ATTACHMENT A

WETZEL COUNTY

WETLAND SWVM FORMS/WETLAND DELINEATION FORM/PHOTOS

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	39.559744	Lon.	-80.546756
STREAM/SITE ID AND SITE DESCRI	PTION:					W-ME1, ATWS		
(% 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-ME1	Emergent	0.0382	Emergent					
				-			Mitigatio	n
				-		Sustainable Determination Made or	hinguno	••
				-		Advanced Mitigation		Y
Total Impact		0.0382						
	PART II -	Unit Scores				Estimated		
Wetland Cla	assification		Replacement Unit(s)	-		ILF Costs		
I otal Emergent			0.0382	-		* 0.000.00		
I otal Scrub-Shrub			0	-		\$2,292.00	1	
			0	4				
Total Open Water			0					

Project/Site: MVP	City/County: Wetzel County	Sampling Date: 06/28/2018
Applicant/Owner: MVP	State: <u>V</u>	VV Sampling Point: W-ME1
Investigator(s); M. Elizondo; G. Kingsley	Section, Township, Range; N/A	
Landform (hillslope, terrace, etc.); Toe of Slope	Local relief (concave, convex, none); Cond	cave Slope (%): 2-5
Subregion (LRR or MLRA) LRRN Lat: 39.56183	3 Long -80.544222	Datum: NAD 83
Soil Map Linit Name: Skidmore gravelly loam	20.1g	classification: None
Are climatic / hydrologic conditions on the site typical for this time of		ain in Pomarka)
Are Vegetetien Seil er Ludrelegy significant		
Are Vegetation, Soil, or Hydrology significan	archiegestic2	inces present? res No
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point locations, tran	sects, important features, etc.
Hydrophytic Vegetation Present? Yes <u>No</u> No	— Is the Sampled Area	
Hydric Soli Present? Yes V No Wetland Hydrology Present? Yes V No	— within a Wetland? Yes	; 🔽 No
Remarks: Cowardin Code: DEM HGM: Do	- Water Type: BBW/W/F	
Maintained ROW for existing pipeline corridor. Wetlan	d is a depression near to Moblev R	, un (S-WX2) Open ended to the
north and southwest of the survey area	u is a depression hear to mobiley it	un (3-W/2). Open ended to the
	Secondar	ulpdiastore (minimum of two required)
Primary Indicators (minimum of one is required; check all that appl	Surfa	y malcalors (minimum or two required)
Surface Water (A1) True Aquatic	<u>v)</u> Sulla Plante (B14) Spare	ce Soli Clacks (B0)
High Water Table (A2)	ulfide Odor (C1)	page Patterns (B10)
✓ Saturation (A3)	izospheres on Living Roots (C3) Moss	Trim Lines (B16)
Water Marks (B1)	Reduced Iron (C4)	Season Water Table (C2)
Sediment Deposits (B2) Recent Iron	Reduction in Tilled Soils (C6) Cravf	ish Burrows (C8)
Drift Deposits (B3)	urface (C7)	ation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Expla	in in Remarks) Stunt	ed or Stressed Plants (D1)
Iron Deposits (B5)	✓ Geon	norphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shall	ow Aquitard (D3)
Water-Stained Leaves (B9)	Micro	otopographic Relief (D4)
Aquatic Fauna (B13)	✓ FAC-	Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes 🖌 No Depth (inch	es):3	
Water Table Present? Yes No V Depth (inch	es):	
Saturation Present? Yes Ves No Depth (inch	es): 8 Wetland Hydrology	Present? Yes 🖌 No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial ph	otos, previous inspections), if available:	
Remarks:	pout the post week	
Heavy fain storms were observed in the area through	iout the past week .	

Sampling Point: W-ME1

, , , , , , , , , , , , , , , , , , ,	Abaaluta	Dominon	Indiantor	Deminance Test worksheet
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Dominance rest worksneet.
1				Number of Dominant Species
l				That are OBL, FACW, of FAC. (A)
2				Total Number of Dominant
3				Species Across All Strata:3 (B)
4.				
5				Percent of Dominant Species
				That Are OBL, FACW, or FAC:(A/B)
b				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	ver	
50% of total cover: 0	20% of	f total cove	r: <u>0</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		<u> </u>		
3		<u> </u>		UPL species X 5 =
4.				Column Totals: (A) (B)
5				
<u> </u>				Prevalence Index = B/A =
0		<u> </u>		Hydrophytic Vegetation Indicators:
7		<u> </u>		1 - Rapid Test for Hydrophytic Vegetation
8		.		\mathbf{V} 2 Dominance Test is $>50\%$
9.				✓ 2 - Dominance Test is >50%
	0	- Total Co	vor	3 - Prevalence Index is ≤3.0
E0% of total cover:	20%	= Total CO		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>0</u>	20% 0	l total cove		data in Remarks or on a separate sheet)
Herb Stratum (Plot size:)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Juncus etfusus	30	<u> </u>	FACW	
2. Scirpus atrovirens	20	~	OBL	
3 Carex baileyi	10		OBL	'Indicators of hydric soil and wetland hydrology must
A Carex cristatella	25	~	FACW	be present, unless disturbed of problematic.
- Sorahum halananaa	15			Definitions of Four Vegetation Strata:
5. Sorginum naiepense	10		FACU	Trop Woody plants, excluding vince, 2 in (7.6 cm) or
6		<u> </u>		more in diameter at breast beight (DBH) regardless of
7.				height.
8				
<u> </u>				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	100	= Total Co	ver	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50	20% of	f total cove	r: 20	
Woody Vino Stratum (Plot size: 15'			·	Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2		<u> </u>		
3				
4				
				Hydrophytic
	0			Present? Ves V
	0	= Total Co	ver	
50% of total cover: 0	20% of	f total cove	r: <u> </u>	
Remarks: (Include photo numbers here or on a separate s	heet.)			

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth	Matrix		Redo	x Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 4/2	100						
4-10	10VR 1/3	75	7 5VR 5/6	25	C	M/PI	511	
4-10	1011 4/3		7.5TK 5/0	20	<u> </u>			<u> </u>
						<u> </u>		
						·		
						·		
						·		
¹ Type: C=Co	oncentration. D=Depl	etion. RM=	Reduced Matrix. MS	S=Masked	I Sand Gr	ains.	² Location:	PL=Pore Lining, M=Matrix,
Hydric Soil	Indicators:		, , ,				Indi	cators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
Histic Er	pipedon (A2)		Polyvalue Be	low Surfa	ce (S8) (N	/LRA 147.	148)	Coast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Su	rface (S9)		I47. 148)		(MLRA 147, 148)
Hvdroge	n Sulfide (A4)		Loamv Gleve	d Matrix (F2)	, ,		Piedmont Floodplain Soils (F19)
Stratified	Lavers (A5)		Depleted Mat	trix (F3)	,			(MLRA 136, 147)
2 cm Mu	ick (A10) (LRR N)		Redox Dark	Surface (F	-6)			Verv Shallow Dark Surface (TF12)
Depleted	Below Dark Surface	e (A11)	Depleted Dar	k Surface	(F7)			Other (Explain in Remarks)
Thick Da	ark Surface (A12)	· · ·	Redox Depre	ssions (F	8)			
 Sandy M	lucky Mineral (S1) (L	RR N.	Iron-Mangan	ese Mass	, es (F12) (LRR N.		
MLRA	A 147, 148)		MLRA 13	6)				
Sandy G	leved Matrix (S4)		Umbric Surfa	, ce (F13) (MLRA 13	86, 122)	³ In	dicators of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Flo	odplain S	, oils (F19)	(MLRA 14	8) v	vetland hydrology must be present.
Stripped	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 147	, 7) u	inless disturbed or problematic.
Restrictive I	_ayer (if observed):			,	, (•
Type: GI	avel							
Depth (in	(10+)						Hydric So	il Present? Ves 🖌 No
	lies). <u></u>						Hyunc 30	
Remarks:								

Wetland Photograph Page

Wetland ID <u>W-ME1</u> Date <u>06/28/2018</u>



Comments:

Project/Site: MVP	City/C	City/County: Wetzel County Sampling Date: 06/28/2018					
Applicant/Owner: MVP		State: WV Sampling Point: W-ME1-UF					
Investigator(s); M. Elizondo; G. Kingsle	y Section	on, Township, Range; N/A					
Landform (hillslope, terrace, etc.); Toe of S	Slope Local rel	ief (concave, convex, none):	Concave	Slope (%): 2-5			
Subregion (LRR or MLRA): LRRN	Lat: 39.561877	Long: -80.544	037	etops (<u>),</u> Datum: NAD 83			
Soil Map Unit Name: Skidmore gravelly loa	Lat. <u></u> m	Long	NW/L classificati	on: None			
Are elimetia (hydrologia conditions on the site	tunical for this time of year?						
Are climatic / hydrologic conditions on the site			, explain in Ren				
Are Vegetation, Soil, or Hydro	blogy significantly distur	bed? Are "Normal Circ	umstances" pres	sent? Yes <u>•</u> No			
Are Vegetation, Soil, or Hydro	ology naturally problema	atic? (If needed, explai	in any answers i	in Remarks.)			
SUMMARY OF FINDINGS – Attack	h site map showing san	pling point locations,	transects, i	mportant features, etc.			
Hydrophytic Vegetation Present?	es No 🖌	le die Oemanie d'Ameri					
Hydric Soil Present? Ye	es No 🖌	Is the Sampled Area	Ves	No 🖌			
Wetland Hydrology Present? Ye	es No		163				
Remarks: Cowardin Code: UPLAN	ID HGM:	Water Type:					
Associated with W-ME1							
HYDROLOGY		-					
Wetland Hydrology Indicators:		Sec	ondary Indicator	s (minimum of two required)			
Primary Indicators (minimum of one is requi	red; check all that apply)		Surface Soil Cra	acks (B6)			
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Veget	ated Concave Surface (B8)			
High Water Table (A2)	Hydrogen Sulfide Od	or (C1)	Drainage Patter	rns (B10)			
Saturation (A3)	Oxidized Rhizospher	es on Living Roots (C3)	Moss Irim Line	s (B16)			
Water Marks (B1)	Presence of Reduced	d Iron (C4)	Dry-Season Wa	ater Table (C2)			
Sediment Deposits (B2)	Recent Iron Reductio	in in Tilled Soils (C6)	Crayfish Burrow	vs (C8)			
Drift Deposits (B3)	Thin Muck Surface (C		Saturation Visib	ble on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Other (Explain in Rer	marks)	Stunted or Stres	ssed Plants (D1)			
Iron Deposits (B5)	7\	—	Geomorphic Po	isition (D2)			
Weter Steined Leoves (B0)	()		Shallow Aquitar	u (D3)			
Aquatic Equips (B13)			EAC Noutral To				
Aqualic Faulia (BT3)			FAC-Neuliai Te	st (D3)			
Field Observations:	No. V Donth (inchoo);						
Surface water Present? Yes	No <u> </u>						
Vater Table Present? Yes	No <u> </u> Depth (inches): <u> </u>						
(includes capillary fringe)	No <u> </u> Depth (inches):	wetland Hydro	blogy Present?	resNo			
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photos, pre	vious inspections), if available	e:				
Remarks:	the design of the second se	(1					
Heavy rain storms were observed	in the area throughout the	e past week .					

