ATTACHMENT I

SUMMERS COUNTY

WETLAND SWVM FORMS/WETLAND DELINEATION FORM/PHOTOS

USACE FILE NO./Project Name:		Mountain Valley Pipeline			Lat.	37.813845	Lon.	-80.748769
STREAM/SITE ID AND SITE DESCR	RIPTION:					W-EE4, Pipeline ROW		
(% stream slope, watershed size {a								
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-EE4	Emergent	0.0453	Emergent					
						PART III - Advanced	Mitigatio	on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0453						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0453			¢0.740.00		
Total Scrub-Shrub Total Forested			0			\$2,718.00		
			0					
Total Open Water			U	I				

Project/Site: MVP	City/County: Summers Sampling Date: 07/30/2015							
Applicant/Owner: MVP	State: WV Sampling Point: W-EE4							
Investigator(s): J.Hart, D. McCullough, F. Martinez	Section, Township, Range; N/							
Landform (hillslope, terrace, etc.): Drainageway								
Subregion (LRR or MLRA): LRRN Lat: 37.8	,							
Soil Map Unit Name: Gilpin-Berks channery silt loams								
Are climatic / hydrologic conditions on the site typical for this ti								
Are Vegetation, Soil, or Hydrology sign		•						
Are Vegetation, Soil, or Hydrology natr								
SUMMARY OF FINDINGS – Attach site map sh	,							
		,						
Hydrophytic Vegetation Present? Yes No_ Hydric Soil Present? Yes No_	is the Sampled Area							
·	willing a welland?	Yes No						
Wetland Hydrology Present? Yes No_ Remarks:	<u> </u>							
Cowardin Code:PEM HGM:Slope WT: RPWWD Information listed on this form represents the data collected in 2015. The wetland was revisited on 10/22/2019. Presence of wetland hydrology, hydrophytic vegetation, and hydric soils was confirmed using the USACE EMP Regional Supplement delineation methodology.								
HYDROLOGY								
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)						
Primary Indicators (minimum of one is required; check all that	t apply)	Surface Soil Cracks (B6)						
	quatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)						
	en Sulfide Odor (C1)	Drainage Patterns (B10)						
	ed Rhizospheres on Living Roots (C3)	Moss Trim Lines (B16)						
	ce of Reduced Iron (C4)	Dry-Season Water Table (C2)						
	Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)						
	uck Surface (C7)	Saturation Visible on Aerial Imagery (C9)						
	Explain in Remarks)	Stunted or Stressed Plants (D1)						
Iron Deposits (B5)		Geomorphic Position (D2)						
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)						
Water-Stained Leaves (B9) Aquatic Fauna (B13)		Microtopographic Relief (D4) ✓ FAC-Neutral Test (D5)						
Field Observations:		TAC-Neutral Test (D3)						
Surface Water Present? Yes No Depth	(inches):							
Water Table Present? Yes No Depth								
		halada wa Barara (O. Waran M. Ala						
Saturation Present? Yes No Depth (includes capillary fringe)	(inches): wetland H	lydrology Present? Yes No						
Describe Recorded Data (stream gauge, monitoring well, ael	ial photos, previous inspections), if ava	ilable:						
Remarks:								
PEM wetland occurs at head of intermittent stream	m (S-EE4) Groundwater is see	ping out of the hillside creating wetland						
and stream, this is the reason for Slope HGM det		ping out of the filliside creating wetland						
and stream, the is the reason for crops from ast	5							
Standing water in vicinity of sample plot								

Sampling Point: W-EE4

Tree Stratum (Plot size: 30'	Absolute		Indicator	Dominance Test worksheet:		
1100 Ottatum (1 lot 3/20.		Species?		Number of Dominant Species	0	
1				That Are OBL, FACW, or FAC:	3	(A)
2				Total Number of Dominant		
3				Species Across All Strata:	3	(B)
4						(-)
				Percent of Dominant Species	100	
5				That Are OBL, FACW, or FAC:	100	(A/B)
6				Prevalence Index worksheet:		
7					Multiply by	
		= Total Co		Total % Cover of:		
50% of total cover: 0	20% of	total cover	r: <u> </u>	OBL species x	1 =	_
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2	2 =	_
1				FAC species x :	3 =	_
				FACU species x 4	4 =	
2				UPL species x :		
3						
4				Column Totals: (A)	/	_ (D)
5				Prevalence Index = B/A =		
6						
7				Hydrophytic Vegetation Indicat		
				1 - Rapid Test for Hydrophyt		
8				✓ 2 - Dominance Test is >50%	1	
9		T / 10		3 - Prevalence Index is ≤3.0 ¹	1	
500/ of total answer		= Total Co	_	4 - Morphological Adaptation	ns¹ (Provide sup	porting
50% of total cover: 0	20% 01	total cove	r:	data in Remarks or on a s	separate sheet)	
Helb Stratum (Flot Size)	00	,		Problematic Hydrophytic Veg	netation¹ (Expla	in)
1. Impatiens capensis	20		FACW_		,	,
2. Boehmaria cylindrica	20		FACW_	1 adianta and foundation and constitution		
3. Persicarria virginianum	20		F <u>AC</u>	¹ Indicators of hydric soil and wetl be present, unless disturbed or p		nust
4				Definitions of Four Vegetation		
5				Definitions of Four Vegetation	Strata.	
6				Tree - Woody plants, excluding	vines, 3 in. (7.6	cm) or
				more in diameter at breast height	t (DBH), regard	less of
7				height.		
8				Sapling/Shrub – Woody plants,	excluding vines	. less
9				than 3 in. DBH and greater than		
10				m) tall.		
11.				Herb – All herbaceous (non-woo	du) plante roas	rdlocc
	60	= Total Co	ver	of size, and woody plants less that		liuless
50% of total cover: 30		total cove		, , , , , , , , , , , , , , , , , , , ,		
Woody Vine Stratum (Plot size: 15')			· 	Woody vine – All woody vines g	reater than 3.28	3 ft in
				height.		
1						
2						
3						
4		·		Hydrophytic		
5				Vegetation		
	0	= Total Co	ver	Present? Yes	No	
50% of total cover: 0	20% of	total cover	r: <u> </u>			
Remarks: (Include photo numbers here or on a separate s	heet.)					
Remaining cover in herb stratum is bare ground						

SOIL Sampling Point: W-EE4

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the i	ndicator	or confirm	the absence of indicators.)
Depth	Matrix		Redo	x Feature	s		
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u> <u>Remarks</u>
0-2	10YR 4/2	95	10YR 4/4	5	С	M	Silt Clay Loam
2-8	2.5Y 4/1	95	7.5YR 4/4	5	C	<u>PL</u>	Silt Clay Loam
8-18	2.5Y 4/1	90	7.5YR 5/6	10	С	M/PL	Silt Clay Loam Hydrogen sulfide odor
			_		'		
					-		
					-		
	-						
¹Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	=Masked	Sand Gr	ains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I		•	,				Indicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Be				148) Coast Prairie Redox (A16)
Black Hi			Thin Dark Su		•	47, 148)	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		F2)		Piedmont Floodplain Soils (F19)
	d Layers (A5) lck (A10) (LRR N)		Depleted Mar		-c\		(MLRA 136, 147) Very Shallow Dark Surface (TF12)
	d Below Dark Surface	(A11)	Depleted Dar				Other (Explain in Remarks)
	ark Surface (A12)	(,,,,	Redox Depre				
	lucky Mineral (S1) (L	RR N,	Iron-Mangan			LRR N,	
	A 147, 148)		MLRA 13	•			-
	lleyed Matrix (S4)		Umbric Surfa				³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo				
	Matrix (S6) -ayer (if observed):		Red Parent N	riateriai (F	(WLR	A 127, 147	y unless disturbed or problematic.
Type:	Layer (ii observeu).						
	ches):						Hydric Soil Present? Yes V No
Remarks:							riyunc son Fresent: Tes No
Remarks.							

Wetland Photograph Page

Wetland ID W-EE4



Photograph Direction SE

Date: 07/30/2015

Comments: 2015 wetland delineation.



Photograph Direction North

Date: 10/22/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP		City/C	County: Monroe		Sampling Date: 07/30/2015		
Applicant/Owner: MVP		•	,		Sampling Point: W-EE4 UP		
Investigator(s): J.Hart, D. N	/IcCullough, F. M	artinez _{Secti}	on. Township, Range: N/	<u> </u>	_		
Landform (hillslope, terrace, et					Slope (%): 2		
Subregion (LRR or MLRA): L	Datum: NAD 83						
Soil Map Unit Name: Gilpin-			_				
					·		
Are climatic / hydrologic condi		•			·		
Are Vegetation, Soil				Circumstances" p	present? Yes No		
Are Vegetation, Soil	, or Hydrology	naturally problemate	atic? (If needed, e.	xplain any answe	ers in Remarks.)		
SUMMARY OF FINDIN	GS – Attach sit	e map showing san	npling point locatio	ns, transects	, important features, etc.		
Hydrophytic Vegetation Pres	ent? Yes	No_ 🗸					
Hydric Soil Present?		No	Is the Sampled Area within a Wetland?	Voc	No		
Wetland Hydrology Present?	Yes	No 🗸	within a wetiand?	res	NO		
Remarks:							
Upland plot occurs on h	illslope above w	etland/pond. Paired	plot with W-EE4				
HYDROLOGY							
Wetland Hydrology Indicat					ators (minimum of two required)		
Primary Indicators (minimum	of one is required; of			Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8)			
Surface Water (A1)		True Aquatic Plants (
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Pa			
Saturation (A3) Water Marks (B1)		Oxidized Rhizospher Presence of Reduced	-	Moss Trim L	Water Table (C2)		
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Bur			
Drift Deposits (B3)		Thin Muck Surface (0			Visible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)		Other (Explain in Rer			or Stressed Plants (D1)		
Iron Deposits (B5)					Position (D2)		
Inundation Visible on Ae	rial Imagery (B7)				w Aquitard (D3)		
Water-Stained Leaves (I	39)				aphic Relief (D4)		
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)		
Field Observations:							
Surface Water Present?	Yes No _	Depth (inches):					
Water Table Present?	Yes No _	Depth (inches):					
Saturation Present?	Yes No _	Depth (inches):	Wetland H	ydrology Preser	nt? Yes No		
(includes capillary fringe) Describe Recorded Data (str	eam gauge, monitor	ing well, aerial photos, pre	vious inspections), if avai	ilable:			
(1)	33.,	3 - , , , , , , , , ,	.,,				
Remarks:							
No hydrology							

