ATTACHMENT F

WEBSTER COUNTY

WETLAND SWVM FORMS/WETLAND DELINEATION FORM/PHOTOS

USACE FILE NO./Project Name:	Mountain Valley Pipeline		COORDINATES:	Lat.	38.667178	Lon.	-80.480225	
STREAM/SITE ID AND SITE DESCRIPTION:					N-R2, Temporary Access Road			
% stream slope, watershed size {a		d or impairments)				·····, ····, ····, ·····,		
FORM OF MITIGATION:				-				
DATE:	8/10/2015 WEATHER CONDITIONS:				PRECIPITATION PAST 48 HRS:			
PART I - Wetland Indicators								
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-R2	Emergent	0.062	Emergent					
						PART III - Advanced	Mitigatio	2
						Sustainable Determination Made on		···
						Advanced Mitigation (Y or N)		Y
Fotal Impact		0.062						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)	4		ILF Costs		
otal Emergent			0.062	-		¢0.700.00		
otal Scrub-Shrub			0	-		\$3,720.00		
otal Forested			0	-				
otal Open Water			0]				

Project/Site: MVP	City/County: Webster	Sampling Date: 06/12/2015
Applicant/Owner: MVP		State: WV Sampling Point: W-R2
•••	Section, Township, Range:	
Landform (hillslope, terrace, etc.): Valley		
Subregion (LRR or MLRA): LRRN Lat: 38.60		0.480122 Datum: NAD 83
3 ()	-	
Soil Map Unit Name: Pope loam		NWI classification: None
Are climatic / hydrologic conditions on the site typical for this ti		
Are Vegetation, Soil, or Hydrology sign	nificantly disturbed? Are "Norma	al Circumstances" present? Yes 🔽 No
Are Vegetation, Soil, or Hydrology nat	urally problematic? (If needed,	explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh	nowing sampling point locati	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>Ves</u> No	lo the Compled Area	
	Is the Sampled Area within a Wetland?	Yes 🖌 No
Wetland Hydrology Present? Yes Ves No		
Remarks:		
Cowardin Code: PEM		
HGM: SLOPE		
WT: RPWWD		
Soils are massive and this area appears to be an	abandoned road.	
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that	t apply)	Surface Soil Cracks (B6)
	quatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
	gen Sulfide Odor (C1)	Drainage Patterns (B10)
	ed Rhizospheres on Living Roots (C3)	
	nce of Reduced Iron (C4)	Dry-Season Water Table (C2)
	t Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
	luck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
	(Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9) Aquatic Fauna (B13)		 Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes No Depth	(inches);	
Water Table Present? Yes No Depth Saturation Present? Yes No Depth		
Saturation Present? Yes <u>No</u> Depth (includes capillary fringe)	(inches): wetland	Hydrology Present? Yes 🖌 No
Describe Recorded Data (stream gauge, monitoring well, ae	rial photos, previous inspections), if av	ailable:
Remarks:		

Sampling Point: W-R2

, , ,	Absolute	Dominant	Indiantor	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		
<u> </u>				Number of Dominant Species That Are OBL, FACW, or FAC:3(A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100% (A/B)
6				、
7				Prevalence Index worksheet:
	0	= Total Cov	or	Total % Cover of: Multiply by:
50% of total cover: 0			-	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')	2070.01			FACW species x 2 =
Platanus occidentalis	7			FAC species x 3 =
1. Platanus occidentalis	/		FACW	
2				FACU species x 4 =
3		<u> </u>		UPL species x 5 =
4				Column Totals: (A) (B)
5			·	Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is $\leq 3.0^{1}$
	7	= Total Cov	er	
50% of total cover: <u>3.5</u>		f total cover:		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Packera aurea	18	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Impatiens capensis	8			
		·	F <u>ACW</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Carex lurida	12	. <u> </u>	O <u>BL</u>	be present, unless disturbed or problematic.
4. Boehmeria cilindrica	10		F <u>ACW</u>	Definitions of Four Vegetation Strata:
5. Microstegium vimineum	30	<u> /</u>	FAC	
6. Onoclea sensibilis	2		FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7 Thelypteris noveboracensis	5			more in diameter at breast height (DBH), regardless of height.
0			1 <u>710</u>	holgh
8				Sapling/Shrub – Woody plants, excluding vines, less
9			<u> </u>	than 3 in. DBH and greater than or equal to 3.28 ft (1
10			. <u> </u>	m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	85	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>42.5</u>	5 20% of	f total cover:	17	
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1				
2			·	
3				
4		. <u> </u>	. <u> </u>	Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes V No
50% of total cover: 0	20% of	f total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet)			

Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 3/3	100					MCK	
3-9	7.5YR 5/2	70	7.5YR 4/6	30	MS	Μ	SIC	Redox masses, Fe
9-15	10YR 5/2	100			MS	Μ	SIC	Redox masses Mn
15+	7.5YR 5/6	100					LS	
		·				·		
		·				·		
Type: C=C	oncentration, D=Dep	letion, RM:	=Reduced Matrix, M	S=Maske	d Sand Gr	ains.	² Location: PL=	Pore Lining, M=Matrix.
	Indicators:							ors for Problematic Hydric Soils ³
Black H Hydroge Stratifie 2 cm M Deplete Thick D Sandy M MLR	I (A1) pipedon (A2) istic (A3) d Layers (A5) uck (A10) (LRR N) d Below Dark Surfac ark Surface (A12) Mucky Mineral (S1) (I A 147, 148) Gleyed Matrix (S4)		Dark Surface Polyvalue Be Thin Dark Surface Coamy Gleye ✓ Depleted Ma Redox Dark Depleted Da Redox Depre Iron-Mangan MLRA 13 Umbric Surface	elow Surfa urface (S9 ed Matrix trix (F3) Surface (I rk Surface essions (F ese Mass 6)) (MLRA ((F2) =6) = (F7) =8) =es (F12) (147, 148) LRR N,	148) Coa (M Piec (M Very Othe	n Muck (A10) (MLRA 147) Ist Prairie Redox (A16) MLRA 147, 148) Imont Floodplain Soils (F19) MLRA 136, 147) y Shallow Dark Surface (TF12) er (Explain in Remarks)
Sandy F	Redox (S5) d Matrix (S6)		Piedmont Flo	odplain S	Soils (F19)	(MLRA 14	I8) wetla	nd hydrology must be present, is disturbed or problematic.
	Layer (if observed):							
Restrictive								
Type:								

Wetland ID <u>W-R2</u> Date <u>06/12/2015</u>



Photograph Direction SW

Comments:

Project/Site: MVP		City/C	_{ounty:} Webster	Sa	mpling Date: 06/12/2015
Applicant/Owner: MVP		· · · · ·			Sampling Point: W-R2 UPL
Investigator(s): DH JC EF N	IV CC KL	Sectio	n, Township, Range: N/A		
Landform (hillslope, terrace, et				Convex	Slope (%): 3
Subregion (LRR or MLRA): L			Long: <u>-80.480</u>		
Soil Map Unit Name: Pope Ic			2019		
Are climatic / hydrologic condit					
Are Vegetation, Soil					
Are Vegetation, Soil, SOIL, SOIL, SOIL, SUMMARY OF FINDING				-	
				lian36013, m	
Hydrophytic Vegetation Prese		No	Is the Sampled Area		
Hydric Soil Present?		No <u> </u>	within a Wetland?	Yes	No
Wetland Hydrology Present? Remarks:	Yes	No			
Upland					
Located on slight berm a	along abandoned	d road. Along a powe	rline easement.		
HYDROLOGY					
Wetland Hydrology Indicate		· · · · · · · · · · · · · · · · · · ·			(minimum of two required)
Primary Indicators (minimum	of one is required; c			Surface Soil Cra	· ,
Surface Water (A1)		True Aquatic Plants (ted Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Odd Ovidized Phizesphere		Drainage Patterr	
Saturation (A3) Water Marks (B1)		Oxidized Rhizosphere Presence of Reduced		Moss Trim Lines Dry-Season Wat	
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Burrows	
Drift Deposits (B3)		Thin Muck Surface (C		-	e on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Rem		Stunted or Stres	
Iron Deposits (B5)				Geomorphic Pos	
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aquitarc	
Water-Stained Leaves (E				Microtopographi	
Aquatic Fauna (B13)	,			FAC-Neutral Tes	
Field Observations:					
Surface Water Present?		Depth (inches):			
Water Table Present?		Depth (inches):			
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):	Wetland Hydro	logy Present?	Yes No/
	eam gauge, monitori	ng well, aerial photos, prev	vious inspections), if available	:	
Remarks:					
Remarks:					

Sampling Point: W-R2 UPL

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u>)		Species?		Number of Dominant Species
_{1.} Acer rubrum	10	~	FAC	That Are OBL, FACW, or FAC:3 (A)
2. Cornus florida	5	~	FACU	
3. Carpinus caroliniana	5	~	FAC	Total Number of Dominant Species Across All Strata: 4 (B)
4 Oxydendrum arboreum	2	•		Species Across All Strata: (B)
· · · · · · · · · · · · · · · · · · ·			<u>UPL</u>	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 80 (A/B)
6				Prevalence Index worksheet:
7				
	22	= Total Cov	ver	Total % Cover of: Multiply by:
50% of total cover: <u>11</u>	20% of	total cover	4.4	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1 Asimina triloba	4		FAC	FAC species x 3 =
				FACU species x 4 =
2				UPL species x 5 =
3				· · · · · · · · · · · · · · · · · · ·
4				Column Totals: (A) (B)
5			. <u> </u>	Prevalence Index = B/A =
6				
7				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
8			·	✓ 2 - Dominance Test is >50%
9			·	3 - Prevalence Index is ≤3.0 ¹
0		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 2	20% of	total cover	0.0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Anthoxanthum odoratum	7		FACU	
2. Thelypteris noveboracensis	60	~	FAC	
3. Polystichum acrostichoides	5		FACU	¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
4			·	Definitions of Four Vegetation Strata:
5			·	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6			·	more in diameter at breast height (DBH), regardless of
7				height.
8				Conting/Chruch Weady planta avaluding vince loss
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11				
· · · · ·	72	T () 0	·	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 36		= Total Cov total cover		or size, and woody plants less than 3.28 it tall.
	20% 0	total cover		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4.				
5				Hydrophytic Vegetation
	0	Tatal Oa	·	Present? Yes <u>V</u> No
50% of total array 0		= Total Cov		
50% of total cover: 0		total cover		
Remarks: (Include photo numbers here or on a separate s	heet.)			

0-1.5 10YR 3/3 100 0 organic 1.5-7 7.5YR 4/3 100 Ls	Depth	Matrix			x Features				
1.5-7 7.5YR 4/3 100 Ls 7-16 7.5YR 4/2 100 S 7-16 7.5YR 4/2 100 S 9 9 S S 9 9 S S 1.5-7 7.5YR 4/2 100 S 9 9 S S 9 9 9 S 9 9 9 S 9 9 9 S 100 9 9 S 9 9 9 S S 100 9 9 S S 1100 9 9 S S 1100 9 9 S S 1100 9 9 S S 1110 9 9 S S 1110 9 9 S S 1110 9 9 S 10 S 1110 9 9 10 10 10 1110	(inches)	Color (moist)	%	Color (moist)	<u>% Type¹</u>	Loc ²	Texture		
7-16 7.5YR 4/2 100 S 7-16 7.5YR 4/2 100 S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S S	0-1.5	10YR 3/3	100				0	orga	nic
**Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. **Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F15) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) 3*Indicators of hydrophytic vegetat	1.5-7	7.5YR 4/3	100				LS		
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F15) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) ³ Indicators of hydrophytic vegetat	7-16	7.5YR 4/2	100				S		
Hydric Soil Indicators: Indicators for Problematic Hydrid					·		· · · · · · · · · · · · · · · · · · ·		
Hydric Soil Indicators: Indicators for Problematic Hydrid					·		·		
Hydric Soil Indicators: Indicators for Problematic Hydrid									
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Hydric Soil Indicators: Indicators for Problematic Hydrid									
Hydric Soil Indicators: Indicators for Problematic Hydrid			·				·		
Hydric Soil Indicators: Indicators for Problematic Hydrid			<u> </u>				·		
Hydric Soil Indicators: Indicators for Problematic Hydrid			·						
Hydric Soil Indicators: Indicators for Problematic Hydrid									
Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F15) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Indicators of hydrophytic vegetat MLRA 136) Umbric Surface (F13) (MLRA 136, 122) ³ Indicators of hydrophytic vegetat	¹ Type: C=Co	oncentration, D=Depl	letion, RM=I	Reduced Matrix, MS	S=Masked Sand G	Frains.			
Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 147, 148) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) ³ Indicators of hydrophytic vegetat	Hydric Soil I	Indicators:					Indicators	for Problematic	Hydric Soils ³
Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) MLRA 136) ³ Indicators of hydrophytic vegetat	Histosol	(A1)		Dark Surface	(S7)		2 cm I	Muck (A10) (MLR	A 147)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Iron-Manganese Masses (F12) (LRR N, MLRA 136) MLRA 136, 122) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) ³ Indicators of hydrophytic vegetat		• • • •			· · ·	•	148) Coast	Prairie Redox (A	16)
Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Iron-Manganese Masses (F12) (LRR N, MLRA 136) MLRA 136, 122) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) ³ Indicators of hydrophytic vegetat	Black Hi	stic (A3)		Thin Dark Su	rface (S9) (MLRA	147, 148)	(ML	.RA 147, 148)	
2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) ³ Indicators of hydrophytic vegetat		. ,			· · ·		Piedm	ont Floodplain Sc	oils (F19)
	Stratified	d Layers (A5)		Depleted Mat	trix (F3)		(ML	.RA 136, 147)	
					()				
Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122)			e (A11)				Other	(Explain in Rema	rks)
MLRA 147, 148) MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) ³ Indicators of hydrophytic vegetat									
Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) ³ Indicators of hydrophytic vegetat		• • • •	.RR N,		• • •	(LRR N,			
					•		3		
Sandy Reday (S5) Piedmont Floodalain Soile (F10) (MLPA 148) wetland hydrology must be pres					· · ·				
					•	, .	•		•
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed):		()		Red Parent N	lateriai (F21) (ML	RA 127, 147) uniess	disturbed or probl	ematic.
Type:	Type:								
Depth (inches): Hydric Soil Present? Yes N		ches):					Hydric Soil Pres	sent? Yes	No 🔽

USACE FILE NO./Project Name:		Mountain Valley Pipeline		COORDINATES:	Lat.	38.667027	Lon.	-80.478547
STREAM/SITE ID AND SITE DESCR	REAM/SITE ID AND SITE DESCRIPTION:				W-KK3, Pipeline ROW	-		
% stream slope, watershed size {a		d or impairments)				·····, • •		
FORM OF MITIGATION:								
DATE:	8/10/2015 WEATHER CONDITIONS:				PRECIPITATION PAST 48 HRS:			
PART I - Wetland Indicators								
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
/-KK3	Emergent	0.0222	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made or Advanced Mitigation (Y or N)		Y
Fotal Impact		0.0222						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0222			A ·		
otal Scrub-Shrub			0			\$1,332.00		
otal Forested			0					
otal Open Water			0					

Project/Site: MVP	City/County: Webster	Sa	ampling Date: 08/10/2015
Applicant/Owner: MVP			Sampling Point: W-KK03
Investigator(s): D. Hadersbeck A. Hatfield C. Carver	_ Section, Township, Range:_	N/A	
Landform (hillslope, terrace, etc.): Depression	ocal relief (concave, convex, r	none): Concave	Slope (%): 1
Subregion (LRR or MLRA): LRRN Lat: 38.66701	8 Long: <u>-</u> 8	30.478508	Datum: NAD 83
Soil Map Unit Name: Pope Ioam		NWI classification	_{on:} None
Are climatic / hydrologic conditions on the site typical for this time of y	vear? Yes 🖌 No	_ (If no, explain in Rem	arks.)
Are Vegetation, Soil, or Hydrology significant	y disturbed? Are "Norn	nal Circumstances" pres	ent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed	l, explain any answers i	n Remarks.)
SUMMARY OF FINDINGS – Attach site map showin	g sampling point locat	tions, transects, ir	nportant features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes <u> </u>	No No No	Is the Sampled Area within a Wetland?	Yes No
Remarks: Cowardin Code: PEM HGM: Riverine WT: RPWWD				

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Field Observations:	
Surface Water Present? Yes No 🔽 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes No <u>✓</u> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes <u>V</u> No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	tions), if available:
Remarks:	

Sampling Point: W-KK03

	Absolute	- Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)		Species?		Number of Dominant Species
_{1.} Carpinus caroliniana	15	~	FAC	That Are OBL, FACW, or FAC:5 (A)
2. Tsuga canadensis	10	~	FACU	
3			1.7.00	Total Number of Dominant Species Across All Strata: 6 (B)
			- <u> </u>	Species Across All Strata: 6 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 83 (A/B)
6				Development to develop here (
7		<u></u>	<u> </u>	Prevalence Index worksheet:
	25	= Total Cov	/er	Total % Cover of: Multiply by:
50% of total cover: 12.5	5 20% of	f total cover	5	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
Acer rubrum	4	~	FAC	FAC species x 3 =
				FACU species x 4 =
2				
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				
6				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
8		·		✓ 2 - Dominance Test is >50%
9			<u> </u>	3 - Prevalence Index is ≤3.0 ¹
	4	= Total Cov	/er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 2	20% of	f total cover	<u>: 0.8</u>	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Carex stipata	30	~	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Packara aurea	20	<u> </u>		
		·	FACW	¹ Indicators of hydric soil and wetland hydrology must
3. Thelypteris noveboracensis	15	<u> </u>	FAC	be present, unless disturbed or problematic.
4. Boehmeria cylindrica	4		FACW	Definitions of Four Vegetation Strata:
5				
6		<u></u>		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of height.
7			- <u> </u>	neight.
8			<u> </u>	Sapling/Shrub – Woody plants, excluding vines, less
9			- <u> </u>	than 3 in. DBH and greater than or equal to 3.28 ft (1
10			- <u> </u>	m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	69	= Total Cov	/er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>34.</u>		f total cover		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in
				height.
1			- <u> </u>	
2		·		
3			<u> </u>	
4				Hydrophytic
5				Vegetation
		= Total Cov		Present? Yes <u>V</u> No
50% of total cover: 0		f total cover	~	
Remarks: (Include photo numbers here or on a separate s	neet.)			

Depth	Matrix		Redo	x Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10YR 3/3	85	5YR 4/6	10	С	Μ	SL	5YR 4/1 D 5%
6-12	2.5Y 2.5/1	70	7.5YR 5/8	30	С	Μ	SL	
12-20	2.5Y 3/1	90	7.5YR 5/8	10	C	<u>M</u>	LS	60% gravel at bottom of pit
	Concentration, D=Depl Indicators:	etion, RM=	=Reduced Matrix, M		d Sand G	rains.	Indica	L=Pore Lining, M=Matrix. ators for Problematic Hydric Soils ³ : cm Muck (A10) (MLRA 147)
Histic E	pipedon (A2)		Polyvalue Be	low Surfa				Coast Prairie Redox (A16)
Black H			Thin Dark Su	•		147, 148)	_	(MLRA 147, 148)
	en Sulfide (A4) d Layers (A5)		Loamy Gleye Depleted Ma		(F2)		P	Piedmont Floodplain Soils (F19) (MLRA 136, 147)
	uck (A10) (LRR N)		Redox Dark	```	=6)		V	(WERA 136, 147) /ery Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Da	•				Other (Explain in Remarks)
Denlete			Redox Depre				0	
	ark Surface (A12)							
Thick D	ark Surface (A12) Mucky Mineral (S1) (L	RR N.			,	(LRR N.		
Thick D Sandy I	ark Surface (A12) Mucky Mineral (S1) (L A 147, 148)	RR N,	Iron-Mangan MLRA 13	ese Mass	,	(LRR N,		
Thick D Sandy I MLR	Mucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Mass 6)	es (F12)		³ Ind	licators of hydrophytic vegetation and
Thick D Sandy I MLR Sandy (Mucky Mineral (S1) (L A 147, 148)	.RR N,	Iron-Mangan	ese Mass 6) ace (F13)	es (F12) (MLRA 1	36, 122)		licators of hydrophytic vegetation and etland hydrology must be present,
Thick D Sandy I MLR Sandy I Sandy I Stripped	Mucky Mineral (S1) (L A 147, 148) Gleyed Matrix (S4) Redox (S5) d Matrix (S6)		Iron-Mangan MLRA 13 Umbric Surfa	ese Mass 6) Ice (F13) podplain S	es (F12) (MLRA 1 Soils (F19	36, 122)) (MLRA 14	l8) we	
Thick D Sandy I MLR Sandy I Sandy I Stripped	Mucky Mineral (S1) (L A 147, 148) Gleyed Matrix (S4) Redox (S5)		Iron-Mangan MLRA 13 Umbric Surfa Piedmont Flo	ese Mass 6) Ice (F13) podplain S	es (F12) (MLRA 1 Soils (F19	36, 122)) (MLRA 14	l8) we	etland hydrology must be present,
Thick D Sandy I Sandy (Sandy I Stripped	Mucky Mineral (S1) (L A 147, 148) Gleyed Matrix (S4) Redox (S5) d Matrix (S6)		Iron-Mangan MLRA 13 Umbric Surfa Piedmont Flo	ese Mass 6) Ice (F13) podplain S	es (F12) (MLRA 1 Soils (F19	36, 122)) (MLRA 14	l8) we	etland hydrology must be present,
Thick D Sandy I Sandy (Sandy I Stripper Restrictive Type:	Mucky Mineral (S1) (L A 147, 148) Gleyed Matrix (S4) Redox (S5) d Matrix (S6)		Iron-Mangan MLRA 13 Umbric Surfa Piedmont Flo	ese Mass 6) Ice (F13) podplain S	es (F12) (MLRA 1 Soils (F19	36, 122)) (MLRA 14	l8) we	etland hydrology must be present, less disturbed or problematic.

Wetland Photograph Page

Wetland ID <u>W-KK03</u> Date <u>08/10/2015</u>



Photograph Direction SE

Comments:

Project/Site: MVP	City/County: Webster	Sampling Date: 08/10/2015
Applicant/Owner: MVP	State:	
Investigator(s): D. Hadersbeck A. Hatfield C. Carver	Section, Township, Range: N/A	
Landform (hillslope, terrace, etc.): Depression Lo	ocal relief (concave, convex, none): <u>Co</u>	ncave Slope (%): <u>1</u>
Subregion (LRR or MLRA): LRRN Lat: 38.666962	Long: <u>-80.47849</u>	2 Datum: NAD 83
Soil Map Unit Name: Pope Ioam	NV	/I classification: None
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🖌 No (If no, ex	plain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	v disturbed? Are "Normal Circums	stances" present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain a	ny answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, tra	ansects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks: Upland					

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) 	 Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
Aquatic Fauna (B13) Field Observations:	FAC-Neutral Test (D5)
Surface Water Present? Yes No ✓ Depth (inches): Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) Ves No ✓ Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No
Remarks:	

HYDROLOGY

Sampling Point: W-KK03 UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		Number of Dominant Species
1. Carpinus caroliniana	15	~	FAC	That Are OBL, FACW, or FAC:4 (A)
2. Tsuga canadensis	10	~	FACU	
			FACU	Total Number of Dominant
3		<u> </u>	<u> </u>	Species Across All Strata:6 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:67 (A/B)
6				
7.				Prevalence Index worksheet:
	25	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 12.5				OBL species x 1 =
	<u> </u>	lotal cover		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')	10	,		
1. Carpinus caroliniana	10	<u> </u>	FAC	FAC species x 3 =
2. Asimina triloba	5	<u> </u>	FAC	FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
			- <u> </u>	
5			<u> </u>	Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				
9				2 - Dominance Test is >50%
<u> </u>	15	= Total Cov		3 - Prevalence Index is ≤3.0 ¹
50% of total cover:7.5		f total cover	~	4 - Morphological Adaptations ¹ (Provide supporting
	20% 0	total cover		data in Remarks or on a separate sheet)
	05	,		Problematic Hydrophytic Vegetation ¹ (Explain)
1. Dryopteris intermedia	25	<u> </u>	FAC	
2. Thelypteris noveboracensis	12	~	FACU	
3				¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
4			- <u> </u>	Definitions of Four Vegetation Strata:
5		·	<u> </u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6		·		more in diameter at breast height (DBH), regardless of
7				height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.			- <u> </u>	m) tall.
		· ·	- <u> </u>	
11	07	·	·	Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>18.5</u>	20% of	f total cover	: 1.4	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
			·	
3		<u> </u>	- <u> </u>	
4			<u> </u>	Hydrophytic
5			. <u> </u>	Vegetation
	0	= Total Cov	/er	Present? Yes V No
50% of total cover: 0	20% of	f total cover	: 0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the ir	ndicator	or confirm	the absence	of indicators	s.)	
Depth	Matrix		Redo	x Features	;					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-20	10 YR 5/6	100					LS			
						·				
		<u> </u>								
		<u> </u>								
¹ Type: C=Co	oncentration, D=Depl	etion, RM=R	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location: Pl	L=Pore Lining	g, M=Matrix.	
Hydric Soil I	ndicators:						Indica	ators for Pro	blematic Hyd	dric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)			2	cm Muck (A1	0) (MLRA 14	7)
Histic Ep	pipedon (A2)		Polyvalue Be	low Surfac	e (S8) (N	ILRA 147,	148) C	oast Prairie F	Redox (A16)	
Black Hi	stic (A3)		Thin Dark Su	Irface (S9)	(MLRA 1	47, 148)		(MLRA 147,	148)	
Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matrix (F	-2)		P	iedmont Floo	dplain Soils (I	F19)
Stratified	Layers (A5)		Depleted Ma	trix (F3)				(MLRA 136,	147)	
2 cm Mu	ck (A10) (LRR N)		Redox Dark	Surface (F	6)		V	ery Shallow [Dark Surface	(TF12)
	Below Dark Surface	e (A11)	Depleted Date				0	ther (Explain	in Remarks)	
	ark Surface (A12)		Redox Depre							
	lucky Mineral (S1) (L	.RR N,	Iron-Mangan		es (F12) (I	LRR N,				
	147, 148)		MLRA 13	•			0			
	leyed Matrix (S4)		Umbric Surfa					•	Irophytic vege	
	edox (S5)		Piedmont Flo					•	gy must be pi	
	Matrix (S6)		Red Parent N	Material (F2	21) (MLR	A 127, 147	') unl	ess disturbed	d or problema	tic.
Restrictive L	ayer (if observed):									
Туре:										_
Depth (inc	ches):						Hydric Soil	Present?	Yes	No 🖌
Remarks:										

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.666869	Lon.	-80.480889
STREAM/SITE ID AND SITE DESCR	IPTION:					W-R3, Temporary Access Road		
% stream slope, watershed size {a		d or impairments)				····, · ···, · ···, · ····, · ····, · · ····		
FORM OF MITIGATION:		. ,						
DATE:	8/10)/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-R3	Emergent	0.0155	Emergent					
						PART III - Advanced		n
						Sustainable Determination Made or Advanced Mitigation (Y or N)		Y
Fotal Impact		0.0155				- - 1		
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0155			¢020.00		
otal Scrub-Shrub			0			\$930.00		
Total Forested			0					
Total Open Water			0					

Project/Site: MVP	City/Coun	_{tv:} Webster		Sampling Date: 06/12/2015
Applicant/Owner: MVP				_ Sampling Point: W-R03
	Section, T			
Landform (hillslope, terrace, etc.): Valley				Slope (%). 1
Subregion (LRR or MLRA): LRRN				0iope (70) Datum: NAD 83
Soil Map Unit Name: Laidig channery silt loar				
Are climatic / hydrologic conditions on the site typic				
Are Vegetation, Soil, or Hydrology _	significantly disturbed	? Are "Normal	Circumstances" p	resent? Yes <u>V</u> No
Are Vegetation, Soil, or Hydrology _	naturally problematic?	(If needed, e	xplain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site	e map showing sampli	ng point locatio	ns, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes	No Is i			
Hydric Soil Present? Yes		the Sampled Area thin a Wetland?	Yes 🗸	No
Wetland Hydrology Present? Yes	No Wit	thin a wetland?	res	NO
Remarks: Cowardin Code: PEM HGM: DEPRESSION				
WT: NRPWW				
Soils are disturbed and this area appears	s to be an abandoned ro	bad.		
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indicat	ors (minimum of two required)
Primary Indicators (minimum of one is required; cl	heck all that apply)		Surface Soil (Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B14))	Sparsely Veg	etated Concave Surface (B8)
	Hydrogen Sulfide Odor (C		Drainage Pat	terns (B10)
	Oxidized Rhizospheres or		Moss Trim Lir	
	Presence of Reduced Iron			Vater Table (C2)
	Recent Iron Reduction in	Tilled Soils (C6)	Crayfish Burr	
Drift Deposits (B3)	Thin Muck Surface (C7)			sible on Aerial Imagery (C9)
	Other (Explain in Remark	s)		ressed Plants (D1)
Iron Deposits (B5)			Geomorphic I	
Inundation Visible on Aerial Imagery (B7)			Shallow Aquit	, ,
Water-Stained Leaves (B9)				phic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)
Field Observations:	4			
	Depth (inches):1			
	Depth (inches):			
Saturation Present? Yes No (includes capillary fringe)	Depth (inches):	Wetland H	ydrology Presen	t? Yes 🖌 No
Describe Recorded Data (stream gauge, monitori	ng well, aerial photos, previou	s inspections), if ava	ilable:	
		· /		
Remarks:				

Sampling Point: W-R03

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: <u>30'</u>)		Species?		Number of Dominant Species		
1				That Are OBL, FACW, or FAC: (A)		
2						
3				Total Number of Dominant Species Across All Strata: 3 (B)		
				Species Across Air Strata (B)		
4				Percent of Dominant Species		
5			·	That Are OBL, FACW, or FAC:66 (A/B)		
6			·	Prevalence Index worksheet:		
7				Total % Cover of: Multiply by:		
		= Total Cov	-			
50% of total cover: 0	20% of	total cover	0	OBL species x 1 =		
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =		
1. Rosa multiflora	1	 ✓ 	FACU	FAC species x 3 =		
2. Fraxinus pennsylvanica	4	~	FACW	FACU species x 4 =		
3				UPL species x 5 =		
4				Column Totals: (A) (B)		
			·			
5			·	Prevalence Index = B/A =		
6			·	Hydrophytic Vegetation Indicators:		
7			·	1 - Rapid Test for Hydrophytic Vegetation		
8			·	✓ 2 - Dominance Test is >50%		
9				3 - Prevalence Index is $\leq 3.0^1$		
		= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting		
50% of total cover: 2.5	20% of	total cover	1			
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)		
1. Packera aurea	10		FACW	Problematic Hydrophytic Vegetation ¹ (Explain)		
2. Impatiens capensis	3		FACW			
3. Thelypteris noveboracensis	8		FAC	¹ Indicators of hydric soil and wetland hydrology must		
4. Boehmeria cylindrica	5			 be present, unless disturbed or problematic. 		
		~	FACW	Definitions of Four Vegetation Strata:		
5. Microstigeum vimineum	60	-	FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or		
6. Carex Iurida	10		<u>OBL</u>	more in diameter at breast height (DBH), regardless of		
7			. <u> </u>	height.		
8				Sapling/Shrub - Woody plants, excluding vines, less		
9				than 3 in. DBH and greater than or equal to 3.28 ft (1		
10.				m) tall.		
11.						
	96	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
50% of total cover: 48		total cover				
Woody Vine Stratum (Plot size: 15')	20/001			Woody vine – All woody vines greater than 3.28 ft in		
· · · · · · · · · · · · · · · · · · ·				height.		
1						
2			·			
3			·			
4			·	Hydrophytic		
5				Vegetation		
	0	= Total Cov	er	Present? Yes V No		
50% of total cover: 0	20% of	total cover	0			
Remarks: (Include photo numbers here or on a separate s	heet.)					

Profile Desc	ription: (Describe t	to the dept	h needed to docur	nent the	indicator	or confirm	m the absence of indicators.)
Depth	Matrix		Redo	x Feature	s		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-3	10yr 4/2	100					Muck
3-20	2.5yr 4/2	80	10yr 4/6	20	MS	М	Clay
				_			
						·	
¹ Type: C=C	oncentration, D=Depl	letion, RM=	Reduced Matrix, M	S=Masked	d Sand Gr	ains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)			2 cm Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Be	elow Surfa	ice (S8) (I	MLRA 147	7, 148) Coast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Su			147, 148)	
	en Sulfide (A4)		Loamy Gleye	ed Matrix	(F2)		Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma				(MLRA 136, 147)
	uck (A10) (LRR N)	<i></i>	Redox Dark				Very Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Da				✓ Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre				
	/lucky Mineral (S1) (L \ 147, 148)	.RR N,	Iron-Mangan		es (F12) (LRR N,	
	Gleyed Matrix (S4)		MLRA 13 Umbric Surfa		(MI DA 13	86 122)	³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo				
-	Matrix (S6)		Red Parent I				
	Layer (if observed):			natoriai (i			
Type:							
Depth (in	ches).						Hydric Soil Present? Yes 🖌 No
	chcs).						
Remarks:	alla annaara ta	h a a a a a a					
Disturbed	soils, appears to	be on an	abandoned roa	i u .			
I							

Wetland Photograph Page

Wetland ID <u>W-R03</u> Date <u>06/12/2015</u>



Photograph Direction SE

Comments:

Project/Site: MVP	City/County: Webster	Sampling Date: 06/12/2015
Applicant/Owner: MVP	State	e: WV Sampling Point: W-R03-up
Investigator(s): DH JC EF NV CC KL	Section, Township, Range:	
Landform (hillslope, terrace, etc.): Meadow	Local relief (concave, convex, none): <u>C</u>	onvex Slope (%): <u>3</u>
Subregion (LRR or MLRA): LRRN Lat:	Long:	Datum:
Soil Map Unit Name:	N	WI classification: None
Are climatic / hydrologic conditions on the site typical for this tim	ne of year? Yes 🔽 No (If no, e	explain in Remarks.)
Are Vegetation, Soil, or Hydrology signif	ficantly disturbed? Are "Normal Circur	nstances" present? Yes 🔽 No
Are Vegetation, Soil, or Hydrology natur	ally problematic? (If needed, explain	any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sho	owing sampling point locations, t	ansects, important features, etc.
Hydrophytic Vegetation Present? Yes No	Is the Sampled Area	

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes 🖌 Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks:					
Cowardin Code:					
HGM:					
WT:					
Located adjacent to berm along a	abandoned	road.			

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Oxidized Rhizospheres on Living I Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Recent Iron Reduction in Tilled Sc Drift Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Other (Explain in Remarks) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) 	Dry-Season Water Table (C2)
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No tions), if available:
Remarks:	

Sampling Point: W-R03-up

	Absolute	• Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species		
Acer rubrum	25	~	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 4
2. Nyssa sylvaticum	20	~		
	5	-	_ F <u>AC</u>	Total Number of Dominant
3. Liriodendron tulipifera	5		FACU	Species Across All Strata:4 (B)
4				Demonst of Deminent Creation
5				Percent of Dominant Species That Are OBL, FACW, or FAC:100 (A/B)
6				Prevalence Index worksheet:
7		· - <u></u>		Total % Cover of: Multiply by:
		= Total Co		
50% of total cover: 25	20% of	total cove	r: <u>10</u>	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
				UPL species x 5 =
3				
4				Column Totals: (A) (B)
5				Dravalance Index D/A
6				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8		·		✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	0	= Total Co	ver	
50% of total cover: 0		total cove	-	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Boehmeria cylindrica	10		FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Thelypteris noveboracensis	70	<u> </u>	F <u>AC</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Polystichum acrostichoides	2		FACU	be present, unless disturbed or problematic.
4				
		·		Definitions of Four Vegetation Strata:
5		·		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
				m) tall.
10		·		
11		·		Herb – All herbaceous (non-woody) plants, regardless
	82	= Total Co	ver	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 41	20% of	total cove	r: 16.4	Mandussing Allowed using a prostor there 2.00 ft in
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1 Toxicodendron radicans	5	~	FAC	noight.
··		·	1/10	
2				
3				
4				Hydrophytic
5				Vegetation
	5	= Total Co	vor	Present? Yes <u>V</u> No
50% of total cover: 2.5		total cove		
		IUIAI COVE	·	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Depth	Matrix			ox Features					
(inches)	Color (moist)	%	Color (moist)	<u>%</u> Typ	pe ¹ Loo		ture	Remarks	
0-15	10yr4/4	100				Loar	ny sa		
		·		<u> </u>					
		·							
		·		·					
		·							
		·		<u> </u>					
Type: C-C	oncentration, D=Dep	letion RM-	Reduced Matrix M	S-Masked San	dGrains	² 1 oca	tion: PI -Pore I	_ining, M=Matrix	,
Hydric Soil					u Orains.	LUCA		Problematic H	
Histosol			Dark Surface	o (97)				k (A10) (MLRA	•
	bipedon (A2)			elow Surface (S		147 149)		irie Redox (A16	,
	stic (A3)			urface (S9) (ML				147, 148))
	n Sulfide (A4)			ed Matrix (F2)	$\mathbf{A} \mathbf{H} \mathbf{H} \mathbf{I}$	+0)	•	Floodplain Soils	(E10)
	d Layers (A5)		Depleted Ma	. ,				136, 147)	5 (113)
	ick (A10) (LRR N)		Redox Dark	. ,				low Dark Surfac	o (TE12)
	d Below Dark Surface	o (A11)		irk Surface (F7)				plain in Remark	
	ark Surface (A12)		Redox Depr						3)
	lucky Mineral (S1) (L			nese Masses (F	12) /I PP N	J			
	A 147, 148)	-ixix i x ,	MLRA 13			۹,			
	Bleyed Matrix (S4)			ace (F13) (MLR .	A 136 123	2)	³ Indicators o	f hydrophytic ve	adatation and
	edox (S5)			oodplain Soils (I				drology must be	-
	Matrix (S6)			Material (F21) (I	<i>,</i> .		•	urbed or probler	•
	_ayer (if observed):					, 147)			natio.
	Layer (il observeu).								
Type:									
Depth (in	ches):					Hyd	ric Soil Presen	t? Yes	No
Remarks:									

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	38.664132	Lon.	-80.479008
STREAM/SITE ID AND SITE DESCR						W-F46, Timber Mat Crossing	-	
% stream slope, watershed size {a	creage}, unaltered	l or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wetl	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-F46	Emergent	0.0039	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Fotal Impact		0.0039						
		Jnit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0039			* ***		
otal Scrub-Shrub			0			\$234.00		
otal Forested			0					
otal Open Water			0					

Project/Site: MVP	City/Cou	_{nty:} Webster	:	Sampling Date: 05/06/2015
Applicant/Owner: MVP				Sampling Point: W-F46
Investigator(s): A. Flake, D. McCullough, I	E. Strohmaier Section.	Township, Range: N/A		
Landform (hillslope, terrace, etc.): Hillside				Slope (%). 10-20
Subregion (LRR or MLRA): LRRN				0iope (%) Datum: NAD83
• · · · · · ·				
Soil Map Unit Name: Pineville-Gilpin-Guyand				
Are climatic / hydrologic conditions on the site type	-			
Are Vegetation, Soil, or Hydrolog	y significantly disturbed	d? Are "Normal C	Circumstances" pr	esent? Yes 🔽 No
Are Vegetation, Soil, or Hydrolog			plain any answers	
SUMMARY OF FINDINGS – Attach s	ite map showing sampl	ling point location	is, transects,	important features, etc.
Lindrophy tip Vagatation Dragont2				
Hydrophytic Vegetation Present? Yes _ Hydric Soil Present? Yes _		s the Sampled Area		
Wetland Hydrology Present? Yes	W	vithin a Wetland?	Yes 🔽	No
Remarks:				
Cowardin Code: PEM; HGM: SLOPE;	WT: RPWWN			
Information listed on this form represer	nts the data collected in 2	2015. The wetland	was revisited of	on 10/5/2019. The
presence of wetland hydrology, hydrop	hytic vegetation, and hyd	dric soils was unab	le to be confiri	med because of
construction activity within the LOD.				
HYDROLOGY				
Wetland Hydrology Indicators:		<u>S</u>	Secondary Indicate	ors (minimum of two required)
Primary Indicators (minimum of one is required	; check all that apply)	_	Surface Soil C	cracks (B6)
Surface Water (A1)	True Aquatic Plants (B1			etated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (Drainage Patte	
Saturation (A3)	Oxidized Rhizospheres		Moss Trim Lin	
Water Marks (B1)	Presence of Reduced Ire	on (C4)	Dry-Season W	/ater Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction ir	n Tilled Soils (C6)	Crayfish Burro	ows (C8)
Drift Deposits (B3)	Thin Muck Surface (C7)	_	Saturation Vis	ible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remar	rks)	Stunted or Str	essed Plants (D1)
Iron Deposits (B5)		_	Geomorphic F	Position (D2)
Inundation Visible on Aerial Imagery (B7)		_	Shallow Aquita	ard (D3)
Water-Stained Leaves (B9)		_	Microtopograp	hic Relief (D4)
Aquatic Fauna (B13)		<u> </u>	FAC-Neutral T	ēst (D5)
Field Observations:				
	Depth (inches):			
Water Table Present? Yes No	Depth (inches):			
	Depth (inches): 0	Wetland Hy	drology Present	? Yes 🖌 No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitor	oring well aerial photos, previo	us inspections) if availa	able.	
Remarks:				
Same upland plot at w-F44				

Sampling Point: W-F46

201		Dominant I		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u>) 1		Species?		Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
2				
3				Total Number of Dominant Species Across All Strata: 2 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
6		·		Prevalence Index worksheet:
7	0	·		Total % Cover of: Multiply by:
		= Total Cove		OBL species x 1 =
50% of total cover: <u>0</u>	20% of	total cover:	0	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')				FAC species x 3 =
1				
2		·		FACU species x 4 =
3		·		UPL species x 5 =
4		·		Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9		·	·	3 - Prevalence Index is ≤3.0 ¹
		= Total Cove	•	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>0</u>	20% of	total cover:	0	data in Remarks or on a separate sheet)
	50			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Packera aurea			FACW	
2. Microstigium vimineum	30		F <u>AC</u>	¹ Indicators of hydric soil and wetland hydrology must
3		·		be present, unless disturbed or problematic.
4		·		Definitions of Four Vegetation Strata:
5				The All the standards and strandards and the standards and the sta
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	80	= Total Cove	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 40	20% of	total cover:	16	We duying All woods vince greater than 2.29 ft in
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1				
2				
3				
4				the described in
5				Hydrophytic Vegetation
	0	= Total Cove	er	Present? Yes <u>V</u> No
50% of total cover: 0		total cover:		
Remarks: (Include photo numbers here or on a separate s				
	,			

Depth	Matrix		Redo	x Feature	s					
inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-1								(Organic mat	erial
1-2	2.5Y 4/1	93	2.5YR 5/8	7	С	М	GRCL			
2-5	10YR 5/6	90	2.5YR 5/8	10	С	М	GRCL			
					·	·				
						·				
						·				
						·				
						·				
	oncentration, D=Depl	etion, RM:	=Reduced Matrix, MS	S=Masked	d Sand Gr	ains.			ng, M=Matrix.	
dric Soil	Indicators:						Indic	ators for Pr	oblematic Hyd	dric Soils [°]
Histosol	· · ·		Dark Surface	· · ·				cm Muck (/	A10) (MLRA 14	7)
Histic Ep	pipedon (A2)		Polyvalue Be				148) (Coast Prairie	Redox (A16)	
Black Hi	stic (A3)		Thin Dark Su			47, 148)		(MLRA 14	7, 148)	
_ Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix ((F2)		F	Piedmont Flo	odplain Soils (F19)
_ Stratified	d Layers (A5)		Depleted Ma	rix (F3)				(MLRA 13	6, 147)	
_ 2 cm Mu	ick (A10) (LRR N)		Redox Dark	Surface (F	-6)				Dark Surface	(TF12)
_ Depleted	d Below Dark Surface	e (A11)	Depleted Dar	k Surface	e (F7)		<u>~</u> (Other (Expla	in in Remarks)	
_ Thick Da	ark Surface (A12)		Redox Depression	ssions (F	8)					
_ Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Mass	es (F12) (LRR N,				
MLRA	A 147, 148)		MLRA 13	6)						
_ Sandy G	Bleyed Matrix (S4)		Umbric Surfa	ce (F13) ((MLRA 13	6, 122)	³ Inc	licators of h	/drophytic vege	tation and
_ Sandy R	edox (S5)		Piedmont Flo	odplain S	ioils (F19)	(MLRA 14	48) we	etland hydro	logy must be p	resent,
_ Stripped	Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) ur	less disturb	ed or problema	tic.
estrictive I	_ayer (if observed):									
Type: Gr	avel									
Depth (inc	_{ches):} <u>5</u>						Hydric Soi	Present?	Yes 🖌	No
							1			

Wetland Photograph Page

Wetland ID W-F46



Photograph Direction South

Date: 05/06/2015

Comments: 2015 wetland delineation.



Photograph Direction West

Date: 10/05/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	_ City/County: Webster Sampling Date: 05/06/2015
Applicant/Owner: MVP	State: WV Sampling Point: & F47. UPL
Investigator(s): A. Flake, D. McCullough, E. Strohmaier	_ Section, Township, Range: <u>N/A</u>
Landform (hillslope, terrace, etc.): hillslope	ocal relief (concave, convex, none): <u>CONVEX</u> Slope (%): <u>8</u>
Subregion (LRR or MLRA): LRRN Lat: 38.664722	2 Long: -80.478715 Datum: NAD83
Soil Map Unit Name: Pineville-Gilpin-Guyandotte association, v	very steep, extremely stony NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of y	year? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significant	ly disturbed? Are "Normal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally p	problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No 🔽
Remarks: Upland					

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living	Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Se	oils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes No Vo Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Remarks:	

HYDROLOGY

Sampling Point: W-F44, F45, F46, & F47 UPL

	annes or	plants.		
30'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		Number of Dominant Species
1. Acer rubrum	50	<u> </u>	FAC	That Are OBL, FACW, or FAC: 2 (A)
_{2.} Fagus grandifolia	30	~	FACU	
3				Total Number of Dominant Species Across All Strata:4 (B)
4				Percent of Dominant Species
5		·		That Are OBL, FACW, or FAC: 50 (A/B)
6				
7				Prevalence Index worksheet:
		= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: <u>40</u>		total cover:		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
<u>Saping/Silub Silatum</u> (Flot Size)	25			FAC species x 3 =
1. Carpinus caroliniana		<u> </u>	FAC	
2. Viburnum acerifolium	30	 ✓ 	<u>UPL</u>	FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
9	55			3 - Prevalence Index is ≤3.0 ¹
	. 55	= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 27.5	20% of	total cover:	11	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				. ,
1				Problematic Hydrophytic Vegetation ¹ (Explain)
2		·		¹ Indicators of hydric soil and wetland hydrology must
3		·		be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of
7				height.
8		·		Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				
	0	Tatal Ora		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total array 0	_	= Total Cov		of size, and woody plants less than 5.26 it tail.
50% of total cover: 0	20% of	total cover:		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4		·		Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes No V
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate sl				
	leel.)			