Sampling Point: W-ME1-UPL

, ,	Abaoluto	Dominant	Indiactor	Dominance Test worksheet
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Dominance rest worksneet.
1 1				Number of Dominant Species
l				
2		·		Total Number of Dominant
3				Species Across All Strata: <u>3</u> (B)
4.				
5				Percent of Dominant Species
<u> </u>				That Are OBL, FACW, or FAC: (A/B)
b				Prevalence Index worksheet
7				Total % Cover of: Multiply by:
	0	= Total Cov	er	
50% of total cover: 0	20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1.				FAC species x 3 =
				FACU species x 4 =
		·		
3		·		
4				Column Totals: (A) (B)
5				Dravalance ladev D/A
6.				
7				Hydrophytic Vegetation Indicators:
-		·		1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is <3.01
	0	= Total Cov	er	A March de ried A der telle se ¹ (Preside serre etile
50% of total cover: 0	20% of	total cover:	0	4 - Morphological Adaptations" (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
A Daucus carota	20	~	UPI	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Daucus carota				
2. Plantago major	25	<u> </u>	FACU	¹ Indicators of hydric soil and wotland hydrology must
_{3.} Rosa carolina	20	<u> </u>	FACU	be present, unless disturbed or problematic.
4. Solidago altissima	10		FACU	Definitions of Four Vegetation Strate:
5 Sorghum halepense	10		FACU	Definitions of Four vegetation Strata:
o Polygonum pensylvanicum	5		FACW	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Tolygonam pensylvanicum				more in diameter at breast height (DBH), regardless of
7				height.
8				Sepling/Shrub Woody plants excluding vines loss
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	90	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>45</u>	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				
<u> </u>		·		
4		·		Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes No V
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			l
	,			

Profile Desc	ription: (Describe te	o the dept	n needed to docum	nent the in	dicator o	or confirm	the absence of indicate	tors.)
Depth	Matrix		Redo	x Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-14	10YR 4/3	100					CL	
				·				
·							·	
				·				
	ncentration D-Deple	ation RM-	Peduced Matrix MS	-Masked	Sand Gra	ine	² Location: PL-Pore Lit	ning M-Matrix
Hydric Soil I	ndicators:					an 13.	Indicators for F	Problematic Hvdric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2 cm Muck	(A10) (MI RA 147)
Histic Er	pipedon (A2)		Polyvalue Be	low Surfac	e (S8) (N	I RA 147	148) Coast Prair	(10) (112) (112) (113)
Black Hi	stic (A3)		Thin Dark Su	rface (S9)	(MI RA 1	47, 148)	(MI RA 1	47, 148)
Hydroge	n Sulfide (A4)		Loamy Gleve	d Matrix (F	() (2)	,,	Piedmont F	loodolain Soils (F19)
Stratified	Lavers (A5)		Depleted Mat	rix (F3)	_)		(MI RA 1	36. 147)
2 cm Mu	ck (A10) (I RR N)		Bedox Dark S	Surface (Ff	3)		Verv Shallo	w Dark Surface (TE12)
Depleter	Below Dark Surface	(A11)	Depleted Dar	k Surface	(F7)		Other (Expl	ain in Remarks)
Thick Da	ark Surface (A12)	(,)	Redox Depre	ssions (F8)			
Sandy M	lucky Mineral (S1) (L	RR N.	Iron-Mangan	ese Masse	, s (F12) (I	RR N		
<u> </u>	147, 148)	,	MLRA 13	6)	o (i i 2) (i	,		
Sandy G	leved Matrix (S4)		Umbric Surfa	-, ce (F13) (N	MLRA 13	6, 122)	³ Indicators of	hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Flo	odplain So	ils (F19)	(MLRA 14	8) wetland hydr	ology must be present.
Stripped	Matrix (S6)		Red Parent M	laterial (F2	21) (MLR	A 127. 147	') unless distur	bed or problematic.
Restrictive L	_aver (if observed):					,	,	
Type:	.,,							
Depth (inc	shes):						Hydric Soil Present?	Ves No 🖌
Deptil (Inc							Thyunc Son Tresent:	
Remarks:								

USACE FILE NO./Project Name:	Mountain Valley Pipeline		COORDINATES:	Lat.	39.559744	Lon.	-80.546756	
STREAM/SITE ID AND SITE DESCRIP	PTION:					W-ME2, ATWS		
(% stream slope, watershed size {ac	reage}, 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-ME2	Emergent	0.1036	Emergent					
					1	PART III - Advanced	Mitigatio	n
				_		Sustainable Determination Made or Advanced Mitigation (Y or N)	ו	Y
							·	
Total Impact		0.1036						
	PART II - U	Jnit Scores				Estimated		
Wetland Cla	ssification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.1036			¢c 246 00		
Total Scrub-Shrub			0			\$6,216.00		
Total Open Water			0					

Project/Site: MVP	City/County: Wetzel County	Sampling Date: 06/28/2018
Applicant/Owner: MVP	State: V	NV Sampling Point: W-ME2
Investigator(s); M. Elizondo; G. Kingsley	Section, Township, Range: N/A	
Landform (hillslope, terrace, etc.); Toe of Slope	ocal relief (concave, convex, none); Con	cave Slope (%): 2-5
Subregion (LRB or MLRA): LRRN Lat: 39.559755	5 Long: -80.546749	etops (//) Datum: NAD 83
Soil Map Linit Name: Skidmore gravelly loam	Long	elessification: None
Son Map Unit Name		
Are climatic / hydrologic conditions on the site typical for this time of	/ear? Yes <u>•</u> No (If ho, expl	ain in Remarks.)
Are Vegetation, Soil, or Hydrology significant	y disturbed? Are "Normal Circumsta	ances" present? Yes <u>Y</u> No
Are Vegetation, Soil, or Hydrology naturally p	roblematic? (If needed, explain any	/ answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showir	g sampling point locations, tran	sects, important features, etc.
Hydrophytic Vegetation Present? Yes V No Hydric Soil Present? Yes V No Wetland Hydrology Present? Yes V No	 Is the Sampled Area within a Wetland? Yes 	s No
Remarks: Cowardin Code: PEM HGM: Dep	ressional Water Type: RPWWN	٨
Maintained ROW for existing pipeline corridor. Open e	nded northeast of the survey area	
HYDROLOGY		
Wetland Hydrology Indicators:	Secondar	y Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply	<u>)</u> Surfa	ace Soil Cracks (B6)
Surface Water (A1) True Aquatic	Plants (B14) Spars	sely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Su	fide Odor (C1) Drain	age Patterns (B10)
Saturation (A3) Oxidized Rhi	cospheres on Living Roots (C3) Moss	s Trim Lines (B16)
Water Marks (B1) Presence of I	Reduced Iron (C4) Dry-S	Season Water Table (C2)
Sediment Deposits (B2) Recent Iron F	eduction in Tilled Soils (C6) Crayf	fish Burrows (C8)
Drift Deposits (B3) Thin Muck St	Irface (C7) Satur	ration Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Explain	n in Remarks) Stunt	ted or Stressed Plants (D1)
Iron Deposits (B5)	Ceon	norphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shall	ow Aquitard (D3)
Water-Stained Leaves (B9)	Micro	otopographic Relief (D4)
Aquatic Fauna (B13)	FAC-	Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No Depth (inche	/s):	
Water Table Present? Yes No 🔽 Depth (inche	s):	
Saturation Present? Yes <u>Ves</u> No <u>Depth</u> (inche	(s): 7 Wetland Hydrology	Present? Yes 🖌 No
Describe Recorded Data (stream gauge, monitoring well, aerial pho	tos, previous inspections), if available:	
Demorton		
Heavy rain storms were observed in the area through	out the past week	
	out the past week.	

Sampling Point: W-ME2

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				
3				Total Number of Dominant
3				Species Across All Strata (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>66</u> (A/B)
6				Brovelence Index werkeheet
7				
	0	= Total Cov	er	Iotal % Cover of:Multiply by:
50% of total cover: 0	20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1.				FAC species x 3 =
2				FACU species x 4 =
2				LIPL species x 5 =
3				
4				Column rotals (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				1 - Rapid Test for Hydrophytic Vegetation
9.				2 - Dominance Test Is >50%
	0	- Total Cov		3 - Prevalence Index is ≤3.0'
50% of total cover: 0	20% of	total cover	0	4 - Morphological Adaptations ¹ (Provide supporting
Lierh Stratum (Diet eize: 5	2070.01			data in Remarks or on a separate sheet)
Herb Stratum (Piot size)	30	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Carex vulpinoidea		~	OBL	¹ Indicators of hydric soil and wetland hydrology must
3. Carex baileyi	10		OBL	be present, unless disturbed or problematic.
4. Sorghum halepense	20	 ✓ 	FACU	Definitions of Four Vegetation Strata
_{5.} Typha latifolia	5		OBL	Deminions of Four Vegetation Ottata.
6 Rubus sp.	10		ND	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
z Galium tinctorium	3			more in diameter at breast height (DBH), regardless of
				neight.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	103	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 51.5	20% of	total cover:	20.6	
Woody Vine Stratum (Plot size: 15'				Woody vine – All woody vines greater than 3.28 ft in
1				neight.
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes V No
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate sl	neet.)			1
ND- Not determined	,			

