIS summarizes data from Mountain Valley's filings, organized under resource heading, and addresses comments. The draft EIS was not released prematurely, and was the result of two years of review.

IND301-11

See the response to comment LA1-4 regarding existing 42-inch pipelines in mountainous terrain.

# INDIVIDUALS

## IND301 – Thomas Bouldin

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IND301-12 (6) *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.*

**With the inclusion of the proposed utility corridor through the Jefferson National Forest, there is ample proof that "future actions with significant effects" are not only possible but are integral to any judgment of significance for the MVP. The other proposed modifications of the Forest Service standards are obvious attempts to relax standards of impact such that the MVP's damages can be judged acceptable. Such revisions of agency expectations simply increase the significance of environmental impacts allowed to subsequent entries in the utility corridor.**

IND301-13 (7) *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.*

In general, the suggested amendments to Forest Service standards fall into this category: each of the four amendments taken separately entails relatively minor effects (with the Exception of the Utility Corridor, of course)—but taken together and in conjunction with the proposed utility corridor, the cumulative impacts are significant. And these are only the direct impacts involved; indirect impacts on surrounding lands and communities would be even greater, in the event that numerous infrastructure projects were routed along the same lines or routed so as to utilize the corridor.

**The treatment of stream impacts is a glaring example of the effect of breaking an action down into small component parts. The crossing of a local watershed is a single action that may require crossings of 20 or more tributary streams. By treating each sub-action as a separate act, the DEIS ignores the relation of one crossing to other crossings within a watershed, and the ways in which the cumulative effects quickly exceed any meaningful definition of 'minimal impact.'** This problem is then further compounded by ignoring that the permanent installation will have ongoing impacts on the structure of the streambed and the channels by which sediment will be drawn from the banks of the stream during high water—as if this subsequent sedimentation (an indirect impact of construction and crossing-design) were a totally separate phenomenon. (For details, see comments in Docket # CP-1610, Documents #20160915-5109 and #20161017-5077.)

**As for instances of the DEIS dismissing important negative effects as merely temporary (without any indication of actual temporal extent), a quick thumbing through the document revealed 18 instances, mostly in regard to environmental impacts on soils, vegetation, water resources in karst as well as other private water sources, groundwater and surface water supplies, wetlands and wildlife. See section 4, pages 65, 68, 78, 81, 84 (3 times) 116, 120, 121 (twice), 127, 129, 162, 177 (twice), 180, and 436 (where temporary impacts from noise are described as 'transient').**

IND301-12 The FS routinely reviews other actions proposed to be conducted within National Forests.

IND301-13 Cumulative impacts were discussed in section 4.13 of the draft EIS.



# INDIVIDUALS

## IND301 – Thomas Bouldin

20161205-5233 FERC PDF (Unofficial) 12/5/2016 9:54:53 AM

IND301-14 (8) *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.*

**As already noted above, the MVP's impact on historical and cultural resources has remained an issue of considerable disagreement and dispute, with professionally trained personnel questioning both the integrity and the accuracy of the materials reported by the Applicant to FERC and conveyed in the DEIS.** (See, for examples among many others, Docket CP16-10, Documents #20151130-55432; #20161024-5068; #20160509-5155; # 20160304-5077, and #20160226-5404.)

The DEIS itself acknowledges a wide array of potentially impacted resources, and many more apparently remain in contention. At the time of the DEIS's release, 76 of the 97 resources entered had not yet been professionally evaluated. DEIS Table 4.10.9-12 (beginning pg. 4—374) includes:

3 historical/cultural districts with NRHP listing

14 additional buildings and 3 cemetery sites potentially eligible for listing

70 significant Native American sites

IND301-15 (9) *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.*"

The DEIS identifies the following numbers of **Federally-listed species** potentially impacted: 14 Endangered Species, 2 threatened species, and 5 species of special concern (Table 4.7.1—1, pg. 4—184). **State listings** include 27 species (Table 4.7.2—1, pp. 4—192-193).

Some of MVP's wildlife surveys are incomplete; some have been excused by state officials due to difficult conditions (pg. 4—187) and, because some negative effects are apparently unavoidable, special exceptions must be granted for at least one species (pg.4—186-187). The DEIS provides an extension on completion of studies for 3 survey/studies, allowing reporting to take place "before construction begins"—no matter what the studies may reveal. The DEIS asks us to trust that satisfactory mitigation can be devised and implemented.

### CONCLUSION

Clearly, however the route for the MVP was developed and refined, the planners did a remarkable job of creating potentially significant threats to a large number of the resources most important under the National Environmental Policy Act. It has become critical that FERC staff now take special care in evaluating and revising the evidence for disclaimers of significant impact in the 9 areas mentioned here. My own analysis indicates that the DEIS 'arguments' as they currently stand are claims and assertions rather than defensible arguments. To paraphrase

6

IND301-14 See response to comment IND301-4.

IND301-15 Wildlife are discussed in section 4.5 of the EIS; and threatened and endangered species are discussed in section 4.7 of the EIS and in more detail in our BA.

# INDIVIDUALS

## IND301 – Thomas Bouldin

20161205-5233 FERC PDF (Unofficial) 12/5/2016 9:54:53 AM

IND301-15  
cont'd

an earlier comment from the Forest Service, to simply assert that impacts are insignificant is not sufficient—you need scientific proof. FERC has released the DEIS for the Mountain Valley Pipeline while large amounts of critical data are outstanding. This must be remedied before a final EIS is prepared. It is essential to the integrity of the process that FERC share with the public and Cooperating Agencies the critical data not yet provided in the DEIS and without which no valid assessment can be made of the significant impacts of the proposed Mountain Valley Pipeline.

Respectfully submitted,

Thomas Bouldin  
Pence Springs, West Virginia

Cc:

Ted Boling, Associate Director for NEPA, Council on Environmental Quality  
Barbara Rudnick, NEPA Team Leader, U.S. EPA, Region 3  
Jon Capacasa, Director, Water Protection Division, U.S. EPA Region 3  
Joby Timm, Forest Supervisor, George Washington and Jefferson National Forests  
Jennifer Adams, Special Project Coordinator, Jefferson National Forest, Region 8  
Ginger Mullins, Chief, Regulatory Division, Huntington District, USACE  
Michael Hatten, Regulatory Division, Huntington District, USACE  
Scott Mandirola, Division Director, Water and Waste Management, WVDEP  
Wilma Reip, Manager, 401 Certification Program, WVDEP  
Ben Luckett, Senior Staff Attorney, Appalachian Mountain Advocates

# INDIVIDUALS

## IND302 – Patricia Curran Leonard

20161208-0045 FERC PDF (Unofficial) 12/07/2016

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

FILED  
SECRETARY OF THE  
FERC

November 27, 2016

FERC

2016 DEC -7 P 4:21

Docket Number: PF15-3-000,  
CP16-10-000 or CP16-13-000  
[customer@ferc.gov](mailto:customer@ferc.gov)

FERC  
REGULATORY COMMISSION

ORIGINAL

Re: Opposition to the Mountain Valley Natural Gas Pipeline – Water Testing

IND302-1

I searched the Draft Environmental Impact Statement for the MVP natural gas pipeline and I could not find any mention of where, how, or who will pay for water testing of residences along the 301 mile route. This testing should be open to all home owners that are directly affected and those that will be in the blast and evacuation zones.

The construction phase could pose a need to get water tested during and post construction. Water testing should be conducted throughout the life use of the pipeline. Wells could be contaminated with gas leaks or pesticides if chemicals are used to keep the route cleared.

As you can see below in the links provided, there are a number of different water tests available. FERC should give direction on which are the best to have conducted during construction, post construction and during the lifetime of pipeline. And because these tests are not free, who will pay for the water tests? The DEIS should provide information on the water testing facility that will pay for those affected by the MVP project to ensure the safe, reliable drinking water. We did not ask for the pipeline to invade our water tables, but if this project is approved, our water is at risk and those affected should remain whole. Please do not approve this business for profit that is not for a public good.

Choices of Water Tests & Fees, A Summary of Types of Water Tests ...

[inspectapedia.com/water/Water\\_Test\\_Choices\\_Fees.php](http://inspectapedia.com/water/Water_Test_Choices_Fees.php)  
Bacteriological sampling: (Total Coliform and E-Coli): **\$25-\$30**. FHA-Short Series:  
Coliform, lead, nitrate, nitrite: **\$75-\$100**. FHA/HUD or "FHA-Short" Water Test Series:  
Coliform, Lead, Nitrite, Nitrate, Iron, Manganese, Sodium, pH, Hardness (Ca, Mg),  
Alkalinity, Turbidity: **\$170-\$250**.

Pat Curran Leonard      4638 Dillons Mill Road      Callaway, VA 24065      540-929-5184

IND302-1

See the response to comment IND3-1 regarding drinking water. Mountain Valley would be responsible for funding these tests. See the response to comment IND92-1 regarding leaks. See the response to comment LA1-7 regarding herbicides. Section 4.3.1 of the EIS provides a list of the well water quality parameters that would be tested. See also the response to comment IND226-15 regarding drinking water.

# INDIVIDUALS

## IND303 – Devon Johnson

20161208-5152 FERC PDF (Unofficial) 12/8/2016 4:48:48 PM

- IND303-1 Devon Johnson, Blacksburg, VA.  
No mention of ginseng though confirmed and well known wild ginseng populations throughout Jefferson national forest, request full evaluation of how pipeline route will affect wild ginseng populations.
- IND303-2 concerned about disruption to purple fringeless orchid (*Platanthera peramoena*) between about MPs 203.4 and 203.6 and request Mountain Valley conduct survey for orchid not only in this area but along entire route.  
request more information on the "revegetation" of disturbed areas and wonder how revegetation of hardwoods is possible, will trees be cleared from pipeline route for the rest of time so that roots do not interfere with pipe? please provide management plan on future environmental impact as mowers/route clearers will continue in area.
- IND303-3 Operating pipeline impact estimate of 1,489 acres is much too low; request full map of operating required roadways, easements, etc in order to evaluate impact of this capacity. Estimate of permanent loss of 20 acres (4.4.21) of forest is also much too low and does not account for ecological losses in terms of interference with migration, mowing impact on vegetation spread, etc that will cause additional losses in both acres and quality.
- IND303-4 Request more information on seeding mixes that will be used to reseed area not affected by erosion and sediment control (Wildlife Habitat Council as per 4.4.2.2) and specific details on what is meant by "weather and soil conditions permitting."
- IND303-5 Will creation of forest edges (4.4.2.3) affect white tail deer populations (positively or negatively)? what effect will this have on existing forest ecosystems? how close will these potentially increased deer populations be to major roadways? what potential is there for increased car collisions with deer as a result?

- IND303-1 Section 4.4.2.1 of the draft EIS stated: "The loss of forested vegetation would impact non-timber forest products such as mushrooms (fungus) and other plant communities utilized for medicinal or commercial products." This statement would include ginseng. Section 4.4 of this final EIS has been revised to include additional discussion of ginseng. The purple fringeless orchid is not a federal or state listed species.
- IND303-2 Restoration of the right-of-way is discussed in detail in section 2 of the EIS. As stated in section 4.8.2 of the EIS, trees within the construction right-of-way across forested land would be cleared. In the temporary workspaces, trees would be allowed to regenerate after pipeline installation and restoration; however, larger trees likely would not grow to maturity for many decades, making this a long-term impact. According to our Plan, mowing over the entire permanent right-of-way could not occur more frequently than every 3 years; although a 10-foot-wide corridor over the pipeline centerline could be maintained more regularly in an herbaceous state."
- IND303-3 The impact estimates presented are accurate. See the response to IND303-2 regarding mowing.
- IND303-4 Seed mixes are provided in appendix N of the EIS.
- IND303-5 Forest edge effects are addressed in section 4.4 of the EIS. Deer are often attracted to permanent pipeline rights-of-ways.

# INDIVIDUALS

## IND304 – Robert M. Jones (on behalf of Michaela Peta)

20161206-5099 FERC PDF (Unofficial) 12/5/2016 10:18:47 PM

Date: 5 December 2016

To: Ms. Kimberly Bose, Secretary, Federal Energy Regulatory Commission

From: Mrs. Michaela Pate, Filed on her behalf by Robert M. Jones, Registered Intervenor

Re: Mountain Valley Pipeline, Docket CP16-10-000

Subject: Put the Mountain Valley Pipeline on the Ridge of Brush Mountain

IND304-1

I am writing to warn of the threat to the water supply of those people living along the Mt. Tabor Variation and beyond.

The Mountain Valley Pipeline has chosen the Mt. Tabor Sinkhole Plain in Montgomery County VA as the place where they will build a 42" high-pressure gas pipeline. I do not understand why MVP decided to choose to go through this knowably dangerous area.

Despite the dangers, MVP has tried to site the pipeline in several locations within the sinkhole plain. These sites proved to be unsuitable and unsafe. However, Instead of moving the pipeline route to safer place, MVP just kept moving a little bit and a then a little bit more within the Mount Tabor Sinkhole Plain. The final route they have chosen is the "Mount Tabor Variation". Unfortunately, the "Mt. Tabor Variation" route is no different from the rest of the Mt. Tabor Sinkhole Plain. You only have to look around the "Mt. Tabor Variation" and you will see the many sinkholes, caves, and karst features that make up this whole area. The "Mt. Tabor Variation" route is also an unsuitable and unsafe place to construct the Mountain Valley Pipeline.

The "Mount Tabor Variation" also is home to the only source of water for many people in this area. If the pipeline does cross this area, it will surely be a threat to the very important Slusser's Chapel Conservation Site and therefore, our water. If our water is compromised or destroyed, no one will be able to live here. That is why I am warning about the threat to the water supply. That is why this is such a dangerous place to build a 42" pipeline.

The reality of the situation is that just choosing to build the pipeline in a slightly different place within in the sinkhole plain is not acceptable. There is no safe place here and I do not want any pipeline in the Mt. Tabor Sinkhole Plain. But, because I hope it protect our water supply, I support the DCR proposal to reroute the pipeline and avoid Slusser's Chapel Conservation Site. This route would be along Brush Mountain on the ridge. This safer route will help protect our water and our people.

Michaela Pate  
Shady Grove Lane  
Blacksburg VA

IND304-1

The draft EIS discussed alternatives to reduce impacts on the Mount Tabor Sinkhole Plain and the Slussers Chapel Conservation Site in sections 3.5.1.7 and 4.8.2.4. Water resources are discussed in section 4.3 of the EIS. See the response to comment CO6-1 regarding the VADCR's recommended route alternative.

# INDIVIDUALS

IND304 – Robert M. Jones (on behalf of Michaela Peta)

20161206-5099 FERC PDF (Unofficial) 12/5/2016 10:18:47 PM

IND304-1  
cont'd

The other fact about the Mt tabor variation route is that was not as well investigated and documented as other parts of the sinkhole plain. However, now that investigations have been mounted in the “variation” area, much more is being revealed about new caves, underground water flow and the danger presented to our water supply.