Profile Desc	ription: (Describe t	o the depth	n needed to docur	nent the in	dicator o	or confirm	the absence	of indicato	rs.)	
Depth	Matrix		Redo	x Features						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-10	10YR 3/2	100					SiL			
								-		
										<u> </u>
										<u> </u>
										<u> </u>
								-		
										<u> </u>
¹ Type: C=C	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location: P			
Hydric Soil	Indicators:						Indica	ators for Pr	oblematic H	ydric Soils ³ :
Histosol	(A1)		Dark Surface					cm Muck (A	(MLRA 1	147)
Histic Ep	pipedon (A2)		Polyvalue Be	low Surfac	e (S8) (M	ILRA 147,	148) C	oast Prairie	Redox (A16)	
Black Hi	stic (A3)		Thin Dark Su	rface (S9)	(MLRA 1	47, 148)		(MLRA 14	7, 148)	
	n Sulfide (A4)		Loamy Gleye	•	2)		P		odplain Soils	(F19)
	d Layers (A5)		Depleted Mar	. ,				(MLRA 13	•	
	ıck (A10) (LRR N)		Redox Dark	•	,			•	Dark Surface	· ,
	Below Dark Surface	e (A11)	Depleted Dar				0	ther (Explai)	n in Remarks	.)
	ark Surface (A12)		Redox Depre		,					
	lucky Mineral (S1) (L	RR N,	Iron-Mangan		s (F12) (I	LRR N,				
	A 147, 148)		MLRA 13	,			3			
	Bleyed Matrix (S4)		Umbric Surfa						/drophytic veo	-
	edox (S5)		Piedmont Flo	•	• •	•	•	•	ogy must be	
	Matrix (S6) Layer (if observed):		Red Parent N	/iaterial (F2		A 127, 147) un		ed or problem	
	• • •									
Type: Ro								_		
Depth (in	ches): <u>10</u>						Hydric Soil	Present?	Yes	No 🔽
Remarks:										

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	38.664021	Lon.	-80.483434
STREAM/SITE ID AND SITE DESCRI			N-R4, Temporary Access Road					
(% stream slope, watershed size {acreage}, unaltered or impairments)						·····, · ···, · ····, · ····, · ····		
FORM OF MITIGATION:								
ATE:	8/10/2015		WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
/-R4	Emergent	0.0432	Emergent					
				-		PART III - Advanced	Mitigatio	n
				-		Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
							-	
Total Impact		0.0432						
PART II - Unit Scores					Estimated			
Wetland Classification			Replacement Unit(s)	-		ILF Costs		
Total Emergent Total Scrub-Shrub			0.0432	-		\$2,592.00		
Total Forested			0	-		ψ2,092.00		
Total Open Water			0	1				

Project/Site: MVP	City/County: Webster	Sampling Date: 06/12/2015										
Applicant/Owner: MVP		WV Sampling Point: W-R4										
Investigator(s): DH EF NV JC Section, Township, Range: N/A												
Landform (hillslope, terrace, etc.): Hillslope		nvex Slope (%): 5										
Subregion (LRR or MLRA): LRRN Lat: 38.664037		27 Datum: NAD 83										
Soil Map Unit Name: Pineville-Gilpin-Guyandotte association												
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)												
Are Vegetation, Soil, or Hydrology significant	y disturbed? Are "Normal Circum	stances" present? Yes No										
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed, explain a	any answers in Remarks.)										
SUMMARY OF FINDINGS – Attach site map showin	g sampling point locations, tra	ansects, important features, etc.										
Hydrophytic Vegetation Present? Yes No												
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes V	is the Sampled Area											
Wetland Hydrology Present? Yes <u>V</u> No	- within a Wetland? Y	/es No										
Remarks:	-											
Cowardin Code: PEM												
HGM: Slope												
WT: NRPWW												
Wetland occurring within abandoned road. Rocky/fill re	strictive soil perching water. Dist	urbed soils/hydrology.										
HYDROLOGY												
Wetland Hydrology Indicators:	Second	lary Indicators (minimum of two required)										
Primary Indicators (minimum of one is required; check all that apply) Su	rface Soil Cracks (B6)										
Surface Water (A1) True Aquatic	arsely Vegetated Concave Surface (B8)											
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10)												
Saturation (A3) Oxidized Rhiz	cospheres on Living Roots (C3) Mo	oss Trim Lines (B16)										
Water Marks (B1) Presence of F	Reduced Iron (C4) Dry	y-Season Water Table (C2)										
Sediment Deposits (B2) Recent Iron R	eduction in Tilled Soils (C6) Cra	Crayfish Burrows (C8)										
Drift Deposits (B3) Thin Muck Su	rface (C7) Sa	Saturation Visible on Aerial Imagery (C9)										
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1)												
Iron Deposits (B5)	<u> </u>	omorphic Position (D2)										
Inundation Visible on Aerial Imagery (B7)		allow Aquitard (D3)										
Water-Stained Leaves (B9)		crotopographic Relief (D4)										
Aquatic Fauna (B13)	<u> </u>	C-Neutral Test (D5)										
Field Observations:												
Surface Water Present? Yes No Depth (inche												
Water Table Present? Yes No Depth (inche												
Saturation Present? Yes <u>V</u> No <u>Depth</u> (inche	s):0 Wetland Hydrolog	gy Present? Yes 🔽 No										
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial pho	tos, previous inspections), if available:											
Demotion												
Remarks:												

Sampling Point: W-R4

, ,	Abaaluta	• Dominant	Indiantar	Deminence Test werkehest:			
Tree Stratum (Plot size: <u>30'</u>)		Dominant Species?		Dominance Test worksheet:			
				Number of Dominant Species That Are OBL, FACW, or FAC:3(A)			
1				That Are OBL, FACW, or FAC:3 (A)			
2		·		Total Number of Dominant			
3				Species Across All Strata: <u>3</u> (B)			
4							
5				Percent of Dominant Species That Are OBL_EACW_ or EAC: 100% (A/B)			
				That Are OBL, FACW, or FAC: 100% (A/B)			
6			······	Prevalence Index worksheet:			
7		·		Total % Cover of: Multiply by:			
		= Total Cov	er				
50% of total cover: <u>0</u>	20% of	f total cover:	0	OBL species x 1 =			
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =			
1. Platanus occidentalis	10	✓	FACW	FAC species x 3 =			
2 Lindera benzoin	3	· · · ·		FACU species x 4 =			
	<u> </u>	V	F <u>AC</u>				
3				UPL species x 5 =			
4				Column Totals: (A) (B)			
5				Prevalence Index = B/A =			
6				Hydrophytic Vegetation Indicators:			
7				1 - Rapid Test for Hydrophytic Vegetation			
8							
				✓ 2 - Dominance Test is >50%			
9	10		·	3 - Prevalence Index is ≤3.0 ¹			
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting			
50% of total cover: 6.5	20% of	f total cover:	2.6	data in Remarks or on a separate sheet)			
Herb Stratum (Plot size: 5')							
1. Adiantum pedatum	4		FAC	Problematic Hydrophytic Vegetation ¹ (Explain)			
2. Impatiens capensis	3						
	3		F <u>ACW</u>	¹ Indicators of hydric soil and wetland hydrology must			
3. Osmundastrum cinnamomeum			FACW	be present, unless disturbed or problematic.			
4. Boehmeria cylindrica	12		FACW	Definitions of Four Vegetation Strata:			
5. Microstegium vimineum	60	✓	FAC	Deminiono or i our vegetation ortata.			
6. Carex vulpinoidea	8		OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or			
				more in diameter at breast height (DBH), regardless of			
7. Onoclea sensibilis	4		F <u>ACW</u>	height.			
8							
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1			
				m) tall.			
10			·				
11		. <u> </u>		Herb – All herbaceous (non-woody) plants, regardless			
		= Total Cov		of size, and woody plants less than 3.28 ft tall.			
50% of total cover: 47	20% of	f total cover:	18.8				
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in			
				height.			
1							
2							
3		<u></u>					
4							
				Hydrophytic			
0	0			Vegetation Present? Yes Ves No			
		= Total Cov	~	Present? Tes <u>•</u> No			
50% of total cover: 0	20% of	f total cover:	0				
Remarks: (Include photo numbers here or on a separate s	heet.)						
	,						

Profile Desc	ription: (Describe t	o the dept	th needed to docun	nent the	indicator	or confirm	the absence of	indicators.)	
Depth	Matrix			x Feature	S				
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc ²	Texture	Remark	3
0-1	10YR 3/3	100					0		
1-6	10YR 4/1	70	10YR 4/4	30	С	PL	SC		
6-10	7.5YR 4/6	100					SC		
·									<u> </u>
1				Maalua			² l a satisma DI	Dava Linian M. Matri	
Hydric Soil I	oncentration, D=Depl	etion, RIVI=	Reduced Matrix, Ma	S=IVIASKee	a Sand Gra	ains.		Pore Lining, M=Matri	
Histosol			Dark Surface	(\$7)				Muck (A10) (MLRA	•
	vipedon (A2)		Polyvalue Be	· · ·	nce (S8) (N	II RA 147.		st Prairie Redox (A1	•
Black His	,		Thin Dark Su		· / ·		·	ILRA 147, 148)	5)
	n Sulfide (A4)		Loamy Gleye	•	, .	,,	•	mont Floodplain Soi	ls (F19)
	Layers (A5)		Depleted Mat		(/			ILRA 136, 147)	
2 cm Mu	ck (A10) (LRR N)		Redox Dark S	Surface (I	=6)		Very	Shallow Dark Surfa	ce (TF12)
Depleted	Below Dark Surface	e (A11)	Depleted Dar	k Surface	e (F7)		Othe	r (Explain in Remarl	<s)< td=""></s)<>
Thick Da	ark Surface (A12)		Redox Depre	ssions (F	8)				
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Mass	es (F12) (LRR N,			
MLRA	147, 148)		MLRA 13	6)					
	leyed Matrix (S4)		Umbric Surfa	, ,	•			tors of hydrophytic v	•
	edox (S5)		Piedmont Flo	•	• •	•	•	nd hydrology must b	•
	Matrix (S6)		Red Parent N	Aaterial (F	-21) (MLR	A 127, 147) unless	s disturbed or proble	matic.
	ayer (if observed):								
Type: Ro									
Depth (inc	ches): <u>10</u>						Hydric Soil Pre	esent? Yes 🔽	No
Remarks:									

Wetland ID <u>W-R4</u> Date <u>06/12/2015</u>



Photograph Direction East

Comments:

USACE FILE NO./Project Name:	Mountain Valley Pipeline		COORDINATES:	Lat.	38.60728	Lon.	-80.504722	
TREAM/SITE ID AND SITE DESCRIPTION:						W-H75, Pipeline ROW		
% stream slope, watershed size {a	creage}, unaltered	l or impairments)				· ·		
FORM OF MITIGATION:		· · ·						
ATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
/-H75	Emergent	0.0108	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
otal Impact		0.0108						
		Jnit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0108			AAAAAAAAAAAAA		
otal Scrub-Shrub			0			\$648.00		
otal Forested			0					
otal Open Water			0					

Project/Site: MVP	City/County: Webster	Sampling Date: 05/04/2015					
Applicant/Owner: MVP	State: WV Sampling Point: W-H75						
Investigator(s): A. Grech, S. Kelly, M. Whitten Section, Township, Range: N/A							
Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 0-							
Subregion (LRR or MLRA): LRRN Lat: 38.607454 Long: -80.504813 Datum: NAD							
Soil Map Unit Name: Pineville-Gilpin-Guyandotte association, very steep, extremely stor NWI classification: None							
· · ·	bical for this time of year? Yes No						
	y significantly disturbed? Are "Normal						
	y naturally problematic? (If needed, e						
SUMMARY OF FINDINGS – Attach si	ite map showing sampling point location	ons, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes _							
	No Is the Sampled Area No within a Wetland?	Yes No					
Wetland Hydrology Present? Yes							
Remarks:							
Cowardin Code: PEM; HGM: Slope; W	T: RPWWN						
Information listed on this form represer	nts the data collected in 2015. The wetland	was revisited on 10/10/2019. The					
presence of wetland hydrology, hydrop	phytic vegetation, and hydric soils was una	ble to be confirmed because the wetland					
was obstructed by timber matting.							
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required;	check all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)					
 High Water Table (A2) 	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)					
Saturation (A3)	 Oxidized Rhizospheres on Living Roots (C3) 	Moss Trim Lines (B16)					
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)					
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)					
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)					
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)					
Iron Deposits (B5)		Geomorphic Position (D2)					
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)					
✓ Water-Stained Leaves (B9)		Microtopographic Relief (D4)					
Aquatic Fauna (B13)		FAC-Neutral Test (D5)					
Field Observations:							
Surface Water Present? Yes No	✓ Depth (inches):						
	Depth (inches): 10						
	Depth (inches): 0 Wetland H	lydrology Present? Yes 🖌 No					
(includes capillary fringe) Describe Recorded Data (stream gauge, monito	pring well, aerial photos, previous inspections), if ava	ilable:					
Remarks:							

Sampling Point: W-H75

. ,	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> ')		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:3 (A)
2				
3				Total Number of Dominant Species Across All Strata: 3 (B)
				Species Across Air Strata (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov		
50% of total cover: <u>0</u>	20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
				Column Totals: (A) (B)
4				
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				
	0	= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:0		total cover:	•	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Juncus effusus	40	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Scirpus cyperinus	40	<u> </u>		
			OBL	¹ Indicators of hydric soil and wetland hydrology must
3. Dichanthelium clandestinum	20		F <u>AC</u>	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
8				
				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				iii) taii.
11	400			Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>50</u>	20% of	total cover:	20	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4				
				Hydrophytic
5	•			Vegetation Present? Yes 🖌 No
		= Total Cov		
50% of total cover: 0		total cover:	0	
Remarks: (Include photo numbers here or on a separate s	sheet.)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix			Feature				
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture	Remarks
0-4	10YR 6/3	95	7.5YR 4/6	5	С	M/PL	SIC	
4-10	10YR 5/1	95	7.5YR 4/6	5	С	M/PL	SIC	
10-20	10YR 6/8	95	7.5YR 4/6	5	С	М	С	
. <u></u>						·	<u> </u>	
. <u></u> .							<u> </u>	
						·		
17 0.0							21	
Hydric Soil I	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	=Maske	d Sand Gr	ains.		_=Pore Lining, M=Matrix. ttors for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(97)				cm Muck (A10) (MLRA 147)
	vipedon (A2)		Polyvalue Bel	· · ·	ice (S8) (N	ILRA 147.		oast Prairie Redox (A16)
Black His			Thin Dark Su				·	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye					iedmont Floodplain Soils (F19)
Stratified	Layers (A5)		Depleted Mat	rix (F3)				(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark S		,			ery Shallow Dark Surface (TF12)
	Below Dark Surface	e (A11)	Depleted Dar		. ,		Oi	ther (Explain in Remarks)
	ark Surface (A12)		Redox Depre					
-	lucky Mineral (S1) (L	.RR N,	Iron-Mangane		es (F12) (LRR N,		
	147, 148) leyed Matrix (S4)		MLRA 136		(MI RA 13	6 122)	³ Indi	cators of hydrophytic vegetation and
-	edox (S5)		Piedmont Flo					tland hydrology must be present,
	Matrix (S6)		Red Parent M	•	, ,	•		ess disturbed or problematic.
	ayer (if observed):				, (·
Туре:								
Depth (inc	ches):						Hydric Soil	Present? Yes 🖌 No
Remarks:								

Wetland ID W-H75



Photograph Direction SE

Date: 05/04/2015

Comments: 2015 wetland delineation.



Photograph Direction SE

Date: 10/10/19

Comments: 2019 wetland delineation confirmation.

_ _ . - -.

WETLAND DETERMINATION	I DATA FORM – Eastern Mounta	ins and Piedr	nont Region
Project/Site: MVP	City/County: Webster		Sampling Date: 05/04/2015
Applicant/Owner: MVP			Sampling Point: W-H75-UP
Investigator(s): A. Grech, S.Kelly, M. Whitten	Section, Township, Range:	N/A	
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, n	_{one):} Convex	Slope (%): 0-20
Subregion (LRR or MLRA): LRRN Lat:		Datum: NAD 83	
Soil Map Unit Name: Pineville-Gilpin-Guyandotte			
Are climatic / hydrologic conditions on the site typical for t			
Are Vegetation, Soil, or Hydrology		explain any answ	
Are Vegetation, Soil, or Hydrology			
SUMMARY OF FINDINGS – Attach site ma	p showing sampling point locat	ions, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes Remarks: Yes	No within a Wetland?		No
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indic	ators (minimum of two required)
Primary Indicators (minimum of one is required; check a	III that apply)	Surface Soi	
	rue Aquatic Plants (B14)		egetated Concave Surface (B8)
	ydrogen Sulfide Odor (C1)	-	atterns (B10)
	xidized Rhizospheres on Living Roots (C3)		
	resence of Reduced Iron (C4)	-	Water Table (C2)
	ecent Iron Reduction in Tilled Soils (C6) nin Muck Surface (C7)	Crayfish Bu	rrows (C8) /isible on Aerial Imagery (C9)
,	ther (Explain in Remarks)		Stressed Plants (D1)
Iron Deposits (B5)		c Position (D2)	
Inundation Visible on Aerial Imagery (B7)		Shallow Aqu	
Water-Stained Leaves (B9)			aphic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutra	
Field Observations:			
Surface Water Present? Yes No E	Depth (inches):		

Surface Water Present?	Yes No 🔽	Depth (inches):				
Water Table Present?	Yes No 🔽	Depth (inches):				
Saturation Present? (includes capillary fringe)	Yes No _	Depth (inches):	Wetland Hydrology Present?	Yes	No	~
Describe Recorded Data (strea	am gauge, monitoring v	vell, aerial photos, previous inspec	tions), if available:			
Remarks:						

Sampling Point: W-H75-UP

Tree Stratum (Plot size: $30'$) $30'$ $0'$ $50'$ $50'$ $50'$ $51 tusNumber of Dominant Species1. Acer rubrum40 * FACNumber of Dominant Species2.40 * FACTotal Number of Dominant Species3. - $	(A) (B) (A/B)
1. Acer rubrum 40 ✓ FAC That Are OBL, FACW, or FAC: 3 2.	(B) (A/B)
3.	(A/B)
3.	(A/B)
4.	(A/B)
5	. ,
5.	. ,
7. 40 = Total Cover Total % Cover of: Multiply by: 50% of total cover: 20 20% of total cover: 8 OBL species x 1 = Sapling/Shrub Stratum (Plot size: 15' Y Y Y	
7. 40 = Total Cover Total % Cover of: Multiply by: 50% of total cover: 20 20% of total cover: 8 OBL species x 1 = Sapling/Shrub Stratum (Plot size: 15' Y Y Y	
40 = Total Cover Total % Cover of: Multiply by: 50% of total cover: 20 20% of total cover: 8 Sapling/Shrub Stratum (Plot size: 15' 7	
50% of total cover: 20 20% of total cover: 8 OBL species x 1 = Sapling/Shrub Stratum (Plot size: 15' FACW species x 2 =	
Sapling/Shrub Stratum (Plot size: 15') FACW species x 2 =	
I LIFIODENDION TUIDITERA	
2. <u>Acer rubrum</u> <u>10</u> <u>✔</u> <u>FAC</u> FACU species x 4 =	
3. Robinia pseudoacacia 10 FACU UPL species x 5 =	
4. Rubus occidentalis 10 ✔ UPL Column Totals: (A)	(B)
	. ,
5 Prevalence Index = B/A =	
6 Hydrophytic Vegetation Indicators:	
7	
3 - Prevalence Index is ≤3.0°	
= Total Cover A Merphological Adaptations' (Provide supr	orting
50% of total cover: <u>20</u> 20% of total cover: <u>0</u>	0
Herb Stratum (Plot size:)	
1. Holcus lanatus 15 ✔ FAC Problematic Hydrophytic Vegetation ¹ (Explain)
2	
Indicators of hydro soil and wetland hydrology in	ust
3 be present, unless disturbed or problematic.	
4 Definitions of Four Vegetation Strata:	
5	
6 Tree – Woody plants, excluding vines, 3 in. (7.6 c	
0 more in diameter at breast height (DBH), regardle 7 more in diameter at breast height (DBH), regardle b b	55 01
8 Sapling/Shrub – Woody plants, excluding vines,	
9 than 3 in. DBH and greater than or equal to 3.28	t (1
10 m) tall.	
11 Herb – All herbaceous (non-woody) plants, regar	lless
15 = Total Cover of size, and woody plants less than 3.28 ft tall.	
50% of total cover: 7.5 20% of total cover: 3	
Woody vine Stratum (Plat size) 15' Woody vines greater than 3.28	t in
1	
2	
3	
4. Understanding	
5 Hydrophytic	
50% of total cover: 0 20% of total cover: 0	
Remarks: (Include photo numbers here or on a separate sheet.)	

Profile Desc	cription: (Describe	to the dept	h needed to docum	nent the	indicator	or confirm	m the absence of indicators.)
Depth	Matrix		Redo	x Feature	s		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-7	10YR 5/4	96	7.5YR4/6	4	C	M	SC
7-14	10YR 6/4	98	7.5YR5/6	2	<u>C</u>	Μ	<u> </u>
14-21	10YR 5/6	100					C
					·		
		·					
		·			. <u> </u>		
		·					
					<u> </u>		
1 Type: C-C	oncentration, D=Dep	letion RM-	Reduced Matrix M	S-Maska	d Sand G	aine	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil						anis.	Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)
	bipedon (A2)		Polyvalue Be	· ·	ace (S8) (I	MLRA 147	
	stic (A3)		Thin Dark Su		· / ·		
	en Sulfide (A4)		Loamy Gleye		, .	, .,	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Mar		()		(MLRA 136, 147)
	uck (A10) (LRR N)		Redox Dark		F6)		Very Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Dar				Other (Explain in Remarks)
·	ark Surface (A12)	()	Redox Depre				
	/ Iucky Mineral (S1) (L	.RR N,	Iron-Mangan			(LRR N,	
	A 147, 148)		MLRA 13	6)	. ,		
Sandy G	Bleyed Matrix (S4)		Umbric Surfa	ce (F13)	(MLRA 1	36, 122)	³ Indicators of hydrophytic vegetation and
Sandy F	Redox (S5)		Piedmont Flo	odplain S	Soils (F19)	(MLRA 1	148) wetland hydrology must be present,
	l Matrix (S6)		Red Parent N	/laterial (l	=21) (MLF	A 127, 14	47) unless disturbed or problematic.
Restrictive	Layer (if observed):						
Туре:							
Depth (in	ches):						Hydric Soil Present? Yes No _
Remarks:							

USACE FILE NO./Project Name:		Mountain Valley Pipeline		COORDINATES:	Lat.	38.602069	Lon.	-80.508493
STREAM/SITE ID AND SITE DESCRIPTION:						W-H79, Timber Mat Crossing		
% stream slope, watershed size {a		d or impairments)						
FORM OF MITIGATION:		,						
DATE:	8/10)/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-H79	Emergent	0.0077	Emergent					
						PART III - Advanced	Mitigatio	on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Fotal Impact		0.0077						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0077	-				
otal Scrub-Shrub			0			\$462.00		
otal Forested			0					
otal Open Water			0					

Project/Site: MVP	City/County: Webster	Sampling Date: 05/05/2015				
Applicant/Owner: MVP						
Investigator(s): A. Grech, S. Kelly, M. Whitten Section, Township, Range: N/A						
Landform (hillslope, terrace, etc.): Summit Local relief (concave, convex, none): Concave Slope (%):						
Subregion (LRR or MLRA): LRRN La		508531 Datum: NAD 83				
Soil Map Unit Name: Gilpin silt loam, 3 to 15 p	-					
•						
Are climatic / hydrologic conditions on the site typical		· · · · ·				
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Normal	Circumstances" present? Yes <u>V</u> No				
Are Vegetation, Soil, or Hydrology	naturally problematic? (If needed, ex	xplain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site	map showing sampling point location	ns, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes	No					
Hydrophytic Vegetation Present?YesHydric Soil Present?Yes✓	Is the Sampled Area					
Wetland Hydrology Present?	No within a Wetland?	Yes No				
Remarks:						
Cowardin Code: PEM; HGM: slope; WT: N	IRPWW					
Information listed on this form represents t	the data collected in 2015. The wetland	was revisited on 11/10/2019. Presence				
of wetland hydrology, hydrophytic vegetati	on, and hydric soils was confirmed usir	ng the USACE EMP Regional				
Supplement delineation methodology.		5				
HYDROLOGY						
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; che		Surface Soil Cracks (B6)				
✓ Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)				
	Oxidized Rhizospheres on Living Roots (C3)	Moss Trim Lines (B16)				
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)				
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)				
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)		Geomorphic Position (D2)				
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)				
✓ Water-Stained Leaves (B9)		Microtopographic Relief (D4)				
Aquatic Fauna (B13)		 FAC-Neutral Test (D5) 				
Field Observations:						
Surface Water Present? Yes <u>Yes</u> No	Depth (inches):2					
Water Table Present? Yes No _	Depth (inches):					
	Depth (inches): Wetland H	ydrology Present? Yes 🖌 No				
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring	well aerial photos, previous inspections), if avai	lable.				
Describe Recorded Data (stream gauge, monitoring						
Remarks:						

Sampling Point: W-H79

, ,	Abcoluto	• Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species		
<u> </u>				Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100 (A/B)
6				
7.				Prevalence Index worksheet:
	0	= Total Co	ver	Total % Cover of: Multiply by:
50% of total cover: 0				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')	20/00			FACW species x 2 =
				FAC species x 3 =
1				
2				FACU species x 4 =
3				UPL species x 5 =
4	_			Column Totals: (A) (B)
5				
				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	0	= Total Co	ver	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	f total cove	r: <u>0</u>	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Microstegium viminum	50	~	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Scirpus cyperinus	20	~	OBL	
3. Juncus effusus	10			¹ Indicators of hydric soil and wetland hydrology must
			FACW	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Co		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 40) 20% of	f total cove	r: <u> 16 </u>	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4				Hydrophytic
5	-			Vegetation
		= Total Co		Present? Yes V No
50% of total cover: <u>0</u>	20% of	f total cove	r: <u>0</u>	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Profile Desc	ription: (Describe to	o the depth	needed to docun	nent the i	ndicator	or confirm	n the absence of indicators.)
Depth	Matrix			x Features	s		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-20	10YR 6/2	98	7.5YR 6/8	2	С	M/PL	SIC
						·	
						·	
·						·	· ·
						·	
	oncentration, D=Deple	etion, RM=R	educed Matrix, MS	S=Masked	Sand Gr	ains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	· · ·			2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				, 148) Coast Prairie Redox (A16)
Black Hi	· · /		Thin Dark Su	, ,	•	47, 148)	(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye		F2)		Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Mat	• •			(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S		,		Very Shallow Dark Surface (TF12)
·	d Below Dark Surface	(A11)	Depleted Dar		. ,		Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre				
	lucky Mineral (S1) (LI	RR N,	Iron-Mangan		es (F12) (LRR N,	
	A 147, 148)		MLRA 13	,		C 400)	
	Bleyed Matrix (S4) Redox (S5)		Umbric Surfa Piedmont Flo	· · ·	•		³ Indicators of hydrophytic vegetation and
	Matrix (S6)		Red Parent N				
	Layer (if observed):			naterial (F		A 127, 147	
	Layer (il observeu).						
Type:			_				
Depth (in	ches):		_				Hydric Soil Present? Yes Ves No
Remarks:							

Wetland ID W-H79



Photograph Direction <u>NW</u>

Date: 05/05/2015

Comments: 2015 wetland delineation.



Photograph Direction North

Date: 11/10/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	City/C	ounty: Webster		Sampling Date: 05/05/2015				
Applicant/Owner: MVP			State: WV	Sampling Point: W-H79-UP				
Investigator(s): A. Grech, S.Kelly, M. Whitten	Section							
Landform (hillslope, terrace, etc.): Summit	Local rel	ef (concave, convex, none): None	Slope (%): 0-1				
Subregion (LRR or MLRA): LRRN La	t: 38°36'7.37"	Long: <u>-80°3</u>	30'30.41"	Datum: NAD 83				
Soil Map Unit Name: Gilpin silt loam, 3 to 15 percent slopes, very stony NWI classification: None								
Are climatic / hydrologic conditions on the site typical	for this time of year? Y	es No (If	no, explain in I	Remarks.)				
Are Vegetation, Soil, or Hydrology	significantly distur	bed? Are "Normal C	Circumstances"	present? Yes 🖌 No				
Are Vegetation, Soil, or Hydrology	naturally problema	atic? (If needed, ex	plain any answ	ers in Remarks.)				
SUMMARY OF FINDINGS – Attach site r	nap showing san	pling point location	s, transect	s, important features, etc.				
Hydrophytic Vegetation Present? Yes	No_	In the Compled Area						
Hydric Soil Present? Yes	No 🖌	Is the Sampled Area within a Wetland?	Yes	No 🖌				
Wetland Hydrology Present? Yes	No							
Remarks:								
Upland, mountain top hardwood forest.								
HYDROLOGY								

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	
Field Observations:	
Surface Water Present? Yes No <u>/</u> Depth (inches):	
Water Table Present? Yes No <u>/</u> Depth (inches):	
	4
Saturation Present? Yes No Ves Depth (inches):	Wetland Hydrology Present? Yes No

Sampling Point: W-H79-UP

	Absolute	- Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		
Acer rubrum	40	<u> </u>		Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
11 <u></u>			FAC	That Are OBL, FACW, or FAC: (A)
2. Quercus montana	20	~	<u>UPL</u>	Total Number of Dominant
3				Total Number of Dominant Species Across All Strata: 5 (B)
				Species Across All Strata. (B)
4	-			Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 40 (A/B)
6				
				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	60	= Total Cov	rer	
50% of total cover: 30	20% of	total cover:	12	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Liriodendron tulipifera	20			FAC species x 3 =
		<u> </u>	FACU	-
2. Acer rubrum	10	~	FAC	FACU species x 4 =
3. Rubus occidentalis	10	~	UPL	UPL species x 5 =
		· · ·		
4				Column Totals: (A) (B)
5				
				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				
		<u></u>		2 - Dominance Test is >50%
9	40			3 - Prevalence Index is ≤3.0 ¹
	40	= Total Cov	rer	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 20	20% of	total cover:	8	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation ¹ (Explain)
1				
2				1
				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4			·	Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of
7	-			height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3.28 ft (1
10	-			m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	0	= Total Cov	or	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 0		total cover:		
	20 % 01	lotal cover.		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1.				
2			·	
3		· . <u></u>		
4				The described a
				Hydrophytic
5	•	· · · · · · · · · · · · · · · · · · ·	·	Vegetation Present? Yes No
		= Total Cov		
50% of total cover: 0	20% of	total cover	0	
Remarks: (Include photo numbers here or on a separate s	neet.)			
1				

Profile Desc	ription: (Describe to	o the depth	needed to docun	nent the i	ndicator	or confirm	the absenc	e of indicato	ors.)	
Depth	Matrix		Redo	x Features	3					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	;
0-20	2.5Y 6/3	98	7.5YR 6/8	2	С	М	SIC			
						·				
						·				
		<u> </u>				·				
		<u> </u>				·		<u> </u>		
1 Type: C=C	oncentration, D=Deple	etion RM=R	educed Matrix MS	S=Masked	Sand Gr	ains	² Location:	PL=Pore Linii	ng M=Matrix	(
Hydric Soil		500H, 10H-10								 Iydric Soils ³ :
Histosol			Dark Surface	(\$7)				2 cm Muck (A		•
	bipedon (A2)		Polyvalue Be	. ,	ce (S8) (N	/II RΔ 147		Coast Prairie	, ,	
Black Hi	,		Thin Dark Su			140)	(MLRA 14		·)	
	n Sulfide (A4)		Loamy Gleye			141, 140)		Piedmont Flo		s (F19)
	d Layers (A5)		Depleted Mat		- 2)			(MLRA 13		5 (1 15)
	ick (A10) (LRR N)		Redox Dark \$. ,	6)			Very Shallow		e (TF12)
	d Below Dark Surface	(A11)	Depleted Dar	•	,			Other (Explai		· ·
-	ark Surface (A12)	(,)	Redox Depre)	
	lucky Mineral (S1) (L l	RR N.	Iron-Mangan			LRR N.				
-	A 147, 148)	,	MLRA 13		/	,				
	Bleyed Matrix (S4)		Umbric Surfa	,	MLRA 13	6. 122)	³ In	dicators of hy	/drophytic ve	egetation and
	edox (S5)		Piedmont Flo	. , ,				etland hydro		-
	Matrix (S6)		Red Parent N	•	• •	•		nless disturb	•••	
	_ayer (if observed):			,	/ (
Type:	,									
, i i i i i i i i i i i i i i i i i i i	ches):		_				Hydric So	il Present?	Yes	No 🖌
							Tiyune 30	ii i iesein:	163	
Remarks:										

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.599491	Lon.	-80.506376
STREAM/SITE ID AND SITE DESCR	IPTION:					W-H81, Timber Mat Crossing		
% stream slope, watershed size {a		d or impairments)						
FORM OF MITIGATION:								
DATE:	8/10)/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-H81	Emergent	0.0237	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Fotal Impact		0.0237						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0237			A · · · · · · · · · · · · · · · · · · ·		
otal Scrub-Shrub			0			\$1,422.00		
otal Forested			0					
otal Open Water			0					

Project/Site: MVP	City	//County: Webster		Sampling Date: 05/05/2015		
Applicant/Owner: MVP		Sampling Point: W-H81				
Investigator(s): A. Grech, S. Kelly, M. Whitten Section, Township, Range: N/A						
Landform (hillslope, terrace, etc.): Sum	imit Local r	elief (concave, convex, nor	ne): Concave	Slope (%): 0-3		
Subregion (LRR or MLRA): LRRN	Lat. 38.599462	Long: -80	.506392	Datum NAD 83		
Soil Map Unit Name: Gilpin-Dekalb o		-				
Are climatic / hydrologic conditions on th						
				· · · · · ·		
Are Vegetation, Soil, or H						
Are Vegetation, Soil, or H			explain any answe			
SUMMARY OF FINDINGS – At	tach site map showing sa	ampling point location	ons, transects	, important features, etc.		
Hydrophytic Vegetation Present?	Yes No	Is the Sampled Area				
Hydric Soil Present?	Yes 🖌 No	within a Wetland?	Yes 🗸	No		
Wetland Hydrology Present?	Yes 🖌 No					
Cowardin Code: PEM; HGM: de Information listed on this form re of wetland hydrology, hydrophyt Supplement delineation method	epresents the data collected tic vegetation, and hydric so	l in 2015. The wetland ils was confirmed usi	d was revisited ng the USACE	l on 11/10/2019. Presence EMP Regional		
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indica	ators (minimum of two required)		
Primary Indicators (minimum of one is			Surface Soil	. ,		
✓ Surface Water (A1)	True Aquatic Plants		Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)	Hydrogen Sulfide C	· · ·	Drainage Pa			
Saturation (A3) Water Marks (B1)	Oxidized Rhizosph Presence of Reduct	eres on Living Roots (C3)	Moss Trim L			
Sediment Deposits (B2)		tion in Tilled Soils (C6)	Dry-Season Water Table (C2) Crayfish Burrows (C8)			
Drift Deposits (B3)	Thin Muck Surface		-	isible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Other (Explain in R			tressed Plants (D1)		
Iron Deposits (B5)	<u> </u>	,		Position (D2)		
Inundation Visible on Aerial Image	ry (B7)		Shallow Aquitard (D3)			
Water-Stained Leaves (B9)			Microtopographic Relief (D4)			
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)		
Field Observations:		40				
Surface Water Present? Yes	No Depth (inches):	16				
	No Depth (inches):					
Saturation Present? Yes (includes capillary fringe)	No 🥓 Depth (inches):	Wetland H	lydrology Preser	nt? Yes 🖌 No		
Describe Recorded Data (stream gaug	e, monitoring well, aerial photos, p	previous inspections), if ava	ilable:			
Remarks:						
Large pool in road is feeding we	tland hydrology					
	and hydrology					

Sampling Point: W-H81

20		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:3 (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>3</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
50% (1.1.1		= Total Cov		OBL species x 1 =
50% of total cover: 0 Sapling/Shrub Stratum (Plot size: 15')	20% of	total cover	0	FACW species x 2 =
				FAC species X 2 =
1				FACU species X 4 =
2				UPL species x 5 =
3				
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				✓ 1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				$3 - Prevalence Index is < 3.0^{1}$
		= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	total cover	0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				
1. Scirpus atrovirens	30	~	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
_{2.} Typha angustifolia	20	 ✓ 	<u>OBL</u>	
3. Carex lacustris	20	~	<u>OBL</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Deminions of Four Vegetation of ata.
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				
	70	= Total Cov	or	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>35</u>		total cover		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in
1,				height.
2				
3				
4				Hydrophytic
5	0	Tatal Car		Vegetation Present? Yes V No
50% of total cover: 0		= Total Cov total cover		
Remarks: (Include photo numbers here or on a separate s	nieet.)			

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the i	indicator	or confirn	n the absence of indicators.)	
Depth	Matrix			k Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks	
0-6	10YR 5/2	98	10YR 5/6	2	С	M/PL	SIC	
6-20	10YR 5/1	100					SIC	
·		·			·	·		
		<u> </u>				·		—
		<u> </u>						
		<u> </u>				·		—
		<u> </u>						
¹ Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gr	ains.	² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil I			,				Indicators for Problematic Hydric Soils ³ :	
Histosol	(A1)		Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)	
Histic Ep	vipedon (A2)		Polyvalue Be	low Surfa	ce (S8) (N	ILRA 147,	, 148) Coast Prairie Redox (A16)	
Black Hi	. ,		Thin Dark Su	•	•	47, 148)	(MLRA 147, 148)	
	n Sulfide (A4)		Loamy Gleye		(F2)		Piedmont Floodplain Soils (F19)	
	Layers (A5)		Depleted Mat				(MLRA 136, 147)	
	ck (A10) (LRR N)	(Redox Dark S		,		Very Shallow Dark Surface (TF12)	
	l Below Dark Surface ark Surface (A12)	(ATT)	Depleted Dar Redox Depre		. ,		Other (Explain in Remarks)	
	lucky Mineral (S1) (L	RRN	Iron-Mangane		,			
	147, 148)	,	MLRA 13		00 (1 12) (LININ,		
	leyed Matrix (S4)		Umbric Surfa		(MLRA 13	6, 122)	³ Indicators of hydrophytic vegetation and	
	edox (S5)		Piedmont Flo	• •	•			
Stripped	Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) unless disturbed or problematic.	
Restrictive L	ayer (if observed):							
Туре:								
Depth (inc	ches):						Hydric Soil Present? Yes 🖌 No	_
Remarks:								

Wetland ID W-H81



Photograph Direction NE

Date: 05/05/2015

Comments: 2015 wetland delineation.



Photograph Direction SE

Date: 11/10/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	City/County:	Webster	Sampling Date: 05/05/2015
Applicant/Owner: MVP		State: WV	<pre>/ Sampling Point: W-H81-UP</pre>
Investigator(s): A. Grech, S.Kelly, M. Whitten	Section, Tow	/nship, Range: N/A	
Landform (hillslope, terrace, etc.): Shoulder slope	Local relief (con	cave, convex, none): None	Slope (%): <u>3</u>
Subregion (LRR or MLRA): LRRN Lat: 3	8°35'57.91"	Long: -80°30'22.77"	Datum: NAD 83
Soil Map Unit Name: Gilpin-Dekalb complex, 15 to	35 percent slopes, e	extremely stony NWI clas	ssification: None
Are climatic / hydrologic conditions on the site typical for th	nis time of year? Yes	No (If no, explain	in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstanc	es" present? Yes 🗹 No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any ar	nswers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling	point locations, transe	ects, important features, etc.
Hydrophytic Vegetation Present? Yes	No 🖌		
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Is the	e Sampled Area n a Wetland? Yes	No 🖌
Wetland Hydrology Present? Yes I	No		

Remarks: Upland, mountain top hardwood forest.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living R	Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled So	pils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No 🔽 Depth (inches):	
Saturation Present? Yes No Ves Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	tions), if available:
Remarks:	

Sampling Point: W-H81-UP

, ,	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: <u>30'</u>)		Species?			
1 Quercus rubra	20	v	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 2 ((A)
2. Quercus montana	20	 ✓ 	UPL		(^)
3 Acer rubrum	20	· · · · ·		Total Number of Dominant	
	20		FAC	Species Across All Strata: 5 ((B)
4				Percent of Dominant Species	
5				· 10	(A/B)
6					/
				Prevalence Index worksheet:	
7	60	Tatal Car		Total % Cover of: Multiply by:	
50% of total assume 30		= Total Cov		OBL species x 1 =	
50% of total cover: <u>30</u>	20% 01	f total cover	:	FACW species x 2 =	
Sapling/Shrub Stratum (Plot size: 15')					
1. Kalmia latifolia	20	<u> </u>	FACU	FAC species x 3 =	
2. Acer rubrum	10	~	FAC	FACU species x 4 =	
3				UPL species x 5 =	
				Column Totals: (A)	(B)
4					(2)
5				Prevalence Index = B/A =	
6					
7				Hydrophytic Vegetation Indicators:	
				1 - Rapid Test for Hydrophytic Vegetation	
8		·		2 - Dominance Test is >50%	
9				3 - Prevalence Index is ≤3.0 ¹	
		= Total Cov	-	4 - Morphological Adaptations ¹ (Provide suppo	orting
50% of total cover: <u>15</u>	20% of	f total cover	: 6		Jung
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)	
				Problematic Hydrophytic Vegetation ¹ (Explain))
1					
2		·		¹ Indicators of hydric soil and wetland hydrology mu	ist
3				be present, unless disturbed or problematic.	101
4				Definitions of Four Vegetation Strata:	
5				Deminions of Four Vegetation Strata.	
		·		Tree – Woody plants, excluding vines, 3 in. (7.6 cm	n) or
6		·		more in diameter at breast height (DBH), regardles	
7				height.	
8					
9				Sapling/Shrub – Woody plants, excluding vines, lo than 3 in. DBH and greater than or equal to 3.28 ft	
				m) tall.	. (1
10		·			
11				Herb - All herbaceous (non-woody) plants, regard	less
		= Total Cov		of size, and woody plants less than 3.28 ft tall.	
50% of total cover: 0	20% of	f total cover	: 0	Weedwaine Allowedwaines meeter there 2.00 ft	4 :
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft height.	<i>i</i> in
				Theight.	
1					
2					
3		. <u> </u>			
4				Liver and the	
5				Hydrophytic Vegetation	
	•	Total Ca		Present? Yes No V	
		= Total Cov			
50% of total cover:0		total cover	:		
Remarks: (Include photo numbers here or on a separate s	neet.)				
					ſ
1					

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the i	indicator	or confirm	n the absence	of indicators.)
Depth Matrix Redox Features								
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	10YR 5/6	99	7.5YR 6/8	1	С	М	CL	
						·		
						<u> </u>		
						·		
						<u> </u>		
·								
1						·	2	
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gr	ains.		L=Pore Lining, M=Matrix.
Hydric Soil I								ators for Problematic Hydric Soils ³ :
Histosol	. ,		Dark Surface	. ,				cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				148) C	Coast Prairie Redox (A16)
Black Hi	· · · ·		Thin Dark Su	. ,		147, 148)		(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix ((F2)		P	Piedmont Floodplain Soils (F19)
	I Layers (A5)		Depleted Mat	. ,				(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark S	•	,			ery Shallow Dark Surface (TF12)
	Below Dark Surface	e (A11)	Depleted Dar		. ,		C	Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre					
-	lucky Mineral (S1) (L	RR N,	Iron-Mangane		es (F12) (LRR N,		
	147, 148)		MLRA 13					
	ileyed Matrix (S4)		Umbric Surfa					licators of hydrophytic vegetation and
	edox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be					
	Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) un	less disturbed or problematic.
Restrictive I	ayer (if observed):							
Type:								
Depth (ind	ches):						Hydric Soil	Present? Yes No _
Remarks:	,							
Remarks.								

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	38.598415	Lon.	-80.505238
STREAM/SITE ID AND SITE DESCRIPTION:						W-H82, Timber Mat Crossing		
% stream slope, watershed size {a		d or impairments)				····· ·		
FORM OF MITIGATION:								
ATE:	8/10	0/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-H82	Emergent	0.0128	Emergent					
				-				
						PART III - Advanced	Mitiantin	-
						Sustainable Determination Made on		····
				-		Advanced Mitigation		Y
						, , , , , , , , , , , , , , , , , , , 		
otal Impact		0.0128						
	PART II -	Unit Scores		2		Estimated		
Wetland Cl	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0128					
otal Scrub-Shrub			0			\$768.00		
Total Forested			0					
otal Open Water			0					

Project/Site: MVP	City/County: Webster		Sampling Date: 05/05/2015						
Applicant/Owner: MVP			Sampling Point: W-H82						
Investigator(s): A. Grech, S. Kelly, M. Whitten Section, Township, Range: N/A									
Landform (hillslope, terrace, etc.): Summit			Slope (%): 0-1						
Subregion (LRR or MLRA): LRRN			Datum: NAD 83						
Soil Map Unit Name: Gilpin-Dekalb complex,	_								
Are climatic / hydrologic conditions on the site typic									
Are Vegetation, Soil, or Hydrology _									
Are Vegetation, Soil, or Hydrology _		ded, explain any answe							
SUMMARY OF FINDINGS – Attach site	e map showing sampling point lo	cations, transects	, important features, etc.						
Hydrophytic Vegetation Present? Yes	No Is the Sampled 4								
Hydric Soil Present? Yes			Νο						
Wetland Hydrology Present? Yes	No No	. 105							
Remarks: Cowardin Code: PEM; HGM: Depressional; WT: NRPWW Information listed on this form represents the data collected in 2015. The wetland was revisited on 11/10/2019. Presence of wetland hydrology, hydrophytic vegetation, and hydric soils was confirmed using the USACE EMP Regional Supplement delineation methodology.									
HYDROLOGY									
Wetland Hydrology Indicators:		Secondary Indica	tors (minimum of two required)						
Primary Indicators (minimum of one is required; c	heck all that apply)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8)							
Surface Water (A1)	True Aquatic Plants (B14)								
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Pat							
Saturation (A3)	Oxidized Rhizospheres on Living Roots	. ,	()						
Water Marks (B1) Sediment Deposits (B2)	 Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Soils (C6) 	_ ·	Water Table (C2)						
Drift Deposits (B3)	Thin Muck Surface (C7)								
	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)							
Iron Deposits (B5)		Geomorphic Position (D2)							
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)							
Water-Stained Leaves (B9)		Microtopographic Relief (D4)							
Aquatic Fauna (B13)		FAC-Neutral Test (D5)							
Field Observations:	10								
Surface Water Present? Yes No	Depth (inches):10								
	Depth (inches):								
Saturation Present? Yes <u>No</u> (includes capillary fringe)	Depth (inches): Wetl	Wetland Hydrology Present? Yes <u>V</u> No							
Describe Recorded Data (stream gauge, monitori	ng well, aerial photos, previous inspections),	if available:							
Remarks:									
Komans.									

Sampling Point: W-H82

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> ')	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata:3 (B)
4				Demonst of Deminent Crossies
5				Percent of Dominant Species That Are OBL, FACW, or FAC:100 (A/B)
6				
7				Prevalence Index worksheet:
	0	= Total Cov	rer	Total % Cover of:Multiply by:
50% of total cover:0			-	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
				、
5			·	Prevalence Index = B/A =
6			·	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8		<u></u>	·	✓ 2 - Dominance Test is >50%
9			·	3 - Prevalence Index is ≤3.0 ¹
		= Total Cov	•	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>0</u>	20% of	total cover	0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Scirpus atrovirens	30	<u> </u>	OBL	
2. Juncus effusus	20	<u> </u>	FACW	¹ Indicators of hydric soil and wetland hydrology must
_{3.} Solidago rugosa	20	~	FACW	be present, unless disturbed or problematic.
4. Microstegium viminum	5		F <u>AC</u>	Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
8				Ů
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
			·	,
11	75	Tatal Car		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 37.		= Total Cov		or size, and woody plants less than 3.20 it tail.
Woody Vine Stratum (Plot size: 15')	<u> </u>			Woody vine - All woody vines greater than 3.28 ft in
				height.
1			·	
2			·	
3			·	
4		·	·	Hydrophytic
5			·	Vegetation
		= Total Cov		Present? Yes V No
50% of total cover: 0	20% of	total cover	0	
Remarks: (Include photo numbers here or on a separate s	sheet.)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix Redox Features							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-7	10YR 5/2	98	7.5YR 4/6	2	С	M/PL	С	
7-20	10YR 5/3	98	7.5YR 4/6	2	С	M/PL	С	
						·		
						·		
¹ Type: C=Co	oncentration, D=Deple	etion, RM=F	Reduced Matrix, MS	=Masked	d Sand Gr	ains.	² Location: I	PL=Pore Lining, M=Matrix.
Hydric Soil	ndicators:							cators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Bel	ow Surfa	ce (S8) (/LRA 147,	148)	Coast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Sur					(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleyed					Piedmont Floodplain Soils (F19)
	Layers (A5)		 Depleted Matr 					(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark S		-6)			Very Shallow Dark Surface (TF12)
	Below Dark Surface	(A11)	Depleted Dark		,			Other (Explain in Remarks)
	ark Surface (A12)	()	Redox Depres		. ,			,
	lucky Mineral (S1) (LF	RR N,	Iron-Mangane		,	LRR N,		
-	147, 148)				(),	,		
Sandy G	leyed Matrix (S4)		Umbric Surfac		(MLRA 13	86, 122)	³ In	dicators of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Floo	odplain S	oils (F19)	(MLRA 14	• 8) w	vetland hydrology must be present,
Stripped	Matrix (S6)		Red Parent M	aterial (F	21) (MLR	A 127, 147	') u	nless disturbed or problematic.
Restrictive I	ayer (if observed):							
Туре:								
Depth (ind	ches):						Hydric So	il Present? Yes 🖌 No
Remarks:								

Wetland ID W-H82



Photograph Direction North

Date: 05/05/2015

Comments: 2015 wetland delineation.



