BASELINE ASSESSMENT – WETLAND ATTRIBUTES

ATTACHMENT O PITTSYLVANIA COUNTY

WETLAND SWVM FORMS/WETLAND DELINEATION FORM/PHOTOS

Wetland ID	Wetland SWVM Form Provided	Delineation Data/Photos		
W-D3	N/A – Permanent Conversion	N/A – Permanent Conversion		
W-B5	✓	✓		
W-B4-PSS	N/A – Permanent Conversion	N/A – Permanent Conversion		
W-C1	✓	✓		
W-H5	✓	✓		
W-B3	✓	✓		
W-CC2-PEM	✓	✓		
W-MM5	N/A – Permanent Conversion	N/A – Permanent Conversion		
W-MM9	✓	✓		
W-MM8-PEM	✓	✓		
W-MM8-PFO	N/A – Permanent Conversion	N/A – Permanent Conversion		
W-Q2	N/A – Permanent Conversion	N/A – Permanent Conversion		
W-Q1	✓	✓		
W-G2	✓	✓		
W-H1	✓	✓		
W-EF6	N/A – Permanent Conversion	N/A – Permanent Conversion		
W-H2	✓	✓		
W-IJ21	N/A – Permanent Conversion	N/A – Permanent Conversion		
W-H3	✓	✓		
W-MM3	N/A – Permanent Conversion	N/A – Permanent Conversion		
W-IJ22-PEM	✓	✓		
W-IJ22-PFO	N/A – Permanent Conversion	N/A – Permanent Conversion		

Mountain Valley Pipeline			COORDINATES:	Lat.	36.959293	Lon.	-79.586201
IPTION: creage}, unaltered	d or impairments)				W-B5, Pipeline ROW		
9/28	3/2021	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetl	land Indicators						
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0048	Emergent					
					PART III - Advanced	Mitigatio	n
					Advanced Mitigation (Y or N)		Y
				!	·		
	0.0048						
	Unit Scores						
ssification					ILF Costs		
					* 200 00		
					\$288.00		
		U					
	9/28 PART I - Wet Impact Wetland Classification Emergent	PART II - Unit Scores	IPTION: creage}, unaltered or impairments) 9/28/2021 WEATHER CONDITIONS: PART I - Wetland Indicators Impact (acreage) Wetland Classification Emergent 0.0048 Emergent 0.0048 PART II - Unit Scores	PTION: creage}, unaltered or impairments) 9/28/2021 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts Wetland Classification Emergent 0.0048 Emergent 0.0048 PART II - Unit Scores assification Replacement Unit(s) 0.0048 0.0048	PTION: creage}, unaltered or impairments) 9/28/2021 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts (acreage) Wetland Classification Emergent 0.0048 Emergent 0.0048 PART II - Unit Scores sssification Replacement Unit(s) 0.0048 0	PTION: creage), unaltered or impairments) PART I - Wetland Indicators Impact Impacts (acreage) Wetland Classification Emergent 0.0048 Emergent PART II - Advanced Mitigation (Y or N) PART II - Unit Scores sisfication Replacement Unit(s) 0.0048 PART III - Unit Scores 1	PTION: creage), unaltered or impairments) PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0048 Emergent Description of the impact of the impac

Project/Site: MVP	City/County: Pittsylvannia Sampling Date: 04/02						
Applicant/Owner: MVP							
Investigator(s): C. Ansari, J. Rodriguez, M.	Whitten Section, Township,	Range: N/A					
Landform (hillslope, terrace, etc.): Hillslope		-	Slope (%): 0				
Subregion (LRR or MLRA): LRRP			Datum: NAD 83				
Soil Map Unit Name: Madison fine sandy loa							
Are climatic / hydrologic conditions on the site typic	cal for this time of year? Yes N	lo (If no, explain in R	emarks.)				
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances" r	oresent? Yes No				
Are Vegetation, Soil, or Hydrology		If needed, explain any answe					
SUMMARY OF FINDINGS – Attach sit							
Hadronia dia Manadalia Barrando	<u> </u>	<u> </u>	· · · · · · · · · · · · · · · · · · ·				
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	Is the Samp	oled Area					
Wetland Hydrology Present? Yes	▼ No within a We	tland? Yes <u>▼</u>	No				
Remarks:							
Cowardin: PEM HGM: depressional W	t: RPWWN						
Information listed on this form represent of wetland hydrology, hydrophytic veget Supplement delineation methodology.	s the data collected in 2015. Th ation, and hydric soils was conf	e wetland was revisited firmed using the USACE	on 11/14/2019. Presence E EMP Regional				
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Indica	tors (minimum of two required)				
Primary Indicators (minimum of one is required; of	check all that apply)	Surface Soil	Cracks (B6)				
✓ Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Ve	getated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Pa	tterns (B10)				
✓ Saturation (A3)	Oxidized Rhizospheres on Living F	Roots (C3) Moss Trim Li	ines (B16)				
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season	Water Table (C2)				
Sediment Deposits (B2)	Recent Iron Reduction in Tilled So	ils (C6) Crayfish Buri	rows (C8)				
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Vi	sible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or S	tressed Plants (D1)				
Iron Deposits (B5)		✓ Geomorphic	Position (D2)				
Inundation Visible on Aerial Imagery (B7)		Shallow Aqui	itard (D3)				
Water-Stained Leaves (B9)			Microtopographic Relief (D4)				
Aquatic Fauna (B13)		✓ FAC-Neutral	Test (D5)				
Field Observations:	0						
Surface Water Present? Yes <u>✓</u> No _	Depth (inches):2						
	✓ Depth (inches):		,				
Saturation Present? Yes <u>▼</u> No _ (includes capillary fringe)	Depth (inches):0	Wetland Hydrology Presen	nt? Yes <u>√</u> No				
Describe Recorded Data (stream gauge, monitor	ing well, aerial photos, previous inspect	ions), if available:					
Remarks:							
This is a small depressional wetland adj	acent to an intermittent stream.						
,							

VEGETATION (Four Strata) -

	Absolute	- Dominant	Indicator	Dominance Test work	sheet:		
ree Stratum (Plot size: 30')	% Cover	Species?		Number of Dominant S That Are OBL, FACW,	pecies	1	(A)
				Total Number of Domir			_ ('')
				Species Across All Stra	·	1	_ (B)
				Percent of Dominant S That Are OBL, FACW,		100	_ (A/B)
				Prevalence Index wor	ksheet:		
	0	= Total Cov	/er	Total % Cover of:		Multiply by:	
50% of total cover:0				OBL species	x 1 =	·	
apling/Shrub Stratum (Plot size: 15')				FACW species	x 2 =	:	
,				FAC species	x 3 =	:	
				FACU species	x 4 =	:	
			<u> </u>	UPL species	x 5 =	:	
			-	Column Totals:	(A)		(B)
				Prevalence Index	= B/A =		
				Hydrophytic Vegetation			
	-			1 - Rapid Test for I			
	-	-		✓ 2 - Dominance Tes		rogotation	
				3 - Prevalence Ind			
	0	= Total Cov	/er	4 - Morphological /		(Provide su	innorting
50% of total cover: 0	20% of	total cover	:0	data in Remark			
erb Stratum (Plot size: 5')				Problematic Hydro			,
Glyceria striata	30		OBL	Problematic Hydro	priytic veget	alion (⊏xp	iaiii)
Panicum sp.	5		ND	landinatara of budria an		يند جا ما ام	
Scirpus atrovirens	5		OBL	¹ Indicators of hydric so be present, unless dist			/ must
Carex stricta	5		<u>OBL</u>	Definitions of Four Ve	•		
Juncus effusus	5		F <u>ACW</u>				
				Tree – Woody plants, e more in diameter at bre			
				height.	asi neigni (L	лы і), теgai	uless of
				0 11 101 1 111			
				Sapling/Shrub – Wood than 3 in. DBH and gre			
)				m) tall.		0 9 0 0 12	-0 (.
				Herb – All herbaceous	(non woods)	Anlanta ras	aardlaaa
	50	= Total Cov	/er	of size, and woody plar			yaruless
50% of total cover: 25	20% of	total cover	10				20.6.
oody Vine Stratum (Plot size: 15')				Woody vine – All wood height.	ay vines grea	ater than 3.2	∠8 ft in
				noight.			
			<u> </u>	Hydrophytic Vegetation			
	0	= Total Cov	/Or		s	No	_
		= Total Cov	/EI				_
50% of total cover: 0	20% of	total cover	. 0				

SOIL Sampling Point: W-B5

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the i	ndicator	or confirm	the abse	ence of indicators.)
Depth	Matrix		Redo	x Feature:	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Textur	
0-12	10YR 4/2	98	7.5YR 5/6	2	_C	M/PL	SiL	<u>. </u>
12-20	10YR 4/2	100					SiL	
					-			<u> </u>
					-			
					-			
¹ Type: C=Co	oncentration, D=Depl	etion. RM=	Reduced Matrix. MS	S=Masked	Sand Gra	ains.	² Location	on: PL=Pore Lining, M=Matrix.
Hydric Soil		,	,					ndicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		ce (S8) (N	ILRA 147,		Coast Prairie Redox (A16)
Black Hi			Thin Dark Su				· -	(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix (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	e (A11)	Depleted Dar				_	Other (Explain in Remarks)
	ark Surface (A12)	DD N	Redox Depre			I DD N		
	lucky Mineral (S1) (L \ 147, 148)	KK N,	Iron-Mangan		es (F12) (LKK N,		
	Gleyed Matrix (S4)		Umbric Surfa	-	MIRA 13	6 122)		³ Indicators of hydrophytic vegetation and
	tedox (S5)		Piedmont Flo				8)	wetland hydrology must be present,
	Matrix (S6)		Red Parent N					unless disturbed or problematic.
	_ayer (if observed):				/ (,	<u>, </u>	, p
	,							
	ches):						Hydric	Soil Present? Yes ✓ No
Remarks:							11,741.10	
Nemarks.								



Photograph Direction SW

Date: 04/02/2015

Comments: 2015 wetland delineation.



Photograph Direction NW

Date: 11/14/19

Mountain Valley Pipeline			COORDINATES:	Lat.	36.929954	Lon.	-79.526831
IPTION: creage}, unaltered	d or impairments)				W-C1, Timber Mat Crossing		
9/28	3/2021	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetl	land Indicators						
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0182	Emergent					
					PART III - Advanced	Mitigatio	n
					Advanced Mitigation (Y or N)		Y
					,		
	0.0182						
	Unit Scores						
ssification					ILF Costs		
					#4 000 00		
					\$1,092.00		
	9/28 PART I - Wetl Impact Wetland Classification Emergent	IPTION: creage}, unaltered or impairments) 9/28/2021 PART I - Wetland Indicators Impact Wetland (acreage) Classification Emergent 0.0182 0.0182 PART II - Unit Scores	IPTION: creage}, unaltered or impairments) 9/28/2021 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0182 Emergent 0.0182 PART II - Unit Scores	IPTION: creage}, unaltered or impairments) 9/28/2021 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts Wetland Classification Emergent 0.0182 Emergent 0.0182 PART II - Unit Scores assification Replacement Unit(s) 0.0182 0	PPTION: creage}, unaltered or impairments) 9/28/2021 WEATHER CONDITIONS: PART I - Wetland Indicators Impact (acreage) Wetland Classification Emergent 0.0182 Emergent 0.0182 PART II - Unit Scores assification Replacement Unit(s) 0.0182 0	PTION: creage), unaltered or impairments) PART I - Wetland Indicators Impact Impacts Wetland Classification Classification Emergent 0.0182 Emergent PART II - Advanced Sustainable Determination Made or Advanced Mitigation (Y or N) PART II - Unit Scores sistification Replacement Unit(s) 0.0182 0.0182 0.0182 0.0182 0.0182 0.0182 0.0182 0.0182 0.0182 0.0182 0.0182 0.0182 0.0182 0.0182	PTION: creage), unaltered or impairments) PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0182 Emergent DATE I - Wetland Indicators Emergent 0.0182 Emergent O.0182 Emergent O.0182 Emergent O.0182 Emergent Estimated Indicators PART II - Unit Scores Replacement Unit(s) 0.0182 St.1,092.00