Sampling Point: W-EE4 UP

30'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1. Acer saccharum	50		<u>FACU</u>	That Are OBL, FACW, or FAC:1 (A)
2. Aesculus flava	25		FACU_	Total Number of Descinant
3				Total Number of Dominant Species Across All Strata: 6 (B)
4				(b)
		-		Percent of Dominant Species
5				That Are OBL, FACW, or FAC:16.7 (A/B)
6				Prevalence Index worksheet:
7				
		= Total Cov		Total % Cover of: Multiply by:
50% of total cover: <u>37.</u> 5	5 20% of	total cover:	15	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Acer saccharum	30	✓	FACU	FAC species x 3 =
2. Aesculus flava	15		FACU	FACU species x 4 =
			r <u>ACU</u>	UPL species x 5 =
3				
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				
7				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 22.5	5 20% of	total cover:	9	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Persicarria virginianum	20	/	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Ozmorhiza claytonii	15		FACU	
3. Verbesina alternifolia	10			¹ Indicators of hydric soil and wetland hydrology must
			F <u>AC</u>	be present, unless disturbed or problematic.
4. Polystichum acrostichoides	10		F <u>ACU</u>	Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7		·		more in diameter at breast height (DBH), regardless of height.
				Hoight.
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
	55	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 27.5	5 20% of	total cover:	11	
Woody Vine Stratum (Plot size:15')				Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes No
50% of total cover: 0		total cover:	_	
Remarks: (Include photo numbers here or on a separate s				
		littor		
Remaining cover in herb stratum is bare ground	i and lear	iitter		

SOIL Sampling Point: W-EE4 UP

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator o	or confirm	the abser	ce of indica	tors.)	
Depth	Matrix			x Features						
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>		Remarl	ks
0-6	10YR 3/2	100					Silt Lo	<u>am</u>		
6-15	10YR 5/6	100					Clay L	.oam		
-										
-							-			
¹Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ins.	² Location:	PL=Pore Lir	ning, M=Mat	rix.
Hydric Soil I		,	,			-	Inc	dicators for F	Problematic	Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)				2 cm Muck	(A10) (MLR	A 147)
	pipedon (A2)		Polyvalue Be		ce (S8) (M	LRA 147,	148)	_	ie Redox (A	•
Black Hi			Thin Dark Su					(MLRA 1		,
Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matrix (F2)		_	Piedmont F	loodplain Sc	oils (F19)
	l Layers (A5)		Depleted Ma	. ,				(MLRA 1		
	ick (A10) (LRR N)		Redox Dark				_		w Dark Surf	
	Below Dark Surface	e (A11)	Depleted Dai				_	Other (Expl	ain in Rema	rks)
	ark Surface (A12)	DD 11	Redox Depre			DD 11				
	lucky Mineral (S1) (L	KK N,	Iron-Mangan		es (F12) (I	LKK N,				
	147, 148) sleyed Matrix (S4)		MLRA 13 Umbric Surfa		MI DA 13	6 122)	3	Indicators of	hydrophytic	vegetation and
	edox (S5)		Piedmont Flo					wetland hydr		-
-	Matrix (S6)		Red Parent N					unless distur		
	_ayer (if observed):			(1	, (<u></u>			
	mpacted clay									
,	ches): 15						Hydric 9	oil Present?	Yes	No 🗸
Remarks:	51103). <u> </u>		<u></u>				Tiyano C	on i resent:		
No hydric in	ndicators									
ivo riyaric ii	idicators									

USACE FILE NO./Project Name:		Mountain Valley Pipeline			Lat.	37.807721	Lon.	-80.746088
STREAM/SITE ID AND SITE DESCR	RIPTION:				7	W-M2, Pipeline ROW		
(% stream slope, watershed size {a								
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-M2	Emergent	0.1064	Emergent					
						PART III - Advanced Sustainable Determination Made on		on
						Advanced Mitigation (Y or N)		Y
Total Impact		0.1064						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.1064			# 0.004.00		
Total Scrub-Shrub			0			\$6,384.00		
Total Forested			0					
Total Open Water			0	1				

Project/Site: MVP	City/Co	ounty: Summers	(Sampling Date: 04/17/2015			
Applicant/Owner: MVP	ant/Owner: MVP State: WV Sampling Point: W-M2						
Investigator(s): A. Jennrich, J. Kovacs, M. Shaffe				- 1 3			
Landform (hillslope, terrace, etc.): Floodplain			Flat to slightly	concave Slope (%): 3			
Subregion (LRR or MLRA): LRRN Lat: 3				Datum: NAD 83			
Soil Map Unit Name: Cateache-Berks channery s							
Are climatic / hydrologic conditions on the site typical for	this time of year? Ye	es <u> </u>	o, explain in Re	marks.)			
Are Vegetation, Soil, or Hydrology	significantly disturb	ped? Are "Normal Circ	cumstances" pre	esent? Yes 🗸 No			
Are Vegetation, Soil, or Hydrology							
SUMMARY OF FINDINGS – Attach site ma		•	•				
Hydrophytic Vegetation Present? Yes ✓	No						
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes ✓ Yes ✓	No	Is the Sampled Area	/				
Wetland Hydrology Present?	No No	within a Wetland?	Yes <u> </u>	_ No			
Remarks:							
Cowardin Code:PEM HGM:Riverine WT: RPV	WWD						
Information listed on this form represents the		2015. The wetland wa	as revisited o	on 10/23/2019. Presence			
of wetland hydrology, hydrophytic vegetation							
Supplement delineation methodology.							
HYDROLOGY							
Wetland Hydrology Indicators:		<u>Sec</u>	ondary Indicate	ors (minimum of two required)			
Primary Indicators (minimum of one is required; check a	all that apply)		Surface Soil C	racks (B6)			
Surface Water (A1) T	rue Aquatic Plants (E	<u> </u>	Sparsely Vege	etated Concave Surface (B8)			
✓ High Water Table (A2) H	lydrogen Sulfide Odo	or (C1)	Drainage Patte	erns (B10)			
✓ Saturation (A3)	xidized Rhizosphere	s on Living Roots (C3)	Moss Trim Lin	es (B16)			
Water Marks (B1) P	Presence of Reduced	Iron (C4)	Dry-Season W	/ater Table (C2)			
Sediment Deposits (B2) R	Recent Iron Reduction	n in Tilled Soils (C6)	Crayfish Burro	ws (C8)			
1	hin Muck Surface (C			ible on Aerial Imagery (C9)			
	Other (Explain in Rem			essed Plants (D1)			
Iron Deposits (B5)			Geomorphic P				
Inundation Visible on Aerial Imagery (B7)		_	Shallow Aquitard (D3)				
✓ Water-Stained Leaves (B9)		_		hic Relief (D4)			
Aquatic Fauna (B13)			FAC-Neutral T	est (D5)			
Field Observations:	5 (
Surface Water Present? Yes No I		7					
Water Table Present? Yes ✓ No I	Deptit (inches).		_				
Saturation Present? Yes Ves No I (includes capillary fringe)	Depth (inches):(Wetland Hydro	ology Present	? Yes <u>√</u> No			
Describe Recorded Data (stream gauge, monitoring we	II, aerial photos, prev	vious inspections), if available	e:				
Remarks:							
On floodplain with S-M6							
·							

VEGETATION (Four S

001	Absolute	Dominant	Indicator	Dominance Test works	heet:	
ree Stratum (Plot size: 30')		Species?	<u>Status</u>	Number of Dominant Spe		(4)
				That Are OBL, FACW, or	FAC:	(A)
				Total Number of Dominal Species Across All Strata	^*	(B)
				Species Across Air Strate	ı. <u> </u>	(b)
				Percent of Dominant Spe That Are OBL, FACW, or		(A/B
	-		·	Prevalence Index works	sheet:	
				Total % Cover of:		:
500/ - 51-1-1 0		= Total Cov		OBL species		
50% of total cover: 0	20% of	total cover	:0	FACW species		
npling/Shrub Stratum (Plot size: 15') Aesculus glabra	20	/	FACU	FAC species		
			FACU_	FACU species		
			·			
				1	x 5 =	
				Column Totals:	(A)	(B)
				Prevalence Index =	= B/A =	
	_			Hydrophytic Vegetation		
				1 - Rapid Test for Hy		า
	-			✓ 2 - Dominance Test		
				3 - Prevalence Index		
		= Total Cov	er er	4 - Morphological Ad		sunnortin
50% of total cover: 10) 20% of	total cover	:4		or on a separate she	
erb Stratum (Plot size: 5')					•	
Ranunculus spp	15		ND	Problematic Hydroph	iyuc vegetadori (Ex	ріаніј
Poa palustris	10		FACW_	1		
Impatiens capensis	10	_ ✓	FACW_	¹ Indicators of hydric soil a be present, unless distur	and wetland hydrolog hed or problematic	gy must
Solidago spp	3		ND	Definitions of Four Veg	•	
Viola spp	3		ND	Definitions of Four Veg	etation Strata:	
				Tree – Woody plants, ex		
	-			more in diameter at breas	st height (DBH), rega	ardless o
				height.		
				Sapling/Shrub – Woody		
				than 3 in. DBH and great m) tall.	er than or equal to 3	.28 ft (1
)	-			inj tali.		
	41			Herb – All herbaceous (r		
50% - 51-1-1 20		= Total Cov		of size, and woody plants	s less than 3.28 ft tall	l.
50% of total cover: <u>20.</u>	<u>J</u> 20% 01	total cover	. 0.2	Woody vine – All woody	vines greater than 3	.28 ft in
oody Vine Stratum (Plot size: 15')				height.		
	-					
				Hydrophytic		
				Vegetation	,	
	0	= Total Cov	ver	Present? Yes	No	_
50% of total cover:0	20% of	total cover	: 0			

Plot was in a forested and Aesculus glabra.