# INDIVIDUALS

## IND304 – Robert M. Jones (on behalf of Michaela Peta)

20161206-5099 FERC PDF (Unofficial) 12/5/2016 10:18:47 PM

IND304-2

There is no place here that this pipeline can safely cross. The dangers that are very evident in this area have already been well documented to FERC. Yet, the MT Tabor Variation in this same sinkhole plain has now been chosen as the “final route”. This is a dangerous decision because it ignores the reality of the terrain and the wealth of documentation concerning the serious problems that exist in this area. This pipeline will will most certainly threaten the Water supply for people in this area. It will not only affect those along the Mt Tabor .

All you have to do is look ...just about anywhere her and you will see many sinholes, caves, and all of the features that make up one of the most intense networks of Karst features in the...

No pipeline should ever be built through this area. The dangers that exist in this karst area have been well documented to FERC. The whole sinkhole plain (not just a few select areas)is full of Karst and karst features.

I am also opposed to the use of eminent domain to take people' s private property from them. If this pipeline is for the public good then it should be built on public land. This is the fair thing to do.

I am concerned about the effect on property values as well. The presence of a 42” pipeline anywhere people's homes in this pastoral area will have a huge negative effect on property values.

Mountain valley Pipeline made a big mistake and chose a route which may have looked good on a map in but which in reality was a very dangerous choice.

IND304-2

See the response to comment IND12-1 regarding property values.

See the response to comment IND1-3 regarding eminent domain.

# INDIVIDUALS

## IND305 – Robert M. Jones

20161206-5100 FERC PDF (Unofficial) 12/5/2016 10:23:15 PM

Date: 5 December 2016  
To: Ms. Kimberly Bose, Secretary, Federal Energy Regulatory Commission  
Mr. Joby Timm, Supervisor, Jefferson National Forest, U. S. Forest Service, Roanoke VA  
Mr. Neil Kornze, Director, Bureau of Land Management, Washington DC  
From: Robert M. Jones, Ph.D., Registered Intervenor  
Re: Mountain Valley Pipeline, Docket CP16-10-000  
Subject: Opposition to the Proposed FERC Amendments to the Forest Service Plan

IND 305-1 FERC has proposed that the Land and Resources Management Plan (LRMP) of the Forest Service be modified in four different ways. **I strongly oppose each and every one of them with absolutely no hesitation!**

#1 Expand the Category 5C-Designated Utility Corridor from 50' wide to 500' wide

**A 500' wide corridor through a forest to enable more and more pipelines to ugly up and destroy the forest is absolutely insane!** The national forests were created in order for the public to enjoy them, not to be offended by a wide swath of cleared area. Moreover, such a corridor would impact all the private land and counties through which pipelines would occupy to get to the corridor. **That consequence of enabling and encouraging such a wide corridor is unacceptable to private landowners and counties alike!**

IND 305-2 #2 LRMP downgrade in requirements on Soil Conditions and Riparian Corridor to be followed by MVP during construction

If the requirements now in effect were imposed because of valid conditions, why on earth would we want to downgrade those requirements? **We certainly should not be downgrading well-thought-out requirements just so some company can steamroller through the National Forest!**

IND 305-3 #3 LRMP downgraded to allow cutting old-growth trees in the MVP construction corridor

The prohibition on cutting old-growth trees was imposed for a reason. That reason has not changed. **Why on earth would we want to cut old-growth trees?** We certainly would not want them cut just so a private company can make money!

IND 305-4 #4 LRMP downgraded to allow a lowered Scenic Integrity Objective for the Appalachian National Scenic Trail

The whole point of the Appalachian National Scenic Trail is **SCENERY!** Pipeline paths are ugly and just the opposite of scenic. Of course it makes no sense to downgrade the Forest Service's Scenic Integrity Objective---that is **exactly contrary to the whole point of having a National Scenic Trail!**

**If FERC doesn't want MVP to follow the established Forest Service rule, what else are they compromising? Our Safety?**

IND305-1 See the response to comment FA8-1 regarding Amendment 1.

IND305-2 See the response to comment FA10-1 regarding Amendment 2.

IND305-3 See the response to comment FA10-1 regarding Amendment 3.

IND305-4 See the response to comment FA10-1 regarding Amendment 4.



# INDIVIDUALS

## IND306 – Marc

20161206-5109 FERC PDF (Unofficial) 12/6/2016 9:20:12 AM

Marc, Warm Springs, VA.

Hello,

IND306-1 I am one hundred percent opposed to the Mountain Valley Pipeline. Besides the horrific destruction to our beautiful mountain environment and the potential for great damage from a leak or spill from the pipeline, I also object to the original source of the gas, from fracked wells and I object to the fact that a great portion of the gas moved in this pipeline might well be for export and just about corporate profits.

IND306-2 My number one objection though is that this investment in a fossil fuel future dooms my grandchildren to inhabiting a planet that is increasingly difficult to live on. Climate change is REAL. We need to right now turn to clean renewable energy sources, not investing in fossil fuels that accelerate CLIMATE CHANGE. Please, in keeping with the United States' obligations to fulfill it's commitments to the Paris Climate Accords, turn down the construction of the Mountain Valley Pipeline

IND306-1 The EIS concluded that the projects would not have significant impacts on most resources. See the response to comment CO14-3 regarding spills. The potential for pipeline leakage is discussed in section 4.12. See the response to comment IND2-1 regarding safety. See the response to comment IND 2-3 regarding hydraulic fracturing and export.

IND306-2 Climate change is discussed in section 4.13 of the EIS. See the response to comment IND40-1 regarding renewable energy.

**INDIVIDUALS**  
**IND307 – Justin Haber**

20161206-5191 FERC PDF (Unofficial) 12/6/2016 1:29:41 PM

Submission Description: (doc-less) Motion to Intervene of Justin Haber under CP16-10-000.

Submission Date: 12/6/2016 1:29:41 PM

Filed Date: 12/6/2016 1:29:41 PM

Dockets

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CP16-10-000 Application for Certificate of Public Convenience and Necessity and Related Authorizations.

Filing Party/Contacts:

Filing Party	Signer (Representative)
Other Contact (Principal)	-----
-----	-----
Individual	haber239@vt.edu

Basis for Intervening:  
 I am Biological Engineering Student at Virginia Tech and resident and landowner of Blacksburg. I am a member of Preserve NRV and Vice President of Environmental Coalition at Virginia Tech.  
 I am concerned about some of the conclusions from the EIS that has been released and I believe that with my background in biological systems engineering and watershed science will be helpful in assessing the EIS. Because the MVP will be affecting me and my community, I believe I should have a strong voice in making comments.

IND307-1

IND307-1

Non-environmental Commission staff will make a determination on whether to grant a party's out-of-time intervention request.

# INDIVIDUALS

## IND308 – Patricia Curran Leonard

20161206-0047 FERC PDF (Unofficial) 12/06/2016

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

November 26, 2016

FILED  
SECRETARY OF THE  
FEDERAL ENERGY REGULATORY COMMISSION  
2016 DEC -6 A 11:31  
FEDERAL ENERGY REGULATORY COMMISSION

FERC  
Docket Number: PF15-3-000,  
CP16-10-000 or CP16-13-000  
[customer@ferc.gov](mailto:customer@ferc.gov)

ORIGINAL

Re: Opposition to the Mountain Valley Natural Gas Pipeline – Fossils

IND308-1

On page 4-39 of the DEIS it states: "Paleontological resources including plant, invertebrates, and vertebrate fossils may be found in a variety of geologic formations. Typically, fossils are found in bedrock; therefore, areas with shallow bedrock, mentioned above, have the potential for containing paleontological resources. Those resources may be impacted by construction activities, including trenching. The Antiquities Act of 1906 and the Paleontological Resources Preservation Act of 2009 protect objects of antiquity and fossils, respectively, on federal lands. No such protection for paleontological resources exists in laws or regulations for non-federal lands."

If I read this correctly, if the earth is disturbed by the MVP project and fossils are uncovered even having a large paleontological significance, if it is found on non-federal land, then what? Spell it out for the reader of the document. Let the readers of the DEIS know that this means that MVP has control of the property and can choose to disregard the significance of the fossil and/or do nothing.

IND308-2

That is one of the major issues with eminent domain. A private equity firm now owns the rights to the pipeline route and all of the future-producing resources. This taking of private property for a business to gain shareholder value is directly highlighting why this project does not make any sense.

IND308-3

Who will monitor the paleontological resources along the construction of the pipeline? If no protection exists on non-federal land, what recourse does the land owner have to preserving these resources found locally?

Please do not approve this for profit money making enterprise that is NOT a public good or need.

Pat Curran Leonard      4638 Dillons Mill Road      Callaway, VA 24065      540-929-6184

IND308-1

Section 4.1.2.8 of the draft EIS stated: "...should a significant paleontological resource be discovered during construction of the MVP, Mountain Valley would follow the procedures provided in its Plan for Unanticipated Discovery of Paleontological Resources. Mountain Valley would stop work and notify the West Virginia Geologic and Economic Survey or the Virginia Department of Mines Minerals and Energy."

IND308-2

See the response to comment IND1-3 regarding eminent domain.

IND308-3

See the response to comment IND152-1 regarding our third-party construction monitoring program.

**INDIVIDUALS**  
**IND309 – Patricia Curran Leonard**

20161206-0050 FERC PDF (Unofficial) 12/06/2016

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

November 23, 2016

FERC

Docket Number: PF15-3-000,  
CP16-10-000 or CP16-13-000  
[customer@ferc.gov](mailto:customer@ferc.gov)

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2016 DEC -6 A 11:32  
FEDERAL ENERGY  
REGULATORY COMMISSION  
**ORIGINAL**

Re: Opposition to the Mountain Valley Natural Gas Pipeline – Risk now where today there is none.

IND309-1

The DEIS does put the reader into a perspective to realize just how intense and destructive this project will be. I never realized all of the impact on humans, water creatures, insects, animals, and the environment.

I often think why? How does fate put a 42 inch pipeline near my property? I never asked for a natural gas pipeline to come across the steep terrain that runs along one side of our property. I will never see a benefit from this 42 inch pipeline but I have the risk. Risk that I also never imagined would be so intense and close to our home. The risk is shared with everyone along the 301 mile route and they did not ask for the risk either. How can FERC not address the issue of that risk to those that will forever have to live in the blast zone and an evacuation zone.

I would like to see the DEIS measure the risk as part of the assessment. Today, there is no risk of a blast from a 42 inch natural gas explosion. If FERC approves and allows this project to move forward, there will be risk. How will this risk be compensated? I will not use this natural gas. I will get no benefit. This is not a public use or a public utility. How can you approve this project when only EQT will be the business that is out to make more money but not compensating those assuming the risk.

Please do not approve this for business profit making project. This is NOT a public good rather a risk being shoved to those living in the proposed blast and evacuation zones.

Pat Curran Leonard      4638 Dillons Mill Road      Callaway, VA 24065      540-929-5184

IND309-1

See the response to comment IND2-1 regarding safety. See the response to comment CO2-1 regarding benefit.

# INDIVIDUALS

## IND310 – Guy W. Buford

20161209-5002 FERC PDF (Unofficial) 12/8/2016 5:23:08 PM

Guy W Buford, Rocky Mount, VA.  
OUR ONLY EARTH (#3)

IND310-1

Words from some of our Native American citizens:

"Our religion is all about thanking the creator. That's what we do when we pray. We don't ask him for things. We thank Him. We thank Him for the world and every animal and plant in it."

These prayers were not at odds (as ours often are) with daily behavior. It would have made no sense to "pray for this land" during a campaign season or Thanksgiving church service, while unraveling its life, waters and woods for temporary gains that basically go up in smoke.

"Their motto seems to be 'Money, money, get money, get rich!' "

By contrast, "we were instructed to carry love for one another and to show great respect for all the beings of this earth," That's why, "in our way, spiritual consciousness is the highest form of politics."

Explaining to a past U.N. Council "that a weird brain disorder was infecting humans: We now believed our own money to be the source of life. Thus the land's life has become devalued to mere fiscal numbers."

"Nature, the land, must not mean money; it must designate life, Nature is the storehouse of potential life of future generations and is sacred. Western society needs to prioritize life-supporting systems and to question its commitment to materialism. Spirituality should be our foundation."

DO NOT APPROVE THE MOUNTAIN VALLEY PIPELINE

Excerpts from Field Notes by Liza Field 11/19/16

IND310-1

This does not appear to be a comment about the draft EIS issued by the FERC in September 2016.

# INDIVIDUALS

IND311 – John Applequist

20161206 0046 FERC PDF (Unofficial) 12/06/2016

NOVEMBER 29, 2016

KIMBERELY D. BOSE, SECRETARY  
FEDERAL ENERGY REGULATORY COMMISSION  
888 FIRST STREET, N.E. ROOM 1A  
WASHINGTON, D.C. 20426

FILED  
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REGULATORY COMMISSION  
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SECRETARY OF THE  
FEDERAL ENERGY  
REGULATORY COMMISSION

RE: COMMENTS ON DRAFT EIS CP16-10 MVP LLC

MADAME SECRETARY,

I AM OPPOSED TO THE MOUNTAIN VALLEY PIPELINE PROJECT FOR THE FOLLOWING REASONS:

① INCALCULABLE AND IRREVOCABLE LOSSES DUE TO LONG TERM AND/OR PERMANENT FRAGMENTATION OF THE FORESTS AND VALLEYS. SUCH LOSSES INCLUDE REDUCED CAPACITY FOR GROUND WATER RECHARGING AND CLEANING OF ACQUIFERS, ADVERSE IMPACTS FOR KEYSTONE SPECIES (INCLUDING HUMANKIND) DUE TO DEGRADING AND TOXIC CHANGES TO HABITAT WHICH INCLUDE TRAMMELING, NOISE POLLUTION, POTENTIAL FOR LEAKS, SPILLS, FIRES, EXPLOSION HAZARDS, DAMAGE TO WELLS & DRINKING WATER ACQUIFERS, DAMAGE TO ROADS AND OTHER PUBLIC INFRASTRUCTURE, INDUCED ECONOMIC STRESS.

IND311-1

IND311-1

The EIS addresses impacts on forested areas in section 4.4, water resources in section 4.3, wildlife in section 4.5, and socioeconomics in section 4.9.

# INDIVIDUALS

IND311 – John Applequist

20161206-0046 FERC PDF (Unofficial) 12/06/2016

②

IND  
311-1  
conf'd

DUE TO THE BOOM/BUST CHARACTER OF THE CON-  
STRUCTION PHASE, AMONG OTHERS, PERMANENT LOSS OF PROPERTY VALUES.

IND  
311-2

② IGNORING OF THE CLEAR NEED FOR A COMPREHENSIVE  
ENVIRONMENTAL IMPACT STUDY TO ENCOMPASS THE MVP, ACP,  
APPALACHIAN CONNECTOR AND ALL OTHER REGIONAL FRACKED-  
GAS PIPELINE PROPOSALS TO ASSESS THEIR ATTENDANT IMPACTS.

IND311-2

See the response to FA11-12 regarding need. The ACP Project was considered as an alternative in section 3 of the EIS. The Appalachian Connector is not a real project.

IND  
311-3

③ THE UNAFFORDABLE COST, IN THE LONG RUN, OF RUSHING  
HEADLONG TO PROP UP THE SCARCE DISTRIBUTION MODEL  
OF THE FOSSIL FUEL ERA INSTEAD OF PIVOTING TO THE  
FREELY DISTRIBUTED AND SUSTAINABLE POWER OF RENEWABLE  
ENERGY SOURCES, NAMELY, THE SUN AND IT'S DERIVATES OF  
WIND, WATER, BIOMASS, PHOTOVOLTAICS, ETC.