Project/Site: MVP	City/County: Pittsylvania Sampling Date:				
Applicant/Owner: MVP					
Investigator(s): L.Harloe, K.Lamontagne, A.	Flake, E. Stror Section, Township, Range: No.	/A			
Landform (hillslope, terrace, etc.): Toeslope	Local relief (concave, convex, no	ne): Concave	Slope (%): 1		
Subregion (LRR or MLRA): LRRP		.526893	Datum: NAD 83		
Soil Map Unit Name: Madison fine sandy loa					
Are climatic / hydrologic conditions on the site typic					
Are Vegetation, Soil, or Hydrology _	-	•	resent? Yes ✓ No		
Are Vegetation, Soil, or Hydrology		explain any answe			
	e map showing sampling point location	-			
The second secon	, and showing sampling point reduction		, important routeros, oto.		
Hydrophytic Vegetation Present? Yes	Is the Sampled Area				
Hydric Soil Present? Yes	within a wetland?	Yes	No		
Wetland Hydrology Present? Yes Remarks:	√ No				
Cowardin Code:PEM HGM:depressiona	al WT: RPWWN				
Information listed on this form represent of wetland hydrology, hydrophytic vegets Supplement delineation methodology.	s the data collected in 2015. The wetland ation, and hydric soils was confirmed us	d was revisited ing the USACE	on 11/16/2019. Presence E EMP Regional		
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)		
Surface Water (A1)	True Aquatic Plants (B14)		getated Concave Surface (B8)		
✓ High Water Table (A2)	 Hydrogen Sulfide Odor (C1)✓ Oxidized Rhizospheres on Living Roots (C3)	Drainage Pat			
✓ Saturation (A3) Water Marks (B1)	Oxidized Rnizospheres on Living Roots (C3) Presence of Reduced Iron (C4)	Moss Trim Li	Water Table (C2)		
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burr			
Drift Deposits (B3)	Thin Muck Surface (C7)	=	sible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Other (Explain in Remarks)		tressed Plants (D1)		
Iron Deposits (B5)		✓ Geomorphic	Position (D2)		
Inundation Visible on Aerial Imagery (B7)		Shallow Aqui	tard (D3)		
Water-Stained Leaves (B9)			phic Relief (D4)		
Aquatic Fauna (B13)		✓ FAC-Neutral	Test (D5)		
Field Observations:	✓ Post the (tracks on)				
	Depth (inches): Depth (inches): 3				
	Deptit (inches)	Hydrology Presen	ıt? Yes √ No		
(includes capillary fringe)	Depth (menes) wettand i	3 03	It: 163 <u>v</u> NO		
Describe Recorded Data (stream gauge, monitori	ing well, aerial photos, previous inspections), if ava	ıilable:			
Remarks:					
Wetland extends beyond ROW.					

		111
Sampling	Doint.	VV-C I
	т Опп.	

301	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover Species? Status	Number of Dominant Species
1		That Are OBL, FACW, or FAC:3 (A)
2		Total Number of Deminant
3		Total Number of Dominant Species Across All Strata:3 (B)
		Species Neross Air Strata.
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 Cover	
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		
	0 = Total Cover	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:0		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')		data in Remarks or on a separate sheet)
1. Juncus effusus	20 ✓ FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Persicaria sagittata		
		¹ Indicators of hydric soil and wetland hydrology must
3. Arthraxon hispidus	10	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		noig.iii
		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		Herb – All herbaceous (non-woody) plants, regardless
	40 = Total Cover	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 20	20% of total cover:8	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
5000 60 11		11c3citt: 1c3 <u>v</u> 100
	20% of total cover:0	
Remarks: (Include photo numbers here or on a separate s		
Carex sp with no heads not identified to species	and not included in domin	ance test.

Sampling Point: W-C1

Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	x Features % 7	Γype ¹	Loc ²	Texture	Remarks
0-12	10YR 4/1	85	7.5YR 5/8			M/PL	L	<u> </u>
		- — —				M		
12-20	10YR 3/2	70	10YR 5/8	30	 -	IVI	SL	C,M
		letion, RM=	Reduced Matrix, MS	S=Masked Sa	and Grair	ns.		L=Pore Lining, M=Matrix.
ydric Soil I							Indica	ators for Problematic Hydric Soils ³ :
_ Histosol			Dark Surface		/ > /			cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Be				148) C	Coast Prairie Redox (A16)
_ Black His			Thin Dark Su			7, 148)	_	(MLRA 147, 148)
_ , ,	n Sulfide (A4)		Loamy Gleye)		P	riedmont Floodplain Soils (F19)
	Layers (A5)		✓ Depleted Ma					(MLRA 136, 147)
	ck (A10) (LRR N)	- (011)	Redox Dark		7)			Yery Shallow Dark Surface (TF12)
	Below Dark Surface	e (ATT)	Depleted Date		/)		0	Other (Explain in Remarks)
	rk Surface (A12)	DD N	Redox Depre		/E40) /LF	2D N		
	ucky Mineral (S1) (L	_RR N,	Iron-Mangan		(F12) (LF	R N,		
	147, 148)		MLRA 13	•	DA 10/	100)	31	to the second section of the section
	leyed Matrix (S4)		Umbric Surfa					icators of hydrophytic vegetation and
-	edox (S5)		Piedmont Flo					etland hydrology must be present,
	Matrix (S6)		Red Parent N	/laterial (F21)) (MLRA	127, 147) un	less disturbed or problematic.
	ayer (if observed):							
Type:								,
Depth (inc	:hes):						Hydric Soil	Present? Yes ✓ No
emarks:							1	



Photograph Direction North

Date: 04/01/2015

Comments: 2015 wetland delineation.



Photograph Direction WNW

Date: 11/16/19

W-H5, Pipeline ROW PRECIPITATION PAST 48 HRS:		
PRECIPITATION PAST 48 HRS:		
PRECIPITATION PAST 48 HRS:		
PART III - Advanced	Mitigatio	n
Advanced Mitigation (Y or N)		Y
	-	
ILF Costs		
640.400.0	^	
\$12,402.0	U	
	Sustainable Determination Made of Advanced Mitigation (Y or N) Estimated ILF Costs	

Project/Site: MVP		City/C	ounty: Pittsylvania		Sampling Date: 04/02/2015
Applicant/Owner: MVP					Sampling Point: W-H5
Investigator(s): A.Stott, A. Gr					
•					Slope (%): 1-2%
Subregion (LRR or MLRA): LR		36.925084	Lona: -79	.516876	Datum: NAD 83
Soil Map Unit Name: Madison			_		
Are climatic / hydrologic conditio			,		
Are Vegetation, Soil		=			oresent? Yes <u>√</u> No
Are Vegetation, Soil		= -		explain any answe	
_					, important features, etc.
		.p se.m.g sa	.p9 po		,portant router 00, 010.
Hydrophytic Vegetation Presen	,	No	Is the Sampled Area	,	
Hydric Soil Present? Wetland Hydrology Present?	Yes <u>✓</u> Yes ✓	No No	within a Wetland?	Yes <u></u> ✓	No
Remarks:		l			
Cowardin Code:PEM HG	3M: depressional W	/T: RPWWD			
Information listed on this of wetland hydrology, hyd Supplement delineation n	form represents the Irophytic vegetation nethodology.	e data collected in , and hydric soils	n 2015. The wetland s was confirmed us	d was revisited ing the USACI	on 11/16/2019. Presence E EMP Regional
HYDROLOGY					
Wetland Hydrology Indicator	'S:			Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of	f one is required; check	all that apply)		Surface Soil	Cracks (B6)
✓ Surface Water (A1)	T	rue Aquatic Plants (I	B14)	Sparsely Ve	getated Concave Surface (B8)
✓ High Water Table (A2)		Hydrogen Sulfide Odd		✓ Drainage Pa	tterns (B10)
✓ Saturation (A3)		· · · · · · · · · · · · · · · · · · ·	es on Living Roots (C3)	Moss Trim L	
Water Marks (B1)		Presence of Reduced		-	Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Bur	
Drift Deposits (B3) Algal Mat or Crust (B4)		Thin Muck Surface (C Other (Explain in Ren			isible on Aerial Imagery (C9) tressed Plants (D1)
Iron Deposits (B5)	`	other (Explain in Ken	narks)	✓ Geomorphic	· ·
Inundation Visible on Aeria	al Imagery (B7)			Shallow Aqu	
Water-Stained Leaves (B9	= =				aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:					
Surface Water Present?	Yes No	Doptii (iiioiios):	2"		
Water Table Present?	Yes No	Deptit (inches)	6"		
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):	2" Wetland F	Hydrology Preser	nt? Yes <u>√</u> No
Describe Recorded Data (stream	am gauge, monitoring we	ell, aerial photos, pre	vious inspections), if ava	nilable:	
Remarks:					
Areas within wetland have	e ponded water up	to a 12 inches de	еер		
Area recently clear cut. C	lear cut trees are re	ed maple, and Ar	nerican sycamore		
1					l l

o "	.	W LE
Sampling	Point:	VV-113

201	Absolute Dominant Indica	tor Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover Species? Stat	Number of Dominant Species
1		That Are OBL, FACW, or FAC: 2 (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: 67% (A/B)
6		
7		Prevalence Index worksheet:
/· <u> </u>	0 = Total Cover	Total % Cover of: Multiply by:
F00/ -ft-t-t-t		OBL species x 1 =
4.51	20% of total cover:0	FACW species x 2 =
Subing/Shidb Shatam (Flot Size)	_	
1. Lindera benzoin	5 <u>√</u> FAC	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		
8		1 - Rapid Test for Hydrophytic Vegetation
		— ✓ 2 - Dominance Test is >50%
9		3 - Prevalence Index is ≤3.0 ¹
0.5	= Total Cover	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 2.5	20% of total cover:	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')		•
1. Symplocarpus foetidus		Problematic Hydrophytic Vegetation ¹ (Explain)
2. Podophyllum peltatum	10 ✓ FAC	ı
·		Indicators of hydric soil and wetland hydrology must
3		be present, unless disturbed or problematic.
4		Definitions of Four Vegetation Strata:
5		Trans Manchards and all and a 2 in (7 (and) and
6		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7		
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 Cover	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 15	20% of total cover: 6	
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 Cover	Present? Yes Vo No
50% of total cover: 0		
		<u> </u>
Remarks: (Include photo numbers here or on a separate s	sneet.)	
Disturbed area		

SOIL Sampling Point: W-H5

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the i	ndicator	or confirn	n the absence	of indicators.)
Depth	Matrix			x Features	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	<u>Remarks</u>
0-4"	10YR 3/2	90	5YR 3/4	10	С	М	SL	
4-20"	10YR 4/2	85	10YR 5/8	15	С	M	S	
						·	-	
-	-				-		·——	
	-							
						<u> </u>		
1- 0.0							2, ,, ,,	
Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gr	ains.		L=Pore Lining, M=Matrix. ators for Problematic Hydric Soils ³ :
-			Dork Curtons	(07)				
Histosol	oipedon (A2)		Dark Surface Polyvalue Be		1) (82) an	ЛГРД 1/17		cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
Black His	•		Tolyvalde Be				((MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			, ,	F	Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat		,			(MLRA 136, 147)
	ck (A10) (LRR N)		✓ Redox Dark S		6)		\	/ery Shallow Dark Surface (TF12)
	l Below Dark Surface	(A11)	Depleted Dar				(Other (Explain in Remarks)
	rk Surface (A12)		Redox Depre					
_	lucky Mineral (S1) (L	RR N,	Iron-Mangane		es (F12) (LRR N,		
	147, 148)		MLRA 130	-	MI DA 11	1 (100)	31	licatore of budgenbutic constation and
✓ Sandy G	leyed Matrix (S4)		Umbric Surfa Piedmont Flo					dicators of hydrophytic vegetation and etland hydrology must be present,
_	Matrix (S6)		Red Parent M					lless disturbed or problematic.
	ayer (if observed):		Red r drent iv	naterial (i	ZI) (WILI	7(12), 14	1	ileas disturbed of problematic.
	.,							
٠	ches):						Hydric Soil	Present? Yes ✓ No
Remarks:							J J J J J J J J J J	
rtomamor								



Photograph Direction SW

Date: 04/02/2015

Comments: 2015 wetland delineation.