ND- Not determined

*Vegetation not ID'd down to species level not included in dominance test.

SOIL Sampling Point: W-M2

Profile Desc	ription: (Describe to	o the dept	th needed to docun	nent the i	indicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
<u> 0-1</u>	10 yr 3/1	_100_					SiL	Slightly mucky
1-3	10 yr 3/2	95	10 yr 3/8	5	<u>C</u>	M/PL	SiL	Slightly mucky
3-6	Gley 2 4/5PB	96	10 yr 3/8	4	<u>C</u>	M/PL	CL	
6-20	Gley 2 4/5PB	_100_						
				-				
				-		- ——		
						<u> </u>		
¹Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gr	ains.	² Location: PL	
Hydric Soil I								tors for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2	cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Be				148) C	oast Prairie Redox (A16)
Black His			Thin Dark Su			147, 148)		(MLRA 147, 148)
	n Sulfide (A4)		✓ Loamy Gleye		(F2)		Pi	edmont Floodplain Soils (F19)
	l Layers (A5) ck (A10) (LRR N)		Depleted Mar Redox Dark S		-6)		V	(MLRA 136, 147) ery Shallow Dark Surface (TF12)
	Below Dark Surface	(A11)	Nedox Dark Depleted Dar					ther (Explain in Remarks)
	rk Surface (A12)	(, , , , ,	Redox Depre					(=,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
	lucky Mineral (S1) (L l	RR N,	Iron-Mangan			LRR N,		
	\ 147, 148)		MLRA 13	•				
	leyed Matrix (S4)		Umbric Surfa					cators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo					tland hydrology must be present,
	Matrix (S6) ayer (if observed):		Red Parent N	nateriai (F	(VILE	A 127, 147	unii	ess disturbed or problematic.
	Layer (ii observeu).							
Type:	ches):						Hydric Soil	Present? Yes ✓ No
	nes).						nyuric 3011	Present? res_v NO
Remarks:								



Photograph Direction SW

Date: 04/17/2015

Comments: 2015 wetland delineation.



Photograph Direction SW

Date: 10/23/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	City/County: Summers	Sampling Date: 04/17/2015			
Applicant/Owner: MVP		State: WV Sampling Point: W-M2 Up			
Investigator(s): A. Jennrich, J. Kovacs, M. Sh	naffer Section Township Range N				
Landform (hillslope, terrace, etc.): Hillslope					
Subregion (LRR or MLRA): LRRN L	at. 37 807643	0.745873 Slope (76)			
Soil Map Unit Name: Cateache-Berks channe					
•					
Are climatic / hydrologic conditions on the site typical					
Are Vegetation, Soil, or Hydrology _	significantly disturbed? Are "Norma	al Circumstances" present? Yes ✓ No			
Are Vegetation, Soil, or Hydrology _	naturally problematic? (If needed,	explain any answers in Remarks.)			
SUMMARY OF FINDINGS – Attach site	map showing sampling point locati	ons, transects, important features, etc.			
Hydrophytic Vogotation Procent?	No / Is the Sampled Area				
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	No. / Is the Sampled Area				
Wetland Hydrology Present? Yes	No_ ✓ within a Wetland?	Yes No <u></u>			
Remarks:	<u> </u>				
Upland					
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)			
Primary Indicators (minimum of one is required; ch	eck all that apply)	Surface Soil Cracks (B6)			
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)			
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)				
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)			
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)			
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)			
	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)			
Iron Deposits (B5)		Geomorphic Position (D2)			
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)			
Water-Stained Leaves (B9)		Microtopographic Relief (D4)			
Aquatic Fauna (B13)		FAC-Neutral Test (D5)			
Field Observations:	Ponth (inches)				
	Depth (inches):				
	Depth (inches):	W 1-1 Possesso W			
Saturation Present? Yes No No	Depth (inches): Wetland	Hydrology Present? Yes No✓			
Describe Recorded Data (stream gauge, monitorin	g well, aerial photos, previous inspections), if av	ailable:			
Remarks:					

'EGETATION (Four Strata) – Use scientific r	names of	plants.		Sampling Point: W-M2 U	p
301	Absolute	Dominant		Dominance Test worksheet:	
Tree Stratum (Plot size: 30')		Species?		Number of Dominant Species	
_{1.} Quercus rubra	_ <u>55</u> _		FACU_	That Are OBL, FACW, or FAC:0	(A)
{2.} Aesculus glabra	20		FACU	Total Number of Dominant	
3				Species Across All Strata: 4*	(B)
4					- ` ′
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 0	(A/B)
6				That Ale Obl., FACW, OF FAC.	_ (A/D)
				Prevalence Index worksheet:	
7	75	Total Cov		Total % Cover of: Multiply by:	
50% of total cover: <u>37.</u>				OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15')	2070 01	total cover.		FACW species x 2 =	
Aesculus glabra	10	./	FACU	FAC species x 3 =	
2 Smilax rotundifolia	$-\frac{10}{2}$			FACU species x 4 =	
			FAC	UPL species x 5 =	
3				The state of the s	
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%	
	12	Total Cov		3 - Prevalence Index is ≤3.0 ¹	
50% of total cover:6		total cover:		4 - Morphological Adaptations ¹ (Provide su	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet	:)
1 Daucus carota	10	✓	UPL	Problematic Hydrophytic Vegetation ¹ (Expl	ain)
2. Grass spp	5		ND_		
3. Viola spp	- - 5			¹ Indicators of hydric soil and wetland hydrology	must
<u> </u>	$-\frac{3}{2}$		ND	be present, unless disturbed or problematic.	
4. Galium spp	$-\frac{2}{2}$		ND	Definitions of Four Vegetation Strata:	
5. Taraxacum officinale			F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6	S cm) or
6. Podophyllum peltatum			F <u>ACU</u>	more in diameter at breast height (DBH), regard	
7				height.	
8				Sapling/Shrub – Woody plants, excluding vine	e loce
9				than 3 in. DBH and greater than or equal to 3.2	s, iess 8 ft (1
10.				m) tall.	
 11.				Herb – All herbaceous (non-woody) plants, reg	ordlocc
	25	= Total Cov	 er	of size, and woody plants less than 3.28 ft tall.	aruiess
50% of total cover:12.					
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.2	8 ft in
1				height.	
2					
3					
4. <u> </u>				Hydrophytic	
5	- —			Vegetation	
		= Total Cov	_	Present? Yes No	
50% of total cover:0	20% of	total cover:	0		
Remarks: (Include photo numbers here or on a separate	sheet.)				
ND- Species not determined not included in do	minance t	est.			
•					

SOIL Sampling Point: W-M2 Up

Profile Desc	ription: (Describe t	o the depti	n needed to docun	nent the i	ndicator	or confirm	the absen	ce of indicators.)
Depth	Matrix		Redo	x Feature:	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks Remarks
0-13	10 yr 3/3	_100_					SiL	
13-15	10 yr 4/3	100					SiL	
15-20	10 yr 4/3	99	10 yr 4/6	1	С	PL	SiL	A few manganese nodules
			10 91 1/0	<u> </u>	<u> </u>	<u> </u>		
						. ——		_
¹ Type: C=Co	oncentration, D=Depl	etion RM=I	Reduced Matrix MS	——— S=Masker	I Sand Gr	ains	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil		Ction, Itivi–i	reduced Matrix, Me)-IVIdSRCC	Juliu Oi	uirio.		icators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(\$7)				2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be		ce (S8) (N	/II RA 147.		Coast Prairie Redox (A16)
Black Hi			Thin Dark Su					(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			,	_	Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat					(MLRA 136, 147)
2 cm Mu	ck (A10) (LRR N)		Redox Dark S	Surface (F	6)			Very Shallow Dark Surface (TF12)
	d 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	•	(BAL DA 40	0. 400)	3,	
	leyed Matrix (S4) edox (S5)		Umbric Surfa Piedmont Flo					ndicators of hydrophytic vegetation and wetland hydrology must be present,
-	Matrix (S6)		Red Parent N					unless disturbed or problematic.
	_ayer (if observed):		Red r drent iv	iateriai (i	Z I) (IVILIX	A 127, 177	' '	unless disturbed of problematic.
Type:	Luyer (ii observeu).							
J	ahaa).						Libratria C.	oil Present? Yes No <u>√</u>
	ches):						nyunc s	oil Present? Yes No _ ✓
Remarks:								

USACE FILE NO./Project Name:		Mountain Valley Pipeline			Lat.	37.693888	Lon.	-80.735663
STREAM/SITE ID AND SITE DESCR						W-EF40, Timber Mat Crossing		
(% stream slope, watershed size {a	creage}, unaltered	l or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	8/10/2015 WEATHER CONDITIONS:				PRECIPITATION PAST 48 HRS:		
	PART I - Wetl	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-EF40	Emergent	0.0889	Emergent					
				-				
						PART III - Advanced		on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
						11 M 13		
Total Impact		0.0889				Fatimated		
W di la		Jnit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent Total Scrub-Shrub			0.0889	-		¢= 224.00		
			0			\$5,334.00		
Total Forested			0	-				
Total Open Water			0	<u></u>				