IND311-3

See the response to comment IND40-1 regarding renewable energy.

IND  
311-4

FURTHERMORE, THE PROCESS FOR PUBLIC INVOLVEMENT HAS  
BEEN INADEQUATE AND UNFAIR. SEQUESTERING OF PUBLIC  
TESTIMONY IN THREE MINUTE SESSIONS WITH A STENOGRAPHER  
IS UN DEMOCRATIC AND INTOLERABLE IN A FREE SOCIETY  
WHERE CITIZENS HAVE A MEANINGFUL STAKE IN THE COMMON  
WEALTH, BY SUCH ACTION THE F.E.R.C. APPEARS TO BE  
RUNNING INTERFERENCE FOR PIPELINE ADVOCATES. THIS IS

IND311-4

See the response to comment LA2-1 regarding the draft EIS comment sessions. Public participation in our environmental review process for MVP is summarized in section 1.4 of the EIS. See the response to comment IND1-3 regarding eminent domain.

# INDIVIDUALS

IND311 - John Applequist

20161206-0046 FERC PDF (Unofficial) 12/06/2016

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IND311-4  
cont'd

SIMILAR TO EARLIER IN THE PROCESS WHERE BY THE MVP CONSORTIUM ENCOURAGED PRESCREENING OF QUESTIONS SUBMITTED BY INTERESTED CITIZENS AT PUBLIC MEETINGS. MANY OF THOSE QUESTIONS INCLUDING MINE WERE NEVER AIRED IN PUBLIC.

THE STEALTH ASSAULT ON CITIZENS PROPERTY RIGHTS AND VALUES BY THE VIRGINIA LEGISLATURE, FOR EXAMPLE, IN GRANTING EMINENT DOMAIN POWERS TO NON-HUMAN ARTIFACTS KNOWN AS CORPORATIONS IS NOT LIKELY TO ENHANCE FEALTY OF CITIZENS FOR THEIR GOVERNMENTS.

NOR CAN WE ALL IN THE LONG RUN IGNORE THE LACK OF A COHERENT ENERGY STRATEGY FOR OUR COUNTRY WHICH SHOULD BE SCIENCE BASED, FORMED BY CONSENSUS OF ALL INTERESTED PARTIES INCLUDING THE INTERNATIONAL COMMUNITY, AND SHOULD DRIVE THE DEVELOPMENT OF OUR ENERGY PROPOSALS. THANK YOU FOR YOUR CONSIDERATION.

SUBMITTED BY

JOHN APPELQUIST  
CHRISTIANSBURG, VA. 24073  
45 SOUTH CENTRAL DR.



# INDIVIDUALS

IND312 – Patricia Curran Leonard

20161206-0062 FERC PDF (Unofficial) 12/06/2016

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

FILED  
SECRETARY OF THE  
COMMISSION  
2016 DEC -6 A 11:41  
FEDERAL ENERGY  
REGULATORY COMMISSION

November 29, 2016

FERC

Docket Number: PF15-3-000,  
CP16-10-000 or CP16-13-000  
[customer@ferc.gov](mailto:customer@ferc.gov)

ORIGINAL

Re: Opposition to the Mountain Valley Natural Gas Pipeline – Historic Areas

IND312-1

On page 4-349 of the Draft Environmental Impact Statement it states: "...Retail Store (80-5161-342) in Franklin County; each in the indirect APE within the boundaries for the Blue Ridge Parkway Historic District. The bridge over Callaway Road was previously determined to be a contributing resource to the Historic District. The barn requires additional research. The Shaver Cemetery is unevaluated. The Retail Store was determined to be a non-contributing element to the district (Turco et al., September 2015b; Turco et al., March 2016b)."

The above statement highlights a very flawed DEIS. FERC rendered a preliminary decision long before getting all of the information for clarification of the project's impact. The statement above is repeated a number of times in many of the communities along the MVP proposed route.

The cemetery is unevaluated and the barn requires additional research. The term "additional research" appears over 15 times in the DEIS and the term "unevaluated" appears over 167 times!

If FERC's mission statement includes Reliable, Efficient and Sustainable Energy for Customers – why is this DEIS not complete?

FERC needs to take the time to release a complete EIS that fills in the needed additional research and the unevaluated areas that the DEIS points to.

Please do not approve this very for profit business who is proposing a pipeline that will make EQT huge profits and nothing for the public that will forever be in a blast and evacuation zone.

Pat Curran Leonard

4638 Dillons Mill Road

Callaway, VA 24085 540-829-5184

IND312-1

The draft EIS was not flawed. As stated in section 1.2.3, the EIS is not a decision document. The commenter has confused NHPA Section 106 determinations by staff with the Commission making a decision about the projects (which it has not yet done). Section 4.10 of the EIS stated that we have not yet completed the Section 106 process, and includes a recommendation that the process should be completed prior to construction. See the response to comment FA11-2 regarding pending information.

# INDIVIDUALS

## IND313 – James Workman

20161207-5000 FERC PDF (Unofficial) 12/6/2016 5:44:26 PM

	<p>James Workman, Newport, VA. Continued...3. The draft EIS lacks a meaningful discussion of alternatives to the MVP pipeline.</p>	
IND313-1	<p>The cursory statements provided regarding alternatives yield little information on which a decision could be made. If FERC is determined to grant any certifications, it must ensure the final EIS has a robust alternatives section. At a minimum, the societal cost of carbon, methane, and nitrous oxide must be calculated and considered for each and every alternative – including the construct and operate the MVP pipeline alternative.</p>	IND313-1 We stand by our analyses in the draft EIS. Alternatives were examined in section 3 of the EIS.
IND313-2	<p>No decision can be made until each federal body determines, considers, and assesses the social cost of carbon, methane, and nitrous oxide that this project would generate, if approved. According to the United States Interagency Working Group on Social Cost of Greenhouse Gases, Executive Orders 12866 and 13563 require federal agencies to use the best available scientific, technical, economic, and other information to quantify the costs and benefits of regulatory actions. The White House incorporated advice from the National Academies of Sciences into the social cost of carbon and released new estimates for methane and nitrous oxide. However, despite the requirements of these Executive Orders; the Council of Environmental Quality's recommended guidance; and a US Circuit Court of Appeals ruling upholding their use in federal regulations, no discussion of these costs is included. Therefore, no decision – other than denial – can be given. Such a discussion must include not only the emissions from construction and operation of the proposed pipeline, but also those associated with end use of the natural gas. As the average social cost of carbon, methane, and nitrous oxide over the anticipated 20 year life of the pipeline are \$51, \$1600, and \$19,000 per ton at a generous 3 percent discount rate and the pipeline is projected on an annual basis to emit from the compressor stations 625 tons of methane; 726,500 tons of carbon dioxide; and 1.3 tons of nitrous oxide, along with 3399.5 tons of methane; 43,482,450 tons of carbon dioxide; and 1185.9 tons of nitrous oxide due to end use natural gas combustion, then the final EIS will need to account for \$2.3 billion annually for 20 years, as the MVP pipeline operating cost. Given annual revenues of \$2.2 billion at a price of \$3 per thousand cubic feet of natural gas, MVP would end up with a \$110 million annual loss, if it were to have to account for its emissions. It remains to be seen how such a plan could attract and keep shareholders. Please explain how the pipeline benefits us 324 million Americans who are not MVP shareholders but who will have to bear the annual cost caused, but not paid, by MVP. By way of contrast, an alternative based on solar power would provide the alleged needed electricity at a near zero societal cost, clearly making money for its owners while shielding the planet from further ravages of climate change. FERC's final EIS must bolster its no-action alternative by examining and discussing the costs associated with this project. In addition, each alternative must account for these costs. Only if the costs are outweighed by the benefits can an alternative, or, for that matter, the certificate of public convenience and necessity, be approved.</p>	IND313-2 Air quality and emissions were disclosed in section 4.11. Climate change, GHGs, and cumulative impacts are discussed in section 4.13. See the response to comment CO2-1 regarding benefits. See the response to comment IND40-1 regarding renewable energy.

# INDIVIDUALS

## IND313 – James Workman

20161207-5000 FERC PDF (Unofficial) 12/6/2016 5:44:26 PM

IND313-2  
cont'd

In addition to society cost, the final EIS must assess the cost trends and jobs potential of each and every alternative. As an example regarding renewable electricity generation, the EIS discussion should note that the Department of Energy has found precipitous cost declines in several clean energy technologies, as demonstrated by more than two-thirds of new energy capacity in 2015 was wind and solar. Indeed, more than twice as much renewable energy than natural gas-fired energy was installed in 2015.

Further, the final EIS discussion should describe the announced projects as well as requests for proposals. Southeastern utilities are seeking renewable projects: Alabama Power just requested 500 MW and Georgia Power expects to add 900 MW by year's end. Gulf Power expects to add 500 MW of solar power by 2024 and Florida Power and Light looks to add 1200 MW of solar power by 2020. Regarding solar power, the EIS should reflect attorney Chris Delp's statement: "...Solar prices are in free-fall, and no one knows where the bottom is" and the projected solar installation and investment: The Florida Solar Energy Industry Association reports that 2315 MW of solar power will be installed in Florida over the next five years. Florida installed 41 MW of solar electric capacity in 2015, investing over \$105 million on the projects. Such an investment in renewable power would lead to 272,700 jobs, according to a commenter who finds that 46 jobs are created for each \$1 million investment in renewable energy.

As another example, when discussing rail transport of natural gas, MVP acts as if 779 railcars per day is an overwhelming obstacle, offering no additional discussion. Yet, the Alaskan Railroad Corporation has already begun delivering liquefied natural gas (LNG) via rail over a 350 mile path. Given that most coal unit trains consisted of 115 railcars, 7 additional unit trains per day should not prove to be burdensome, especially with the decline in coal sales that were linked to rail activity. Moreover, given the direct railroad job losses in Appalachia - 2,000 at Norfolk Southern and 580 at CSX, , , local residents may welcome the opportunity to continue to work in railyards. The EIS should estimate the number of jobs resulting from the rail transport alternative and contrast that number to the 25 permanent jobs pledged by the project.

IND313-3

The final EIS needs to contain better describe emissions estimates. Table 1 in Resource Report 9 identifies use of EPA and compressor manufacturer emission factors. Those emissions factors cover not only criteria pollutants such as particulate matter (PM) but also hazardous air pollutants; however, as explained by EPA, those emissions factors represent averages, meaning that about half the time, estimates using them are too low. Because emission factors essentially represent an average of a range of emission rates, approximately half of the subject sources will have emission rates greater than the emission factor and the other half will have emission rates less than the factor. Therefore, data from source-specific emission tests or continuous emission monitors are usually preferred. Moreover, emission factors do not do a good job of accounting for uncertainty - where uncertainty can be defined as including the effects of bias or systematic error, random error, and variability - which is why use of emission factors may be necessary only as a last resort. While emission factors were initially intended for estimating emissions for a large number of sources, such as that in a national inventory, in many cases, emission factor use has expanded beyond the original purpose, including for rule applicability purposes,

IND313-3

The Applicant used either EPA or manufacturer emission factors to determine potential operational emissions for purposes of permit applicability. The use of EPA's AP-42 emissions factors has become widely accepted by federal, state, local, and tribal agencies as well as industry as a reproducible and cost-effective method for emissions estimation. Specifically, in FERC's 2015 draft guidance manual for environmental report preparation, it states that "emission factors should be based on either: (1) manufacturer data, (2) current EPA AP-42, or (3) peer reviewed studies for the equipment" (FERC 2015, <https://www.ferc.gov/industries/gas/enviro/guidelines/report-preparation-volume-1.pdf>). As calculated, a Title I Prevention of Significant Determination major permit would not be triggered by any of the compressor stations. However, each of the compressor stations would require state minor permits prior to construction. During permitting, the state can determine if emission calculations are adequate, and also if additional monitoring is needed to ensure compliance. For this reason, emission calculations are not being recalculated to add an adjustment for uncertainty.

# INDIVIDUALS

## IND313 – James Workman

20161207-5000 FERC PDF (Unofficial) 12/6/2016 5:44:26 PM

IND313-3  
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as was done by MVP. In such cases, where risks of adverse environmental effects or adverse regulatory outcomes are high, more sophisticated and more costly emissions determination approaches may be necessary. In order to help assess the impact of uncertainty on emission factors, EPA developed a means to express how uncertainty could impact decisions made through use of emission factors. MVP made such decisions for determining PSD applicability for air emissions from compressor stations, but did not make any adjustments for uncertainty. EPA's analysis found all examined emission factor datasets are skewed, exhibit either lognormal or Weibull distributions, and adjustments for uncertainty decrease as the number of tests upon which the emission factors are based, increase. This analysis led to development of emission factor multipliers dependent on the pollutant type and number of tests used to establish the emission factors. Independent comparison of methane emission factors with emission test results corroborate the skewed distribution of site level emission rates. Direct measurements of methane emissions were combined with AP-42-based exhaust emissions factors for operating engines and turbines. Site-level emission rates were highly skewed; the highest emitting 10 percent of sites contributed 50 percent of emissions, while the lowest emitting 50 percent of sites contributed less than 10 percent of the aggregate emissions. For this reason, if FERC were to grant the certificates of convenience and necessity, FERC and regulatory air agencies must require MVP to conduct emissions testing after installation and on an annual basis, so that actual impacts to the airshed will be measured and assessed, not estimated. Such an approach would also enhance the greenhouse gas reporting program, requiring more direct measurements of emissions, as opposed to using counts and emission factors. Moreover, until the emissions-creating equipment is installed and operational, FERC and regulatory authorities should require MVP to account for emission factor uncertainty, as emission factors are used to determine prevention of significant deterioration (PSD) program applicability and to estimate greenhouse gas and hazardous air pollutant (HAP) emissions. The final EIS should rely on statistical techniques, as suggested by EPA, to account for the uncertainty of the estimates, moving from use of factors at the average (50th percentile) and with a normal distribution to use of more conservative factors, calculated at the 95th percentile and with a skewed distribution. As an example, consider benzene and acetaldehyde, two HAPs whose emission factors are provided by MVP in Table 1 of Resource Report 9. Those emission factors were developed from results of 6 tests and 2 tests, respectively. Using Table 3.2 on page 2-7 of EPA's Emissions Factor Uncertainty Assessment, available at [https://www3.epa.gov/ttn/chief/efpac/documents/ef\\_uncertainty\\_assess\\_draft\\_0207s.pdf](https://www3.epa.gov/ttn/chief/efpac/documents/ef_uncertainty_assess_draft_0207s.pdf), one can see that the multipliers for HAPs at the 95th percentile under these number of tests are 6.0 and 13.4, respectively. This means that for benzene, emissions at the 95th percentile are estimated to be 7.50 E-05 lbs/MMBTU and for acetaldehyde, emissions at the 95th percentile are estimated to be 5.58 E-04 lbs/MMBTU. As mentioned earlier, such an adjustment for emission factor uncertainty becomes important when considering PSD program applicability. The final EIS needs to explain how many tests were used by the compressor manufacturer to develop his carbon monoxide (CO), nitrogen oxides (NOx), and volatile organic compound (VOC) emission factors. If those emission

# INDIVIDUALS

## IND313 – James Workman

20161207-5000 FERC PDF (Unofficial) 12/6/2016 5:44:26 PM

IND313-3  
cont'd factors exhibit similar qualities to EPA's AP-42 emission factors (i.e., results from few tests were used to develop the emission factors), then the 3 compressor sites are very likely to have CO emissions at the 95th percentile in excess of the 250 tons per year major source threshold, instead of the estimated values which are based on the 50th percentile and which are given in Table 4.11.1-2 on page 4-392 of the Draft EIS. Such a recalculation would render each of the compressor sites subject to PSD permitting, warranting changes to Resource Report 9, the project, its air permitting application, and the EIS.