Photograph Direction SW

Date: 11/16/19

Mountain Valley Pipeline			COORDINATES:	Lat.	36.916508	Lon.	-79.49236
RIPTION: acreage}, unaltered	d or impairments)				W-B3, Timber Mat Crossing		
9/28	3/2021	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wet	land Indicators						
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0013	Emergent					
					PART III - Advanced	Mitigatio	n
					Advanced Mitigation (Y or N)		Y
				•	•		
	0.0013			_			
	0.0013 Unit Scores			j	Estimated		
PART II - I		Replacement Unit(s)			Estimated ILF Costs		
		0.0013			ILF Costs		
	9/28 PART I - Wet Impact Wetland Classification	9/28/2021 PART I - Wetland Indicators Impact Impacts Wetland (acreage) Classification	RIPTION: acreage}, unaltered or impairments) 9/28/2021 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts Mitigation Wetland (acreage) Wetland Classification Classification	RIPTION: Increage}, unaltered or impairments) 9/28/2021 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts (acreage) Wetland Classification Classification Classification	RIPTION: acreage}, unaltered or impairments) 9/28/2021 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts Wetland (acreage) Wetland Classification Emergent 0.0013 Emergent	RIPTION: Icreage}, unaltered or impairments) 9/28/2021 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0013 Emergent PART III - Advanced Sustainable Determination Made on Advanced Mitigation	RIPTION: Icreage}, unaltered or impairments) 9/28/2021 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0013 Emergent PART III - Advanced Mitigation Sustainable Determination Made on Advanced Mitigation

Project/Site: MVP		Citv/C	ounty: Pittsylvania		Sampling Date: 03/31/2015
Applicant/Owner: MVP			,	State: VA	Sampling Point: W-B3
Investigator(s): C. Ansari, J	. Rodriguez, M. W				_
Landform (hillslope, terrace, et					Slope (%): 0
Subregion (LRR or MLRA): L	RRP L:	at: 36.916571			Datum: NAD 83
Soil Map Unit Name: Madiso					
•					
Are climatic / hydrologic condit	٠.	, and the second	· · · · · · · · · · · · · · · · · · ·	•	
Are Vegetation, Soil					resent? Yes No
Are Vegetation, Soil	, or Hydrology	naturally problema	atic? (If needed, e	explain any answer	s in Remarks.)
SUMMARY OF FINDIN	GS – Attach site	map showing sam	pling point location	ons, transects,	important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Remarks:	Yes <u>√</u> Yes <u>√</u>	No No No	Is the Sampled Area within a Wetland?	Yes <u></u> ✓	No
Cowardin: PEM HGM: I Information listed on this of wetland hydrology, hy obstructed by timber ma HYDROLOGY	· s form represents /drophytic vegetat	the data collected i	n 2015. The wetland s was was unable to	d was revisited be confirmed l	on 11/16/2019. Presence because the wetland was
Wetland Hydrology Indicate	ors:			Secondary Indicat	ors (minimum of two required)
Primary Indicators (minimum	of one is required; che	eck all that apply)		Surface Soil (Cracks (B6)
✓ Surface Water (A1)	_	_ True Aquatic Plants (Sparsely Veg	etated Concave Surface (B8)
✓ High Water Table (A2)		_ Hydrogen Sulfide Od		Drainage Patt	
✓ Saturation (A3)		_ Oxidized Rhizosphere	=	Moss Trim Lir	
Water Marks (B1)Sediment Deposits (B2)		Presence of ReducedRecent Iron Reduction		Dry-Season V Crayfish Burro	
Drift Deposits (B3)		Thin Muck Surface (C		=	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		_ Other (Explain in Rer	•		ressed Plants (D1)
Iron Deposits (B5)				✓ Geomorphic F	Position (D2)
Inundation Visible on Ae				Shallow Aquit	
Water-Stained Leaves (E	39)				phic Relief (D4)
✓ Aquatic Fauna (B13)				✓ FAC-Neutral	Test (D5)
Field Observations:	Van 🗸 Na	Danth (inches)	4		
Surface Water Present? Water Table Present?	Yes Vos No	Depth (inches): Depth (inches):	0		
Saturation Present?	Ves V No	Depth (inches):	0 Wetland b	Hydrology Present	t? Yes ✓ No
(includes capillary fringe)	· · · · · · · · · · · · · · · · · · ·				t: Tes_▼ No
Describe Recorded Data (stre	eam gauge, monitorino	g well, aerial photos, pre	vious inspections), if ava	ilable:	
Remarks:					
2015 note:					
The feature is adjacent feature was not conside	o an S-G4 along a	a toe slope. The we shrub wetland.	tland had less than	30% canopy co	over. Therefore, this
Frog eggs in standing w	ater.				

Sampling	Point.	W-B3
Sambilliu	r onn.	

201	Absolute Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover Species? Status	Number of Dominant Species
1		That Are OBL, FACW, or FAC:4 (A)
2		T. I. M. J. CD. J. J.
3		Total Number of Dominant Species Across All Strata: 4 (B)
		Species Across Air Strata.
4		Percent of Dominant Species
5		That Are OBL, FACW, or FAC: (A/B)
6		Prevalence Index worksheet:
7		
	0 = Total Cover	Total % Cover of: Multiply by:
	20% 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 =
		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		1 - Rapid Test for Hydrophytic Vegetation
9.		✓ 2 - Dominance Test is >50%
<i>'</i>	15 = Total Cover	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:	20% of total cover: 0	4 - Morphological Adaptations ¹ (Provide supporting
<u></u>	20% of total cover	data in Remarks or on a separate sheet)
, ist size:	E / 05:	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Carex Iurida	_ /	<u> </u>
2. Scirpus atrovirens	5 √ OBL	¹ Indicators of hydric soil and wetland hydrology must
3. Poa trivialis	10✓F <u>ACW</u>	be present, unless disturbed or problematic.
4		Definitions of Four Vegetation Strata:
5		Definitions 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 Cover	of size, and woody plants less than 3.28 ft tall.
50% of total cover:0	20% of total cover: 0	Was the day Allows the day are the three 2 20 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
	= Total Cover	Present? Yes ✓ No
50% of total cover: 0	20% of total cover:0	
Remarks: (Include photo numbers here or on a separate s	heet.)	
	•	

SOIL Sampling Point: W-B3

Profile Desc	ription: (Describe	to the depth	needed to docum	nent the i	ndicator	or confirm	n the abse	ence of indicators.)
Depth	Matrix		Redox	K Features	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Textur</u>	e Remarks
0-16"	10YR 3/1	100					LS	
		· <u></u>						
		· ——— —			-			
							-	
							-	
							-	
¹ Type: C=Co	ncentration, D=Dep	letion, RM=R	educed Matrix, MS	=Masked	Sand Gra	ains.	² Location	n: PL=Pore Lining, M=Matrix.
Hydric Soil I		·	·					ndicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Be		ce (S8) (N	II RA 147	148)	Coast Prairie Redox (A16)
Black His			Tolyvalde Be				. 10, _	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			17, 110)		Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat		/		_	(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark S		6)			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	RR N,	Iron-Mangane			LRR N,		
	. 147, 148)		MLRA 136		` , `			
	leyed Matrix (S4)		Umbric Surfa		MLRA 13	6, 122)		³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo				18)	wetland hydrology must be present,
-	Matrix (S6)		Red Parent M					unless disturbed or problematic.
Restrictive L	ayer (if observed):							•
Type:								
	hes):						Hydric	Soil Present? Yes ✓ No
Remarks:	1103).						Tiyano	
Remarks.								



Photograph Direction NW

Date: 03/31/2015

Comments: 2015 wetland delineation.



Photograph Direction NW

Date: 11/16/19

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	36.905418	Lon.	-79.471566
STREAM/SITE ID AND SITE DESCR	RIPTION:				W	-CC2-PEM, Timber Mat Crossing		
(% stream slope, watershed size {a	creage}, unaltered	d or impairments)						
FORM OF MITIGATION:								
DATE:	9/28	3/2021	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-CC2-PEM	Emergent	0.0272	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made or		
						Advanced Mitigation		Υ
						(Y or N)		
Total Impact	-	0.0272						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0272					
Total Scrub-Shrub			0			\$1,632.00		
Total Forested			0					
Total Open Water			0					

Project/Site: MVP	City/Count	_{y:} <u>Pittsylvania</u>	Sampling Date: 07/16/2015
Applicant/Owner: MVP		State: V	A Sampling Point: W-CC2-PEM
Investigator(s): JH, LM, LS, CL	Section, Te	ownship, Range: N/A	
Landform (hillslope, terrace, etc.): Depression			ave Slope (%): 0
Subregion (LRR or MLRA): LRRP La			Datum: NAD 83
Soil Map Unit Name: Madison fine sandy loam,			
Are climatic / hydrologic conditions on the site typical			
Are Vegetation, Soil, or Hydrology			nces" present? Yes No
Are Vegetation, Soil, or Hydrology			•
SUMMARY OF FINDINGS – Attach site r			·
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes ✓ Yes ✓ Yes ✓	IS U	he Sampled Area hin a Wetland? Yes	
Remarks: Cowardin Code: PEM HGM: Riverine WT: RPWV	MD		
Information listed on this form represents data coll hydrophytic vegetation, and hydric soils was confir was previously confirmed by the USACE during 20 anticipated that wetland criteria will persist in the a		d was revisited on 11/16/2019 MP Regional Supplement deli al areas of wetland were iden ad area after construction com	9. Presence of wetland hydrology, neation methodology. W-CC2-PEM tified during the 2019 revisit. It can be apletion.
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary	Indicators (minimum of two required)
Primary Indicators (minimum of one is required; chec	ck all that apply)	Surfac	ce Soil Cracks (B6)
✓ Surface Water (A1)	True Aquatic Plants (B14)	Spars	ely Vegetated Concave Surface (B8)
_	_ Hydrogen Sulfide Odor (C		age Patterns (B10)
	Oxidized Rhizospheres on	=	Trim Lines (B16)
1 	Presence of Reduced Iron		eason Water Table (C2)
	Recent Iron Reduction in	· / — ·	sh Burrows (C8)
Drift Deposits (B3)	Thin Muck Surface (C7)		ation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks	·	ed or Stressed Plants (D1)
Iron Deposits (B5)			orphic Position (D2)
Inundation Visible on Aerial Imagery (B7)			w Aquitard (D3)
Water-Stained Leaves (B9)			opographic Relief (D4)
✓ Aquatic Fauna (B13)		<u>▼</u> FAC-1	Neutral Test (D5)
Field Observations: Surface Water Present? Yes ✓ No	Depth (inches):0.5		
	Depth (inches):		
	Depth (inches):		Present? Yes ✓ No
(includes capillary fringe)			riesent: resNo
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous	s inspections), if available:	
Remarks:			

001	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?		Number of Dominant Species
1. Fraxinus americana	20	✓	FACU	That Are OBL, FACW, or FAC: (A)
2				Total Number of Densired
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				
F				Percent of Dominant Species That Are OBL FACW or FAC: 67% (A/B)
·				That Are OBL, FACW, or FAC: 6/% (A/B)
6		-		Prevalence Index worksheet:
1	20			Total % Cover of: Multiply by:
50% of total cover: 10		= Total Cov		OBL species x 1 =
	20% 01	total cover		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				
7				Hydrophytic Vegetation Indicators:
8.				1 - Rapid Test for Hydrophytic Vegetation
9.		-		✓ 2 - Dominance Test is >50%
7	0	= Total Cov	· · · · · · · · · · · · · · · · · · ·	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 0		total cover:	_	4 - Morphological Adaptations ¹ (Provide supporting
	2070 01	total cover.		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5) 1. Leersia oryzoides	40	./	ODI	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Juncus effusus	35		OBL	
=-			F <u>ACW</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Microstegium vimineum	8		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 more in diameter at breast height (DBH), regardless of
7				height.
8				
9		-		Sapling/Shrub – Woody plants, excluding vines, less
10.		-		than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
11				
11	83			Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 41.5		= Total Cov		of size, and woody plants less than 3.28 it tall.
	20% 01	total cover.	10.0	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	20% of	total cover	0	
Remarks: (Include photo numbers here or on a separate sl	heet.)			