Project/Site: MVP		City/C	ounty: Summers		Sampling Date: 07/26/2016
Applicant/Owner: MVP					Sampling Point: W-EF40
Investigator(s): D Hadersbe	ck S Therkildson				
Landform (hillslope, terrace, etc			-		Slope (%): 2-4
Subregion (LRR or MLRA): LI					Datum: NAD 83
Soil Map Unit Name: Ud-Udifl	uvents and Psamme	ents, frequently flooded			
Are climatic / hydrologic conditi	ions on the site typica	I for this time of year? Y	es No	(If no, explain in R	temarks.)
Are Vegetation, Soil	, or Hydrology	significantly distur	bed? Are "Normal	l Circumstances" r	present? Yes No
Are Vegetation, Soil					
-					, important features, etc.
Hydrophytic Vogototica Proce		, No	<u> </u>		
Hydrophytic Vegetation Present?		No	Is the Sampled Area		
Wetland Hydrology Present?		, No	within a Wetland?	Yes	No
Demandra			Water Type:	RPWWD	
			• •		adjacent uplands (based
on soils and hydrology).	Streamside Wella	nd along 5-14. Sin	ub and tree cartopy	layer rooted ii	i aujacent upianus (baseu
on soils and hydrology).					
HYDROLOGY					
Wetland Hydrology Indicato	ore:			Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum		ack all that apply)		Surface Soil	
✓ Surface Water (A1)			D14\		getated Concave Surface (B8)
High Water Table (A2)		True Aquatic Plants (lHydrogen Sulfide Odd		Sparsely ve	
Saturation (A3)		_ Oxidized Rhizosphere		Moss Trim L	
Water Marks (B1)		_ Presence of Reduced	-		Water Table (C2)
Sediment Deposits (B2)		_ Recent Iron Reductio		Crayfish Bur	
Drift Deposits (B3)	_	Thin Muck Surface (C			isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	_	_ Other (Explain in Ren			tressed Plants (D1)
Iron Deposits (B5)	_				Position (D2)
Inundation Visible on Aer	rial Imagery (B7)			✓ Shallow Aqu	
Water-Stained Leaves (B					aphic Relief (D4)
Aquatic Fauna (B13)	-,			FAC-Neutral	
Field Observations:					. ,
Surface Water Present?		Depth (inches):	1		
Water Table Present?	Yes No	Depth (inches):			
Saturation Present?	Yes No		_	Hydrology Preser	nt? Yes <u>/</u> No
(includes capillary fringe) Describe Recorded Data (stre	eam dauge monitoring	n well aerial photos pre	vious inspections) if ava	ailahle:	
Bosonibe Necorded Bata (stre	zam gaage, montonin	g well, derial priotos, pro	viodo irispectionoj, ir ava	masic.	
Remarks:					
Restrictive layer prevent	ing high water tab	ole			

Samo	lina	Point:	W-EF40
Janio	III IU	I OIIII.	

Tree Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:	
Tiec otratum (Flot size.	% Cover			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				Prevalence Index worksheet:	
7				Total % Cover of: Multiply by:	
0		= Total Co	_	OBL species x 1 =	
50% of total cover:0_	20% of	total cover	:0	FACW species x 2 =	
Sapling/Shrub Stratum (Plot size: 15') 1 Lindera benzoin	5		540	FAC species x 3 =	
· ``			FAC	FACU species x 4 =	
2					
3				· — — — — — — — — — — — — — — — — — — —	
4				Column Totals: (A)	_ (B)
5				Prevalence Index = B/A =	
6				Hydrophytic Vegetation Indicators:	_
7		-		1 - Rapid Test for Hydrophytic Vegetation	
8				✓ 2 - Dominance Test is >50%	
9				3 - Prevalence Index is ≤3.0 ¹	
0.5		= Total Co		4 - Morphological Adaptations ¹ (Provide supp	oortina
50% of total cover: 2.5	20% of	total cover	: 1	data in Remarks or on a separate sheet)	
Herb Stratum (Plot size: 5')	00	,		Problematic Hydrophytic Vegetation ¹ (Explain	n)
1. Carex vulpinoidea	20		OBL	1 Toblematic Tryarophytic Vegetation (Explain	11)
2. Cared lurida	20		OBL	¹ Indicators of hydric soil and wetland hydrology m	nuet
3. Scirpus polyphyllus	15		OBL	be present, unless disturbed or problematic.	lust
4. Impatiens capensis	15		F <u>ACW</u>	Definitions of Four Vegetation Strata:	
5. Pilea pumila	10		FACW_		,
6. Microstegium vimineum	10		F <u>AC</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 of more in diameter at breast height (DBH), regardle	
7				height.	300 01
8				Sanling/Shrub Woody plants evaluding vines	loop
9				Sapling/Shrub – Woody plants, excluding vines, than 3 in. DBH and greater than or equal to 3.28	
10				m) tall.	,
11		-		Herb – All herbaceous (non-woody) plants, regar	dless
	90	= Total Co	/er	of size, and woody plants less than 3.28 ft tall.	4.000
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.	10 111
1					
2					
3		-			
4		-		Hydrophytic	
5				Vegetation	
	0	= Total Co	/er	Present? Yes _ V No	
50% of total cover:0	20% of	total cover	:0		
Remarks: (Include photo numbers here or on a separate s	heet.)				

Depth	Matrix			x Features	_ 1	. ,	_			
(inches)	Color (moist)	<u>%</u>	Color (moist)		Γype ¹ _	Loc ²	Texture		Remarks	
0-6	10yr4/1	80	7.5yr 5/8	20 (<u> </u>	M/PL	SaCL			
								-		
										
			Dealer and Market MA				21			
ydric Soil I	ncentration, D=Depl	etion, RM=	Reduced Matrix, Mi	S=Masked Sa	and Grair	ns.			ng, M=Matrix. roblematic Hy	dria Caila ³ .
-			DI- 0((07)					-	
Histosol	• •		Dark Surface		(CO) (BAI	DA 447		•	A10) (MLRA 1	•
	ipedon (A2)		Polyvalue Be		. , .		148) C		Redox (A16)	
Black His	n Sulfide (A4)		Thin Dark Su Loamy Gleye			7, 140)	Р	(MLRA 14	oodplain Soils	(E10)
	l Layers (A5)		Depleted Ma)			(MLRA 13		(୮19)
	ck (A10) (LRR N)		Redox Dark	. ,			V		/ Dark Surface	(TF12)
	Below Dark Surface	(A11)	Depleted Dai	, ,	7)				in in Remarks	
	rk Surface (A12)	, (, , , ,	Redox Depre		.,			(=,4,5.6		,
	lucky Mineral (S1) (L	RR N,	Iron-Mangan		(F12) (LF	RR N.				
	147, 148)	,	MLRA 13		` / `	,				
	leyed Matrix (S4)		Umbric Surfa	•	_RA 136,	122)	³ Ind	icators of h	ydrophytic veg	etation and
	edox (S5)		Piedmont Flo						logy must be p	
Stripped	Matrix (S6)		Red Parent N	Material (F21)	(MLRA	127, 147) un	less disturb	ed or problem	atic.
Restrictive L	ayer (if observed):									
Type: Co	bble/streambed									
Depth (inc	ches): 6						Hydric Soil	Present?	Yes_ 🗸	No
Remarks:										·



Photograph Direction SE

Comments:		

Project/Site: MVP		City/C	ounty: Summers		Sampling Date: 07/26/2016
Applicant/Owner: MVP					Sampling Point: W-EF40-UI
Investigator(s): D Hadersbeck S Ther	kildson S P				_ ,
					Slope (%): 2-4
Subregion (LRR or MLRA): LRR N					Datum: NAD 83
Soil Map Unit Name: Ud-Udifluvents and					
Are climatic / hydrologic conditions on the s	ite typical for th	nis time of year? Y	es No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hyd	Irology	significantly distur	bed? Are "Normal	Circumstances" p	resent? Yes V No
Are Vegetation, Soil, or Hyd					
SUMMARY OF FINDINGS – Atta					
Hydrophytic Vegetation Present?	Yes	No. V			<u> </u>
	Yes		Is the Sampled Area	Vaa	No
	Yes		within a Wetland?	Yes	NO - _
Remarks: Cowardin Code: UPLA		I	Water Type:		
HYDROLOGY					
Wetland Hydrology Indicators:				<u> </u>	tors (minimum of two required)
Primary Indicators (minimum of one is req				Surface Soil	
Surface Water (A1)		ue Aquatic Plants (getated Concave Surface (B8)
High Water Table (A2)	-	drogen Sulfide Ode		Drainage Pat	
Saturation (A3)			es on Living Roots (C3)	Moss Trim Li	
Water Marks (B1)		esence of Reduced	n in Tilled Soils (C6)		Water Table (C2)
Sediment Deposits (B2) Drift Deposits (B3)		in Muck Surface (C		Crayfish Burr	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		her (Explain in Ren			ressed Plants (D1)
Iron Deposits (B5)	0	nor (Explain in Roll	namo)	Geomorphic	
Inundation Visible on Aerial Imagery ((B7)			Shallow Aqui	
Water-Stained Leaves (B9)	,				phic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:					
		epth (inches):			
Water Table Present? Yes	_ No D	epth (inches):			
Saturation Present? Yes (includes capillary fringe)	No / D	epth (inches):	Wetland H	lydrology Presen	t? Yes No
Describe Recorded Data (stream gauge, r	monitoring well	, aerial photos, pre	vious inspections), if ava	ilable:	
Barred a					
Remarks:					

Sampling	Point: W-EF40-UP
Sambillia	1 01111

Troo Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:
Tiee Stratum (Fiot Size)		Species?	Status	Number of Dominant Species
1. Tsuga canadensis	30		FACU_	That Are OBL, FACW, or FAC:4 (A)
2. Acer saccharum	35		FACU_	Total Number of Deminent
3. Aesculus flava	10		<u>FACU</u>	Total Number of Dominant Species Across All Strata: 8 (B)
4.				(2)
				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
07.6		= Total Cov		
50% of total cover: <u>37.5</u>	20% of	total cover:	15	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Carpinus caroliniana	50		FAC	FAC species x 3 =
2. Aesculus flava	25	✓	<u>FACU</u>	FACU species x 4 =
3. Lindera benzoin	20	~	FAC	UPL species x 5 =
•			1.710	Column Totals: (A) (B)
4				(-)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				
9			·	2 - Dominance Test is >50%
-	0.5	= Total Cov		3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 47.5				4 - Morphological Adaptations ¹ (Provide supporting
- !	2070 01	total cover.		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 1, Polystichum acrosticoides	15	~	EACH	Problematic Hydrophytic Vegetation ¹ (Explain)
			FACU_	
2. Lindera benzoin	20		F <u>AC</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Amphicarpaea bracteata	10		F <u>AC</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
	45 .	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>22.5</u>	20% of	total cover:	9	
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
				neight.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0 .	= Total Cov	er	Present? Yes No
50% of total cover: 0		total cover:	_	
Remarks: (Include photo numbers here or on a separate s				1
Tremains. (include prioto numbers here of on a separate s	neet.)			