Depth	Matrix		Redo	x Feature	S		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-10	10YR 4/3	92					SIL
0-10	10YR 5/3	5					CL
0-10	10YR 5/8	2					С
							· ·
							· ·
Type: C=Cc	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	I Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix.
lydric Soil I	ndicators:						Indicators for Problematic Hydric Soils
 Histosol Histic Ep Black His Hydroge Stratified 2 cm Mu Depleted Thick Da 	(A1) pipedon (A2) stic (A3) n Sulfide (A4) Layers (A5) lck (A10) (LRR N) Below Dark Surface ark Surface (A12) Weber Minered (S1) (I	: (A11)	Dark Surface Polyvalue Be Thin Dark Su Loamy Gleye Depleted Mai Redox Dark 3 Depleted Dar Redox Depre	(S7) low Surfa rface (S9) d Matrix (trix (F3) Surface (F k Surface essions (F4	ce (S8) (N (MLRA 1 F2) (F7) 8) 8)	ILRA 147, 47, 148)	2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) ✓ Other (Explain in Remarks)
Sandy M MLRA	lucky Mineral (S1) (L \ 147, 148)	RR N,	Iron-Mangan MLRA 13	ese Mass 6)	es (F12) (LRR N,	
Sandy G	ileyed Matrix (S4)		Umbric Surfa	ce (F13) (MLRA 13	6, 122)	³ Indicators of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	48) wetland hydrology must be present,
Stripped	Matrix (S6)		Red Parent N	Aaterial (F	21) (MLR	A 127, 147	7) unless disturbed or problematic.
Restrictive L	ayer (if observed):						
туре: <u>Gr</u>	avel						
Depth (inc	ches): <u>10+</u>						Hydric Soil Present? Yes 🖌 No
emarks:							

Pipeline right-of-way with highly disturbed soils. Recently developed wetlands may lack hydric soil indicators because insufficient time has passed for their development. Restrictive gravel layer prohibits further investigation.

Wetland Photograph Page

Wetland ID <u>W-ME2</u> Date <u>06/28/2018</u>



Comments:

Project/Site: MVP	City/C	ounty: Wetzel County	Sampling Date: 06/28/2018
Applicant/Owner: MVP	·	State	: WV Sampling Point: W-ME2-UPL
Investigator(s): M. Elizondo; G. Kingsley	Sectio	on, Township, Range: N/A	
Landform (hillslope, terrace, etc.): Toe of Slope	Local reli	ef (concave, convex, none): C	oncave Slope (%): 2-5
Subregion (LRR or MLRA): LRRN	1 at 39.559737	Long: -80.5467	81 Datum NAD 83
Soil Map Unit Name Skidmore gravelly loam	Lat	Long	Suum
Are elimetic / hydrologic conditions on the site typic	al for this time of year? V		Which in Domarka)
Are climatic / nydrologic conditions on the site typica	al for this time or years in		
Are Vegetation, Soil, or Hydroiogy _		Ded? Are "Normal Circum	nstances" present? Yes <u>▼</u> No
Are Vegetation, Soil, or Hydrology _	naturally problema	itic? (If needed, explain a	any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site	map showing sam	pling point locations, tr	ansects, important features, etc.
Hvdrophytic Vegetation Present? Yes	No 🖌		
Hydric Soil Present? Yes	No_	Is the Sampled Area	Vas No 🗸
Wetland Hydrology Present? Yes	No		
Remarks: Cowardin Code: UPLAND	HGM:	Water Type:	
Associated with W-ME2.			
		Saaaa	den la disstara (minimum of two roquirod)
Drimony Indicators (minimum of one is required: ch	hade all that annly)	<u>əecon</u>	dary Indicators (minimum or two required)
Primary indicators (minimum or one is required, or Surface Water (A1)	<u>True Aquetic Plants (I</u>	O(JITACE SUIL CRACKS (DO)
Ligh Water Table (A2)		314) 3 ₁	roinage Patterns (R10)
=	Hydrogen Sumue Suc Ovidized Rhizosphere	DI(CI) DI	anage raterns (DTU)
Water Marks (R1)	Presence of Reduced	$\frac{1}{100} (C.4) \qquad \qquad$	ry-Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction	n in Tilled Soils (C6)	ravfish Burrows (C8)
Drift Deposits (B3)	Thin Muck Surface (C	(20) <u> </u>	aturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Rem	narks) St	tunted or Stressed Plants (D1)
Iron Deposits (B5)		Gr	eomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Sł	hallow Aquitard (D3)
Water-Stained Leaves (B9)		M	icrotopographic Relief (D4)
Aquatic Fauna (B13)		F#	AC-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 Hydrolo	ogy Present? Yes No
Describe Recorded Data (stream gauge, monitorir	ng well, aerial photos, prev	vious inspections), if available:	
	J ,	· · · ·	
Remarks:			
Heavy rain storms were observed in the	e area throughout the	e past week .	

Sampling Point: W-ME2-UPL

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species		
1				That Are OBL, FACW, or FAC:	0	(A)
2				Telebore		
3.				Lotal Number of Dominant Species Across All Strata	1	(B)
4			·	opecies Across Air otrata.		(0)
			- <u> </u>	Percent of Dominant Species	0	
D			·	That Are OBL, FACW, or FAC:	0	(A/B)
6			·	Prevalence Index worksheet:		
7			. <u> </u>	Total % Cover of:	Multiply by:	
	0	= Total Cov	/er		widitiply by.	
50% of total cover: 0	20% of	total cover	:0	OBL species \$	x 1 =	_
Sapling/Shrub Stratum (Plot size: 15)				FACW species >	x 2 =	_
1				FAC species >	x 3 =	_
2.				FACU species	x 4 =	_
3				UPL species	x 5 =	_
			. <u> </u>	Column Totals: (A)	(B)
			- <u> </u>	、	,	. ,
5			·	Prevalence Index = B/A =	=	_
6			·	Hydrophytic Vegetation Indic	ators:	
7			. <u> </u>	1 - Rapid Test for Hydroph	vtic Vegetation	
8				2 - Dominance Test is >50	%	
9					0 ¹	
	0	= Total Cov	/er	3 - Flevalence index is ±3.		
50% of total cover: 0	20% of	total cover	. 0	4 - Morphological Adaptatio	ons' (Provide sup	porting
Herb Stratum (Plot size: 5')				data in Remarks or on a	a separate sheet)	
1 Solanum carolinense	20		FACU	Problematic Hydrophytic V	egetation ¹ (Expla	in)
2 Daucus carota	15		UPI			
	5			¹ Indicators of hydric soil and we	etland hydrology	must
3. Julicus ellusus				be present, unless disturbed or	problematic.	
4. Solidago altissima	5		FACU	Definitions of Four Vegetation	n Strata:	
5. Sorghum halepense	40	<u> </u>	FACU		·	,
6. Convolvulus arvensis	3		ND	I ree – Woody plants, excluding	yvines, 3 in. (7.6	cm) or
7. Carex vulpinoidea	5		OBL	height.	int (DDH), regard	1633 01
8. Dichanthelium clandestinum	10		FAC	Ū.		
9			·	Sapling/Shrub – Woody plants	s, excluding vines	s, less
10			·	m) tall	1 of equal to 3.26	511 (1
10			·			
	102			Herb – All herbaceous (non-wo	ody) plants, rega	rdless
	103	= Total Cov	/er	of size, and woody plants less t	than 3.28 ft tall.	
50% of total cover: <u>51.5</u>	<u>20% of</u>	total cover	20.6	Woody vine – All woody vines	greater than 3.28	3 ft in
Woody Vine Stratum (Plot size: 15)				height.	5	
1						
2			<u> </u>			
3						
4.						
5				Hydrophytic		
<u> </u>	0	Total Ca		Present? Yes	No 🖌	
50% of total cover:	20% of		. 0			
	2078.01					
Remarks: (Include photo numbers here or on a separate s	neet.)					

Profile Desc	ription: (Describe t	o the dept	h needed to document the indicator or confirm	the absen	ce of indicators.)
Depth	Matrix		Redox Features		
(inches)	Color (moist)	%	Color (moist) % Type ¹ Loc ²	Texture	Remarks
0-4	10YR 4/3	100		SIL	
4-12	10YR 3/4	90		SIL	
4-12	10YR 4/3	10		SIL	
		·			
1 				2	
Type: C=Co	ncentration, D=Deple	etion, RM=	Reduced Matrix, MS=Masked Sand Grains.	Location:	PL=Pore Lining, M=Matrix.
History	(A1)		Dark Surface (SZ)	inc	2 om Muck (A10) (MI DA 117)
Histosol Histic Er	(AT) binedon (A2)		Dark Surface (S7)	1/8)	Coast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Surface (S9) (MI RA 147, 148)	140)	(MI RA 147 148)
<u> </u>	n Sulfide (A4)		L oamy Gleved Matrix (F2)		Piedmont Floodplain Soils (F19)
Stratified	Lavers (A5)		Depleted Matrix (F3)		(MI RA 136, 147)
2 cm Mu	ick (A10) (LRR N)		Redox Dark Surface (F6)		Very Shallow Dark Surface (TF12)
Depleted	Below Dark Surface	(A11)	Depleted Dark Surface (F7)		Other (Explain in Remarks)
Thick Da	ark Surface (A12)	()	Redox Depressions (F8)		· · · · · · (_ · + · · · · · · · · · · · · · · · · ·
Sandy M	luckv Mineral (S1) (L	RR N.	Iron-Manganese Masses (F12) (LRR N.		
MLRA	147, 148)	,	MLRA 136)		
Sandy G	ileyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	3	Indicators of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Floodplain Soils (F19) (MLRA 14	8)	wetland hydrology must be present,
Stripped	Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147	7)	unless disturbed or problematic.
Restrictive I	_ayer (if observed):				
туре: <u>G</u> r	avel				
Depth (ind	ches): <u>12+</u>			Hydric S	oil Present? Yes No 🖌
Remarks:					

USACE FILE NO./Project Name:	Mountain Valley Pipeline		COORDINATES:	Lat.	39.559075	Lon.	-80.547489	
STREAM/SITE ID AND SITE DESCRI	IPTION:					W-ME3, ATWS		
(% stream slope, watershed size {a	creage}, unaltered	l or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-ME3	Emergent	0.0869	Emergent					
				_				
						PART III - Advanced	Mitigatio	n
				-		Sustainable Determination Made or Advanced Mitigation (Y or N)	ו	Y
							ł	
Total Impact		0.0869						
	PART II -	Unit Scores			ļ	Estimated		
Wetland Cl	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0869					
Total Scrub-Shrub			0			\$5,214.00		
Total Forested			0					
Total Open Water			0					