Sampling Point: W-CC2-PEM

Color (moist) 96 Color (moist) 97 Type: Loc. Texture Remarks 0-12 10YR 5/1 98 10YR 4/6 2 C M/PL SCL SCL SCL 10YR 5/1 98 10YR 4/6 2 C M/PL SCL SCL SCL SCL SCL SCL SCL SCL SCL SC	Domarko
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Depleted Below Dark Surface (A10) Depleted Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) MLRA 136) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Pledmont Floodplain Soils (F1) Loamy Gleyed Matrix (F2) Depleted Dark Surface (F7) Depleted Dark Surface (F7) Other (Explain in Remarks) MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Pledmont Floodplain Soils (F19) (MLRA 148) Wetland hydrology must be public before the problems of the probl	Remarks
Histosol (A1)	
ric Soil Indicators: Histosol (A1) — Dark Surface (S7) — 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) — Muck (A10) (MLRA 147, 148) — Piedmont Floodplain Soils (MLRA 147, 148) — Piedmont Floodplain Soils (MLRA 136, 147) — Very Shallow Dark Surface — Other (Explain in Remarks) — Sandy Mucky Mineral (S1) (LRR N) — MLRA 147, 148) — Sandy Redox (S5) — Sandy Redox (S5) — Piedmont Floodplain Soils (F12) (LRR N, MLRA 136, 122) — Piedmont Floodplain Soils (F12) — Very Shallow Dark Surface — Other (Explain in Remarks) — Other (Explain in Remarks) — Wetland hydrology must be pounded in Soils (F12) (MLRA 148) — Red Parent Material (F21) (MLRA 127, 147) — Wetland hydrology must be pounded or problemate trictive Layer (if observed): — Wetland hydrology must be pounded or problemate trictive Layer (if observed): — Wetland hydrology must be pounded or problemate trictive Layer (if observed): — Wetland hydrology must be pounded or problemate trictive Layer (if observed): — Wetland hydrology must be pounded or problemate trictive Layer (if observed): — Wetland hydrology must be pounded or problemate trictive Layer (if observed): — Wetland hydrology must be pounded or problemate trictive Layer (if observed): — Wetland hydrology must be pounded or problemate trictive Layer (if observed): — Wetland hydrology must be pounded or problemate trictive Layer (if observed): — Wetland hydrology must be pounded or problemate trictive Layer (if observed): — Wetland hydrology must be pounded or problemate trictive Layer (if observed): — Wetland Hydrology must be pounded or problemate trictive Layer (if observed): — Wetland Hydrology must be pounded or problemate trictive Layer (if observed): — Wetland Hydrology (Altra 147, 148) — Piedmont Floodplain Soils (F12) (MLRA 127, 147) — Wetland Hydrology (Altra 148) — Wetland	
ric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Thin Dark Surface (F13) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Redox (S5) Stripped Matrix (S6) Thin Dark Surface (S9) (MLRA 147, 148) Depleted Matrix (F2) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrology must be pountered in the problematory of the policy o	
ric Soil Indicators: Histosol (A1) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Thin Dark Surface (F13) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Redox (S5) Stripped Matrix (S6) Thin Dark Surface (S9) (MLRA 147, 148) Depleted Matrix (F2) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrology must be pountered in the problematory of the policy o	
Histosol (A1)	-
Histosol (A1)	
Histosol (A1)	
Histosol (A1)	
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Coast Prairie Redox (A16) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Thin Dark Surface (S9) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrology must be purchastic tirctive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes ✓	coblematic Hydric Soils ³
Black Histic (A3)	
Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Matrix (F2) — Piedmont Floodplain Soils (MLRA 136, 147) Very Shallow Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S6) Trictive Layer (if observed): Depth (inches):	
Stratified Layers (A5)	
2 cm Muck (A10) (LRR N)	
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripp	
Thick Dark Surface (A12)	
Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Strictive Layer (if observed): Type: Depth (inches): Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Jeron-Manganese Masses (F12) (MLRA 136, 122) Jeron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Jeron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Jeron-Manganese Masses (F12) (MLRA 148) Jeron-Manganese Masses (F12) (MLRA 148) Jeron-Manganese Masses (F12) (MLRA 148) Je	iii iii Kemarkaj
MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Stripped Matrix (S6) Experiment Floodplain Soils (F19) (MLRA 148) Red Parent Material (F21) (MLRA 127, 147) Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes ✓	
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be postripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problems strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes ✓	
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problema strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes ✓	ydrophytic vegetation and
Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes	logy must be present,
Type:	ed or problematic.
Depth (inches): Hydric Soil Present? Yes ✓	
marks:	Yes ✓ No
	-

Wetland Photograph Page

Wetland ID W-CC2-PEN



Photograph Direction West

Date: 07/16/2015

Comments: 2015 wetland delineation.



Photograph Direction West

Date: 11/16/19

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	36.894087	Lon.	-79.44611
STREAM/SITE ID AND SITE DESCR	IPTION:			W-MM9, Timber Mat Crossing				
(% stream slope, watershed size {ad	(% stream slope, watershed size {acreage}, unaltered or impairments)							
FORM OF MITIGATION:								
DATE:	9/28	3/2021	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	and Indicators					•	
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-MM9	Emergent	0.0108	Emergent					
						PART III - Advanced		n
						Sustainable Determination Made or Advanced Mitigation (Y or N)	וו	Υ
Total Impact		0.0108						
		Unit Scores				Estimated		
Wetland Cla	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0108			40.40.00		
Total Scrub-Shrub			0			\$648.00		
Total Forested			0					

Total Open Water

Project/Site: MVP	City/County: Pittsy	lvania	Sampling Date: 08/25/2015
Applicant/Owner: MVP		State: VA	_ Sampling Point: W-MM9
Investigator(s): A. Grech, A. Stott, M. Whitten			
Landform (hillslope, terrace, etc.): Valley bottom		=	Slope (%): 1-4%
Subregion (LRR or MLRA): LRRP Lat:			Datum: NAD 83
Soil Map Unit Name: Chenneby-Toccoa complex		U	
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology		·	resent? Yes No
Are Vegetation, Soil, or Hydrology		needed, explain any answer	
SUMMARY OF FINDINGS – Attach site ma		-	
			, , , , , , , , , , , , , , , , , , , ,
Hydrophytic Vegetation Present? Yes ✓	No Is the Sampl	led Area	
Hydric Soil Present? Yes V	No within a Wet	land? Yes	No
Wetland Hydrology Present? Yes ✓	No		
Remarks: Cowardin Code: PEM HGM: depression W	T: RPWWN		
Information listed on this form represents the Presence of wetland hydrology, hydrophytic Supplement delineation methodology.	e data collected in 2015. The vegetation, and hydric soils	wetland was revisited was confirmed using th	on MM/DD/2019. le USACE EMP Regional
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicat	tors (minimum of two required)
Primary Indicators (minimum of one is required; check	all that apply)	Surface Soil (Cracks (B6)
Surface Water (A1)	Frue Aquatic Plants (B14)	Sparsely Veg	etated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Pat	
Saturation (A3) <u>✓</u> (Oxidized Rhizospheres on Living Ro	oots (C3) Moss Trim Lii	nes (B16)
Water Marks (B1) I	Presence of Reduced Iron (C4)	Dry-Season \	
1	Recent Iron Reduction in Tilled Soils		
	Thin Muck Surface (C7)		sible on Aerial Imagery (C9)
	Other (Explain in Remarks)	·	ressed Plants (D1)
Iron Deposits (B5)		Geomorphic I	
Inundation Visible on Aerial Imagery (B7)		Shallow Aquit	
Water-Stained Leaves (B9)Aquatic Fauna (B13)		Microtopogra	phic Relief (D4)
Field Observations:		I AC-Neullai	1 est (D3)
	Depth (inches):		
	Depth (inches):		
	-	Wetland Hydrology Presen	t? Yes ✓ No
(includes capillary fringe)		3 03	1. 163 <u>v</u> 110
Describe Recorded Data (stream gauge, monitoring w	ell, aerial photos, previous inspection	ons), if available:	
Remarks:			

Sampling	Point-	W-MM9
Sambiinu	POID:	* * * * * * * * * * * * * * * * * * * *

Tree Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:		
Tree Stratam (Flot Size.		Species?		Number of Dominant Species	3	(0)
1				That Are OBL, FACW, or FAC:		(A)
2				Total Number of Dominant	4	<i>(</i> =)
3				Species Across All Strata:	4	(B)
4				Percent of Dominant Species	7.5	
5				That Are OBL, FACW, or FAC:	75	(A/B)
6				Prevalence Index worksheet:		
7				Total % Cover of:	Multiply by:	
50% of total cover:0		= Total Cove		OBL species x		
Sapling/Shrub Stratum (Plot size: 15')	20% 01	total cover.		FACW species x 2		
				FAC species x 3		
1				FACU species x		
2				UPL species x !		
3				Column Totals: (A)		
4				Column rotals.		_ (5)
5				Prevalence Index = B/A =		_
6				Hydrophytic Vegetation Indicat	tors:	
7				1 - Rapid Test for Hydrophyt	ic Vegetation	
8				✓ 2 - Dominance Test is >50%		
9				3 - Prevalence Index is ≤3.0 ¹	I	
50% of total cover: 0		= Total Cove		4 - Morphological Adaptation	ıs¹ (Provide sup	porting
E!	20% 01	total cover:		data in Remarks or on a s	separate sheet)	
Herb Stratum (Plot size: 5) 1. Microstegium vimineum	30	1	FAC	Problematic Hydrophytic Veg	getation ¹ (Expla	iin)
2. Persicaria sagittata	20					
3, Onoclea sensibilis	15		OBL CVV	¹ Indicators of hydric soil and wetl	and hydrology	must
4. Lamium purpureum	15		FACW_	be present, unless disturbed or p		
5. Commelina communis	10		UPL	Definitions of Four Vegetation	Strata:	
6. Vernonia noveboracensis	5		FAC	Tree – Woody plants, excluding v	vines, 3 in. (7.6	cm) or
7 Amphicarpaea bracteata	5		FACW_	more in diameter at breast height		
· · · · · · · · · · · · · · · · · · ·				height.		
8				Sapling/Shrub – Woody plants,	excluding vines	s, less
9				than 3 in. DBH and greater than (or equal to 3.28	3 ft (1
10				m) tall.		
11	100			Herb – All herbaceous (non-wood	dy) plants, rega	ırdless
50% of total cover: 50		= Total Cover:		of size, and woody plants less that	an 3.28 π tall.	
Woody Vine Stratum (Plot size: 15')	20% 01	total cover:		Woody vine – All woody vines g	reater than 3.28	3 ft in
				height.		
1						
2						
3						
4				Hydrophytic		
5	_	Total Caus		Vegetation Present? Yes ✓	No	
50% of total cover: 0		= Total Cover:	_			
Remarks: (Include photo numbers here or on a separate s		total cover.				
Remarks. (include prioto numbers here of our a separate s	neet.)					

Sampling Point: W-MM9

	ription: (Describe	to the dep				or confirm	the absence	of indicators.)
Depth (inches)	Matrix	%	Color (moist)	x Feature	S Tuno ¹	Loc ²	Toyturo	Domorko
(inches) 0-6"	Color (moist) 10YR 4/2	90	5YR 4/6	<u>%</u> 10	Type ¹		Texture SCL	Remarks
						M/PL		
6-15"	10YR 4/1	90	5YR 4/6	10	<u>C</u>	M/PL	SCL	
15+"								Refusal:cf
		-		-				
				-				
		-		-				
¹ Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Indica	ators for Problematic Hydric Soils ³ :
Histosol			Dark Surface					cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be				148) <u> </u>	Coast Prairie Redox (A16)
Black His	stic (A3) n Sulfide (A4)		Thin Dark Su Loamy Gleye			147, 148)	-	(MLRA 147, 148) Piedmont Floodplain Soils (F19)
	l Layers (A5)		✓ Depleted Mat		(Г2)		<u> </u>	(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S		- 6)		V	/ery 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 130	-	/MI DA 1	24 122)	³ Ind	licators of hydrophytic vegetation and
	leyed Matrix (S4) edox (S5)		Umbric Surfa Piedmont Flo					etland hydrology must be present,
-	Matrix (S6)		Red Parent M					less disturbed or problematic.
	_ayer (if observed):			`	, ,	· · · · · · · · · · · · · · · · · · ·		'
Type: CF	=							
Depth (inc	ches): 15						Hydric Soil	Present? Yes ✓ No
Remarks:							1	

Wetland Photograph Page

Wetland ID W-MM9



Photograph Direction West

Date: 08/25/2015

Comments: 2015 wetland delineation.