Depth	ription: (Describe t		Redo	x Features						
(inches)	Color (moist)	<u>%</u>	Color (moist)			Loc ²	Texture		Remarks	3
0-5	10yr 4/3	99	7.5yr 5/6		<u>C </u>	<u>и </u>	SiL	-		
								-		
								-		
vne: C=Co	oncentration, D=Depl	etion RM=R	educed Matrix MS	S=Masked S	and Grain	s ² I	ocation: PI	=Pore Lini	ng, M=Matrix	x
	ndicators:	ouon, ruvi–ru	caacca Matrix, IVIC	z-iviaskou o	ana Orani	o. L				lydric Soils ³ :
_ Histosol			Dark Surface	(S7)					A10) (MLRA	-
	oipedon (A2)		Polyvalue Be		(S8) (MLF	RA 147. 14			Redox (A16	•
Black Hi			Thin Dark Su		. , .		_	(MLRA 14		,
	n Sulfide (A4)		Loamy Gleye				Pi		odplain Soil	s (F19)
_ Stratified	Layers (A5)		Depleted Mat	rix (F3)				(MLRA 13	6, 147)	
	ck (A10) (LRR N)		Redox Dark S	, ,					Dark Surfac	
	Below Dark Surface	(A11)	Depleted Dar	,	7)		0	ther (Expla	in in Remark	s)
	ark Surface (A12)		Redox Depre							
	lucky Mineral (S1) (L	RR N,	Iron-Mangan		(F12) (LR	R N,				
	147, 148)		MLRA 13	•	DA 400	400\	31			
	leyed Matrix (S4) edox (S5)		Umbric Surfa Piedmont Flo						yaropnytic ve logy must be	egetation and
	Matrix (S6)		Red Parent N						ed or proble	
	_ayer (if observed):		Ned Falentin	iateriai (i Z i) (IVILIXA I	121, 141)	un	ess distuib	ed of problet	matic.
	ourse fragments									
Depth (inc			_			١.	Hydric Soil	Dracant?	Voc	No_ 🗸
	nes). <u> </u>		_				Tyuric Soii	rieseiit?	Yes	
emarks:										
ery faint,	possibly historic	redox								

	Mountain Valley Pipeline		COORDINATES:	Lat.	37.675423	Lon.	-80.732001
STREAM/SITE ID AND SITE DESCRIPTION:					W-EF36, Timber Mat Crossing		
creage}, unaltered	or impairments)						
8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetl	and Indicators						
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0035	Emergent					
							n
					Sustainable Determination Made or Advanced Mitigation (Y or N)		Υ
	0.0035						
	Jnit Scores						
assification					ILF Costs		
					\$210.00		
			-		\$210.00		
		-					
	PART I - Wetl Impact Wetland Classification Emergent	IPTION: creage}, unaltered or impairments) 8/10/2015 PART I - Wetland Indicators Impact (acreage) Classification Emergent 0.0035 0.0035 PART II - Unit Scores	IPTION: creage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts Wetland Classification Emergent 0.0035 Emergent 0.0035 PART II - Unit Scores	IPTION: creage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0035 Emergent 0.0035 PART II - Unit Scores assification Replacement Unit(s) 0 0 0	IPTION: creage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0035 Emergent 0.0035 PART II - Unit Scores assification Replacement Unit(s) 0 0 0	PTION: creage), unaltered or impairments) ### RECIPITATION PAST 48 HRS: ### PART I - Wetland Indicators Impact	IPTION: creage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0035 Emergent PART II - Unit Scores assification Replacement Unit(s) 0.0035 Replacement Unit(s) 0.0035 \$210.00

Project/Site: MVP	City/C	county: Summers		Sampling Date: 07/24/2016
Applicant/Owner: MVP		Sampling Point: W-EF36		
Investigator(s): D Hadersbeck S Ther	kildson S Pitcher Section	on, Township, Range: N/A		_ ,
Landform (hillslope, terrace, etc.): Basin				Slone (%): 0-2
Subregion (LRR or MLRA): LRR N		Datum: NAD 83		
Soil Map Unit Name: MgB-Monongahela				
Are climatic / hydrologic conditions on the s				
Are Vegetation, Soil, or Hyd			Circumstances" p	resent? Yes No
Are Vegetation, Soil, or Hyd	Irology naturally problema	atic? (If needed, ex	xplain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Atta	ch site map showing san	pling point location	ns, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes No			
7. 1 7. 3	Yes No	Is the Sampled Area within a Wetland?	V V	No
*	Yes No	within a wetland?	res	NO
Remarks: Cowardin Code: PEM	HGM: Riverine	Water Type: F	RPWWN	
		• •		secont ton All of ooil ore
Wetland formed within railroad dito stained/contaminated from what a			•	•
Stanied/containinated from what a	ppears to be creasure from	radjacent ramoad tre	icks. Carrie up	nana form as W 144 Of
HYDROLOCY				
Westland Hydrology Indicators			Cocondon, Indico	toro (minimum of two required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one is required)	uired: abook all that apply)	•		tors (minimum of two required)
✓ Surface Water (A1)			Surface Soil	, ,
High Water Table (A2)	True Aquatic Plants (Hydrogen Sulfide Od		Sparsely veg Drainage Pat	getated Concave Surface (B8)
Saturation (A3)		es on Living Roots (C3)	Drainage Fai	
Water Marks (B1)	Presence of Reduced	-		Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reductio		Crayfish Bur	
Drift Deposits (B3)	Thin Muck Surface (0			sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Rer			tressed Plants (D1)
Iron Deposits (B5)			✓ Geomorphic	
Inundation Visible on Aerial Imagery ((B7)	•	Shallow Aqui	` '
Water-Stained Leaves (B9)	,	•		phic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	
Field Observations:				
Surface Water Present? Yes	No Depth (inches):	1		
Water Table Present? Yes	No Depth (inches):			
	No Pepth (inches):		vdrology Presen	t? Yes 🗸 No
(includes capillary fringe)				
Describe Recorded Data (stream gauge, r	monitoring well, aerial photos, pre	vious inspections), if avail	lable:	
Remarks:				

Sampling	Point: W-EF	-36
Gairibiliu	1 OII IL. · · - ·	

Tree Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:	
Tiec otratum (Flot size.	% Cover			Number of Dominant Species	2 (A)
1				That Are OBL, FACW, or FAC:	<u>2</u> (A)
3				Total Number of Dominant Species Across All Strata:	2 (B)
4					
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 10	00 _(A/B)
6					(" -)
7				Prevalence Index worksheet:	ly by
		= Total Cov			
50% of total cover:0	20% of	total cover	:0	FACW species x 2 =	
Sapling/Shrub Stratum (Plot size: 15')				FAC species x 3 =	
1				FACU species x 4 =	
2				UPL species x 5 =	
3				Column Totals: (A)	
5					
6				Prevalence Index = B/A =	
7				Hydrophytic Vegetation Indicators:	4-4:
8				1 - Rapid Test for Hydrophytic Veger 2 - Dominance Test is >50%	tation
9				2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹	
		= Total Cov		4 - Morphological Adaptations ¹ (Prov	ide supporting
50% of total cover:0	20% of	total cover	:0	data in Remarks or on a separate	
Herb Stratum (Plot size: 5')	50			Problematic Hydrophytic Vegetation	,
1. Phalaris arundinacea	50		FACW		(=:-μ-:-::-)
2. Impatiens capensis	<u>35</u> 15		FACW_	¹ Indicators of hydric soil and wetland hyd	Irology must
3. Carex lurida	15	-	OBL	be present, unless disturbed or problema	atic.
4. Polygonum sagittatum 5. Juncus effusus	15		OBL	Definitions of Four Vegetation Strata:	
· · ·			<u>FACW</u>	Tree – Woody plants, excluding vines, 3	in. (7.6 cm) or
6				more in diameter at breast height (DBH),	
7				height.	
8				Sapling/Shrub – Woody plants, excluding	ng vines, less
10				than 3 in. DBH and greater than or equal m) tall.	10 3.26 11 (1
11.				Herb All barbaccaus (non woody) plans	to regardless
	130	= Total Cov	ver	Herb – All herbaceous (non-woody) plan of size, and woody plants less than 3.28	
50% of total cover: <u>65</u>		total cover		Woody vine – All woody vines greater th	on 2 20 ft in
Woody Vine Stratum (Plot size: 15')				height.	iaii 3.20 it iii
1					
2					
3					
4		-		Hydrophytic	
5	^			Vegetation Present? Yes ✓ No	
50% of total cover: 0		= Total Cover total cover	_	100 100	
Remarks: (Include photo numbers here or on a separate s		total cover	•		
The manual (manual prints in a manual prints in a m	,				