Project/Site: MVP	_ City/County: Wetzel County	Sampling Date: 06/28/2018
Applicant/Owner: MVP	_ , ,	State: WV Sampling Point: W-ME3
Investigator(s): M. Elizondo; G. Kingsley	Section, Township, Range: N/A	
Landform (billslope terrace etc.). Toe of Slope		Concave Slope (%): 2-5
Subrasian (LDD or MLDA), LBRN Lat. 39 55897	1	47545 Datum: NAD 83
Subregion (LRR of MLRA): <u>LRR of MLRA):</u> Lat: <u>35.55657</u>		Datum: Nope
Soil Map Unit Name:		_ NWI classification: _NOTE
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes <u>Ves</u> No (If	no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significan	tly disturbed? Are "Normal C	ircumstances" present? Yes No
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, exp	lain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point location	s, transects, important features, etc.
Hydrophytic Vegetation Present? Yes V No Hydric Soil Present? Yes V No Wetland Hydrology Present? Yes V No	 Is the Sampled Area within a Wetland? 	Yes 🖌 No
Remarks: Cowardin Code: PEM HGM: De	oressional Water Type: R	PWWN
Maintained ROW for existing pipeline corridor. Open	ended northeast and southea	ast of the survey area.
HYDROLOGY		
Wetland Hydrology Indicators:	<u>S</u>	econdary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that appl	y)	_ Surface Soil Cracks (B6)
✓ Surface Water (A1) True Aquatic	Plants (B14)	_ Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen Su	Ilfide Odor (C1)	_ Drainage Patterns (B10)
Saturation (A3)	zospheres on Living Roots (C3)	_ Moss Trim Lines (B16)
Water Marks (B1) Presence of	Reduced Iron (C4)	_ Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iron	Reduction in Tilled Soils (C6)	_ Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck S	urface (C7)	_ Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Expla	in in Remarks)	_ Stunted or Stressed Plants (D1)
Iron Deposits (B5)	<u> </u>	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	_	_ Shallow Aquitard (D3)
Water-Stained Leaves (B9)	-	_ Microtopographic Relief (D4)
Aquatic Fauna (B13)	<u>_</u>	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes <u>Ves</u> No <u>Depth</u> (inch	es): <u> </u>	
Water Table Present? Yes No Depth (inch	es):	
Saturation Present? Yes No Depth (inch (includes capillary fringe)	es): Wetland Hyd	trology Present? Yes 🖌 No
Describe Recorded Data (stream gauge, monitoring well, aerial ph	otos, previous inspections), if availa	ble:
Demerica		
Remarks:	pout the past week	
	iout the past week.	

Sampling Point: W-ME3

	Abcoluto	Dominont	Indicator	
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Dominance rest worksneet.
1			010100	Number of Dominant Species
I				That are OBL, FACW, of FAC. (A)
2				Total Number of Dominant
3				Species Across All Strata:3 (B)
4.				
5				Percent of Dominant Species
0				That Are OBL, FACW, or FAC:(A/B)
б				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
	0	= Total Co	ver	
50% of total cover: 0	20% of	f total cover	: <u>0</u>	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1 Salix nigra	5	v	OBL	FAC species x 3 =
0				FACU species x 4 =
2				
3				UPL species X 5 =
4				Column Totals: (A) (B)
5				
<u> </u>				Prevalence Index = B/A =
ю				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				\mathbf{K} 2 Dominance Test is $>50\%$
9.				
	5	- Total Co	r	3 - Prevalence Index is ≤3.0°
50% of total cover: 2.5	20% of	f total cover	. 1	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover. <u></u>	2078 01		·	data in Remarks or on a separate sheet)
Herb Stratum (Plot size:)	40			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Juncus effusus	40	<u> </u>	FACW	
2. Carex vulpinoidea	30	 ✓ 	OBL	1
3. Typha latifolia	15		OBL	Indicators of hydric soil and wetland hydrology must
A Sorghum halepense	10		FACU	be present, unless disturbed of problematic.
- Dishanthalium alandastinum	15		<u> </u>	Definitions of Four Vegetation Strata:
	10		FAC	Trop Woody plants, excluding vince, 2 in (7.6 cm) or
6				more in diameter at breast height (DBH) regardless of
7.				height.
8				
0				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	110	= Total Co	ver	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 55	20% of	f total cover	: 22	
Woody Vine Stratum (Plot size: 15'				Woody vine – All woody vines greater than 3.28 ft in
				neight.
1				
2				
3				
4.				
5				Hydrophytic
- J	0			Present? Ves V No
		= Iotal Co	ver	
50% of total cover: 0	20% of	t total cover	<u> </u>	
Remarks: (Include photo numbers here or on a separate s	sheet.)			

Profile Desc	ription: (Describe t	to the dept	h needed to docun	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redo	x Features	s			
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture	Remarks
0-3	10YR 4/4	100					SIL	
3-7	10YR 4/3	95	7.5YR 4/6	5	С	M/PL	SIL	
				. <u></u>				
¹ Type: C=Ce	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	I Sand Gra	ains.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil Indicators: Indicators for Problematic Hydric Soils ³ :								
Histosol	(A1)		Dark Surface	(S7)			2	2 cm Muck (A10) (MLRA 147)
Histic Ep	Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16)							Coast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Su	rface (S9)) (MLRA 1	47, 148)	_	(MLRA 147, 148)
Hydroge	en Sulfide (A4)		Loamy Gleye	d Matrix (F2)		F	viedmont Floodplain Soils (F19)
Stratified	d Layers (A5)		Depleted Mat	rix (F3)				(MLRA 136, 147)
2 cm Mu	ıck (A10) (LRR N)		Redox Dark S	Surface (F	-6)		V	/ery Shallow Dark Surface (TF12)
Depleted	d Below Dark Surface	e (A11)	Depleted Dar	k Surface	(F7)		C	Other (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre	ssions (F	8)			
Sandy M	lucky Mineral (S1) (L	.RR N,	Iron-Mangane	ese Mass	es (F12) (LRR N,		
MLRA	A 147, 148)		MLRA 13	6)			0	
Sandy G	Bleyed Matrix (S4)		Umbric Surfa	ce (F13) (MLRA 13	6, 122)	³ Inc	licators of hydrophytic vegetation and
Sandy R	ledox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	• 8) we	etland hydrology must be present,
Stripped	Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	') un	less disturbed or problematic.
Restrictive I	Layer (if observed):							
Type: G								
Depth (in	ches): /+						Hydric Soil	Present? Yes <u>V</u> No
Remarks:		ماليان ماليمة						
Pipeline ng	nt-oi-way with hi	ignly dist	urbed solls.					
1								

Wetland Photograph Page

Wetland ID <u>W-ME3</u> Date <u>06/28/2018</u>



Comments:

Project/Site: MVP	City/County: Wetzel County	Sampling Date: 06/28/2018
Applicant/Owner: MVP		State: <u>WV</u> Sampling Point: <u>W-ME</u> 3-UPL
Investigator(s): M. Elizondo; G. Kingsley	Section, Township, Range: N/A	
Landform (hillslope, terrace, etc.): Toe of Slope	Local relief (concave, convex, none): Concave Slope (%): 2-5
Subregion (LRR or MLRA); LRRN Lat: 39.5587	78 _{Lona:} -80.5	47695 Datum: NAD 83
Soil Map Unit Name: Skidmore gravelly loam		NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of	fvear? Ves 🖌 No (If	no evolain in Remarks)
Are Vegetation Soil or Hydrology aignified	nthy disturbed? Are "Normal (if	
Are Vegetation, Soil, of Hydrologysignification	any disturbed? Are normal c	plain any anguar in Remarka)
SUMMARY OF FINDINGS – Attach site man show	ing sampling point location	plain any answers in Remarks.)
Hydrophytic Vegetation Present? Yes No		
Hydric Soil Present? Yes No		Yes No
Wetland Hydrology Present? Yes No_		
Cowardin Code: UPLAND HGM:	Water Type:	
Associated with W-ME3.		
HYDROLOGY		
Wetland Hydrology Indicators:	<u>S</u>	econdary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that app	ıly)	Surface Soil Cracks (B6)
Surface Water (A1) True Aquat	c Plants (B14) _	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2) Hydrogen S	ulfide Odor (C1)	_ Drainage Patterns (B10)
Saturation (A3) Oxidized R	izospheres on Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1) Presence c	Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2) Recent Iror	Reduction in Tilled Soils (C6)	_ Crayfish Burrows (C8)
Drift Deposits (B3) Thin Muck	Surface (C7)	_ Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Exp	ain in Remarks)	_ Stunted or Stressed Plants (D1)
Iron Deposits (B5)	-	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)	-	Snallow Aquitard (D3)
Aquatic Fauna (B13)	-	EAC-Neutral Test (D5)
Field Observations:	_	
Surface Water Present? Ves No V Denth (inc	nes).	
Water Table Present? Ves No V Depth (inc		
Saturation Present? Ves No V Depth (inc	nes). Wetland Hy	drology Present? Yes No 🖌
(includes capillary fringe)	ico)	
Describe Recorded Data (stream gauge, monitoring well, aerial p	notos, previous inspections), if availa	able:
Remarks:		
Heavy rain storms were observed in the area through	hout the past week.	