Photograph Direction SE

Date: 11/10/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	City/County: Webster		_ Sampling Date: 05/05/2015					
Applicant/Owner: MVP		State: WV	Sampling Point: W-H82-UP					
Investigator(s): A. Grech, S.Kelly, M. Whit	ten Section, Township, Rar	nge: N/A						
Landform (hillslope, terrace, etc.): Summit	Local relief (concave, conv	ex, none): None	Slope (%): 0-2					
Subregion (LRR or MLRA): LRRN	_ Lat: 38°35'54.62 Long	_{g:} -80°30'18.77"	Datum: NAD 83					
Soil Map Unit Name: Gilpin-Dekalb comple	x, 15 to 35 percent slopes, extremely	/ stony NWI classif	ication: None					
Are climatic / hydrologic conditions on the site typ	pical for this time of year? Yes No	(If no, explain in	Remarks.)					
Are Vegetation, Soil, or Hydrolog	y significantly disturbed? Are "	Normal Circumstances"	present? Yes 🖌 No					
Are Vegetation, Soil, or Hydrolog	y naturally problematic? (If ne	eded, explain any answ	ers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.								
Hydrophytic Vegetation Present? Yes	No In the Sampled							
	No Is the Sampled within a Wetlan		No_					
Wetland Hydrology Present? Yes	No							

Remarks: Upland, mountain top hardwood forest.

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)			
Surface Water (A1) True Aquatic Plants (B14) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidized Rhizospheres on Living I	Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Roots (C3) Moss Trim Lines (B16)			
Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Recent Iron Reduction in Tilled Sc Drift Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Other (Explain in Remarks) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13)	 Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) 			
Field Observations: Surface Water Present? Yes No Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Yes No Depth (inches):	Wetland Hydrology Present? Yes No			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:			
Remarks:				

Sampling Point: W-H82-UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)	% Cover	Species?		Number of Dominant Species
1. Quercus rubra	20	<u> </u>	FACU	That Are OBL, FACW, or FAC: (A)
2. Quercus montana	20	<u> /</u>	<u>UPL</u>	Total Number of Dominant
3. Liriodendron tulipifera	20	<u> /</u>	FACU	Species Across All Strata: <u>4</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:0 (A/B)
6				
7				Prevalence Index worksheet:
	60	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: <u>30</u>	20% o	f total cover:	12	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Liriodendron tulipifera	40	~	FACU	FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9	- 10			3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>20</u>	20% o	f total cover:	8	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				Problematic Hydrophytic Vegetation ¹ (Explain)
1				
2				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Semilions of Four Vegetation offata.
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
8				loight.
				Sapling/Shrub – Woody plants, excluding vines, less
9			·	than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10			·	
11	0		·	Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: 0		= Total Cov	-	of size, and woody plants less than 3.28 ft tall.
	20% 0	f total cover:	0	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4			. <u> </u>	Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes No V
50% of total cover: 0	20% o	f total cover:	0	
Remarks: (Include photo numbers here or on a separate sl	neet.)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redo	x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-14	10YR 5/4	98	7.5YR 4/6	2	С	M	С	
14-20	10YR 6/6	100					С	
·						- <u> </u>		
		·						
. <u> </u>		·						
	oncentration, D=Deple	-tion RM-I	Reduced Matrix MS	S-Masker	1 Sand Gr	ains	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil I		510H, HIM-1				uno.		cators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
	vipedon (A2)		Polyvalue Be	· ·	ce (S8) (I	/LRA 147,		Coast Prairie Redox (A16)
Black His	stic (A3)		Thin Dark Su	rface (S9)) (MLRA	147, 148)	-	(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix ((F2)			Piedmont Floodplain Soils (F19)
Stratified	Layers (A5)		Depleted Mat	rix (F3)				(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark S	•	,			Very Shallow Dark Surface (TF12)
	Below Dark Surface	(A11)	Depleted Dar		. ,		(Other (Explain in Remarks)
	rk Surface (A12)		Redox Depre		,			
	lucky Mineral (S1) (LI	RR N,	Iron-Mangane		es (F12) (LRR N,		
	147, 148)		MLRA 13				3.	
-	leyed Matrix (S4)		Umbric Surfa					dicators of hydrophytic vegetation and
	edox (S5) Matrix (S6)		Piedmont Flo	•	, ,	•	•	etland hydrology must be present, nless disturbed or problematic.
	ayer (if observed):			iateriai (i		A 127, 14	r) u	niess disturbed of problematic.
Type:	ayer (il observed).							
							Undria Cal	il Present? Yes No 🖌
Depth (inc	nes):						nyaric So	il Present? Yes No K
Remarks:								

USACE FILE NO./Project Name:		Mountain Valley Pipeline			Lat.	38.591803	Lon.	-80.508481
STREAM/SITE ID AND SITE DESCR						W-H86, Pipeline ROW	-	
% stream slope, watershed size {a	creage}, unaltered	l or impairments)				· ·		
FORM OF MITIGATION:		· · ·						
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
/-H86	Emergent	0.0013	Emergent					
						PART III - Advanced	Mitigatio	'n
						Sustainable Determination Made or		·••
						Advanced Mitigation (Y or N)		Y
otal Impact		0.0013						
		Jnit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0013			ATO OO		
otal Scrub-Shrub			0			\$78.00		
otal Forested			0					
otal Open Water			0					

Project/Site: MVP	City/County: Webster	Sampling Date: 05/05/2015					
Applicant/Owner: MVP		State: WV Sampling Point: W-H86					
Investigator(s): A. Grech, S. Kelly, M. Whitten Section, Township, Range: N/A							
Landform (hillslope, terrace, etc.): Shoulder slop							
Subregion (LRR or MLRA): LRRN		508469 Slope (%) Datum: NAD 83					
	_						
Soil Map Unit Name: Gilpin silt loam, 3 to 15	_						
Are climatic / hydrologic conditions on the site typic	-	· · · · · · · · · · · · · · · · · · ·					
Are Vegetation, Soil, or Hydrology _	significantly disturbed? Are "Normal	Circumstances" present? Yes No					
Are Vegetation, Soil, or Hydrology _	naturally problematic? (If needed, e	explain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site	map showing sampling point locatio	ns, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes	No Is the Sampled Area						
Hydric Soil Present? Yes	Is the Sampled Area	× V N					
Wetland Hydrology Present? Yes	No within a Wetland?	Yes No					
Remarks:							
Cowardin Code: PEM; HGM: Slope; WT:	NRPWW						
Information listed on this form represents	the data collected in 2015. The wetland	was revisited on 11/10/2019. Presence					
of wetland hydrology, hydrophytic vegeta	ation, and hydric soils was confirmed usi	ng the USACE EMP Regional					
Supplement delineation methodology.	-						
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; cl		Surface Soil Cracks (B6)					
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)					
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)					
	✓ Oxidized Rhizospheres on Living Roots (C3)	Moss Trim Lines (B16)					
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)					
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)					
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)					
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)					
Iron Deposits (B5)		Geomorphic Position (D2)					
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)					
Water-Stained Leaves (B9)		Microtopographic Relief (D4)					
Aquatic Fauna (B13)		FAC-Neutral Test (D5)					
Field Observations:							
	Depth (inches):						
	Depth (inches):0	_					
	Depth (inches):0 Wetland H	lydrology Present? Yes 🖌 No					
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring)	ng well, aerial photos, previous inspections), if avai	ilable:					
Remarks:							

Sampling Point: W-H86

201	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC:3 (A)
2				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4				· · · · · · · · · · · · · · · · · · ·
				Percent of Dominant Species That Are OBL_EACW_or EAC: 100 (A/B)
5				That Are OBL, FACW, or FAC: 100 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov		
50% of total cover: 0	20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				✓ 1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	0	= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>0</u>	20% of	total cover:	0	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Scirpus atrovirens	30	~	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Viola cucullata	20	 ✓ 	FACW	
3. Juncus effusus	15	· · ·		¹ Indicators of hydric soil and wetland hydrology must
			FACW	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>32.</u>	<u>5</u> 20% of	total cover:	13	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4				Hydrophytic
5	0			Vegetation Present? Yes <u>V</u> No
		= Total Cov		
50% of total cover: <u>0</u>	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	sheet.)			

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the	indicator	or confirm	the absenc	e of indicators.)
Depth								
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	10YR 8/2	95	10YR 6/8	5	С	M/PL	C	
								<u> </u>
		·						
		·			·			
		·						
1			De due e d Martin M				2	
Hydric Soil	oncentration, D=Deple	etion, RIVI=I	Reduced Matrix, Ma	S=IVIASKe	d Sand Gr	ains.		PL=Pore Lining, M=Matrix. cators for Problematic Hydric Soils ³ :
•			Darla Curfa an	(07)				•
<u> </u>	(A1) vipedon (A2)		Dark Surface Polyvalue Be					2 cm Muck (A10) (MLRA 147)
Black Hi			Polyvalue Be				140)	Coast Prairie Redox (A16)
	n Sulfide (A4)		Loamy Gleye	•	, .	147, 140)		(MLRA 147, 148) Piedmont Floodplain Soils (F19)
	I Layers (A5)		Depleted Mat		(FZ)			(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark \$. ,				Very Shallow Dark Surface (TF12)
	Below Dark Surface	(11)	Depleted Dark	•	,			Other (Explain in Remarks)
	ark Surface (A12)	(ATT)	Redox Depre		. ,			
	lucky Mineral (S1) (L		Iron-Mangan		,			
-	147, 148)	кіх і ч ,	MLRA 13		503 (1 12) (LIXIX I X ,		
	leyed Matrix (S4)		Umbric Surfa	,	(MLRA 1	36, 122)	³ In	dicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo	. ,	•			vetland hydrology must be present,
	Matrix (S6)		Red Parent M	•	, ,	•	•	nless disturbed or problematic.
Restrictive I	ayer (if observed):				, .			·
_{Type:} Ha	ardpan							
<u> </u>	ches): 10						Hydric So	il Present? Yes 🖌 No
Remarks:								···
Remarks.								

Wetland ID W-H86



Photograph Direction NE

Date: 05/05/2015

Comments: 2015 wetland delineation.



Photograph Direction NE

Date: <u>11/10/19</u>

Project/Site: MVP Applicant/Owner: MVP	City/County: Webster	Sampling Date: 05/05/2015 State: Sampling Point: W-H86-UP
Investigator(s): <u>A. Grech, S.Kelly, M. Whit</u> Landform (hillslope, terrace, etc.): <u>Shoulder s</u> Subregion (LRR or MLRA): <u>LRRN</u> Soil Map Unit Name: <u>Gilpin silt Ioam, 3 to 1</u> Are climatic / hydrologic conditions on the site typ Are Vegetation, Soil, or Hydrologic Are Vegetation, Soil, or Hydrologic	y naturally problematic? (If needed,	I/A Slope (%): 0-3 D°30'30.64" Datum: NAD 83 NWI classification: None
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required Surface Water (A1) High Water Table (A2) Saturation (A3)	; check all that apply) True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living Roots (C3)	Secondary Indicators (minimum of two required) Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16)

		<u> </u>	s () <u> </u>	
Water Marks (B1)		Presence of Reduced	d Iron (C4) Dry-Season Water Table (C2)	
Sediment Deposits (B2)	Recent Iron Reduction	n in Tilled Soils (C6) Crayfish Burrows (C8)	
Drift Deposits (B3)		Thin Muck Surface (C	C7) Saturation Visible on Aerial Image	ery (C9)
Algal Mat or Crust (B4)		Other (Explain in Rem	narks) Stunted or Stressed Plants (D1)	
Iron Deposits (B5)			Geomorphic Position (D2)	
Inundation Visible on A	erial Imagery (B7	7)	Shallow Aquitard (D3)	
Water-Stained Leaves	(B9)		Microtopographic Relief (D4)	
Aquatic Fauna (B13)			FAC-Neutral Test (D5)	
Field Observations:				
Surface Water Present?	Yes N	No 🛃 Depth (inches):		
Water Table Present?	Yes N	No Depth (inches):		
Saturation Present? (includes capillary fringe)	Yes N	No <u> </u> Depth (inches):	Wetland Hydrology Present? Yes N	lo_ 🗸
Describe Recorded Data (s	ream gauge, mo	nitoring well, aerial photos, prev	vious inspections), if available:	

Remarks:

~

Sampling Point: W-H86-UP

	Absolute	- Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		
1 Betula lenta	40	 ✓ 	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
2 Magnolia acuminata	20	~		
	20	-	FACU	Total Number of Dominant
3				Species Across All Strata: 4* (B)
4				
5				Percent of Dominant Species
				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				
	60	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: 30	20% of	total cover:	12	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Rubus allegheniensis	40	~	FACU	FAC species x 3 =
	20	<u> </u>		FACU species x 4 =
2. Prunus serotina	20	V	F <u>ACU</u>	
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				
9				2 - Dominance Test is >50%
	60	Tatal Oa		3 - Prevalence Index is ≤3.0 ¹
50% (1.1.1		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>30</u>	20% of	total cover:	12	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				
_{1.} Dryopteris sp.	30	 ✓ 	ND	Problematic Hydrophytic Vegetation ¹ (Explain)
2				
				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				
	30	Tatal Oa		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
500/ // 15		= Total Cov		or size, and woody plants less than 5.20 it tall.
50% of total cover: <u>15</u>	20% of	total cover:	0	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes No 🖌
50% of total cover: 0		total cover:		
Remarks: (Include photo numbers here or on a separate s				
	neet.)			
ND- not determined				
*Vegetation not ID'd down to species level not in	ncluded ii	n domina	nce test.	
		-		

Profile Desc	ription: (Describe t	o the depth	n needed to docum	nent the	indicator	or confirn	n the absence of indicators.)
Depth	Matrix		Redox	K Feature	s		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-7	10YR 5/4	98	7.5YR 4/6	2	С	Μ	SC
7-16	10YR 6/6	100					<u> </u>
16-20	10YR 4/3	98	7.5YR 4/6	2	С	М	SC
			<u> </u>			·	
						·	
							- <u></u>
	oncentration, D=Deple	etion, RM=F	Reduced Matrix, MS	=Masked	d Sand Gi	ains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface				2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Bel				· · · · ·
Black Hi	(<i>)</i>		Thin Dark Su	•	, .	147, 148)	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		(F2)		Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat	· · ·	(MLRA 136, 147)		
	ck (A10) (LRR N) Below Dark Surface	(11)	Redox Dark S	•			Very Shallow Dark Surface (TF12) Other (Explain in Remarks)
	ark Surface (A12)	(ATT)	Depleted Dar Redox Depres				
	lucky Mineral (S1) (L	RR N.	Iron-Mangane		,		
	147, 148)	,	MLRA 136		00 (1 12)	LITT 14,	
	leyed Matrix (S4)		Umbric Surfac		(MLRA 1	36, 122)	³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo	· ,	•		
Stripped	Matrix (S6)		Red Parent M	laterial (F	21) (MLF	A 127, 147	7) unless disturbed or problematic.
Restrictive L	ayer (if observed):						
Туре:							
Depth (inc	ches):						Hydric Soil Present? Yes No 🖌
Remarks:							

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	38.591372	Lon.	-80.508904
STREAM/SITE ID AND SITE DESCR	IPTION:				W-H83.	Pipeline ROW/Temporary Access Ro	ad	
% stream slope, watershed size {a		d or impairments)				· · · · · · · · · · · · · · · · · · ·		
FORM OF MITIGATION:		. ,						
DATE:	8/10/2015 WEATHER CONDITIONS:					PRECIPITATION PAST 48 HRS:		
PART I - Wetland Indicators								
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-H83	Emergent	0.0177	Emergent	-				
				-		PART III - Advanced		n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Fotal Impact		0.0177						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)	-		ILF Costs		
otal Emergent			0.0177	-				
otal Scrub-Shrub			0	-		\$1,062.00		
Total Forested			0	-				
otal Open Water			0	1				

Project/Site: MVP	City/County: Webster	Sampling Date: 05/05/2015				
Applicant/Owner: MVP	· · ·	_ State: <u>WV</u> Sampling Point: <u>W-H83</u>				
Investigator(s): A. Grech, S. Kelly, M. Whitten Section, Township, Range: N/A						
Landform (hillslope, terrace, etc.): Summit						
Subregion (LRR or MLRA): LRRN		.50892 0.000 (.0)				
Soil Map Unit Name: Gilpin silt Ioam, 3 to 15	_					
Are climatic / hydrologic conditions on the site typic	-	· · · · · · · · · · · · · · · · · · ·				
Are Vegetation, Soil, or Hydrology _		I Circumstances" present? Yes No				
Are Vegetation, Soil, or Hydrology _	naturally problematic? (If needed, e	explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site	e map showing sampling point location	ons, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes	No Is the Sampled Area					
Hydric Soil Present? Yes	Is the Sampled Area	Yes 🖌 No				
Wetland Hydrology Present? Yes	No within a Wetland?	Yes No				
Remarks:						
Cowardin Code: PEM; HGM: Slope; WT	NRPWW					
Information listed on this form represents	s the data collected in 2015. The wetland	d was revisited on 11/10/2019. Presence				
of wetland hydrology, hydrophytic vegeta	ation, and hydric soils was confirmed usi	ng the USACE EMP Regional				
Supplement delineation methodology.						
HYDROLOGY						
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; cl	neck all that apply)	Surface Soil Cracks (B6)				
✓ Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)				
✓ High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)				
✓ Saturation (A3) ✓ Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)						
Water Marks (B1)	 Presence of Reduced Iron (C4) 	Dry-Season Water Table (C2)				
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)				
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)		Geomorphic Position (D2)				
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)				
Water-Stained Leaves (B9)		Microtopographic Relief (D4)				
Aquatic Fauna (B13)		FAC-Neutral Test (D5)				
Field Observations:	16					
	Depth (inches):0					
	Depth (inches):0	,				
Saturation Present? Yes <u>Ves</u> No No	Depth (inches):0 Wetland H	lydrology Present? Yes _ ✔ No				
Describe Recorded Data (stream gauge, monitori	ng well, aerial photos, previous inspections), if ava	ilable:				
Bunda						
Remarks:						

Sampling Point: W-H83

0.01	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				
				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:100 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov		
50% of total cover: <u>0</u>	20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	0	= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	total cover:	0	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Scirpus atrovirens	15	✓	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Juncus effusus	15	~	FACW	
3. Carex gynandra	15	~	OBL	¹ Indicators of hydric soil and wetland hydrology must
4 Dicanthelium clandestinum	5			be present, unless disturbed or problematic.
			F <u>AC</u>	Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Conting/Chrysh Weathurlanta availuding visco loog
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11				
	50	Total Cau	~~~	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 25		= Total Cov total cover:		
Woody Vine Stratum (Plot size:)	20 /8 01			Woody vine - All woody vines greater than 3.28 ft in
				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes V No
50% of total cover:0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			
	,			

Profile Desc	ription: (Describe te	o the dept	h needed to docun	nent the	indicator	or confirm	the absence	ef indicators.)
Depth	Matrix		Redo	x Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-18	10YR 5/1	97	7.5YR 6/8	3	С	M/PL	SC	
18-20	10YR 5/2	100				·	SC	
						·		
		·				·		
						·		
		·						
		·				·		
		. <u> </u>				·		
						. <u> </u>		
¹ Type: $C=C_0$	oncentration, D=Deple	etion. RM=	Reduced Matrix, MS	S=Masker	d Sand Gr	ains	² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil								ators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
	vipedon (A2)		Polyvalue Be		ice (S8) (N	ILRA 147,		Coast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Su	rface (S9) (MLRA	47, 148)		(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix	(F2)		F	Piedmont Floodplain Soils (F19)
Stratified	I Layers (A5)		Depleted Mat	trix (F3)				(MLRA 136, 147)
2 cm Mu	ck (A10) (LRR N)		Redox Dark \$	Surface (F	-6)		\	√ery Shallow Dark Surface (TF12)
Depleted	Below Dark Surface	(A11)	Depleted Dar	k Surface	e (F7)		(Other (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre	ssions (F	8)			
Sandy M	lucky Mineral (S1) (L l	RR N,	Iron-Mangan	ese Mass	es (F12) (LRR N,		
MLRA	147, 148)		MLRA 13	6)				
Sandy G	leyed Matrix (S4)		Umbric Surfa	ce (F13)	(MLRA 13	6, 122)	³ Inc	dicators of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	8) w	etland hydrology must be present,
Stripped	Matrix (S6)		Red Parent M	Aaterial (F	21) (MLR	A 127, 147	7) ur	nless disturbed or problematic.
Restrictive I	ayer (if observed):							
Туре:								
Depth (ind	ches):						Hydric Soi	il Present? Yes 🖌 No
Remarks:								

Wetland ID W-H83



Photograph Direction <u>NW</u>

Date: 05/05/2015

Comments: 2015 wetland delineation.



Photograph Direction NW

Date: 11/10/19

Project/Site: MVP		City/Co	unty: Webster		_ Sampling Da	te: 05/05/2015		
Applicant/Owner: MVP				State: WV	Sampling I	Point: W-H83-UP		
Investigator(s): A. Grech, S.Kelly,	M. Whitten	Section						
Landform (hillslope, terrace, etc.): Sh	oulder slope	Local relie	f (concave, convex, none	e): Concave		Slope (%): 0-2		
Subregion (LRR or MLRA): LRRN Lat: 38°35′29.05″ Long: -80°30′32.51″ Datum:								
Soil Map Unit Name: Gilpin silt Ioa	m, 3 to 15 perc	ent slopes, very	stony	NWI classifi	cation: None			
Are climatic / hydrologic conditions on	the site typical for	this time of year? Ye	s No (If	no, explain in F	Remarks.)			
Are Vegetation, Soil, c	Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes 🗹 No							
Are Vegetation, Soil, c	r Hydrology	naturally problemat	ic? (If needed, ex	plain any answe	ers in Remarks	.)		
SUMMARY OF FINDINGS -	Attach site ma	ap showing sam	oling point location	ns, transects	s, importan	t features, etc.		
Hydrophytic Vegetation Present?	Yes	No 🖌						
Hydric Soil Present?	Yes Yes	No 🖌	Is the Sampled Area within a Wetland?	Yes	No 🖌	/		
Wetland Hydrology Present?	Yes	No		103				
Remarks:								
Upland, mountain top hardwo	od forest.							
HYDROLOGY								

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)	
Primary Indicators (minimum of one is required; che	Surface Soil Cracks (B6)	
Surface Water (A1)	_ True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	_ Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3)	Oxidized Rhizospheres on Living Roc	ots (C3) Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	_ Recent Iron Reduction in Tilled Soils	(C6) Crayfish Burrows (C8)
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No _	Depth (inches):	
Water Table Present? Yes No _	Depth (inches):	
Saturation Present? Yes No _	Depth (inches): W	/etland Hydrology Present? Yes No
(includes capillary fringe)		a) Marcallable
Describe Recorded Data (stream gauge, monitoring	g weil, aerial photos, previous inspection	is), if available:
Remarks:		

Sampling Point: W-H83-UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> ')		Species?		
Liriodendron tulipifera	70	v	FACU	Number of Dominant Species That Are OBL_FACW_or FAC: 0 (A)
··			1,400	That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4				
				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Developer a la devena de la st
7				Prevalence Index worksheet:
	70	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: 35		total cover:		OBL species x 1 =
	20 /0 01	total cover.		FACW species x 2 =
<u>oupling/office/office/office/</u> /	~~			
1. Prunus serotina	30	 ✓ 	FACU	FAC species x 3 =
2. Acer pensylvanicum	10	✓	FACU	FACU species x 4 =
2				UPL species x 5 =
3				Column Totals: (A) (B)
4				
5				Prevalence Index = B/A =
6				
				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				
	40	= Total Cov	or	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:20		total cover:		4 - Morphological Adaptations ¹ (Provide supporting
	20% 0	total cover.	0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				Problematic Hydrophytic Vegetation ¹ (Explain)
1				
2				
				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
				Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Capling/Chrub Woody plants evoluting vines loss
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
				m) tall.
10				
11				Herb – All herbaceous (non-woody) plants, regardless
	0	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 0	20% of	total cover:	0	
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes No V
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s				
Remarks. (include proto numbers here of on a separate s	neet.)			

Profile Desc	ription: (Describe t	o the dept	h needed to docum	ent the i	ndicator o	or confirm	the absence of indicators.)
Depth	Les Color (moist) % Color (moist) % Type ¹ Loc ² 0-10 10YR 4/4 100						
(inches)		%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-10	10YR 4/4	100					SIL
10-14	10YR 5/3	100					SICL
14-20	10YR 5/6	100					С
		·					
			<u> </u>				·
		<u> </u>					
¹ Tvpe: C=Co	oncentration. D=Depl	etion. RM=	Reduced Matrix. MS	=Masked	Sand Gra	ins.	² Location: PL=Pore Lining, M=Matrix.
							Indicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)
							148) Coast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Sur	face (S9)	(MLRA 1	47, 148)	(MLRA 147, 148)
	. ,				F2)		Piedmont Floodplain Soils (F19)
	• • •			. ,			(MLRA 136, 147)
					,		Very Shallow Dark Surface (TF12)
·		(A11)					Other (Explain in Remarks)
	· ,						
-		RR N,	-		es (F12) (l	.RR N,	
				•			3
-							³ Indicators of hydrophytic vegetation and
	. ,			•	. ,	•	, , , , , , , , , , , , , , , , , , , ,
	()		Red Parent M	laterial (F	21) (MLR/	A 127, 147	v) unless disturbed or problematic.
	ayer (il observed).						
· · ·							
	(nes):						Hydric Soil Present? Yes No
Remarks:							

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.586855	Lon.	-80.518697
STREAM/SITE ID AND SITE DESCR	IPTION:					N-T4, Temporary Access Road		
% stream slope, watershed size {a		d or impairments)				·····		
FORM OF MITIGATION:								
DATE:	8/10)/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
<i>I-</i> T4	Emergent	0.0403	Emergent	-				
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Fotal Impact		0.0403						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0403	-				
otal Scrub-Shrub			0			\$2,418.00		
otal Forested			0					
otal Open Water			0]				

Project/Site: MVP	City/County	Webster	Sampling Date: 10/16/2015
Applicant/Owner: MVP			Sampling Point: W-T4
Investigator(s): J. Heule, L. McCarrell, J.k	Covaks Section, To		
Landform (hillslope, terrace, etc.): Riverine			Slope (%): 10
Subregion (LRR or MLRA): LRRN		Long: <u>-80.518856</u>	
Soil Map Unit Name: Pineville-Gilpin-Deka			
Are climatic / hydrologic conditions on the site ty			
Are Vegetation, Soil, or Hydrolog			
Are Vegetation, Soil, or Hydrolog SUMMARY OF FINDINGS – Attach s		(If needed, explain any answ	
		<u>5 point room (name)</u>	-, p
	No Is th	e Sampled Area	
	✓ No with	in a Wetland? Yes 🔽	No
Wetland Hydrology Present? Yes	No		
Remarks: Cowardin Code: PEM ; HGM: Riverine	· WT· NRPWW		
Information listed on this form represe		15 The wetland was revisite	d on 10/09/2019 Presence
of wetland hydrology, hydrophytic veg			
Supplement delineation methodology.	•	s commed using the OOAO	
HYDROLOGY			
		Casaa damu ka dia	
Wetland Hydrology Indicators:			cators (minimum of two required)
Primary Indicators (minimum of one is required		Surface Soi	
Surface Water (A1)	True Aquatic Plants (B14)		egetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1 Oxidized Rhizospheres on		atterns (B10)
Water Marks (B1)	Presence of Reduced Iron		n Water Table (C2)
Valer Marks (B1) Sediment Deposits (B2)	Recent Iron Reduction in T		
Drift Deposits (B3)	Thin Muck Surface (C7)		/isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)		Stressed Plants (D1)
Iron Deposits (B5)			c Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aq	
Water-Stained Leaves (B9)			raphic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutra	al Test (D5)
Field Observations:			
Surface Water Present? Yes <u>Ves</u> No	Depth (inches): 2	_	
Water Table Present? Yes No	Depth (inches):	_	
Saturation Present? Yes <u>Ves</u> No	Depth (inches): 2	Wetland Hydrology Prese	ent? Yes 🖌 No
(includes capillary fringe) Describe Recorded Data (stream gauge, monit	aring well, parial photog, providua	increations) if evoilable:	
Describe Recorded Data (stream gauge, monit	oning well, aerial priolos, previous	inspections), il available.	
Remarks:			

Sampling Point: W-T4

201	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species	0	
1		<u></u>	·	That Are OBL, FACW, or FAC:	(A)
2			. <u> </u>	Total Number of Dominant		
3			·	Species Across All Strata:	3 (I	B)
4				Dereent of Deminent Creation		
5			<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC:	67 (A/B)
6					(
7.				Prevalence Index worksheet:		
	0	= Total Cov	ver	Total % Cover of:	Multiply by:	
50% of total cover: <u>0</u>		total cover	-	OBL species x	1 =	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x	2 =	
1. Liriodendron tulipifera	10	~	FACU	FAC species x	3 =	
2. Rubus allegheniensis	2		FACU	FACU species x	4 =	
3 Acer rubrum	2	·	FAC		5 =	
A Sambucus canadensis	8	~	FAC	Column Totals: (A		(B)
n		·		••••••••••••••••••••••••••••••••••••••	·/	(_)
5				Prevalence Index = B/A =		
6				Hydrophytic Vegetation Indica	ators:	
7		<u></u>		1 - Rapid Test for Hydrophy		
8				✓ 2 - Dominance Test is >50%	-	
9				3 - Prevalence Index is ≤3.0		
		= Total Cov		4 - Morphological Adaptatio		orting
50% of total cover: 11	20% of	total cover	4.4			Jung
Herb Stratum (Plot size: 5')				data in Remarks or on a		
1. Parathelypteris noveboracensis	10		FAC	Problematic Hydrophytic Ve	egetation' (Explain)	
2. Solidago rugosa	85	~	FAC			
3 Panicum clandestinum	5		FAC	¹ Indicators of hydric soil and we		ist
4				be present, unless disturbed or		
				Definitions of Four Vegetation	Strata:	
5			·	Tree – Woody plants, excluding	vines, 3 in. (7.6 cm	n) or
6		·	·	more in diameter at breast heigh	nt (DBH), regardles	s of
7		·	·	height.		
8				Sapling/Shrub – Woody plants	, excluding vines, le	ess
9				than 3 in. DBH and greater than		
10				m) tall.		
11			·	Herb – All herbaceous (non-woo	ody) plants, regardl	less
		= Total Cov		of size, and woody plants less the		
50% of total cover: <u>50</u>	20% of	total cover	20	Woody vine – All woody vines	aroator than 2 29 ft	in
Woody Vine Stratum (Plot size: 15')				height.	greater than 5.20 ft	
1				¥		
2.						
3						
4						
5			·	Hydrophytic Vegetation		
	0	Tatal Car	·	Present? Yes	Νο	
50% of total cover:0		= Total Cov total cover	-			
Remarks: (Include photo numbers here or on a separate s	heet.)					

Profile Desc	ription: (Describe t	o the depth	needed to docum	ent the i	ndicator	or confirm	the absence of indicators.)	
Depth	Matrix		Redox	Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks	
0-4	10YR 6/3	95	7.5YR 4/6	5	С	М	SC	
4-20	10YR 5/2	90	7.5YR 4/6	10	С	М	SC	
						·		
·						·	· ·	
·	·					·		
						·		
						·		
						·		
						·		
¹ Type: C=Co	oncentration, D=Deple	etion, RM=R	educed Matrix, MS	=Maskec	I Sand Gr	ains.	² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil I	ndicators:						Indicators for Problematic Hydric	Soils ³ :
Histosol	(A1)		Dark Surface	· · ·			2 cm Muck (A10) (MLRA 147)	
	vipedon (A2)		Polyvalue Bel					
Black Hi	. ,		Thin Dark Sur	. ,	•	47, 148)	(MLRA 147, 148)	
	n Sulfide (A4)		Loamy Gleye		F2)		Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat	. ,			(MLRA 136, 147)	40)
	ck (A10) (LRR N) Below Dark Surface	(A11)	Redox Dark S	,	,		Very Shallow Dark Surface (TF Other (Explain in Remarks)	12)
	ark Surface (A12)	(711)	Redox Depres					
	lucky Mineral (S1) (L l	RR N.	Iron-Mangane		,	LRR N.		
	(147, 148)	,				,		
	leyed Matrix (S4)		Umbric Surfac	•	MLRA 13	6, 122)	³ Indicators of hydrophytic vegetati	on and
	edox (S5)		Piedmont Flo					
Stripped	Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) unless disturbed or problematic.	
Restrictive L	ayer (if observed):							
Туре:								
Depth (inc	ches):						Hydric Soil Present? Yes 🖌 N	o
Remarks:								

Wetland ID W-T4



Photograph Direction <u>NW</u>

Date: 10/16/2015

Comments: 2015 wetland delineation.



Photograph Direction NW

Date: 10/09/19

Project/Site: MVP	City/County: Webster	Sampling Date: 06/17/2015
Applicant/Owner: MVP	State: W	
Investigator(s): JH, LM, JK	Section, Township, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Hillslope	ocal relief (concave, convex, none): <u>Conve</u>	x Slope (%): 15
Subregion (LRR or MLRA): LRRN Lat: 38.587129	9 _{Long:} 80.518885	Datum: NAD83
Soil Map Unit Name: Gilpin-Dekalb complex, 15 to 35 perce	ent slopes, extremely stony NWI cla	assification: None
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes 🔽 No (If no, explain	n in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstand	ces" present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed, explain any a	nswers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, trans	ects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks: Upland					

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Fauna (B13) 	Dry-Season Water Table (C2)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No 🔽 Depth (inches):	
Saturation Present? Yes No Ves Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	ions), if available:
Remarks:	

HYDROLOGY

Sampling Point: UP-T4

		-		
Trop Stratum (Plot size: 30')	Absolute	Dominant		Dominance Test worksheet:
		<u>Species?</u>		Number of Dominant Species
1. Liriodendron tulipifera	20	<i>v</i>	FACU	That Are OBL, FACW, or FAC: (A)
2. Prunus serotina	15	~	FACU	
3. Populus grandidentata	5		FACU	Total Number of Dominant Species Across All Strata: 12 (B)
4. Quercus montana	15	 ✓ 		Species Across All Strata: <u>12</u> (B)
			<u>UPL</u>	Percent of Dominant Species
5. Acer rubrum	20	<u> </u>	FAC	That Are OBL, FACW, or FAC:17 (A/B)
6.				
7				Prevalence Index worksheet:
1	75			Total % Cover of: Multiply by:
		= Total Cov		
50% of total cover: <u>37.5</u>	20% of	total cover:	15	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Quercus montana	10	✓	UPL	FAC species x 3 =
2. Liriodendron tulipifera	30	v		FACU species x 4 =
			FACU	
3. Acer rubrum	10	<i>v</i>	FAC	UPL species x 5 =
4. Prunus serotina	10	✓	FACU	Column Totals: (A) (B)
5				
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
0				2 - Dominance Test is >50%
9				3 - Prevalence Index is $≤3.0^1$
	60	= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>30</u>	20% of	total cover:	12	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Lysimachia quadrifolia	10	~	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
		•		
2. Parathelypteris noveboracensis	5		F <u>AC</u>	¹ Indiantara of hydria pail and watland hydrology must
3. Quercus montana	2		UPL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Acer rubrum	8		FAC	
5. Panicum clandestinum	5	·		Definitions of Four Vegetation Strata:
			F <u>AC</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
_{6.} Sassafras albidum	15	<u> </u>	F <u>ACU</u>	more in diameter at breast height (DBH), regardless of
7				height.
8				
0		·		Sapling/Shrub – Woody plants, excluding vines, less
9		·		than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				Herb – All herbaceous (non-woody) plants, regardless
	45	= Total Cov	or	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 22.5		total cover:	-	
15	2078 01	total cover.		Woody vine – All woody vines greater than 3.28 ft in
				height.
1. Rubus allegheniensis	20	<u> </u>	FACU	
2. Smilax rotundifolia	20	~	FACU	
3.				
3		·		
4				Hydrophytic
5				Vegetation
	40	= Total Cov	er	Present? Yes No 🖌
50% of total cover: 20		total cover:	~	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Desc	ription: (Describe t	o the depth	needed to docun	nent the inc	dicator o	or confirm	the absence	of indicato	rs.)	
Depth	Matrix			x Features						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-19	10YR 3/2	30								
	10YR 6/6	70								
·										·
· · · · · · · · · · · · · · · · · · ·										
				<u> </u>						
1							2: .	<u> </u>		
Hydric Soil	oncentration, D=Deple	etion, RM=Re	educed Matrix, Ma	S=Masked S	Sand Gra	ains.			ng, M=Matrix. oblematic Hy	dric Soils ³ :
-			Darly Curferes	(07)					-	
Histosol	pipedon (A2)		Dark Surface Polyvalue Be						10) (MLRA 1 Redox (A16)	•
Black Hi	• • •		Thin Dark Su				140)	MLRA 14	. ,	
	en Sulfide (A4)		Loamy Gleye			47, 140)	F	•	odplain Soils	(F19)
	d Layers (A5)		Depleted Mat		_)			(MLRA 13	•	(1.10)
	ick (A10) (LRR N)		Redox Dark \$. ,)		١	•	Dark Surface	e (TF12)
	d Below Dark Surface	(A11)	Depleted Dar	k Surface (I	, F7)				n in Remarks	
Thick Da	ark Surface (A12)		Redox Depre	ssions (F8)						
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Masses	s (F12) (l	_RR N,				
MLRA	A 147, 148)		MLRA 13	,						
Sandy G	Bleyed Matrix (S4)		Umbric Surfa					dicators of hy	/drophytic veg	etation and
	Redox (S5)		Piedmont Flo	•	. ,	•	•	•	ogy must be p	
	Matrix (S6)		Red Parent M	Aaterial (F2	1) (MLR /	A 127, 147	') ur	less disturb	ed or problem	atic.
Restrictive I	Layer (if observed):									
Туре:			_							
Depth (ind	ches):		_				Hydric Soi	I Present?	Yes	No 🖌
Remarks:										

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.586644	Lon.	-80.51035
TREAM/SITE ID AND SITE DESCR						W-H85, Pipeline ROW	-	
% stream slope, watershed size {a	creage}, unaltered	l or impairments)						
FORM OF MITIGATION:								
ATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
/-H85	Emergent	0.0069	Emergent					
						PART III - Advanced		n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
otal Impact		0.0069						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0069			¢ 44 4 00		
otal Scrub-Shrub			0			\$414.00		
otal Forested			0					
otal Open Water			0					

Project/Site: MVP	City/County: Web	oster	Sampling Date: 10/16/2015		
Applicant/Owner: MVP			Sampling Point: W-H85		
Investigator(s): A. Grech, S. Kelly, M. Whitten	Section, Township	, _{Range:} N/A			
Landform (hillslope, terrace, etc.): Shoulder slope	Local relief (concave,	convex, none): Concave	Slope (%): 0-2		
Subregion (LRR or MLRA): LRRN Lat:			Datum: NAD 83		
Soil Map Unit Name: Gilpin-Dekalb complex, 15					
Are climatic / hydrologic conditions on the site typical fo	_				
Are Vegetation, Soil, or Hydrology			·		
Are Vegetation, Soil, or Hydrology					
SUMMARY OF FINDINGS – Attach site m					
			,		
Hydrophytic Vegetation Present? Yes					
· ·	No within a W	etland? Yes 🔽	No		
Wetland Hydrology Present? Yes <u>Yes</u> Remarks:	_ No				
Cowardin Code: PEM; HGM: Slope; WT: NF	8. BMM				
Information listed on this form represents the		e wetland was revisited	on 10/10/2019 Presence		
of wetland hydrology, hydrophytic vegetation					
Supplement delineation methodology.					
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indica	ators (minimum of two required)		
Primary Indicators (minimum of one is required; check	all that apply)	Surface Soil			
	True Aquatic Plants (B14)		getated Concave Surface (B8)		
	Hydrogen Sulfide Odor (C1)	Drainage Pa			
	Oxidized Rhizospheres on Living	-			
	Presence of Reduced Iron (C4)		Water Table (C2)		
	Recent Iron Reduction in Tilled So				
	Thin Muck Surface (C7)		isible on Aerial Imagery (C9)		
	Other (Explain in Remarks)		Stressed Plants (D1)		
Iron Deposits (B5)		🗹 Geomorphic	Position (D2)		
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)			
Water-Stained Leaves (B9)		Microtopographic Relief (D4)			
Aquatic Fauna (B13)		FAC-Neutral	l Test (D5)		
Field Observations:					
	Depth (inches):				
	Depth (inches):				
	Depth (inches):	Wetland Hydrology Preser	nt? Yes 🖌 No		
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring w	ell, aerial photos, previous inspec	tions), if available:			
	· · · ·				
Remarks:					

Sampling Point: W-H85

001	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Deminent
3				Total Number of Dominant Species Across All Strata: 2 (B)
4				
				Percent of Dominant Species That Are OBL_EACW_or EAC: 100 (A/B)
5				That Are OBL, FACW, or FAC: 100 (A/B)
6			·	Prevalence Index worksheet:
7			·	Total % Cover of: Multiply by:
		= Total Cov		
50% of total cover: 0	20% of	total cover	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6			·	Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is $\leq 3.0^1$
	0	= Total Cov	ver	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	total cover	0	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Solidago rugosa	20	✓	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Packera aurea	20	~	FACW	
3. Scirpus atrovirens	15		OBL	¹ Indicators of hydric soil and wetland hydrology must
4 Juncus effusus	15			be present, unless disturbed or problematic.
· ··	15		FACW	Definitions of Four Vegetation Strata:
5. Impatiens capensis	15		FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Oralia (Olimita Missilaria and dia ang balancia ang ba
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11			·	
	85	Total Car		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 42.5		= Total Cov		
	20 /0 01			Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1			·	
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cov	ver	Present? Yes 🖌 No
50% of total cover: 0		total cover	-	
Remarks: (Include photo numbers here or on a separate s				

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remark	S
0-20	10YR 5/2	95	7.5YR 4/6	5	С	M/PL	SC	
						·	· · · · · · · · · · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ /	
						·		
						·		
						·		
·	·							
	·					·		
	oncentration, D=Deple	etion, RM=R	educed Matrix, MS	S=Masked	I Sand Gra	ains.	² Location: PL=Pore Lining, M=Matri	
Hydric Soil	Indicators:						Indicators for Problematic	Hydric Soils [°] :
Histosol	()		Dark Surface	· · ·			2 cm Muck (A10) (MLRA	•
	pipedon (A2)		Polyvalue Be					6)
	stic (A3)		Thin Dark Su			47, 148)	(MLRA 147, 148)	
	en Sulfide (A4)		Loamy Gleye		F2)		Piedmont Floodplain Soi	ls (F19)
	d Layers (A5)		Depleted Mat	()			(MLRA 136, 147)	(——) =)
	uck (A10) (LRR N)	()	Redox Dark S	•	,		Very Shallow Dark Surfa	
	d Below Dark Surface	(A11)	Depleted Dar				Other (Explain in Remark	KS)
	ark Surface (A12)		Redox Depre					
	/lucky Mineral (S1) (L l \ 147, 148)	KK N,	Iron-Mangane		es (F12) (LKK N,		
	Bleyed Matrix (S4)		Umbric Surfa	•	MI PA 13	6 122)	³ Indicators of hydrophytic v	egetation and
	Redox (S5)		Piedmont Flo					-
	Matrix (S6)		Red Parent M	•	. ,	•		•
	Layer (if observed):			iatoriai (i		A 127, 147		
Type:								
	-1		_					N
	ches):		_				Hydric Soil Present? Yes	No
Remarks:								

Wetland ID W-H85



Photograph Direction <u>NW</u>

Date: 10/16/2015

Comments: 2015 wetland delineation.



Photograph Direction NW

Date: 10/10/19

Project/Site: MVP		City/Co	_{ounty:} Webster		Sampling Date: 05/0	5/2015
Applicant/Owner: MVP				State: WV	Sampling Point: W	
Investigator(s): A. Grech, S.Kelly, N	√l. Whitten	Sectio	n, Township, Rang	_{e:} N/A		
Landform (hillslope, terrace, etc.): Sho	ulder slope	Local relie	ef (concave, conve>	k, none): Convex	Slope (%	<u>):</u> 0-3
Subregion (LRR or MLRA): LRRN						
Soil Map Unit Name: Gilpin-Dekalb	complex, 15 te	o 35 percent slop	pes, extremely s	stony NWI classifi	_{cation:} None	
Are climatic / hydrologic conditions on th	ne site typical for	this time of year? Ye	es 🖌 No 🔄	(If no, explain in I	Remarks.)	
Are Vegetation, Soil, or	Hydrology	_significantly disturk	bed? Are "No	ormal Circumstances"	present? Yes 🧹	No
Are Vegetation, Soil, or	Hydrology	_naturally problema	tic? (If need	led, explain any answ	ers in Remarks.)	
SUMMARY OF FINDINGS - A	ttach site ma	p showing sam	pling point loc	ations, transects	s, important featu	res, etc.
Hydrophytic Vegetation Present?	Yes	No 🖌				
Hydric Soil Present?	Yes	No 🖌	Is the Sampled A within a Wetland		No 🖌	
Wetland Hydrology Present?	Yes	No	within a restand			
Remarks:						
Upland, mountain top logged ar	ea.					