Profile Desc	cription: (Describe to	o the depth	needed to docur	ment the i	ndicator	or confirm	the abs	sence of indicators.)	
Depth	Matrix			x Features					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Textu	ure Remarks	
0-4	10yr 2/1	100					L	contaminated soi	ls
			•						
								 ,	
							-		
	-								
			•						
								 ,	
							-		
	oncentration, D=Deple	etion, RM=R	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location	on: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:							Indicators for Problematic Hydric S	Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)				2 cm Muck (A10) (MLRA 147)	
Histic E _l	oipedon (A2)		Polyvalue Be	low Surfac	ce (S8) (N	ILRA 147,	148)	Coast Prairie Redox (A16)	
	istic (A3)		Thin Dark Su					(MLRA 147, 148)	
Hydroge	en Sulfide (A4)		Loamy Gleye	ed Matrix (F2)			Piedmont Floodplain Soils (F19)	
Stratified	d Layers (A5)		Depleted Ma	trix (F3)				(MLRA 136, 147)	
2 cm Mu	uck (A10) (LRR N)		Redox Dark	Surface (F	6)			Very Shallow Dark Surface (TF1)	2)
Deplete	d Below Dark Surface	(A11)	Depleted Dar	rk Surface	(F7)		•	Other (Explain in Remarks)	
	ark Surface (A12)		Redox Depre						
	/lucky Mineral (S1) (L l	RR N,	Iron-Mangan		es (F12) (I	_RR N,			
	A 147, 148)		MLRA 13	-				2	
	Bleyed Matrix (S4)		Umbric Surfa					Indicators of hydrophytic vegetatio	
-	Redox (S5)		Piedmont Flo					wetland hydrology must be preser	nt,
	l Matrix (S6)		Red Parent N	Material (F	21) (MLR	A 127, 147	7)	unless disturbed or problematic.	
	Layer (if observed):								
Type: <u>Fr</u>	agmented rock								
Depth (in	ches): <u>4</u>		<u></u>				Hydrid	c Soil Present? Yes <u> </u>	
Remarks:							-1		
Problemati	ic soils. Soils with	in ditch a	nd adjacent to	railroad	smelled	strongly	of cred	osote and were visibly contar	ninated
with a blac	k oil sheen prese	nt on the	soils to a depth	of 4 inc	ches who	ere a res	strictive	layer was hit. Contamination	of the
soils has c	learly altered the	color of th	ne soils in the v	vetland,	10yr 2/1	most a	ccurate	ly represented the black color	
currently p	•			,	•			•	
ourronaly p	1000111.								



Photograph Direction SW

Comments:		

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	37.66813	Lon.	-80.723493
STREAM/SITE ID AND SITE DESCR	STREAM/SITE ID AND SITE DESCRIPTION:					W-K2-PEM, Pipeline ROW		
(% stream slope, watershed size {a	creage}, unaltered	d or impairments)						
FORM OF MITIGATION:								
DATE:	8/10)/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators					•	
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-K2-PEM	Emergent	0.014	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.014						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.014	-		¢0.40.00		
Total Scrub-Shrub			0	_		\$840.00		
Total Coan Water			0	-				
Total Open Water			0	1				

Project/Site: MVP	City/County	: Summers		Sampling Date: 04/13/2015
Applicant/Owner: MVP				Sampling Point: W-K2 PEM
Investigator(s): J. Hart, B. Czeck, N. Katsiaficas	Section, To			
Landform (hillslope, terrace, etc.): Terrace				Slope (%): 2
Subregion (LRR or MLRA): LRRN Lat:	37.668210	Long: <u>-</u> 80.7	723516	Datum: NAD 83
Soil Map Unit Name: Culleoka silt loam, 30 to 65			NWI classification	
Are climatic / hydrologic conditions on the site typical fo	r this time of year? Yes			
Are Vegetation, Soil, or Hydrology	-			resent? Yes No
Are Vegetation , Soil , or Hydrology			plain any answer	
SUMMARY OF FINDINGS – Attach site m				
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	NI a	e Sampled Area		
Wetland Hydrology Present?	No with	in a Wetland?	Yes	No
Remarks:				
Cowardin Code: PEM				
HGM: SLOPE				
WT: RPWWD				
Seep fed wetland on gently sloping terrace a	adjacent to perrennial	stream. Paired	with W-K2 UP	
HYDROLOGY				
Wetland Hydrology Indicators:		<u> </u>	Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum of one is required; check	all that apply)		Surface Soil (Cracks (B6)
✓ Surface Water (A1)	True Aquatic Plants (B14)	<u>-</u>	Sparsely Veg	etated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1	_	Drainage Pat	terns (B10)
	Oxidized Rhizospheres on		Moss Trim Li	
	Presence of Reduced Iron		Dry-Season \	Vater Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in T	illed Soils (C6)	Crayfish Burr	
	Thin Muck Surface (C7)	-		sible on Aerial Imagery (C9)
	Other (Explain in Remarks)	_		ressed Plants (D1)
Iron Deposits (B5)		· -	Geomorphic	
Inundation Visible on Aerial Imagery (B7)		-	Shallow Aqui	
Water-Stained Leaves (B9)		-	Microtopogra ✓ FAC-Neutral	phic Relief (D4)
Aquatic Fauna (B13)		-	- FAC-Neuliai	Test (D5)
Field Observations: Surface Water Present? Yes No	Depth (inches): 2			
Water Table Present? Yes V No		-		
Saturation Present? Yes V No		- Wetland Hy	drology Presen	t? Yes ✔ No
(includes capillary fringe)		_	•	
Describe Recorded Data (stream gauge, monitoring w	ell, aerial photos, previous	inspections), if avail	able:	
Remarks:				
Surface water observed in adjacent areas of	f wetland.			

Sampling	Point:	W-K2	PEM
----------	--------	------	-----

201	Absolute	Dominant		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 Descious
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				Species Advector All Gualds.
				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	: <u> </u>	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
		-		FACU species x 4 =
2				UPL species x 5 =
3				
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				
7				Hydrophytic Vegetation Indicators:
		-		1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:0	20% of	total cover	:0	
Herb Stratum (Plot size: 5'				data in Remarks or on a separate sheet)
1. Panicum virgatum	15	~	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Ludwigia palustris	10		OBL	
3. Carex lurida	10			¹ Indicators of hydric soil and wetland hydrology must
	5		OBL	be present, unless disturbed or problematic.
4. Juncus effusus		-	F <u>AC</u>	Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
8				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
	40	= Total Cov	ver	of size, and woody plants less than 3.28 ft tall.
50% of total cover:20	20% of	total cover	: <u>8</u>	
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
				neigni.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0 ,	= Total Cov	ver	Present? Yes No
50% of total cover: 0		total cover	_	
Remarks: (Include photo numbers here or on a separate s			·	
		-1-		
Remaining cover in herb stratum is bare ground	and that	cn.		

SOIL Sampling Point: W-K2 PEM

Profile Desc	cription: (Describe to	the depth	n needed to docum	nent the i	indicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redo	x Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-17	10YR 5/2	60	10YR 5/6	35	C	M	Silty Clay	
0-17			10YR 3/6	5	С	M	Silty Clay	Iron nodules
		 -				· <u></u>		
		 -						
		 -						
		 -						
					С			
1 _{Turner} C. C	anaphratian D Danie	tion DM [Dadwaad Matrix MG	Mooko			² l continue DI	Dara Lining M. Matrix
Hydric Soil	oncentration, D=Deple	etion, Rivi=i	Reduced Matrix, MS	s=iviasked	sand Gr	ains.		=Pore Lining, M=Matrix. tors for Problematic Hydric Soils ³ :
-			Dork Surface	(87)				·
Histosol	pipedon (A2)		Dark Surface Polyvalue Be	. ,	co (S9) (N	MI DA 147		cm Muck (A10) (MLRA 147) past Prairie Redox (A16)
	istic (A3)		Thin Dark Su					(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye			147, 140)		edmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Mar		(1 2)			(MLRA 136, 147)
	uck (A10) (LRR N)		Redox Dark		- 6)			ery Shallow Dark Surface (TF12)
	d Below Dark Surface	(A11)	Depleted Dar	,	,			her (Explain in Remarks)
Thick D	ark Surface (A12)		Redox Depre	ssions (F	8)			
Sandy N	Mucky Mineral (S1) (LI	RR N,	Iron-Mangan	ese Mass	es (F12) (LRR N,		
	A 147, 148)		MLRA 13	-				
	Gleyed Matrix (S4)		Umbric Surfa					cators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo					land hydrology must be present,
	d Matrix (S6)		Red Parent N	Material (F	21) (MLR	A 127, 147	') unle	ess disturbed or problematic.
	Layer (if observed):							
	arge cobbles		<u>—</u>					
Depth (in	ches): <u>17</u>						Hydric Soil I	Present? Yes V No No
Remarks:								

Wetland Photograph Page

Wetland ID $\underline{\text{W-K2 PEM}}$ Date $\underline{\text{04/13/201}}$ 5



Photograph Direction NE

Comments:			