Sampling Point: W-ME3-UPL

	Absolute	- Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> ')	<u>% Cover</u>	Species?	Status	Number of Dominant Species
1				That Are OBL_EACW_or EAC: 0 (A)
·· <u> </u>				
Z				Total Number of Dominant
3				Species Across All Strata: 1 (B)
4				Demonst of Deminent Creation
5.				That Are OBL EACW or EAC 0 (A/B)
6				
0				Prevalence Index worksheet:
/				Total % Cover of Multiply by
		= Total Cove	er	
50% of total cover: 0	20% of	total cover:	0	
Sapling/Shrub Stratum (Plot size: 15)				FACW species x 2 =
1.				FAC species x 3 =
2				FACU species x 4 =
2				LIPL species x 5 =
3				
4				Column Totals: (A) (B)
5				Drevelence Index D/A
6.				
7				Hydrophytic Vegetation Indicators:
1				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				$3 - \text{Prevalence Index is } \leq 3.0^{1}$
	0	= Total Cove	er	
50% of total cover: 0	20% of	total cover:	0	4 - Morphological Adaptations' (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
(Sorabum balenense	50	~	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Daucus carota	5		UPL	¹ Indiantara of hydria apil and watland hydrology must
3. Erigeron strigosus	10		FACU	he present unless disturbed or problematic
4 Carex vulpinoidea	5		OBL	Definitions of Four Venetation Of problemate.
	-			Definitions of Four Vegetation Strata:
o				Tree – Woody plants, excluding vines 3 in (7.6 cm) or
6	. <u> </u>	. <u> </u>		more in diameter at breast height (DBH), regardless of
7				height.
8.				
9				Sapling/Shrub – Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3.28 π (1
10				11) tan.
11				Herb – All herbaceous (non-woody) plants, regardless
	70	= Total Cove	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 35	20% of	total cover:	14	
Woody Vine Stratum (Plot size: 15'				Woody vine – All woody vines greater than 3.28 ft in
				neight.
[¹				
2				
3		·		
4.				
5				Hydrophytic Venetation
- J	0			Present? Yes No
		= Iotal Cove	er	
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Desc	ription: (Describe to	o the depth	needed to docun	nent the ir	dicator o	or confirm	the absence of ir	ndicato	ors.)		
Depth	Matrix		Redo	x Features							
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remark	S	
0-12	10YR 4/3	100					SIL				
		<u> </u>									
		<u> </u>									
	,						<u> </u>				
1 <u> </u>							2				
	oncentration, D=Deple	etion, RM=R	educed Matrix, MS	S=Masked	Sand Gra	uns.	Location: PL=PC	ore Linii	ng, M=Matr	X. Hydria Sai	10 ³
			Darily Curford	(07)							15.
HISTOSOI	(A1) vinodon (A2)		Dark Surface	(S7) Iow Surfac	o (S9) (M		148) 2 cm I	VIUCK (A	ATU) (IVILRA Rodov (A1	(147) 6)	
Black Hi	stic $(\Delta 3)$		Thin Dark Su	rface (SQ)	(MIRA1	LNA 147, 47 148)	(MI		7 148)	0)	
Black The Hydroge	n Sulfide (A4)		Loamy Gleve	d Matrix (F	-2)	47, 140)	Piedm	ont Flo	n, 140) Indolain Soi	ls (F19)	
<u>Stratified</u>	Lavers (A5)		Depleted Mat	rix (F3)	_)		<u>(ML</u>	.RA 13	6. 147)		
2 cm Mu	ck (A10) (LRR N)		Redox Dark S	Surface (Fr	6)		Very S	Shallow	Dark Surfa	ce (TF12)	
Depleted	Below Dark Surface	(A11)	Depleted Dar	k Surface	, (F7)		Other	(Explai	in in Remar	ks) ́	
Thick Da	ark Surface (A12)		Redox Depre	ssions (F8	5)						
Sandy M	lucky Mineral (S1) (Ll	RR N,	Iron-Mangane	ese Masse	s (F12) (L	.RR N,					
MLRA	147, 148)		MLRA 136	ô)							
Sandy G	leyed Matrix (S4)		Umbric Surfa	ce (F13) (VILRA 13	6, 122)	³ Indicato	rs of hy	/drophytic v	egetation a	and
Sandy R	edox (S5)		Piedmont Flo	odplain Sc	oils (F19)	(MLRA 14	8) wetland	d hydrol	logy must b	e present,	
Stripped	Matrix (S6)		Red Parent M	laterial (F2	21) (MLR	A 127, 147) unless	disturbe	ed or proble	matic.	
Restrictive L	ayer (if observed):										
_{Type:} <u>Gr</u>	avel		_								
Depth (inc	_{ches):} <u>12+</u>		_				Hydric Soil Pres	sent?	Yes	No	~
Remarks:											

USACE FILE NO./Project Name:	Mountain Valley Pipeline		COORDINATES:	Lat.	39.553912	Lon.	-80.544941	
STREAM/SITE ID AND SITE DESCRI	PTION:					W-A1a, Pipeline ROW		
(% stream slope, watershed size {a	creage}, unaltered	l or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-A1a	Emergent	0.0038	Emergent					
				-				
				-				
				_		PART III - Advanced	Mitigatio	n
						Sustainable Determination Made or Advanced Mitigation (Y or N)	ı	Y
				-			-	
				-				
Total Impact		0.0038						
	PART II -	Unit Scores		-		Estimated		
Wetland Cl	assification		Replacement Unit(s)	-		ILF Costs		
Total Emergent			0.0038	-		*****		
I otal Scrub-Shrub			0	-		\$228.00		
Total Forested			0	-				
I otal Open Water			0					

Project/Site: MVP	City/County: Wetz	el	Sampling Date: 10/14/2014		
Applicant/Owner: MVP		State: WV	Sampling Point: W-A1a		
Investigator(s); ES,CM,DM,MW	Section, Township,	Range: N/A			
Landform (hillslope, terrace, etc.): stream channel	Local relief (concave, c	onvex, none); CONCAVE	Slope (%); 3		
Subregion (LRR or MLRA): LRRN	39.553881	ong: -80.544875	Oatum [.] NAD 83		
Soil Map Lipit Name: Skidmore gravellev loam	·	NW/L classifi	cotion: NONE		
Are elization (hudred aris and difference of the site turing) for					
Are climatic / hydrologic conditions on the site typical fo	r this time of year? Yes No		kemarks.)		
Are Vegetation, Soil, or Hydrology	significantly disturbed? A	re "Normal Circumstances"	present? Yes <u></u> No <u></u>		
Are Vegetation, Soil, or Hydrology	naturally problematic? (If	needed, explain any answe	ers in Remarks.)		
SUMMARY OF FINDINGS – Attach site m	ap showing sampling poin	t locations, transects	s, important features, etc.		
	No				
Hydrophylic Vegetation reserver res	No Is the Samp	led Area			
Wetland Hydrology Present? Yes	No within a We	land? Yes <u>*</u>	No		
Remarks:					
Cowardin: PEM: HGM: Riverine: WT: RPW	ND				
Information listed on this form represents the	e data collected in 2014. The	wetland was revisited	d on 9/16/2019; however,		
the three wetland criteria were not present.	The wetland was previously	located on a deposition	nal sand bar within the		
banks of a stream. Scour and other natural	processes have likely impact	ed the area.			
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indic	ators (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 Ve	Sparsely Vegetated Concave Surface (B8)		
✓ High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Pa	atterns (B10)		
✓ Saturation (A3)	Oxidized Rhizospheres on Living R	pots (C3) Moss Trim L	ines (B16)		
Water Marks (B1)	Presence of Reduced Iron (C4)	Drv-Season	Water Table (C2)		
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soil	s (C6) Crayfish Bu	rrows (C8)		
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation V	isible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or S	Stressed Plants (D1)		
Iron Deposits (B5)		Geomorphic	Position (D2)		
Inundation Visible on Aerial Imagery (B7)		Shallow Aqu	uitard (D3)		
Water-Stained Leaves (B9)		Microtopogr	aphic Relief (D4)		
Aquatic Fauna (B13)		FAC-Neutra	l Test (D5)		
Field Observations:					
Surface Water Present? Yes No	Depth (inches):				
Water Table Present? Yes <u>Yes</u> No	Depth (inches): <u>13</u>				
Saturation Present? Yes <u>Ves</u> No	Depth (inches): 10	Wetland Hydrology Prese	nt? Yes 🖌 No		
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring w	vell, aerial photos, previous inspection	ons), if available:			
	····, ······ [·····, [······				
Remarks:			0.04		
Riverine flow through PEM wetland is locate	ed on a vegetated sand bar w	vithin the OHWM of str	eam S-A1a.;		

Sampling Point: W-A1a

	Absolute	Dominant Ir	ndicator	Dominance Test worksheet
Tree Stratum (Plot size: <u>30'</u>)	<u>% Cover</u>	Species?	<u>Status</u>	Number of Dominant Species
1.				That Are OBL, FACW, or FAC: 4 (A)
2				
2				Total Number of Dominant
3				Species Across All Strata:4 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
6				
7				Prevalence Index worksheet:
	0	= Total Cover		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 Platanus occidentalis	5	~	FACW	FAC species x 3 =
			17.011	
2				
3				UPL species X 5 =
4				Column Totals: (A) (B)
5.	_		-	Developer la la P.A.
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
1				✓ 1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				$3 - \text{Prevalence Index is } \leq 30^1$
	5	= Total Cover		5 = 1 revalence index is ±5.0
50% of total cover: 2.5	20% of	total cover:	1	4 - Morphological Adaptations" (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
A Phalaris arundinacea	30	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
	20			
				¹ Indicators of hydric soil and wetland hydrology must
3. Impatiens capensis	30	~	FACW	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata
5.				Deminions of Four Vegetation offata.
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
-				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.				
	90			Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3 28 ft tall
50% of total appears 15		= Total Cover	18	or size, and woody plants less than 5.20 it tail.
30'	20% 01	total cover.	10	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:)				height.
1				
2				
3				
4				
				Hydrophytic
o				Vegetation Present? Ves V No
		= Total Cover		
50% of total cover: 0	20% of	total cover:	U	
Remarks: (Include photo numbers here or on a separate s	heet.)			
See photo W-A1-P1.				
Within the herb stratum there was 10% bare are	ound			
Wall the nois statem there was 10% bare gro				