Photograph Direction South

Date: 11/18/19

USACE FILE NO./Project Name:	Mountain Valley Pipeline		COORDINATES:	Lat.	36.894034	Lon.	-79.445486	
STREAM/SITE ID AND SITE DESCRI	PTION:					W-MM8-PEM, Pipeline ROW		
(% stream slope, watershed size {ac	creage}, unaltered	l or impairments)				· ·		
FORM OF MITIGATION:								
DATE:	9/28	/2021	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wetl	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
N-MM8-PEM	Emergent	0.0553	Emergent					
						PART III - Advanced	Mitigatio	on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0553						
		Unit Scores				Estimated		
Wetland Cla	ssification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0553			00.040.00		
Total Scrub-Shrub			0			\$3,318.00		
Total Forested			0					

Total Open Water

Project/Site: MVP	City/County: Pittsy	ylvania	Sampling Date: 08/25/2015
Applicant/Owner: MVP		State: VA	Sampling Point: W-MM8-PEM
Investigator(s): A. Grech, A. Stott, M. Whitten	Section, Township,	Range: N/A	
Landform (hillslope, terrace, etc.): Valley bottom	· · · · · · · · · · · · · · · · · · ·	_	Slope (%): 1-4%
Subregion (LRR or MLRA): LRRP Lat:			Datum: NAD 83
Soil Map Unit Name: Chenneby-Toccoa complex	·		
Are climatic / hydrologic conditions on the site typical for	,	o (If no, explain in R	
Are Vegetation, Soil, or Hydrology		·	present? Yes No
Are Vegetation, Soil, or Hydrology	-	f needed, explain any answe	
SUMMARY OF FINDINGS – Attach site ma			
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes ✓ Yes ✓ Yes ✓	No Is the Samp No within a We	/	No
Remarks: Cowardin Code: PEM HGM: depression W	T· RPWWN		
Information listed on this form represents the of wetland hydrology, hydrophytic vegetation Supplement delineation methodology.		e wetland was revisited rmed using the USACE	on 11/18/2019. Presence EMP Regional
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is required; check	all that apply)	Surface Soil	Cracks (B6)
	True Aquatic Plants (B14)		getated Concave Surface (B8)
	Hydrogen Sulfide Odor (C1)	Drainage Pa	
	Oxidized Rhizospheres on Living R		
	Presence of Reduced Iron (C4)		Water Table (C2)
•	Recent Iron Reduction in Tilled Soi	= = = = = = = = = = = = = = = = = = =	
1	Thin Muck Surface (C7)		isible on Aerial Imagery (C9)
Algal Mat or Crust (B4) (Iron Deposits (B5)	Other (Explain in Remarks)	Geomorphic	tressed Plants (D1)
Inundation Visible on Aerial Imagery (B7)		Geomorphic Shallow Aqu	
Water-Stained Leaves (B9)			aphic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutral	
Field Observations:			
	Depth (inches):		
	Depth (inches):		
	-	Wetland Hydrology Preser	nt? Yes ✓ No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring w		ons), if available:	
Remarks:			
Troniano.			

Sampling Point: W-M	M8-	PΕ	M
---------------------	-----	----	---

301	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC:4 (A)
2				Total Number of Dominant
3		<u> </u>		Species Across All Strata: 4* (B)
4				Percent of Dominant Species
5				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 =
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 =
		-		Hydrophytic Vegetation Indicators:
7		·		1 - Rapid Test for Hydrophytic Vegetation
8		·		✓ 2 - Dominance Test is >50%
9	0			3 - Prevalence Index is ≤3.0 ¹
50% of total cover:0		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
	20% 01	total cover:		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5) 1. Microstegium vimineum	30	./	ГЛС	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Verbesina alternifolia	20		FAC	
2. Verbesina atterniona 3. Poa trivialis	15		FAC	¹ Indicators of hydric soil and wetland hydrology must
			FACW_	be present, unless disturbed or problematic.
4. Eupatorium perfoliatum	15		FACW_	Definitions of Four Vegetation Strata:
5. Dryopteris sp.*	<u>15</u>		ND	Tree Meady plants evaluding vines 2 in (7 (cm) or
6. Boehmeria cylindrica	5		F <u>ACW</u>	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
	100	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50	20% of	f total cover:	20	Was divising. All was divising a 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				· · · · · · · · · · · · · · · · · · ·
2				
3		-		
4				
5				Hydrophytic Vegetation
	^	= Total Cov		Present? Yes _ ✓ No
50% of total cover: 0		f total cover:		
Remarks: (Include photo numbers here or on a separate s				
ND- Not determined				
*Not identified to species, not included in domination	ance test	t		
The facilities to species, flot illoladed ill dollling	G1100 103	•		

Sampling Point: W-MM8-PEM

	ription: (Describe	to the dep				or confirm	the absence	of indicators.)
Depth (inches)	Matrix	%	Color (moist)	x Feature	S Tuno ¹	Loc ²	Toyturo	Domorko
(inches) 0-6"	Color (moist) 10YR 4/2	90	5YR 4/6	<u>%</u> 10	Type ¹		Texture SCL	Remarks
						M/PL		
6-15"	10YR 4/1	90	5YR 4/6	10	<u>C</u>	M/PL	SCL	
15+"								Refusal:cf
	-							
					· 			
		-						-
¹ Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Indica	ators for Problematic Hydric Soils ³ :
Histosol			Dark Surface					cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be				148) <u> </u>	Coast Prairie Redox (A16)
Black His	stic (A3) n Sulfide (A4)		Thin Dark Su Loamy Gleye			147, 148)	Г	(MLRA 147, 148) Piedmont Floodplain Soils (F19)
	l Layers (A5)		✓ Depleted Mat		(Г2)		<u> </u>	(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S		F6)		V	'ery 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		ses (F12)	(LRR N,		
	147, 148)		MLRA 130		/MI DA 1:	24 122)	3 In d	licators of hydrophytic vegetation and
	leyed Matrix (S4) edox (S5)		Umbric Surfa Piedmont Flo					licators of hydrophytic vegetation and etland hydrology must be present,
-	Matrix (S6)		Red Parent M					less disturbed or problematic.
	_ayer (if observed):			`	, ,	· · · · · · · · · · · · · · · · · · ·		'
Type: CF	=							
Depth (inc	ches): 15						Hydric Soil	Present? Yes _ \(\sqrt{No}
Remarks:							1	

Wetland Photograph Page

Wetland ID W-MM8-PEM



Photograph Direction North

Date: 08/25/2015

Comments: 2015 wetland delineation.



Photograph Direction East

Date: 11/18/19

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	36.883985	Lon.	-79.427305
STREAM/SITE ID AND SITE DESCR			W-Q1, Pipeline ROW					
(% stream slope, watershed size {a	d or impairments)							
FORM OF MITIGATION:								
DATE:	9/28	3/2021	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wetl	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-Q1	Emergent	0.0146	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made or		
						Advanced Mitigation		Y
						(Y or N)		
Total Impact		0.0146						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0146			4070.00		
Total Scrub-Shrub Total Forested			0			\$876.00		
Total Open Water			0					
Total Open water			U					

Project/Site: MVP	City/County: Pittsylvania		Sampling Date: 06/14/2015
Applicant/Owner: MVP			
Investigator(s): A.Stott, A.Grech, D.McCullo			
Landform (hillslope, terrace, etc.): Side-slope			Slope (%): 0-3%
Subregion (LRR or MLRA): LRRP	Lat: 36.884195 Long: -79	.427363	Datum: NAD 83
Soil Map Unit Name: Chenneby-Toccoa complex,	0 to 2 percent slopes, frequently flooded		
Are climatic / hydrologic conditions on the site typic	cal for this time of year? Yes No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Normal	l Circumstances" pr	resent? Yes <u>√</u> No
Are Vegetation, Soil, or Hydrology		explain any answers	
SUMMARY OF FINDINGS – Attach site	e map showing sampling point location	ons, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes	Is the Sampled Area	Yes <u></u> ✓	No
Remarks: Cowardin Code: PEM HGM: Depression	nal WT: RPWWD		
Information listed on this form represents of wetland hydrology, hydrophytic vegets Supplement delineation methodology.	s the data collected in 2015. The wetland ation, and hydric soils was confirmed usi	d was revisited ng the USACE	on 11/19/2019. Presence EMP Regional
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicat	ors (minimum of two required)
Primary Indicators (minimum of one is required; c	heck all that apply)	Surface Soil (,
✓ Surface Water (A1)	True Aquatic Plants (B14)		etated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patt	
✓ Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Moss Trim Lir	nes (B16)
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season V	Vater Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burro	ows (C8)
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Vis	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)		ressed Plants (D1)
Iron Deposits (B5)		Geomorphic F	
Inundation Visible on Aerial Imagery (B7)		Shallow Aquit	
Water-Stained Leaves (B9)			ohic Relief (D4)
Aquatic Fauna (B13)		✓ FAC-Neutral	Test (D5)
Field Observations: Surface Water Present? Yes ✓ No	Depth (inches):1"		
	Depth (inches): 0"		
_	Deptit (inches)	Hydrology Present	i? Yes ✓ No
(includes capillary fringe)	Depti (inches) wettand i	5 05	!? res_ ▼ No
Describe Recorded Data (stream gauge, monitori	ing well, aerial photos, previous inspections), if ava	ilable:	
Remarks:			

Sampling	Point-	W-Q1

201		inant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover Spe	cies? Status	Number of Dominant Species
1,			That Are OBL, FACW, or FAC:5 (A)
2			Total Number of Dominant
3			Species Across All Strata: 5 (B)
4			
5			Percent of Dominant Species That Are ORL FACW or FAC: 100% (A/R)
			That Are OBL, FACW, or FAC: 100% (A/B)
6			Prevalence Index worksheet:
1	0 = Tota		Total % Cover of: Multiply by:
50% (1.1.1		al Cover	OBL species x 1 =
50% of total cover: 0 Sanling/Shrub Stratum (Plot size: 15')	20% of total	cover: U	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15			
1			FAC species x 3 =
2			FACU species x 4 =
3			UPL species x 5 =
4			Column Totals: (A) (B)
5			Decualance Indian D/A
6			Prevalence Index = B/A =
7			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
8			✓ 2 - Dominance Test is >50%
9			3 - Prevalence Index is ≤3.0 ¹
F00/ affectal account 0		al Cover	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of total	cover: U	data in Remarks or on a separate sheet)
Terb Stratum (Piot Size)	00	/	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Scirpus atrovirens	30	✓ OBL	: resternatio : iyarep:iyar v egetation (2:xp:ami)
2. Carex vulpinoidea	30	✓ OBL	¹ Indicators of hydric soil and wetland hydrology must
3. Juncus tenuis		✓ FAC	be present, unless disturbed or problematic.
4. Microstegium vimineum	20	✓ FAC	Definitions of Four Vegetation Strata:
5			Definitions 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
	100 _ = Tota		of size, and woody plants less than 3.28 ft tall.
50% of total cover:50	20% of total	cover: 20	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')		,	height.
1. Toxicodendron radicans	10	✓ FAC	
2			
3			
4			
5.			Hydrophytic Vegetation
·	10 _{= Total}	al Cover	Present? Yes _ ✓ No
50% of total cover: 5	20% of total		
Remarks: (Include photo numbers here or on a separate sl			
Tremarks. (include prioto numbers here of our a separate si	ileet.)		