Project/Site: MVP		City/C	ounty: Summers		Sampling Date: 04/13/2015
Applicant/Owner: MVP		,			Sampling Point: W-K2 UP
Investigator(s): J. Hart, B. (Czeck, N. Katsia	uficas Section	on Township Range N/A		_ ,
Landform (hillslope, terrace, et					Slone (%): 2
Subregion (LRR or MLRA): L	RRN	27 668217			Datum: NAD 83
Subregion (LRR of MLRA):	ka silt laam 20 (to 65 percent clapse			
Soil Map Unit Name: Culleol					
Are climatic / hydrologic condit		· · · · · · · · · · · · · · · · · · ·			
Are Vegetation, Soil	, or Hydrology	significantly distur	bed? Are "Normal (Circumstances" p	resent? Yes No
Are Vegetation, Soil	, or Hydrology	naturally problems	atic? (If needed, ex	cplain any answe	rs in Remarks.)
SUMMARY OF FINDIN	GS – Attach si	te map showing sam	pling point location	ns, transects	, important features, etc.
Hydrophytic Vegetation Pres	ont? Vos	No_ 🗸			
Hydric Soil Present?		No	Is the Sampled Area		🗸
Wetland Hydrology Present?	Yes	No	within a Wetland?	Yes	No -
Remarks:					
Upland					
Higher area of terrace a	djacent to small	wetland. Upland plot	paired with W-K2.		
HYDROLOGY					
Wetland Hydrology Indicate	ors:		<u> </u>	Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum	of one is required;	check all that apply)		Surface Soil	Cracks (B6)
Surface Water (A1)		True Aquatic Plants (B14) _	Sparsely Veg	getated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Ode	or (C1)	Drainage Pat	tterns (B10)
Saturation (A3)		Oxidized Rhizosphere	es on Living Roots (C3)	Moss Trim Li	nes (B16)
Water Marks (B1)		Presence of Reduced	I Iron (C4)	Dry-Season	Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reductio	n in Tilled Soils (C6)	Crayfish Burr	rows (C8)
Drift Deposits (B3)		Thin Muck Surface (C	C7) _	Saturation Vi	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Rer	narks)	Stunted or St	tressed Plants (D1)
Iron Deposits (B5)			-	Geomorphic	Position (D2)
Inundation Visible on Ae	rial Imagery (B7)		-	Shallow Aqui	tard (D3)
Water-Stained Leaves (E	39)		-	Microtopogra	phic Relief (D4)
Aquatic Fauna (B13)			-	FAC-Neutral	Test (D5)
Field Observations:		•			
Surface Water Present?	Yes No _	Depth (inches):			
Water Table Present?		Depth (inches):			
Saturation Present?	Yes No _	Depth (inches):	Wetland Hy	drology Presen	t? Yes No
(includes capillary fringe) Describe Recorded Data (str	eam gauge, monito	ring well, aerial photos, pre	vious inspections), if avail	able:	
	gg-,		,,,		
Remarks:					
No hydrology observed					

Sampling	Point: W-K2 UP
1	

Tree Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:		
Tiec otratum (Flot size.		Species?	·	Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
1				That Ale OBL, I AGW, OI I AC.		(八)
3				Total Number of Dominant Species Across All Strata:	9	(B)
4				_		()
5				Percent of Dominant Species That Are OBL, FACW, or FAC:	11	(A/B)
6		-		Prevalence Index worksheet:		
7	0 .	= Total Cov	·	Total % Cover of:	Multiply by:	
50% of total cover: 0		total cover	_	OBL species x 1 =	=	_
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =	=	_
1. Hypericum hypericoides	10	~	FACU	FAC species x 3 =	=	_
2 Ligustrum sinense	5	~	F <u>ACU</u>	FACU species x 4 =	=	
3				UPL species x 5 =	=	
4				Column Totals: (A)		
5						
6				Prevalence Index = B/A =		_
7				Hydrophytic Vegetation Indicator		
8				1 - Rapid Test for Hydrophytic	Vegetation	
9				2 - Dominance Test is >50%		
<u> </u>		= Total Cov	or .	3 - Prevalence Index is ≤3.0 ¹		
50% of total cover: 7.5				4 - Morphological Adaptations ¹	(Provide sup	porting
Herb Stratum (Plot size: 5')				data in Remarks or on a se	parate sheet)	
1. Agrostis perennans	20	~	FACU	Problematic Hydrophytic Vege	tation ¹ (Expla	in)
2. Andropogon virginicas	10	~	FACU			
3. Daucus carota	10	~	UPL	¹ Indicators of hydric soil and wetlan		must
4. Fragaria virginiana	10	~	FACU	be present, unless disturbed or pro		
5. Allaria petiolata	10		FACU	Definitions of Four Vegetation St	rata:	
6. Cirsium vulgare	5		FACU	Tree - Woody plants, excluding vin		
7. Viola bicolor	5			more in diameter at breast height (I height.	DBH), regard	less of
8				neight.		
0			· -	Sapling/Shrub – Woody plants, ex	cluding vines	, less
40		-		than 3 in. DBH and greater than or m) tall.	equal to 3.28	3π(1
10		-		, '		
	70	= Total Cov		Herb – All herbaceous (non-woody of size, and woody plants less than		rdless
50% of total cover: 35		total cover		or size, and woody plants less than	3.20 It tall.	
Woody Vine Stratum (Plot size: 15')	2070 01	total oover		Woody vine – All woody vines great	ater than 3.28	3 ft in
1. Lonicera japonica	5	/	FAC	height.		
2 Rubus trivialis	5	~	FACU			
			17.00			
			· ——			
4				Hydrophytic		
5	10	T-1-1-0		Vegetation Present? Yes	No 🗸	
50% of total cover: 5		= Total Cov total cover	_			
		total cover				
Remarks: (Include photo numbers here or on a separate s		o b				
Remaining cover in herb stratum is bare ground	and that	cn.				

Sampling Point: W-K2 UP

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the	indicator	or confirn	n the absence of	indicators.)	
Depth	Matrix			x Feature					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remar	·ks
0-6	10YR 3/3	100					Silt Loam		
6-11	10YR 3/3	95	10YR 5/6	5	С	<u>PL</u>	Silty Clay		
11-14	10YR 3/2	70	10YR 4/6	30	С	М	Silty Clay		
					. <u></u>				_
					-				
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gra	ains.		Pore Lining, M=Mat	
Hydric Soil I								ors for Problemation	•
Histosol			Dark Surface		(00) (1			m Muck (A10) (MLR	•
	nipedon (A2)		Polyvalue Be					ast Prairie Redox (A	.16)
Black His	stic (A3) n Sulfide (A4)		Thin Dark Su Loamy Gleye			47, 148)		MLRA 147, 148) dmont Floodplain So	oilo (E10)
	I Layers (A5)		Depleted Mat		(FZ)			MLRA 136, 147)	olis (F 19)
	ck (A10) (LRR N)		Redox Dark \$		- 6)			y Shallow Dark Surf	face (TF12)
	Below Dark Surface	e (A11)	Depleted Dar					er (Explain in Rema	
	ark Surface (A12)	,	Redox Depre		. ,			•	,
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Mass	es (F12) (LRR N,			
	147, 148)		MLRA 13	•					
	leyed Matrix (S4)		Umbric Surfa					ators of hydrophytic	-
-	edox (S5)		Piedmont Flo					and hydrology must	•
	Matrix (S6)		Red Parent N	faterial (F	-21) (MLR	A 127, 14	7) unles	ss disturbed or prob	lematic.
	ayer (if observed): rge cobbles								
			<u> </u>						4/
	thes): 14						Hydric Soil P	resent? Yes	No
Remarks:									

SOIL

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	37.654106	Lon.	-80.702592
STREAM/SITE ID AND SITE DESCR						W-G7, Timber Mat Crossing		
(% stream slope, watershed size {a	creage}, unaltered	l or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wetl	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-G7	Emergent	0.0121	Emergent					
						PART III - Advanced		on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
					ļ	11 OF NO		
Total Impact	DADT "	0.0121			ſ	Estimated		
Wedlend Cl		Jnit Scores	Danie annout Helifa					
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent Total Scrub-Shrub			0.0121	-		\$726.00		
Total Forested			0	-	l	\$726.00		
Total Open Water			0	-				
Total Open water			U	<u></u>				

Project/Site: MVP		City/County: Summers		Sampling Date: 04/10/2015
Applicant/Owner: MVP				Sampling Point: W-G7
Investigator(s): team G		Section, Township, Range: N		_
Landform (hillslope, terrace, etc.): Valle		Local relief (concave, convex, no		Slone (%): 2-3
Subregion (LRR or MLRA): LRRN	Lat. 37.6540	25 Long: -80	0.702949	Datum: NAD 83
Soil Map Unit Name: Westmoreland	silt loam 3 to 15 pe	rcent slones		
		_		
Are climatic / hydrologic conditions on the	* *			
Are Vegetation, Soil, or H			ıl Circumstances" p	present? Yes No
Are Vegetation, Soil, or I	Hydrology natural	y problematic? (If needed,	explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – At	tach site map show	ring sampling point location	ons, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes No			
Hydric Soil Present?	Yes V No	is the campica Area	/	
Wetland Hydrology Present?	Yes No	within a Wetland?	Yes	No
Remarks:				
Cowardin Code:PEM				
HGM:SLOPE				
WT:NRPWW				
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum of one is	required; check all that ap	ply)	Surface Soil	Cracks (B6)
Surface Water (A1)		tic Plants (B14)		getated Concave Surface (B8)
High Water Table (A2)		Sulfide Odor (C1)	Drainage Pa	tterns (B10)
Saturation (A3)		Rhizospheres on Living Roots (C3)	Moss Trim L	
Water Marks (B1)	Presence	of Reduced Iron (C4)	Dry-Season	Water Table (C2)
Sediment Deposits (B2)	Recent Iro	n Reduction in Tilled Soils (C6)	Crayfish Bur	rows (C8)
Drift Deposits (B3)	Thin Muck	Surface (C7)	Saturation V	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Exp	olain in Remarks)	Stunted or S	tressed Plants (D1)
Iron Deposits (B5)			Geomorphic	Position (D2)
Inundation Visible on Aerial Image	ry (B7)		Shallow Aqu	itard (D3)
Water-Stained Leaves (B9)				aphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)
Field Observations:	•			
	No Depth (inc			
	No Depth (inc			
	No Depth (ind	ches): 0 Wetland	Hydrology Preser	nt? Yes V No
(includes capillary fringe) Describe Recorded Data (stream gaug	e, monitoring well, aerial	photos, previous inspections), if av	ailable:	
, ,				
Remarks:				