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	 Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Roots (C3) Moss Trim Lines (B16) Dry-Season Water Table (C2) Sturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	tions), if available:
Remarks:	

Sampling Point: W-H85-UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		
1 Rhus typhina	50	~	UPL	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
<u>u</u>		·	·	
2				Total Number of Dominant
3			·	Species Across All Strata: (B)
4				Demonstrat Demoiser (Demoise
5				Percent of Dominant Species That Are OBL, FACW, or FAC:0 (A/B)
6			·	Prevalence Index worksheet:
7			·	Total % Cover of: Multiply by:
		= Total Cov		
50% of total cover: 25	20% of	total cover	10	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Rubus allegheniensis	60	~	FACU	FAC species x 3 =
2. Rhus typhina	10	~		FACU species x 4 =
	10		<u>UPL</u>	-
3				UPL species x 5 =
4				Column Totals: (A) (B)
5			·	Prevalence Index = B/A =
6			· <u> </u>	Hydrophytic Vegetation Indicators:
7		·		1 - Rapid Test for Hydrophytic Vegetation
8				
9				2 - Dominance Test is >50%
	70	= Total Cov		$_$ 3 - Prevalence Index is $\leq 3.0^1$
50% - (1-1-1				4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>35</u>	20% of	total cover		data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Plantago lanceolata	30	<u> </u>	UPL	
2				
				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4			·	Definitions of Four Vegetation Strata:
5			·	
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
				neight.
8				Sapling/Shrub – Woody plants, excluding vines, less
9			·	than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				
	30	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>15</u>		total cover:		
	20% 0			Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4			·	Hydrophytic
5	-			Vegetation
	0	= Total Cov	rer	Present? Yes No V
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix Redox Features							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-7	10YR 5/4	98	7.5YR 4/6	2	С	Μ	SC	
7-16	10YR 6/6	100					C	
16-20	10YR 4/3	98	7.5YR 4/6	2	С	Μ	SC	
		·						
		·						
¹ Type: C=C	oncentration, D=Deple	etion, RM=F	Reduced Matrix, MS	=Masked	d Sand G	rains.	² Location: PL=I	Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicato	ors for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2 cm	n Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Bel	ow Surfa	ce (S8) (MLRA 147,	148) <u>Coa</u>	ast Prairie Redox (A16)
Black Hi	. ,		Thin Dark Sur			147, 148)	•	MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye		(F2)			dmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Mat	. ,			•	MLRA 136, 147)
	ick (A10) (LRR N)	<i></i>	Redox Dark S	(,			y Shallow Dark Surface (TF12)
·	d Below Dark Surface	(A11)	Depleted Darl				Othe	er (Explain in Remarks)
	ark Surface (A12)		Redox Depres					
	lucky Mineral (S1) (L \ 147, 148)	RR N,	Iron-Mangane MLRA 136		es (F12)	(LKK N,		
	Gleyed Matrix (S4)		Umbric Surfac			36 122)	³ Indica	ators of hydrophytic vegetation and
	Redox (S5)		Piedmont Floo	. ,	•	•		and hydrology must be present,
	Matrix (S6)		Red Parent M	•	•	, .		ss disturbed or problematic.
	Layer (if observed):			atoriai (i				
Type:								
· · ·	ches):						Hydric Soil Pr	resent? Yes No 🖌
Remarks:								

USACE FILE NO./Project Name:		Valley Pipeline	COORDINATES:	Lat.	38.56691	Lon.	-80.530098	
TREAM/SITE ID AND SITE DESCRIPTION:					w	-A20-PEM, Timber Mat Crossing		
% stream slope, watershed size {a		d or impairments)				·		
FORM OF MITIGATION:		. ,						
ATE:	8/10	0/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-A20-PEM	Emergent	0.0117	Emergent	-				
				_				
				_				
				_		PART III - Advanced	_	n
				-		Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
				-				
Fotal Impact		0.0117						
	PART II -	Unit Scores		3.		Estimated		
Wetland Cl	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0117					
otal Scrub-Shrub			0			\$702.00		
otal Forested			0			· · · · · · · · · · · · · · · · · · ·		
otal Open Water			0					

Project/Site: MVP		City/Co	_{unty:} Webster		Sampling Date: 05/04/2015			
Applicant/Owner: MVP		,	,		Sampling Point: W-A20-PEM			
Investigator(s): Cook, Heu	le, Lew	Section, Township, Range: N/A						
	Islope, terrace, etc.): Hilltop Local relief (concave, convex, none): Concave Slope (%): 2							
Subregion (LRR or MLRA): _L					Datum: NAD 83			
Soil Map Unit Name: Gilpin-								
Are climatic / hydrologic condi								
					present? Yes No			
-								
Are Vegetation, Soil,				explain any answe				
	IGS – Attach Site	map showing samp	bing point locatio	ons, transects	, important features, etc.			
Hydrophytic Vegetation Pres			is the Sampled Area					
Hydric Soil Present?		No ,	within a Wetland?	Yes 🖌	No			
Wetland Hydrology Present	? Yes 🔽	No						
Remarks: Information listed on thi	is form represents	the data collected in	2015 The wetland	d was revisited	an 10/9/2019 The			
wetland is located outsi								
			•		ds; however, the presence			
of wetland hydrology &		-			-			
			visually from within					
HYDROLOGY				<u> </u>				
Wetland Hydrology Indicat					ators (minimum of two required)			
Primary Indicators (minimum	1 of one is required; che		4.4)	Surface Soil				
 ✓ Surface Water (A1) ✓ High Water Table (A2) 	-	_ True Aquatic Plants (B _ Hydrogen Sulfide Odor		 Sparsely Veg Drainage Pat 	getated Concave Surface (B8)			
Saturation (A3)	~	_ Hydrogen Suinde Odor _ Oxidized Rhizospheres	Moss Trim Li					
Water Marks (B1)	_	_ Presence of Reduced I			Water Table (C2)			
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Bur				
Drift Deposits (B3)	_	_ Thin Muck Surface (C7		-	sible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	_	_ Other (Explain in Rema	arks)	Stunted or St	tressed Plants (D1)			
Iron Deposits (B5)					Position (D2)			
Inundation Visible on Ae				Shallow Aqui				
Water-Stained Leaves (B9)			Microtopogra	,			
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)			
Field Observations:		Depth (inches): 0						
Surface Water Present?	Yes 🔽 No Yes 🗹 No	Deptil (inclics)						
Water Table Present?		Depth (inches):0						
Saturation Present? (includes capillary fringe)	Yes 🚩 No 🔜	Depth (inches):	wetland F	lydrology Presen	nt? Yes 🔽 No			
Describe Recorded Data (st	ream gauge, monitorinç	y well, aerial photos, previ	ous inspections), if ava	ilable:				
Remarks:								
Cowardin Code: PEM;	HGM [.] Depression:	al·WT·NRPWW						
Small complex from roa	•							
	,							

Sampling Point: W-A20-PEM

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> ')	% Cover	Species?	Status	Number of Dominant Species
1			. <u> </u>	That Are OBL, FACW, or FAC: (A)
2				
3				Total Number of Dominant Species Across All Strata: 3 (B)
				Species Across Air Strata (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				
	0	= Total Cov	ver	Total % Cover of:Multiply by:
50% of total cover:0	20% of	total cover	. 0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
				FACU species x 4 =
2			·	UPL species x 5 =
3			·	
4				Column Totals: (A) (B)
5			. <u> </u>	Dravalance Index - P/A -
6				Prevalence Index = B/A =
				Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
8			·	✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov	ver	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	total cover	. 0	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
Juncus effusus	5	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Viola sorroria	3	~		
3. Lamium amplexicaule	2		F <u>AC</u>	¹ Indicators of hydric soil and wetland hydrology must
			ND	be present, unless disturbed or problematic.
4. Packera aurea	1		FACW	Definitions of Four Vegetation Strata:
5. Scirpus atrovirens	3	 ✓ 	OBL	Ū
_{6.} Rubus allegheniensis	2		FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
7			·	neight.
8			·	Sapling/Shrub – Woody plants, excluding vines, less
9			·	than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	16	= Total Cov	ver	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>8</u>		total cover		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in
				height.
1			·	
2				
3				
4				the base had a
5				Hydrophytic Vegetation
	0	= Total Cov		Present? Yes <u>V</u> No
50% of total cover:0		total cover		
			. <u> </u>	
Remarks: (Include photo numbers here or on a separate s	heet.)			
ND - Not determined				
Most of this pem is bare ground covered by wat	er staine	d leaves		
, , , , , , , , , , , , , , , , , , , ,				

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	pth Matrix Redox Features							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-8	5Y 5/3	98	10YR 6/8	2	С	PL	C	Oxidized rhizospheres
8-20	2.5Y 6/1	50	5Y 5/3	40	С	Μ	SC	Dual matrix
			10YR 6/8	10	С	PL	SC	Concentrations
						·		
						·		
					. <u></u>	·		
¹ Type: C=C	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	=Maskec	d Sand Gr	ains.		L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indic	ators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2	2 cm Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Be	low Surfa	ce (S8) (I	/LRA 147	, 148) _ C	Coast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Su	rface (S9)) (MLRA	147, 148)		(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye	• • •	•		F	Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat					(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S	. ,	6)		N.	/ery Shallow Dark Surface (TF12)
	d Below Dark Surface	(Δ11)	Depleted Dar		,			Other (Explain in Remarks)
·	ark Surface (A12)	(711)	Redox Depre					
	lucky Mineral (S1) (LI	RR N.	Iron-Mangane		,	LRR N.		
	A 147, 148)	,	MLRA 136		00 (1 12) (,		
	Bleyed Matrix (S4)		Umbric Surfa	•	(MLRA 1	86, 122)	³ Inc	licators of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	48) we	etland hydrology must be present,
Stripped	Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 14	7) un	less disturbed or problematic.
Restrictive	_ayer (if observed):							
Type:								
Depth (in	ches):						Hydric Soil	l Present? Yes 🖌 No
Remarks:								

Wetland ID W-A20-PEM



Photograph Direction West

Date: 05/04/2015

Comments: 2015 wetland delineation.



Photograph Direction NW

Date: 10/09/19

Project/Site: MVP	City/County: Webster	Sampling Date: 05/04/2015					
Applicant/Owner: MVP	, , ,	State: <u>WV</u> Sampling Point: W-A20 PFO					
	Section, Township, Range: N/A						
Landform (hillslope, terrace, etc.): Hilltop							
Subregion (LRR or MLRA): LRRN Lat		529917 Datum: NAD83					
Soil Map Unit Name: Pineville-Gilpin-Guyandotte							
Are climatic / hydrologic conditions on the site typical f							
Are Vegetation, Soil, or Hydrology		_					
Are Vegetation, Soil, or Hydrology		xplain any answers in Remarks.)					
SUMMARY OF FINDINGS – Attach site n							
Hydrophytic Vegetation Present? Yes <u>Ves</u> Hydric Soil Present? Yes <u>V</u>	Is the Sampled Area						
	No within a Wetland?	Yes No					
Remarks:							
Information listed on this form represents the presence of wetland hydrology, hydrophytic restoration activities within the LOD. The wave structure in 2019, Magnetation listed on the second s	c vegetation, and hydric soils was una retland was cleared of woody vegetatic	ble to be confirmed because of recent on within LOD as part of Project					
construction in 2018. Vegetation listed on t	nis form represents the vegetative con	infunity present in the wetland prior to					
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; check		Surface Soil Cracks (B6)					
Surface Water (A1) Y High Water Table (A2)	True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	 Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) 					
	Oxidized Rhizospheres on Living Roots (C3)						
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)					
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)					
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)					
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)					
Iron Deposits (B5)		Geomorphic Position (D2)					
 Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) 		Shallow Aquitard (D3)					
Aquatic Fauna (B13)		Microtopographic Relief (D4) FAC-Neutral Test (D5)					
Field Observations:							
Surface Water Present? Yes No _	Depth (inches):						
Water Table Present? Yes Ves No							
Saturation Present? Yes Ves No		ydrology Present? Yes 🖌 No					
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring	well earlied photoe, providuo increatione), if ever	lable					
Describe Recorded Data (stream gauge, monitoring	well, aenal photos, previous inspections), il avai						
Remarks:							
Cowardin Code: PFO; HGM: Depressional							
PFO adjacent to PEM wetland. Majority of	tree layer dominated by tulip poplar du	ring 2015 survey.					

Sampling Point: W-A20 PFO

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		
1 Liriodendron tulipifera	17	<u> </u>	FACU	Number of Dominant Species That Are OBL_EACW_or_EAC: 5 (A)
1i				That Are OBL, FACW, or FAC: (A)
_{2.} Nyssa sylvatica	9	<u> </u>	FAC	Total Number of Dominant
3. Quercus rubra	5		FACU	Species Across All Strata: 8 (B)
4 Quercus muehlenbergii	5		UPL	()
5. Acer rubrum	7		FAC	Percent of Dominant Species
			1 40	That Are OBL, FACW, or FAC: <u>62</u> (A/B)
6				Prevalence Index worksheet:
7				
	43	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: 21.5	5 20% of	total cover	8.6	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Nyssa sylvatica	8	~	FAC	FAC species x 3 =
2. Liriodendron tulipifera	6	~		FACU species x 4 =
		~	FACU	
3. Acer rubrum	5		FAC	UPL species x 5 =
_{4.} Quercus rubra	2		FACU	Column Totals: (A) (B)
5. Quercus muehlenbergii	4		UPL	
6. Vaccinium corymbosum	3			Prevalence Index = B/A =
			FACW	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				
0	28	= Total Cov		3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 14				4 - Morphological Adaptations ¹ (Provide supporting
<u></u>	20% 0	total cover.	0.0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')	_			Problematic Hydrophytic Vegetation ¹ (Explain)
_{1.} Osamunda cinnamonea	5	~	FACW	
2. Scirpus atrovirens	4	~	OBL	
3. Carex stipata	2		OBL	¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
4			·	Definitions of Four Vegetation Strata:
5				
6			. <u> </u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
0				
0				Sapling/Shrub – Woody plants, excluding vines, less
9			·	than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	11	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 5.5		total cover		
Woody Vine Stratum (Plot size: 15')			·	Woody vine – All woody vines greater than 3.28 ft in
	4			height.
1. Smilax rotundifolia			FACU	
_{2.} Smilax araculata	5	<u> </u>	FAC	
3				
4.				
5				Hydrophytic
5				Vegetation Present? Yes <u>V</u> No
4 5		= Total Cov		
50% of total cover:4.5	20% of	total cover	1.0	
Remarks: (Include photo numbers here or on a separate s	heet.)			·

Profile Desc	ription: (Describe t	o the depth	n needed to docum	nent the i	ndicator	or confirm	n the absence o	of indicator	rs.)	
Depth	Matrix		Redox		2					
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc ²	Texture		Remarks	
0-8	10YR 5/2	85	2.5YR 3/6	15	C	PL	SC			
8-20	10YR 6/3	60	7.5YR 4/6	40	С	PL	SC	Oxic	lized rhizospheres	
		<u> </u>								
		<u> </u>								
			<u> </u>							
		<u> </u>					<u> </u>			
¹ Type: C=Co	oncentration, D=Deple	etion, RM=F	Reduced Matrix, MS	=Masked	Sand Gra	ains.	² Location: PL	=Pore Linin	g, M=Matrix.	
Hydric Soil I	ndicators:						Indicat	tors for Pro	oblematic Hydric Soils	³ :
Histosol	(A1)		Dark Surface	(S7)			2 c	cm Muck (A	10) (MLRA 147)	
Histic Ep	vipedon (A2)		Polyvalue Bel	low Surfa	ce (S8) (N	ILRA 147,	148) Co	ast Prairie	Redox (A16)	
Black His	stic (A3)		Thin Dark Sui	rface (S9)	(MLRA 1	47, 148)		(MLRA 147	7, 148)	
Hydroge	n Sulfide (A4)		Loamy Gleye	,	F2)		Pie	edmont Floo	odplain Soils (F19)	
	I Layers (A5)		Depleted Mat	. ,				(MLRA 136		
	ck (A10) (LRR N)		Redox Dark S	· · ·	,			•	Dark Surface (TF12)	
	Below Dark Surface	e (A11)	Depleted Dar				Ot	her (Explair	n in Remarks)	
	ark Surface (A12)		Redox Depres	•						
-	lucky Mineral (S1) (L	RR N,	Iron-Mangane		es (F12) (LRR N,				
	A 147, 148)		MLRA 136	,						
	leyed Matrix (S4)		Umbric Surface	. , .				•	drophytic vegetation and	b
	edox (S5)		Piedmont Flo	•	, ,	•	•	•	ogy must be present,	
	Matrix (S6)		Red Parent N	laterial (F	21) (MLR	A 127, 147	7) unle	ess disturbe	d or problematic.	
Restrictive L	ayer (if observed):									
Туре:										
Depth (inc	ches):						Hydric Soil F	Present?	Yes 🖌 No 🔄	_
Remarks:										

Wetland ID W-A20 PFO



Photograph Direction East

Date: 05/04/2015

Comments: 2015 wetland delineation.



Photograph Direction North

Date: <u>10/09/19</u>

Project/Site: MVP	City/County: Webster		Sampling Date: 05/04/2015
Applicant/Owner: MVP		State: WV	_ Sampling Point: W-A20-up1
Investigator(s): Cook, Heule, Lew	Section, Township, Range	<u>; N/A</u>	
Landform (hillslope, terrace, etc.): Road/hilltop	Local relief (concave, convex	, _{none):} None	Slope (%): 2
Subregion (LRR or MLRA): LRRN Lat: 3	38°34'0.46 Long: _	80°31'48.19"	Datum: NAD 83
Soil Map Unit Name: Gilpin-Dekalb complex, 15 to	o 35 percent slopes, extremely s	tony NWI classifica	_{ition:} None
Are climatic / hydrologic conditions on the site typical for the	his time of year? Yes 🖌 No	(If no, explain in Re	marks.)
Are Vegetation, Soil, or Hydrology	_significantly disturbed? Are "No	rmal Circumstances" pr	esent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology	_naturally problematic? (If need	ed, explain any answers	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map	o showing sampling point loc	ations, transects,	important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks:					
Upland					

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living	Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled So	oils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No Vo Depth (inches):	
Saturation Present? Yes No V Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Concern Present? Yes Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No Concern Present? Yes Pepth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	
Saturation Present? Yes No Concern Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	
Saturation Present? Yes No Concern Present? Yes Pepth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	
Saturation Present? Yes No Concern Present? Yes Pepth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	
Saturation Present? Yes No Concern Present? Yes Pepth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec Remarks:	
Saturation Present? Yes No Concern Present? Yes Pepth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	

Sampling Point: W-A20-up1

, <i>,</i>	Absolute	- Dominant	Indiantor	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		
1 Quercus rubra	7	000000	FACU	Number of Dominant Species That Are OBL_FACW_or FAC: 2 (A)
··				That Are OBL, FACW, or FAC: 2 (A)
2. Acer rubrum	20	<i>✓</i>	FAC	Total Number of Dominant
3. Quercus muehlenbergii	5		<u>UPL</u>	Species Across All Strata: 6 (B)
_{4.} Nyssa sylvatica	6		FAC	
5				Percent of Dominant Species That Are OBL_FACW_ or FAC: 40 (A/B)
				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	·	
50% of total cover: <u>19</u>	20% of	total cover:	7.6	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Quercus rubra	7	~	FACU	FAC species x 3 =
2. Quercus muehlenbergii	9	v	UPL	FACU species x 4 =
3. Acer rubrum	3			UPL species x 5 =
			F <u>AC</u>	
4. Nyssa sylvatica	6	<u> </u>	FAC	Column Totals: (A) (B)
_{5.} Festuca rubra	3		FACU	Prevalence Index = B/A =
6				
7				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
8		·		2 - Dominance Test is >50%
9				3 - Prevalence Index is $≤3.0^1$
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 14	20% of	total cover:	5.6	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1 Festuca rubra	3	~	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
··			17100	
2			······	¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				Harb All borbassaus (non woody) planta regardlass
	3	= Total Cov	or	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover:1.5		total cover:		
	20 /0 01		0.0	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')	45			height.
1. Smilax auriculata	15	<u> </u>	FACU	
2				
3				
4				
				Hydrophytic
5	4 5	·	<u> </u>	Vegetation Present? Yes No 🖌
		= Total Cov		Present? Yes No V
50% of total cover: 7.5	20% of	total cover:	3	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Desc	ription: (Describe to	o the depth	n needed to docun	nent the in	ndicator o	or confirm	the absence o	f indicator	s.)	
Depth	Matrix			x Features						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-8	10 YR 4/3	100					SL			
8-20	10 YR 5/6	100					SIL			
				<u> </u>						
. <u> </u>										
<u> </u>							2	D 1.1.1		
Hydric Soil	oncentration, D=Deple	etion, RM=H	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location: PL=		g, M=Matrix. blematic Hydric Soil	c ³ .
			Deal Oracia	(07)					•	5.
Histosol	· ,		Dark Surface		· · · (CO) /M				10) (MLRA 147)	
	pipedon (A2)		Polyvalue Be		· / •		·		Redox (A16)	
Black Hi	n Sulfide (A4)		Thin Dark Su Loamy Gleye			47, 140)		MLRA 147	, 140) odplain Soils (F19)	
	Lavers (A5)		Depleted Mat		2)			MLRA 136		
	ick (A10) (LRR N)		Redox Dark \$	• •	6)		•		Dark Surface (TF12)	
	Below Dark Surface	(A11)	Depleted Dar					•	in Remarks)	
	ark Surface (A12)	()	Redox Depre		. ,			(<u>=</u> ,p.a		
	lucky Mineral (S1) (LI	RR N.	Iron-Mangan			RR N.				
	A 147, 148)	,	MLRA 13		· / ·					
Sandy G	ileyed Matrix (S4)		Umbric Surfa	ce (F13) (I	MLRA 13	6, 122)	³ Indic	ators of hyd	drophytic vegetation a	nd
Sandy R	edox (S5)		Piedmont Flo	odplain So	oils (F19)	(MLRA 14	8) wetla	and hydrolo	ogy must be present,	
	Matrix (S6)		Red Parent M	Aaterial (F2	21) (MLR	A 127, 147) unle:	ss disturbe	d or problematic.	
Restrictive I	_ayer (if observed):									
Туре:										
Depth (in	ches):						Hydric Soil P	resent?	Yes No	
Remarks:										

USACE FILE NO./Project Name:		Mountain Valley Pipeline			Lat.	38.557156	Lon.	-80.538578
STREAM/SITE ID AND SITE DESCR		v	V-A19, Temporary Access Road	-				
% stream slope, watershed size {a		d or impairments)				····, ···, ···, ···,		
FORM OF MITIGATION:		. ,						
DATE:	8/10)/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-A19	Emergent	0.0265	Emergent					
						PART III - Advanced		'n
						Sustainable Determination Made or Advanced Mitigation (Y or N)		Y
Fotal Impact		0.0265						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)	-		ILF Costs		
otal Emergent			0.0265					
otal Scrub-Shrub			0			\$1,590.00		
otal Forested			0					
otal Open Water			0					

Project/Site: MVP		City/Co	ounty: Webster		Sampling Date: 05/03/2015	
Applicant/Owner: MVP		,	,		Sampling Point: W-A19	
Investigator(s): Cook, Heule, Lew		Sectio	n, Township, Range: <u>N</u> /			
Landform (hillslope, terrace, etc.): Hills					Slope (%); 6	
Subregion (LRR or MLRA): LRRN					0:000 (70) Datum: NAD83	
Soil Map Unit Name: Pineville-Gilpir				NWI classifi		
Are climatic / hydrologic conditions on th						
Are Vegetation, Soil, or I						
Are Vegetation, Soil, or I				explain any answe		
SUMMARY OF FINDINGS – At			ping point locatio	ons, transects	s, important reatures, etc.	
Hydrophytic Vegetation Present?	Yes 🔽	No	Is the Sampled Area			
Hydric Soil Present?	Yes 🖌		within a Wetland?	Yes 🖌	No	
Wetland Hydrology Present?	Yes 🔽	No				
Remarks:						
Cowardin Code: PEM; HGM: SI	-		2015 The wetlens	luco rovioitor	11/25/2010 Droconco	
Information listed on this form re	•					
of wetland hydrology, hydrophy	•	and hydric solis	was commed usi	ng the USACE	E EIMP Regional	
Supplement delineation method	lology.					
				Coordon India	otoro (minimum of two required)	
Wetland Hydrology Indicators:	roquirod, obool, o	ll that apply)			ators (minimum of two required)	
Primary Indicators (minimum of one is			21.4)	Surface Soil		
 Surface Water (A1) High Water Table (A2) 		ue Aquatic Plants (E		Drainage Pa	getated Concave Surface (B8)	
\checkmark Saturation (A3)						
Water Marks (B1)		esence of Reduced		Moss Trim L Dry-Season	Water Table (C2)	
Sediment Deposits (B2)			n in Tilled Soils (C6)	Crayfish Bu		
Drift Deposits (B3)		nin Muck Surface (C		Saturation Visible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Ot	ther (Explain in Rem	arks)	Stunted or S	Stressed Plants (D1)	
Iron Deposits (B5)				Geomorphic	Position (D2)	
Inundation Visible on Aerial Image	ry (B7)			Shallow Aqu		
Water-Stained Leaves (B9)					aphic Relief (D4)	
Aquatic Fauna (B13)				FAC-Neutra	l Test (D5)	
Field Observations:			n			
			0			
		eptil (inches).				
Saturation Present? Yes (includes capillary fringe)	No C	Pepth (inches):	U Wetland H	lydrology Prese	nt? Yes 🔽 No	
Describe Recorded Data (stream gaug	e, monitoring wel	l, aerial photos, prev	vious inspections), if ava	ilable:		
Remarks:						
Sopping wet linear side slope w	etiano, Linear	road, 2015 lieid	i survey notes.			

Sampling Point: W-A19

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)	% Cover	Species?	Status	Number of Dominant Species
1		·	. <u> </u>	That Are OBL, FACW, or FAC: (A)
2			·	Total Number of Dominant
3				Species Across All Strata:6 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 83 (A/B)
6.				
7.				Prevalence Index worksheet:
	0	= Total Cov	/er	Total % Cover of: Multiply by:
50% of total cover:0		total cover		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Alnus serrulata	5	~	FACW	FAC species x 3 =
2. Acer rubrum	1		FAC	FACU species x 4 =
3 Rubus hispidus	2	~	FACW	UPL species x 5 =
4. Rubus allegheniensis	2			Column Totals: (A) (B)
5. Acer saccharum	2		FACU	
		-	FAC	Prevalence Index = B/A =
6			·	Hydrophytic Vegetation Indicators:
7		<u></u>	. <u> </u>	1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is $\leq 3.0^1$
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>6</u>	20% of	total cover	<u>: 2.4</u>	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
_{1.} Juncus effusus	5		FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Viola sororia	20	~	FAC	
3. Osmunda cinnamonea	5		FACW	¹ Indicators of hydric soil and wetland hydrology must
4. Polystichum acrostichoides	2		FACU	be present, unless disturbed or problematic.
5. Potentilla simplex	2	·	FACU	Definitions of Four Vegetation Strata:
6. Scirpus atrovirens	15	~	OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of
7		·	·	height.
8		·	·	Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10		<u></u>	·	m) tall.
11		·	·	Herb – All herbaceous (non-woody) plants, regardless
0.17		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>24.5</u>	<u>)</u> 20% of	total cover	9.8	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4				Hudrophytic
5				Hydrophytic Vegetation
	•	= Total Cov	/er	Present? Yes V No
50% of total cover:0		total cover	-	
Remarks: (Include photo numbers here or on a separate s	heet.)			
Tons of moss and aquatic vegetation. Veg is ob		listurbed.	route for	r travel.

Depth	Matrix	%		x Feature		L = = ²	Tautuna	Demerles
inches)	Color (moist) 10YR 3/1		Color (moist)	<u>%</u> 20	Type ¹		Texture SaC	Remarks
0-9	1018 3/1	55	10 YR 5/1		<u>C</u>	M		Dual matrix
			10YR 5/8	25	<u>C</u>	<u> </u>	SaC	Oxidized rhizospheres
9-20	10YR 6/1	80	10 YR 7/8	20	C	M	·	Dual matrix
							·	
	Concentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Maske	d Sand G	rains.		=Pore Lining, M=Matrix. ors for Problematic Hydric Soils ³
Black H Hydrogo Stratifie 2 cm Mi Deplete Thick D Sandy N MLR. Sandy F Stripped	pipedon (A2) listic (A3) en Sulfide (A4) id Layers (A5) uck (A10) (LRR N) ed Below Dark Surface park Surface (A12) Mucky Mineral (S1) (L A 147, 148) Gleyed Matrix (S4) Redox (S5) d Matrix (S6)	、 ,	 Dark Surface Polyvalue Be Thin Dark Su Loamy Gleye Depleted Ma Redox Dark Depleted Da Redox Depre Iron-Mangan MLRA 13 Umbric Surfa Piedmont Flo Red Parent N 	elow Surfa urface (S9 ed Matrix ttrix (F3) Surface (I rk Surface essions (F esse Mass 6) ace (F13) poodplain S) (MLRA (F2) F6) € (F7) F8) ses (F12) (MLRA 1 Soils (F19)	(LRR N, 36, 122)	148) Co (Pie (Ve Oth ³ Indic 18) weth	m Muck (A10) (MLRA 147) ast Prairie Redox (A16) (MLRA 147, 148) edmont Floodplain Soils (F19) (MLRA 136, 147) ry Shallow Dark Surface (TF12) her (Explain in Remarks) ators of hydrophytic vegetation and and hydrology must be present, ss disturbed or problematic.
Type:	Layer (if observed):							
Depth (in emarks:	icnes):						Hydric Soll F	Present? Yes 🖌 No
isturbed	soils.							

Wetland ID W-A19



Photograph Direction SE

Date: 05/03/2015

Comments: 2015 wetland delineation.



Photograph Direction SE

Date: 11/25/19

Project/Site: MVP		City/County:	Webster	Sampling Date: 05/03/2015
Applicant/Owner: MVP			State: WV	
Investigator(s): Cook, Heul	e, Lew	Section, Tov	wnship, Range: <u>N/A</u>	
Landform (hillslope, terrace, et	_{tc.):} Slope	Local relief (cor	ncave, convex, none): None	Slope (%): 35
Subregion (LRR or MLRA): L	.RRN La	_{it:} 38.556991	Long: -80.538464	Datum: NAD83
Soil Map Unit Name: Pinevil	le-Gilpin-Dekalb-B	uchanan (s8830)	NWI class	sification: None
Are climatic / hydrologic condit	tions on the site typical	for this time of year? Yes	No (If no, explain i	n Remarks.)
Are Vegetation, Soil	, or Hydrology	significantly disturbed?	Are "Normal Circumstance	s" present? Yes 🔽 No
Are Vegetation, Soil	, or Hydrology	naturally problematic?	(If needed, explain any ans	swers in Remarks.)
SUMMARY OF FINDIN	GS – Attach site r	map showing sampling	g point locations, transed	cts, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No	<u>~</u>
Remarks: Upland						

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Fauna (B13) 	Dry-Season Water Table (C2)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No <u>V</u> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No _
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Remarks:	

HYDROLOGY

Sampling Point: W-A19-UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		
1.				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata:5(B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 40 (A/B)
6				
7				Prevalence Index worksheet:
	0	= Total Cov		Total % Cover of: Multiply by:
50% of total cover:0		total cover:	-	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')	2070 01			FACW species x 2 =
	15			FAC species x 3 =
1. Carpinus caroliniana		<u> </u>	FAC	
2. Ulmus americana	10		FACW	FACU species x 4 =
3. Acer saccharum	10		FACU	UPL species x 5 =
_{4.} Acer negundo	1		FAC	Column Totals: (A) (B)
5. Vaccinium corymbosum	1		FACW	
6. Liriodendron tulipifera	15	 ✓ 	FACU	Prevalence Index = B/A =
			ACO	Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	52	= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>26</u>	20% of	total cover:	10.4	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Dennstaedtia punctilobula	1		FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Galium sp	2		1 400	
	7			¹ Indicators of hydric soil and wetland hydrology must
3. Polystichum acrostichoides			F <u>ACU</u>	be present, unless disturbed or problematic.
4. Viola sororia	4	<u> </u>	F <u>AC</u>	Definitions of Four Vegetation Strata:
5. Viola blanda	3		FACW	
_{6.} Viola hastata	4	~	UPL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7 Packera aurea	1		FACW	more in diameter at breast height (DBH), regardless of height.
8.			1 <u>71011</u>	noight.
				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	22	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 11	20% of	total cover:	4.4	
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes No 🖌
50% of total cover:0		total cover:		
Remarks: (Include photo numbers here or on a separate s				
	neet.)			
Clear upland vegetation				

Profile Desc	ription: (Describe to	o the depth r	needed to docum	nent the in	dicator o	or confirm	the absend	ce of indicato	rs.)		
Depth	Matrix	<u> </u>		Features							
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture		Remarks		
0-20	2.5 Y 6/6	100					SaC				
				Maakad			² Location		a M Matrix		
Hydric Soil I	ncentration, D=Deple	elion, Rivi=Re	duced Matrix, Ma	eiviaskeu	Sand Gra	ans.		PL=Pore Linir icators for Pro			
Histosol			Dark Surface	(97)				2 cm Muck (A		-	
	ipedon (A2)	-	Polyvalue Be	. ,	e (S8) (M	II RA 147	148)	Coast Prairie			
Black His		-	Thin Dark Su					(MLRA 147)	
	n Sulfide (A4)	-	Loamy Gleye	, ,	•	,,		Piedmont Flo		s (F19)	
	Layers (A5)	-	Depleted Mat		,			(MLRA 136			
	ck (A10) (LRR N)	_	 Redox Dark S		6)			Very Shallow		e (TF12)	
Depleted	Below Dark Surface	e (A11)	Depleted Dar	k Surface	(F7)			Other (Explain	n in Remark	s)	
Thick Da	rk Surface (A12)	. <u>-</u>	Redox Depre	ssions (F8)						
-	ucky Mineral (S1) (L l	RR N,	Iron-Mangane		s (F12) (l	_RR N,					
	. 147, 148)		MLRA 130								
-	leyed Matrix (S4)	-	Umbric Surfa					ndicators of hy			
-	edox (S5)	-	Piedmont Flo					wetland hydrol			
	Matrix (S6)	-	Red Parent M	laterial (F2	1) (MLR	A 127, 147	') ı	unless disturbe	ed or probler	natic.	
	ayer (if observed):										
Type:	<u> </u>		-								
Depth (inc	hes):		-				Hydric So	oil Present?	Yes	No	
Remarks:											
Good uplar	Id soils										

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.548175	Lon.	-80.540709
STREAM/SITE ID AND SITE DESCR	IPTION:					W-H64-PEM, Pipeline ROW	-	
% stream slope, watershed size {a		d or impairments)				, -		
FORM OF MITIGATION:								
DATE:	8/10)/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-H64-PEM	Emergent	0.0276	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Fotal Impact	-	0.0276						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0276	-		.		
otal Scrub-Shrub			0	-		\$1,656.00		
otal Forested			0					
otal Open Water			0]				

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.548058	Lon.	-80.540847
STREAM/SITE ID AND SITE DESCR	IPTION:					W-H64-PEM-2, Pipeline ROW		
% stream slope, watershed size {a		d or impairments)				, P		
FORM OF MITIGATION:		. ,						
DATE:	8/10)/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-H64-PEM-2	Emergent	0.0289	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Fotal Impact		0.0289						
		Unit Scores		-		Estimated		
	assification		Replacement Unit(s)	-		ILF Costs		
otal Emergent			0.0289			.		
otal Scrub-Shrub			0			\$1,734.00		
otal Forested			0					
otal Open Water			0					

Project/Site: MVP	City/County: Webster	Sampling Date: 05/02/2015
Applicant/Owner: MVP		State: WV Sampling Point: W-H64-PEN
Investigator(s): A. Grech, S. Kelly, M. Whitten	Section, Township, Range: <u>N/</u>	A
Landform (hillslope, terrace, etc.): Valley bottom		
Subregion (LRR or MLRA): LRRN Lat: 38.54	8261 Long -80	540628 Datum: NAD83
Soil Map Unit Name: Craigsville gravelly loam, 0 to 5 p	ercent slopes	
Are climatic / hydrologic conditions on the site typical for this tin	-	
Are Vegetation, Soil, or Hydrology sign	ficantly disturbed? Are "Normal	Circumstances" present? Yes <u>V</u> No
Are Vegetation, Soil, or Hydrology natu	rally problematic? (If needed, e	explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh	owing sampling point location	ns, transects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>Ves</u> No_		
Hydric Soil Present? Yes <u>V</u> No	is the Sampled Area	· · · ·
Wetland Hydrology Present? Yes Vo	within a wetland?	Yes No
Remarks:		
Cowardin Code: PEM section; HGM: Riverine; WT: RPWWD		
Information listed on this form represents the data collected in		,
hydrophytic vegetation, and hydric soils was confirmed using t is obstructed by timbermatting. The wetland was cleared of wo	• • • •	
this form represents the vegetative community present in the v		
HYDROLOGY		·
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that		Surface Soil Cracks (B6)
	uatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
	en Sulfide Odor (C1)	Drainage Patterns (B10)
	d Rhizospheres on Living Roots (C3)	Moss Trim Lines (B16)
	ce of Reduced Iron (C4)	Moss min Lines (D10) Dry-Season Water Table (C2)
	Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
	uck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
	Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <u>V</u> No Depth	(inches):0.25	
Water Table Present? Yes Ves No Depth		
Saturation Present? Yes Ves No Depth		lydrology Present? Yes 🖌 No
(includes capillary fringe)		· · ·
Describe Recorded Data (stream gauge, monitoring well, aer	al photos, previous inspections), if ava	liable:
Remarks:		

Sampling Point: W-H64-PEM

20'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2		<u></u>	. <u> </u>	Total Number of Dominant
3				Species Across All Strata:2 (B)
4				(-)
			·	Percent of Dominant Species That Are OBL_EACW or EAC: 100 (A/B)
5				That Are OBL, FACW, or FAC: 100 (A/B)
6	·	·	·	Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	•	
50% of total cover: 0	20% of	total cover	<u> 0 </u>	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Salix sericea	10	 ✓ 	OBL	FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
			·	Column Totals: (A) (B)
4			·	
5			·	Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				✓ 1 - Rapid Test for Hydrophytic Vegetation
8				\checkmark 2 - Dominance Test is >50%
9				
		= Total Cov	/er	3 - Prevalence Index is $\leq 3.0^1$
50% of total cover:5		total cover		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')	2070 01			data in Remarks or on a separate sheet)
1. Carex crinita	75	V		Problematic Hydrophytic Vegetation ¹ (Explain)
			OBL	
2. Scirpus cyperinus	15		OBL	¹ Indicators of hydric soil and wetland hydrology must
3. Solidago rugosa	15		FAC	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of
7			·	height.
8		·	·	Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10	·			m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	105	= Total Cov	ver	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>52</u> .	5 20% of	total cover	21	
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1,				
			·	
2			·	
3	·	· <u> </u>	·	
4	·			Hydrophytic
5				Vegetation
	0	= Total Cov	/er	Present? Yes V No
50% of total cover:0	20% of	total cover	0	
Remarks: (Include photo numbers here or on a separate s	sheet.)			1
, ,	,			

Profile Desc	ription: (Describe t	o the depth	needed to docun	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redo	x Features	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	10YR 4/1	90	7.5YR 4/6	5	С	M/PL	SL	
<u> </u>				·	·			
						- <u> </u>		
				·				
¹ T			a du a a d Matriu - MC			- <u> </u>	² I a setient. DI	Dana Linia a M. Mataiu
Hydric Soil I	oncentration, D=Deple	$\frac{1}{2}$	educed Matrix, Ma	S=IVIASKED	I Sand Gr	ains.		=Pore Lining, M=Matrix. tors for Problematic Hydric Soils ³ :
-				(0-)				•
Histosol	()		Dark Surface					cm Muck (A10) (MLRA 147)
	vipedon (A2)		Polyvalue Be					bast Prairie Redox (A16)
Black His			Thin Dark Su	, ,	•	147, 148)		(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		F2)			edmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat	. ,				(MLRA 136, 147)
	ck (A10) (LRR N)	(.	Redox Dark S		,			ery Shallow Dark Surface (TF12)
	Below Dark Surface	(A11)	Depleted Dar		. ,		Ot	her (Explain in Remarks)
	rk Surface (A12)		Redox Depre					
	lucky Mineral (S1) (L	RR N,	Iron-Mangan		es (F12) (LRR N,		
	147, 148)		MLRA 13			0. 400)	31	
	leyed Matrix (S4)		Umbric Surfa	. , .				cators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo					land hydrology must be present,
	Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147) unie	ess disturbed or problematic.
	ayer (if observed):							
Туре:			_					,
Depth (inc	ches):						Hydric Soil	Present? Yes 🚩 No
Remarks:								

Wetland ID W-H64-PEM



Photograph Direction West

Date: 05/02/2015

Comments: 2015 wetland delineation.



Photograph Direction NE

Date: 11/25/19

Project/Site: MVP		City/County: Webster		Sampling Date: 05/02/2015
Applicant/Owner: MVP			State: WV	Sampling Point: W-H64-PSS
Investigator(s): A. Grech, S. Kelly	, M. Whitten	Section, Township, Ran		
Landform (hillslope, terrace, etc.): Va				Slope (%): 0-3
Subregion (LRR or MLRA): LRRN	Lat: 38.5479			00000000000000000000000000000000
Soil Map Unit Name: Craigsville gr			,	
			NWI classific	
Are climatic / hydrologic conditions on		·		,
Are Vegetation, Soil, o	r Hydrology significa	antly disturbed? Are "N	Normal Circumstances"	present? Yes 🦯 No
Are Vegetation, Soil, o	r Hydrology naturally	y problematic? (If nee	eded, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS -	Attach site map show	ing sampling point lo	cations, transects	s, important features, etc.
Hudrophytic Vegetation Propert?	Yes 🖌 No			
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes V No	Is the Sampled		
Wetland Hydrology Present?	Yes V No	within a Wetland	d? Yes 🖌	No
Remarks:				
Cowardin Code: PSS ; HGM: Riverine	e; WT: RPWWD			
The wetland was revisited on 11/25/2		d hydrology, hydrophytic veg	getation, and hydric soils	s was unable to be confirmed
because of recent restoration activitie				
2018. Vegetation listed on this form re	presents the vegetative con	nmunity present in the wetlar	nd prior to the start of co	nstruction.
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one i	is required: check all that an		Surface Soil	
Surface Water (A1)				getated Concave Surface (B8)
High Water Table (A2)		ic Plants (B14) Sulfide Odor (C1)	Sparsery ve Drainage Pa	
Saturation (A3)		hizospheres on Living Roots		
Water Marks (B1)		of Reduced Iron (C4)		Water Table (C2)
Sediment Deposits (B2)		Reduction in Tilled Soils (C		
Drift Deposits (B3)		Surface (C7)		isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		lain in Remarks)		tressed Plants (D1)
Iron Deposits (B5)			Geomorphic	
Inundation Visible on Aerial Imag	aerv (B7)		Shallow Aqu	
Water-Stained Leaves (B9)				aphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	
Field Observations:				
Surface Water Present? Yes	No Depth (inc	_{hes):} 0.25		
Water Table Present? Yes				
Saturation Present? Yes	No Depth (inc		land Hydrology Preser	nt? Yes 🖌 No
(includes capillary fringe)		-		
Describe Recorded Data (stream gat	uge, monitoring well, aerial p	hotos, previous inspections)	, if available:	
Remarks:				

Sampling Point: W-H64-PSS

20'	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> ')		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>2</u> (B)
4				Demont of Dominant Crossica
5				Percent of Dominant Species That Are OBL, FACW, or FAC:100 (A/B)
6				
7.				Prevalence Index worksheet:
	0	= Total Cove	er	Total % Cover of:Multiply by:
50% of total cover:0				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
	60	~	OBL	FAC species x 3 =
		·	<u> </u>	FACU species x 4 =
2				UPL species x 5 =
3				
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				✓ 1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9		·		3 - Prevalence Index is $\leq 3.0^{1}$
		= Total Cove	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 30) 20% of	f total cover:	12	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Scirpus cyperinus	60	~	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2				
				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6		·		more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub Weady plants evaluating vince lass
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				
	60	= Total Cove		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 30		f total cover:		
Woody Vine Stratum (Plot size: 15')	207801			Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cove	er	Present? Yes V No
50% of total cover: 0	20% of	f total cover:	0	
Remarks: (Include photo numbers here or on a separate	sheet.)			1
	,			

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the	indicator	or confirm	the absence	of indicators.)			
Depth	Matrix			x Feature							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks			
0-20	10YR 4/1	90	7.5YR 4/6	10	С	M/PL	SL				
						·					
			,			·					
						·					
						·					
·						·					
17							21	Dens Lisien M. Matrix			
	¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ :										
Histosol			Dark Surface	(87)				cm Muck (A10) (MLRA 147)			
	oipedon (A2)		Polyvalue Be	. ,	(S8) (N			oast Prairie Redox (A16)			
Black Hi	• • •		Thin Dark Su				140) 0	(MLRA 147, 148)			
	n Sulfide (A4)		Loamy Gleye			141, 140)	P	iedmont Floodplain Soils (F19)			
	d Layers (A5)		Depleted Mar		(• =)			(MLRA 136, 147)			
	ick (A10) (LRR N)		Redox Dark	. ,	-6)		Very Shallow Dark Surface (TF12)				
	d Below Dark Surface	e (A11)	Depleted Dar	•	,		Other (Explain in Remarks)				
Thick Da	ark Surface (A12)		Redox Depre	ssions (F	8)						
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Mass	es (F12) (LRR N,					
	A 147, 148)		MLRA 13	,							
	leyed Matrix (S4)		Umbric Surfa	. ,	•	•		icators of hydrophytic vegetation and			
	edox (S5)		Piedmont Flo	•	, ,	•	•	tland hydrology must be present,			
	Matrix (S6)		Red Parent N	Aaterial (F	21) (MLR	A 127, 147) unl	ess disturbed or problematic.			
	_ayer (if observed):										
Туре:											
Depth (ind	ches):						Hydric Soil	Present? Yes V No			
Remarks:							•				

Wetland ID W-H64-PSS



Photograph Direction North

Date: 05/02/2015

Comments: 2015 wetland delineation.



Photograph Direction NE

Date: 11/25/19

Project/Site: MVP		City/Co	_{unty:} Webster		Sampling Date: 05/02/2015
Applicant/Owner: MVP			,		Sampling Point: W-H64-PSS
Investigator(s): A. Grech, S.	Kelly, M. Whitte	en Section	n, Township, Range; N		
Landform (hillslope, terrace, etc					Slope (%): 0-3
Subregion (LRR or MLRA): LR	, .				Datum: NAD83
Soil Map Unit Name: Craigsvi					
Are climatic / hydrologic conditio					
		-			
					present? Yes <u>V</u> No
Are Vegetation, Soil				explain any answe	
SUMMARY OF FINDING	S – Attach site	e map showing sam	pling point location	ons, transects	s, important features, etc.
Hydrophytic Vegetation Prese	nt? Yes	No	Is the Sampled Area		
Hydric Soil Present?	Yes	No	within a Wetland?	Yes 🖌	No
Wetland Hydrology Present?	Yes	No			
woody vegetation within LOD a wetland prior to the start of con	dric soils was unabl s part of Project co	e to be confirmed because	of recent restoration a	ctivities within the	esence of wetland hydrology, LOD. The wetland was cleared of etative community present in the
HYDROLOGY					
Wetland Hydrology Indicator					ators (minimum of two required)
Primary Indicators (minimum c	of one is required; c			Surface Soil	
✓ Surface Water (A1) ✓ High Water Table (A2)		True Aquatic Plants (B Hydrogen Sulfide Odo		Sparsely Ve	getated Concave Surface (B8)
Saturation (A3)		 Oxidized Rhizospheres 			
Water Marks (B1)		 Presence of Reduced 	- · ·		Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reduction	. ,	Crayfish Bur	
Drift Deposits (B3)		Thin Muck Surface (C	7)	Saturation V	isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Rem	arks)	Stunted or S	tressed Plants (D1)
Iron Deposits (B5)					Position (D2)
Inundation Visible on Aeri				Shallow Aqu	
Water-Stained Leaves (B9)			FAC-Neutral	aphic Relief (D4)
Field Observations:					
Surface Water Present?	Yes 🖌 No	Depth (inches): 0.2	25		
Water Table Present?		Depth (inches):)		
Saturation Present?	4	Depth (inches):) Wetland I	Hydrology Preser	nt? Yes 🖌 No
(includes capillary fringe)					
Describe Recorded Data (strea	am gauge, monitori	ng well, aerial photos, prev	ious inspections), if ava	alladie:	
Remarks:					

Sampling Point: W-H64-PSS

20'	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> ')		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>2</u> (B)
4				Demont of Dominant Crossica
5				Percent of Dominant Species That Are OBL, FACW, or FAC:100 (A/B)
6				
7.				Prevalence Index worksheet:
	0	= Total Cove	er	Total % Cover of:Multiply by:
50% of total cover:0				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
	60	~	OBL	FAC species x 3 =
		·	<u> </u>	FACU species x 4 =
2				UPL species x 5 =
3				
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				✓ 1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9		·		3 - Prevalence Index is $\leq 3.0^{1}$
		= Total Cove	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 30) 20% of	f total cover:	12	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Scirpus cyperinus	60	~	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2				
				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6		·		more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub Weady plants evaluating vince lass
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				
	60	= Total Cove		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 30		f total cover:		
Woody Vine Stratum (Plot size: 15')	207801			Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cove	er	Present? Yes V No
50% of total cover: 0	20% of	f total cover:	0	
Remarks: (Include photo numbers here or on a separate	sheet.)			1
	,			

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the	indicator	or confirm	the absence	of indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	10YR 4/1	90	7.5YR 4/6	10	С	M/PL	SL	
						·		
			;			·		
						·		
						·		
·						·		
17							21	Dens Lisien M. Matrix
Hydric Soil	oncentration, D=Depl	etion, RIVI=	Reduced Matrix, Ma	S=IVIasked	a Sand Gr	ains.		L=Pore Lining, M=Matrix. ators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(87)				cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be	. ,	(S8) (N			oast Prairie Redox (A16)
Black Hi	• • •		Thin Dark Su				140) 0	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			141, 140)	P	iedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Mar		(• =)			(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark	. ,	-6)		V	ery Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Dar	•	,			ther (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre	ssions (F	8)			
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Mass	es (F12) (LRR N,		
	A 147, 148)		MLRA 13	,				
	leyed Matrix (S4)		Umbric Surfa	. ,	•	•		icators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo	•	, ,	•	•	tland hydrology must be present,
	Matrix (S6)		Red Parent N	Aaterial (F	21) (MLR	A 127, 147) unl	ess disturbed or problematic.
	_ayer (if observed):							
Туре:								
Depth (ind	ches):						Hydric Soil	Present? Yes V No
Remarks:							•	

Wetland ID W-H64-PSS



Photograph Direction North

Date: 05/02/2015

Comments: 2015 wetland delineation.