0-16 10YR 3/2 100	iches)	Color (moist)	%	Color (moist)	% Type ¹	Loc ²	Texture	Remarks
6-20 10Y 2.5/1 100 SCL 6-20 10Y 2.5/1 100 SCL 9 9 SCL 9 9 9 SCL 9 9 9 SCL 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 <th>0-16</th> <th>10YR 3/2</th> <th>100</th> <th>· · · ·</th> <th></th> <th></th> <th>sand</th> <th></th>	0-16	10YR 3/2	100	· · · ·			sand	
0 1 2.0 1 01 2.0 1 100 200 100 200 000 200 0 1 2.0 1 01 2.0 1 100 200 100 200 000 200 0 1 2.0 1 100 200 000 200 000 200 0 1 2.0 1 100 200 000 200 000 200 0 1 2.0 1 100 200 000 200 000 200 0 1 2.0 1 100 200 000 200 000 200 0 1 2.0 1 100 200 000 200 000 200 0 1 2.0 1 100 200 000 200 000 200 0 1 2.0 1 100 200 000 200 000 200 0 1 2 100 200 000 200 000 200 0 1 2 100 200 000 200 000 200 0 1 2 100 200 000 200 000 200 0 1 2 100 200 000 200 000 200 0 1 2 100 200 000 200 000 200 0 1 2 100 200 000 200 000 200 0 1 2 100 200 000 200 000 200 0 1 2 100 200 000 200 000 200 0 1 2 100 200 000 200 000 200 0 1 2 100 200 000 200 000 200 0 1 2 100 200 000 200 000 200 0 1 2 100 200 000 200 000 200 00000	16-20	10V 2 5/1	100			·	<u>SCI</u>	
pe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Iric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1)	10-20	101 2.3/1	100			·	30L	
pe: C-Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1)			·			·		
pe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. iric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1)								
pe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1)								
pe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. fric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1)								
pe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1)			·			·		
pe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Iric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1)			·			·		
pe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. Iric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1)			·			·		
pe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. dric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Coast Prairie Redox (A16) Yudrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) ✓ Thick Dark Surface (A12) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Type:								
pe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix. dric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) ✓ Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, Piedmont Floodplain Soils (F19) (MLRA 136, 122) Sandy Gleyed Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 147, 148) wetland hydrology must be present, unless disturbed or problematic. Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Type:								
tric Soil Indicators: Indicators for Problematic Hydric Soils ³ : Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) Histosol (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A12) Redox Depressions (F8) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Other (Explain in Remarks) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 136, 122) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Type:	ype: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS=N	Masked Sand Gr	ains. 2	Location: PL=Pore L	ining, M=Matrix.
Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147) Histosol (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 147, 148) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) ✓ Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N,	dric Soil	ndicators:					Indicators for	Problematic Hydric Soils ³ :
Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Coast Prairie Redox (A16) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) WLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) ✓ Thick Dark Surface (A12) Redox Depressions (F8) Very Shallow Dark Surface (TF12) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Other (Explain in Remarks) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) 3 Indicators of hydrophytic vegetation and Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, Unless disturbed or problematic.	Histosol	(A1)		Dark Surface (S	7)		2 cm Muck	(A10) (MLRA 147)
Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 147, 148) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) ✓ Thin Dark Surface (F12) Redox Depressions (F8) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, Other (Explain in Remarks) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) 3Indicators of hydrophytic vegetation and Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Thin Dark Surface	_ Histic Ep	pipedon (A2)		Polyvalue Below	v Surface (S8) (N	ILRA 147, 14	48) Coast Prai	rie Redox (A16)
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 147) 2 cm Muck (A10) (LRR N) Redox Dark Surface (F6) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) ✓ Other (Explain in Remarks) Thick Dark Surface (A12) Redox Depressions (F8) Other (Explain in Remarks) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148)	Black Hi	stic (A3)		Thin Dark Surfa	ce (S9) (MLRA	147, 148)	(MLRA	147, 148)
Stratilied Layers (AS)	_ Hydroge	n Sulfide (A4)		Loamy Gleyed N	Matrix (F2)		Piedmont I	Floodplain Soils (F19)
2 cinindical (nfb) (Link n)	2 cm Mu	Layers (A5) lock (Δ10) (LRR N)		Depleted Matrix Redox Dark Sur	(F3) face (F6)		(IVILRA Very Shall	130, 147) ow Dark Surface (TE12)
Thick Dark Surface (A12) Redox Depressions (F8) Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. strictive Layer (if observed): Type: Depth (inches): marks: bbles to 3 inches present in upper layer.	Depleted	Below Dark Surface	e (A11)	Depleted Dark S	Surface (F7)		✓ Other (Exp	lain in Remarks)
Sandy Mucky Mineral (S1) (LRR N,	Thick Da	ark Surface (A12)		Redox Depressi	ions (F8)			,
MLRA 147, 148) MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) ³ Indicators of hydrophytic vegetation and vegetation and vegetation and sandy Redox (S5) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Strictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No No narks: bbles to 3 inches present in upper layer.	Sandy M	lucky Mineral (S1) (L	.RR N,	Iron-Manganese	Masses (F12) (LRR N,		
Sandy Gleyed Matrix (S4)Umbric Surface (F13) (MLRA 136, 122) ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Stripped Matrix (S6)Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. strictive Layer (if observed): Type: Depth (inches): narks: wetsent in upper layer.	MLRA	A 147, 148)		MLRA 136)				
Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. strictive Layer (if observed): Type: Hydric Soil Present? Yes Ves No Depth (inches): No No	Sandy G	leyed Matrix (S4)		Umbric Surface	(F13) (MLRA 13	6, 122)	³ Indicators of	hydrophytic vegetation and
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Unless disturbed or problematic. strictive Layer (if observed):	Sandy R	edox (S5)		Piedmont Flood	plain Soils (F19)	(MLRA 148)	wetland hyd	rology must be present,
Type: Depth (inches): No narks: bbles to 3 inches present in upper layer.	_ Stripped	Matrix (56)		Red Parent Mat	eriai (F21) (MLR	A 127, 147)	uniess distu	rbed or problematic.
Depth (inches):		ayer (il observeu).						
narks: bles to 3 inches present in upper layer.	Danath (inc	-h).					Ukudain Chil Dana anti	
narks: obles to 3 inches present in upper layer.	Depth (Ind	cnes):					Hydric Soli Present	? Yes <u>•</u> No
bles to 3 inches present in upper layer.	narks:	2 inches press	t in unno					
	bbles to	s inches presen	it in upper	layer.				

Wetland Photograph Page

Wetland ID W-A1a



Photograph Direction <u>NW</u>

Date: 10/14/2014

Comments: 2014 wetland delineation.



Photograph Direction SE

Date: 09/16/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	City/County: Wetzel	Sampling	J Date: 10/16/2014
Applicant/Owner: MVP		State: <u>WV</u> Sampli	ing Point: W-A1a UPL
Investigator(s): ES,CM,DM,MW	Section, Township, Range:	N/A	
Landform (hillslope, terrace, etc.): floodplain	Local relief (concave, convex,	_{none):} flat	Slope (%): 5-8
Subregion (LRR or MLRA): LRRN Lat: 39.5	5387355 Long:	-80.5448865	Datum: NAD 83
Soil Map Unit Name: Skidmore gravelley loam		NWI classification: N//	A
Are climatic / hydrologic conditions on the site typical for this ti	me of year? Yes 🗹 No	(If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrology sign	nificantly disturbed? Are "Nori	mal Circumstances" present?	Yes 🖌 No
Are Vegetation, Soil, or Hydrology nati	urally problematic? (If neede	d, explain any answers in Rema	arks.)
SUMMARY OF FINDINGS – Attach site map sh	owing sampling point loca	tions, transects, import	ant features, etc.
Hydrophytic Vegetation Present? Yes <u>Ves</u> No_	Is the Sampled Are		

Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes	No <u>v</u>	Is the Sampled Area within a Wetland?	Yes	No	 ✓
Wetland Hydrology Present?	Yes	No				
Remarks:						
Upland plot is located on the floo wetland W-A1	dplain outsi	de of the OHW	M of stream S-A1, about	t 3-4 feet in el	levatior	ו higher than

HYDROLOGY

wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	 Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No 🖌 Depth (inches):	
Water Table Present? Yes No 🗸 Depth (inches):	
Saturation Present? Yes No Ver Depth (inches):	Wetland Hydrology Present? Yes No
Saturation Present? Yes No Depth (inches): (includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections)	Wetland Hydrology Present? Yes No

Sampling Point: W-A1a UPL

20'	Absolute	Dominant I	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30)	<u>% Cover</u>	Species?	Status	Number of Dominant Species
1. Acer negundo	30	<u> </u>	FAC	That Are OBL, FACW, or FAC: (A)
2. Platanus occidentalis	5		FACW	Total Number of Dominant
3				Species Across All Strata: 5 (B)
4.				· · · · · · · · · · · · · · · · · · ·
5				Percent of Dominant Species
с				That Are OBL, FACW, of FAC: (A/B)
8			·	Prevalence Index worksheet:
7	25			Total % Cover of: Multiply by:
500/ // 17/	30	= Total Cove	r 7	OBL species x 1 =
50% of total cover: <u>17.3</u>	<u>20% of</u>	total cover:	/	$\frac{10}{5}$
Sapling/Shrub Stratum (Plot size: 15)				FACW species 0^2 $x_2 = 10^2$
1. Acer negundo	2	<u> </u>	FAC	FAC species $32 \times 3 = 270$
2				FACU species25 x 4 =100
3.				UPL species x 5 =
4				Column Totals: <u>122</u> (A) <u>386</u> (B)
5				0.40
				Prevalence Index = $B/A = 3.10$
0			<u> </u>	Hydrophytic Vegetation Indicators:
7			<u> </u>	1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is < 3.01
	2	= Total Cove	r	Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>1</u>	20% of	total cover:	0.4	4 - Morphological Adaptations (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Verbesina alternifolia	35	~	FAC	Problematic Hydrophytic Vegetation' (Explain)
2 Solidado altissima	25	v	FACU	
2. Microstegium vimineum	25	· · ·	FAC	¹ Indicators of hydric soil and wetland hydrology must
			170	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				The All March states and strand strand strand strand
6				nee – 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				m) tall.
11	05			Herb – All herbaceous (non-woody) plants, regardless
	- 00	= Total Cove	r 17	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>42.3</u>	<u>5</u> 20% of	total cover:	17	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 50)				height.
1				
2				
3				
4.				
5				Hydrophytic Vegetation
· · · · · · · · · · · · · · · · · · ·	0	Total Covo		Present? Yes V No
50% of total cover: 0	20% of	total cover:	0	
Demoriko: (include abete numbere bare er en e concrete e	2070 01			
Remarks. (include photo numbers here of on a separate s	neet.)			
See photo W-A1-P1.				
vvitnin the nerb stratum there was ~15% bare gi	round.			