Sampling Point: W-G7

201	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 1 (A)
2				Total Number of Dominant
3			- ——	Species Across All Strata: 1 (B)
4				Demonstrat Demoissant Operation
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:
7				
	0	= Total Co	/er	Total % Cover of: Multiply by:
50% of total cover: 0	20% of	total cover	: 0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
,				FAC species x 3 =
1				
2				FACU species x 4 =
3				UPL species x 5 =
				Column Totals: (A) (B)
4				\
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
				1 - Rapid Test for Hydrophytic Vegetation
8		-		✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	^	= Total Co	/er	
50% of total cover:0	20% of	total cover	: 0	4 - Morphological Adaptations ¹ (Provide supportin
E!	_			data in Remarks or on a separate sheet)
Tiero Stratum (Fiot Size)	90	.,	E4 0)4/	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Phalaris arundinacea			F <u>ACW</u>	
2. Solidago canadensis	5		FACU_	1
3. Carex stricta	5		OBL	¹ Indicators of hydric soil and wetland hydrology must
4				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5			- ——	Tree Meady plants avaluding vines 2 in (7.6 cm) a
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				Harb All borbossous (non woods) plants regardless
	100	= Total Co	,or	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50		total cover		or size, and woody plants less than 5.20 it tall.
	20% 01	total cover		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:15')				_ · · · · · · · · · · · · · · · · · · ·
1				height.
				height.
				height.
2		-		height.
2				height.
2				
2				Hydrophytic Vegetation
2				Hydrophytic
2		= Total Co		Hydrophytic Vegetation
2	0 20% of			Hydrophytic Vegetation
2	0 20% of	= Total Co		Hydrophytic Vegetation
2	0 20% of	= Total Co		Hydrophytic Vegetation
2	0 20% of	= Total Co		Hydrophytic Vegetation
2	0 20% of	= Total Co		Hydrophytic Vegetation
2	0 20% of	= Total Co		Hydrophytic Vegetation
2	0 20% of	= Total Co		Hydrophytic Vegetation
2	0 20% of	= Total Co		Hydrophytic Vegetation
2	0 20% of	= Total Co		Hydrophytic Vegetation
2	0 20% of	= Total Co		Hydrophytic Vegetation

SOIL Sampling Point: W-G7

Profile Desc	cription: (Describe t	o the depth	needed to docum	nent the i	ndicator	or confirn	n the abs	sence of indicate	ors.)
Depth	Matrix			x Feature	s				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Textu</u>		Remarks
0-12	10YR 5/1	95	7.5 YR 6/6	5	RM	М	Sandy	y loa	
						· ——	-		
							-		
					-		-		
					-				
						. ——			
	oncentration, D=Deple	etion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gr	ains.		on: PL=Pore Lin	
Hydric Soil									roblematic Hydric Soils ³ :
Histosol			Dark Surface	. ,					(A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				, 148)	Coast Prairie	
	istic (A3)		Thin Dark Su		•	147, 148)		(MLRA 14	
	en Sulfide (A4)		Loamy Gleye		F2)				oodplain Soils (F19)
	d Layers (A5)		Depleted Ma					(MLRA 1	
	uck (A10) (LRR N)	(0.4.4)	Redox Dark	,	,		,		w Dark Surface (TF12)
	d Below Dark Surface	(A11)	Depleted Dar		. ,		•	Other (Expla	ain in Remarks)
	ark Surface (A12) ⁄lucky Mineral (S1) (L l	DD N	Redox Depre			I DD N			
	A 147, 148)	KK N,	MLRA 13		es (F12) (LKK N,			
	Gleyed Matrix (S4)		Umbric Surfa	-	MI DA 13	16 122)		³ Indicators of h	ydrophytic vegetation and
	Redox (S5)		Piedmont Flo				18)		plogy must be present,
-	Matrix (S6)		Red Parent N					-	ped or problematic.
	Layer (if observed):		Red r drene n	natoriai (i	Z I) (III ZII		,, 	dilicoo diotais	oca or problematic.
	_ayo: (oboo: roa).								
								- 0 - 'l D 10	V V N-
	ches):						Hyaric	c Soil Present?	Yes No
Remarks:									



Photograph Direction South

Comments:	

Project/Site: MVP	City/County: S	ummers	Sampling Date: 04/10/2015
Applicant/Owner: MVP		State: WV	Sampling Point: W-G7 UP
_	Section, Towns		<u> </u>
Landform (hillslope, terrace, etc.): valley bottom			Slope (%): 3-5
Subregion (LRR or MLRA): LRRN	37.654064	Long: -80.702955	Datum: NAD 83
Soil Map Unit Name: Westmoreland silt loam			
Are climatic / hydrologic conditions on the site typic			
Are Vegetation, Soil, or Hydrology _	·		
Are Vegetation, Soil, or Hydrology _			
SUMMARY OF FINDINGS – Attach site			
	,		-, ,
	No Is the Somethin a	ampled Area	
	No within a	Wetland? Yes	No
Remarks:	140		
Upland			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indic	cators (minimum of two required)
Primary Indicators (minimum of one is required; c	neck all that apply)	Surface Soi	l Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B14)		egetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	_	atterns (B10)
Saturation (A3)	Oxidized Rhizospheres on Livir	-	
Water Marks (B1)	Presence of Reduced Iron (C4)	·	Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled		
Drift Deposits (B3) Algal Mat or Crust (B4)	Thin Muck Surface (C7) Other (Explain in Remarks)		/isible on Aerial Imagery (C9) Stressed Plants (D1)
Algai Mat of Crust (B4) Iron Deposits (B5)	Other (Explain in Nemarks)		c Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aqu	
Water-Stained Leaves (B9)			raphic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutra	
Field Observations:			
	Depth (inches):		
Water Table Present? Yes No	Depth (inches):		
	Depth (inches):	Wetland Hydrology Prese	nt? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitori	ng well, aerial photos, previous insp	 pections), if available:	
Remarks: No flagging due to open cattle grazing,	no substantive to tie flagging	•	
Two hagging due to open cattle grazing,	to substantive to the hagging		

Sampling	Point: W-G7	UP
Jannonna	I Ullit. II Si	•

20'	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:30')	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC:1 (A)
2				Total Number of Descinent
3				Total Number of Dominant Species Across All Strata: (B)
4				Specifica Activities Attitudes.
				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:50 (A/B)
6				Prevalence Index worksheet:
7				
	0	= Total Cove	er	Total % Cover of: Multiply by:
50% of total cover:0	20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species50 x 2 =100
1				FAC species x 3 =
				FACU species90 x 4 =320
2				UPL species x 5 =
3				4.40
4				Column Totals:140(A)420(B)
5				Prevalence Index = B/A =3.0
6				
7				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				✓ 3 - Prevalence Index is ≤3.0 ¹
	0:	= Total Cove	er	4 - Morphological Adaptations ¹ (Provide supporting
	20% of	total cover:	0	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Rosa multiflora	5		FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Achillea millefolium	15		FACU	
			I ACC	¹ Indicators of hydric soil and wetland hydrology must
3	50			be present, unless disturbed or problematic.
4. Phalaris arundinacea			FACW_	Definitions of Four Vegetation Strata:
5. Dactylis glomerata	50		FACU	
			·	T W
6. Solidago canadensis	20		F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Solidago canadensis	20			more in diameter at breast height (DBH), regardless of
6. Solidago canadensis 7	20			
6. Solidago canadensis 78	20			more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less
6. Solidago canadensis 7. 8. 9.	20			more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
6. Solidago canadensis 78	20			more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less
6. Solidago canadensis 7. 8. 9.	20		FACU	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
6. Solidago canadensis 7. 8. 9. 10.	20		FACU	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
6. Solidago canadensis 7. 8. 9. 10.	20		FACU ———————————————————————————————————	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
6. Solidago canadensis 7.	20	= Total Cove	FACU ———————————————————————————————————	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6. Solidago canadensis 7.	20 140 20% of	= Total Cover:	FACU ———————————————————————————————————	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
6. Solidago canadensis 7	140	= Total Cover:	FACU ———————————————————————————————————	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6. Solidago canadensis 7.	140	= Total Cover:	FACU ———————————————————————————————————	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6. Solidago canadensis 7	140	= Total Cover:	FACU ———————————————————————————————————	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6. Solidago canadensis 7.	140 20% of	= Total Cover:	FACU ———————————————————————————————————	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
6. Solidago canadensis 7	140 20% of	= Total Cover:	FACU ———————————————————————————————————	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
6. Solidago canadensis 7	140 20% of	= Total Cover:	FACU	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
6. Solidago canadensis 7.		= Total Cover:	PACU	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6. Solidago canadensis 7	20 140 20% of	= Total Cover:	PACU	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6. Solidago canadensis 7	20 140 20% of	= Total Cover:	PACU	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6. Solidago canadensis 7.	20 140 20% of	= Total Cover:	PACU	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6. Solidago canadensis 7	20 140 20% of	= Total Cover:	PACU	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
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Sampling Point: W-G7 UP

Profile Desc	ription: (Describe	to the depth	needed to docun	nent the i	ndicator	or confirm	the absence	of indicators	s.)		
Depth	Matrix		Redox Features								
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks		-
0-16	10 YR 4/3	100%			RM	М	SIL				
	-	·				· ——					-
											-
	-										_
	-		-								-
											-
											_
											_
		· ——— -				· ——					-
	-	· ———				· ——					-
	oncentration, D=Dep	letion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gr	ains.	² Location: PL			3	
Hydric Soil I								tors for Prol	-		
Histosol	• •		Dark Surface (S7)				cm Muck (A1	, .	47)		
	pipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147, 14				oast Prairie R				
Black Hi			Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148)								
	n Sulfide (A4)	Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19)							₍ F19)		
	Layers (A5)	Depleted Matrix (F3) (MLRA 136, 147)							(TE40)		
	ck (A10) (LRR N) Below Dark Surfac	Redox Dark Surface (F6) Very Shallow Dark Surface (TF12)									
	ark Surface (A12)	Depleted Dark Surface (F7) Other (Explain in Remarks) Redox Depressions (F8)									
	lucky Mineral (S1) (I	Redox Depressions (Fo) Iron-Manganese Masses (F12) (LRR N,									
	147, 148)		MLRA 136)								
	leyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122) 3Indicators of hydrophytic vegetation and									
	edox (S5)	Piedmont Flo				land hydrolog					
	Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147)									
	ayer (if observed):					<u> </u>					
Type:											
	ches):						Hydric Soil	Present?	Yes	No 🗸	
Remarks:							1.,				
Upland											
Opiana											