IND313-4 4. Other comments on the Draft EIS.  
A. Blanket statements in the Draft EIS to the effect of "renewable energy alternatives cannot meet the purpose of the MVP and are not considered or evaluated further in this analysis" are inaccurate, unhelpful, and obfuscate the purpose of the MVP. As the limited information about the shippers and alleged subscribers of the natural gas in the MVP shows, 87 percent of the shippers are themselves involved in electrical generation. If FERC is unwilling to expose the purported purchasers of contracts for the natural gas, at least the EIS could describe the types of entities that the purported purchasers manage; it would be most unusual if most, if not all, of them are engaged in or affiliated with electrical generation. Holding a belief that the MVP is something other than being about transferring and transforming thermal energy in the form of natural gas to mechanical energy via steam turbines to electrical energy insults the intelligence of EIS readers. Maintaining that pretense in the Draft EIS is particularly galling when that pretense is used to block comparisons to other, lower-cost, renewable alternatives for electrical production, including wind power - which transforms mechanical energy to electrical energy via turbines - and solar power - which transforms thermal energy to electrical energy. Such statements are also disingenuous, as the Draft EIS notes that "coal is widely used as an alternative to natural gas in the region in which the projects would be located," while the only project in the southeast US that consume this quantity of coal are coal-fired electrical generating plants. In fact, according to the US Energy Information Administration's Annual Coal Report 2015, over 93 percent of coal consumed in the states of Florida, Georgia, North and South Carolina, Virginia, and Alabama was for electric power generation. The final EIS must include a thorough examination and discussion of renewable electrical generating alternatives before any decision regarding certificates of necessity or convenience can be issued.

IND313-5 B. The Draft EIS offers scant attention to guidance from the Council on Environmental Quality (CEQ), stating that FERC has presented, to the extent practicable, the direct and indirect greenhouse gas emissions and impacts of climate change and then going on to note that FERC cannot assess how proposed MVP contributions to greenhouse gases can be assessed. Hogwash! As mentioned earlier, the US District Court-approved method of assessing impacts of climate change is through the use of the society cost of carbon, along with the newly-issued society costs of methane and nitrous oxides. The Draft EIS fails to include greenhouse gas emissions from end use of natural gas in its presentation, appears to exclude greenhouse gas emissions from some pollutants in its presentation, and uses the wrong units (CO units are provided) in its presentation. One would expect to see units of carbon dioxide equivalent (CO2e), determined after summing CO2 and CO2e values for methane and

IND313-4

The statements regarding renewable energy are noted. However, as stated in section 3 of the EIS, because the purpose of the MVP and the EEP is to transport natural gas, and the generation of electricity from renewable energy sources or the gains realized from increased energy efficiency and conservation are not transportation alternatives, they cannot function as a substitute for the projects. These alternatives cannot meet the purpose for the projects and are not considered or evaluated further in this analysis.

IND313-5

The typographical errors in table 4.13.2-1 (which was revised to table 4.13.2-2) were corrected in the final EIS. Specifically, the table calculates total annual GHG emissions in units of metric-tons of CO<sub>2</sub>-equivalents per year that would result from natural gas consumption based on the total capacity for each project. This information is provided as well as the direct construction and operational GHG emissions for each project.

As indicated by the CEQ, GHG emissions serve as a proxy for assessing climate change impacts. However, it is not possible for the EIS to attempt to link specific climatological changes, or the environmental impacts thereof, to the particular project or its GHG emissions, as such direct linkage is difficult to isolate and to understand (CEQ 2016). Under Executive Order 12866, federal agencies are required, to the extent permitted by law, "to assess both the costs and the benefits of the intended regulation and, recognizing that some costs and benefits are difficult to quantify, propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs." The social cost of carbon (SCC) is meant to be a comprehensive estimate of climate change damages and includes changes in net agricultural productivity, human health, property damages from increased flood risk, and changes in energy system costs, such as reduced costs for heating and increased costs for air conditioning. The purpose of the SCC estimates is to allow federal agencies to incorporate the social benefits of reducing carbon dioxide emissions into cost-benefit analyses of regulatory actions that impact cumulative global emissions. The SCC has not been included in this EIS because the EIS is not a regulatory action, the FERC is not part of the Executive Branch of government that must comply with Executive Orders, and because FERC has not determined that a monetized assessment of impacts of GHGs or a monetary cost-benefit analysis is appropriate and relevant to the choice among different alternatives being considered in the EIS.

# INDIVIDUALS

## IND313 – James Workman

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IND313-5

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nitrous oxide. The final EIS needs to correct these omissions and errors, making appropriate adjustments elsewhere.

IND313-6

C.The Draft EIS is incorrect in concluding that emissions resulting from operation of the compressor stations would not result in significant impacts on local or regional air quality. There are no actual data available to support such a declaration. Only data collected from continuous emission monitoring systems (CEMS) contained on the operating compressor stations could be used to support such a conclusion. The EIS should require that air permits for those compressor stations require use of CEMS or initial and annual emissions testing of pollutants such as particulate matter (PM), nitrogen oxides (NOx), VOC, and methane so that this type of statement can be made.

IND313-6

In section 4.11, the draft EIS stated: “It is expected that compliance with the applicable federal and state air quality standards and regulations would be addressed accordingly in the air quality permits. As a result, we conclude that air quality impacts during operation of the compressor stations would be minor.” The EIS further explains that an air quality screening analysis (i.e., dispersion modeling) was performed for each of the compressor stations and results for all pollutants were in compliance with the relevant NAAQS. As a result of the information provided, the air impacts are deemed minor and will not be revised in the EIS. Furthermore, air monitoring is not a suggested mitigation, but may still be required by regulators beyond the scope of this EIS.

# INDIVIDUALS

## IND314 – Robert M. Jones (on behalf of Peter Montgomery)

20161207-5007 FERC PDF (Unofficial) 12/6/2016 9:39:56 PM

Date: 6 December 2016  
To: Ms. Kimberly Bose, Secretary, Federal Energy Regulatory Commission  
Mr. Joby Timm, Supervisor, Jefferson National Forest, U. S. Forest Service, Roanoke VA  
Mr. Neil Kornze, Director, Bureau of Land Management, Washington DC  
From: Robert M. Jones, Ph.D., Registered Intervenor on Behalf of Peter Montgomery  
Re: Mountain Valley Pipeline, Docket CP16-10-000  
Subject: Opposition to the Proposed FERC Amendments to the Forest Service Plan

IND  
314-1

FERC has proposed that the Land and Resources Management Plan (LRMP) of the Forest Service be modified in four different ways. **These amendments are an unacceptable degradation of our well-established National Forest environment.**

IND314-1

See the response to comment FA8-1 regarding Amendment 1.

#1 Expand the Category 5C-Designated Utility Corridor from 50' wide to 500' wide

**A 500' wide corridor through a forest to enable more and more pipelines to ugly up and destroy the forest would be a huge mistake!** The national forests were created in order for the public to enjoy them, not to be offended by a wide swath of cleared area that might well be eroded and ugly. Moreover, such a corridor would impact all the private land and counties through which pipelines would occupy to get to the corridor. Many pipelines would be going through the neighboring countryside to get to the corridor and destroying the countryside. **That consequence of enabling and encouraging such a wide corridor is unacceptable to private landowners and counties alike!**

IND  
314-2

#2 LRMP downgrade in requirements on Soil Conditions and Riparian Corridor to be followed by MVP during construction

IND314-2

See the response to comment FA10-1 regarding Amendment 2.

If the requirements now in effect were imposed because of well-considered evaluation of all the consequences, why would we want to downgrade those requirements? **We certainly should not be downgrading well-thought-out requirements just so some company can waltz through the National Forest without due care! We should enforce all the current requirements rigorously.**

IND  
314-3

#3 LRMP downgraded to allow cutting old-growth trees in the MVP construction corridor

IND314-3

See the response to comment FA10-1 regarding Amendment 3.

The prohibition on cutting old-growth trees was imposed for a reason. That reason has not changed. **Why would we want to cut old-growth trees?** We certainly would not want them cut just so a private company can cut corners to make money!

IND  
314-4

#4 LRMP downgraded to allow a lowered Scenic Integrity Objective for the Appalachian National Scenic Trail

IND314-4

See the response to comment FA10-1 regarding Amendment 4.

The whole point of the Appalachian National Scenic Trail is **SCENERY!** Scenic is part of its name! Pipeline paths are ugly and quite the opposite of scenic. **It certainly makes no sense to downgrade the Forest Service's Scenic Integrity Objective---that is exactly contrary to the whole point of having a National *Scenic* Trail!**

# INDIVIDUALS

## IND315 – Melissa B. West

20161206-5256 FERC PDF (Unofficial) 12/6/2016 4:26:30 PM

Dear Ms. Bose,

IND315-1

I started my thru-hike of the Appalachian Trail when I was just 19 years old, and the Virginia Mountains made an undeniable impression on me. I had grown up on Long Island, New York, but a few years after hiking the entire Appalachian Trail, I moved to Giles County, VA. I had found my new home, a place I love.

Naturally, I was shocked and horrified when I found out about The Mountain Valley Pipeline's plans to impede the scenic integrity of several memorable spots along the Appalachian Trail, such as Dragon's Tooth, my favorite Appalachian Trail spot in the entire state. I remember spending hours up on the tooth during my thru-hike, eating peanut butter and chocolate that became gooey in the sun. I have since returned to Dragon's Tooth, as well as other sites that the pipeline will negatively impact, such as Rice Fields, Kelly Knob, and McAfee Knob, many times. McAfee Knob is well known for being the most photographed spot along the entire Appalachian Trail. From the bottom of my heart, I wish to prevent such a change that the Mountain Valley Pipeline would bring to its views.

I was also saddened about other negative impacts that would occur in the Jefferson National Forest. The current forest management plan should not be changed simply because those building the MVP wish it to be so. A plan is put in place as a guide for suitable action and use; to do so the other way around would be both opportunistic and backwards. The 500 foot corridor and the building of the pipeline would negatively impact soil and riparian conditions, as well as vegetation and old growth forests. This is unacceptable, for the term "we are all connected" is not a hippy ideal, but literal science through the food chain and food web. The pipeline would interrupt a travel and living corridor for wildlife all of the way up the food chain, including for larger mammals. Giles County has a thriving hunting community, and negatively impacting animal homes also negatively impacts the local hunting culture.

IND315-2

By far the worst and most personal result of this pipeline, however, would be the impact it would have on the Village of Newport. For me, Newport is much more than a cute little town. Three years ago, I began searching for a place to begin my own nature-based preschool, a place where children could learn from the outdoor world as well as their community members. The Newport Recreation Center offers us very reasonable rent, and also agreed to the accommodations we needed to make in order to become a fully licensed Child Day Center through the Virginia Department of Social Services. We are a fully licensed center in our second year of operation. Currently, we have 17 (soon to be 18 or 19) students enrolled in our program, plus teachers, volunteers, and parents who often stay and play with their children before dropping them off. Our school, The Mayapple School, is open five days per week from 8:30 am to 3 pm, late August to mid June. It serves as an educational gathering place for 20 or more people each day. I am so, so proud of the work that I and others have done to make this school a reality. I am so grateful for the support of those at the various departments in Giles County that helped us meet all of the needed requirements. And the pipeline would take all of that away. It would be irresponsible to have a preschool in the blast zone of the MVP. It is also highly uncertain that another suitable location could be found for our nature preschool, as surmised from the difficulty of our first initial search. We are the only preschool in the Village of Newport, and while many of our students could go elsewhere, more than one parent of our scholarship recipients has told us that if their child could not go to The Mayapple

IND315-1

Visual impacts to the ANST are discussed in section 4.8 of the EIS. See the response to comment FA8-1 regarding the 500 foot-wide utility corridor within the Jefferson National Forest.

IND315-2

On October 14, 2016, Mountain Valley adopted the Mayapple School Variation suggested in the draft EIS into its proposed route, increasing the distance of the pipeline from the school to about 0.3-mile.



# INDIVIDUALS

IND315 – Melissa B. West

20161206-5256 FERC PDF (Unofficial) 12/6/2016 4:26:30 PM

IND315-2  
cont'd

School, they wouldn't be going to preschool that year. We are also the only nature-based preschool program in all of Southwest Virginia.

I have been inspired and in awe as I watch my three year old fall in love with the mountains while on day hikes of the Appalachian Trail with me. I am daily surrounded with the joy and wonder as my preschool students learn and explore indoors and out at The Mayapple School. I love my community. I love my work. The current route of The Mountain Valley Pipeline would take that away from me, and from many others. Please do not let this happen.

Sincerely,

Melissa West

# INDIVIDUALS

IND316 – Patricia Curran Leonard

20161206-0074 FERC PDF (Unofficial) 12/06/2016

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

November 30, 2016

FERC

Docket Number: PF15-3-000,  
CP16-10-000 or CP16-13-000  
[customer@ferc.gov](mailto:customer@ferc.gov)

FILED  
SECRETARY OF THE  
2016 DEC -6 A 11:40  
FEDERAL ENERGY  
REGULATORY COMMISSION

ORIGINAL

Re: Opposition to the Mountain Valley Natural Gas Pipeline – Not completed, remains to be inventoried

IND316-1

On page 4-384 of the Draft Environmental Statement it states: "The entire process of compliance with Section 106 of the NHPA has not yet been completed for the MVP. About 36 miles of pipeline route remains to be inventoried. In addition, 5 above ground facilities, 65 new or to-be-improved access roads, and 91 ATWS, staging areas, and yards still require survey. Also, testing or additional research must be conducted at 57 unevaluated sites in the direct APE to determine their NRHP eligibility."

Again the use of the incomplete data of the DEIS is apparent. As it states above, the NHPA has not been completed and parts of the pipeline route still needs to be inventoried. How is it possible that FERC can render a statement about the project without all of the route being fully evaluated?

It is my hope that FERC will publish all of the data that has been collected, all of the comments and concerns of property owners and people that live in the impact zone of MVP pipeline.

I also hope that before the next version of the EIS is released that all areas that still require survey has been completed.

Please do not approve this profit making private EQT business that will destroy parts of the Appalachians not for a public good but only to gain profit for EQT.

Pat Curran Leonard

4638 Dillons Mill Road

Callaway, VA 24065 540-929-5184

IND316-1

It is standard practice for cultural resources investigations to be completed after the Commission authorizes a project, so that access may be obtained using eminent domain where landowners had previously denied access. We account for this in our recommendation as discussed in section 4.10 and 5.2 of the draft EIS. Part 800, the regulations for implementing Section 106 of the NHPA, allows for phased investigations. The ACHP and the courts have supported FERC's practice of completing the Section 106 process after a Project Order, but prior to construction.