Profile Desc	ription: (Describe t	o the dep	th needed to docum	ent the in	ndicator o	or confirm	n the absence of indicators.)
Depth	Matrix		Redox	Features	5		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks
0-16	10YR 3/2	100					silt loam
16-20	10YR 3/3	100					silt loam
						·	
							·
¹ Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	=Masked	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix.
Hydric Soil I	Indicators:						Indicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Bel	ow Surfac	ce (S8) (M	LRA 147,	, 148) Coast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Sui	rface (S9)	(MLRA 1	47, 148)	(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix (F	-2)		Piedmont Floodplain Soils (F19)
<u></u> Stratified	d Layers (A5)		Depleted Mat	rix (F3)			(MLRA 136, 147)
2 cm Mu	ick (A10) (LRR N)		Redox Dark S	Surface (F	6)		Very Shallow Dark Surface (TF12)
Depleted	d Below Dark Surface	e (A11)	Depleted Dar	k Surface	(F7)		Other (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depres	ssions (F8	3)		
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangane	ese Masse	es (F12) (I	_RR N,	
MLRA	A 147, 148)		MLRA 136	5)			
Sandy G	leyed Matrix (S4)		Umbric Surfac	ce (F13) (I	MLRA 13	6, 122)	³ Indicators of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Flo	odplain So	oils (F19)	(MLRA 14	 wetland hydrology must be present,
Stripped	Matrix (S6)		Red Parent N	laterial (F2	21) (MLR	A 127, 147	7) unless disturbed or problematic.
Restrictive I	_ayer (if observed):						
Туре:							
Depth (ind	ches):						Hydric Soil Present? Yes No
Remarks:							

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	39.5535075	Lon.	-80.5455175
STREAM/SITE ID AND SITE DESCRI	PTION:					W-A2a, Timber Mat Crossing		
(% stream slope, watershed size {ac	creage}, unaltered	l or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-A2a	Emergent	0.0424	Emergent					
				-		PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0424						
Wotland Cl	PART II -	Unit Scores		-		Estimated		
vvetland Cla	assilication			-				
Total Scrub-Shrub			0.0424	-		\$2 544 00		
Total Forested			0	-		φ2,544.00		
Total Open Water			0	-				

Applicant/Ounsi: MVP State: WV Sampling Point; W-A2a Investigant(s): ES,CM,DM,MW	Project/Site: MVP	City/County: Wet	zel	Sampling Date: 10/17/2014
Immedigator(s): ES.CM.DM.MW	Applicant/Owner: MVP		State: WV	Sampling Point: W-A2a
Landom (hillsbps, terrace, etc.): floodplain Local relief (concare, convex, none): CONC8VE Stope (%; C) Subregion (LRR or MLRA): LLRR LARN Lat: 39.55343 Long -40.645431 Datum; NAD 83 Soil Map Unit Name: Skidmore gravelley loam NVV classification: InONE Acc Stope (%; C) Are Vogetation Soil	Investigator(s); ES,CM,DM,MW	Section, Township	Range: N/A	
Subregion (LRR or MLRA): LRRN Lat: 39.55343 Long: 90.545431 Datum: NAD 83 Soli Map Unit Name: Skilfmore gravelley loam	Landform (hillslope, terrace, etc.); floodplain	Local relief (concave.	convex. none); concave	Slope (%); 0
constraint (unit on many constraints)	Subregion (I BB or MI BA): LRRN	1 at: 39.55343	Long: -80.545431	eteps (75) Datum: NAD 83
Out any data construction on the site typical for this time of year? Yes No (If no, explain in Remarks.) Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If ne eded, explain any answers in Remarks.) Are Vogetation Sol or Hydrology	Soil Man Unit Name Skidmore gravelley loa	am	NWI classifi	cation. NONE
Ard Unitable File (IIII) (IIII) (IIII) Are "Normal Circumstances" present? Yes No Are Vegetation Soil or Hydrology naturally problematic? (III needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No is the Sampled Area within a Wetland? No (III needed, explain any answers in Remarks.) 2014 Index: FDM wetland is located in a slightly conceve area of the floodplain, located about 100 feet south of stream S-A1a. Cowardin: FEM Holds. No (III needed, explain any answers in Remarks.) 2014 Index: FDM wetland is located in a slightly conceve area of the floodplain, located about 100 feet south of stream S-A1a. Cowardin: FEM Holds. No (III needed, explain any answers in Remarks.) 2014 Index: FDM wetland is located in a slightly conceve area of the floodplain, located about 100 feet south of stream S-A1a. Cowardin: FEM Holds. No (III needed, explain any answers in Remarks.) 2014 Index: FDM wetland is located in a slightly conceve area of the floodplain, located about 100 feet south of stream S-A1a. Cowardin: FEM Holds. No (III needed, explain and explain	Are elimetic / hydrologic conditions on the site typi	inclutor this time of year? Yea		Pomorka)
Are Vegetation Soil or Hydrology inplicantly disturbed? Are Normal Circumstances? present? Yes No Are Vegetation Soil or Hydrology inaturally problematic? (If needed, explain any answers in Remarks) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No is the Sampled Area within a Wetand? No No Remarks: 2014 notes: PEM wetand is located in a slightly concave area of the floodplain, located about 100 feet south of stream S-A1a. Cowardin: PEM Holt. Depresence of wetland hydrology, hydrophytic vegetation, and hydro soils was confirmed using the USACE EMP Regional Supplement delineation methodology. Hydrophytic vegetation, and hydro soils was confirmed using the USACE EMP Regional Supplement delineation methodology. Hydrophytic vegetation (A2) Hydrophytic Bar Single Sing	Are climatic / hydrologic conditions on the site typ	carlor this time of year? res N		(emarks.)
Are Vegetation	Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances"	present? Yes No
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No Image: Status of St	Are Vegetation, Soil, or Hydrology	naturally problematic? (If needed, explain any answe	ers in Remarks.)
Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No Rematic: 2014 notes: FEW HGM: Depressional WT: RPWWN Information listed on this form represents the data collected in 2014. The wetland was revisited on 09/16/2019. Presence of wetland hydrology, hydrophytic vegetation, and hydro soils was confirmed using the USACE EMP Regional Supplement delineation methodology. HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Surface Water (A1)	SUMMARY OF FINDINGS – Attach si	te map showing sampling poin	nt locations, transects	s, important features, etc.
Hydrology Present? Yes No	Hydrophytic Vegetation Present? Yes	No la the Som		
Wetland Hydrology Present? Yes No	Hydric Soil Present? Yes	No within a We	oled Area	No
Remarks: 2014 notes: PEM wetland is located in a slightly concave area of the floodplain, located about 100 feet south of stream S-A1a. Cowardin: PEM HGM: Depressional WT: RPWWN Information listed on this form represents the data collected in 2014. The wetland was revisited on 09/16/2019. Presence of wetland hydrology, hydrophytic vegetation, and hydro soils was confirmed using the USACE EMP Regional Supplement delineation methodology. HYDROLOGY Wetland Hydrology Indicators: Surface Water (A1)	Wetland Hydrology Present? Yes	✓ No		
HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required: check all that apply) Surface Soil Cracks (B6) Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) Y High Water Table (A2) Hydrogen Sulfde Odor (C1) Drainage Patterns (B10) Y Saturation (A3) Oxidized Rhizospheres on Living Roots (G3) Moss Tim Lines (B16) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks) Iron Deposits (B5) Statuted Oxing Roots (C3) Moss Tim Lines (D4) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water Table (Dservations: Surface Water Present? Yes Surface Bale No Depth (inches): Metland Hydrology Present? Yes No Bescribe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Water was seeping from the side of the soil pit at 4". Wetland Hydrology Present? Yes No	2014 notes: PEM wetland is located in a slightly of Cowardin: PEM HGM: Depressional WT: RPWV Information listed on this form represents the data hydrophytic vegetation, and hydric soils was conf	concave area of the floodplain, located a VN a collected in 2014. The wetland was rev irmed using the USACE EMP Regional	bout 100 feet south of strear isited on 09/16/2019. Preser Supplement delineation meth	n S-A1a. nce of wetland hydrology, nodology.
Wettand Hydrology Indicators: Secondary Indicators: Secondary Indicators: Primary Indicators: Surface Water (A1)	HYDROLOGY			
Primary Indicators (minimum of one is required; check all that apply)	Wetland Hydrology Indicators:		Secondary Indic	ators (minimum of two required)
	Primary Indicators (minimum of one is required;	check all that apply)	Surface Soi	Cracks (B6)
 	Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Ve	egetated Concave Surface (B8)
	High Water Table (A2) Seturation (A3)	Hydrogen Sullide Odor (C1)	Drainage Pa	inos (B16)
	Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season	Water Table (C2)
□ Drift Deposits (B3)	Sediment Deposits (B2)	Recent Iron Reduction in Tilled So	ils (C6) Cravfish Bu	rrows (C8)
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stressed Plants (D1) Iron Deposits (B5) ✓ Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4) Aquatic Fauna (B13) ✓ Field Observations: Surface Water Present? Surface Water Present? Yes Ves No Depth (inches): 4 (includes capillary fringe) Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Water was seeping from the side of the soil pit at 4".	Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation V	/isible on Aerial Imagery (C9)
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Aquatic Fauna (B13) Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Wetland Hydrology Present? Yes No Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Water was seeping from the side of the soil pit at 4".	Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or S	Stressed Plants (D1)
	Iron Deposits (B5)		🗹 Geomorphic	Position (D2)
Water-Stained Leaves (B9) Microtopographic Relief (D4) Aquatic Fauna (B13) FAC-Neutral Test (D5) Field Observations:	Inundation Visible on Aerial Imagery (B7)		Shallow Aqu	uitard (D3)
	Water-Stained Leaves (B9)		Microtopogr	aphic Relief (D4)
Field Observations: Surface Water Present? Yes No Depth (inches): Water Table Present? Yes No Depth (inches): Saturation Present? Yes No Depth (inches): Includes capillary fringe) Depth (inches): Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Water was seeping from the side of the soil pit at 4".	Aquatic Fauna (B13)		FAC-Neutra	l Test (D5)
Surface Water Present? Yes No Depth (inches): 4 Water Table Present? Yes V Depth (inches): 4 Saturation Present? Yes V No Depth (inches): 4 Saturation Present? Yes V No Depth (inches): 4 Wetland Hydrology Present? Yes V No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Water was seeping from the side of the soil pit at 4". Water was seeping from the side of the soil pit at 4".	Field Observations:			
Water Table Present? Yes V No Depth (inches): 4 Saturation Present? Yes V No Depth (inches): 4 Wetland Hydrology Present? Yes V No No No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: No No Remarks: Water was seeping from the side of the soil pit at 4". V No No	Surface Water Present? Yes No _	Depth (inches):		
Saturation Present? Yes No Depth (inches): 4 Wetland Hydrology Present? Yes No Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Remarks: Water was seeping from the side of the soil pit at 4".	Water Table Present? Yes Ves No	Depth (inches): 4		
Includes capillary initige) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Remarks: Water was seeping from the side of the soil pit at 4".	Saturation Present? Yes <u>Ves</u> No	Depth (inches):4	Wetland Hydrology Prese	nt? Yes 🖌 No
Remarks: Water was seeping from the side of the soil pit at 4".	Describe Recorded Data (stream gauge, monito	ا ring well, aerial photos, previous inspect	ions), if available:	
Remarks: Water was seeping from the side of the soil pit at 4".				
water was seeping from the side of the soll pit at 4°.	Remarks:			
	water was seeping from the side of the	soli pit at 4".		