Photograph Direction NE

Date: 11/25/19

Project/Site: MVP	City/County: V	/ebster		Sampling Date: 05/02/2015		
Applicant/Owner: MVP				Sampling Point: W-H64-UP		
Investigator(s): A. Grech, S.Kelly, M. W	nitten Section, Towns					
Landform (hillslope, terrace, etc.): Valley bo			None	Slope (%): 0-3		
Subregion (LRR or MLRA): LRRN						
Soil Map Unit Name: Craigsville gravelly	loam, 0 to 5 percent slopes		NWI classific	ation: None		
Are climatic / hydrologic conditions on the site	typical for this time of year? Yes	No (If no	, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrol	ogy significantly disturbed?	Are "Normal Circ	umstances" p	resent? Yes 🖌 No		
Are Vegetation, Soil, or Hydrol	ogy naturally problematic?	(If needed, explai	in any answei	rs in Remarks.)		
SUMMARY OF FINDINGS – Attach	site map showing sampling p	oint locations,	transects	, important features, etc.		
Hydric Soil Present? Ye		ampled Area a Wetland?	Yes	No		
HYDROLOGY						
Wetland Hydrology Indicators:		Sec	ondary Indica	tors (minimum of two required)		
Primary Indicators (minimum of one is requir	·		Surface Soil			
Surface Water (A1)	True Aquatic Plants (B14)			etated Concave Surface (B8)		
High Water Table (A2)	Hydrogen Sulfide Odor (C1)		Drainage Pat			
Saturation (A3)	Oxidized Rhizospheres on Livi	• • • —	Moss Trim Li	nes (B16) Water Table (C2)		
	Water Marks (B1) Presence of Reduced Iron (C4)					

Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutral Test (D5)

Aquatic Fauna (B13)				FAC-Neutral Test (D5)
Field Observations:				
Surface Water Present?	Yes	No	Depth (inches):	_
Water Table Present?	Yes	No	Depth (inches):	_
Saturation Present? (includes capillary fringe)	Yes	No	_ Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (s	tream gauge	e, monitoring v	well, aerial photos, previou	s inspections), if available:

Remarks:

~

Sampling Point: W-H64-UP

, , , , , , , , , , , , , , , , , , ,	Abaaluta	- Dominant	Indicator	Dominance Test worksheet
Tree Stratum (Plot size: <u>30'</u>)		Species?		Dominance Test worksheet:
				Number of Dominant Species
1		·		That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4				Percent of Dominant Species
5		·		That Are OBL, FACW, or FAC: <u>33</u> (A/B)
6				
7.				Prevalence Index worksheet:
	0	= Total Co	(or	Total % Cover of: Multiply by:
				OBL species x 1 =
50% of total cover: 0	20% of	total cover	:	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
				UPL species x 5 =
3		. <u> </u>		
4				Column Totals: (A) (B)
5				
				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7		<u></u>		1 - Rapid Test for Hydrophytic Vegetation
8				
9.				2 - Dominance Test is >50%
	0	T () O		3 - Prevalence Index is ≤3.0 ¹
•		= Total Co	-	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>0</u>	20% of	total cover	:0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				
1. Holcus lanatus	50	~	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Acchilea milifolium	30	~	FACU	
				¹ Indicators of hydric soil and wetland hydrology must
3. Trifolium repens	30	<u> </u>	FACU	be present, unless disturbed or problematic.
4. Anthoxanthum odoratum	10		FACU	Definitions of Four Vegetation Strata:
5				Deminions of Four vegetation Strata.
		·		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				
				Sapling/Shrub – Woody plants, excluding vines, less
9		·		than 3 in. DBH and greater than or equal to 3.28 ft (1
10		·		m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	120	= Total Co	ver	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>60</u>	20% of	total cover	. 24	
	20/00		·	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1		·		
2				
3		·		
4		·		Hydrophytic
5				Vegetation
	0	= Total Co	ver	Present? Yes No V
50% of total cover: 0		total cover	-	
			·	
Remarks: (Include photo numbers here or on a separate s	neet.)			

Profile Des	cription: (Describe t	the dept	h needed to docun	nent the	indicator	or confirn	n the absence of indicators.)	
Depth	Matrix			x Feature		0		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks	
0-9	10YR 4/3	98	7.5YR 4/6	2	<u>C</u>	M		
9-20	10YR 4/6	100					SL	
						·		
·		·			·	·		
					. <u> </u>	·		
					·			
¹ Type: C=C	oncentration, D=Depl	etion RM-	Reduced Matrix MS	-Maske	d Sand Gr	ains	² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil							Indicators for Problematic Hydric S	Soils ³ :
Histoso			Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)	
	pipedon (A2)		Polyvalue Be		ace (S8) (N	/LRA 147.		
	istic (A3)		Thin Dark Su				(MLRA 147, 148)	
	en Sulfide (A4)		Loamy Gleye		, .	,,	Piedmont Floodplain Soils (F19)	
	d Layers (A5)		Depleted Mat		(/		(MLRA 136, 147)	
	uck (A10) (LRR N)		Redox Dark S	• •	F6)		Very Shallow Dark Surface (TF1)	2)
	d Below Dark Surface	e (A11)	Depleted Dar	•	,		Other (Explain in Remarks)	-/
	ark Surface (A12)	. (,	Redox Depre					
	Aucky Mineral (S1) (L	RR N.	Iron-Mangan		,	LRR N.		
	A 147, 148)	,	MLRA 13			,		
	Gleyed Matrix (S4)		Umbric Surfa		(MLRA 13	86, 122)	³ Indicators of hydrophytic vegetatio	n and
	Redox (S5)		Piedmont Flo	. ,	•			
Stripped	d Matrix (S6)		Red Parent N	1aterial (I	=21) (MLR	A 127, 147	7) unless disturbed or problematic.	
Restrictive	Layer (if observed):							
Туре:								
Depth (in	ches):						Hydric Soil Present? Yes No	<u> </u>
Remarks:								

JSACE FILE NO./Project Name:		Valley Pipeline	COORDINATES:	Lat.	38.545807	Lon.	-80.542983	
STREAM/SITE ID AND SITE DESCRI	PTION:					W-H56, Pipeline ROW	-	
% stream slope, watershed size {a	creage}, unaltered	l or impairments)				· ·		
FORM OF MITIGATION:		· · ·						
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
/-H56	Emergent	0.0206	Emergent					
				_		PART III - Advanced		on
						Sustainable Determination Made or Advanced Mitigation (Y or N)		Y
				-				
otal Impact		0.0206						
		Jnit Scores				Estimated		
Wetland Cla	assification		Replacement Unit(s)			ILF Costs		
otal Emergent otal Scrub-Shrub			0.0206	-		\$1,236.00		
otal Scrub-Shrub			0	-		\$1,236.00		
otal Open Water			0	-				

Project/Site: MVP		City/Co	_{ounty:} Webster		Sampling Date: 05/01/2015
Applicant/Owner: MVP		·			Sampling Point: W-H56
Investigator(s): A. Grech, S	. Kelly, M. Whitten	Sectio	n, Township, Range:_N/		
					Slope (%): 1-15
Subregion (LRR or MLRA): L			Long: <u>-80.</u>		Datum: NAD83
			-		
Soil Map Unit Name: Pineville					
Are climatic / hydrologic condit		-			
Are Vegetation, Soil	, or Hydrology	_ significantly disturb	bed? Are "Normal	Circumstances" p	oresent? Yes 🔽 No
Are Vegetation, Soil	, or Hydrology	_ naturally problema	tic? (If needed, e	explain any answe	rs in Remarks.)
	GS – Attach site ma	p showing sam	pling point locatio	ons, transects	, important features, etc.
	var V	Ne			
Hydrophytic Vegetation Prese Hydric Soil Present?	ent? Yes V Yes V	No No	Is the Sampled Area		
Wetland Hydrology Present?		No	within a Wetland?	Yes 🖌	No
Remarks:		<u> </u>			
Cowardin Code: PEM; H	IGM: Slope; WT: RP	WWD			
Information listed on this	form represents the	data collected ir	n 2015. The wetland	d was revisited	on 11/25/2019. Presence
of wetland hydrology, hy	•				
Supplement delineation		, ,		5	0
HYDROLOGY					
Wetland Hydrology Indicate	ors:			Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum		all that apply)		Surface Soil	
✓ Surface Water (A1)		rue Aquatic Plants (E	314)		getated Concave Surface (B8)
High Water Table (A2)		lydrogen Sulfide Odo		Drainage Pat	
Saturation (A3)			es on Living Roots (C3)	Moss Trim Li	
Water Marks (B1)		resence of Reduced			Water Table (C2)
Sediment Deposits (B2)	R	ecent Iron Reduction	n in Tilled Soils (C6)	Crayfish Burr	rows (C8)
Drift Deposits (B3)	T	hin Muck Surface (C	7)	Saturation Vi	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	0	ther (Explain in Rem	narks)	Stunted or St	tressed Plants (D1)
Iron Deposits (B5)				Geomorphic	Position (D2)
Inundation Visible on Ae	ial Imagery (B7)			Shallow Aqui	itard (D3)
Water-Stained Leaves (E	9)				phic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:					
Surface Water Present?	Yes <u>V</u> No [1		
Water Table Present?		Depth (inches):	0		
Saturation Present? (includes capillary fringe)	Yes 🖌 No [Depth (inches):	0 Wetland H	lydrology Presen	it? Yes 🔽 No
Describe Recorded Data (stre	am gauge, monitoring we	II, aerial photos, prev	vious inspections), if ava	ilable:	
, , , , , , , , , , , , , , , , , , ,			1 /		
Remarks:					
Tadpoles present.					

Sampling Point: W-H56

201	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1		·		That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Demont of Dominant Crassica
5				Percent of Dominant Species That Are OBL, FACW, or FAC:100 (A/B)
6				
7.				Prevalence Index worksheet:
	0	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: 0				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
				FAC species x 3 =
				FACU species x 4 =
2				UPL species x 5 =
3				
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				✓ 1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is $\leq 3.0^1$
	0	= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:0	20% of	total cover:	0	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Juncus effusus	40	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Scirpus atrovirens	30		OBL	
3. Typha angustifolia	5		OBL	¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11				
· · · ·	75	Tatal Cau		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>37.</u>		= Total Cov		or size, and woody plants less than 3.20 it tall.
	<u>J</u> 20% 0		10	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2		·		
3				
4				Hydrophytic
5				Vegetation
	~	= Total Cov	er	Present? Yes 🖌 No
50% of total cover: 0		total cover:		
Remarks: (Include photo numbers here or on a separate s				
	neet.)			

Profile Desc	ription: (Describe to	o the dept	h needed to docun	nent the	indicator	or confirm	the absence	e of indicators.)
Depth	Matrix			x Feature		2		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-7"	10YR 5/2	98	10YR 5/6	2	С	Μ	SC	
7-16"	7.5YR 5/6	100					SC	
					·	·		
					·	·		
·								
					· - <u></u>	·		
·	,							
						·		
	oncentration, D=Deple		Reduced Matrix MS	-Masko	d Sand Gr	ains	² Location: E	PL=Pore Lining, M=Matrix.
Hydric Soil								ators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be	. ,	nce (S8) (N	ILRA 147.		Coast Prairie Redox (A16)
Black Hi	• • • •		Thin Dark Su		· / ·			(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye				F	Piedmont Floodplain Soils (F19)
Stratified	d Layers (A5)		 Depleted Mat 	trix (F3)				(MLRA 136, 147)
2 cm Mu	ıck (A10) (LRR N)		Redox Dark S	Surface (I	=6)		\	/ery Shallow Dark Surface (TF12)
Depleted	d Below Dark Surface	(A11)	Depleted Dar	k Surface	e (F7)		(Other (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre	ssions (F	8)			
Sandy M	lucky Mineral (S1) (Ll	RR N,	Iron-Mangane	ese Mass	es (F12) (LRR N,		
MLRA	A 147, 148)		MLRA 13	6)				
Sandy G	Bleyed Matrix (S4)		Umbric Surfa	ce (F13)	(MLRA 13	6, 122)	³ Inc	dicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo	•	, ,	•		etland hydrology must be present,
	Matrix (S6)		Red Parent M	Aaterial (F	⁻ 21) (MLR	A 127, 147	') ur	nless disturbed or problematic.
	Layer (if observed):							
71 -	barse Fragments							_
Depth (ind	_{ches):} <u>16</u>						Hydric Soi	l Present? Yes 🖌 No
Remarks:								

Wetland ID W-H56



Photograph Direction South

Date: 05/01/2015

Comments: 2015 wetland delineation.



Photograph Direction SW

Date: <u>11/25/19</u>

Project/Site: MVP	City/County: Webs	ster	Sampling Date: 05/01/2015
Applicant/Owner: MVP		State: WV	Sampling Point: W-H56-UP
Investigator(s): A. Grech, S.Kelly, M. Whitten	Section, Township,	Range: NA	
Landform (hillslope, terrace, etc.): summit	ocal relief (concave, c	convex, none): <u>concave</u>	Slope (%): 10-15
Subregion (LRR or MLRA): LRRN Lat: 38.545780) I	_ong: <u>-80.543073</u>	Datum: NAD 83
Soil Map Unit Name: Pineville-Gilpin-Guyandotte association, ve	ery steep, extremel	y stoney NWI classi	fication: None
Are climatic / hydrologic conditions on the site typical for this time of y	ear?Yes 🖌 No	o (If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? A	re "Normal Circumstances"	" present? Yes 🔽 No
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (It	f needed, explain any ansv	vers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling poin	t locations, transect	ts, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks: Upland, forest in logging area.					

Primary Indicators (minimum of one is required; check all that apply)
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) FAC-Neutral Test (D5) Field Observations: Image Patterns (B10) FAC-Neutral Test (D5)
Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) FAC-Neutral Test (D5) Field Observations: Image Plants Image Plants (D5)
Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) FAC-Neutral Test (D5) Field Observations: Field Observations: Fac-Neutral Test (D5)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrows (C8) Drift Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) Aquatic Fauna (B13) FAC-Neutral Test (D5)
 Drift Deposits (B3) Algal Mat or Crust (B4) Other (Explain in Remarks) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13)
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B5) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) Aquatic Fauna (B13) FAC-Neutral Test (D5)
Iron Deposits (B5) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) Aquatic Fauna (B13) FAC-Neutral Test (D5)
Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) Aquatic Fauna (B13) FAC-Neutral Test (D5) Field Observations: Field Characterization
Water-Stained Leaves (B9) Microtopographic Relief (D4) Aquatic Fauna (B13) FAC-Neutral Test (D5) Field Observations: Field Provide the second sec
Aquatic Fauna (B13) FAC-Neutral Test (D5) Field Observations:
Field Observations:
Surface Water Present? Yes No 🖌 Depth (inches):
Water Table Present? Yes No 🖌 Depth (inches):
Saturation Present? Yes No 🖌 Depth (inches): Wetland Hydrology Present? Yes No 🖌
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:

HYDROLOGY

Sampling Point: W-H56-UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		
Acer saccharum	20	~	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
"				
2				Total Number of Dominant
3			. <u> </u>	Species Across All Strata: 4 (B)
4				
5				Percent of Dominant Species That Are OBL_FACW_or FAC: 0 (A/B)
			<u></u>	That Are OBL, FACW, or FAC: (A/B)
6			<u> </u>	Prevalence Index worksheet:
7			<u> </u>	Total % Cover of: Multiply by:
	20	= Total Cov	/er	
50% of total cover: 10	20% of	total cover	: 4	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
Acer saccharum	15	~	FACU	FAC species x 3 =
"	-			FACU species x 4 =
2				
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				
				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8		·		2 - Dominance Test is >50%
9				
	15	= Total Cov	/er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:	20% of	total cover	3	4 - Morphological Adaptations ¹ (Provide supporting
	20/0 01			data in Remarks or on a separate sheet)
	30			Problematic Hydrophytic Vegetation ¹ (Explain)
1. viola sororia		<u> </u>	FACU	
2. Acer saccharum	15	<u> </u>	FACU	
3				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4				
				Definitions of Four Vegetation Strata:
5			·	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6			<u></u>	more in diameter at breast height (DBH), regardless of
7			<u> </u>	height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
			- <u> </u>	m) tall.
10		·	·	
11	45		<u></u>	Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 22.5	20% of	total cover	: 9	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
			- <u> </u>	
2			·	
3		· . <u> </u>		
4			. <u> </u>	Hydrophytic
5			<u> </u>	Vegetation
	0	= Total Cov	/er	Present? Yes No 🖌
50% of total cover: 0		total cover		
Remarks: (Include photo numbers here or on a separate s			·	
	neet.)			

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the	indicator	or confirm	n the absence of indicators.)	
Depth	Matrix		Redo	x Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks	
0-2	10 YR 4/3	100					CL	
2-15	10 YR 5/8	98	7.5YR 5/6	2	С	М	CL	
					<u> </u>			
·						·		
·						·		
						·		
					·			
						·		
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gr	ains.	² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil I							Indicators for Problematic Hydric S	oils°:
Histosol			Dark Surface				2 cm Muck (A10) (MLRA 147)	
-	oipedon (A2)		Polyvalue Be				, 148) Coast Prairie Redox (A16)	
Black Hi	()		Thin Dark Su			47, 148)	(MLRA 147, 148)	
	n Sulfide (A4)		Loamy Gleye		(F2)		Piedmont Floodplain Soils (F19)	
	Layers (A5)		Depleted Mat	· · ·			(MLRA 136, 147)	
	ick (A10) (LRR N)		Redox Dark S				Very Shallow Dark Surface (TF12)
	Below Dark Surface	e (A11)	Depleted Dar				Other (Explain in Remarks)	
	ark Surface (A12)		Redox Depre	•	,			
-	lucky Mineral (S1) (L	RR N,	Iron-Mangane		es (F12) (LRR N,		
	147, 148)		MLRA 13	,		6 400)	³ Indicators of hydrophytic vegetation	and
-	edox (S5)		Umbric Surfa Piedmont Flo					
	Matrix (S6)		Red Parent M	•	. ,	•		,
	ayer (if observed):			ialeilai (i		A 127, 147	r) unless disturbed of problematic.	
	barse Fragments							
JI -								~
Depth (ind	ches): <u>15</u>						Hydric Soil Present? Yes No	
Remarks:								

JSACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.519565	Lon.	-80.545076
STREAM/SITE ID AND SITE DESCRI	PTION:					W-KL8, Pipeline ROW		
% stream slope, watershed size {a	creage}, unaltered	l or impairments)				· ·		
FORM OF MITIGATION:		· · ·						
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
/-KL8	Emergent	0.0976	Emergent					
				-				
				-		PART III - Advanced		n
				-		Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0976				- - 1		
		Jnit Scores				Estimated		
Wetland Cla	assification		Replacement Unit(s)	-		ILF Costs		
otal Emergent otal Scrub-Shrub			0.0976	-		\$5,856.00		
otal Scrub-Shrub			0	-		φ3,030.00		
otal Open Water			0	4				

Project/Site: MVP		City/Count	ty: Webster		Sampling Date: 05/08/2016
Applicant/Owner: MVP					Sampling Point: W-KL8
Investigator(s): J. Cook, D.	McCullough, L. Se	xton Section. T	ownship, Range: N/		
Landform (hillslope, terrace, et					Slope (%); 1
Subregion (LRR or MLRA): <u>L</u>					0.000 (70) Datum: NAD 83
Soil Map Unit Name: GcC-Gil					
Are climatic / hydrologic condit					
		-			
Are Vegetation, Soil					
Are Vegetation, Soil				explain any answe	
SUMMARY OF FINDIN	GS – Attach site r	nap showing sampli	ng point locatio	ons, transects	, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes 🗸	No Is t			
Hydric Soil Present?	Yes 🗸	13 1	the Sampled Area thin a Wetland?	Vac 🗸	No
Wetland Hydrology Present?		No	IIIII a Wetiana:	103	UU
Remarks: Cowardin C	ode: PEM	HGM: Depressional	Water Type:	NRPWW	
	om compression of	·			
LIKEly created no	m compression of	SOIL DY VEHICLES			
HYDROLOGY					
Wetland Hydrology Indicate				Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum		ek all that annly)		Surface Soil	
					, ,
✓ Surface Water (A1) ✓ High Water Table (A2)		_ True Aquatic Plants (B14) _ Hydrogen Sulfide Odor (C		Sparsely Ve	getated Concave Surface (B8)
Saturation (A3)	V	_ Hydrogen Suilide Odor (C _ Oxidized Rhizospheres or		Drainage Pa	
Water Marks (B1)	<u> </u>	Presence of Reduced Iror			Water Table (C2)
Sediment Deposits (B2)	—	_ Recent Iron Reduction in	()	Crayfish Bur	
Drift Deposits (B3)		_ Thin Muck Surface (C7)		-	isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		_ Other (Explain in Remarks	c)		tressed Plants (D1)
Iron Deposits (B5)			5)		Position (D2)
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aqu	
Water-Stained Leaves (E					aphic Relief (D4)
Aquatic Fauna (B13)	,			FAC-Neutral	
Field Observations:			I		
Surface Water Present?	Yes 🖌 No	Depth (inches); 1			
Water Table Present?		Depth (inches):8	-		
Saturation Present?		Depth (inches):0	Wetland F	Ivdroloav Preser	nt? Yes 🖌 No
(includes capillary fringe)					
Describe Recorded Data (stre	eam gauge, monitoring	well, aerial photos, previous	s inspections), if ava	ilable:	
Remarks:					
Wet roadside depressio	n				

Sampling Point: W-KL8

, , , , , , , , , , , , , , , , , , ,	Abcoluto	• Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				
3				Total Number of Dominant Species Across All Strata: 2 (B)
4				
				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co		OBL species x 1 =
50% of total cover:	20% o	f total cove	r: <u>0</u>	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1	·			FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
8	·			2 - Dominance Test is >50%
9	0			3 - Prevalence Index is ≤3.0 ¹
50% - () - () - ()		= Total Co	-	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% o	t total cove	r: <u>0</u>	data in Remarks or on a separate sheet)
	40			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Juncus effusus	40	<u> </u>	FACW	
2. Scirpus cyperinus	20	 ✓ 	FACW	¹ Indiantara of hydria poil and watland hydrology must
3. Eleocharis obtusa	15		OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
_{4.} Viola blanda	3		FACW	Definitions of Four Vegetation Strata:
5. Potentilla simplex	1		FACU	Deminions of Four Vegetation Strata.
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10	·			m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Co		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>39.</u>	<u>5</u> 20% o	f total cove	r <u>15.8</u>	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4				
				Hydrophytic
5	0			Vegetation Present? Yes V No
	-	= Total Co		
		f total cove	<u> </u>	
Remarks: (Include photo numbers here or on a separate s	sheet.)			

SOIL

Profile Desc	ription: (Describe t	o the dept	h needed to docum	nent the	indicator	or confirm	the absence of	indicators.)
Depth	Matrix			k Feature				
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹	Loc ²	Texture	Remarks
0-3	2.5Y 5/2	93	7.5 YR 6/8	7	С	M/PL	CL	
3-7	2.5Y 7/2	93	7.5 YR 6/8	7	С	M/PL	CL	
7-12	Gley N 7/1	95	7.5 YR 6/8	5	С	PL	С	
	¥							
							·	
		·				·		
			<u> </u>					
·						·		
	·				·	·		
	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Maske	d Sand Gr	ains.		Pore Lining, M=Matrix. rs for Problematic Hydric Soils ³ :
Hydric Soil I			Dark Surfage	(67)				•
Histosol	pipedon (A2)		Dark Surface Polyvalue Bel	. ,				n Muck (A10) (MLRA 147) st Prairie Redox (A16)
Black His			Thin Dark Su				·	MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye	,	, .	,,	•	Imont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat		()			MLRA 136, 147)
2 cm Mu	ick (A10) (LRR N)		Redox Dark S	Surface (I	=6)		Very	/ Shallow Dark Surface (TF12)
Depleted	d Below Dark Surface	(A11)	Depleted Dar	k Surface	e (F7)		Othe	er (Explain in Remarks)
	ark Surface (A12)		Redox Depre	`	,			
	lucky Mineral (S1) (L	RR N,	Iron-Mangane		es (F12) (LRR N,		
	A 147, 148)		MLRA 136				3	
	ileyed Matrix (S4)		Umbric Surfa					tors of hydrophytic vegetation and
	edox (S5) Matrix (S6)		Piedmont Flo Red Parent N	•	. ,	•	•	nd hydrology must be present, s disturbed or problematic.
	ayer (if observed):			ialeilai (i		A 127, 147) unies	s disturbed of problematic.
Type: Ro	• • •							
· · ·	ches): <u>12</u>						Hydric Soil Pr	resent? Yes 🗸 No
	(nes). <u>12</u>						Hydric Soli Fi	
Remarks:								

Wetland ID <u>W-KL8</u> Date <u>05/08/2016</u>



Photograph Direction _

Comments:

Project/Site: MVP	City/County: Webster	San	npling Date: 05/08/2016
Applicant/Owner: MVP		State: WV S	ampling Point: W-KL8-UP
Investigator(s): J. Cook, D. McCullough, L. Sexton	Section, Township, Range:		
Landform (hillslope, terrace, etc.): Summit	ocal relief (concave, convex, r	_{ione):} Linear	Slope (%): <u>2</u>
Subregion (LRR or MLRA): LRR N Lat: 38.519297	Long: <u>-8</u>	0.545050	Datum: NAD 83
Soil Map Unit Name: GcC-Gilpin silt Ioam, 3 to 15 percent slopes,	, very stony	NWI classification	: None
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🖌 No	_ (If no, explain in Remai	rks.)
Are Vegetation, Soil, or Hydrology significantly	v disturbed? Are "Norm	nal Circumstances" prese	nt? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed	, explain any answers in	Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locat	ions, transects, im	portant features, etc.

Hydric Soil I	Vegetation Present? Present? drology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No 🖌	
Remarks:	Cowardin Code: UP	LAND	HGM:	Water Type:			

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living	Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled So	oils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🔽 Depth (inches):	
Saturation Present? Yes No 🖌 Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	

Sampling Point: W-KL8-UP

	Absolute	Dominan	t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species		Number of Dominant Species
1. Acer rubrum	20	<u> </u>	FAC	That Are OBL, FACW, or FAC:6 (A)
2. Ulmus rubra	10	<u> </u>	_ F <u>AC</u>	Total Number of Dominant
3. Acer pennsylvanicum	5	. <u> </u>	_ FACU_	Species Across All Strata: 9 (B)
4. Quercus rubra	15	<u> </u>	FACU	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 67 (A/B)
6				
7				Prevalence Index worksheet:
		= Total Co		Total % Cover of: Multiply by:
50% of total cover: 25	20% of	f total cove	er: <u>10</u>	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Acer pennsylvanicum	10	<u> </u>	FACU	FAC species x 3 =
_{2.} Nyssa sylvatica	5	~	_ FAC	FACU species x 4 =
3		.		UPL species x 5 =
4				Column Totals: (A) (B)
5				Decusion of Index D/A
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9.				∠ 2 - Dominance Test is >50%
··	15	= Total Co		3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 7.5				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')			· ·	data in Remarks or on a separate sheet)
1. Acer rubrum	5	~	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Quercus rubra	5	~	FACU	
3. Ulmus rubra	5	~	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. Magnolia acuminata	3		FACU	be present, unless disturbed or problematic.
				Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8		<u> </u>		Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11	40			Herb – All herbaceous (non-woody) plants, regardless
		= Total Co		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>9</u>	20% of	f total cove	r: 3.0	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')	15		540	height.
1. Smilax rotundifolia	15	<u> </u>	FAC	
2				
3				
4				Hydrophytic
5				Vegetation
		= Total Co	-	Present? Yes V No
50% of total cover: <u>7.5</u>	20% of	f total cove	r: <u>3</u>	
Remarks: (Include photo numbers here or on a separate sl	neet.)			

SOIL

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the i	ndicator	or confirm	the absence	e of indicato	rs.)	
Depth	Matrix		Redo	x Features	5					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-2	10 YR 3/2	100					Loam			
2-16	10 YR 5/6	100					Loam			
·					. <u> </u>			<u></u>		
·				·						
					. <u> </u>					
. <u> </u>										
¹ Type: C=Ce	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location: F	PL=Pore Linir	ng, M=Matrix.	
Hydric Soil		1	,						oblematic Hy	
Histosol	(A1)		Dark Surface	(S7)			:	2 cm Muck (A	(MLRA 1	47)
	pipedon (A2)		Polyvalue Be	low Surfac	ce (S8) (N	ILRA 147,			Redox (A16)	
Black Hi	stic (A3)		Thin Dark Su	rface (S9)	(MLRA 1	47, 148)		(MLRA 14)	7, 148)	
Hydroge	en Sulfide (A4)		Loamy Gleye	d Matrix (F2)			Piedmont Flo	odplain Soils	(F19)
	d Layers (A5)		Depleted Mat					(MLRA 13		
2 cm Mu	ıck (A10) (LRR N)		Redox Dark S	Surface (F	6)			•	Dark Surface	· · ·
·	d Below Dark Surface	e (A11)	Depleted Dar					Other (Explai	n in Remarks)
	ark Surface (A12)		Redox Depre							
	lucky Mineral (S1) (L	RR N,	Iron-Mangane		es (F12) (I	LRR N,				
	A 147, 148)		MLRA 13	•			2			
	Bleyed Matrix (S4)		Umbric Surfa						/drophytic veg	
	edox (S5)		Piedmont Flo					-	ogy must be	
	Matrix (S6)		Red Parent M	Aaterial (F	21) (MLR	A 127, 147	') u	nless disturbe	ed or problem	atic.
_	Layer (if observed):									
Туре:										
Depth (in	ches):						Hydric So	il Present?	Yes	No 🔽
Remarks:										
Good upla	nd soil									

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.51785	Lon.	-80.544693
STREAM/SITE ID AND SITE DESCR	IPTION:					W-H60, Timber Mat Crossing		
% stream slope, watershed size {a		d or impairments)						
FORM OF MITIGATION:								
DATE:	8/10/2015 WEATHER CONDITIONS:				PRECIPITATION PAST 48 HRS:			
PART I - Wetland Indicators				I				
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-H60	Emergent	0.0495	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Fotal Impact		0.0495						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)	-		ILF Costs		
otal Emergent			0.0495	-		* ~ ~~~ ~~		
otal Scrub-Shrub			0	-		\$2,970.00		
Total Forested			0					
otal Open Water			0	1				

Project/Site: MVP	City/Co	_{unty:} Webster		Sampling Date: 05/02/2015				
Applicant/Owner: MVP		· · · · ·		Sampling Point: W-H60				
Investigator(s): A. Grech, S. Kelly, M. Whitten	Section	1. Township, Range: N/						
Landform (hillslope, terrace, etc.): Summit				Slope (%)· 0-3				
Subregion (LRR or MLRA): LRRN Lat: 38.517764 Long: -80.544849 Datum: NAD 83								
Soil Map Unit Name: Gilpin silt loam, 3 to 15 pe								
Are climatic / hydrologic conditions on the site typical f								
	-			,				
Are Vegetation, Soil, or Hydrology								
Are Vegetation, Soil, or Hydrology			explain any answe					
SUMMARY OF FINDINGS – Attach site n	nap showing samp	oling point location	ons, transects	, important features, etc.				
Hydrophytic Vegetation Present? Yes	No							
Hydric Soil Present? Yes	No	Is the Sampled Area within a Wetland?	Yes 🗸	No				
Wetland Hydrology Present? Yes 🖌	No		105					
Remarks:								
Cowardin Code: PEM HGM: slope WT: NR								
Information listed on this form represents the								
of wetland hydrology, hydrophytic vegetation Supplement delineation methodology.	on, and hydric soils	was commed usi	ng the USACE	EMP Regional				
HYDROLOGY								
Wetland Hydrology Indicators:			-	tors (minimum of two required)				
Primary Indicators (minimum of one is required; chec		\	Surface Soil					
	True Aquatic Plants (B Hydrogen Sulfide Odor		 ✓ Sparsely Veç ✓ Drainage Pa 	getated Concave Surface (B8)				
High Water Table (A2) Saturation (A3)	Oxidized Rhizospheres		Moss Trim Li					
Saturation (AS) Vater Marks (B1)	Presence of Reduced			Water Table (C2)				
Sediment Deposits (B2)	Recent Iron Reduction		Crayfish Bur					
Drift Deposits (B3)	Thin Muck Surface (C7		-	isible on Aerial Imagery (C9)				
	Other (Explain in Rema			tressed Plants (D1)				
I Iron Deposits (B5)		,		Position (D2)				
Inundation Visible on Aerial Imagery (B7)			Shallow Aqu					
✓ Water-Stained Leaves (B9)			Microtopogra	aphic Relief (D4)				
🖌 Aquatic Fauna (B13)			✓ FAC-Neutral	Test (D5)				
Field Observations:		<u></u>						
Surface Water Present? Yes <u>V</u> No	_ Depth (inches):6	<u> </u>						
	_ Depth (inches):							
Saturation Present? Yes No _◀_ (includes capillary fringe)	_ Depth (inches):	Wetland H	lydrology Preser	nt? Yes <mark>√</mark> No				
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previ	ious inspections), if ava	ilable:					
Demondue								
Remarks:								
Man-made wetlands in logging area.								

Sampling Point: W-H60

	Absolute	• Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		Number of Dominant Species
1		·		That Are OBL, FACW, or FAC:3 (A)
2				Total Number of Dominant
3				Species Across All Strata:3 (B)
4				Dereent of Deminent Species
5				Percent of Dominant Species That Are OBL, FACW, or FAC:100 (A/B)
6				
7				Prevalence Index worksheet:
/	0			Total % Cover of:Multiply by:
		= Total Co		
50% of total cover: <u>0</u>	20% of	total cover	: 0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
				UPL species x 5 =
3				Column Totals: (A) (B)
4				
5				Prevalence Index = B/A =
6				
7				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
8				🗹 2 - Dominance Test is >50%
9				3 - Prevalence Index is $\leq 3.0^1$
		= Total Co	ver	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	total cover	: 0	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Scirpus atrovirens	20	1	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Juncus effusus	20			
			_ F <u>ACW_</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Dichanthelium clandestinum	20	_ √	_ F <u>AC</u>	be present, unless disturbed or problematic.
4. Onoclea sensibillis	10		FACW	Definitions of Four Vegetation Strata:
5				Definitions of Four Vegetation Strata.
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Co		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>35</u>	20% of	total cover	: 14	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Co	ver	Present? Yes 🖌 No
50% of total cover: 0		total cover		
Remarks: (Include photo numbers here or on a separate s			·	
Remarks. (include proto numbers here of on a separate s	neet.)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			Feature					
(inches)	Color (moist)	%	Color (moist)	%	<u>Type¹</u>	Loc ²	Texture Remarks		
0-15	10YR 6/2		5YR 4/6	8	С	M/PL	SiCL		
15-20	2.5YR 5/2	80	5YR 4/6	20	С	M/PL	SiC		
						·	·		
					. <u> </u>				
						·			
¹ Type: C=Co	oncentration, D=Deple	etion, RM=Re	educed Matrix, MS	=Maskec	Sand Gr	ains.	² Location: PL=Pore Lining, M=Matrix.		
Hydric Soil	ndicators:						Indicators for Problematic Hydric Soils ³ :		
Histosol	(A1)		Dark Surface				2 cm Muck (A10) (MLRA 147)		
	oipedon (A2)		Polyvalue Bel						
Black Hi			Thin Dark Su			147, 148)	(MLRA 147, 148)		
	n Sulfide (A4)		Loamy Gleye		F2)		Piedmont Floodplain Soils (F19)		
	Layers (A5)		✓ Depleted Mat				(MLRA 136, 147)		
	ick (A10) (LRR N) d Dalaus Dark Surfaga	(11)	Redox Dark S		•		Very Shallow Dark Surface (TF12)		
	l Below Dark Surface ark Surface (A12)	(ATT)	Depleted Dar Redox Depres				Other (Explain in Remarks)		
	lucky Mineral (S1) (L l	DD N	Iron-Mangane						
	147, 148)		II OII-Mangane MLRA 136						
	ileyed Matrix (S4)		Umbric Surfa	•	MLRA 1	86, 122)	³ Indicators of hydrophytic vegetation and		
	edox (S5)		Piedmont Flo				5 , 5 0		
Stripped	Matrix (S6)		Red Parent N	laterial (F	21) (MLR	A 127, 147	n) unless disturbed or problematic.		
Restrictive I	_ayer (if observed):								
Туре:			_						
Depth (ind	ches):						Hydric Soil Present? Yes <u>✓</u> No		
Remarks:							1		

Wetland Photograph Page

Wetland ID W-H60



Photograph Direction <u>SW</u>

Date: 05/02/2015

Comments: 2015 wetland delineation.



Photograph Direction SW

Date: <u>11/09/19</u>

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	City	County: Webster		_ Sampling Date: 05/02/2015				
Applicant/Owner: MVP	0.0			Sampling Point: W-H60-UP				
Investigator(s): A. Grech, S.Kelly, M. V	Vhitten sec							
Landform (hillslope, terrace, etc.): Summit		aliaf (canadua, convex, nor		Slope (%), 0-3				
Landrorm (missiope, terrace, etc.): <u>Communic</u>	38 517730	eller (concave, convex, nor 80	544883					
Subregion (LRR or MLRA): LRRN				Datum: NAD 83				
Soil Map Unit Name: Gilpin silt loam, 3		,						
Are climatic / hydrologic conditions on the sit	e typical for this time of year?		•					
Are Vegetation, Soil, or Hydr	ology significantly dist	urbed? Are "Normal	Circumstances"	present? Yes 🖌 No				
Are Vegetation, Soil, or Hydr	ology naturally probler	natic? (If needed, e	xplain any answe	ers in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.								
Hydric Soil Present? Y	Yes No✓ Yes No✓ Yes No✓	Is the Sampled Area within a Wetland?	Yes	No✓				
Remarks:	es NU							
Upland, forest								
HYDROLOGY								
Wetland Hydrology Indicators:			Secondary Indic	ators (minimum of two required)				
Primary Indicators (minimum of one is requ	ired; check all that apply)		Surface Soil	Cracks (B6)				
Surface Water (A1)	True Aquatic Plants			getated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide C		Drainage Pa					
Saturation (A3)		eres on Living Roots (C3)	Moss Trim L					
Water Marks (B1)	Presence of Reduc			Water Table (C2)				
Sediment Deposits (B2)		ion in Tilled Soils (C6)	Crayfish Bu					
Drift Deposits (B3)	Thin Muck Surface			(isible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in R	emarks)		Stressed Plants (D1)				
Iron Deposits (B5)	27)			Position (D2)				
Inundation Visible on Aerial Imagery (E Water-Stained Leaves (B9)	57)		Shallow Aqu					
Aquatic Fauna (B13)			FAC-Neutra	aphic Relief (D4)				
Field Observations:								
	No Depth (inches):							
	No / Depth (inches):							
	No <u>V</u> Depth (inches):		ydrology Prese	nt? Yes No√				
(includes capillary fringe)								
Describe Recorded Data (stream gauge, m	ionitoring well, aerial photos, p	revious inspections), if avai	llable:					
Remarks:								

Sampling Point: W-H60-UP

	Absolute	Dominan	t Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: <u>30'</u>)		Species				
1. Magnolia accuminata	30		FACU	Number of Dominant Species That Are OBL, FACW, or FAC:	2	(A)
2 Prunus serotina	30	$\overline{\checkmark}$	FACU	-		. ()
3 Lireodendron tulipifera	20		 	Total Number of Dominant	6	
A.			<u>1700</u>	Species Across All Strata:	0	(B)
4		·		Percent of Dominant Species	00	
5				That Are OBL, FACW, or FAC:	33	(A/B)
6				Prevalence Index worksheet:		
7		·		Total % Cover of:	Multiply by:	
		= Total Co				
50% of total cover: <u>40</u>	20% of	f total cove	r: <u>16</u>	OBL species x 1		
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2		
1. Acer rubrum	10	<u> </u>	_ FAC	FAC species x 3		
2				FACU species x 4		
3				UPL species x 5	=	_
4				Column Totals: (A)		(B)
5						
				Prevalence Index = B/A = _		_
6				Hydrophytic Vegetation Indicate	ors:	
7				1 - Rapid Test for Hydrophytic	: Vegetation	
8				2 - Dominance Test is >50%		
9				3 - Prevalence Index is ≤3.0 ¹		
_		= Total Co		4 - Morphological Adaptations	¹ (Provide sur	oporting
50% of total cover: <u>5</u>	20% of	f total cove	r: <u> </u>	data in Remarks or on a se		
Herb Stratum (Plot size: 5')				Problematic Hydrophytic Vege		
1. Podophyllum peltatum	15	✓	_ F <u>ACU</u> _			
2					بمطلق بطعما معيد	
3				¹ Indicators of hydric soil and wetla be present, unless disturbed or pro-	nd nydrology oblematic	must
4				Definitions of Four Vegetation S		
5					suata.	
6				Tree – Woody plants, excluding vi	nes, 3 in. (7.6	cm) or
				more in diameter at breast height	(DBH), regard	less of
7				height.		
8				Sapling/Shrub – Woody plants, e	xcluding vines	s, less
9				than 3 in. DBH and greater than o	r equal to 3.28	3 ft (1
10		·		m) tall.		
11				Herb – All herbaceous (non-wood	y) plants, rega	ardless
		= Total Co	-	of size, and woody plants less that	n 3.28 ft tall.	
50% of total cover: 7.5	20% of	f total cove	r: <u> 3 </u>	Woody vine – All woody vines gre	ator than 3.2	R ft in
Woody Vine Stratum (Plot size: 15')				height.		51111
1. Smilax rotundifolia	10	<u> </u>	_ FAC			
2						
3						
4						
т		·		Hydrophytic		
o	10	- <u> </u>		Vegetation Present? Yes	No 🗸	
500% of total anyon 5		= Total Co	_	105 <u> </u>	<u> </u>	
50% of total cover: <u>5</u>		f total cove	r: <u> </u>			
Remarks: (Include photo numbers here or on a separate s	neet.)					

Profile Desc	ription: (Describe t	o the dept	h needed to docume	ent the in	dicator o	or confirm	the absence of	f indicato	·s.)		
Depth	Matrix		Redox	Features							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	6	
0-8	10YR 5/3	100					L				
8-15	10YR 5/4	100					SC				
		·									
1											
	oncentration, D=Depl	etion, RM=I	Reduced Matrix, MS=	-Masked	Sand Gra	ins.	² Location: PL=				
Hydric Soil										Hydric Soils ³ :	
Histosol			Dark Surface ((00) (1-				10) (MLRA		
	bipedon (A2)		Polyvalue Belo				· · ·		Redox (A1	5)	
Black Hi			Thin Dark Surf			47, 148)		MLRA 147		(510)	
	en Sulfide (A4)		Loamy Gleyed		2)				odplain Soil	s (F19)	
	d Layers (A5)		Depleted Matri		~			MLRA 136		aa (TE12)	
	ıck (A10) (LRR N) d Below Dark Surface	(111)	Redox Dark Si Depleted Dark				Very Shallow Dark Surface (TF12) Other (Explain in Remarks)				
	ark Surface (A12)	: (ATT)	Redox Depres				Oun	iei (Expiali	I III Reman	(5)	
	lucky Mineral (S1) (L		Iron-Manganes								
5	A 147, 148)		MLRA 136)		3 (1 12) (
	Gleyed Matrix (S4)		Umbric Surfac		MLRA 13	6. 122)	³ Indica	ators of hv	drophytic v	egetation and	
	Redox (S5)		Piedmont Floo						ogy must be		
	Matrix (S6)		Red Parent Ma	•					d or proble		
	Layer (if observed):								•		
_{Type:} Be	edrock										
J	ches): 15						Hydric Soil P	resent?	Yes	No✓	
Remarks:											

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.517345	Lon.	-80.545025
STREAM/SITE ID AND SITE DESCR	IPTION:					W-H61, Timber Mat Crossing		
% stream slope, watershed size {a		d or impairments)						
FORM OF MITIGATION:		,						
DATE:	8/10	8/10/2015 WEATHER CONDITIONS:				PRECIPITATION PAST 48 HRS:		
PART I - Wetland Indicators								
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-H61	Emergent	0.0094	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Fotal Impact		0.0094						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0094					
otal Scrub-Shrub			0			\$564.00		
otal Forested			0					
otal Open Water			0					

Project/Site: MVP	City/County: Webster		Sampling Date: 05/02/2015						
Applicant/Owner: MVP			Sampling Point: W-H61						
Investigator(s): A. Grech, S. Kelly, M. Whitten Section, Township, Range: N/A									
Landform (hillslope, terrace, etc.): Summit			Slope (%) 0-3						
Subregion (LRR or MLRA): LRRN Lat: 38.51736									
Soil Map Unit Name: Gilpin silt Ioam, 3 to 15 percent slope	•								
•	4								
Are climatic / hydrologic conditions on the site typical for this time o			· · ·						
Are Vegetation, Soil, or Hydrology significant		l Circumstances" pre	esent? Yes <u>V</u> No						
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, e	explain any answers	in Remarks.)						
SUMMARY OF FINDINGS – Attach site map showi	ng sampling point location	ons, transects, i	important features, etc.						
Hydrophytic Vegetation Present? Yes <u></u> No									
Hydric Soil Present? Yes V No	is the outpied Area	Yes 🖌	No						
Wetland Hydrology Present? Yes Ves No		Tes							
Remarks: Cowardin Code: PEM HGM: Depressional WT: NRPWW Information listed on this form represents the data collected in 2015. The wetland was revisited on 11/09/2019. Presence of wetland hydrology, hydrophytic vegetation, and hydric soils was confirmed using the USACE EMP Regional Supplement delineation methodology.									
HYDROLOGY									
Wetland Hydrology Indicators:		Secondary Indicato	ors (minimum of two required)						
Primary Indicators (minimum of one is required; check all that app	ly)	Surface Soil Cracks (B6)							
Surface Water (A1) True Aquati	✓ Sparsely Vegetated Concave Surface (B8)								
High Water Table (A2) Hydrogen S	erns (B10)								
	izospheres on Living Roots (C3)	Moss Trim Line							
	Reduced Iron (C4)		ater Table (C2)						
	Reduction in Tilled Soils (C6)	Crayfish Burrow							
Drift Deposits (B3) Thin Muck S Algal Mat or Crust (B4) Other (Expla			ble on Aerial Imagery (C9)						
Algal Mat or Crust (B4) Other (Explanation Other (Explanation)))))))		Stunted or Stressed Plants (D1)							
Inundation Visible on Aerial Imagery (B7)		Geomorphic Position (D2) Shallow Aquitard (D3)							
✓ Water-Stained Leaves (B9)		Microtopographic Relief (D4)							
Aquatic Fauna (B13)		FAC-Neutral T							
Field Observations:									
Surface Water Present? Yes 🖌 No Depth (inch	ies): 6								
Water Table Present? Yes No Depth (inch	ies):								
Saturation Present? Yes No Ves Depth (inch		lydrology Present?	? Yes 🖌 No						
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial pl	otos provious inspections) if or	ilabla:							
Describe Recorded Data (stream gauge, monitoring well, aenar pr	otos, previous inspections), il ave								
Remarks:									
Man-made wetlands in logging area. Tadpoles and R	ed-spotted Newts.								