**INDIVIDUALS**  
**IND317 – Patricia Curran Leonard**

20161206-0064 FERC PDF (Unofficial) 12/06/2016

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

November 28, 2016

FILED  
SECRETARY OF THE  
COMMISSION

2016 DEC -6 A 11:41

FEDERAL ENERGY  
REGULATORY COMMISSION

ORIGINAL

FERC

Docket Number: PF15-3-000,  
CP16-10-000 or CP16-13-000  
[customer@ferc.gov](mailto:customer@ferc.gov)

**Re: Opposition to the Mountain Valley Natural Gas Pipeline – Bridge Crossings**

The Draft Environmental Impact Statement does not address the small rural bridges that the construction trucks and equipment would need to use to access the pipeline route.

If you travel along some of these rural roads and have to cross the wooden planks of the bridges, there is some concern with the weight limits and what the wear and tear of the project would have on these bridges.

Have the roads and bridges been studied for how the project would impact the rural infrastructure?

I have watched school buses cross the bridges and the planks jump and move when it passes over. What are the weights of the equipment that are proposed to travel over these bridges and roads?

Have these weighted vehicles been matched with the weight limits of the crossings that the construction of the MVP pipeline has outlined? Can FERC address these bridges and weight limits of road crossings along the MVP route in the next version of the EIS?

Has every infrastructure approach condition been analyzed to be certain the limitations will not be exceeded or the repetitive loading of the construction operations not adversely affect any of the approach infrastructure.

Please do not approve such a profit making proposal which is NOT a public use.

Pat Curran Leonard      4638 Dillons Mill Road      Callaway, VA 24065      540-929-5184

IND317-1

IND317-1

Transportation was discussed in section 4.9 of the EIS. As stated in section 4.9.2 of the EIS, during construction, Mountain Valley would inspect roads periodically and, if damages occur as a direct result of project-related activities, would repair them as appropriate and in accordance with the applicable permit. These repairs would extend to rural bridges associated with roads.

# INDIVIDUALS

IND318 – David J. Werner

20161207-5037 FERC PDF (Unofficial) 12/7/2016 10:19:55 AM

**David J. Werner**

December 7, 2016

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

**RE: Mountain Valley Pipeline, LLC**  
**FERC Docket No: CP16-10-000**  
**DEIS-DO272 September 2016**

Dear Secretary Bose:

IND318-1

As an affected property owner (not a “stakeholder”) and registered intervener, I request that FERC deny the application for building the proposed Mountain Valley Pipeline.

While there are many reasons, I will cite only a few in this letter. Global, regional, local, and personal reasons will be offered.

## **GLOBAL**

According to the U.S. Energy Administration’s Natural gas publications, LNG exports are forecasted to increase: “Across the different export scenarios and baselines, higher natural gas production satisfies about 61% to 84% of the increase in natural gas demand from LNG exports...”. EQT and Mountain Valley Pipeline contracts indicate an increased interest in exporting natural gas and, in fact, reports I have studied show that there is *no* increase in demand for domestically consumed natural gas.

The LNG industry uses public relations efforts to convince lawmakers and the public that LNG exports will fix the crisis in Ukraine, solve climate disruption, and improve other issues facing the U.S. While the export of natural gas may be considered by some to be a good policy for national defense, it is not justified by the use of Eminent Domain to force property owners into unwanted and one-sided easement agreements to support national policy. Specifically EQT and Mountain Valley Pipeline’s “problem” is they have large reserves of natural gas to sell and wish to do so using Eminent Domain to build their pipeline which will take natural gas to the Transco distribution point for further distribution to the

513 Parkview Dr., Rocky Mount, Virginia 24151 540-334-1344 [dave@fourcornersfarm.com](mailto:dave@fourcornersfarm.com)

IND318-1

See the response to comment FA11-12 regarding need. See the response to comment IND2-3 regarding the fact that MVP was not designed for export. See the response to comment IND1-3 regarding eminent domain.

# INDIVIDUALS

## IND318 – David J. Werner

20161207-5037 FERC PDF (Unofficial) 12/7/2016 10:19:55 AM

IND318-1 cont'd Cove Point LNG export facility in Maryland as well as to existing and new LNG plants being built in Florida, Georgia, and in Louisiana (see exhibit "A"). I believe this is the improper use of Eminent Domain because property owners receive no local benefits while EQT and Mountain Valley Pipeline reap profits on our backs.

IND318-2 **REGIONAL**

In a letter from Paul Washburn to FERC dated December 29, 2014, the writer states "Contrary to MVP statements, EIA models indicate the projected growth rate for natural gas consumption in the South Atlantic region is considerably lower than other U.S. regions, and is below the national average."

MVP has not been able to show an increased demand for natural gas in the areas stemming from the Transco Pipeline. Again, it appears that LNG exports are driving any such "demand". Admittedly, however, it is difficult to prove this since MVP and EQT contracts are kept confidential from the public. Their statement that they have long term contracts to sell natural gas to other companies (of which some like WGL Holdings also have shareholder interests in EQT) who are LNG exporters, confuses the public and lacks the transparency that we deserve.

IND318-3 **LOCAL**

Key-Log's economic impact report of May 2016 clearly shows that approval of the proposed Mountain Valley Pipeline project will result in COSTING residents rather than benefitting them.

- Property value at risk:
  - In the Right-of-Way (ROW): \$50.9 million
  - In the Evacuation Zone: \$390.0 million
  - In the Viewshed: \$3.7 Billion
- Total property value lost (a one-time cost): \$17.0 to \$21.5 million
- Resulting loss in *annual* property tax revenue: \$79,900 to \$100,900
- Lost Ecosystem Service Value: \$5. to \$18.4 million during construction; recurring annually thereafter for the life of the pipeline: \$929,000 to \$3.4 million
- Lost economic development opportunities due to the erosion of Franklin County's comparative advantages as an attractive place to visit, reside, and do business:
  - Annual loss of recreation tourism expenditures of \$8.7 million supporting 118 jobs, \$1.9 million in payroll, and \$344,500 in state and \$264,00 in local taxes;
  - Annual loss of personal income of \$3.9 million due to slower

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540-334-1344

IND318-2 See the response to comment IND277-13 regarding gas usage and customers. See the response to comment IND2-3 regarding the fact that the MVP was not designed for export. See the response to comment IND1-3 regarding eminent domain.

IND318-3 See the response to comment IND137-1 regarding the KeyLog report.

# INDIVIDUALS

## IND318 – David J. Werner

20161207-5037 FERC PDF (Unofficial) 12/7/2016 10:19:55 AM

IND318-3  
cont'd

- growth in the number of retirees;
- o Annual loss of \$125,000 in personal income due to slower growth in sole proprietorships.

The total estimated costs, therefore, include:

- One time loss of property and ecosystem service value during construction: \$22.1 to \$39.8 million.
- Annual costs after construction ranging from \$13.8 to \$16.3 million
- One-time costs plus discounted value of all future annual costs: \$0.9 to \$1.1 billion.

IND318-4

### PERSONAL

Coates Field Services, Inc. has represented Mountain Valley Pipeline's interests in attempting to survey and acquire easements in our County. They have been abusive and deceitful in dealing with our family as well as many friends or so called "stakeholders" along the proposed route. Examples include:

- Entering our property day after day without announcing their presence;
- Failing to leave when asked to or told they were trespassing;
- Failing to respond to our letters answering their certified letters;
- Lying to family members and friends;
- Misrepresenting Eminent Domain laws and generally badgering people into signing easement agreements based on false or deceptive information.

If you approve this project, you will be unleashing the most distrusted group of corporations and people into our community we have ever experienced in addition to the expected environmental devastation and public safety disasters.

In summary, the applicants have not demonstrated the domestic demand for additional natural gas but, rather, wish to export their gas through a network of companies and contracts. Moreover, if this project is approved, it will cost the landowners and residents of our county millions of dollars in lost property values and, finally, we would be forced to deal with people proven to be liars and deceivers.

Sincerely,



David J. Werner

Attachments

513 Parkview Drive, Rocky Mount, VA 24151 [dave@fourcornersfarm.com](mailto:dave@fourcornersfarm.com)

540-334-1344

IND318-4

The statements regarding Coates Field Services, Inc. are noted. See the response to comment IND12-1 regarding property values.

**INDIVIDUALS**  
**IND319 – Patricia Curran Leonard**

20161206-0096 FERC PDF (Unofficial) 12/06/2016

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

November 25, 2018

FERC

Docket Number: PF15-3-000,  
CP16-10-000 or CP16-13-000  
[customer@ferc.gov](mailto:customer@ferc.gov)

FILED  
SECRETARY OF THE  
COMMISSION  
2018 DEC -6 A 11:47  
REGULATORY DECISION ORIGINAL

Re: Opposition to the Mountain Valley Natural Gas Pipeline – Caves and Sink holes with Karst Terrain

IND319-1

In the Draft EIS on page 4-35 it states: "In total, 94 instances of karst features were identified within Summers and Monroe Counties, West Virginia and Giles, Craig, and Montgomery Counties, Virginia. Several of the caves identified along the MVP, including Pig Hole Cave, Tawney's Cave, and Smokehole Cave, are used recreationally."

Has anyone from FERC walked along the proposed MVP route? There are a number of caves named, un-named, marked, un-marked all along this area of Appalachia. Why is FERC taking the report that MVP's sub-contractor consultant as a basis to make a determination for permitting?

In this area of Virginia, Montgomery County, many of the local cavers know where a number of these caves are located. Why doesn't FERC ask these local organizations to bring attention to the number, location, and inhabitants of these caves and other karst areas?

While you state and use the wording "several of the cases identified along the MVP....are used recreationally." Why is the route going through these areas? What will be the issues associated with the stability of those caves after the pipeline has been constructed? What about during construction? And who will monitor that stability? How will the pipeline be supported along a karst area and how will the integrity of those sections be inspected to avoid issues of damage or leaking?

Please address these issues before your decision on permitting is made. Please do not approve this very risky project. The MVP project is only for a money-making enterprise and not a public good.

Pat Curran Leonard      4838 Dillons Mill Road      Callaway, VA 24065      540-929-5184

IND319-1

Karst terrain and caves are discussed in section 4.1. Mountain Valley has produced a *Karst Mitigation Plan*, and would employ a karst specialist to evaluate areas of potential karst prior to and during construction. FERC has received comments from local experts and resource agencies, including the Virginia Cave Board. Route selection criteria is discussed in section 3.

# INDIVIDUALS

IND320 – Patricia Curran Leonard

20161206-0066 FERC PDF (Unofficial) 12/06/2016

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

November 24, 2016

FILED  
SECRETARY OF THE  
COMMISSION

FERC

2016 DEC -6 A 11:25

Docket Number: PF15-3-000,  
CP16-10-000 or CP16-13-000  
[customer@ferc.gov](mailto:customer@ferc.gov)

FEDERAL ENERGY  
REGULATORY COMMISSION

Re: Opposition to the Mountain Valley Natural Gas Pipeline – Seismic Activity from gas/oil drilling

On page 4-21 of the DEIS it states: "**Seismicity**

The majority of significant earthquakes around the world are associated with tectonic subduction zones, where one crustal plate is overriding another (e.g., the Japanese islands), where tectonic plates are sliding past each other (such as in California), or where tectonic plates are converging (e.g., the Indian Sub-Continent). Unlike these highly active tectonic regions, the east coast of the United States is a passive tectonic plate boundary located on the "trailing edge" of the North American continental plate, which is relatively seismically quiet when compared with active plate boundaries in the United States such as the San Andreas fault, a transformative plate boundary, and the Juan de Fuca convergent (subduction) plate boundary, both along the western coast of the United States."

Recent information just being released over the past few months indicate the amount of seismic activity that wastewater being forced into the wells to break up rocks and getting more out of each well for oil and gas is causing across the U.S. The DEIS does not address these recent observations and outcomes. The DEIS does not look at recent reports that are producing more information on seismic activity associated with oil and gas production.

Here are a few for your review:

[Oklahoma earthquake: State orders shutdown of 37 wells - Sep. 3, 2016](http://money.cnn.com/2016/09/03/news/economy/oklahoma-earthquake-fracking-oil/)  
money.cnn.com/2016/09/03/news/economy/oklahoma-earthquake-fracking-oil/

Sep 3, 2016 - Oklahoma orders shutdown of 37 wells after earthquake ... The report found that oil and gas drilling activity, particularly practices like hydraulic ...

[Series of Texas quakes likely triggered by oil and gas industry activity ...](http://www.sciencemag.org/.../2016/.../series-texas-quakes-likely-triggered-oil-and-gas-indu...)  
www.sciencemag.org/.../2016/.../series-texas-quakes-likely-triggered-oil-and-gas-indu...

Sep 22, 2016 - A researcher reviews the seismic waves generated by an east Texas ...  
22, 2016 ; 2:00 PM ... Oil and gas producers dispose of their wastewater deep ... Few doubt that injection wells are the chief reason that Oklahoma has ...

IND320-1

IND320-1

Injecting wastewater into wells is part of the process of oil and gas production. The MVP does not involve oil or gas production. The states regulate oil and gas production as explained in section 1.3 of the EIS. The pipeline is for transportation of natural gas; which is regulated by FERC. Therefore, there would be no seismic activity induced by the MVP.



# INDIVIDUALS

## IND321 – Thomas Bouldin

20161207-5092 FERC PDF (Unofficial) 12/7/2016 1:05:05 PM

To: Kimberly D. Bose, Secretary, Federal Energy Regulatory Commission  
Norman Bay, Chairman; Members of the Commission

From: Thomas Bouldin and Susan Bouldin, Landowners and Intervenor  
Pence Springs, West Virginia

Date: December 7, 2016

Re: Docket # CP16-10-000: Mountain Valley Pipeline

Comment: NEPA Guidance Concerning Significance as a Contextual Judgment

### Significant Misrepresentations of Impacts on Watersheds and First Order Streams

IND321-1

The authors of the Draft Environmental Impact Statement for the Mountain Valley Pipeline have made several decisions that effectively minimize and thereby misrepresent the potential impacts of the project on the water resources throughout the proposed route. The DEIS record of data is incomplete on such issues as stream scour, measured impacts on sedimentation, and any indications of measured effectiveness of proposed mitigation techniques. Moreover, by defining watersheds in such a way as to minimize the effects of the ROW, the authors have defied NEPA guidance concerning significance as a contextual judgment. The DEIS has also omitted discussion of a major analytic report submitted by a professional geologist on behalf of Indian Creek Watershed Association on significant impacts to watersheds in Summers County and Monroe County, West Virginia. In doing so, they fail to treat of critical data on impacts to First Order Streams and the movement of groundwater in Summers and Monroe counties. We request an extensive and thorough revision of the DEIS to accommodate the necessary corrections, and we require that FERC register the original submission of the report by Pamela Dodds as an integral part of the present comment: [“Hydrogeological Assessment of Watershed Impacts Caused by Constructing the Mountain Valley Gas Pipeline Through Summers and Monroe Counties, West Virginia.” Pamela C. Dodds, Ph.D., August 2016. \[Accession # 20160815-5135, Docket # CP16-10-000\].](#)

IND321-2

### Incomplete Records of Data

IND321-3

As pointed out in several previous comments, FERC staff have allowed the DEIS to go forward without any record of significant data on a number of important issues affecting water resources. The agency allowed MVP a deadline past the publication date of the DEIS to submit a revised estimate of scour depths without which no one could predict the depth at which the line must be buried at major stream crossings—a critical issue in light of severe flooding at these sites, well documented in the Docket by experts and citizens. Despite numerous requests, the DEIS has no information concerning sedimentation impacts on streams outside the Jefferson National Forest. Moreover, there is no discussion of the relevant research establishing the effectiveness of the mitigation strategies used by the agency to declare all

IND321-1

Water resources are discussed in section 4.3 of the EIS. See the response to comment CO99-39 regarding the scour analysis. A revised discussion of sedimentation and turbidity can be found in section 4.3 of this final EIS.