SOIL Sampling Point: W-Q1

Profile Desc	ription: (Describe t	o the depth	n needed to docun	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix			x Feature:	s			
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-6"	10YR 4/1	90	7.5YR 3/4	10	С	M	S	
6-12"	10YR 3/1	97	10YR 4/2	3	С	M	SiL	
12+"			_					Refusal: CF
-								
	ncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gr	ains.		L=Pore Lining, M=Matrix.
Hydric Soil I								ators for Problematic Hydric Soils ³ :
Histosol			Dark Surface		/==\ /s			cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Be				148) C	oast Prairie Redox (A16)
Black His	stic (A3) n Sulfide (A4)		Thin Dark Su			47, 148)	D	(MLRA 147, 148)
	Layers (A5)		Loamy Gleye Depleted Material		F2)		<u> </u>	iedmont Floodplain Soils (F19) (MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark S		·6)		V	ery Shallow Dark Surface (TF12)
	Below Dark Surface	(A11)	Depleted Dar					ther (Explain in Remarks)
	rk Surface (A12)	. ,	Redox Depre					,
Sandy M	ucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Mass	es (F12) (LRR N,		
	. 147, 148)		MLRA 13	-				
	leyed Matrix (S4)		Umbric Surfa					icators of hydrophytic vegetation and
✓ Sandy R			Piedmont Flo					tland hydrology must be present,
	Matrix (S6) ayer (if observed):		Red Parent N	nateriai (F	21) (IVILR	A 127, 147	r) uni	ess disturbed or problematic.
	fusal: Coarse Fr	agments						
J	thes): 12"	a.goo					Hydric Soil	Present? Yes ✓ No
Remarks:	<u></u>						Tryunc 3011	rieseit: res_v NO
Remarks:								



Photograph Direction South

Date: 06/14/2015

Comments: 2015 wetland delineation.



Photograph Direction South

Date: 11/19/19

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	36.851816	Lon.	-79.38593
STREAM/SITE ID AND SITE DESCR			W-G2, Timber Mat Crossing					
(% stream slope, watershed size {a	creage}, unaltered	d or impairments)						
FORM OF MITIGATION:								
DATE:	9/28	3/2021	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wetl	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-G2	Emergent	0.0346	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made or		
						Advanced Mitigation		Υ
						(Y or N)		
Total Impact		0.0346						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0346			*** 070 00		
Total Scrub-Shrub			0			\$2,076.00		
Total Forested			0					
Total Open Water			0					

Project/Site: MVP	City/County: Pittsylvania Sampling Date: 04/04/20				
	Section, Township, Range: N				
Landform (hillslope, terrace, etc.): Valley botton			Slope (%): 0-3%		
Subregion (LRR or MLRA): LRRP			Datum: NAD 83		
Soil Map Unit Name: Cecil sandy clay loam,	7 to 15 percent slopes, severely eroded	NWI classifica	ation: None		
Are climatic / hydrologic conditions on the site typic	al for this time of year? Yes No	(If no, explain in Re	emarks.)		
Are Vegetation, Soil, or Hydrology _	significantly disturbed? Are "Norma	al Circumstances" p	resent? Yes 🗸 No		
Are Vegetation, Soil, or Hydrology _		explain any answer			
SUMMARY OF FINDINGS – Attach site		-			
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes	Is the Sampled Area	Yes <u></u> ✓	No		
Remarks: Cowardin Code: PEM HGM: Riverine V	VT: RPWWD				
Information listed on this form represents of wetland hydrology, hydrophytic vegets Supplement delineation methodology.	s the data collected in 2015. The wetlan	d was revisited ing the USACE	on 11/19/2019. Presence EMP Regional		
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indicat	tors (minimum of two required)		
Primary Indicators (minimum of one is required; c	heck all that apply)	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 Living Roots (C3)	Moss Trim Lir	nes (B16)		
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season V	Vater Table (C2)		
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burr	ows (C8)		
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Vis	sible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or St	ressed Plants (D1)		
Iron Deposits (B5)		✓ Geomorphic I	Position (D2)		
Inundation Visible on Aerial Imagery (B7)		Shallow Aquit	tard (D3)		
Water-Stained Leaves (B9)			phic Relief (D4)		
Aquatic Fauna (B13)		✓ FAC-Neutral	Test (D5)		
Field Observations:					
	Depth (inches):				
Water Table Present? Yes ✓ No	Depth (inches):0"		_		
	Depth (inches):0 Wetland	Hydrology Present	t? Yes <u>√</u> No		
(includes capillary fringe) Describe Recorded Data (stream gauge, monitori	ng well, aerial photos, previous inspections), if av	ailable:			
Remarks:					

Sampling	Point:	W-G2
Samuliniu	r on n.	

30'	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:)		Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC:5 (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: 100 (A/B)
6				
7				Prevalence Index worksheet:
	0	= Total Co	ver	Total % Cover of: Multiply by:
50% of total cover:0	20% of	total cove	r: <u> </u>	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Lindera benzoin	10	✓	FAC	FAC species x 3 =
2. Acer rubrum	10	<u>√</u>	FAC	FACU species x 4 =
3			. <u></u>	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
40		= Total Co		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:10	20% of	total cove	r: <u>4</u>	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')		,		Problematic Hydrophytic Vegetation ¹ (Explain)
{1.} Juncus effusus	25		FACW	Problematic Trydrophytic Vegetation (Explain)
2. Microstegium vimineum	25		FACW_	The disease of booking and condend booking to constant
3. Carex Iurida	20	√	OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Impatiens capensis	10		FACW	Definitions of Four Vegetation Strata:
5. Dichanthelium clandestinum	10		FAC	Definitions of Four Vegetation Strata.
6. Eupatorium perfoliatum	5		FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7 Carex emoryi	5		OBL	more in diameter at breast height (DBH), regardless of height.
8 Ludwigia alternifolia	5		FACW	neight.
			1 AOV	Sapling/Shrub – Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10	-			iii) taii.
11	105			Herb – All herbaceous (non-woody) plants, regardless
500/ CL L		= Total Co		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>52.5</u>	20% of	total cove	r: <u>21</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
	0	= Total Co	ver	Present? Yes _ ✓ No
50% of total cover:0	20% of	total cove	r: <u> </u>	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Sampling Point: W-G2

SOIL

/! I \	Matrix		Redox Features	T	D
(inches) 0-10"	Color (moist) Gley1 5/10Y	<u>%</u>	Color (moist) % Type ¹ Loc ²	Texture SCL	Remarks
0-10		60			
	2.5Y 4/2	40		SCL	
				· -	
					-
					-
		etion, RM=R	educed Matrix, MS=Masked Sand Grains.		L=Pore Lining, M=Matrix.
Hydric Soil I					ators for Problematic Hydric Soils ³ :
Histosol			Dark Surface (S7)		cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147	, 148) C	coast Prairie Redox (A16)
Black His			Thin Dark Surface (S9) (MLRA 147, 148)✓ Loamy Gleyed Matrix (F2)	D	(MLRA 147, 148)
	n Sulfide (A4) I Layers (A5)		Depleted Matrix (F3)	<u> </u>	iedmont Floodplain Soils (F19) (MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark Surface (F6)	V	ery Shallow Dark Surface (TF12)
	Below Dark Surface	(A11)	Depleted Dark Surface (F7)		other (Explain in Remarks)
	rk Surface (A12)	` '	Redox Depressions (F8)		,
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Manganese Masses (F12) (LRR N,		
	. 147, 148)		MLRA 136)		
	leyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)		icators of hydrophytic vegetation and
-	edox (S5)		Piedmont Floodplain Soils (F19) (MLRA 1		tland hydrology must be present,
	Matrix (S6)		Red Parent Material (F21) (MLRA 127, 14	·/) un	less disturbed or problematic.
Type: No	ayer (if observed):				
	// IC		_		
					Present? Yes <u>✓</u> No
Depth (inc			_	Hydric Soil	
Depth (inc			-	Hydric Soil	
Depth (inc				Hydric Soil	
Depth (inc			_	Hydric Soli	<u> </u>
Depth (inc			_	Hydric Soil	
Depth (inc			_	Hydric Soli	
Depth (inc			_	Hydric Soli	
Depth (inc				Hydric Soli	
Depth (inc				Hydric Soli	
Depth (inc				Hydric Soli	
Depth (inc			_	Hydric Soli	
Depth (inc				Hydric Soli	
Depth (inc				Hydric Soli	
Depth (inc				Hydric Soli	
Depth (inc				Hydric Soli	
Depth (inc				Hydric Soli	
Depth (inc				Hydric Soli	
٠				Hydric Soli	
Depth (inc				Hydric Soli	
Depth (inc				Hydric Soli	
Depth (inc				Hydric Soli	
Depth (inc				Hydric Soli	
Depth (inc				Hydric Soli	



Photograph Direction SE

Date: 04/04/2015

Comments: 2015 wetland delineation.



Photograph Direction SE

Date: 11/19/19

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	36.836097	Lon.	-79.360895
STREAM/SITE ID AND SITE DESCR			W-H1, Pipeline ROW					
(% stream slope, watershed size {a								
FORM OF MITIGATION:								
DATE:	9/28	/2021	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wetl	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-H1	Emergent	0.011	Emergent					
						PART III - Advanced		n
						Sustainable Determination Made or Advanced Mitigation (Y or N)	ו	Y
						(1.01.11)		
Total Impact		0.011						
W 2: 10		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent Total Scrub-Shrub			0.011			\$660.00		
Total Forested			0			\$660.00		
Total Open Water			0					
Total Open water			U					

Project/Site: MVP	City/County: Pittsylvania		Sampling Date: 03/30/2015
			· -
Investigator(s): A.Stott, A. Grech, H. Heist			
Landform (hillslope, terrace, etc.): Valley bottom	Local relief (concave, convex, no		Slope (%): 0-3%
Subregion (LRR or MLRA): LRRP Lat:	36.836109 Long: -79		Datum: NAD 83
Soil Map Unit Name: Chenneby-Toccoa complex, 0			
Are climatic / hydrologic conditions on the site typical for	r this time of year? Yes No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Norma	al Circumstances" p	resent? Yes ✓ No
Are Vegetation, Soil, or Hydrology		explain any answei	
SUMMARY OF FINDINGS – Attach site ma			•
Hydrophytic Vegetation Present? Hydric Soil Present? Wes ✓ Wetland Hydrology Present? Yes ✓ Yes ✓ Yes ✓	No Is the Sampled Area within a Wetland?	Yes	No -
Remarks: Cowardin Code: PEM HGM: depressional \	WT: RPWWN		
Information listed on this form represents the of wetland hydrology, hydrophytic vegetation Supplement delineation methodology.	e data collected in 2015. The wetlar	d was revisited ing the USACE	on 11/20/2019. Presence EMP Regional
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum of one is required; check	all that apply)	Surface Soil	
	True Aquatic Plants (B14)		etated Concave Surface (B8)
-	Hydrogen Sulfide Odor (C1)	✓ Drainage Pat	
	Oxidized Rhizospheres on Living Roots (C3)	-	
<u> </u>	Presence of Reduced Iron (C4)		Water Table (C2)
	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burr	
1	Thin Muck Surface (C7)	=	sible on Aerial Imagery (C9)
<u> </u>	Other (Explain in Remarks)		ressed Plants (D1)
Iron Deposits (B5)	,	Geomorphic	
Inundation Visible on Aerial Imagery (B7)		Shallow Aqui	
Water-Stained Leaves (B9)		Microtopogra	phic Relief (D4)
Aquatic Fauna (B13)		✓ FAC-Neutral	Test (D5)
Field Observations:			
Surface Water Present? Yes _ ✓ No	Depth (inches):3"		
Water Table Present? Yes ✓ No			
Saturation Present? Yes Ves No		Hydrology Presen	t? Yes ✔ No
(includes capillary fringe)		5 05	
Describe Recorded Data (stream gauge, monitoring w	eii, aeriai pnotos, previous inspections), if av	allable:	
Remarks:			

5amonno Pom: vv-i i i	Sampling	Point: W-H1
-----------------------	----------	-------------

,	Abcoluto	Dominant Ir	adicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		
				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: 4* (B)
4				
5				Percent of Dominant Species That Are OBL FACW or FAC: 75% (A/B)
				That Are OBL, FACW, or FAC: 75% (A/B)
6	-	·		Prevalence Index worksheet:
7				
	0	= Total Cover	r	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 =
				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				
9	-			✓ 2 - Dominance Test is >50%
/	0	Total Cause		3 - Prevalence Index is ≤3.0 ¹
500/ 51 1 1		= Total Cover	_	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'				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Juncus effusus	20		FACW	Problematic Hydrophytic Vegetation (Explain)
2. Persicaria sp.*	20	✓	ND	
3 Carex vulpinoidea	15		OBL	¹ Indicators of hydric soil and wetland hydrology must
4. Dactylis glomerata	15		FACU	be present, unless disturbed or problematic.
				Definitions of Four Vegetation Strata:
_{5.} Juncus tenuis	15		FAC	
6. Solanum carolinense	5		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		<u></u> .		m) tall.
11.				Heate All banks are see An are see to An London are smallered
	90	= Total Cove		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		total cover:_		or size, and woody plants less than size it tall.
	20% 01	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				Hydrophytic
5				Vegetation
	0	= Total Cover	r	Present? Yes No
50% of total cover:0	20% of	total cover:_	0	
Remarks: (Include photo numbers here or on a separate s	heet)			
ND- not determined	,			
IND- HOL GERTIIIIGG				
*\/ogatation not lold down to the angeles level in	not incl	.dad : +1	don::	unaa taat
*Vegetation not Id'd down to the species level is	not inclu	ided in the	uomina	INCE IESI.