Sampling Point: W-H61

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> ')	% Cover	Species?	Status	Number of Dominant Species
1			FAC	That Are OBL, FACW, or FAC: 2 (A)
2				
3				Total Number of Dominant Species Across All Strata: 2 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6	·			Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		Total Cove		
50% of total cover:0	20% of t	otal cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				✓ 1 - Rapid Test for Hydrophytic Vegetation
8	·			✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	=	Total Cove	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>0</u>	20% of t	otal cover:	0	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Scirpus atrovirens	20	~	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Juncus effusus	20	~	FACW	
3				¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6			. <u> </u>	more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9	·			than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11.				
	40 =	Total Cove		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>20</u>		otal cover:	-	
Woody Vine Stratum (Plot size:)	2070 011			Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2				
3				
4				Hydrophytic
5	·			Vegetation
	0 =	Total Cove	er	Present? Yes V No
50% of total cover:0	20% of t	otal cover:	0	
Remarks: (Include photo numbers here or on a separate s		_		1
	,			

Sampling Point: W-H61

Profile Desc	ription: (Describe	to the dept	h needed to docur	nent the	indicator	or confirm	m the absence of indicators.)
Depth	Matrix			x Feature		1 2	Tarkan
<u>(inches)</u> 0-3	Color (moist) 10YR 4/2	<u>%</u> 95	Color (moist) 5YR 4/6	<u>%</u> 5	<u>Type</u> ¹ C	Loc ² M/PL	<u>Texture</u> <u>Remarks</u>
3-8	10YR 5/2	80	5YR 4/6	20		·	
		·	5TK 4/0	_20	С	M/PL	 C
8-15	10YR 5/6	100				·	·
15-20	2.5YR 6/4	100			·	·	SC
						·	
					<u></u>	<u> </u>	
		·			. <u> </u>	·	
¹ Type: C-Cc	oncentration, D=Depl	letion RM-	Reduced Matrix M	S-Masker	d Sand Gr	ains	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I				0-maono			Indicators for Problematic Hydric Soils ³ :
Histosol	· · /		Dark Surface	e (S7)			2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				
Black His			Thin Dark Su			147, 148)	(MLRA 147, 148)
	n Sulfide (A4) I Layers (A5)		Loamy Gleye		(F2)		Piedmont Floodplain Soils (F19)
	ck (A10) (LRR N)		Redox Dark		F6)		(MLRA 136, 147) Very Shallow Dark Surface (TF12)
	Below Dark Surface	e (A11)	Depleted Dat	,	,		Other (Explain in Remarks)
	ark Surface (A12)	· · ·	Redox Depre				
	lucky Mineral (S1) (L	.RR N,	Iron-Mangan		ses (F12) (LRR N,	
	147, 148)		MLRA 13				
	leyed Matrix (S4) edox (S5)		Umbric Surfa				 ³Indicators of hydrophytic vegetation and wetland hydrology must be present,
	Matrix (S6)		Red Parent N				
	ayer (if observed):				7.	,	,
Type:							
Depth (inc	ches):						Hydric Soil Present? Yes 🖌 No
Remarks:							

Wetland Photograph Page

Wetland ID W-H61



Photograph Direction North

Date: 05/02/2015

Comments: 2015 wetland delineation.



Photograph Direction SW

Date: 11/09/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	City/County: Webster		Sampling Date: 05/02/2015
Applicant/Owner: MVP		State: WV	Sampling Point: W-H61-UP
Investigator(s): A. Grech, S.Kelly, M. Whitten	Section, Township, Ran	_{ge:} NA	
Landform (hillslope, terrace, etc.): Summit	Local relief (concave, conv	ex, none): <u>Convex</u>	Slope (%): 0-3
Subregion (LRR or MLRA): LRRN Lat: 38.	.517730 Long	<u>- 80.544883</u>	Datum: NAD 83
Soil Map Unit Name: Gilpin silt loam, 3 to 15 percent	t slopes, very stony	NWI classific	cation: None
Are climatic / hydrologic conditions on the site typical for this	s time of year? Yes No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology sig	ignificantly disturbed? Are "N	Jormal Circumstances" p	oresent? Yes 🔽 No
Are Vegetation, Soil, or Hydrology na	aturally problematic? (If nee	eded, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map s	showing sampling point lo	cations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes No		A	
Hydric Soil Present? Yes No			No 🖌
Wetland Hydrology Present? Yes No			
Remarks:			
Upland, forest			

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) High Water Table (A2) Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8)
Saturation (A3) Oxidized Rhizospheres on Living	Drainage Patterns (B10) Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Vale Marks (B1) Presence of Reduced from (C4) Recent Iron Reduction in Tilled Sc	
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No V Depth (inches):	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No
Water Table Present? Yes No _ Depth (inches): Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Ves No _ Depth (inches):	
Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches):	
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	
Water Table Present? Yes No _ Depth (inches): Saturation Present? Yes No _ Depth (inches): (includes capillary fringe) Ves No _ Depth (inches):	
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	
Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective	

Sampling Point: W-H61-UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: <u>30</u> ')		Species?			
1 Magnolia accuminata	30	 ✓ 	FACU	Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)	`
2 Prunus serotina	30	 ✓ 		$\frac{1}{1}$,
		·	FACU	Total Number of Dominant	
3. Lireodendron tulipifera	20	<u> </u>	FACU	Species Across All Strata: 6 (B))
4					
5				Percent of Dominant Species That Are OBL_EACW_or EAC: 33 (A/	(D)
				That Are OBL, FACW, or FAC: 33 (A/	в)
6				Prevalence Index worksheet:	
7					
	80	= Total Cov	er	Total % Cover of: Multiply by:	
50% of total cover: 40	20% of	total cover:	16	OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =	
Acer rubrum	10	~	FAC	FAC species x 3 =	
"	-				
2				FACU species x 4 =	
3				UPL species x 5 =	
4				Column Totals: (A) (E	3)
5				Prevalence Index = B/A =	
6				Hydrophytic Vegetation Indicators:	
7				1 - Rapid Test for Hydrophytic Vegetation	
8					
				2 - Dominance Test is >50%	
9	10			3 - Prevalence Index is ≤3.0 ¹	
_		= Total Cov		4 - Morphological Adaptations ¹ (Provide support	ina
50% of total cover: 5	20% of	total cover:	2	data in Remarks or on a separate sheet)	
Herb Stratum (Plot size: 5')					
1. Podophyllum peltatum	15	✓	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)	
2				¹ Indicators of hydric soil and wetland hydrology must	t
3				be present, unless disturbed or problematic.	
4				Definitions of Four Vegetation Strata:	
5				bennitions of Four Vegetation of ata.	
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm)	or
6		·		more in diameter at breast height (DBH), regardless	of
7		·		height.	
8				Conting/Chruch Weady plants evoluting vines los	
9				Sapling/Shrub – Woody plants, excluding vines, les than 3 in. DBH and greater than or equal to 3.28 ft (1	
10.				m) tall.	•
				,	
11		·	<u> </u>	Herb – All herbaceous (non-woody) plants, regardles	SS
		= Total Cov		of size, and woody plants less than 3.28 ft tall.	
50% of total cover: 7.5	20% of	total cover:	3	Meedy vine All woody vince greater than 2.20 ft in	
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.	1
1. Smilax rotundifolia	10	~	FAC		
··			1/10		
2		·			
3					
4				Hydrophytic	
5				Vegetation	
	10	= Total Cov		Present? Yes No	
50% of total cover: 5		total cover:	-		
		total cover.	<u> </u>		
Remarks: (Include photo numbers here or on a separate s	heet.)				

Profile Desc	ription: (Describe t	o the dept	th needed to docume	nt the inc	dicator o	or confirm	the absence	of indicators.)		
Depth	Matrix		Redox F	eatures						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	F	Remarks	
0-8	10YR 5/3	100					L			
8-15	10YR 5/4	100					SC			
						·				
			·							
1							2			
		etion, RM=	Reduced Matrix, MS=	Masked S	Sand Gra	ins.		L=Pore Lining, I		0 - 11 - 3
Hydric Soil								ators for Proble	•	Solis :
Histosol	()		Dark Surface (S	,	(0.0) (1.1			cm Muck (A10)	• • •	
	pipedon (A2)		Polyvalue Belov				148) <u> </u>	oast Prairie Red		
Black Hi	. ,		Thin Dark Surfa			47, 148)		(MLRA 147, 14		
	n Sulfide (A4)		Loamy Gleyed		2)		P	iedmont Floodp)
	d Layers (A5)		Depleted Matrix	. ,				(MLRA 136, 14	•	
	ick (A10) (LRR N)		Redox Dark Su	. ,				ery Shallow Dai		12)
	d Below Dark Surface	e (A11)	Depleted Dark	,	,		0	ther (Explain in	Remarks)	
Thick Da	ark Surface (A12)		Redox Depress	ions (F8)						
Sandy N	lucky Mineral (S1) (L	RR N,	Iron-Manganes	e Masses	s (F12) (L	.RR N,				
	A 147, 148)		MLRA 136)							
-	leyed Matrix (S4)		Umbric Surface					icators of hydro		
	edox (S5)		Piedmont Floor	•	. ,	•	•	tland hydrology		ent,
	Matrix (S6)		Red Parent Ma	terial (F21	1) (MLR <i>I</i>	A 127, 147	') unl	ess disturbed o	r problematic.	
	_ayer (if observed):									
Type: Be	edrock									
Depth (in	_{ches):} <u>15</u>						Hydric Soil	Present? Ye	esNo	<u>√</u>
Remarks:										

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.517147	Lon.	-80.545591
STREAM/SITE ID AND SITE DESCR	IPTION:					W-H62, Pipeline ROW		
% stream slope, watershed size {a		d or impairments)				·····,		
FORM OF MITIGATION:		. ,						
ATE:	8/10	0/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-H62	Emergent	0.0335	Emergent					
				_				
						DADT III. Advanced		
				-		PART III - Advanced Sustainable Determination Made on		11
				-		Advanced Mitigation (Y or N)		Y
				-				
Fotal Impact		0.0335						
		Unit Scores				Estimated		
Wetland Cl	assification	onit ocores	Replacement Unit(s)			ILF Costs		
otal Emergent			0.0335	-				
otal Scrub-Shrub			0	-		\$2,010.00		
otal Forested			0			,_,_,_,		
otal Open Water			0	1				

Project/Site: MVP	City/County: Webster	S	ampling Date: 05/02/2015		
Applicant/Owner: MVP			Sampling Point: W-H62		
Investigator(s): A. Grech, S. Kelly, M. Whitten	Section, Township, Range: N/				
Landform (hillslope, terrace, etc.): Summit	· · · ·		Slope (%)· 0-3		
Subregion (LRR or MLRA): LRRN Lat: 38.5171					
Soil Map Unit Name: Dekalb-Rock outcrop complex, 35 to					
· ·					
Are climatic / hydrologic conditions on the site typical for this time of	-		· · · · ·		
Are Vegetation, Soil, or Hydrology signification	ntly disturbed? Are "Normal	Circumstances" pres	sent? Yes 🔽 No		
Are Vegetation, Soil, or Hydrology natural	v problematic? (If needed, e	explain any answers	in Remarks.)		
SUMMARY OF FINDINGS – Attach site map show	ing sampling point location	ons, transects, i	mportant features, etc.		
Hydrophytic Vegetation Present? Yes No					
Hydrophytic Vegetation Present? Yes V Hydric Soil Present? Yes V	is the Sampleu Area				
Wetland Hydrology Present? Yes <u>V</u> No	within a Wetland?	Yes 🔽	No		
Remarks:					
Cowardin Code: PEM HGM: Depressional WT: NRP Information listed on this form represents the data co of wetland hydrology, hydrophytic vegetation, and hy Supplement delineation methodology.	llected in 2015. The wetland	d was revisited or ng the USACE E	n 11/09/2019. Presence MP Regional		
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indicator	rs (minimum of two required)		
Primary Indicators (minimum of one is required; check all that ap	oly)	Surface Soil Cra	acks (B6)		
✓ Surface Water (A1) True Aquat	ic Plants (B14)	 Sparsely Veget 	ated Concave Surface (B8)		
	Sulfide Odor (C1)	Drainage Patter	Patterns (B10)		
	hizospheres on Living Roots (C3)	Moss Trim Line	s (B16)		
Water Marks (B1) Presence of	f Reduced Iron (C4)	Dry-Season Wa	ater Table (C2)		
	Reduction in Tilled Soils (C6)	Crayfish Burrow			
	Surface (C7)		ble on Aerial Imagery (C9)		
	ain in Remarks)		ssed Plants (D1)		
Iron Deposits (B5)		Geomorphic Po			
 Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) 		Shallow Aquitar Microtopograph	. ,		
Aquatic Fauna (B13)		✓ FAC-Neutral Te	. ,		
Field Observations:					
	hes) 6				
Surface Water Present? Yes No Depth (income to the second	hes):				
Saturation Present? Yes No Veg Depth (inc		lydrology Present?	Yes 🖌 No		
(includes capillary fringe)					
Describe Recorded Data (stream gauge, monitoring well, aerial p	notos, previous inspections), if ava	ilable:			
Remarks:					
Man-made wetlands in logging area. Tadpoles and F	ed-spotted Newts				

Sampling Point: W-H62

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		Number of Dominant Species
				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata:4 (B)
4				
5				Percent of Dominant Species That Are OBL_FACW_ or FAC: 100 (A/B)
				That Are OBL, FACW, or FAC: 100 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of:Multiply by:
		= Total Cov		
50% of total cover: 0	20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
				FAC species x 3 =
1				FACU species x 4 =
2				
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				 1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9.				
	0	= Total Cov	~	$_$ 3 - Prevalence Index is $\leq 3.0^1$
			•	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>0</u>	20% of	total cover:	0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Scirpus atrovirens	20	 ✓ 	OBL	
2. Juncus effusus	20	~	FACW	
3. Dichanthelium clandestinum	15	v	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. Sambuca nigra	15	~		be present, unless disturbed or problematic.
			F <u>AC</u>	Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
				in organization of the second s
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	70	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>35</u>		total cover:		· · · · · · · · · · · · · · · · · · ·
	2070 01			Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4				
				Hydrophytic
5	•			Vegetation Present? Yes V No
		= Total Cov		Present? Yes V No
50% of total cover: <u>0</u>	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			
	,			
1				

Profile Desc	ription: (Describe t	o the dept	th needed to docun	nent the	indicator	or confirm	n the absence of indicators.)
Depth	Matrix			x Feature			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type'	Loc ²	Texture Remarks
0-6	10YR 5/2	98	7.5YR 4/6	2	С	M/PL	<u> </u>
6-12	2.5YR 6/6	100					CI
							··
	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Maske	d Sand Gr	ains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I							Indicators for Problematic Hydric Soils ³ :
Histosol	. ,		Dark Surface				2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				·
Black His	. ,		Thin Dark Su			147, 148)	(MLRA 147, 148)
, 0	n Sulfide (A4)		Loamy Gleye		(F2)		Piedmont Floodplain Soils (F19)
	l Layers (A5) ck (A10) (LRR N)		Depleted Mat Redox Dark S	• •	E6)		(MLRA 136, 147) Very Shallow Dark Surface (TF12)
	Below Dark Surface	(Δ11)	Depleted Dar	•	,		Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre		. ,		
	lucky Mineral (S1) (L	RR N.	Iron-Mangane		,	LRR N.	
	(147, 148)	,	MLRA 13			(,	
	leyed Matrix (S4)		Umbric Surfa		(MLRA 1	36, 122)	³ Indicators of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Flo	odplain S	Soils (F19)	(MLRA 14	(8) wetland hydrology must be present,
	Matrix (S6)		Red Parent M	laterial (F	=21) (MLF	A 127, 147	7) unless disturbed or problematic.
	ayer (if observed):						
туре: Ве	edrock						
Depth (inc	ches): <u>12</u>						Hydric Soil Present? Yes 🖌 No
Remarks:							

Wetland Photograph Page

Wetland ID W-H62



Photograph Direction NE

Date: 05/02/2015

Comments: 2015 wetland delineation.



Photograph Direction NE

Date: 11/09/19

Comments: 2019 wetland delineation confirmation.

MVP	ounty: Webster Sampling Date: 05/02/2015
ner: MVP	State: WV Sampling Point: W-H62-U
: A. Grech, S.Kelly, M. Whitten	
slope, terrace, etc.): Summit	ef (concave, convex, none): <u>Convex</u> Slope (%): <u>0-3</u>
RR or MLRA): LRRN Lat: 38.5	Long: -80.545873 Datum: NAD 83
	slopes, extremely stony NWI classification: None
	es No (If no, explain in Remarks.)
	ped? Are "Normal Circumstances" present? Yes <u>√</u> No
n, Soil, or Hydrology nat	
5 65	
Y OF FINDINGS – Attach site map si	pling point locations, transects, important features, etc
Vegetation Present? Yes No_ Present? Yes No_ drology Present? Yes No_ rest No_	Is the Sampled Area within a Wetland? Yes No
GY	
drology Indicators:	Secondary Indicators (minimum of two required)
cators (minimum of one is required; check all tha	Surface Soil Cracks (B6)
Water (A1) True A	
ater Table (A2) Hydro	-
	es on Living Roots (C3) Moss Trim Lines (B16)
larks (B1) Prese	
	n in Tilled Soils (C6) Crayfish Burrows (C8) 7) Saturation Visible on Aerial I

 Yes _____
 No ____
 Depth (inches):_____

 Yes _____
 No _____
 Depth (inches):_____

Yes No V Depth (inches):

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

____ Iron Deposits (B5)

____ Aquatic Fauna (B13) Field Observations:

Surface Water Present? Water Table Present?

(includes capillary fringe)

Saturation Present?

____ Water-Stained Leaves (B9)

____ Inundation Visible on Aerial Imagery (B7)

____ Geomorphic Position (D2)

Wetland Hydrology Present? Yes _____ No__

____ Microtopographic Relief (D4) ____ FAC-Neutral Test (D5)

____ Shallow Aquitard (D3)

Sampling Point: W-H62-UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: <u>30'</u>)		Species?		Number of Dominant Species	
1. Acer saccharum	40		FACU	That Are OBL, FACW, or FAC:	1 (A)
2. Quercus rubra	30	\checkmark	FACU		
3. Lireodendron tulipifera	10		FACU	Total Number of Dominant Species Across All Strata:	4 (B)
4.					(=)
5				Percent of Dominant Species That Are OBL, FACW, or FAC:	25 _(A/B)
6					(F(D)
7.				Prevalence Index worksheet:	
	80	= Total Cov	er	Total % Cover of: Multi	<u>iply by:</u>
50% of total cover: 40				OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =	
1. Acer saccharum	10	✓	FACU	FAC species x 3 =	
2				FACU species x 4 =	
3				UPL species x 5 =	
4				Column Totals: (A)	(B)
5					
6				Prevalence Index = B/A =	
7				Hydrophytic Vegetation Indicators:	
				1 - Rapid Test for Hydrophytic Veg	etation
8				2 - Dominance Test is >50%	
9	10	= Total Cov		3 - Prevalence Index is $\leq 3.0^1$	
50% of total cover: 5				4 - Morphological Adaptations ¹ (Pro	ovide supporting
Herb Stratum (Plot size: 5')	2070 01			data in Remarks or on a separa	ite sheet)
				Problematic Hydrophytic Vegetatio	n ¹ (Explain)
1					
2				¹ Indicators of hydric soil and wetland hy	ydrology must
3				be present, unless disturbed or problem	natic.
4				Definitions of Four Vegetation Strata	1:
5				Tree – Woody plants, excluding vines,	3 in (7.6 cm) or
6		·		more in diameter at breast height (DBH	i), regardless of
7				height.	
8				Sapling/Shrub – Woody plants, exclud	ling vines, less
9				than 3 in. DBH and greater than or equ	al to 3.28 ft (1
10				m) tall.	
11				Herb – All herbaceous (non-woody) pla	ants, regardless
		= Total Cov	-	of size, and woody plants less than 3.2	
50% of total cover: 0	20% of	total cover:	0	Woody vine – All woody vines greater	than 3 28 ft in
Woody Vine Stratum (Plot size: 15')		,		height.	
1. Smilax rotundifolia	15	✓	FAC		
2					
3					
4				Hydrophytic	
5				Hydrophytic Vegetation	
	15	= Total Cov	er		<u>√</u>
50% of total cover: 7.5					
Remarks: (Include photo numbers here or on a separate s					
	,				

Profile Desc	ription: (Describe t	o the dept	h needed to docum	ent the ir	ndicator o	or confirm	the absence	of indicator	s.)	
Depth	Matrix		Redox	Features						
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-7	10YR 5/6	100					SCL			
7-11	10YR 3/2	100					SL			
11-20	10YR 5/4	100					С			
¹ Type: C=C	oncentration, D=Deple	 etion, RM=	Reduced Matrix, MS	=Masked	Sand Gra	ins.	² Location: P	L=Pore Linin	q, M=Matrix.	
Hydric Soil			,						blematic Hyd	Iric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)					10) (MLRA 14	
	pipedon (A2)		Polyvalue Bel		e (S8) (M	LRA 147,		oast Prairie I		
Black Hi	istic (A3)		Thin Dark Sur	face (S9)	(MLRA 1	47, 148)		(MLRA 147	, 148)	
	en Sulfide (A4)		Loamy Gleyed		-2)		P		odplain Soils (F19)
	d Layers (A5)		Depleted Mate					(MLRA 136		
	ıck (A10) (LRR N)		Redox Dark S		•				Dark Surface	(TF12)
	d Below Dark Surface	(A11)	Depleted Darl				C	ther (Explain)	in Remarks)	
	ark Surface (A12)		Redox Depres	ssions (F8	5)					
Sandy N	/lucky Mineral (S1) (L	RR N,	Iron-Mangane	ese Masse	es (F12) (I	_RR N,				
	A 147, 148)		MLRA 136				2			
	Bleyed Matrix (S4)		Umbric Surfac					5	drophytic vege	
	Redox (S5)		Piedmont Floo	•				2	ogy must be p	
	Matrix (S6)		Red Parent M	aterial (F2	21) (MLR	A 127, 147	') un	less disturbe	d or problema	tic.
	Layer (if observed):									
Туре: <u>В</u> е										
	ches): 15						Hydric Soil	Present?	Yes	No_ <u>√</u>
Remarks:										

Mountain Valley Pipeline			COORDINATES:	Lat.	38.508151	Lon.	-80.559329
STREAM/SITE ID AND SITE DESCRIPTION: (% stream slope, watershed size {acreage}, unaltered or impairments)					W-B39, Pipeline ROW		
					· ·		
	· · ·						
8/10/2015		WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetland Indicators							
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0906	Emergent					
				I			
			-				
					Advanced Mitigation (Y or N)		Y
			-				
	0.0906						
			-				
Wetland Classification Total Emergent			-		ILF Costs		
			-		¢E 436 00		
Total Scrub-Shrub Total Forested			-		\$5,436.00		
			-				
	PART I - Wetl Breage}, unaltered 8/10 PART I - Wetl Impact Wetland Classification Emergent	PTION: creage}, unaltered or impairments) 8/10/2015 PART I - Wetland Indicators Impact Impacts (acreage) Classification Emergent 0.0906 Emergent 0.0906 Impact 0.0906 0.0906 PART II - Unit Scores	PTION: preage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impact Impacts Vetland (acreage) Classification Classification Emergent 0.0906 Emergent Impact Impact Impact 0.0906 Emergent 0.0906 Emergent 0.0906 Emergent	PTION: rreage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impact Impacts Wetland (acreage) Classification Classification Emergent 0.0906 Emergent 0.0906 Impact Impact 0.0906 Impact 0 0	PTION: preage), unaltered or impairments)	PTION: preage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PRECIPITATION PAST 48 HRS: PART I - Wetland Indicators Impacts Mitigation Impact Impacts Mitigation Vetland (acreage) Wetland Classification Classification PRECIPITATION PAST 48 HRS: PART II 0.0906 Emergent Impact Impacts Mitigation Wetland Classification Classification Emergent 0.0906 Emergent Impact Impact Impact Impact Impacts Mitigation Vetland Classification Classification Impact 0.0906 Impact Impact Impact Impact Impact Impac	PTION: preage), unaltered or impairments)

Project/Site: MVP		City/C	ounty: Webster		Sampling Date: 05/03/2015	
Applicant/Owner: MVP					Sampling Point: W-B39	
Investigator(s): E. Foster, K	. Lamontagne, (C. Ansari _{Sectio}	on, Township, Range; N/		_ 13	
Landform (hillslope, terrace, etc					Slone (%)· 0	
Subregion (LRR or MLRA): <u>LF</u>	?RN	Lat. 38.508119			3iope (78) Datum: NAD 83	
			Ŭ			
Soil Map Unit Name: Pineville						
Are climatic / hydrologic condition						
Are Vegetation, Soil	, or Hydrology	✓ significantly distur	bed? Are "Normal	Circumstances" p	present? Yes 🖌 No	
Are Vegetation, Soil	, or Hydrology	naturally problema	atic? (If needed, e	explain any answe	rs in Remarks.)	
SUMMARY OF FINDING	GS – Attach sit	e map showing sam	pling point location	ons, transects	, important features, etc.	
Hydrophytic Vegetation Prese	nt? Yes	✓ No	le the Sampled Area			
Hydric Soil Present?	Yes	-	Is the Sampled Area within a Wetland?	Yes 🗸	No	
Wetland Hydrology Present?	Yes	✓ No				
Remarks:						
Cowardin Code: PEM HGM: sl			•			
Small depressional wetland cre Information listed on this form r)/7/2019. Presence	e of wetland hydrology,	
hydrophytic vegetation, and hy						
HYDROLOGY						
Wetland Hydrology Indicato	rs:			Secondary Indica	tors (minimum of two required)	
Primary Indicators (minimum	<u>of one is required; c</u>	heck all that apply)		Surface Soil	Cracks (B6)	
Surface Water (A1)		True Aquatic Plants (Sparsely Veg	getated Concave Surface (B8)	
High Water Table (A2)		✓ Hydrogen Sulfide Ode	or (C1)	Drainage Pa	tterns (B10)	
Saturation (A3)		Oxidized Rhizosphere	es on Living Roots (C3)	Moss Trim Li	ines (B16)	
Water Marks (B1)		Presence of Reduced	l Iron (C4)	Dry-Season Water Table (C2)		
Sediment Deposits (B2)		Recent Iron Reductio	n in Tilled Soils (C6)	Crayfish Bur	rows (C8)	
Drift Deposits (B3)		Thin Muck Surface (C	27)	Saturation V	isible on Aerial Imagery (C9)	
Algal Mat or Crust (B4)		Other (Explain in Ren	narks)	Stunted or S	tressed Plants (D1)	
Iron Deposits (B5)				Geomorphic	Position (D2)	
Inundation Visible on Aer	al Imagery (B7)			Shallow Aqu	itard (D3)	
Water-Stained Leaves (B	9)			Microtopogra	aphic Relief (D4)	
Aquatic Fauna (B13)				✓ FAC-Neutral	Test (D5)	
Field Observations:						
Surface Water Present?		Depth (inches):				
Water Table Present?		Depth (inches):				
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):	Wetland F	lydrology Preser	nt? Yes 🖌 No	
Describe Recorded Data (stre	am gauge, monitor	ing well, aerial photos, pre	vious inspections), if ava	ilable:		
Remarks:			<u></u>			
	• •	•	saturation was not re	elated to a wat	er table and therefore does	
not meet the criteria for a	a hydrology inai	cator.				

Sampling Point: W-B39

· · ·	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:3 (A)
2				
				Total Number of Dominant Species Across All Strata: 3 (B)
3				Species Across All Strata: <u>3</u> (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>100</u> (A/B)
6				
7				Prevalence Index worksheet:
	0	= Total Co	ver	Total % Cover of: Multiply by:
50% of total cover: 0	20% of	total cover	r: 0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
				FACU species x 4 =
2				UPL species x 5 =
3				
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
8				$\frac{\checkmark}{\checkmark}$ 1 - Rapid Test for Hydrophytic Vegetation
				\checkmark 2 - Dominance Test is >50%
9				$_$ 3 - Prevalence Index is $\leq 3.0^1$
50% (1.1.1		= Total Co	-	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>0</u>	20% of	total cover	r: <u>0</u>	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')	•	,		Problematic Hydrophytic Vegetation ¹ (Explain)
1. Carex lurida	8	_ √	FACW	
2. Scirpus americana	5	<u> </u>	<u>OBL</u>	
3. Eleocharis obtusa	6	_ ✓	OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4 Juncus effusus	2		FACW	
5. Onoclea sensibilis	1		FACW	Definitions of Four Vegetation Strata:
			- 1 <u>71011</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	22	= Total Co	ver	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>11</u>		total cover		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Co	ver	Present? Yes 🖌 No
50% of total cover: 0	20% of	total cover	r: <u>0</u>	
Remarks: (Include photo numbers here or on a separate s				
······································	,			

Profile Desc	cription: (Describe to	o the dep	th needed to docun	nent the i	indicator	or confirn	n the absence of indicators.)
Depth	Matrix			<pre>K Feature</pre>		<u> </u>	
(inches)	Color (moist)	%	Color (moist)	%	<u>Type¹</u>	Loc ²	Texture Remarks
0-3	10YR 4/1		10YR 4/6	10	<u>C</u>	M	CL
3-13	10YR 6/1	25	10YR 5/6	75	С	М	C
						<u> </u>	
	·				·		
					· <u> </u>		
							· · · · · · · · _ · _ · _ · · _ · · · · · · · · · · · · · · · · · · · ·
	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	=Masked	d Sand Gr	ains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil				()			Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface				2 cm Muck (A10) (MLRA 147)
	pipedon (A2) istic (A3)		Polyvalue Be				
	en Sulfide (A4)		Thin Dark Su Loamy Gleye			147, 148)	(MLRA 147, 148) Piedmont Floodplain Soils (F19)
	d Layers (A5)		✓ Depleted Mat		(ГZ)		(MLRA 136, 147)
	uck (A10) (LRR N)		Redox Dark S		56)		Very Shallow Dark Surface (TF12)
	d Below Dark Surface	(Δ11)	Depleted Dar				\checkmark Other (Explain in Remarks)
	ark Surface (A12)	(ATT)	Redox Depre				
	/lucky Mineral (S1) (L l	RRN	Iron-Mangane				
	A 147, 148)	I I I I I I	MLRA 13				
	Gleyed Matrix (S4)		Umbric Surfa		(MLRA 1	36, 122)	³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo				
	l Matrix (S6)		Red Parent M	•			· · · · · · · · · · · · · · · · · · ·
Restrictive	Layer (if observed):						
Туре:							
Depth (in	ches):						Hydric Soil Present? Yes <u>✓</u> No
Remarks:							
Hardpan c	lay, likely perching	a water	on top.				

Wetland Photograph Page

Wetland ID W-B39



Photograph Direction NE

Date: 05/03/2015

Comments: 2015 wetland delineation.



Photograph Direction North

Date: <u>10/07/19</u>

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	_ City/County: Webster	Sampling [Date: 05/03/2015
Applicant/Owner: MVP		State: WV Sampling	g Point: W-B39-up
Investigator(s): E. Foster, K. Lamontagne, C. Ansari	_ Section, Township, Range: NAE		-
Landform (hillslope, terrace, etc.): hillslope			_ Slope (%): 3-5
Subregion (LRR or MLRA): LRRN Lat: 38.50807	1 Long: -80.5	59439	Datum: NAD 83
Soil Map Unit Name: Pineville-Gilpin-Guyandotte association, v	ery steep, extremely stoney	_ NWI classification: Non	е
Are climatic / hydrologic conditions on the site typical for this time of y	year? Yes 🖌 No (If	no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology significantl	ly disturbed? Are "Normal C	ircumstances" present? Ye	es 🖌 No
Are Vegetation, Soil, or Hydrology naturally p	problematic? (If needed, exp	blain any answers in Remark	ks.)
SUMMARY OF FINDINGS – Attach site map showin	g sampling point location	s, transects, importa	nt features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks: Upland					

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidized Rhizospheres on Living Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Recent Iron Reduction in Tilled Sc Drift Deposits (B3) Thin Muck Surface (C7)	
 Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) 	 Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	tions), if available:

Sampling Point: W-B39-up

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u>)		Species?		Number of Dominant Species
1. Liriodendron tulipifera	25	<u>√</u>	FACU	That Are OBL, FACW, or FAC:3 (A)
_{2.} Acer rubrum	10	\checkmark	FAC	
3. Quercus montana	10	\checkmark	UPL	Total Number of Dominant Species Across All Strata:6(B)
4				
5				Percent of Dominant Species That Are OBL_EACW_or_EAC: 50 (A/B)
6				That Are OBL, FACW, or FAC: (A/B)
7		·	·	Prevalence Index worksheet:
· ·	45	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: _22.5		f total cover	-	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Lindera benzoin	3	1	FAC	FAC species x 3 =
2 Carpinus coroliniana	3			FACU species x 4 =
		• <u>•</u>	F <u>AC</u>	UPL species x 5 =
3			·	Column Totals: (A) (B)
4			- <u> </u>	
5		·	·	Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is $\leq 3.0^{1}$
	6	= Total Cov	ver	
50% of total cover: <u>3</u>	20% of	total cover	<u>: 1.2</u>	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1 Viola hastata	5	\checkmark	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Potentilla simplex	2		FACU	
3				¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5			·	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6			·	more in diameter at breast height (DBH), regardless of
7				height.
8			·	Sapling/Shrub – Woody plants, excluding vines, less
9			·	than 3 in. DBH and greater than or equal to 3.28 ft (1
10		·	·	m) tall.
11		·		Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>3.5</u>	20% of	total cover	<u>: 1.4</u>	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4			. <u> </u>	Hydrophytic
5				Vegetation
	0	= Total Cov	/er	Present? Yes No
50% of total cover: 0	20% of	total cover	: 0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Desc	ription: (Describe t	o the deptl	h needed to docum	ent the i	ndicator o	or confirm	the absence	of indicators.)		
Depth	Matrix			Features	6					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>		Remarks	_
0-14	10YR 3/3	_100					CL			_
14-17	10YR 5/6	60					CL	Dual mat	rix- see line below	
	10YR 5/3	40					CL			
										-
										-
										—
										_
										_
		·								-
1 <u>т. </u>		·				·	2			-
Hydric Soil I	ncentration, D=Deple	etion, RIVI=I	Reduced Matrix, MS	=Masked	Sand Gra	iins.	Location: P	L=Pore Lining, I	ematic Hydric Soils ³ :	
Histosol			Dark Surface	(57)				cm Muck (A10)	-	
	vipedon (A2)		Polyvalue Bel		се (S8) (М	I RA 147		oast Prairie Re		
Black Hi			Thin Dark Sur				140) C	(MLRA 147, 1		
	n Sulfide (A4)		Loamy Gleyed			47, 140)	P		lain Soils (F19)	
	Layers (A5)		Depleted Mati		/		·	(MLRA 136, 1		
	ck (A10) (LRR N)		Redox Dark S		6)		V		rk Surface (TF12)	
	Below Dark Surface	(A11)	Depleted Darl	•	•			ther (Explain in		
Thick Da	nrk Surface (A12)		Redox Depres						·	
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangane	ese Masse	es (F12) (l	_RR N,				
MLRA	147, 148)		MLRA 136	i)						
Sandy G	leyed Matrix (S4)		Umbric Surface	ce (F13) (MLRA 13	6, 122)		2	phytic vegetation and	
	edox (S5)		Piedmont Floo	•				5 05	must be present,	
	Matrix (S6)		Red Parent M	aterial (F	21) (MLR	A 127, 147	') un	less disturbed o	or problematic.	
	ayer (if observed):									
Туре:									/	
•	ches):						Hydric Soil	Present? Ye	es No_✔	
Remarks:										

	Valley Pipeline	COORDINATES:	Lat.	38.494322	Lon.	-80.561155		
STREAM/SITE ID AND SITE DESCRIPTION:					W-B31, Pipeline ROW	-		
reage}, unaltered	or impairments)				· ·			
8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:			
PART I - Wet	and Indicators							
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification						
Emergent	0.0515	Emergent						
			_					
			_				n	
			-		Sustainable Determination Made or Advanced Mitigation (Y or N)		Y	
			-					
	0.0515		-					
	Jnit Scores							
ssification					ILF Costs			
			_		¢0.000.00			
					\$3,090.00			
		0	-					
	reage}, unaltered 8/10 PART I - Weti Impact Wetland Classification Emergent	PTION: preage}, unaltered or impairments)	Replacement Unit(s) Replacement Unit(s) Replacement Unit(s) Replacement Unit(s) Replacement Unit(s) Replacement Unit(s) O Replacement Unit(s) O Replacement Unit(s) O O PART II - Unit Scores Solution Replacement Unit(s) O O O O O O O O O O O O O O O O O O O O O O O <th co<="" td=""><td>PTION: reage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impact Impacts (acreage) Wetland Classification Classification Emergent 0.0515 Emergent 0.0515 Impact Impact 0.0515 Impact 0 0</td><td>PION: reage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impact (acreage) Wetland Classification Emergent 0.0515 Emergent 0.0515 Emergent 0.0515 Emergent 0.0515 Emergent 0.0515 Emergent Emergent 0.0515 Emergent Emergen</td><td>PTION: creage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PRECIPITATION PAST 48 HRS: PART I - Wetland Indicators Impact Impacts Impact Impacts Wetland Classification Classification Classification Emergent 0.0515 Emergent Advanced Mitigation Mitigation Vetland (acreage) Wetland Classification Classification PART III - Advanced Metain Advanced Sustainable Determination Made on Advanced Mitigation (Y or N) PART II - Unit Scores Replacement Unit(s) Estimated ILF Costs 0.0515 0 0 \$3,090.00</td><td>PTION: treage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PRECIPITATION PAST 48 HRS: PART I - Wetland Indicators Impact (acreage) Wetland Classification Emergent 0.0515 Emergent Impact Impacts (acreage) Wetland Classification Emergent 0.0515 Emergent Impact Impacts (acreage) Impacts (acreage) Wetland Classification Emergent Impact 0.0515 Emergent Impact Impacts (acreage) Impacts (acreage) Impact Impacts (acreage) Wetland (acreage) Impact Impacts (acreage) Impacts (acreage) Impact Impacts (acreage) Impacts (acre</td></th>	<td>PTION: reage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impact Impacts (acreage) Wetland Classification Classification Emergent 0.0515 Emergent 0.0515 Impact Impact 0.0515 Impact 0 0</td> <td>PION: reage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impact (acreage) Wetland Classification Emergent 0.0515 Emergent 0.0515 Emergent 0.0515 Emergent 0.0515 Emergent 0.0515 Emergent Emergent 0.0515 Emergent Emergen</td> <td>PTION: creage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PRECIPITATION PAST 48 HRS: PART I - Wetland Indicators Impact Impacts Impact Impacts Wetland Classification Classification Classification Emergent 0.0515 Emergent Advanced Mitigation Mitigation Vetland (acreage) Wetland Classification Classification PART III - Advanced Metain Advanced Sustainable Determination Made on Advanced Mitigation (Y or N) PART II - Unit Scores Replacement Unit(s) Estimated ILF Costs 0.0515 0 0 \$3,090.00</td> <td>PTION: treage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PRECIPITATION PAST 48 HRS: PART I - Wetland Indicators Impact (acreage) Wetland Classification Emergent 0.0515 Emergent Impact Impacts (acreage) Wetland Classification Emergent 0.0515 Emergent Impact Impacts (acreage) Impacts (acreage) Wetland Classification Emergent Impact 0.0515 Emergent Impact Impacts (acreage) Impacts (acreage) Impact Impacts (acreage) Wetland (acreage) Impact Impacts (acreage) Impacts (acreage) Impact Impacts (acreage) Impacts (acre</td>	PTION: reage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impact Impacts (acreage) Wetland Classification Classification Emergent 0.0515 Emergent 0.0515 Impact Impact 0.0515 Impact 0 0	PION: reage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impact (acreage) Wetland Classification Emergent 0.0515 Emergent 0.0515 Emergent 0.0515 Emergent 0.0515 Emergent 0.0515 Emergent Emergent 0.0515 Emergent Emergen	PTION: creage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PRECIPITATION PAST 48 HRS: PART I - Wetland Indicators Impact Impacts Impact Impacts Wetland Classification Classification Classification Emergent 0.0515 Emergent Advanced Mitigation Mitigation Vetland (acreage) Wetland Classification Classification PART III - Advanced Metain Advanced Sustainable Determination Made on Advanced Mitigation (Y or N) PART II - Unit Scores Replacement Unit(s) Estimated ILF Costs 0.0515 0 0 \$3,090.00	PTION: treage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PRECIPITATION PAST 48 HRS: PART I - Wetland Indicators Impact (acreage) Wetland Classification Emergent 0.0515 Emergent Impact Impacts (acreage) Wetland Classification Emergent 0.0515 Emergent Impact Impacts (acreage) Impacts (acreage) Wetland Classification Emergent Impact 0.0515 Emergent Impact Impacts (acreage) Impacts (acreage) Impact Impacts (acreage) Wetland (acreage) Impact Impacts (acreage) Impacts (acreage) Impact Impacts (acreage) Impacts (acre

Project/Site: MVP	City/County: Web	ster	Sampling Date: 05/01/2015		
Applicant/Owner: MVP			Sampling Point: W-B31		
Investigator(s): E. Foster, K. Lamontagne, C	. Ansari Section, Township.				
Landform (hillslope, terrace, etc.): Valley	-	÷	Slope (%); 2		
Subregion (LRR or MLRA): LRRN L	at: 38.494318	Long: -80.561142	Datum: NAD 83		
Soil Map Unit Name: Philo-Pope complex		NWI classific			
Are climatic / hydrologic conditions on the site typica					
	-		,		
Are Vegetation, Soil, or Hydrology _					
Are Vegetation, Soil, or Hydrology		If needed, explain any answe			
SUMMARY OF FINDINGS – Attach site	map showing sampling poir	nt locations, transects	, important features, etc.		
Hydrophytic Vegetation Present? Yes _ Hydric Soil Present? Yes _ Wetland Hydrology Present? Yes _	/ Is the Sam	oled Area ≥tland? Yes	No		
Remarks:					
Cowardin Code: PEM HGM: Riverine WT Information listed on this form represents of wetland hydrology, hydrophytic vegeta Supplement delineation methodology.	the data collected in 2015. Th				
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indica	ators (minimum of two required)		
Primary Indicators (minimum of one is required; ch	eck all that apply)	Surface Soil	Cracks (B6)		
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Ve	getated Concave Surface (B8)		
	Hydrogen Sulfide Odor (C1)	Drainage Pa			
✓ Saturation (A3)	Oxidized Rhizospheres on Living F				
Water Marks (B1)	Presence of Reduced Iron (C4)		Water Table (C2)		
Sediment Deposits (B2)	_ Recent Iron Reduction in Tilled So				
Drift Deposits (B3)	_ Thin Muck Surface (C7)		isible on Aerial Imagery (C9)		
-	Other (Explain in Remarks)		tressed Plants (D1)		
Iron Deposits (B5)			Position (D2)		
Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9)			Shallow Aquitard (D3) Microtopographic Relief (D4)		
Aquatic Fauna (B13)			Microtopographic Relief (D4) ✓ FAC-Neutral Test (D5)		
Field Observations:					
	Depth (inches):				
	Depth (inches):7				
	Depth (inches):0	Wetland Hydrology Preser	nt? Yes ✔ No		
(includes capillary fringe) Describe Recorded Data (stream gauge, monitorin	•	5 05			
Describe Recorded Data (stream gauge, monitorin	y well, aerial priolos, previous inspect	ions), il avaliable:			
Remarks:					

Sampling Point: W-B31

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)	% Cover	Species		Number of Dominant Species
1. Acer rubrum	5	\checkmark	FAC	That Are OBL, FACW, or FAC:4 (A)
2				
				Total Number of Dominant Species Across All Strata: 5 (B)
3				Species Across All Strata:5 (B)
4				Percent of Dominant Species
5		·		That Are OBL, FACW, or FAC:75 (A/B)
6				Development by development
7				Prevalence Index worksheet:
	5	= Total Co	ver	Total % Cover of: Multiply by:
50% of total cover: <u>2.5</u>	20% of	total cove	r: 1	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Lindera benzoin	6	1	FAC	FAC species x 3 =
		· _ •	<u>- 1 AO</u>	FACU species x 4 =
2				
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				\checkmark 2 - Dominance Test is >50%
9				
<u> </u>	6	= Total Co		$_$ 3 - Prevalence Index is $\leq 3.0^1$
50% of total cover: <u>3</u>		f total cove		4 - Morphological Adaptations ¹ (Provide supporting
	20% 0	lotal cove		data in Remarks or on a separate sheet)
	40	1		Problematic Hydrophytic Vegetation ¹ (Explain)
1 Carex stricta	40	· <u> </u>	_ <u>OBL</u>	
2. Scirpus americanus	20	√	<u>OBL</u>	¹ Indiastors of hydric soil and watland hydrology must
_{3.} Osmunda cinnamomea	10		_ F <u>ACW</u> _	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Impatiens capensis	2		FACW	Definitions of Four Vegetation Strata:
5. Packera aurea	5		FACW	Deminitions of Four vegetation Strata.
6. Onoclea sensibilis	2		FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7 Asclepias incarnata		·		more in diameter at breast height (DBH), regardless of
		·		height.
8		·		Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	80	= Total Co	ver	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>40</u>		total cove		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in
1 Rosa multiflora	5	✓	FACU	height.
			<u></u>	
2				
3				
4		·		Hydrophytic
5				Vegetation
	5	= Total Co	ver	Present? Yes <u>✓</u> No
50% of total cover: <u>2.5</u>	20% of	total cove	r: <u>1</u>	
Remarks: (Include photo numbers here or on a separate s				
	,			

Profile Desc	ription: (Describe to	o the depth	needed to docum	ent the i	indicator	or confirm	n the absence of indicators.)
Depth	Matrix		Redox Features				
(inches)	Color (moist)		Color (moist)	%	<u>Type¹</u>	Loc ²	Texture Remarks
0-3	10YR 2/2	95	7.5YR 5/8	5	С	Μ	SiL
3-20	10YR 4/2	90	7.5YR 5/8	10	С	М	SiL
					. <u> </u>	·	· · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · · ·
						·	
						·	
¹ Type: C=Co	oncentration, D=Deple	etion, RM=R	educed Matrix, MS	=Masked	l Sand Gr	ains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I							Indicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Bel		ce (S8) (/LRA 147,	
Black Hi	stic (A3)		Thin Dark Sur	face (S9) (MLRA	147, 148)	(MLRA 147, 148)
🖌 Hydroge	n Sulfide (A4)		Loamy Gleyed	d Matrix	(F2)		Piedmont Floodplain Soils (F19)
Stratified	l Layers (A5)		Depleted Matr	ix (F3)			(MLRA 136, 147)
2 cm Mu	ck (A10) (LRR N)		Redox Dark S	urface (F	-6)		Very Shallow Dark Surface (TF12)
Depleted	Below Dark Surface	(A11)	Depleted Dark	surface	e (F7)		Other (Explain in Remarks)
Thick Da	rk Surface (A12)		Redox Depres				
Sandy M	lucky Mineral (S1) (L l	RR N,	Iron-Mangane		es (F12) (LRR N,	
MLRA	. 147, 148)		MLRA 136)			
Sandy G	leyed Matrix (S4)		Umbric Surface				³ Indicators of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Floo	odplain S	oils (F19)	(MLRA 14	 wetland hydrology must be present,
	Matrix (S6)		Red Parent M	aterial (F	21) (MLR	A 127, 147	7) unless disturbed or problematic.
Restrictive L	ayer (if observed):						
Туре:							
Depth (ind	:hes):						Hydric Soil Present? Yes 🖌 No
Remarks [.]							1

Oxidized rhizoshperes not visible roots, but may be present in drier conditions (recent heavy rain makes it difficult to tell).

Wetland Photograph Page

Wetland ID W-B31



Photograph Direction South

Date: 05/01/2015

Comments: 2015 wetland delineation.



Photograph Direction NE

Date: 10/07/19

Comments: 2019 wetland delineation confirmation.