IND321-2

See the response to CO34-1 regarding hydrogeologic studies.

IND321-3

See the response to comment FA11-2 regarding pending information in the draft EIS. The EIS concludes that impacts on water sources would be temporary or short-term, and would be mitigated to not be significant. See response to comment IND295-1 regarding temporary stream impacts.

# INDIVIDUALS

## IND321 – Thomas Bouldin

20161207-5092 FERC PDF (Unofficial) 12/7/2016 1:05:05 PM

IND321-3  
cont'd

stream impacts temporary and insignificant. A considerable body of data describing stream impacts is needed—given the obvious fact that such effects as clearing for the ROW are permanent impacts, and other impacts such as clearing for the construction easements in riparian areas will take many years to repair.

### DEIS' Problematic Definition of Watersheds

IND321-4

NEPA §1508.27 requires that significance be construed to reflect the actual contexts in which the evaluated action takes place:

“This means that the significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole.”

When the authors of the DEIS chose to delineate watersheds in the broadest possible terms by scaling to the HUC 10 classification, they effectively undermined any understanding of the impacts of construction to local water resources. This strategy makes it appear that the project would have minimal impacts.

On page 4—476 of the DEIS the authors attempt to justify this decision that effectively minimizes estimates of impacts to watersheds: “The relatively large geographic scopes of analysis utilized herein such as HUC 10 watersheds and AQCRs were based on scaling to the relatively large size of the two projects, which extend for a combined 309 miles of new pipeline across three states (Pennsylvania, West Virginia, and Virginia).” The DEIS goes on to say that “The 33 HUC10 watersheds (one is shared between the projects) represent a combined total 4,557,727 acres. The MVP and the EEP account for about 6,533 acres of impacts (0.1 percent) of these watersheds.” Please note that the reported overall percentage is so low only because the total watershed area selected for the DEIS schema is so large: the MVP route is not in meaningful proximity to most of the 4.5+ million acres listed, or to the majority of streams flowing through those acres.

**One aspect of this problem involves the DEIS decision to treat of MVP and EEP together. This effectively expands the total watershed acreage by about 1,124,278 acres, although EEP affects only 127.1 acres in the combined watersheds. As noted below, we have serious reservations about asserting that acreage affected is a valid indicator of impacts to streams, but the effect of overly-expanded definitions of a watershed is an important illustration of the need for caution in accepting DEIS statements at face value.**

The effect of the generalization is clear when looking at the Table 4.13.1—1 (pg. 4-477 ff). Here, the HUC 10 watersheds are displayed in individual terms—and in many cases the percentage of impact is dramatically greater: For Hominy Creek in Nicholas County, the total area is 66,041 acres—while, as best I can calculate, the percentage of impact is five times

IND321-4

Streams and watersheds are discussed extensively in section 4.3 of the EIS and in appendix F.

# INDIVIDUALS

## IND321 – Thomas Bouldin

20161207-5092 FERC PDF (Unofficial) 12/7/2016 1:05:05 PM

IND321-4  
cont'd

greater than the average. And, in fact, 17 of the 33 watersheds suffer between 2 and 6 times that 'average'. **The strategy is clear: to minimize the appearance of (and thereby trivialize) relative impacts, expand the definition of the watershed.**

The effect is even more pronounced if the most local delineation of the watershed is the focus of concern (as it should be in any consideration of the significance of real-world impacts). For instance, a glance at the maps of the HUC 10 Indian Creek Watershed (on pages 4—486 and 487) shows that this sub-watershed includes not just Indian Creek, but also a number of tributaries such as Hans Creek (which is crossed multiple times). A more detailed and complete map would reveal that there are numerous other tributaries to Indian Creek which are not affected at all by the proposed route. An accurate appraisal of impacts at the local level (where in fact the 'action' is occurring and entails impacts of the most damaging sort) will require an analysis of the crossings of Hans Creek and the acreage of that watershed, and a comparable analysis of the acreage along Indian Creek itself that is affected. These effects can then be tallied and an overall assessment can be undertaken. **This is a specific example of a "case of a site-specific action, [for which] significance would usually depend upon the effects in the locale rather than in the world as a whole." NEPA §1508.27**

IND321-5

The authors of the DEIS have another strategy for minimizing reported impacts: as in the passage quoted from pg. 4—476, they discuss the percentage of a watershed's acreage affected as proof of a minimal impact. But the impact of concern is not simply a question of the acreage involved: it is a question of construction violence to the riparian environment—the trenching, the blasting, and the clearing of bankside vegetation. The cumulative impacts on streams are generated in large part by the multiple crossings of mainstem streams and their tributaries. The Table of Waterbody Crossings in DEIS Appendix F registers a total of seven crossings of Indian Creek and five of its tributaries. The Table also records a total of 26 crossings of Hans Creek (involving 16 tributaries and 3 crossings of Hans Creek itself—all taking place within a 4-mile stretch between MP 183.1 and MP 187). By obscuring these collective impacts in favor of a report of acreage affected, the authors effectively misrepresent the actual potential damage to area water resources.

### Dismissing the Importance of First Order Streams

IND321-6

The FERC environmental contractors and staff have used very similar strategies in avoiding discussion of the effects of the pipeline on first order streams within the counties crossed by the project. On page 4—112 of the DEIS, where they discuss potential impacts on water resources, the DEIS writers remark: "We received a comment regarding potential project-related impacts associated with the crossing of first order streams. *(And then follows a textbook definition of such streams:)* "A first-order stream is the source (or headwaters) of a waterbody; the order level increases (i.e., second-order, third-order, etc.) downstream at each confluence with another waterbody (Strahler, 1952). The applicants would minimize impacts on first order streams by adhering to the Mountain Valley [...] procedures."

IND321-5

See the response to IND321-4.

IND321-6

See the response to IND321-4. We have decades of extensive experience observing and assessing pipeline construction and restoration using the mitigation measures outlined in our Plan and Procedures.

# INDIVIDUALS

## IND321 – Thomas Bouldin

20161207-5092 FERC PDF (Unofficial) 12/7/2016 1:05:05 PM

IND321-6  
cont'd

We wish to make a number of points about this passage. First of all, we know of only one submission to the Docket that uses the terminology of "first order streams". An extended treatment of the significance of first order streams within a watershed appears in the report by Dr. Pamela Dodds referred to earlier in this comment. Dr. Dodds' professional expertise as a consultant includes conducting hydrogeological assessment reports, serving as an expert witness in hydrology before the West Virginia Environmental Quality Board and the West Virginia Public Service Commission, and providing numerous presentations and workshops in hydrology to state and federal environmental employees. She has also served as District Geologist for the Virginia Department of Transportation and as Senior Geologist for the Virginia Department of Environmental Quality.

Given that the DEIS has utterly refused to deal with the substance of her report, we are insisting that the original submission be added to the present document as an appendix and that it be made a part of the record of comments on the DEIS. We also respectfully request that the EPA, WVDEP, and VADEQ refer to this study for an in-depth analysis of the significance of first-order streams to a watershed and as a well-documented assessment of potential threats to the local watersheds crossed by the MVP throughout the proposed route.

Dr. Dodds' study details a number of significant impacts of the MVP on water resources throughout Summers and Monroe Counties and analyzes the potential damage from the point of view of hydrological science. Not only does the DEIS' refuse to acknowledge as significant the issue of impacts to first order streams, we are distressed to see that the DEIS has presented absolutely no data on potential impacts, no analysis of the number of such streams endangered, and no description of the crossing lengths or crossing geometry of these streams. Indeed, it appears from many documents in the Docket that FERC has not even requested such data be produced by MVP: requests for detailed information on crossing sites have been largely confined to major or intermediate streams—which, of course, are larger and therefore more visible to scrutiny. The important issue here is that construction and maintenance activity that impacts first order streams can significantly impact the life, health and viability of intermediate and major streams. Within FERC's schema, most headwater (first order) streams are too small to figure in the requirement that impacts be noted, though it is these streams which provide the biological nourishment and stability for the 2<sup>nd</sup> and 3<sup>rd</sup> order streams into which they flow. This is a serious flaw, but one that serves well to obscure significant impacts to the local watersheds through which the MVP would be constructed.

Once again the authors of the DEIS have found ways to avoid detailing impacts predictably entailed by the construction of the pipeline. We note in this regard that the writers have not established any empirical basis for their confidence that MVP's "procedures" will be successful. Since the DEIS does not describe the number of crossings of first order streams—or provide any other relevant data about them—it is unclear what could possibly justify such a positive

# INDIVIDUALS

## IND321 – Thomas Bouldin

20161207-5092 FERC PDF (Unofficial) 12/7/2016 1:05:05 PM

IND321-6  
cont'd

appraisal of mitigation effects for which the FERC does not present any research that would assess or measure effectiveness.

### CONCLUSION

We request that FERC immediately begin the processes of revising and correcting the DEIS in relation to the issue of impacts on water resources: The results of requests for scour depth and other information on perennial waterbodies must be assembled and released for evaluation by the public and by cooperating agencies as soon as possible, together with a revised table of waterbody crossings that clarifies which entries actually cross the waterbody identified.

This material should be accompanied by a full-scale study of impacts to first order streams along the route that includes at least the following data:

- Number, size, and location of all first order streams and functionally-related seeps, fractures, or springs;
- length and character of any crossing or intrusions proposed for each stream;
- Depth of excavation and blasting required for installation of the ROW, and extent of grading/excavation for non-ROW sites (if this is not relayed in previous entry);
- Mapping that reveals any interconnections between tributaries to a common mainstem and reveals all possible cumulative impacts.

These revisions must include some account of cumulative impacts within local watersheds reflecting the structure of intersections among streams in the immediate locale of crossings where the impacts are sited. As noted in a previous comment (Docket # CP16-10, Document #20161128-5167), there are at least 61 such stream complexes along the route as described in the DEIS Appendix F-1 listings. Maps and tables should be developed identifying the structure of each watershed, the specific crossings and/or intrusions affecting the streams, and significant aspects of the context of each crossing such as slope steepness, soil composition, and known flooding patterns.

Another addition to the discussion of impacts on water resources is a detailed discussion of mitigation techniques and full discussions of their measured effectiveness in preventing negative impacts to water resources (including but not limited to increased turbidity and sedimentation, thermal damage, and destruction of riparian forests) and in restoring riparian habitat.

Finally, because Dr. Dodds' study is an integral part of this comment, we ask that it be re-entered into Docket # CP16-10-000 as a comment requiring response in the final EIS.

Respectfully submitted,

Thomas Bouldin and Susan Bouldin  
Pence Springs, West Virginia

# INDIVIDUALS

## IND321 – Thomas Bouldin

20161207-5092 FERC PDF (Unofficial) 12/7/2016 1:05:05 PM

Cc:

Ted Boling, Associate Director for NEPA, Council on Environmental Quality  
Barbara Rudnick, NEPA Team Leader, U.S. EPA, Region 3  
Jon Capacasa, Director, Water Protection Division, U.S. EPA Region 3  
Joby Timm, Forest Supervisor, George Washington and Jefferson National Forests  
Jennifer Adams, Special Project Coordinator, Jefferson National Forest, Region 8  
Ginger Mullins, Chief, Regulatory Division, Huntington District, USACE  
Michael Hatten, Regulatory Division, Huntington District, USACE  
Scott Mandirola, Division Director, Water and Waste Management, WVDEP  
Wilma Reip, Manager, 401 Certification Program, WVDEP  
Ben Lockett, Senior Staff Attorney, Appalachian Mountain Advocates

# INDIVIDUALS

## IND322 – Judy Sink

20161207-0011 FERC PDF (Unofficial) 12/07/2016

DEIS/MVP # CP 16-10-000  
EQUITRANS # CP 16-13-000

CONFIDENTIAL

FERC members,

IND322-1

Where does one begin with concerns when you know in your heart that these comments will be tossed aside and ignored? It must be nice to have heart so cold that nothing phases you. But let me state my concerns anyway.

Mountain Valley Pipeline will have no economic benefit to Franklin County and its residents. The only ones that will benefit will be the investors of MVP and EQT. You have stated it will bring jobs and tax revenue. How so? The jobs MVP say this monster will bring around 4,000 jobs. About 1/3 of those jobs will be taken by union workers from the pipeline itself. Do you really think members of the community will be able to obtain jobs with the pipeline? Do you think the union workers will allow non-union persons on the job site? I highly doubt it.

IND322-2

This monster's only job is to destroy acres of farmland, working farms, homes, families, churches and in some areas, the entire community. The land will be polluted with harsh chemicals from the drills, fuel from the large machines, no longer to be useable for farming, crops, livestock or human habitation.

The freshwater streams and rivers will also be contaminated killing any aquatic ecosystems living there, even the little snail darter, which by the way is on the endangered list. These streams and rivers provide food, water, shelter for the animals and the aquatic life in the area.

Our wells will be contaminated. No longer will we be able to survive on our small parcel of land without fresh, pure clean water to drink. But there again, what do you care? It doesn't affect you and you could care less who or what this contamination does affect. That is just plain cold hearted.

IND322-3

The air we all breathe will be compromised by the toxic fumes from the heavy equipment and the fumes from the pipeline itself. Are you aware that a person who lives near a pipeline has more health issues than those who do not? Are you willing to take responsibility for those health issues? And you are asking why not move? Most of us cannot afford to go in debt for another home.

IND322-4

Tourists that currently visit our beautiful county will not want to bring their families to visit the tourist sites because of the dangers this line will cause. Would you bring your children to visit, play in an area that has so much toxicity to offer? As parents and grandparents, I would not and will not expose my children and grandchildren to the dangers this pipeline poses. NO not poses, WILL bring.

IND322-5

The land acquisitions persons you have working for you are some of the most unscrupulous persons my husband and I have every dealt with. They lie, misconstrue, and pressure persons they have been assigned to contact. Of course those are the ones you want to work for you, right? Well in this part of the country that behavior is unacceptable.

By the way, my husband and I told MS. Ozee that MVP could buy the whole 5 acres and they would not have to worry about us being a thorn in their side, but she said you all were not interested.

With regards to the easements, how can it be legal or morally right for MVP to own part of our property but we still have to pay the taxes? There is just something not quite right about this.

JUDY SINK

RECEIVED  
DEC 7 11:23 AM '16  
COMMUNICATIONS SECTION

IND322-1

See the response to comment CO2-1 regarding benefits of the proposed projects. Section 4.9 of the EIS provides a discussion of jobs. See also the response to comment IND191-3 regarding local jobs.