SOIL Sampling Point: W-H1

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator	or confirm	n the absence	e of indicators.)
Depth	Matrix		Redo	x Feature:	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-12"	10YR 5/2	90	5YR 4/6	10	С	M	SL	
12-20"	10YR 6/3	90	7.5YR 4/4	10	С	М	SC	
12-20	10110/3		7.511\4/4			IVI		
-					-			
	<u> </u>				-			
					-			
¹ Type: C=Co	ncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gr	ains.	² Location: P	PL=Pore Lining, M=Matrix.
Hydric Soil I			,			-		ators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Be		ce (S8) (N	/ILRA 147.		Coast Prairie Redox (A16)
Black His	•		Thin Dark Su					(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			, , , ,	F	Piedmont Floodplain Soils (F19)
	Layers (A5)		✓ Depleted Mar		,			(MLRA 136, 147)
2 cm Mu	ck (A10) (LRR N)		Redox Dark S		6)		\	/ery Shallow Dark Surface (TF12)
Depleted	Below Dark Surface	(A11)	Depleted Dar	k Surface	(F7)		(Other (Explain in Remarks)
Thick Da	rk Surface (A12)		Redox Depre					
Sandy M	ucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Mass	es (F12) (LRR N,		
	. 147, 148)		MLRA 13					
	leyed Matrix (S4)		Umbric Surfa					licators of hydrophytic vegetation and
-	edox (S5)		Piedmont Flo					etland hydrology must be present,
	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 147	7) un	lless disturbed or problematic.
Restrictive L	ayer (if observed):							
Туре:								
Depth (inc	hes):						Hydric Soi	I Present? Yes <u>√</u> No
Remarks:							l	



Photograph Direction North

Date: 03/30/2015

Comments: 2015 wetland delineation.



Photograph Direction East

Date: 11/20/19

Mountain Valley Pipeline			COORDINATES:	Lat.	36.834817	Lon.	-79.360479
PTION: eage}, unaltered	or impairments)				W-H2, Pipeline ROW		
9/28	/2021	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetl	and Indicators						
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.7987	Emergent					
			-				
					PART III - Advanced	Mitigatio	n
					Advanced Mitigation (Y or N)		Y
				!			
	0.7987						
	Jnit Scores						
sification					ILF Costs		
					\$47.000 O	•	
					\$47,922.0	J	
	9/28 PART I - Wetl Impact Wetland Classification Emergent	PART II - Unit Scores	PART II - Unit Scores PART II - Unit Scores PART II - Wetland Indicators Impact Impacts Wetland Classification C	PTION: eage}, unaltered or impairments) 9/28/2021 WEATHER CONDITIONS: PART I - Wetland Indicators Impact (acreage) Wetland Classification Emergent 0.7987 Emergent 0.7987 PART II - Unit Scores sification Replacement Unit(s) 0.7987 0 0	PITION: eage), unaltered or impairments) 9/28/2021 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.7987 Emergent 0.7987 PART II - Unit Scores sification Replacement Unit(s) 0.7987 0 0	### PART II - Unit Scores ### Sification Advanced Mitigation	TION: eage), unaltered or impairments) 9/28/2021 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Classification Emergent O.7987 Emergent PART III - Advanced Mitigation (Y or N) PART III - Unit Scores Iffication Replacement Unit(s) 0.7987 0 0 547,922.00

Project/Site: MVP	City/County: Pittsylv	ania	Sampling Date: 03/30/2015				
pplicant/Owner: MVP State: VA Sampling Point: W-H2							
Investigator(s): A.stott, A.Grech, H.Heist	Section Township Ra		<u> </u>				
Landform (hillslope, terrace, etc.): Valley bottom			Slone (%): 0-3				
Subregion (LRR or MLRA): LRRP			Datum: NAD 83				
Soil Map Unit Name: Chenneby-Toccoa comple							
	_						
Are climatic / hydrologic conditions on the site typic		·	,				
Are Vegetation, Soil, or Hydrology _							
Are Vegetation, Soil, or Hydrology _	naturally problematic? (If ne	eeded, explain any answe	ers in Remarks.)				
SUMMARY OF FINDINGS – Attach site	e map showing sampling point I	ocations, transects	s, important features, etc.				
Hydrophytic Vegetation Present? Yes	No Is the Samples						
Hydric Soil Present? Yes	/ No	d Area	No				
Wetland Hydrology Present? Yes	No within a Wetlan	na? Yes_ <u>▼</u>	NO				
Remarks:							
Cowardin Code: PEM							
HGM: Depressional							
WT: RPWWD							
In cow pasture							
HYDROLOGY							
Wetland Hydrology Indicators:		·	ators (minimum of two required)				
Primary Indicators (minimum of one is required; c	* * *	Surface Soil					
	True Aquatic Plants (B14)	,	getated Concave Surface (B8)				
✓ High Water Table (A2)	✓ Hydrogen Sulfide Odor (C1)✓ Oxidized Rhizospheres on Living Roof	✓ Drainage Pa					
✓ Saturation (A3) — Water Marks (B1)	Presence of Reduced Iron (C4)		Water Table (C2)				
	Recent Iron Reduction in Tilled Soils (
Drift Deposits (B3)	Thin Muck Surface (C7)		isible on Aerial Imagery (C9)				
1	Other (Explain in Remarks)		tressed Plants (D1)				
Iron Deposits (B5)		Geomorphic	Position (D2)				
Inundation Visible on Aerial Imagery (B7)		Shallow Aqu					
Water-Stained Leaves (B9)			aphic Relief (D4)				
Aquatic Fauna (B13)		✓ FAC-Neutral	Test (D5)				
Field Observations: Surface Water Present? Yes ✓ No	Depth (inches): 3"						
	Depth (inches): 6"						
	Deptit (inches)	etland Hydrology Preser	nt? Yes ✓ No				
(includes capillary fringe)	Depth (meries)	3 03	II: 103				
Describe Recorded Data (stream gauge, monitori	ng well, aerial photos, previous inspections	s), if available:					
Remarks:							

Sampling	Point-	W-H2
Janualina	i Oiiit.	

,	Abcoluto	Dominant Ir	adicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		
				Number of Dominant Species That Are OBL, FACW, or FAC: (A)
1				That Ale Obl., FACW, of FAC (A)
2				Total Number of Dominant
3				Species Across All Strata: 2* (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)
				That Are OBL, FACW, OF FAC.
6				Prevalence Index worksheet:
/				Total % Cover of: Multiply by:
		= Total Cover	_	
50% of total cover:0	20% of	f 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				COMMITTORIALS(A)(D)
5				Prevalence Index = B/A =
6				
7			_	Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
8	-			✓ 2 - Dominance Test is >50%
У		·		3 - Prevalence Index is ≤3.0 ¹
		= Total Cover	_	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:0	20% of	f total cover:	0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				•
1. Juncus effusus	30	✓	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Carex lurida	30		OBL	
3. Persicaria sp.*	20		ND	¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
4. Dichanthelium clandestinum	10	<u> </u>	FAC	Definitions of Four Vegetation Strata:
5. Carex vulpinoidea	5		OBL	
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
	95	= Total Cover	-	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 47.				
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in
				height.
1,				
2				
3				
4				
5.				Hydrophytic Vegetation
·	_	T-1-1 0		Present? Yes _ \(\sqrt{\sq}}}}}}}}}}}}} \signtimes\sintitexet{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}}}}} \signtimes\sintitexet{\sqrt{\sq}}}}}}}}} \end{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}}}} \end{\sqrt{\sqrt{\sint{\sint{\sint{\sint{\sint{\sin}}}}}}}}} \sqrt{\sint{\sint{\
F00/ - \$4-4-1		= Total Cover	_	100 <u> </u>
50% of total cover: 0		f total cover:_		
Remarks: (Include photo numbers here or on a separate s	heet.)			
ND- not determined				
*Vegetation not Id'd down to the species level is	not inclu	ided in the	domina	ance test.

SOIL Sampling Point: W-H2

Profile Desc	ription: (Describe t	o the dep	th needed to docun	nent the	indicator	or confirm	the abse	ence of indicators.)
Depth	Matrix			x Feature		3		
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	<u>Textur</u>	
0-10"	10YR 4/2	85	7.5YR 4/6	15	C	M/PL-	SCL	<u>-</u>
10-20"	10YR 4/3	80	7.5 YR 4/6	20	С	M	SiCL	
					-			
					-		-	
					-			
1- 0.0							2	
'Type: C=Co Hydric Soil I	oncentration, D=Depl	etion, RM:	Reduced Matrix, MS	S=Masked	d Sand Gra	ains.		n: PL=Pore Lining, M=Matrix. ndicators for Problematic Hydric Soils ³ :
=			Dork Curfoso	(67)				
Histosol	oipedon (A2)		Dark Surface Polyvalue Be		re (S8) (N	/I DΔ 1/17		2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
Black Hi	·		Thin Dark Su				140) _	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			17, 110)		Piedmont Floodplain Soils (F19)
	Layers (A5)		✓ Depleted Mat		(- –)		_	(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S		-6)		_	Very Shallow Dark Surface (TF12)
Depleted	d Below Dark Surface	(A11)	Depleted Dar	k Surface	e (F7)		_	Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre					
-	lucky Mineral (S1) (L	RR N,	Iron-Mangan		es (F12) (LRR N,		
	A 147, 148)		MLRA 13		/ D			3
	ileyed Matrix (S4)		Umbric Surfa				0)	³ Indicators of hydrophytic vegetation and
_	edox (S5) Matrix (S6)		Piedmont Flo Red Parent N					wetland hydrology must be present, unless disturbed or problematic.
	_ayer (if observed):		Red Falentin	nateriai (i	ZI) (WILK	A 127, 147	<u> </u>	unless disturbed or problematic.
Type:	Edyor (ii obsorvod).							
· · ·	ches):						Hydric	Soil Present? Yes ✓ No
							Trydite	Son resent: res_v No
Remarks:								



Photograph Direction West

Date: 03/30/2015

Comments: 2015 wetland delineation.