WETLAND DETERMINATION DATA FORM – Eastern	n Mountains and Piedmont Region
Project/Site: MVP City/County: We	bster Sampling Date: 05/01/2015
	State: WVSampling Point: W-B31-up
Investigator(s): E. Foster, K. Lamontagne, C. Ansari Section, Townshi	· -
Landform (hillslope, terrace, etc.): valley bottom Local relief (concave	· •
Subregion (LRR or MLRA): LRRN Lat: 38.494237	Long: -80.561131 Datum: NAD 83
	NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of year? Yes	
	Are "Normal Circumstances" present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology significantly disturbed? Are Vegetation, Soil, or Hydrology naturally problematic?	(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling po	oint locations, transects, important features, etc.
Hydric Soil Present? Yes No_✓ within a V Wetland Hydrology Present? Yes No_✓ within a V	npled Area Vetland? Yes No∕
Remarks: Upland	
HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply)	Dry-Season Water Table (C2)
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	Wetland Hydrology Present? Yes No✓ ctions), if available:

Sampling Point:<u>W-B31-up</u>

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: <u>30'</u>)		Species?			
1 Acer rubrum	10	\checkmark	FAC	Number of Dominant Species That Are OBL, FACW, or FAC:4 (A	3)
2. Prunus serotina	5				v
			FACU	Total Number of Dominant	
3. Quercus rubra	10		FACU	Species Across All Strata: 7 (E	3)
4					
5				Percent of Dominant Species That Are OBL_EACW_or EAC: 57 (A	י רח
		·		That Are OBL, FACW, or FAC:(A	4/B)
6				Prevalence Index worksheet:	
7		·			l
		= Total Cov		Total % Cover of: Multiply by:	
50% of total cover: <u>12.5</u>	<u>5</u> 20% of	f total cover:	5	OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =	
1. Eleagnus angustifolia	10	√	FACU	FAC species x 3 =	
2 Lindera benzoin	10	· _ ·		FACU species x 4 =	l
		v	F <u>AC</u>		
3				UPL species x 5 =	
4				Column Totals: (A) ((B)
5					ļ
				Prevalence Index = B/A =	
6		·		Hydrophytic Vegetation Indicators:	
7		. <u> </u>		1 - Rapid Test for Hydrophytic Vegetation	
8				\checkmark 2 - Dominance Test is >50%	
9					
	20	= Total Cov	er	$_$ 3 - Prevalence Index is ≤3.0 ¹	
50% of total cover: 10	20% of	f total cover:		4 - Morphological Adaptations ¹ (Provide suppor	rting
			<u> </u>	data in Remarks or on a separate sheet)	
	7	1		Problematic Hydrophytic Vegetation ¹ (Explain)	
1. Packera aurea	7	√	F <u>ACW</u>		
2. Rubus hispidus	3		F <u>ACW</u>	1. Provide and and watland budralagy mus	
3. Potentilla simplex	5	_ ✓	F <u>ACU</u>	¹ Indicators of hydric soil and wetland hydrology mus be present, unless disturbed or problematic.	st
4. Ulmus americana	8		FACW		
5. Viola rostrata	5		FACU	Definitions of Four Vegetation Strata:	
6 Luzula multiflora		·		Tree – Woody plants, excluding vines, 3 in. (7.6 cm)) or
6. Luzuia muilinora		·	F <u>ACU</u>	more in diameter at breast height (DBH), regardless	
7		·		height.	
8				C. Products Manufacture evoluting vince la	
9	_	-		Sapling/Shrub – Woody plants, excluding vines, lest than 3 in. DBH and greater than or equal to 3.28 ft (SS (1
				m) tall.	(¹
10		· ·		,	
11				Herb – All herbaceous (non-woody) plants, regardle	ess
		= Total Cov		of size, and woody plants less than 3.28 ft tall.	
50% of total cover: <u>16</u>	20% of	f total cover:	6.4	Woody vine All woody vines greater than 2.29 ft i	in
Woody Vine Stratum (Plot size:15')				Woody vine – All woody vines greater than 3.28 ft i height.	
1					
2		·			
3					
4				Hydrophytic	
5.				Vegetation	
	0	= Total Cov	or	Present? Yes <u>Ves</u> No	
50% of total cover: 0		f total cover:	-		
Remarks: (Include photo numbers here or on a separate s	heet.)				

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redox F	eatures				
<u>(inches)</u>	Color (moist)	%	Color (moist)	<u>% Тур</u>	be ¹ Loc ²	Texture	Rema	rks
0-5	10YR 4/3	100				SIL		
5-18	10YR 4/6	100				SL		
$\frac{1}{1}$		otion DM-	Reduced Matrix, MS=N	Maskod Sand	Crains	² Location: E	PL=Pore Lining, M=Ma	triv
Hydric Soil				viaskeu Sant			ators for Problemati	
Histosol			Dark Surface (S	27)			2 cm Muck (A10) (MLF	5
	bipedon (A2)		Polyvalue Belov		R) (MI RA 147		Coast Prairie Redox (A	
Black Hi			Thin Dark Surfa			(110) <u> </u>	(MLRA 147, 148)	(10)
	n Sulfide (A4)		Loamy Gleyed N		(((14), 140)	F	Piedmont Floodplain S	oils (F19)
	l Layers (A5)		Depleted Matrix			'	(MLRA 136, 147)	
	ick (A10) (LRR N)		Redox Dark Sur			١.	/ery Shallow Dark Sur	face (TE12)
	d Below Dark Surface	(Δ11)	Depleted Dark S				Other (Explain in Rem	
	ark Surface (A12)	. (/ (1)	Redox Depressi			`		
	lucky Mineral (S1) (L	RR N.	Iron-Manganese		2) (LRR N.			
	A 147, 148)	,	MLRA 136)		-, (,			
	leyed Matrix (S4)		Umbric Surface	(F13) (MLR/	A 136, 122)	³ Inc	licators of hydrophytic	vegetation and
-	edox (S5)		Piedmont Flood				etland hydrology must	
Stripped	Matrix (S6)		Red Parent Mat	terial (F21) (N	/LRA 127, 147	7) ur	less disturbed or prot	olematic.
Restrictive I	_ayer (if observed):							
Туре:								
Depth (ind	ches):					Hydric Soi	l Present? Yes	No✓
Remarks:								

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	38.481237	Lon.	-80.555783
STREAM/SITE ID AND SITE DESCR	IPTION:				v	V-A18, Temporary Access Road	-	
% stream slope, watershed size {a		d or impairments)				····, ···, ···, ···,		
FORM OF MITIGATION:		. ,						
DATE:	8/10)/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wetland Indicators							
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-A18	Emergent	0.2038	Emergent	-				
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made or Advanced Mitigation (Y or N)		Y
Fotal Impact		0.2038						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)	-		ILF Costs		
otal Emergent			0.2038	-		• · • • • • •		
otal Scrub-Shrub			0	-		\$12,228.00)	
otal Forested			0	-				
otal Open Water			0	1				

WETLAND DETERMINATION DATA	FORM – Eastern Mountains and Piedmont Region
Project/Site: MVP	City/County: Webster Sampling Date: 05/02/2015
Applicant/Owner: MVP	State: WV Sampling Point: W-A18
Investigator(s): J.Cook, J.Heule, K.Lew	Section, Township, Range: N/A
	Local relief (concave, convex, none): Convex Slope (%): 10-15
Subregion (LRR or MLRA): LRRN Lat: 38.4813	
	ent slopes, extremely stony (LdE) NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time	
	antly disturbed? Are "Normal Circumstances" present? Yes <u>V</u> No
	y problematic? (If needed, explain any answers in Remarks.)
	ing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No Remarks: Cowardin Code: PEM HGM: Depressional Yes	within a Wetland? Yes V No
Access route with linear emergent wetland, likely car HYDROLOGY Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that ap	
✓ High Water Table (A2)	tic Plants (B14)Sparsely Vegetated Concave Surface (B8) Sulfide Odor (C1)Drainage Patterns (B10) hizospheres on Living Roots (C3)Moss Trim Lines (B16) of Reduced Iron (C4)Dry-Season Water Table (C2) n Reduction in Tilled Soils (C6)Crayfish Burrows (C8) Surface (C7)Saturation Visible on Aerial Imagery (C9) lain in Remarks)Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) ✓ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes ✓	thes): 0 Wetland Hydrology Present? Yes _ ✔ No

Remarks:

Sampling Point: W-A18

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> ')		Species?		Number of Dominant Species
				That Are OBL, FACW, or FAC:6 (A)
2				
				Total Number of Dominant Species Across All Strata: 7 (B)
3				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>86</u> (A/B)
6				Prevalence Index worksheet:
7				
	0	= Total Cov	/er	Total % Cover of: Multiply by:
50% of total cover: 0	20% of	total cover	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Acer rubrum	4	~	FAC	FAC species x 3 =
2 Rosa multiflora	3	~	FACU	FACU species x 4 =
3 Rubus hispidus	3	· ·		UPL species x 5 =
<u>.</u>			FACW	
4			·	Column Totals: (A) (B)
5				Prevalence Index = B/A =
6			. <u> </u>	
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9.				✓ 2 - Dominance Test is >50%
- 9	10	Tatal Oa	·	3 - Prevalence Index is ≤3.0 ¹
50% of total array 5		= Total Cov	· •	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>5</u>	20% of	total cover	2	data in Remarks or on a separate sheet)
	00			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Eleocharis obtusa	20	<u> </u>	OBL	
2. Juncus effusus	10	 ✓ 	FACW	Indicators of buddie coll and wetlend buddelers, must
3. Scirpus atrovirens	10	~	OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Packera aurea	10	~	FACW	
5. Potentilla simplex	4		FACU	Definitions of Four Vegetation Strata:
6. Anthrozanthum odorotum	3			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7 Impatiens capensis	3		FACW	more in diameter at breast height (DBH), regardless of
			F <u>ACW</u>	height.
8. Symphotrichum sp.	1		ND	Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb All borbassaus (non woodu) planta, regardlaga
	61	= Total Cov	/er	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>30.</u>				
Woody Vine Stratum (Plot size: 15')	2070 01		·	Woody vine – All woody vines greater than 3.28 ft in
				height.
1			·	
2				
3				
4				Hydrophytic
5				Vegetation
	-	= Total Cov	/er	Present? Yes 🖌 No
50% of total cover: 0		total cover		
Remarks: (Include photo numbers here or on a separate s			· · · · ·	
ND - Not determined	neet.)			
ND - Not determined				

Profile Desc	ription: (Describe to	the depth	needed to docum	nent the i	ndicator	or confirm	the absence o	f indicators.)	
Depth	Matrix		Redox Features						
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-9"	Gley 1 5GY 5/1	95	10YR 6/8	5	С	M/PL	SiC	Gleyed	
9-17"	10YR 8/8	80	10YR 5/8	20	С	Μ	SiC		
		<u> </u>							
						·			
		<u> </u>				·			
		<u> </u>							
					·				
1 							21 / 1		
Hydric Soil	oncentration, D=Deple	tion, RM=F	Reduced Matrix, MS	s=Masked	I Sand Gr	ains.		Pore Lining, M=Matrix.	ric Soils ³ :
Histosol			Dark Surface	(97)				m Muck (A10) (MLRA 147	
	bipedon (A2)		Polyvalue Bel	. ,	ce (S8) (N	II RA 147.		ast Prairie Redox (A16))
Black Hi	,		Thin Dark Su		· · ·			MLRA 147, 148)	
	n Sulfide (A4)		 Loamy Gleye 			, ,		dmont Floodplain Soils (F	[;] 19)
	Layers (A5)		Depleted Mat		,			MLRA 136, 147)	- /
	ick (A10) (LRR N)		Redox Dark S	, ,	6)		•	y Shallow Dark Surface (TF12)
	Below Dark Surface	(A11)	Depleted Dar	,	,			ner (Explain in Remarks)	,
	ark Surface (A12)		Redox Depre						
Sandy M	lucky Mineral (S1) (LR	RR N,	Iron-Mangane	ese Mass	es (F12) (LRR N,			
MLRA	A 147, 148)		MLRA 136	6)					
Sandy G	ileyed Matrix (S4)		Umbric Surfa	, ,	-			ators of hydrophytic veget	tation and
	edox (S5)		Piedmont Flo					and hydrology must be pre	esent,
	Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) unles	ss disturbed or problemati	ic.
Restrictive I	_ayer (if observed):								
Туре:									
Depth (ind	ches):						Hydric Soil P	resent? Yes 🔽	No
Remarks:									
Coal fragm	ents at 11 inches,	disturbe	ed soil from com	pacting	along r	oad.			

Wetland ID <u>W-A18</u> Date <u>05/02/2015</u>



Photograph Direction NE

Comments:

Project/Site: MVP	City/County: Webster	Sampling Date: 05/02/2015
Applicant/Owner: MVP		te: <u>WV</u> Sampling Point: <u>W-A18-UP</u>
Investigator(s): J.Cook, J.Heule, K.Lew	Section, Township, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concave, convex, none): <u>1</u>	None Slope (%): <u>6</u>
Subregion (LRR or MLRA): LRRN Lat: 38.4	181247 Long: -80.555	955 _{Datum:} NAD 83
Soil Map Unit Name: Pineville-Gilpin-Guyandotte association	n, very steep, extremely stony (PLF)	NWI classification: None
Are climatic / hydrologic conditions on the site typical for this	time of year? Yes 🔽 No (If no,	explain in Remarks.)
Are Vegetation, Soil, or Hydrology sig	gnificantly disturbed? Are "Normal Circu	umstances" present? Yes 🔽 No
Are Vegetation, Soil, or Hydrology na	turally problematic? (If needed, explai	n any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks: Upland					

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) High Water Table (A2) Hydrogen Sulfide Odor (C1)	Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living	Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled So	oils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Ves No Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes No <u> (includes capillary fringe) </u>	
Saturation Present? Yes No Concern Present? Yes Part Pepth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	
Saturation Present? Yes No Concern Present? Yes Part Pepth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	
Saturation Present? Yes No Concern Present? Yes Part Pepth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	
Saturation Present? Yes No Concern Present? Yes Part Pepth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	
Saturation Present? Yes No Concern Present? Yes Part Pepth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	
Saturation Present? Yes No Concern Present? Yes Part Pepth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	
Saturation Present? Yes No Concern Present? Yes Part Pepth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	
Saturation Present? Yes No Concern Present? Yes Part Pepth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective Remarks:	
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspec	

Sampling Point: W-A18-UP1

	Absolute	- Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		
1 Acer rubrum	15	~	FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 4
2. Quercus muehlenbergii	5	v	UPL	
	5	·		Total Number of Dominant
3. Liriodendron tulipifera	5	~	FACU	Species Across All Strata: 7 (B)
4				Demonst of Dominant Species
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 57.1% (A/B)
6				
		·		Prevalence Index worksheet:
7	25		·	Total % Cover of: Multiply by:
121		= Total Cov		OBL species x 1 =
50% of total cover: <u>12.</u>	<u>3</u> 20% of	total cover		
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Ulmus rubra	25	<u> </u>	FAC	FAC species x 3 =
2. Acer rubrum	7		FAC	FACU species x 4 =
3. Quercus muehlenbergii	3		UPL	UPL species x 5 =
4 Smilax rotundifolia	3	· . <u></u>		Column Totals: (A) (B)
· · ·		· · · · · · · · · · · · · · · · · · ·	F <u>AC</u>	
5. Viola lanceolata	· <u> </u>	·	OBL	Prevalence Index = B/A =
6. Viola hastata	1		UPL	Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
	·	· . <u></u>	·	✓ 2 - Dominance Test is >50%
9	40	·	·	3 - Prevalence Index is ≤3.0 ¹
		= Total Cov	•	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 20	20% of	total cover	8	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				
_{1.} Viola hastata	1	~	UPL	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Viola lanceolata	1	~	OBL	
<u></u>				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4	·		·	Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
				noight.
8			·	Sapling/Shrub – Woody plants, excluding vines, less
9	·		·	than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	2	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 1		total cover		
	2070 01			Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')	3			height.
1. Smilax rotundifolia	<u> </u>	<u> </u>	FAC	
2				
3				
4				
				Hydrophytic
5			·	Vegetation Present? Yes 🖌 No
		= Total Cov		
50% of total cover:50%	20% of	total cover	0.6	
Remarks: (Include photo numbers here or on a separate s	sheet.)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)						
Depth	Matrix		Redox Features			
(inches)	Color (moist)	%	Color (moist) % Type ¹ Loc ²	Texture	Remarks	
0-7	10YR 3/1	100		SIC		
7-20	10YR 4/4	100		С		
	·					
·				·		
		etion, RM=	Reduced Matrix, MS=Masked Sand Grains.	² Location: P	L=Pore Lining, M=Matrix.	
Hydric Soil	ndicators:			Indica	ators for Problematic Hydric Soils ³ :	
Histosol	(A1)		Dark Surface (S7)	2	cm Muck (A10) (MLRA 147)	
Histic Ep	vipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147,	148) C	coast Prairie Redox (A16)	
Black Hi	stic (A3)		Thin Dark Surface (S9) (MLRA 147, 148)		(MLRA 147, 148)	
Hydroge	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	P	iedmont Floodplain Soils (F19)	
Stratified	Layers (A5)		Depleted Matrix (F3)		(MLRA 136, 147)	
2 cm Mu	ck (A10) (LRR N)		Redox Dark Surface (F6)	V	ery Shallow Dark Surface (TF12)	
Depleted	Below Dark Surface	(A11)	Depleted Dark Surface (F7)	C	Other (Explain in Remarks)	
Thick Da	ark Surface (A12)		Redox Depressions (F8)			
Sandy M	lucky Mineral (S1) (L l	RR N,	Iron-Manganese Masses (F12) (LRR N,			
MLRA	147, 148)		MLRA 136)			
Sandy G	ileyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	³ Ind	icators of hydrophytic vegetation and	
Sandy R	edox (S5)		Piedmont Floodplain Soils (F19) (MLRA 14	8) we	tland hydrology must be present,	
	Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147)) un	less disturbed or problematic.	
Restrictive I	ayer (if observed):					
Туре:						
Depth (ind	ches):			Hydric Soil	Present? Yes No 🖌	
Remarks:				-		
. tomantoi						

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	38.428623	Lon.	-80.567054
STREAM/SITE ID AND SITE DESCR	IPTION:					W-F26, Timber Mat Crossing	-	
% stream slope, watershed size {a		d or impairments)				······		
FORM OF MITIGATION:				-				
DATE:	8/10	8/10/2015 WEATHER CONDITIONS:				PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-F26	Emergent	0.0045	Emergent					
						PART III - Advanced	Mitigatic	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Fotal Impact		0.0045						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)	-		ILF Costs		
otal Emergent			0.0045					
otal Scrub-Shrub			0			\$270.00		
Total Forested			0					
otal Open Water			0					

Project/Site: MVP	_ City/County: Webster Sampling Date:	05/02/2015
Applicant/Owner: MVP	State: <u>WV</u> Sampling Poir	
Investigator(s): A. Flake, D. McCullough, E. Strohmaier	_ Section, Township, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Summit	ocal relief (concave, convex, none): Concave Slo	pe (%): <u>1</u>
Subregion (LRR or MLRA): LRRN Lat: 38.42862	Long: -80.567038 Datur	_{n:} NAD 83
Soil Map Unit Name: Clifftop channery silt loam, 25 to 35 pe	ercent slopes NWI classification: None	
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes 🖌 No (If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrologysignificantl	y disturbed? Are "Normal Circumstances" present? Yes	✓ No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed, explain any answers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showin	g sampling point locations, transects, important fe	atures, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes <u> </u>	No No No	Is the Sampled Area within a Wetland?	Yes 🖌	No
Remarks: Cowardin Code: PEM HGM: slope WT: NRPWW					

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
 Surface Water (A1) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidized Rhizospheres on Living Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Recent Iron Reduction in Tilled So Drift Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) 	 Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2)
Field Observations:	
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspective)	Wetland Hydrology Present? Yes <u>V</u> No tions), if available:
Remarks:	

Sampling Point: W-F26

201		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> ')		Species?		Number of Dominant Species
1			<u> </u>	That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata:2 (B)
4				
5				Percent of Dominant Species That Are OBL_EACW_or_EAC: 100 (A/B)
6				That Are OBL, FACW, or FAC:(A/B)
				Prevalence Index worksheet:
7	•		<u> </u>	Total % Cover of: Multiply by:
50% (4.1.1		= Total Cove		OBL species x 1 =
50% of total cover: 0	20% of	total cover:	0	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				
				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cove	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:0	20% of	total cover:	0	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Anthraxon hispidus	20	~	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Scirpus cyperinus	20	~	FACW	
			<u>//////</u>	¹ Indicators of hydric soil and wetland hydrology must
3			······	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Carling/Chrysh Weathurlanta avaluding visual lass
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				
	40	Tatal Caur		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 20		= Total Cove total cover:		or size, and woody plants less than 3.26 it tall.
451	20% 0	iolal cover.	0	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15)				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	•	= Total Cove		Present? Yes V No
50% of total cover: 0		total cover:		
		10101 001011		
Remarks: (Include photo numbers here or on a separate s				
Bare ground due to ponding 60%				

Sampling Point: W-F26

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the i	ndicator	or confirn	m the absence of indicators.)
Depth	Matrix			<u>k Feature</u>		12	Technic
<u>(inches)</u> 0-1	Color (moist) 10YR 2/2	<u> % </u>	Color (moist)	%	Type'	Loc ²	Texture Remarks Muck
1-4	10YR 2/2	<u>100</u> 95	10YR 4/6	5	С		SaLo
						M	
4-8	10YR 4/6	90	2.5Y 6/1	10	С	Μ	GRCL
							·
							· · · · · · _ ·
						·	· · · · · · · · · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · _ · · _ · _ · · _ · · _ · · _ · · _ · · _ · · _ · · _ · · _ · · _ · · · · · · · · · · · · · · · · · · · ·
				. <u> </u>			
				. <u></u>			
	ncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gr	ains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I				()			Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface		aa (CO) (N		2 cm Muck (A10) (MLRA 147)
Black His	ipedon (A2) stic (A3)		Polyvalue Be				(, 148) Coast Prairie Redox (A16) (MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		•		Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat				(MLRA 136, 147)
	ck (A10) (LRR N)		Kedox Dark S	,	,		Very Shallow Dark Surface (TF12)
	Below Dark Surface	e (A11)	Depleted Dar				Other (Explain in Remarks)
	rk Surface (A12)		Redox Depre				
	ucky Mineral (S1) (L 147, 148)	.RR N,	Iron-Mangane MLRA 136		es (F12) (LRR N,	
	leyed Matrix (S4)		Umbric Surfa		MLRA 13	6. 122)	³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo				
	Matrix (S6)		Red Parent M				
	ayer (if observed):						
_{Туре:} Gr	avel						
Depth (inc	:hes): <u>8</u>						Hydric Soil Present? Yes 🖌 No
Remarks:							·

Wetland ID <u>W-F26</u> Date <u>05/02/2015</u>



Photograph Direction SW

Comments:

Project/Site: MVP	_ City/County: V	Vebster	_ Sampling Date: 05/02/2015
Applicant/Owner: MVP		State: WV	Sampling Point: W-F26 UP
Investigator(s): A. Flake, D. McCullough, E. Strohmaier	_ Section, Town	ship, Range: <u>NA</u>	
Landform (hillslope, terrace, etc.): terrace	Local relief (conca	ave, convex, none): <u>CONVEX</u>	Slope (%): 2-4
Subregion (LRR or MLRA): LRRN Lat: 38.428655	5	Long: -80.567008	Datum: NAD 83
Soil Map Unit Name: Clifftop channery silt loam, 25 to 35 pe	ercent slopes	NWI classifie	_{cation:} None
Are climatic / hydrologic conditions on the site typical for this time of y	year?Yes 🔽	No (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrology significantly	ly disturbed?	Are "Normal Circumstances"	present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally p	problematic?	(If needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	ng sampling _l	point locations, transects	s, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks: Upland					

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Livi	ng Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tillec	I Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes No Depth (inches):	Wetland Hydrology Present? Yes No_
(includes capillary fringe)	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp	Dections), if available:
	Dections), if available:
	Dections), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp	Dections), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp	Dections), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp	Dections), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp	bections), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp	bections), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp	bections), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp	bections), if available:
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp	bections), if available:

Sampling Point: W-F26 UP

201	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: <u>30</u> ')	% Cover	Species?	Status	Number of Dominant Species	
1				That Are OBL, FACW, or FAC: (A	A)
2				Total Number of Dominant	
3				· · · · · · · · · · · · · · · · · · ·	B)
4					
5				Percent of Dominant Species That Are OBL, FACW, or FAC:33 (A	A/B)
6					ң В)
7.				Prevalence Index worksheet:	
·	0	= Total Cov		Total % Cover of: Multiply by:	
50% of total cover:0		total cover:		OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =	
1. Robinia pseudoacacia	25	~	FACU	FAC species x 3 =	
2. Rubus allegheniensis	40	<u> </u>		FACU species x 4 =	
3 Liridendion tulipifera	5		FACU	UPL species x 5 =	
5. <u> </u>	15		FACU	· · <u> </u>	(D)
4. Digitaria ischaenum			<u>UPL</u>	Column Totals: (A)	(D)
5				Prevalence Index = B/A =	
6				Hydrophytic Vegetation Indicators:	
7					
8				1 - Rapid Test for Hydrophytic Vegetation	
9.				2 - Dominance Test is >50%	
···	0.5	= Total Cov		3 - Prevalence Index is ≤3.0 ¹	
50% of total cover: 42.				4 - Morphological Adaptations ¹ (Provide support	orting
Herb Stratum (Plot size: 5')	207001			data in Remarks or on a separate sheet)	
Anthraxon hispidus	5	~	EAC	Problematic Hydrophytic Vegetation ¹ (Explain)	
· · · _ · _ · _ ·			FAC		
2				¹ Indicators of hydric soil and wetland hydrology mus	st
3				be present, unless disturbed or problematic.	01
4				Definitions of Four Vegetation Strata:	
5					
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm	
7				more in diameter at breast height (DBH), regardless height.	s of
				lioight.	
8				Sapling/Shrub - Woody plants, excluding vines, le	
9				than 3 in. DBH and greater than or equal to 3.28 ft	(1
10			·	m) tall.	
11				Herb - All herbaceous (non-woody) plants, regardle	ess
		= Total Cov		of size, and woody plants less than 3.28 ft tall.	
50% of total cover: <u>2.5</u>	20% of	total cover:	1	Woody vine – All woody vines greater than 3.28 ft	in
Woody Vine Stratum (Plot size: 15')				height.	
1					
2					
3.					
4				Hydrophytic	
5	0			Vegetation Present? Yes No	
		= Total Cov			
50% of total cover: 0		total cover:	0		
Remarks: (Include photo numbers here or on a separate s	heet.)				

Profile Desc	ription: (Describe t	o the dept	h needed to docum	nent the i	ndicator	or confirm	the absence of	of indicato	rs.)
Depth	Matrix			Feature					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks
0-7	10YR3/3	90	10YR5/6	10	С	М	SIL		
7-10	10YR2/2	100					SIL		
						·			
		<u> </u>				·			
						·			
						·			
		<u> </u>	<u> </u>						
		·							
1						·	2		
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	=Maskec	Sand Gr	ains.	² Location: PL		ng, M=Matrix. oblematic Hydric Soils ³ :
Hydric Soil				(07)					•
<u> </u>	. ,		Dark Surface	. ,	aa (CO) ((10) (MLRA 147)
	pipedon (A2)		Polyvalue Bel		· · ·		·		Redox (A16)
Black Hi	. ,		Thin Dark Su	. ,	•	47, 148)		(MLRA 147	
	n Sulfide (A4)		Loamy Gleye		F2)				odplain Soils (F19)
	Layers (A5)		Depleted Mat					(MLRA 136	
	ick (A10) (LRR N)		Redox Dark S	•	,				Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Dar		. ,		Ot	her (Explai	n in Remarks)
	ark Surface (A12)		Redox Depres	•					
	lucky Mineral (S1) (L	RR N,	Iron-Mangane		es (F12) (LRR N,			
	A 147, 148)		MLRA 136	,					
Sandy G	eleyed Matrix (S4)		Umbric Surface	ce (F13) ((MLRA 13	6, 122)			drophytic vegetation and
	edox (S5)		Piedmont Flo	•	• •	•	•	•	ogy must be present,
	Matrix (S6)		Red Parent N	laterial (F	21) (MLR	A 127, 147	') unle	ess disturbe	ed or problematic.
	_ayer (if observed):								
_{Type:} <u>Gr</u>	avel								
Depth (ind	ches): <u>10</u>						Hydric Soil I	Present?	Yes No 🔽
Remarks:									

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	38.42405	Lon.	-80.570711
STREAM/SITE ID AND SITE DESCR	IPTION:					W-F29, Timber Mat Crossing		
% stream slope, watershed size {a		d or impairments)				······		
FORM OF MITIGATION:								
DATE:	8/10	8/10/2015 WEATHER CONDITIONS:				PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-F29	Emergent	0.0071	Emergent					
						PART III - Advanced	Mitigatio	on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Fotal Impact		0.0071						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0071					
otal Scrub-Shrub			0			\$426.00		
otal Forested			0					
otal Open Water			0					

Project/Site: MVP	City/County: Webster	Sampling Date: 05/02/2015					
Applicant/Owner: MVP	State: WV						
Investigator(s): A. Flake, D. McCullough, E. Strohmaier	Section, Township, Range: <u>N/A</u>						
Landform (hillslope, terrace, etc.): Terrace	Local relief (concave, convex, none): <u>Convex</u>	Slope (%): <u>0</u>					
Subregion (LRR or MLRA): LRRN Lat: 38.42406	69 Long: -80.570725	Datum: NAD 83					
Soil Map Unit Name: Clifftop channery silt loam, 25 to 35	percent slopes NWI class	ification: None					
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)							
Are Vegetation, Soil, or Hydrology significant	ntly disturbed? Are "Normal Circumstances	s" present? Yes 🖌 No					
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain any answ	wers in Remarks.)					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes 🖌	No
Remarks: Cowardin Code: PEM HGM: RIVERINE WT: RPWWD					

Secondary Indicators (minimum of two required)
Surface Soil Cracks (B6)
Wetland Hydrology Present? Yes 🖌 No
ons), if available:

Sampling Point: W-F29

20	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC:3 (A)
2				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4				· · · · · · · · · · · · · · · · · · ·
				Percent of Dominant Species That Are OBL EACW or EAC: 100 (A/B)
5				That Are OBL, FACW, or FAC: 100 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov		
50% of total cover: 0	20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
				Column Totals: (A) (B)
4				
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				✓ 1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is $\leq 3.0^{1}$
	0	= Total Cov	er	
50% of total cover:0	20% of	total cover:	0	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Poa palustris	30	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Viola cucullata	30	~		
	20		FACW	¹ Indicators of hydric soil and wetland hydrology must
3. Impatiens capensis			FACW	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
				noight.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>40</u>	20% of	total cover:	16	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4				Hydrophytic
5	0			Vegetation
		= Total Cov	-	Present? Yes <u>V</u> No
50% of total cover: <u>0</u>	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			
Bare ground-dead veg 20%				
Baro ground dodd vog 20%				

Sampling Point: W-F29

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redo	x Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	10YR 2/2	100					Muck	
2-10	2.5Y 2.5/1	85	10YR 3/6	8	С	M/PL	SaMuck	
			10YR 5/8	7	D	M/PL		
10-18	2.5Y 2.5/1	100				·	SaSiLo	
				·		·		
		<u> </u>				·	·	
. <u> </u>							·	
						·		
	oncentration, D=Depl	etion RM-I	Reduced Matrix MS	-Masko	d Sand Gr	aine	² Location: PL=Pore Linir	na M-Matrix
Hydric Soil I						uiii5.		oblematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)			2 cm Muck (A	-
	pipedon (A2)		Polyvalue Be		nce (S8) (N	ILRA 147,		
Black His			Thin Dark Su	rface (S9) (MLRA 1	47, 148)	(MLRA 147	
	n Sulfide (A4)		Loamy Gleye		(F2)			odplain Soils (F19)
	Layers (A5)		Depleted Mat				(MLRA 136	-
	ck (A10) (LRR N) Below Dark Surface	(111)	Redox Dark S Depleted Dar	•	,			Dark Surface (TF12) n in Remarks)
	ark Surface (A12)	(ATT)	Redox Depre					n in Remarks)
	lucky Mineral (S1) (L	RR N,	Iron-Mangane			LRR N,		
	147, 148)	,	MLRA 13			·		
	ileyed Matrix (S4)		Umbric Surfa				-	drophytic vegetation and
-	edox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present,					
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed):							ed or problematic.	
	ayer (if observed):							
Type:	-h).						Hydric Soil Present?	
	ches):						Hydric Soll Present?	Yes <u>V</u> No
Remarks:								

Wetland ID <u>W-F29</u> Date <u>05/02/2015</u>



Photograph Direction <u>NW</u>

Comments:

USACE FILE NO./Project Name:		Mountain Valley Pipeline			Lat.	38.42389	Lon.	-80.570659
STREAM/SITE ID AND SITE DESCR	IPTION:					W-F28, Timber Mat Crossing		
% stream slope, watershed size {a		d or impairments)						
FORM OF MITIGATION:		,						
DATE:	8/10)/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators				I		
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-F28	Emergent	0.0071	Emergent					
						PART III - Advanced	Mitigatio	in
						Sustainable Determination Made on		-
						Advanced Mitigation (Y or N)		Y
						· · · · · · · · · · · · · · · · · · ·		
Fotal Impact		0.0071						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0071					
otal Scrub-Shrub			0			\$426.00		
Total Forested			0					
otal Open Water			0					

Project/Site: MVP	City/County: Webster		Sampling Date: 05/02/2015
Applicant/Owner: MVP		State: WV	_ Sampling Point: W-F28, F29,F30 UF
Investigator(s): A. Flake, D. McCullough, E. Strohmaier	Section, Township, Rar	nge: N/A	
Landform (hillslope, terrace, etc.): Hillslope	_ Local relief (concave, conv	ex, none): <u>Convex</u>	Slope (%): 2-5
Subregion (LRR or MLRA): LRRN Lat: 38.417	806 Long	_{g:} -80.576139	Datum: NAD83
Soil Map Unit Name: Laidig channery silt loam, 8 to 15 p	ercent slopes	NWI classificat	tion: None
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes 🖌 No	(If no, explain in Re	marks.)
Are Vegetation, Soil, or Hydrology signific	antly disturbed? Are "I	Normal Circumstances" pre	esent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology natural	ly problematic? (If ne	eded, explain any answers	in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ving sampling point lo	ocations, transects,	important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks: Upland					

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Living I	Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tilled Sc	ils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes No <u></u>	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	tions), if available:
Remarks:	

Sampling Point: W-F28, F29,F30 UP

20'	Absolute Domina	ant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	<u>% Cover</u> Specie	es? Status	Number of Dominant Species
1			That Are OBL, FACW, or FAC: (A)
2			
3			Total Number of Dominant Species Across All Strata: 1 (B)
4			Percent of Dominant Species
5			That Are OBL, FACW, or FAC: (A/B)
6	·		Descelar on Index workshoot
7			Prevalence Index worksheet:
	0 = Total 0	Cover	Total % Cover of: Multiply by:
50% of total cover: 0	20% of total co	ver: 0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')			FACW species x 2 =
			FAC species x 3 =
1			FACU species x 4 =
2			UPL species x 5 =
3			
4			Column Totals: (A) (B)
5			Prevalence Index = B/A =
6			
7			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
8			2 - Dominance Test is >50%
9	<u>^</u>		3 - Prevalence Index is ≤3.0 ¹
	0 = Total 0		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>0</u>	20% of total co	ver: 0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Polystichum acrostichoides	30 🖌	FACU	
2. Packera aurea	5	FACW	1 - d'antana a Chardela a d'ana dara da a dika da barta sa ara d
3			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4			
5			Definitions of Four Vegetation Strata:
			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6			more in diameter at breast height (DBH), regardless of
7			height.
8			Sapling/Shrub – Woody plants, excluding vines, less
9			than 3 in. DBH and greater than or equal to 3.28 ft (1
10			m) tall.
11.			Herb – All herbaceous (non-woody) plants, regardless
	35 = Total 0	Cover	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>17</u> .			
Woody Vine Stratum (Plot size: 15')	<u> </u>		Woody vine – All woody vines greater than 3.28 ft in
			height.
1			
2			
3			
4			Hydrophytic
5.			Vegetation
	0 = Total 0	Cover	Present? Yes No 🖌
50% of total cover: 0	20% of total co	-	
Remarks: (Include photo numbers here or on a separate s	sneet.)		
Bare ground 50%			

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the in	dicator o	or confirm	the absence of indicators.)
Depth	Matrix			x Features	1		
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc ²	Texture Remarks
0-10	10YR3/3	100					SIL
10-16	10YR4/6	100					SICL
		·				·	· · · · ·
	·						;;
		<u> </u>					
		·					
				<u> </u>			
¹ Type: C=C	oncentration, D=Deple	etion, RM=I	Reduced Matrix, MS	S=Masked S	Sand Gra	ins.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicators for Problematic Hydric Soils ³ :
<u> </u>	(A1)		Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Be				148) Coast Prairie Redox (A16)
	stic (A3)		Thin Dark Su			47, 148)	(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye		2)		Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Mat	. ,			(MLRA 136, 147)
	ick (A10) (LRR N)	(11)	Redox Dark S	•			Very Shallow Dark Surface (TF12)
	d Below Dark Surface ark Surface (A12)	(ATT)	Depleted Dar Redox Depre	,	,		Other (Explain in Remarks)
	lucky Mineral (S1) (L		Iron-Mangane	· · ,		RR N	
	A 147, 148)	,	MLRA 13		, (1 12) (E		
	Bleyed Matrix (S4)		Umbric Surfa	•	ILRA 13	6, 122)	³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo	odplain Soi	ls (F19) (MLRA 14	8) wetland hydrology must be present,
	Matrix (S6)		Red Parent M	laterial (F2	1) (MLR	A 127, 147	") unless disturbed or problematic.
Restrictive I	Layer (if observed):						
Туре:							
Depth (in	ches):						Hydric Soil Present? Yes No
Remarks:							

USACE FILE NO./Project Name:		Mountain Valley Pipeline			Lat.	38.417599	Lon.	-80.576458
STREAM/SITE ID AND SITE DESCR	IPTION:				V	V-F41, Temporary Access Road	-	
% stream slope, watershed size {a		d or impairments)				· · · · · · · · · · · · · · · · · · ·		
FORM OF MITIGATION:								
DATE:	8/10)/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-F41	Emergent	0.0002	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made or Advanced Mitigation (Y or N)		Y
Fotal Impact		0.0002						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0002	-				
otal Scrub-Shrub			0	-		\$12.00		
otal Forested			0					
otal Open Water			0					

Project/Site: MVP	City/County: Webster	Sampling Date: 05/04/2015
Applicant/Owner: MVP		Sampling Point: W-F41
Investigator(s): A. Flake, D. McCullough, E. Strohmaie	r Section, Township, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Valley	Local relief (concave, convex, none): <u>Convex</u>	Slope (%): 1-3
Subregion (LRR or MLRA): LRRN Lat: 38.417	326 Long: -80.57645	
Soil Map Unit Name: Laidig channery silt loam, 8 to 15 p	Dercent slopes NWI clas	ssification: None
Are climatic / hydrologic conditions on the site typical for this time	e of year? Yes 🔽 No (If no, explain	in Remarks.)
Are Vegetation, Soil, or Hydrology signific	cantly disturbed? Are "Normal Circumstance	es" present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology natura	ally problematic? (If needed, explain any an	swers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	wing sampling point locations, transe	cts, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes V Wetland Hydrology Present? Yes V	Is the Sampled Area within a Wetland? Yes	✓ No
Remarks: Cowardin Code: PEM HGM: RIVERINE WT: RPWWD	I	

Wetland Hydrology Indicato	ors:					Secondary Indicators (minimum of two required)		
Primary Indicators (minimum	of one is requi	ired; check all	that apply)			Surface Soil Cracks (B6)		
Surface Water (A1)		Tru	e Aquatic Plar	nts (B14)		Sparsely Vegetated Concave Surface (B8)		
High Water Table (A2)		Hyc	Irogen Sulfide	Odor (C1)		Drainage Patterns (B10)		
Saturation (A3)		Oxi	dized Rhizosp	heres on Living	Roots (C3)	Moss Trim Lines (B16)		
Water Marks (B1)		Pre	sence of Redu	uced Iron (C4)		Dry-Season Water Table (C2)		
Sediment Deposits (B2)		Rec	cent Iron Redu	ction in Tilled So	oils (C6)	Crayfish Burrows (C8)		
Drift Deposits (B3)		Thir	n Muck Surfac	e (C7)		Saturation Visible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)		Oth	er (Explain in	Remarks)		Stunted or Stressed Plants (D1)		
Iron Deposits (B5)						Geomorphic Position (D2)		
Inundation Visible on Aer	ial Imagery (B	37)				Shallow Aquitard (D3)		
Water-Stained Leaves (B	9)					Microtopographic Relief (D4)		
Aquatic Fauna (B13)						FAC-Neutral Test (D5)		
Field Observations:								
Surface Water Present?	Yes	No 🔽 De	pth (inches):					
Water Table Present?	Yes 🖌	No De	pth (inches):					
Saturation Present? (includes capillary fringe)	Yes 🔽	No De	pth (inches):	0	Wetland I	Hydrology Present? Yes <u>¥</u> No		
Describe Recorded Data (stre	am gauge, m	onitoring well,	aerial photos,	previous inspec	tions), if ava	ailable:		
Remarks:								

Sampling Point: W-F41

. ,	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> ')		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Demission
3				Total Number of Dominant Species Across All Strata: 2 (B)
4				
5				Percent of Dominant Species That Are OBL_EACW or EAC: 100 (A/B)
				That Are OBL, FACW, or FAC: 100 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov		OBL species x 1 =
50% of total cover: 0	20% of	total cover:	0	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				
				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:	20% of	total cover:	0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Eleocharis sp.	30	<u> </u>	<u>OBL</u>	
2. Juncus effusus	10		FACW	1
3. Ranunculus recurvatus	10		FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Agrostis stolonifera	20	~	FAC	Definitions of Four Vegetation Strata:
5				Demnitions of Four vegetation Strata:
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 35	20% of	total cover:	14	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4				Hydrophytic
5	~			Vegetation Present? Yes V No
50% (4.4.4		= Total Cov		
50% of total cover: <u>0</u>		total cover:	0	
Remarks: (Include photo numbers here or on a separate s	sheet.)			
Bare ground 25%				

Sampling Point: W-F41

Profile Desc	ription: (Describe	to the dept	h needed to docun	nent the	indicator	or confirm	n the absence of indicators.)
Depth	Matrix			x Feature		. 2	.
(inches)	Color (moist)	<u>%</u>	Color (moist)		<u>Type¹</u>		<u>Texture</u> <u>Remarks</u> SiLo
0-12	2.5Y 3/2	90	5Y 3/4	10	<u>C</u>	M	· · · · · · · · · · · · · · · · · · ·
12-16	2.5Y 5/3	82	7.5YR 5/8	15	С	Μ	SiSaLo
			2.5Y 4/1	3	D	Μ	
						·	
		·					
	oncentration, D=Depl	letion, RM=	Reduced Matrix, MS	S=Maske	d Sand Gr	ains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I							Indicators for Problematic Hydric Soils ³ :
Histosol	· · /		Dark Surface				2 cm Muck (A10) (MLRA 147)
	vipedon (A2)		Polyvalue Be				
Black His Hydroge	n Sulfide (A4)		Thin Dark Su Loamy Gleye			147, 140)	(MLRA 147, 148) Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat		(12)		(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark		=6)		Very Shallow Dark Surface (TF12)
	Below Dark Surface	e (A11)	Depleted Dar				Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre				
	lucky Mineral (S1) (L \ 147, 148)	.RR N,	Iron-Mangan MLRA 13		es (F12) (LRR N,	
	leyed Matrix (S4)		Umbric Surfa		(MLRA 1	36, 122)	³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo				
-	Matrix (S6)		Red Parent N				
Restrictive L	.ayer (if observed):						
Туре:							
Depth (inc	ches):						Hydric Soil Present? Yes V No
Remarks:							·

Wetland Photograph Page

Wetland ID <u>W-F41</u> Date <u>05/04/2015</u>



Photograph Direction SW

Comments:

Project/Site: MVP	City/County: Webster	_ Sampling Date: 05/04/2015
Applicant/Owner: MVP	State: WV	Sampling Point: W-F41, W-F42 UF
Investigator(s): A. Flake, D. McCullough, E. Strohmaier		
Landform (hillslope, terrace, etc.): valley bottom	ocal relief (concave, convex, none): <u>CONCAVe</u>	Slope (%): <u>3</u>
Subregion (LRR or MLRA): LRRN Lat: 38°25'2.2	2" Long: <u>- 80°34'35.33"</u>	Datum: NAD 83
Soil Map Unit Name: Laidig channery silt loam, 8 to 15 perce	cent slopes NWI classi	fication: None
Are climatic / hydrologic conditions on the site typical for this time of y		
Are Vegetation, Soil, or Hydrology significant	y disturbed? Are "Normal Circumstances"	" present? Yes 🔽 No
Are Vegetation, Soil, or Hydrology naturally p		
SUMMARY OF FINDINGS – Attach site map showin	g sampling point locations, transect	ts, important features, etc.
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Wetland Hydrology Present? Yes No	 Is the Sampled Area within a Wetland? Yes 	No
Remarks:	L	
Upland		
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indi	cators (minimum of two required)
Primary Indicators (minimum of one is required: check all that apply) Surface Sc	nil Cracks (B6)

Finally indicators (finiting of one is required, check an that apply)	
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Liv	ving Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C	4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tille	ed Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No Depth (inches):	
Surface Water Present? Yes No V Depth (inches): Water Table Present? Yes No V Depth (inches):	
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches):	Wetland Hydrology Present? Yes No
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) Yes No ✓ Depth (inches):	, , ,
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches):	, , ,
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) No ✓ Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous instance)	, , ,
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) Yes No ✓ Depth (inches):	, , ,
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) No ✓ Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous instance)	, , ,
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) No ✓ Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous instance)	, , ,
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) No ✓ Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous instance)	, , ,
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) No ✓ Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous instance)	, , ,
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) No ✓ Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous instance)	, , ,
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) No ✓ Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous instance)	, , ,
Water Table Present? Yes No ✓ Depth (inches): Saturation Present? Yes No ✓ Depth (inches): (includes capillary fringe) No ✓ Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous instance)	, , ,

Sampling Point: W-F41, W-F42 UP

	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u>) 1	<u>% Cover</u>	<u>Species?</u>	Status	Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)
2 3				Total Number of Dominant Species Across All Strata: 2* (B)
4 5		·		Percent of Dominant Species
6				That Are OBL, FACW, or FAC: (A/B)
7		<u></u>		Prevalence Index worksheet:
	0	= Total Cov	/er	Total % Cover of: Multiply by:
50% of total cover:0	20% of	total cover	: 0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5		·		Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8		<u></u>		2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov	· .	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>0</u>	20% of	total cover	:	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')	15			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Anthoxanthum odoratum	15	<u></u>	F <u>ACU</u>	(
2. Plantego lanceolata	15		F <u>ACU</u>	¹ Indicators of hydric soil and wetland hydrology must
<u>з.</u> Роа sp. *	20	<u> </u>	ND	be present, unless disturbed or problematic.
4. Trifolium repens	25	~	FACU	Definitions of Four Vegetation Strata:
5. Taraxicum officinale	25	~	FACU	
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11.				
· · ·	100	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50	20% of	total cover	: 20	
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1			·	
2				
3				
4		·		Hydrophytic
5	<u>^</u>			Vegetation Present? Yes No
50% of total cover:0		= Total Cov total cover	•	
Remarks: (Include photo numbers here or on a separate s	sheet.)			
ND - Not determined				
*Not identified to species, not included in domin	ance test	t		

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix			x Feature					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remark	(S
0-4	2.5Y3/2	88	10YR3/6	12	<u>C</u>	Μ	SIL		
4-8	2.5Y3/3	95	10YR5/6	5	С	Μ	SIL		
8-14	10YR5/6	98	10YR4/2	2	D	Μ	SICL		
						·			
		·			·	·	·		
						·	·		
		. <u> </u>			·		·		
						·			
						·			
1							2		
Type: C=Cc Hydric Soil I	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Maske	d Sand Gr	ains.		=Pore Lining, M=Matr tors for Problematic	
-			Dark Oracia	(07)					-
Histosol	(A1) ipedon (A2)		Dark Surface Polyvalue Be	. ,				cm Muck (A10) (MLR/ bast Prairie Redox (A1	•
Black His			Thin Dark Su		· / ·		· · —	(MLRA 147, 148)	0)
	n Sulfide (A4)		Loamy Gleye		<i>,</i> .	147, 140)		edmont Floodplain So	ils (F19)
	Layers (A5)		Depleted Mat		(• _)			(MLRA 136, 147)	
	ck (A10) (LRR N)		Redox Dark S	• •	F6)			ry Shallow Dark Surfa	ace (TF12)
	Below Dark Surface	(A11)	Depleted Dar	•	,			, her (Explain in Remar	· · ·
Thick Da	rk Surface (A12)		Redox Depre	ssions (F	8)				
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangane	ese Mass	ses (F12) (LRR N,			
	. 147, 148)		MLRA 13						
-	leyed Matrix (S4)		Umbric Surfa	• •	•			cators of hydrophytic v	•
-	edox (S5)		Piedmont Flo					and hydrology must b	
	Matrix (S6)		Red Parent M	Aaterial (F	-21) (MLR	A 127, 14	7) unle	ess disturbed or proble	ematic.
	ayer (if observed):								
Type:									
	ches):						Hydric Soil F	Present? Yes	No
Remarks:									

USACE FILE NO./Project Name:		Mountain Valley Pipeline			Lat.	38.405713	Lon.	-80.591171
STREAM/SITE ID AND SITE DESCR	IPTION:					W-B30, Timber Mat Crossing		
% stream slope, watershed size {a		d or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	8/10/2015 WEATHER CONDITIONS:				PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-B30	Emergent	0.0429	Emergent					
						PART III - Advanced	Mitigatio	on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Fotal Impact		0.0429						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0429					
otal Scrub-Shrub			0			\$2,574.00		
otal Forested			0					
otal Open Water			0					

Project/Site: MVP	City/County: Webster		_ Sampling Date: 05/02/2015		
Applicant/Owner: MVP		State: WV	Sampling Point: W-B30		
Investigator(s): E. Foster, K. Lamontagne, C. Ansar	ri Section, Township, Range:	N/A			
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave, convex,	none): Concave	Slope (%): <u>3</u>		
Subregion (LRR or MLRA): LRRN Lat: 38.4	405525 Long:	30.59113	Datum: NAD 83		
Soil Map Unit Name: Atkins Ioam		NWI classifi	ication: None		
Are climatic / hydrologic conditions on the site typical for this	time of year? Yes <u>V</u> No	_ (If no, explain in F	Remarks.)		
Are Vegetation, Soil, or Hydrology sig	gnificantly disturbed? Are "Norr	nal Circumstances"	present? Yes 🖌 No		
Are Vegetation, Soil, or Hydrology na	aturally problematic? (If neede	d, explain any answe	ers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes V Hydric Soil Present? Yes V	Is the Sampled Are within a Wetland?	a Yes 🗸	, No		
Wetland Hydrology Present? Yes Ves No		100			

Remarks:
Cowardin Code: PEM
HGM: RIVERINE
WT: RPWWD

Wetland Hydrology Indicat	ors:				Secondary Indicators (minimum of two required)
Primary Indicators (minimum	of one is rea	uired; che	ck all that apply)		Surface Soil Cracks (B6)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Ae Water-Stained Leaves (B Aquatic Fauna (B13) 	0,1	(B7)	True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Livit Presence of Reduced Iron (C4 Recent Iron Reduction in Tilled Thin Muck Surface (C7) Other (Explain in Remarks))	 Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:					
Surface Water Present?	Yes	_ No _ 🗸			
Water Table Present?	Yes 🔽	No			
Saturation Present? (includes capillary fringe)	Yes 🖌	_ No	_ Depth (inches): 5"	Wetland	Hydrology Present? Yes 🖌 No
Describe Recorded Data (str	eam gauge, i	monitoring	well, aerial photos, previous insp	pections), if ava	ailable:
Remarks:					
PEM abutting perennial	stream.				