IND322-2

See the response to comment IND36-2 regarding farming. Fuel, oil, and biocide are the chemicals that would be used during construction of the pipeline. See the response to comment CO14-3 regarding spills. Impacts on streams and wells were addressed in section 4.3 of the draft EIS.

IND322-3

Air quality was addressed in section 4.11 of the EIS. The potential health effects regarding methane are discussed in section 4.12 of the EIS.

IND322-4

Tourism would not be adversely impacted, as explained in section 4.9 of the EIS.

IND322-5

The land acquisition personnel work for Mountain Valley and Equitrans rather than the FERC. The FERC expects applicants to enter into good faith negotiations with all landowners.

# INDIVIDUALS

IND322 – Judy Sink

20161207-0011 FERC PDF (Unofficial) 12/07/2016

IND322-6

Property values not affected or going up? Property values will go down. There is no way that this monster will cause the value of our property to go up or even stay the same. Let me ask you a question..would you want to live in a home less than 300 feet from a 42 inch natural gas line knowing that you would be living in the blast zone, knowing that it would mean instant incineration when this monster decides to blow? And it will blow as we have seen in the last couple of days. IF truth be told, your answer would be no. So why put us in that scenario?

There is no good that will come from this pipeline only devastation. There is a more direct route that would have less devastation and would be more cost effective but MVP refuses to look at or even consider it. Must be really nice to have 3.5 billion dollars just lying around gathering dust.

Please reconsider sending this horrible creature through our beautiful county. There is a saying, What goes around, comes around... your "what" will not be *for away!*

*Judy Sink*  
1881 Brick Church Rd  
Rocky Mount, VA 24151  
776-340-8902  
jsink77@gmail.com

**Kimberly D. Bose, Secretary  
Federal Energy Regulatory  
Commission  
888 First Street NE, Room 1 A  
Washington, DC 20436**

**RE: Draft Environmental Impact Statement for  
the Mountain Valley Pipeline (Docket No.  
CP16-10-000) and Equitrans Project (Docket  
No. CP16-13-000)**

IND322-6

See the response to comment IND12-1 regarding property values.



# INDIVIDUALS

## IND323 – Individual

20161207-0014 FERC PDF (Unofficial) 12/07/2016

This is a form letter. 36 copies of this letter have been submitted.

November 2, 2016

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

FILED  
 SECRETARY OF THE  
 COMMISSION  
 2016 DEC -7 A 11: 22  
 FEDERAL ENERGY  
 REGULATORY COMMISSION

**Re: Draft Environmental Impact Statement for the Mountain Valley Pipeline (Docket No. CP16-10-000) and Equitrans Expansion Project (Docket No. CP16-13-000)**

Dear Secretary Bose:

As a concerned citizen of Franklin County, I am hereby submitting my comments, as checked, regarding the subject document.

IND323-1

CHECK	ISSUE	Brief Description
✓		
1		
2		
3		
4		
5		
6		
7		
8	Alternative Approaches	"Without assessing the need for the project in the DEIS, FERC undermines the development of alternatives to the proposed project, which is a "critical component of the NEPA process by FERC."
9	Economic	The DEIS ignores key economic costs to the citizens affected by the MVP such as repairs to structures, wells, septic systems, crop and animal water, etc.
10	Economic	The DEIS ignores key economic costs to the citizens and local economies of the counties affected by the MVP in the form of increased taxes to pay for repair infrastructure structures such as roads, water supplies, economic erosion and other destructive ramifications.

IND323-2

Kimberly D. Bose, Secretary

Page - 1

November 2, 2016

IND323-1

See the response to comment FA11-12 regarding need.

IND323-2

Section 4.9 of the EIS clearly states that the Applicants would pay for damages to structures, wells, crops, etc. Section 4.9 further states that the projects would generate taxes and increase local revenues, thus having economic benefits for the region. See also the response to comment CO2-1 regarding benefits. See the response to comment IND288-3 regarding road damage.

Visual impacts are addressed in section 4.8 of the EIS. See the response to comment IND12-1 regarding property values. As stated in section 4.3 of the EIS, the Applicants would be responsible for damaged water wells within 150 feet (500 feet in karst) of the projects.

# INDIVIDUALS

## IND323 – Individual

20161207-0014 FERC PDF (Unofficial) 12/07/2016

CHECK	ISSUE	Brief Description
IND323-2 cont'd	✓ 11	Economic Economic comparisons do not take into consideration how Destroyed View Sheds will decrease property values.
	12	Economic Economic comparisons do not take into consideration the proven decreases in property values.
	13	Economic Insufficient consideration of the cost to the public to rectify County Road damage.
	14	Economic Insufficient details as to the remedial responsibility for the correction of damage to wells and Septic Systems during the construction of the MVP.
IND323-3	15	Environmental FERC has failed to consider potential cumulative impacts of induced fracking.
IND323-4	16	Environmental River Crossings not adequately planned.
	17	Environmental Effect on Wetland Crossings not sufficiently assessed nor information provided to FERC in order for FERC to make an informed decision
IND323-5	18	Environmental Drinking Water Resources not identified therefore impact of blasting and other construction techniques not provided to FERC as required.
	19	Environmental Aquatic Resources - MVP has not submitted the results of their analysis on sedimentation and turbidity from wet crossings.
IND323-6	20	Environmental Geology - Results of a study to determine the interconnection between karst and water resources has not been completed. FERC must issue a supplemental EIS with the final route and the study results before concluding that the pipeline construction will not significantly impact karst geology.
IND323-7	21	Environmental Soils - The DEIS states that 78% of the pipeline route is highly susceptible to landslides; however, MVP has not supplied a detailed <i>Landslide Mitigation Plan</i> . This information MUST be included in a supplemental EIS.
IND323-8	22	Environmental FERC has not demonstrated a need for the Pipeline
	23	Environmental The DEIS lacks critical environmental information

IND323-3 No “fracking” would be induced by the projects as stated in section 1.3 of the EIS. See also the response to comment IND2-3 regarding hydraulic fracturing.

IND323-4 River crossings are addressed in section 4.3.2 of the EIS. Wetland crossings are addressed in section 4.3.3 of the EIS.

IND323-5 Section 4.3 of the EIS discusses potential impacts on drinking water sources. Aquatic resources are discussed in section 4.6 of the EIS.

IND323-6 Karst is addressed in section 4.1 of the EIS.

IND323-7 Soils are discussed in section 4.2 of the EIS. As listed in table 2.4-2 of the EIS, Mountain Valley provided a draft Landslide Mitigation Plan for which the FERC recommended revisions. Mountain Valley provided a revised Landslide Mitigation Plan to the FERC in March 2017. Section 4.1 of the final EIS has been updated to discuss the revised plan.

IND323-8 See the response to comment FA11-12 regarding need. See the response to comment FA11-2 regarding preparation of the draft EIS.

# INDIVIDUALS

## IND323 – Individual

20161207-0014 FERC PDF (Unofficial) 12/07/2016

CHECK	ISSUE	Brief Description
✓		
24	Environmental	FERC has failed to assess cumulative life cycle climate impacts
25	Environmental	Legal requirement for a Revised or Supplemental Environmental Impact Statement  Numerouse legal references are made in Letter submitted to Kimberly D. Bose, Secretary on October 19, 2016 on behalf of Allegheny Defense Project and 19 official organizations.
26	Environmental	Lack of Relevant Environmental Information (1) Air, Water and Erosion Environmental Impacts
27	Environmental	Lack of Relevant Environmental Information (2) as noted by The Forest Service and other Federal and State stakeholders
28	Environmental	Insufficient information provided to assess the potential of critical Watershed damage and destruction.
29	Environmental	Insufficient information provided to demonstrate mitigation of Rocky Mountain Water Supply pollution potential.
30	Environmental	Insufficient information provided to demonstrate that Smith Mountain Lake sedimentation and pollution potential impact will be mitigated.
31	FERC Process	FERC must analyze and discuss the purported need for the MVP Project in the DEIS.
32	Incomplete Information	A myriad of critical information which appear not to be provided prior to either the end of the DEIS review and/or until <i>after</i> the certificate is issued.
33	Misleading Information	Easement Agreement Representatives using false information and scare tactics to coerce people into signing Easement Agreements prior to FERC issuing the official permit.
34	Misleading Information	False positioning of Eminent Domain procedures.
35	Public Safety	Insufficient Law Enforcement / Rescue resources assessments
36	Public Safety	Insufficient assessment of whether or not there ae sufficient water resources to manage potential fires either during construction and/or production periods.

IND323-9

IND323-10

IND323-11

IND323-12

IND323-13

IND323-9 Cumulative impacts and climate change are discussed in section 4.13 of the EIS.

IND323-10 There is no legal requirement for a supplemental EIS. However, the FERC produced a final EIS. See also the response to comment FA11-2 regarding preparation of the draft EIS. The EIS provides relevant environmental information about air quality in section 4.11, water in section 4.3, and erosion controls in section 2. The FS is a cooperating agency and assisted in preparation of the EIS. Watersheds are discussed in section 4.3 of the EIS. Domestic water supplies are discussed in section 4.3 of the EIS. See the responses to letter CO14 regarding Smith Mountain Lake.

IND323-11 See the response to comment FA11-12 regarding need.

IND323-12 See the response to comment CO5-1 regarding pending information in the draft EIS. The FERC expects applicants to enter into good faith negotiations with all landowners. For more information on eminent domain, see sections 1.3 and 4.9 of the EIS.

IND323-13 See the response to comment IND2-1 regarding safety. See the response to IND285-1 regarding water usage. Terrorism is discussed in section 4.12 of the EIS.

# INDIVIDUALS

## IND323 – Individual

IND323-13  
cont'd

CHECK	ISSUE	Brief Description
37 ✓	Public Safety	Insufficient information detailing the potential depletion of water resources for pipeline construction and testing purposes
38	Public Safety	Significant percentage (40%+) of County within heavy Blast / Evacuation Area Designations. Insufficient information as to plans and costs for managing potential disaster situations.
39	Public Safety	Increased danger of terrorist activity in the form of attacking the pipeline and causing severe damage to human and environmental elements are not addressed at all in the DEIS.

For the reasons outlined in this letter and those documents included by reference, FERC must prepare a Revised or Supplemental DEIS that corrects the significant deficiencies in the DEIS and the way MVP is conducting its business with the citizens of the affected areas.

Respectfully,

\_\_\_\_\_  
Signature

First Name	Last Name
Street Address	Street Address
City	State
ZIP	Email
Phone	

# INDIVIDUALS

## IND324 – Nan Gray

20161207-5185 FERC PDF (Unofficial) 12/7/2016 4:25:06 PM

IND324-1 Nan Gray, Newport, VA.  
Forest Service Staff have identified that MVP application and DEIS findings are inconclusive and need to be reorganized and resubmitted. I agree with the Forest Service. I also want the MVP documents to be better organized. Further, I prefer the entire application be denied and for the "No Action" alternative be issued.

IND324-1 The FS is a cooperating agency that assisted in the production of the EIS. The final EIS organizes data filed by Mountain Valley into resource topics. Section 3 discusses the No Action Alternative.

# INDIVIDUALS

## IND325 – Nan Gray

20161207-5186 FERC PDF (Unofficial) 12/7/2016 3:54:00 PM

1

**OEP/DG2E/GAS 3**  
**Mountain Valley Pipeline IIc**  
**Docket No. CP16-10-000**  
**Equitrans LP**  
**Docket No. CP16-13-000**

IND  
325-1

Regarding the application of Mountain Valley Pipeline to cross Forest Service and Private lands with a 42" pipeline. The areas highlighted in this guide lie within the proposed pipeline routes and/or would be impacted by the construction of a pipeline. This whole area should be designated as a National **do-not-construct zone** due to the findings of select water, soil and geology properties investigated in this report.

IND325-1

The EIS addresses wetlands in section 4.3.

### **Damplands, Intermittently Wet Lands and Wetlands of the Valley and Ridge Province of Southwest Virginia**

Nan Gray, Soil Scientist

#### **Executive Summary:**

- 1) Wilderness and undisturbed areas enhance the physical stability of an environment to be able to tolerate more rainfall and disperse water more slowly, lessening erosion, lessening infilling of sediments and decreasing the risks of water contamination by decreasing erosion and mass wasting
- 2) Influences of population pressure will continue to effect erosion into all damplands, wet lands and intermittently wet lands unless adequate buffers such as "No-Build-Zones" are created
- 3) Geologic Power will change a stable landscape and the Saltville Fault is still active (as of 2011)
- 4) Periglacial influences are considered here to extend to the Sinking Creek Valley as one long periglacial lake, during the last ice age – which affects our water now
- 5) Siliceous fragipans and Calcareous fragipans (here) impact water movement through the soil profile
- 6) Episodic migration of alluvial and saturated debris flow material is presented
- 7) Steep mountain slopes erode for many reasons
- 8) John's Creek Valley and Craig's Creek Valley have evidence of weakly cemented, deep, sorted, thixotropic, peri-fragic, episodic, epi-migrating deposits that may have ice-dam, peri-glacial periodicity
- 9) Humans need clean fresh water
- 10) If ever there was a finger to protect, it is the finger of the Sinking Creek Valley of Craig County, Virginia and all of the surrounding mountains of the Great Eastern Continental Divide
- 11) Sinking Creek Valley stores cool, clean, fresh, free-flowing, natural water, underground, free; there are more miles of the Great Eastern Continental Divide source water in Craig County than any other county in the Commonwealth of Virginia. Our common wealth is fresh water.
- 12) Protect the Source waters that are still clean.
- 13) Deny MVP Application and Project as an inappropriate land use for the routes proposed.
- 14) Designate this region a "NO-BUILD-ZONE" buffer due to the high risk of damaging clean water here.

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FERC Docket # CP16-10-000

## Damplands, Intermittently Wet Lands and Wetlands of the Valley and Ridge Province of Southwest Virginia

Nan Gray



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### **Damplands, Intermittently Wet Lands and Wetlands of the Valley and Ridge Province of Southwest Virginia**

by Nan Gray

Cover: Looking south to Sinking Creek Mountain from the high quarry on Pine Top anticline. Craig's Creek enters from the distant left side of the photograph, John's Creek from the distant right and Meadow Creek tumbles down the Sinking Creek Mountain in the middle right of the photo. High silica, friable Rocky Gap Sandstone and more recent water-borne deposits are mined northeast of New Castle, Virginia at Castle Sands Company Quarry by Titan America (photo by author). Several braided, mosaic water-borne deposits, red and reddish-brown clay rich lenses, bedrock and independent lithologies of large competent rock units and single grain sorted friable sandstone of minimal competence are in the picture above.

