

From: Mountain Valley Watch (MVW)  
Kirk A Bowers, PE  
Autumn Crowe

To: West Virginia Department of Environmental Protection  
601 57th Street SE  
Charleston, WV 25304  
Attention: Jason Liddle

SUBJ: Mountain Valley Pipeline Stabilization  
Webster County, WV

To Whom This Concerns,

On July 7, 2020, a single engine plane flew a flight over the route of the Mountain Valley Pipeline (MVP) in West Virginia and Virginia. During the flight, the pilot captured several thousand aerial photos of the MVP under construction. Volunteers from the MVW recently reviewed thousands of aerial photos to determine the extent of bare unvegetated soil in the pipeline right of way.

Photo review of construction of the MVP revealed numerous areas of exposed soils with inadequate ground cover and stabilization measures to protect the bare soil from erosive forces. The table below lists photos with mile post location of areas with no or sparse grass growing in the pipeline right-of-way in Webster County, WV. Several of these areas are on steep slopes that show erosion occurring. Many of the bare soil areas are adjacent to stream crossings.

The links to the aerial photos are in the right hand column. Hold down Ctrl and click on the link in the link column to open the photo for review. The photos are High resolution photos and you can zoom in on specific areas to gain a close-up view of an area.

<b>Photo No.</b>	<b>Photo Mile post</b>	<b>Link to photos</b>
99	110.1	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0201.JPG">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0201.JPG</a>

<b>S13</b>		
4	109.9	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0205.JPG">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0205.JPG</a>
12	109.8	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0213.JPG">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0213.JPG</a>
18		<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0219.JPG">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0219.JPG</a>
63	107	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0264.JPG">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0264.JPG</a>
92	106.3	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0293.JPG">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0293.JPG</a>
96	106	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0297.JPG">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0297.JPG</a>
<b>S14</b>		
48	104.8	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0348.JPG">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0348.JPG</a>
54	104.3	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0354.JPG">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0354.JPG</a>
67	103.4	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0367.JPG">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0367.JPG</a>
78	101.9	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0378.JPG">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0378.JPG</a>
<b>S15</b>		
34	98.8	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0433.JPG">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0433.JPG</a>
48	98.9	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0433.JPG">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0433.JPG</a>
<b>S16</b>		
19	96.5	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0517.JPG">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0517.JPG</a>

24	95.5-95.0	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0522.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0522.J</a> PG
33	95.1	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0531.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0531.J</a> PG
49	94.4	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0547.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0547.J</a> PG
60	93	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0558.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0558.J</a> PG
78	92.4	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0576.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0576.J</a> PG
<b>S17</b>		
4	93.1	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0601.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0601.J</a> PG
12	91.5	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0609.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0609.J</a> PG
20	90.2	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0617.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0617.J</a> PG
64, 88	89.5	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0661.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0661.J</a> PG
88		<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0690.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0690.J</a> PG
<b>S18</b>		
37	86.4-85.8	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0733.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0733.J</a> PG
41	85.5-85.2	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0737.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0737.J</a> PG
47	87.3-86.8	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0743.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0743.J</a> PG
52		<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0748.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0748.J</a> PG

56		<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0752.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0752.J</a> <a href="#">PG</a>
80	85.7	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0776.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0776.J</a> <a href="#">PG</a>
87-96	86.1-86.7	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0792.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0792.J</a> <a href="#">PG</a>
		<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0789.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0789.J</a> <a href="#">PG</a>
		<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0784.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0784.J</a> <a href="#">PG</a>
<b>S19</b>		
15-40	85.2 - 85.7	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0822.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0822.J</a> <a href="#">PG</a>
		<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0828.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0828.J</a> <a href="#">PG</a>
60	84.2	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0855.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0855.J</a> <a href="#">PG</a>
62 - 69	84.2 - 84.5	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0863.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0863.J</a> <a href="#">PG</a>
<b>S20</b>		
28	82.4	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0922.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0922.J</a> <a href="#">PG</a>
35	82.6	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0929.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0929.J</a> <a href="#">PG</a>
38-40	82.6	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0932.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0932.J</a> <a href="#">PG</a>
47	81.7	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0941.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0941.J</a> <a href="#">PG</a>
57	80.2	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0951.J">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0951.J</a> <a href="#">PG</a>

99	78	<a href="http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0993.JPG">http://newrivergeographics.com/mvw/MVW20200708/101D5301/DSC_0993.JPG</a>
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In the West Virginia Erosion and Sediment Control Best Management Practice Manual (revised August 29, 2016), several regulatory elements required for construction projects described in the Handbook are:

**Element #4: Stabilize soils**

Exposed and unworked soils shall be stabilized by application of effective BMPs that protect the soil from the erosive forces of raindrops, flowing water, and wind. The General Permit requires that all graded areas that are at final grade must be seeded and mulched within 7 days and areas that will not be worked again for 21 days or more must be seeded and mulched within 7 days.

**Element #12: Stabilization**

The construction site should be stabilized as soon as possible after completion. Establishment of final cover must be initiated no later than 7 days after reaching final grade. Final stabilization means that all soil-disturbing activities are completed, and that either a permanent vegetative cover with a density of 70% or greater has been established or that the surface has been stabilized by hard cover such as pavement or buildings... It should be noted that the 70% requirement refers to the total area vegetated and not just a percent of the site.

**Areas shown in the aerial photos have less than 70% vegetative cover.** The majority of the photos show 0% vegetative cover at the photo location. These areas are susceptible to erosion as most of them are on mild to steep slopes. The time limit for establishment of vegetative cover on these areas has exceeded 6 months.

More than 6 months ago, Earthguard was applied to some areas along the right-of-way as a preventive measure to inhibit erosion sediment transport. The use of Earthguard is not a substitute for vegetative cover which is required by Best Management Practices.

A common method of providing vegetative cover during dormant phases in a construction project is shown in the WV Erosion Control Handbook under Standard **3.10 - TEMPORARY SEEDING**, which states that:

Temporary erosion control measures consist of seeding and mulching, or matting used to produce a quick ground cover to reduce erosion on exposed soils that may be redisturbed or permanently stabilized at a later date.

This method is used where exposed soil surfaces are not to be fine-graded for periods longer than 21 days. Such areas include denuded areas, soil stockpiles, dikes, dams, sides of sediment basins, temporary road banks, etc. A permanent vegetative cover shall be applied to areas that will be left unworked for a period of more than six months.

There are numerous areas within the Mountain Valley Pipeline right-of-way that show little to no vegetative cover in Greenbrier County, WV. Numerous areas remain unvegetated despite efforts to grow grass.

The photos are conclusive evidence of unvegetated areas requiring corrective action for lack of ground cover. We request immediate action to correct these regulatory violations. Please contact Autumn Crowe with any questions.

Respectfully,