Sampling Point: W-B30

, <i>,</i>	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				
				Total Number of Dominant Species Across All Strata: 2 (B)
3				Species Across All Strata: <u>2</u> (B)
4				Percent of Dominant Species
5		·		That Are OBL, FACW, or FAC: 100 (A/B)
6				Prevalence Index worksheet:
7				
	0	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: 0	20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Hypericum densiflorum	5	~	FACW	FAC species x 3 =
				FACU species x 4 =
2				UPL species x 5 =
3				Column Totals: (A) (B)
4				
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				 1 - Rapid Test for Hydrophytic Vegetation
8				
9.				✓ 2 - Dominance Test is >50%
	5	= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 2.5				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')	2070 01			data in Remarks or on a separate sheet)
Leocharis obtusa	50	~		Problematic Hydrophytic Vegetation ¹ (Explain)
2 Viola blandens	6		OBL	
			F <u>ACW</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Scirpus sp.	5		ND	be present, unless disturbed or problematic.
4. Packera aurea	2		FACW	Definitions of Four Vegetation Strata:
_{5.} Juncus effusus	10		FACW	
_{6.} Carex sp.	10		ND	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
				noight.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10		·		m) tall.
11		·		Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover:	<u>5</u> 20% of	total cover:	16.6	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2	_			
3				
4				
5				Hydrophytic
- J	~	Tatal Oas		Vegetation Present? Yes 🖌 No
		= Total Cov total cover:		
50% of total cover: 0		total cover.		
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Desc	ription: (Describe t	o the depth	needed to docum	ent the	indicator	or confirm	n the absence of indicators.)
Depth	Matrix		Redox Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-6	10YR 4/1	90	5YR 4/6	10	С	M/PL	CL
6-18	10YR 4/3	85	5YR 4/6	15	С	M/PL	CL
						·	
						·	
						·	
						·	
						·	
						·	
	oncentration, D=Deple	etion, RM=F	Reduced Matrix, MS	=Masked	d Sand Gr	ains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I							Indicators for Problematic Hydric Soils ³ :
Histosol	. ,		Dark Surface	. ,			2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Bel		· / ·		
Black Hi			Thin Dark Sur			47, 148)	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleyed		(F2)		Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mati	. ,			(MLRA 136, 147)
	ick (A10) (LRR N)	(Redox Dark S		,		Very Shallow Dark Surface (TF12)
	d Below Dark Surface ark Surface (A12)	(A11)	Depleted Dark Redox Depres				Other (Explain in Remarks)
	lucky Mineral (S1) (L		Iron-Mangane		,		
	147, 148)	NN 1 1 ,	MLRA 136			LINIX IN,	
	ileyed Matrix (S4)		Umbric Surfac		(MLRA 13	6. 122)	³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Floo	· ,	•		
	Matrix (S6)		Red Parent M	•	. ,	•	
Restrictive L	ayer (if observed):				, ,		
Type:							
Depth (inc	ches):						Hydric Soil Present? Yes 🖌 No
Remarks:	-						

Wetland ID <u>W-B30</u> Date <u>05/02/2015</u>



Photograph Direction West

Comments:

Project/Site: MVP	City/County: Webster	Sam	pling Date: 04/30/2015			
Applicant/Owner: MVP			ampling Point: W-B30-up			
Investigator(s): E. Foster, K. Lamontagne, C. Ansari	Section, Township, Range					
Landform (hillslope, terrace, etc.): Hillslope	ocal relief (concave, convex,	none): Linear	Slope (%): 45			
Subregion (LRR or MLRA): LRRN Lat: 38°24'19.8	36" Long: -	- 80°35'28.27"	Datum: NAD 83			
Soil Map Unit Name: Atkins Ioam		NWI classification	None			
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🖌 No _	(If no, explain in Remar	ks.)			
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Noi	mal Circumstances" preser	nt? Yes 🖌 No			
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (If neede	ed, explain any answers in I	Remarks.)			
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No	<u> 、 、 、 、 、 、 、 、 、 、 、 、 、 、 、 、 、 、 、</u>	Is the Sampled Area within a Wetland?	Yes	No
Remarks:						
Upland						

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Aquatic Fauna (B13) 	Dry-Season Water Table (C2)
Field Observations:	
Surface Water Present? Yes No Ver Depth (inches):	
Water Table Present? Yes No Depth (inches):	
Saturation Present? Yes No Ver Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	ions), if available:
Remarks:	

Sampling Point: W-B30-up

,	Abcoluto	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		
				Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
1				
2				Total Number of Dominant
3			. <u> </u>	Species Across All Strata: 7 (B)
4			·	
5				Percent of Dominant Species That Are OBL, FACW, or FAC:29 (A/B)
				That Are OBL, FACW, of FAC. 20 (A/B)
6		·	·	Prevalence Index worksheet:
7			·	Total % Cover of: Multiply by:
		= Total Cov	-	
50% of total cover: 0	20% of	total cover	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
				FACU species x 4 =
2				
3				
4				Column Totals: (A) (B)
5				
				Prevalence Index = B/A =
6			·	Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9.				
	0	= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:0		total cover	-	4 - Morphological Adaptations ¹ (Provide supporting
	2070.01			data in Remarks or on a separate sheet)
	10			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Anthoxanthum odoratum	10	<u> </u>	FACU	
2. Achillea millefolium	9	<u> </u>	FACU	1
3. Potentilla simplex	8		FACU	¹ Indicators of hydric soil and wetland hydrology must
4 Trifolium repens	10	~	FACU	be present, unless disturbed or problematic.
5. Andropogon virginicus	9	· · · ·		Definitions of Four Vegetation Strata:
		·	FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Allium schoenoprasum	9	<u> </u>	F <u>ACU</u>	more in diameter at breast height (DBH), regardless of
7. Viola blanda	9	~	FACW	height.
_{8.} Packera aurea	10	~	FACW	
				Sapling/Shrub – Woody plants, excluding vines, less
9		·	·	than 3 in. DBH and greater than or equal to 3.28 ft (1
10		·		m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	74	= Total Cov	rer	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>37</u>		total cover		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in
				height.
1		·	·	
2				
3				
4				
			·	Hydrophytic
5	0	·	·	Vegetation Present? Yes No V
		= Total Cov	-	
50% of total cover: 0	20% of	total cover	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Desc	ription: (Describe to	o the dept	h needed to docum	nent the ir	ndicator	or confirm	the absence	of indicato	rs.)	
Depth	Matrix			x Features						
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-8	10YR 4/3	100					SIL			
8-16	10YR 5/6	100					CL			
		<u> </u>				·				
		<u> </u>								
1		<u> </u>				·				
	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.			g, M=Matrix.	Iria Caila ³ .
Hydric Soil				(07)					oblematic Hyd	
Histosol	(A1) bipedon (A2)		Dark Surface		0 (S9) (M				10) (MLRA 14 Redox (A16)	()
Black Hi			Thin Dark Su				140)	(MLRA 147		
	n Sulfide (A4)		Loamy Gleye			,,	F	•	odplain Soils (I	=19)
	d Layers (A5)		Depleted Ma		,			(MLRA 136	• •	,
2 cm Mu	ıck (A10) (LRR N)		Redox Dark \$	Surface (F	6)		V	ery Shallow	Dark Surface	(TF12)
·	d Below Dark Surface	(A11)	Depleted Dar		. ,		0	Other (Explain	n in Remarks)	
	ark Surface (A12)		Redox Depre							
	lucky Mineral (S1) (Ll	RR N,	Iron-Mangan		es (⊦12) (I	_RR N,				
	A 147, 148) Gleyed Matrix (S4)		MLRA 13 Umbric Surfa	•	MI RA 13	6 122)	³ Inc	licators of hy	drophytic vege	tation and
	edox (S5)		Piedmont Flo	· / ·				•	ogy must be pi	
,	Matrix (S6)		Red Parent M	•	. ,	•	•	•	d or problema	
Restrictive I	_ayer (if observed):						-			
Type:										
Depth (ind	ches):						Hydric Soil	Present?	Yes	No 🖌
Remarks:										

USACE FILE NO./Project Name:		Mountain Valley Pipeline			Lat.	38.39994	Lon.	-80.597527
STREAM/SITE ID AND SITE DESCR	IPTION:			v	V-B28, Pipeline ROW/Anode Bed	•		
% stream slope, watershed size {a			·, •					
FORM OF MITIGATION:								
DATE:	8/10)/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-B28	Emergent	0.2983	Emergent	-				
				-		PART III - Advanced		n
						Sustainable Determination Made or Advanced Mitigation (Y or N)		Y
Fotal Impact		0.2983						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)	-		ILF Costs		
otal Emergent			0.2983	-		A		
otal Scrub-Shrub			0	-		\$17,898.00		
otal Forested			0					
otal Open Water			0	1				

Project/Site: MVP		City/County: Webster		Sampling Date: 04/29/2015					
Applicant/Owner: MVP			State: WV	Sampling Point: W-B28					
Investigator(s): E. Foster, K. Lamontag	ne, C. Ansari	Section, Township, Range: N/A	L.						
Landform (hillslope, terrace, etc.): Valley		Local relief (concave, convex, none): Concave	Slope (%): <u>2</u>					
Subregion (LRR or MLRA): LRRN	Lat: <u>38.3996</u>	83	97451	Datum: NAD 83					
Soil Map Unit Name: <u>Atkins Ioam</u>			NWI classific	cation: None					
Are climatic / hydrologic conditions on the sit	Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>V</u> No (If no, explain in Remarks.)								
Are Vegetation, Soil, or Hydro	ology significa	intly disturbed? Are "Normal C	circumstances"	present? Yes 🖌 No					
Are Vegetation, Soil, or Hydro			plain any answe	ers in Remarks.)					
SUMMARY OF FINDINGS – Attac	h site map show	ing sampling point locatior	s, transects	s, important features, etc.					
Hydrophytic Vegetation Present? Y	es No								
	es 🖌 No	is the ballpica Area	Yes 🗸	Νο					
Wetland Hydrology Present? Y	es 🖌 No		100						
Remarks:									
Cowardin Code: PEM									
HGM: RIVERINE									
WT: RPWWD									
HYDROLOGY									

Wetland Hydrology Indicat	ors:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum	of one is required;	check all that apply)	Surface Soil Cracks (B6)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Ae Water-Stained Leaves (I Aquatic Fauna (B13) 	0,000	 True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres on Living I Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled Sc Thin Muck Surface (C7) Other (Explain in Remarks) 	Dry-Season Water Table (C2)
Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (str	Yes 🖌 No Yes 🖌 No	✓ Depth (inches): 17 Oepth (inches): 17 Depth (inches): 14 Dring well, aerial photos, previous inspective	Wetland Hydrology Present? Yes <u>V</u> No
Remarks: PEM adjacent to roadsid	de stream.		

Sampling Point: W-B28

201	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30</u> ')	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata:1 (B)
4				、
5				Percent of Dominant Species That Are OBL_FACW_ or FAC: 100 (A/B)
				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov		OBL species x 1 =
50% of total cover: <u>0</u>	20% of	total cover:	0	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
				Column Totals: (A) (B)
4				
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				✓ 1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	0	= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	total cover	0	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Phalaris arundinacea	50	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Packera aurea	10		FACW	
3. Onoclea sensibilis	7			¹ Indicators of hydric soil and wetland hydrology must
	2		F <u>ACW</u>	be present, unless disturbed or problematic.
4. Asclepias incarnata			F <u>ACW</u>	Definitions of Four Vegetation Strata:
5. Carex sp.	5		ND	
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>37</u>	20% of	total cover	14.8	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				Ť
2				
3				
4				Hydrophytic
5	-			Vegetation
		= Total Cov		Present? Yes V No
50% of total cover: <u>0</u>	20% of	total cover	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			
ND - Not Determined				

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the	indicator	or confirm	n the absence of indicators.)
Depth	Matrix			x Feature	s		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-4	10YR 3/2	98	5YR 4/6	2	C	M/PL	CL
4-15	10YR 4/1	85	5YR 4/6	15	С	M/PL	CL
15-20	2.5Y 3/1	100					CL
						·	
					·	·	
·							·
·						·	
						·	
	oncentration, D=Depl	otion RM	Boducod Matrix MS	-Mooko			² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I					u Sanu Gi	aii 15.	Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)
	vipedon (A2)		Polyvalue Be	. ,	ace (S8) (I	/LRA 147,	
Black His			Thin Dark Su		• • •		(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix	(F2)		Piedmont Floodplain Soils (F19)
Stratified	Layers (A5)		Depleted Mat	rix (F3)			(MLRA 136, 147)
2 cm Mu	ck (A10) (LRR N)		Redox Dark S	Surface (I	F6)		Very Shallow Dark Surface (TF12)
Depleted	Below Dark Surface	e (A11)	Depleted Dar	k Surface	e (F7)		Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre				
-	lucky Mineral (S1) (L	RR N,	Iron-Mangane		ses (F12) (LRR N,	
	147, 148)		MLRA 13	,			
	leyed Matrix (S4)		Umbric Surfa	. ,	•		³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo	•	, ,	•	, , ,
	Matrix (S6)		Red Parent M	laterial (F	-21) (MLR	A 127, 147	7) unless disturbed or problematic.
Restrictive L	ayer (if observed):						
Туре:							
Depth (inc	ches):						Hydric Soil Present? Yes Ves No
Remarks:							•
1							
1							
1							

Wetland Photograph Page

Wetland ID <u>W-B28</u> Date <u>04/29/2015</u>



Photograph Direction West

Comments:

Project/Site: MVP	City/County: Webster	Sam	pling Date: 04/29/2015
Applicant/Owner: MVP			ampling Point: W-B28-up
Investigator(s): E. Foster, K. Lamontagne, C. Ansari	Section, Township, Range		
Landform (hillslope, terrace, etc.): Hillslope	ocal relief (concave, convex,	, _{none):} Linear	Slope (%): 4
Subregion (LRR or MLRA): LRRN Lat: 38°23'59.0		-80°35'50.42"	Datum: NAD 83
Soil Map Unit Name: Atkins Ioam		NWI classification	None
Are climatic / hydrologic conditions on the site typical for this time of ye	ear?Yes 🖌 No	(If no, explain in Remar	ks.)
Are Vegetation, Soil, or Hydrology significantly	/ disturbed? Are "Noi	rmal Circumstances" prese	nt? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If neede	ed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point loca	ations, transects, im	portant features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No	<u> 、 、 、 、 、 、 、 、 、 、 、 、 、 、 、 、 、 、 、</u>	Is the Sampled Area within a Wetland?	Yes	No
Remarks:						
Upland						

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14) High Water Table (A2) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidized Rhizospheres on Living I Water Marks (B1) Presence of Reduced Iron (C4) Sediment Deposits (B2) Recent Iron Reduction in Tilled Sc Drift Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Other (Explain in Remarks) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13)	Dry-Season Water Table (C2)
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	Wetland Hydrology Present? Yes No tions), if available:
Remarks:	

Sampling Point: W-B28-up

	Absolute	- Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		
Prunus serotina	20	~	FACU	Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
"				
2				Total Number of Dominant
3				Species Across All Strata: <u>3*</u> (B)
4				Demonst of Deminerat Creation
5				Percent of Dominant Species That Are OBL, FACW, or FAC:0 (A/B)
6				
				Prevalence Index worksheet:
7	20			Total % Cover of: Multiply by:
		= Total Cov		OBL species x 1 =
50% of total cover: <u>10</u>	20% of	total cover:	4	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
				UPL species x 5 =
3				Column Totals: (A) (B)
4				
5				Prevalence Index = B/A =
6				
7				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov	•	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	total cover	0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				
_{1.} Packera aurea	5		FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Solidago canadensis	15	v	FACU	
3. Agrostis sp.*	10			¹ Indicators of hydric soil and wetland hydrology must
			N <u>D</u>	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
				neight.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	30	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover:15		total cover:		
	2070 01			Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')	10			height.
1. Rosa multiflora	10	-	FACU	
2				
3				
4				
				Hydrophytic
5	10			Vegetation Present? Yes No
-		= Total Cov		
50% of total cover: 5	20% of	total cover		
Remarks: (Include photo numbers here or on a separate s	heet.)			·
ND - Not determined				
*Not identified to species lovel, not included in d	Iominana	o tost		
*Not identified to species level, not included in d	ommanc			

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the	indicator	or confirm	the absence	of indicator	s.)	
Depth	Matrix Redox Features									
(inches)	Color (moist)	<u>%</u>	Color (moist)				<u>Texture</u>		Remarks	
0-10	10YR 4/6	98	5YR 4/6	2	С	M	CL			
10-18	10YR 3/4	100					CL			
					·					
		·								
		<u> </u>			·					
	·				·					
		·				. <u> </u>				
		<u> </u>								
	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Maske	d Sand Gra	ains.	² Location: PL			3
Hydric Soil I				(- -)					blematic Hydi	
<u> </u>	· · ·		Dark Surface	()	(CO) (I)			•	10) (MLRA 147	()
Histic Ep	ipedon (A2)		Polyvalue Be Thin Dark Su		· / ·		148)	oast Prairie F (MLRA 147	. ,	
	n Sulfide (A4)		Loamy Gleye		, .	47, 140)	Pi	•	dplain Soils (F	19)
	Layers (A5)		Depleted Mat		(• =)			(MLRA 136		,
	ck (A10) (LRR N)		Redox Dark S	. ,	=6)		V	•	, Dark Surface (⁻	TF12)
Depleted	Below Dark Surface	(A11)	Depleted Dar	k Surface	e (F7)		0	ther (Explain	in Remarks)	
	rk Surface (A12)		Redox Depre	```	,					
-	ucky Mineral (S1) (L	RR N,	Iron-Mangane		es (F12) (LRR N,				
	147, 148)		MLRA 13	,		c 400)	31	antona of hum		ation and
	leyed Matrix (S4) edox (S5)		Umbric Surfa Piedmont Flo	. ,	•			•	drophytic veget	
	Matrix (S6)		Red Parent M	•	· ,	•	•	•	d or problemati	
	ayer (if observed):						, a			
Type:										
	hes):						Hydric Soil	Present?	Yes	No 🖌
Remarks:										<u> </u>
Remarks.										

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.370595	Lon.	-80.611923
STREAM/SITE ID AND SITE DESCR						W-E21, Pipeline ROW		
% stream slope, watershed size {a	creage}, unaltered	l or impairments)				· ·		
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
/-E21	Emergent	0.0389	Emergent					
						PART III - Advanced	Mitigatic	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
otal Impact		0.0389						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0389			* ~ ~~ / ~~		
otal Scrub-Shrub			0			\$2,334.00		
otal Forested			0					
otal Open Water			0					

WETLAND DETERMINATI	ON DATA FORM – Eastern Mountains and P	iedmont Region
Project/Site: MVP	City/County: Webster	Sampling Date: 04/30/2015
Applicant/Owner: MVP	State: <u>N</u>	
Investigator(s): S Ryan, L Harloe, H Heist		
Landform (hillslope, terrace, etc.): Floodplain	Local relief (concave, convex, none): Conc	ave Slope (%): 2
Subregion (LRR or MLRA): LRRN La	t: <u>38.370659</u> Long: <u>-80.611857</u>	Datum: NAD 83
Soil Map Unit Name: Clifftop channery silt loan	n, 25 to 35 percent slopes NWI c	lassification: None
Are climatic / hydrologic conditions on the site typical	for this time of year? Yes No (If no, expla	ain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Normal Circumsta	nces" present? Yes 🔽 No
	naturally problematic? (If needed, explain any	
SUMMARY OF FINDINGS – Attach site	map showing sampling point locations, trans	sects, important features, etc.
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes Wetland Hydrology Present? Yes Remarks: Cowardin Code: PEM HGM: RIVERINE WT: RPWWD	No Is the Sampled Area No within a Wetland? Yes No Yes	No
HYDROLOGY		
Wetland Hydrology Indicators:		Indicators (minimum of two required)
✓ Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3)	True Aquatic Plants (B14) Spars Hydrogen Sulfide Odor (C1) Draina Oxidized Rhizospheres on Living Roots (C3) Moss Presence of Reduced Iron (C4) Dry-Sa Recent Iron Reduction in Tilled Soils (C6) ✔ Crayfi Thin Muck Surface (C7) Sturface Other (Explain in Remarks) Sturface Shallo Microt	ce Soil Cracks (B6) ely Vegetated Concave Surface (B8) age Patterns (B10) Trim Lines (B16) eason Water Table (C2) sh Burrows (C8) ation Visible on Aerial Imagery (C9) ed or Stressed Plants (D1) orphic Position (D2) w Aquitard (D3) ropographic Relief (D4) Neutral Test (D5)

Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Yes No ✓ Depth (inches): Yes ✓ No Depth (inches): Yes ✓ No Depth (inches):	1 0 Wetland Hydrology Present? Yes _ ✔_ No
Describe Recorded Data (st	ream gauge, monitoring well, aerial photos, pre	revious inspections), if available:

Remarks:

Large wetland adjacent to S-E50.

Sampling Point: W-E21

, , , , , , , , , , , , , , , , , , ,	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		Number of Dominant Species
Acer saccarinum	10	~	FACW	That Are OBL, FACW, or FAC:5 (A)
2 Fraxinus pennsylvanica	5	v	FACW	
			FACW	Total Number of Dominant
3		·		Species Across All Strata:5 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100 (A/B)
6				· · · · · · · · · · · · · · · · · · ·
7				Prevalence Index worksheet:
	15	= Total Co		Total % Cover of: Multiply by:
50% of total assign 7.5			-	OBL species x 1 =
50% of total cover: <u>7.5</u>	20% 0	total cover	:	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')	_			
1. Lindera benzoin	5	<u> </u>	FAC	FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
		· . <u> </u>		Column Totals: (A) (B)
4		·		
5				Prevalence Index = B/A =
6				
7				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
8		·		2 - Dominance Test is >50%
9				3 - Prevalence Index is $≤3.0^1$
		= Total Co	ver	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 2.5	20% of	total cover	: <u>1</u>	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Packera aurea	30	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Carex crinita	20	~		
		· _ ·	<u>OBL</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Viola cucullata	15	·	FACW	be present, unless disturbed or problematic.
4. Poa palustris	10		FACW	Definitions of Four Vegetation Strata:
_{5.} Impatiens capensis	5		OBL	
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of
7		·		height.
8		·		Sapling/Shrub - Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				
	80	Tatal Ca		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total accurate 40		= Total Co total cover		of size, and woody plants less than 5.20 it tail.
50% of total cover: <u>40</u>	20% 0	total cover	: 10	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2.				
3				
4		· - <u></u>		Hydrophytic
5				Vegetation
	0	= Total Co	ver	Present? Yes V No
50% of total cover: 0	20% of	total cover	: <u>0</u>	
Remarks: (Include photo numbers here or on a separate s	heet)			
	1001.)			

Profile Desc	ription: (Describe t	o the depth	needed to docum	nent the i	indicator	or confirm	n the absence o	of indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-5	10YR 4/1	85	10YR 3/6	15	С	Μ	Silt loam	
5-14	5Y 7/1	60	7.5YR 5/6	15	С	Μ	Silt loam	With sand
	10YR 4/1	25						
						·		
						·	<u> </u>	
						<u> </u>	·	
						. <u> </u>		
·							· ·	
						·	·	
		<u> </u>						
¹ Type: $C=C_{0}$	oncentration, D=Depl	etion RM=R	educed Matrix MS	S=Masker	d Sand Gr	ains	² Location: PL:	=Pore Lining, M=Matrix.
Hydric Soil								tors for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(\$7)				cm Muck (A10) (MLRA 147)
	bipedon (A2)		Polyvalue Be	. ,	ce (S8) (I	/LRA 147		past Prairie Redox (A16)
Black Hi			Thin Dark Su					(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			, ,		edmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mar					(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark \$. ,	-6)		Ve	ry Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Dar	rk Surface	e (F7)			her (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre	essions (F	8)			
Sandy M	lucky Mineral (S1) (L	.RR N,	Iron-Mangan	ese Mass	es (F12) (LRR N,		
MLRA	A 147, 148)		MLRA 13	6)				
Sandy G	leyed Matrix (S4)		Umbric Surfa	ce (F13)	(MLRA 13	86, 122)	³ Indic	cators of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Flo	odplain S	ioils (F19)	(MLRA 14	48) wetl	and hydrology must be present,
	Matrix (S6)		Red Parent M	Material (F	21) (MLR	A 127, 14	7) unle	ess disturbed or problematic.
Restrictive I	_ayer (if observed):							
Type: Ro	ock							
Depth (ind	ches): <u>14</u>						Hydric Soil F	Present? Yes 🖌 No
Remarks:								

Wetland ID <u>W-E21</u> Date <u>04/30/2015</u>



Photograph Direction NE

Comments:

Project/Site: MVP	City/County: Web	ster	Sampling Date: 04/30/2015
Applicant/Owner: <u>MVP</u>		State: WV	_ Sampling Point: W-E21-UP
Investigator(s): S Ryan, L Harloe, H Heist	Section, Township,	Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Lowslope	Local relief (concave,	convex, none): Convex	Slope (%): <u>15</u>
Subregion (LRR or MLRA): LRRN Lat: 38°22'1	4.53"	Long: -80°36'42.90"	Datum: NAD 83
Soil Map Unit Name: Clifftop channery silt loam, 25 to 35	percent slopes	NWI classific	ation: None
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes 🗹 N	lo (If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology significa	antly disturbed? A	Are "Normal Circumstances" p	resent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturall	y problematic? (If needed, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ing sampling poir	nt locations, transects	, important features, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	<u> く く く く </u>	Is the Sampled Area within a Wetland?	Yes	No	<u>v</u>
Remarks: Upland							

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3) Oxidized Rhizospheres on Livi	ng Roots (C3) Moss Trim Lines (B16)
Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron Reduction in Tillec	d Soils (C6) Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Microtopographic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🖌 Depth (inches):	
Saturation Present? Yes No <u>V</u> Depth (inches): (includes capillary fringe)	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous insp	pections), if available:
Remarks:	

Sampling Point: W-E21-UP

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> ')		Species?		
Acer saccharinum	40	<u> </u>	FACW	Number of Dominant Species That Are OBL_EACW, or EAC: 2 (A)
"				That Are OBL, FACW, or FAC: 2 (A)
2			·	Total Number of Dominant
3				Species Across All Strata: 5 (B)
4				、
				Percent of Dominant Species
5		·	·	That Are OBL, FACW, or FAC: 40% (A/B)
6			·	Developer to develop to the set
7				Prevalence Index worksheet:
	40	= Total Cov	er	Total % Cover of:Multiply by:
50% of total cover: 20		total cover:		OBL species x 1 =
	20 /6 01			FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')				
1. Lindera benzoin	15	 ✓ 	FAC	FAC species x 3 =
2. Rosa multiflora	30	~	FACU	FACU species x 4 =
2				UPL species x 5 =
3				Column Totals: (A) (B)
4		·	·	
5				Prevalence Index = B/A =
6				
				Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				
	45	= Total Cov	or	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 22.				4 - Morphological Adaptations ¹ (Provide supporting
	20/00			data in Remarks or on a separate sheet)
	~ ~			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Polystichum acrostichoides	20	<i>v</i>	FACU	
2. Fragaria virginiana	10	~	FACU	
2				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
				more in diameter at breast height (DBH), regardless of
7			·	height.
8			. <u> </u>	Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11	- 00		·	Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>15</u>	20% of	total cover	6	Weady vine All woody vince greater than 2.39 ft in
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1				Toight.
2			·	
3				
4				
5				Hydrophytic Vegetation
³	•		·	Present? Yes No
		= Total Cov		
50% of total cover:0	20% of	total cover		
Remarks: (Include photo numbers here or on a separate s	heet.)			
	,			

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	indicator	or confirm	n the absence of indicators.)
Depth	Matrix		Redo	x Feature			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-5	10YR 3/3	100					SIL
5-14	10YR 5/6	95	7.5YR 5/8	5	С	М	CL
					<u> </u>		
							· · · · · · · _ · _ · _ · · _ · · · · · · · · · · · · · · · · · · · ·
						·	
						·	
	oncentration, D=Depl	otion RM-R	aduand Matrix M	-Maakar	d Sand Cr		² Location: PL=Pore Lining, M=Matrix.
Hydric Soil				S=IVIASKE	a Sanu Gr	all 15.	Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(97)			2 cm Muck (A10) (MLRA 147)
	bipedon (A2)		Polyvalue Be	. ,	(82) A	II RA 147	
Black Hi	• • • •		Thin Dark Su		· · ·		(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			,,	Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Ma		/		(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark	. ,	-6)		Very Shallow Dark Surface (TF12)
Depleted	Below Dark Surface	e (A11)	Depleted Da	rk Surface	e (F7)		Other (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre	essions (F	8)		
	lucky Mineral (S1) (L	RR N,	Iron-Mangan		es (F12) (LRR N,	
	A 147, 148)		MLRA 13				
	ileyed Matrix (S4)		Umbric Surfa	, ,	•		³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo				
	Matrix (S6)		Red Parent M	Aaterial (F	21) (MLR	A 127, 147	7) unless disturbed or problematic.
	_ayer (if observed):						
Type: Ro			_				
Depth (ind	ches): <u>14</u>						Hydric Soil Present? Yes No
Remarks:							

USACE FILE NO./Project Name:		Mountain Valley Pipeline			Lat.	38.367359	Lon.	-80.612334
STREAM/SITE ID AND SITE DESCRIPTION:					W-E18-PEM, Pipeline ROW	-		
% stream slope, watershed size {a		d or impairments)				·····, · ·		
FORM OF MITIGATION:								
DATE:	8/10	8/10/2015 WEATHER CONDITIONS:				PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
V-E18-PEM	Emergent	0.0208	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Fotal Impact		0.0208						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
otal Emergent			0.0208	-		.		
otal Scrub-Shrub			0			\$1,248.00		
otal Forested			0					
otal Open Water			0]				

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

	City/County: V		Sampling Date: 04/29/2015
Applicant/Owner: MVP			V Sampling Point: W-E18-PEN
Investigator(s): S Ryan, AJ Grech, H Heist			• • • • • • • • • • • • • • • • •
Landform (hillslope, terrace, etc.): Depression			ave Slope (%): 0
Subregion (LRR or MLRA): LRRN L			
Soil Map Unit Name: Clifftop channery silt loa			
Are climatic / hydrologic conditions on the site typica			
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumsta	nces" present? Yes 🔽 No
Are Vegetation, Soil, or Hydrology			
SUMMARY OF FINDINGS – Attach site			
	No	Sampled Area a Wetland? Yes	No
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary	/ Indicators (minimum of two required)
Primary Indicators (minimum of one is required; ch	eck all that apply)		ce Soil Cracks (B6)
	True Aquatic Plants (B14)		ely Vegetated Concave Surface (B8)
	Hydrogen Sulfide Odor (C1)		age Patterns (B10)
	Oxidized Rhizospheres on Livi	• • —	
	Presence of Reduced Iron (C4		eason Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled	J Soils (C6) Crayfi	sh Burrows (C8)

- ____ Recent Iron Reduction in Tilled Soils (C6) ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)
- _ Algal Mat or Crust (B4) _ Stunted or Stressed Plants (D1) ____ Iron Deposits (B5) ✓ Geomorphic Position (D2) ____ Inundation Visible on Aerial Imagery (B7) ____ Shallow Aquitard (D3) Water-Stained Leaves (B9) ___ Microtopographic Relief (D4) ✓ FAC-Neutral Test (D5) Aquatic Fauna (B13) **Field Observations:**
 Yes
 No
 ✓
 Depth (inches):

 Yes
 ✓
 No
 Depth (inches):

 Yes
 ✓
 No
 Depth (inches):
 Surface Water Present? 9 Water Table Present? 0 Saturation Present? Wetland Hydrology Present? Yes <u>V</u> No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

___ Drift Deposits (B3)

(includes capillary fringe)

____ Saturation Visible on Aerial Imagery (C9)

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: W-E18-PEM

001	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30'</u>) 1	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC:3(A)
2				Total Number of Dominant
3 4				
5		. <u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6		·	·	Prevalence Index worksheet:
7	0	= Total Cov		Total % Cover of:Multiply by:
50% of total cover:0				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')			·	FACW species x 2 =
1. Carpinus caroliniana	15	~	FAC	FAC species x 3 =
2		·	·	FACU species x 4 =
3		·	·	UPL species x 5 =
4			·	Column Totals: (A) (B)
5		·		Prevalence Index = B/A =
6			·	Hydrophytic Vegetation Indicators:
7		·		1 - Rapid Test for Hydrophytic Vegetation
8			·	✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: -7.5	20% of	total cover	:	data in Remarks or on a separate sheet)
	40			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Carex crinita	40	~	OBL	
2. Impatiens capensis	15		FACW	¹ Indicators of hydric soil and wetland hydrology must
3. Juncus effusus	20	~	FACW	be present, unless disturbed or problematic.
4. Viola septentrionalis	15		FACU	Definitions of Four Vegetation Strata:
5. Packera aurea	10	<u></u>	FACW	Tree Weeds plants evaluating vince 2 in (7.6 cm) or
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10		<u></u>		m) tall.
11		<u></u>		Herb – All herbaceous (non-woody) plants, regardless
	100	= Total Cov	/er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>50</u>	20% of	total cover	: 20	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1			. <u> </u>	
2			. <u> </u>	
3			. <u> </u>	
4			. <u> </u>	Hydrophytic
5				Vegetation
		= Total Cov	-	Present? Yes <u>V</u> No
50% of total cover: <u>0</u>	20% of	total cover	: 0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth								
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks	
0-8	7.5YR 4/2	90	7.5YR 5/6	10	C	M	SA/LO	
8-20	Gley 1 3/10Y	100					SA/LO	
						·		
						·		
						·		
·								
						·		
¹ Type: C=Co	oncentration, D=Deple	etion, RM=F	Reduced Matrix, MS	=Masked	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix.	
Hydric Soil I		•	·				Indicators for Problematic Hydric Soils ³ :	3:
Histosol	(A1)		Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)	
Histic Ep	pipedon (A2)		Polyvalue Bel	ow Surfa	ce (S8) (N	ILRA 147,	148) Coast Prairie Redox (A16)	
Black Hi	stic (A3)		Thin Dark Su	rface (S9)	(MLRA 1	47, 148)	(MLRA 147, 148)	
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix (F2)		Piedmont Floodplain Soils (F19)	
Stratified	I Layers (A5)		Depleted Mat	rix (F3)			(MLRA 136, 147)	
	ck (A10) (LRR N)		Redox Dark S	```	,		Very Shallow Dark Surface (TF12)	
	Below Dark Surface	(A11)	Depleted Dar		. ,		Other (Explain in Remarks)	
	ark Surface (A12)		Redox Depres	•				
	lucky Mineral (S1) (L	RR N,	Iron-Mangane		es (F12) (LRR N,		
	147, 148)		MLRA 136	,			3	
	leyed Matrix (S4) edox (S5)		Umbric Surface				³ Indicators of hydrophytic vegetation and	נ
	Matrix (S6)		Red Parent N	•	• •	•		
-	ayer (if observed):			iateriai (i		A 127, 147		
Type: No	• • • •							
Depth (inc							Hydric Soil Present? Yes 🖌 No	
Remarks:								

Wetland Photograph Page

Wetland ID W-E18-PEM Date 04/29/2015



Photograph Direction South

Comments:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP	City/County: We	ebster	_ Sampling Date: 04/29/2015		
Applicant/Owner: MVP		State: WV	Sampling Point: W-E18-PSS		
Investigator(s): S Ryan, AJ Grech, H Heist	Section, Townsh	nip, Range: <u>N/A</u>			
Landform (hillslope, terrace, etc.): Depression	Local relief (concave	e, convex, none): Concave	Slope (%): <u>0</u>		
Subregion (LRR or MLRA): LRRN Lat: 38.36	67139	_ Long: -80.612127	Datum: NAD83		
Soil Map Unit Name: Clifftop channery silt loam, 25 to	35 percent slopes	NWI classifi	_{cation:} PubHh		
Are climatic / hydrologic conditions on the site typical for this tir	me of year? Yes 🔽	No (If no, explain in F	Remarks.)		
Are Vegetation, Soil, or Hydrology sign	ificantly disturbed?	Are "Normal Circumstances"	present? Yes 🖌 No		
Are Vegetation, Soil, or Hydrology natu	urally problematic?	(If needed, explain any answe	ers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					
Hydrophytic Vegetation Present? Yes V Hydric Soil Present? Yes V Wetland Hydrology Present? Yes V	Is the Sa	mpled Area Wetland? Yes	No		

HGM: RIVERINE		
WT: RPWWD		
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is requir	ed; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
 High Water Table (A2) 	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3)	 Oxidized Rhizospheres on Living Roots (C3) 	Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)

 Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Ae Water-Stained Leaves (Aquatic Fauna (B13) 	0,00,00	_ Other (Explain in Remarks)	 Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5) 			
Field Observations:						
Surface Water Present?	Yes No _	Depth (inches):				
Water Table Present?	Yes 🖌 No 🔄	Depth (inches): 11				
Saturation Present? (includes capillary fringe)	Yes 🖌 No	Depth (inches):0	Wetland Hydrology Present? Yes <u>V</u> No			
Describe Recorded Data (str	Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:						
1						

Remarks:

Cowardin Code: PSS

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: W-E18-PSS

001	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				
				Total Number of Dominant Species Across All Strata: 3 (B)
3		·		Species Across All Strata: <u>3</u> (B)
4		·		Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>66</u> (A/B)
6				
7.				Prevalence Index worksheet:
	0	= Total Cov		Total % Cover of: Multiply by:
50% of total cover:0	_	total cover:	· _	OBL species x 1 =
	20 % 01			FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')	60		540	
1. Carpinus caroliniana	60	<u> </u>	FAC	FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6		·		Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				
9.				∠ 2 - Dominance Test is >50%
- J	60	= Total Cov		$_$ 3 - Prevalence Index is $\leq 3.0^1$
50% of total answer 30		total cover:		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>30</u>	20% of	total cover:	12	data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Barbarea vulgaris	10		<u>OBL</u>	
2. Impatiens capensis	15		FACW	
3 Juncus effusus	10		FACW	¹ Indicators of hydric soil and wetland hydrology must
4. Viola septentrionalis	20			be present, unless disturbed or problematic.
	40		FACU	Definitions of Four Vegetation Strata:
5. Packera aurea		<u> </u>	FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
_{6.} Fragaria virginiana	5		F <u>ACU</u>	more in diameter at breast height (DBH), regardless of
7				height.
8				
				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10		·		
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>50</u>	20% of	total cover:	20	Weedwine All weedwines greater than 2.29 ft in
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1				noight.
2		·		
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes 🖌 No
50% of total cover: 0		total cover:		
Remarks: (Include photo numbers here or on a separate s				
Remarks. (include photo numbers here of on a separate s	neet.)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth	Matrix	<u> </u>	Redox Features						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
0-8	7.5YR 4/2	90	7.5YR 5/6	10	С	Μ	SA/LO		
8-20	Gley1 3/10Y	100					SA/LO		
						·			
						·			
						·			
							·		
¹ Type: C=Co	oncentration, D=Deple	etion. RM=	Reduced Matrix. MS	S=Masked	d Sand Gr	ains.	² Location: PL:	=Pore Lining, M=Matrix.	
Hydric Soil		,	·····,					ors for Problematic Hydric Soils ³ :	
Histosol	(A1)		Dark Surface	(S7)			2 c	m Muck (A10) (MLRA 147)	
Histic Ep	pipedon (A2)		Polyvalue Be	. ,	ce (S8) (/LRA 147,		ast Prairie Redox (A16)	
Black Hi	stic (A3)		Thin Dark Su	rface (S9)) (MLRA	147, 148)	-	(MLRA 147, 148)	
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix ((F2)		Pie	edmont Floodplain Soils (F19)	
Stratified	l Layers (A5)		Depleted Mat	rix (F3)			((MLRA 136, 147)	
	ick (A10) (LRR N)		Redox Dark S		,		Very Shallow Dark Surface (TF12)		
	Below Dark Surface	(A11)	Depleted Dar				Oth	ner (Explain in Remarks)	
	ark Surface (A12)		Redox Depre		,				
	lucky Mineral (S1) (L	RR N,	Iron-Mangane		es (F12) (LRR N,			
	147, 148)		MLRA 130			06 400)	³ In dia	store of hydrophytic vegetation and	
-	edox (S5)		Umbric Surfa Piedmont Flo					ators of hydrophytic vegetation and and hydrology must be present,	
	Matrix (S6)		Red Parent M	•	, ,	•	•	ess disturbed or problematic.	
	_ayer (if observed):			iatoriai (i	21) (1121))		
Type: No	• • •								
Depth (inc							Hydric Soil F	Present? Yes 🖌 No	
Remarks:									
Nemarks.									

Wetland Photograph Page

Wetland ID W-E18-PSS Date 04/29/2015



Photograph Direction SE

Comments:

WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: MVP	City/County: Webster	San	npling Date: 04/29/2015		
Applicant/Owner: MVP		State: WV S	Campling Point: W-E18-UP		
Investigator(s): S Ryan, AJ Grech, H Heist	Section, Township, Rang	_{e:} N/a			
Landform (hillslope, terrace, etc.): Hillslope	ocal relief (concave, conve	k, none): Concave	Slope (%): <u>8</u>		
Subregion (LRR or MLRA): LRRN Lat: 38°22'2.85	5" Long:	-80°36'43.71"	Datum: NAD 83		
Soil Map Unit Name: Clifftop channery silt loam, 25 to 35 pe	ercent slopes	NWI classification	n: None		
Are climatic / hydrologic conditions on the site typical for this time of y	ear?Yes 🖌 No 🔄	(If no, explain in Rema	rks.)		
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "No	ormal Circumstances" prese	nt? Yes 🖌 No		
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If need	led, explain any answers in	Remarks.)		
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.					

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No
Remarks: Upland					

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water Stained Leaves (B9) Aquatic Fauna (B13) 	 Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2)
Field Observations:	· · · · · · · · · · · · · · · · ·
Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): (includes capillary fringe) Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect Remarks:	Wetland Hydrology Present? Yes No tions), if available:

HYDROLOGY

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: W-E18-UP

,	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30'</u>)		Species?		
Quercus alba	40	~	FACU	Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)
2. Quercus rubra	25	 ✓ 	FACU	
3. Fagus grandifolia	20	<u> </u>		Total Number of Dominant
	15		FACU	Species Across All Strata:5 (B)
4. Acer rubrum			FAC	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0 (A/B)
6				Developer a herber werden bei et
7				Prevalence Index worksheet:
	100	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: 50		total cover:		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Fagus grandifolia	40	~	FACU	FAC species x 3 =
2. Prunus serotina	10		FACU	FACU species x 4 =
3. Betula lenta	5		FACU	UPL species x 5 =
				Column Totals: (A) (B)
4				
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				
	55	= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: <u>27.5</u>				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
Mitchella repons	15	~	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
· ···				
2				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
				,
11	15			Herb – All herbaceous (non-woody) plants, regardless
500/ // · · · · · · · · · · · · · · · · ·		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 7.5	20% 01	total cover:		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4				I hadron ha die
5				Hydrophytic Vegetation
	~	= Total Cov		Present? Yes No V
50% of total cover: 0		total cover:	-	
Remarks: (Include photo numbers here or on a separate si				
Remarks. (include proto numbers here of on a separate si	neet.)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist) % Type ¹ Loc ²	Texture	Remarks			
0-4	10YR 3/3	100		SIL				
4-8	10YR 4/4	100		SIL				
		·						
1								
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ :								
-								
Histosol	. ,		Dark Surface (S7)		2 cm Muck (A10) (MLRA 147)			
	pipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147,	148)	Coast Prairie Redox (A16)			
Black Hi	· · /		Thin Dark Surface (S9) (MLRA 147, 148)		(MLRA 147, 148)			
Hydroge	n Sulfide (A4)		Loamy Gleyed Matrix (F2)		Piedmont Floodplain Soils (F19)			
Stratified	l Layers (A5)		Depleted Matrix (F3)		(MLRA 136, 147)			
2 cm Mu	ick (A10) (LRR N)		Redox Dark Surface (F6)		Very Shallow Dark Surface (TF12)			
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7)					Other (Explain in Remarks)			
Thick Dark Surface (A12) Redox Depressions (F8)								
	lucky Mineral (S1) (L	RR N.	Iron-Manganese Masses (F12) (LRR N,					
	147, 148)	,	MLRA 136)					
Sandy G	ileyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)		ndicators of hydrophytic vegetation and			
Sandy R	edox (S5)		Piedmont Floodplain Soils (F19) (MLRA 14	18) v	wetland hydrology must be present,			
	Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147	7) (unless disturbed or problematic.			
	_ayer (if observed):							
Type: Ro	ock							
Depth (ind	ches): <u>8</u>			Hydric So	oil Present? Yes No 🖌			
Remarks:								