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Copies of this Guidebook may be obtained by contacting the author

Nan Gray  
Soil Works, Inc.  
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Newport, VA 24128

Presented as the The Southeastern Friends of the Pleistocene (SEFOP) Annual Field Excursion for 2015

Updated Publication, Third version date: 6 December 2016      Published by Soil Works Inc., Newport, VA

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## **Damplands, Intermittently Wet Lands and Wetlands of the Valley and Ridge Province of Southwest Virginia**

Nan Gray



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### Damplands, Intermittently Wet Lands and Wetlands of the Valley and Ridge Province of Southwest Virginia

#### Purpose and Site Descriptions

The purpose of this field excursion is to showcase the variety of ecosystems, explore the soils and surface processes and their relationships to landscape evolution in this part of the World. We begin the story with where our area of interest is now in the Appalachian Mountains. The Sinking Creek Anticline and surrounding area of Craig County are near a pivot point (west of a radial shear zone) in the Valley and Ridge Province of southwest Virginia. The deep old rocks are broken sedimentary Cambrian to Silurian-Devonian age and are exposed here. The metamorphic rocks of the Blue Ridge Province lie farther to the east and the Appalachian Plateau is to the west of the Valley and Ridge Province. Notice the gradient flow and land extension east-southeast to the Chesapeake Bay and Atlantic Ocean. Notice the land extension to the west, where the water flows, ultimately, to the Gulf of Mexico (Figure 1). Our mountainous watershed study areas are at this part of the Great Eastern Continental Divide, in beautiful Craig County, Virginia, United States of America.

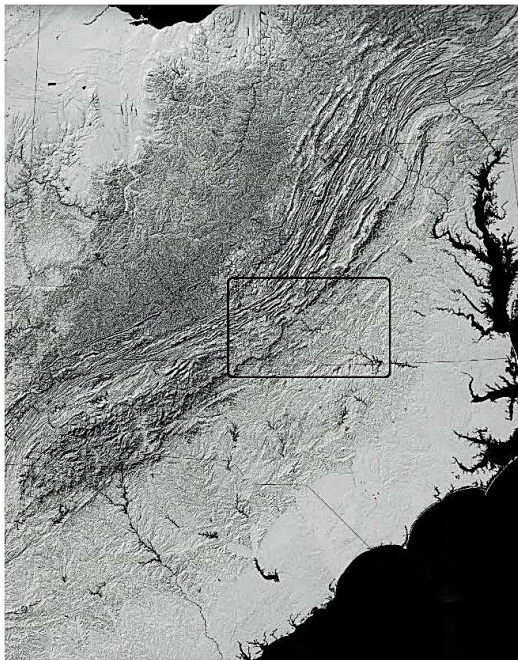


Figure 1. The Appalachian Mountains of eastern United States of America. (Morin, 2006). Inset shows Sinking Creek Mountain anticline in middle northwest corner. The folds and faults of Sinking Creek Valley in Craig County, Virginia are easily traced by the high ridgelines that define the Great Eastern Continental Divide of waters that flow to the east or to the west. Craig County has more miles of source water watershed devoted to the Great Eastern Continental Divide than any other county in the Commonwealth. The water divide's long loop of the Sinking Creek Valley extends into Giles County. To the west, it borders John's Creek Mountain and Potts Mountain; to the east, the continental divide of water follows Brush Mountain of Montgomery and Roanoke Counties, Virginia.

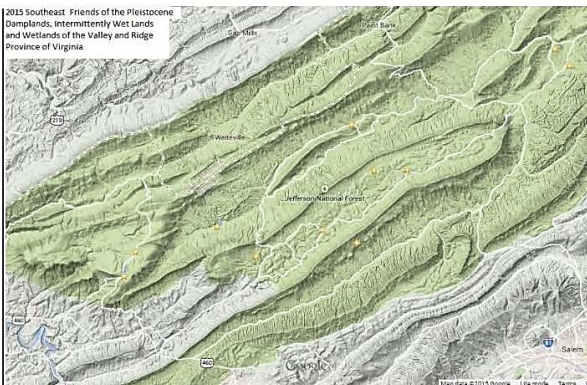


Figure 2. Sinking Creek Mountain (east side of anticline loop) of Craig County in the Valley and Ridge Province of the Appalachian Mountains of southwest Virginia (Google Map, 2015). The general topography and transect stars (yellow) shape of the basis of the water story in this region.

Sinking Creek Valley of Craig County is a folded, breached anticline with a northeast-southwest trending axis that lies in the southern section to the Valley and Ridge Province (Figure 2). This broad, raised valley has an intermediate climate between the higher, colder land of Mountain Lake (west) and the lower elevation, warmer Craig's Creek Valley to the east and New Castle to the north. The western ridge of the breached anticline is named John's Creek Mountain and the creek to the west of that is John's Creek of John's Creek Valley. The western end of John's Creek Valley is narrow and V-shaped, which Mills (1988) considered filled with finer, smaller rock material than what is deposited in a broad valley. The eastern ridge of the broad valley is Sinking Creek Mountain. We shall consider the long axis transect and an east-west transect from Huckleberry Knob to Mountain Lake.

The two western most stars are Mountain Lake and the Mountain Lake Biological Station where periglacial features of evidence were presented in the 1989 SEFOP. The highest point in this area is approximately 4363 feet. Mountain Lake is 3875 feet above sea level. The two northeast stars of Figure 2, are Castle Sands Company Quarry and Virginia Mineral Springs at the lowest elevations on our tour, and flowing away to the east.

### Geology

#### Introduction

The Sinking Creek Valley is a unique geologic feature, one of two raised valleys in this province. The other perched valley is Burke's Garden in Tazewell County, Virginia. Burke's Garden shares many karstic and wetland features with Sinking Creek Valley.

The termination of the Saltville Fault is in the Sinking Creek Anticline, where down faulting has left a wall hanging and tipped the shoulder of the landform down to a toe that reaches for New Castle; or, a fingertip pointing to another, smaller anticline northeast of New Castle. The smaller anticline, broken but unbreached, underlies sand worth digging.

Hard sandstones armor and cap the mountain ridges. Remnants of those sandstones compose the alluvial fans in John's Creek and what we shall see in the lowlands' quarry. To the east, Craig's Creek Valley has large sandstone blocks that slid over sandstone and shale. The fluvial and alluvial deposits are reworked in Craig's Creek. Craig's Creek has enough force to move downstream boulders weighing more than 8 tons, just outside

Damplands, Intermittently Wet Lands and Wetlands of the Valley and Ridge Province of Southwest Virginia, Second Version. Nan Gray, © 2015 Soil Works, Inc.

# INDIVIDUALS

## IND325 – Nan Gray

IND325-1  
cont'd

of New Castle. They are rounded Devonian and Silurian shale and sandstone boulders. Shale beds are exposed in the creek.

Cambrian and Ordovician limestone valley exposed has grown clay as it has weathered over time (250+ million years). So we shall go from clay size to sand size to giant, rock-block slides on this transect, as we look through a "vertical" window of this anticline.

The Saltville Fault is one of the major structures of the Valley and Ridge Belt as a whole. Sinking Creek Valley is a southwesterly dipping anticline, eroded to the Cambrian formations. The fault runs all the way down the Sinking Creek Valley to Saltville, Virginia and extends to Alabama. Generally, the Saltville Fault juxtaposes the Cambrian Honaker Dolomite in the hanging wall against Devonian and Mississippian units of the Greendale Syncline in the footwall block (Webb et al, 2008).

The outside of the anticline consists of Silurian and Devonian age rocks that may be overlain by younger erosion deposits. The Pulaski Fault runs along Craig's Creek just east of Sinking Creek Mountain. We shall see ancient, giant rock-block slides on this side of the mountain. The Appalachian Trail is approximately 300 feet from the "knobs" we shall visit.

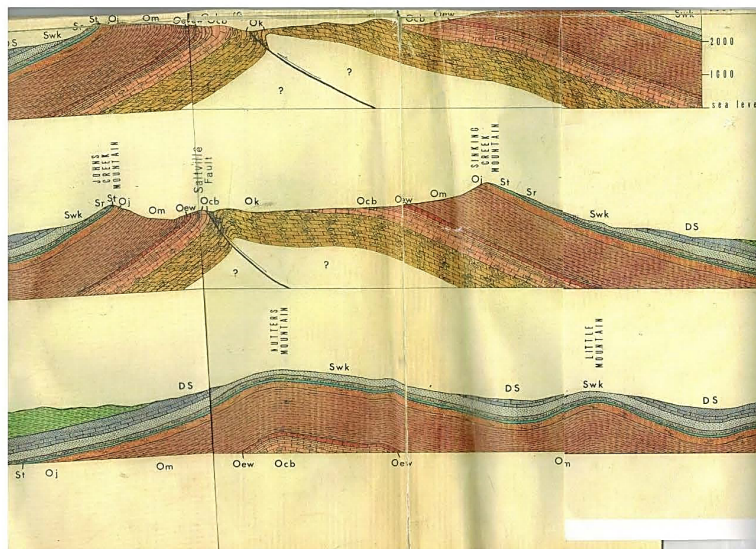


Figure 3. The anticlines of New Castle Area, Craig County, Virginia (Bregman, 1967) general geology, where Ds=Devonian Shale (Millboro and Needmore), DS=DevonianSilurian formations (Ridgely sandstone, Tonoloway limestone), Swk=(Keefer-Wills Creek sandstone, Sr=Rose Hill formation, St=Tuscarora Sandstone, Oj=Juniata formation, Om=Martinsburg/Reedsville formation, Oew= Eggleston formation, Ocb=Lincolnshire, Elway limestone, Ok=(upper) Knox dolomite; O= Ordovician (510+-435 my), S= Silurian (435-405 my), D= Devonian (405-350 my)

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cont'd

### Importance

Vastly different ages of exposed rock, created in various environments, sometimes mixed together or scalped away to someplace else and re-lithified, allow concentrations and depletions of minerals, water and nutrients to occur in this area of Virginia; everything connected by younger events and deposits. We know land changes up and down and sideways. Geologic Power can be matched by man and done so incrementally; however, the landscapes all require geologic time to stabilize internally. Geologic equilibrium is tentative, and so while we are waiting, let us enjoy some beauty and good water.

The location and orientation of Craig County's watersheds allow the water to be filtered by wilderness, trees and soils and channeled through our geology of karst, shales and episodic deposits of eroded sandstone from the upland. Craig County has unique, natural wetlands due to the local geology. The entire Sinking Creek Valley is karstic and stores water in addition to being a tributary to the New River (lower left corner of Figure 2). The area outside of the Sinking Creek Valley is underlain with shales, some of which outcrop or can be seen in road cuts. The soils and rocks shed from the mountains reveal a number of different environments and climates. Our soils and current climate are excellent for cultivation of asparagus and many other foods of plants and animals.

Here are distinct ecosystems, each with its own diverse biotic (soils, flora and fauna) and abiotic (rock) characteristics. This whole area contains a mixed deciduous, temperate peri-rainforest. Happy Hollow, alone, hosts native dogwood, hickory (shagbark and pignut), oak (northern red, scarlet, white), pine (Virginia and white), black locust (*Robinia pseudoacacia*) maples, hemlocks and walnuts, cherries, hawthorn, beech, elm, ash, tulip trees and sassafras. Mountain Lake, and in the highest elevations nearby, have spruce and hemlock. Craig's Creek is drier, warmer and more acidic environment than the limestone Sinking Creek Valley. John's Creek has the Endangered James Spiny mussel whose dependence on good, clean water is limited living on Earth to here.

This evolution of landforms and landscapes is significant today because the intermittent nature of relative stability means that humans may build dwellings or other permanent structures in terrestrial environments that change with hydrological, seismic or collapse phenomena, such as what is evident in the watersheds of this study.

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### Base camp:

Route 662 in Craig County is also called Happy Hollow Rd. The creek is mapped as "Little Creek".

Silver Lining Farm Coordinates

37° 22' 23.079"N

80° 23' 38.997"W

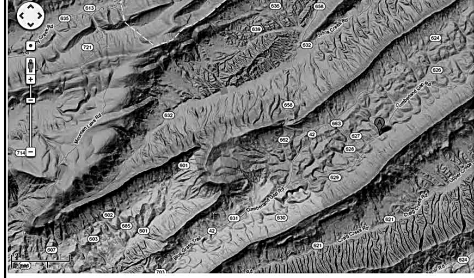


Figure 4. Google map of local roads we shall travel in Craig, Giles and Montgomery Counties, Virginia (Google Map, 2015). Rt. 662 is west of the "A" placemark. Where the map has 662 is where we begin, at Silver Lining Farm



### General story of Holocene field excursion sites

#### DAY 1 STOP 1: Base Camp

Silver Lining Farm contains well drained, deep and shallow soils derived from transported soils and pockets of residuum soils, held mostly in places where it did not erode. The soils are primarily loamy to silty loam in the upper horizons and grade to more clay in lower horizons. Soils are naturally high in calcium and magnesium from limestone and dolostone bedrock. The soils are Loamy to Clayey, mixed, mesic Typic Paleudults and cousins. Being a natural system and having anthropic influences the diversity of soils in this part of the World match the diversity of flora and fauna and abiotic geology. Even then, rock becomes soil, soil weathers physically and chemically to nourish all biotic, until it rests again in the soil.

Indian arrowheads of the Archaic age (9,000-3,000 years ago) work their way to the garden soil surface periodically. This field would have provided shelter and water and the hills above would have offered good lookout points for early people passing through the area on hunting expeditions. Sinking Creek Valley is a raised valley, prone to colder climate than the surrounding land. It was a great hunting ground, lush with many animals who might eat you during the last Ice Age, so Native Americans did not linger to build, but passed through the area. But people here would have been interacting and communicating with nearby Indian Tribes. Later, this land was hunting grounds for Cherokee and Monacan Tribes with an occasional raiding party of the Shawnee passing through this area (Eckhart, 2001).

The first white settlers came, stayed here (what is now Craig County) and recorded their deeds in the 1750's. The French and Indian Wars (1756-1763) pitted the expansion of the settlers against the Indians and their French backers. The Cumberland Gap Rd. (Route 42) was the front of the settler territory, to the west, wilderness and Indian Territory. Cumberland Gap Rd. was the main road to get to Cumberland Gap, Virginia-Tennessee. Ms. Olga Smith's house was built in the 1770's and has window slits in the basement (which would have been the whole house then) to ward off the Indians attacks. They shot guns through the window slits. We pass by the Cumberland Gap Rd. house on our tour. Several farms were given to soldiers or their families who served King George III, for which he awarded land grants in the 1770's (Johnston, et al, 2011)

The Happy Hollow is documented by oral and written family histories of Civil War Union General Averell and more than 2,000 troops retreating westward from Montgomery County (east of us) across Sinking Creek Mountain to Sinking Creek Valley, up Happy Hollow, across John's Creek Mountain and Potts Mountain on west to West Virginia. The creeks were swollen with rain. The retreating Yankees stopped here to rest a few hours, long enough for the local folks to call this Yankee Meadow. The farmhouse next door was used as a field hospital. The family who lived there put their daughter to bed as being sick. The daughter hid the jewelry and hams in bed with her (Johnston et al, 2010). Another neighbor was told by Grandparents that the Yankee solders showed good manners by asking permission before taking something, whether it was food or animals (Huffman, personal communication). The name Happy Hollow is primarily used, but Yankee Meadow is known here, as well.

Happy Hollow has been Happy Hollow for a long time. The James Echols Tannery tanyard of Happy Hollow began operation in the 1880's. It had a pond covering part of where our garden is now. The pond was drained by the 1940's (Johnston, personal communication). Soil cores taken during construction of an irrigation system revealed waterlogged soils of blue-green color. Soil analyses of our garden show soils to be high in calcium and magnesium with a neutral pH.