From: Mountain Valley Watch (MVW)

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To: West Virginia Department of Environmental Protection

601 57th Street SE

Charleston, WV 25304

Attention: Jason Liddle

SUBJ: Mountain Valley Pipeline Stabilization

Nicholas 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 Nicholas 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.

Photo No.	Photo Mile post	Link to photos
22	135.4	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0529.JPG

41	134.5	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0548.JPG
58	134	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0565.JPG
65	133	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0572.JPG
70, 74, 82, 87, 90	132.1 - 132.5	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC 0577.JPG
		http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0581.JPG
		http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0589.JPG
		http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0594.JPG
		http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0597.JPG
99	131.4	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0606.JPG
S7		
42, 58	130.4	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0648.JPG
		http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0656.JPG
81	130.1	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0686.JPG
92	128.8	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0698.JPG
98	128.3	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0705.JPG

S8		
20	127.6	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0725.JPG
36, 38	126.9	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0741.JPG
		http://newrivergeographics.com/mvw/MVW20200708/100D5301/DSC_0743.JPG
44	125.9	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0750.JPG
46	127	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0751.JPG
68	125.1	http://newrivergeographics.com/mvw/MVW20200708/100D5301/DSC_0773.JPG
78	124.8	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0783.JPG
84	124.2	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0789.JPG
S9		
13	125	http://newrivergeographics.com/mvw/MVW20200708/100D5301/DSC_0817.JPG
17,18	123 - 124	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0821.JPG
		http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0822.JPG
26	123.2	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0830.JPG
47	122.4	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0851.JPG
51	122.5	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC_0855.JPG

		http://newrivergeographics.com/mvw/MVW20200708/100D5301
54	122.7	/DSC_0858.JPG
		http://newrivergeographics.com/mvw/MVW20200708/100D5301
61	123	/DSC 0865.JPG
0-	110	/ <u>D3C_0005.31 G</u>
64 - 70	121.6 - 122	http://newrivergeographics.com/mvw/MVW20200708/100D5301
		/DSC_0868.JPG
		http://newrivergeographics.com/mvw/MVW20200708/100D5301
		/DSC 0871.JPG
		/ D3C_0071.31 G
		http://newrivergeographics.com/mvw/MVW20200708/100D5301
		/DSC_0874.JPG
		http://newrivergeographics.com/mvw/MVW20200708/100D5301
87	120.2	/DSC 0891.JPG
	120.2	/ D3C 0031.31 G
<b>S10</b>		
_		http://newrivergeographics.com/mvw/MVW20200708/100D5301
5	119.5	/DSC_0908.JPG
	118.2 -	
20 20		http://newrivergeographics.com/mvw/MVW20200708/100D5301
30 - 36	118.6	/DSC_0933.JPG
		http://newrivergeographics.com/mvw/MVW20200708/100D5301
		/DSC_0937.JPG
		http://newrivergeographics.com/mvw/MVW20200708/100D5301
		/DSC_0938.JPG
		http://newrivergeographics.com/mvw/MVW20200708/100D5301
59	117.4	/DSC_0962.JPG
60.65		
62, 66,		http://newrivergeographics.com/mvw/MVW20200708/100D5301
90	117.2	/DSC_0966.JPG
		http://pourivorgoographics.com/min./ANAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
		http://newrivergeographics.com/mvw/MVW20200708/100D5301
		/DSC_0969.JPG
		http://newrivergeographics.com/mvw/MVW20200708/100D5301
		/DSC_0994.JPG

71	117	http://newrivergeographics.com/mvw/MVW20200708/100D5301 /DSC 0976.JPG
	_ <b>_</b> -	
93	116.8	http://newrivergeographics.com/mvw/MVW20200708/100D5301/DSC 0996.JPG
93	110.0	/ <u>DSC_0996.1FG</u>
	4460	http://newrivergeographics.com/mvw/MVW20200708/101D5301
99	116.9	/DSC_0003.JPG
S11		
		http://newrivergeographics.com/mvw/MVW20200708/101D5301
10, 20	116.5	/DSC 0013.JPG
38	116.2	http://newrivergeographics.com/mvw/MVW20200708/101D5301
		/DSC_0048.JPG
		http://newrivergeographics.com/mvw/MVW20200708/101D5301
52, 72	115.3	/DSC_0055.JPG
77 - 78,	114.8 -	http://newrivergeographics.com/mvw/MVW20200708/101D5301
84-99	114.2	/DSC_0080.JPG
04-99	114.2	
		http://newrivergeographics.com/mvw/MVW20200708/101D5301
		/DSC_0081.JPG
		http://newrivergeographics.com/mvw/MVW20200708/101D5301
		/DSC_0090.JPG
		http://newrivergeographics.com/mvw/MVW20200708/101D5301
		/DSC_0094.JPG
		http://newrivergeographics.com/mvw/MVW20200708/101D5301
		/DSC_0097.JPG
		http://newrivergeographics.com/mvw/MVW20200708/101D5301
		/DSC_0100.JPG
S12		
		http://newrivergeographics.com/mvw/MVW20200708/101D5301
14	113.8	/DSC_0116.JPG
15	113.5	
		http://newrivergeographics.com/mvw/MVW20200708/101D5301

		/DSC_0117.JPG
18	113.2	http://newrivergeographics.com/mvw/MVW20200708/101D5301 /DSC_0120.JPG
26-36	113.2 - 112.6	http://newrivergeographics.com/mvw/MVW20200708/101D5301 /DSC 0128.JPG
20 30	112.0	
		http://newrivergeographics.com/mvw/MVW20200708/101D5301 /DSC_0131.JPG
		http://newrivergeographics.com/mvw/MVW20200708/101D5301 /DSC_0133.JPG
		http://newrivergeographics.com/mvw/MVW20200708/101D5301
		/DSC_0135.JPG
		http://newrivergeographics.com/mvw/MVW20200708/101D5301 /DSC_0137.JPG
52, 65 -		http://newrivergeographics.com/mvw/MVW20200708/101D5301
70	111.7	/DSC_0154.JPG
		http://newrivergeographics.com/mvw/MVW20200708/101D5301 /DSC_0168.JPG
		http://newrivergeographics.com/mvw/MVW20200708/101D5301 /DSC 0170.JPG
43	111.8	http://newrivergeographics.com/mvw/MVW20200708/101D5301 /DSC_0145.JPG

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, Earthquard was applied to some areas along the right-ofway as a preventive measure to inhibit erosion sediment transport. The use of Earthquard 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,