Photograph Direction South

Date: 11/20/19

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	36.833741	Lon.	-79.360081
STREAM/SITE ID AND SITE DESCRIPTION:					W-H3, Pipeline ROW			
(% stream slope, watershed size {a	creage}, unaltered	d or impairments)						
FORM OF MITIGATION:								
DATE:	9/28	3/2021	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wetl	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-H3	Emergent	0.0509	Emergent					
						PART III - Advanced	Mitigatio	
						Sustainable Determination Made or		11
						Advanced Mitigation	•	Υ
						(Y or N)		
Total Impact		0.0509						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0509			**		
Total Scrub-Shrub			0			\$3,054.00		
Total Forested			0					
Total Open Water			0					

Project/Site: MVP	City/County: Pittsylvania		Sampling Date: 03/30/2015
Applicant/Owner: MVP			Sampling Point: W-H3
Investigator(s): A.Stott, A.Grech, H. Heist			
Landform (hillslope, terrace, etc.): Toe-slope			Slope (%): 0-3%
Subregion (LRR or MLRA): LRRP Lat: 36.			NAD 83
Soil Map Unit Name: Chenneby-Toccoa complex, 0 to			
Are climatic / hydrologic conditions on the site typical for this	s time of year? Yes ✓ No	(If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrologys			,
Are Vegetation, Soil, or Hydrology n			
SUMMARY OF FINDINGS – Attach site map			
Hydric Soil Present? Yes ✓ N Wetland Hydrology Present? Yes ✓ N Remarks:	Is the Sampled Area within a Wetland?	Yes	No ✓
Cowardin Code: PEM; HGM: Slope; WT: RPW	•	daa waxiiaita d	on 11/01/2010 Droconco
Information listed on this form represents the da			
of wetland hydrology, hydrophytic vegetation, a	nd flydric solls was conlittled usi	ing the USACE	EIVIP Regional
Supplement delineation methodology.			
HYDROLOGY			()) () ()
Wetland Hydrology Indicators:			ors (minimum of two required)
Primary Indicators (minimum of one is required; check all t	* * *	Surface Soil (
	Aquatic Plants (B14)		etated Concave Surface (B8)
	rogen Sulfide Odor (C1) lized Rhizospheres on Living Roots (C3)	Drainage Patt Moss Trim Lir	
	sence of Reduced Iron (C4)		Vater Table (C2)
	ent Iron Reduction in Tilled Soils (C6)	Crayfish Burro	
1	Muck Surface (C7)		sible on Aerial Imagery (C9)
	er (Explain in Remarks)		ressed Plants (D1)
Iron Deposits (B5)		Geomorphic F	Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquit	ard (D3)
Water-Stained Leaves (B9)			ohic Relief (D4)
Aquatic Fauna (B13)		✓ FAC-Neutral	Test (D5)
Field Observations:	411		
Surface Water Present? Yes No Dep			
Water Table Present? Yes No Dep			
Saturation Present? Yes ✓ No Dep (includes capillary fringe)	oth (inches): 0" Wetland F	lydrology Present	!? Yes <u> </u>
Describe Recorded Data (stream gauge, monitoring well, a	aerial photos, previous inspections), if ava	ilable:	
Remarks:			

Sampling	Point:	W-H3
----------	--------	------

<u> </u>	Absoluto	Dominant II	adicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		
				Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
1				That Are OBL, I ACW, OF I AC (A)
2				Total Number of Dominant
3		. <u> </u>		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, OF FAC. (A/B)
6		·		Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
		= Total Cove	_	
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 =
				UPL species x 5 =
3		·		
4				Column Totals: (A) (B)
5				Provalence 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		. <u> </u>		3 - Prevalence Index is ≤3.0 ¹
	0	= Total Cove	r	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 tenuis	40	1	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Persicaria sp.	20		ND	
				¹ Indicators of hydric soil and wetland hydrology must
3. Juncus effusus	10		FACW	be present, unless disturbed or problematic.
4. Carex lurida	10		OBL	Definitions of Four Vegetation Strata:
5 Holcus lanatus	10		FAC	Definitions of Four Vegetation Strata.
4		·		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
0				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				
11				Herb – All herbaceous (non-woody) plants, regardless
45		= Total Cove		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45	20% of	total cover:_	18	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	r	Present? Yes Ves No No
50% of total cover:0		total cover:_	_	
Remarks: (Include photo numbers here or on a separate s		.5.0.00001		1
	neet.)			
ND- not determined				
*Vegetation not Id'd down to the species level is	not inclu	ided in the	domina	ance test

SOIL Sampling Point: W-H3

Profile Desc	ription: (Describe t	o the dep	th needed to docur	nent the i	ndicator	or confirm	n the abs	sence of indicators.)
Depth	Matrix			x Feature:				
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Textu	
0-20"	10YR 5/1	90	7.5YR 4/6	10	С	PL/M	SC	L
	-							
							-	
	-				-		-	
	-							
¹ Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Locatio	on: PL=Pore Lining, M=Matrix.
Hydric Soil			·					Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		ce (S8) (N	1LRA 147,	148)	Coast Prairie Redox (A16)
Black Hi	·		Thin Dark Su				, .	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye				_	Piedmont Floodplain Soils (F19)
Stratified	l Layers (A5)		✓ Depleted Ma					(MLRA 136, 147)
2 cm Mu	ick (A10) (LRR N)		Redox Dark	Surface (F	6)			Very Shallow Dark Surface (TF12)
Depleted	d Below Dark Surface	(A11)	Depleted Dar					Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre					
-	lucky Mineral (S1) (L	RR N,	✓ Iron-Mangan		es (F12) (LRR N,		
	A 147, 148)		MLRA 13					2
	ileyed Matrix (S4)		Umbric Surfa					³ Indicators of hydrophytic vegetation and
_	edox (S5)		Piedmont Flo					wetland hydrology must be present,
	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 147	7)	unless disturbed or problematic.
Restrictive I	_ayer (if observed):							
Туре:								
Depth (in	ches):						Hydrid	c Soil Present? Yes <u>√</u> No
Remarks:							1	



Photograph Direction NW

Date: 03/30/2015

Comments: 2015 wetland delineation.



Photograph Direction North

Date: 11/01/19

USACE FILE NO./Project Name:	NO./Project Name: Mountain Valley		Valley Pipeline	COORDINATES:	Lat.	36.82778	Lon.	-79.350264
STREAM/SITE ID AND SITE DESCR		W	-IJ22-PEM, Timber Mat Crossing					
(% stream slope, watershed size {a	creage}, unaltered	d or impairments)						
FORM OF MITIGATION:								
DATE: 9/28/2021		WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:			
	PART I - Wetl	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-IJ22-PEM	Emergent	0.039	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made or		<u></u>
						Advanced Mitigation		Υ
						(Y or N)		
Total Impact		0.039						
	PART II -				Estimated			
Wetland Classification			Replacement Unit(s)			ILF Costs		
Total Emergent			0.039			40.040.00		
Total Scrub-Shrub			0			\$2,340.00		
Total Forested			0					
Total Open Water			0					

Project/Site: MVP	City/County: Pittsylvania		Sampling Date: 05/03/2016
Applicant/Owner: MVP		State: VA	Sampling Point: W-IJ22-PEM
Investigator(s): E. Foster, J. Niergarth, B. Shrotenboer			
Landform (hillslope, terrace, etc.): Floodplain			Slope (%): 1
Subregion (LRR or MLRA): LRR P Lat: 36.82776	62 Long: -79	9.35027	Datum: NAD 83
Soil Map Unit Name: 41a-Wehadkee silt loam, 0 to 2 percent s			
Are climatic / hydrologic conditions on the site typical for this time of			
Are Vegetation, Soil, or Hydrology significa			resent? Yes No
Are Vegetation, Soil, or Hydrology naturally		explain any answe	
		,	•
SUMMARY OF FINDINGS – Attach site map show	ing sampling point location		, important reatures, etc.
Hydrophytic Vegetation Present? Yes ✓ No Hydric Soil Present? Yes ✓ No Wetland Hydrology Present? Yes ✓ No	is the Sampled Area	Yes <u>√</u>	No
Remarks: Cowardin Code: PEM HGM: Ri	verine Water Type:	RPWWD	
HYDROLOGY		Const. I I	
Wetland Hydrology Indicators:			tors (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	-	Surface Soil	
✓ Surface Water (A1) True Aquat ✓ High Water Table (A2) Hydrogen S	Sulfide Odor (C1)	Sparsely veg	getated Concave Surface (B8)
	hizospheres on Living Roots (C3)		
	f Reduced Iron (C4)	Dry-Season	
Sediment Deposits (B2) Recent Iron	Reduction in Tilled Soils (C6)	Crayfish Burr	
	Surface (C7)		sible on Aerial Imagery (C9)
	ain in Remarks)		ressed Plants (D1)
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)		✓ GeomorphicShallow Aqui	
Water-Stained Leaves (B9)		✓ Microtopogra	
✓ Aquatic Fauna (B13)		✓ FAC-Neutral	•
Field Observations:			
Surface Water Present? Yes No Depth (inc			
Water Table Present? Yes <u>✓</u> No Depth (inc	l l		
Saturation Present? Yes ✓ No Depth (inc	hes):0 Wetland	Hydrology Presen	t? Yes <u>√</u> No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial p	hotos, previous inspections), if ava	ailable:	
	, p		
Remarks:			
Saturated to the surface			

Sampling Point:	W-I	J22-	PEI	V
Janibilia i Oliit.				

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	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)
1				Species Across Air Strata (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100 (A/B)
6				Prevalence Index worksheet:
7				
		= Total Cov		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. Quercos phellos	4	\checkmark	FAC	FAC species x 3 =
2. Betula nigra	3	√	FACW	FACU species x 4 =
	-		1/1011	UPL species x 5 =
3				Column Totals: (A) (B)
4				Oblaniii Totals (F)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				_ , , , , ,
9				✓ 2 - Dominance Test is >50%
<i>'</i> -	7	= Total Cov	· · ·	3 - Prevalence Index is ≤3.0 ¹
50% of total cover:3.5				4 - Morphological Adaptations ¹ (Provide supporting
E!	20 /6 01	total cover.		data in Remarks or on a separate sheet)
Tierb Stratum (Flot Size)	60	/	0.01	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Glyceria striata	60	✓	OBL	
2. Carex Iurida	15		OBL	¹ Indicators of hydric soil and wotland hydrology must
3. Juncus effuses	5		FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Peltandra virginica	1		OBL	Definitions of Four Vegetation Strata:
5. Carex stricta	10		OBL	Definitions of Four Vegetation Strata.
6. Carex albolutescens	10		FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
· · ·			1/1011	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
	101	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>50.5</u>				
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	20% of	total cover:	. 0	
Remarks: (Include photo numbers here or on a separate si	heet.)			
	•			

Sampling Point: W-IJ22-PEM

Profile Desc	cription: (Describe t	o the depth	needed to docur	nent the ir	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix			x Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-20	2.5Y 5/2	70	7.5YR 4/6	30	С	M	SaCILo	
					-	· ——		
-								
							·	
								
	oncentration, D=Depl	etion, RM=R	educed Matrix, MS	S=Masked	Sand Gr	ains.		L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indica	ators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface					cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be				148) C	oast Prairie Redox (A16)
	stic (A3)		Thin Dark Su			147, 148)		(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye		-2)		P	iedmont Floodplain Soils (F19)
	d Layers (A5)		✓ Depleted Ma					(MLRA 136, 147)
	uck (A10) (LRR N)	(0.4.4)	Redox Dark					ery Shallow Dark Surface (TF12)
	d Below Dark Surface	(A11)	Depleted Date				0	ther (Explain in Remarks)
	ark Surface (A12) Nucky Mineral (S1) (L	DD NI	Redox Depre Iron-Mangan			I DD N		
	4 147, 148)	KK IV,	MLRA 13		S (F 12) (LRK II,		
	Gleyed Matrix (S4)		Umbric Surfa		MIRA 13	36 122)	³ Ind	icators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo					tland hydrology must be present,
-	Matrix (S6)		Red Parent N					less disturbed or problematic.
	Layer (if observed):			(-	., (1	, , , , , , , , , , , , , , , , , , ,
	.,							
	ches):						Hydric Soil	Present? Yes ✓ No
Remarks:			<u> </u>				Trydric 30ii	Tresent: Tes_v No
Remarks:								

Wetland Photograph Page

Wetland ID $\underline{\text{W-IJ22-PEM}}_{\text{Date}} \underline{\text{05/03/2016}}$



Photograph Direction NE

Comments:		