Sampling Point: W-A2a

Indicator Status Status	Dominance Test worksheet:Number of Dominant SpeciesThat Are OBL, FACW, or FAC:2(A)Total Number of DominantSpecies Across All Strata:2(B)Percent of Dominant SpeciesThat Are OBL, FACW, or FAC:100(A/B)Prevalence Index worksheet:Total % Cover of:Multiply by:OBL speciesx 1 =FACW speciesx 2 =FAC speciesx 3 =FACU speciesx 5 =Column Totals:(A)UPL speciesx 5 =Column Totals:(A)I - Rapid Test for Hydrophytic VegetationI - Rophological Adaptations ¹ (Provide supportind data in Remarks or on a separate sheet)Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
?? Status	Number of Dominant Species That Are OBL, FACW, or FAC:2(A)Total Number of Dominant Species Across All Strata:2(B)Percent of Dominant Species That Are OBL, FACW, or FAC:100(A/BPrevalence Index worksheet: Total % Cover of: Multiply by:(A/BPrevalence Index worksheet: Total % Cover of: Prevalence Index worksheet: Multiply by:(A/BPrevalence Index worksheet: Total % Cover of: PrevalenceMultiply by:OBL species FAC species $x 1 =$ FAC speciesFACU species Column Totals: $x 3 =$ (A)Prevalence Index = B/A = Column Totals:(A)Prevalence Index = B/A = Column Totals:(B) Prevalence Index is $<3.0^1$ (A)1 - Rapid Test for Hydrophytic Vegetation data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
over er: 0 	Total Number of Dominant Species Across All Strata:2(B)Percent of Dominant Species That Are OBL, FACW, or FAC:100(A/BPrevalence Index worksheet: Total % Cover of: OBL speciesMultiply by:(A/BPrevalence Index worksheet: Total % Cover of: Multiply by:Multiply by:(A/BPrevalence Index worksheet: 							
over over over over 	Species Across All Strata: 2 (B) Percent of Dominant Species 100 (A/B Prevalence Index worksheet: 100 (A/B Prevalence Index worksheet: Multiply by: (B) OBL species x 1 = (B) FACW species x 2 = (A/B) FAC species x 3 = (B) FACU species x 4 = (B) VPL species x 5 = (B) Column Totals: (A) (B) Prevalence Index = B/A = (B) Prevalence Index = B/A = (B) Prevalence Index is $> 50\%$ 3 - Prevalence Index is $> 3.0^1$ 4 - Morphological Adaptations ¹ (Provide supportin data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1							
over er: 0	Percent of Dominant Species That Are OBL, FACW, or FAC:100(A/BPrevalence Index worksheet: Total % Cover of: OBL species FACW speciesMultiply by: Multiply by: OBL speciesMultiply by: Multiply by: 							
over pr: 0 pr: 0 pr: 0 pr: 0 FAC FACW FACW FACW OBL	Prevalence Index worksheet:							
over over 	Frevalence index worksheet. Total % Cover of: Multiply by: OBL species x 1 = FACW species x 2 = FAC species x 3 = FACU species x 4 = UPL species x 5 = Column Totals: (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50% 3 - Prevalence Index is $\leq 3.0^1$ 4 - Morphological Adaptations ¹ (Provide supportin data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain)							
over er: 0 	Inditiply by: OBL species x 1 = FACW species x 2 = FAC species x 3 = FACU species x 4 = UPL species x 5 = Column Totals: (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation \checkmark 2 - Dominance Test is >50% 3 - Prevalence Index is <3.01							
	FACW species x 2 = FAC species x 3 = FACU species x 4 = UPL species x 5 = Column Totals: (A) Prevalence Index = B/A = (B) Prevalence Index = B/A = (B) Yet and Test for Hydrophytic Vegetation Yet and the second seco							
	FAC species x 3 = FACU species x 4 = UPL species x 5 = Column Totals: (A) Prevalence Index = B/A = (B) Prevalence Index = B/A = (B) I - Rapid Test for Hydrophytic Vegetation \checkmark 2 - Dominance Test is >50% 3 - Prevalence Index is $\leq 3.0^1$ 4 - Morphological Adaptations ¹ (Provide supportind data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1							
over er: 0 FAC FACW FACW OBL	FACU species x 4 = UPL species x 5 = Column Totals: (A) Prevalence Index = B/A = (B) Prevalence Index = B/A = (B) Yerevalence Index = B/A = (C) 1 - Rapid Test for Hydrophytic Vegetation Yerevalence Index is >50% 3 - Prevalence Index is ≤3.01 (C) 4 - Morphological Adaptations1 (Provide supportion data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation1 (Explain) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 1							
over er: 0 FAC FACW FACW OBL	UPL species x 5 = Column Totals: (A) Prevalence Index = B/A = (B) Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.01 4 - Morphological Adaptations1 (Provide supportindata in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation1 (Explain) 1 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
over er: 0 FAC FACW FACW OBL	Column Totals:							
over or: 0 FAC FACW FACW OBL	Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supportin data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
over er: 0 FAC FACW FACW OBL	Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 ¹ 4 - Morphological Adaptations ¹ (Provide supportin data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
over er: 0 FAC FACW FACW OBL	 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportindata in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 							
FAC FAC FACW FACW OBL	 ✓ 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportindata in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 							
FAC FAC FACW FACW OBL	 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide supportind data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 							
FAC FACW FACW OBL	 4 - Morphological Adaptations¹ (Provide supportindata in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain) ¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 							
FAC FACW FACW OBL	data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
FAC FACW FACW OBL	Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
FACW FACW OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
FACW OBL	Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.							
OBL	F F							
	Definitions of Four Vegetation Strata:							
FACW								
	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.							
over	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.							
er: <u>20</u>	Woody vine – All woody vines greater than 3.28 ft in height.							
	Hydrophytic							
	Vegetation							
over er: <u>0</u>								
	Cover // 20							
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		Redox	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks	
0-4	10YR 4/2	100					silt loam	
4-8	10YR 4/2	95	7.5YR 3/4	5	С	Μ	SCL	
8-16	10YR 4/2	80	7.5YR 3/4	10	С	Μ	SCL	
			7.5YR 4/6	10	С	Μ	SCL	
16-20	10YR 4/2	70	7.5YR 3/4	15	С	Μ	SCL	
			7.5YR 4/6	15	С	М	SCL	
'Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix.	3
Hydric Soli I	ndicators:			(- -)			Indicators for Problematic Hydric Solls	
	(A1)		Dark Surface	(\$7)			2 cm Muck (A10) (MLRA 147)	
Histic Ep	aria (AQ)	Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16)						
	STIC (A3)			nace (59)		47, 148)	(MLRA 147, 148) Diadmant Flaadalain Caila (F10)	
Hydroge	n Suifide (A4)		Loamy Gleye	d Matrix (F2)			
Stratified Layers (A5)			 Depleted Mat 	rix (⊢3)	-0)		(MLRA 136, 147)	
2 cm Muck (A10) (LRR N)			Redox Dark :	Surface (F	·0) (E7)		Very Shallow Dark Surface (TF12)	
Depleted Below Dark Sufface (ATT)			Depieteu Dai	ccione (E	(<i>Г1)</i> 9)			
Sondy Mucky Mineral (S1) (LPP N					0) 00 (E12) (
	147 148)	ixix i x ,		530 Mass	es (i iz) (i	LIXIX I N ,		
Sandy G	leved Matrix (S4)		Umbric Surfa	ор се (F13) (MI RA 13	6 122)	³ Indicators of hydrophytic vegetation and	Ч
Sandy Bedox (S5)			Piedmont Flo	odolain S	oils (F19)	(MI RA 14	(18) wetland hydrology must be present	
Stripped	Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127. 147	7) unless disturbed or problematic.	
Restrictive L	_aver (if observed):					,		
Type:	,							
Depth (inc	ches):						Hydric Soil Present? Yes 🖌 No	
Remarks:							•	

Wetland Photograph Page





Photograph Direction NW

Date: 10/17/2014

Comments: 2014 wetland delineation.



Photograph Direction <u>NNE</u> Date: <u>09/16/19</u>

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP		City/C	_{County:} Wetzel		_ Sampling Date: <u>10/17/2014</u>
Applicant/Owner: MVP				State: WV	Sampling Point: W-A2a UPL
Investigator(s): ES,CM,DM,MW		Secti	on, Township, Rang	_{je:} N/A	
Landform (hillslope, terrace, etc.): hillslope		Local rel	ief (concave, conve	x, none): <u>CONVEX</u>	Slope (%): <u>12</u>
Subregion (LRR or MLRA): LRRN	Lat:	39.55338382	Long:	-80.5454037	Datum: NAD 83
Soil Map Unit Name: Skidmore gravelley lo	am		-	NWI classif	rication: N/A
Are climatic / hydrologic conditions on the site typ Are Vegetation, Soil, or Hydrologi Are Vegetation, Soil, or Hydrologi SUMMARY OF FINDINGS – Attach s	bical fo y y ite m	r this time of year? \ significantly distur naturally problem ap showing san	Yes <u>V</u> No No bed? Are "No atic? (If need point loc	(If no, explain in ormal Circumstances" ded, explain any answ cations, transect	Remarks.) ¹ present? Yes <u> No </u> No <u> No </u> No <u> No </u> No <u> No </u> No <u> No </u> No <u> No </u> No <u> No </u> No <u> No N</u>
Hydrophytic Vegetation Present?Yes _Hydric Soil Present?Yes _Wetland Hydrology Present?Yes _	 	No No No	Is the Sampled A within a Wetland	vrea ? Yes	No
Remarks: Upland plot is located on a 12% slope than wetland W-A2.	leadii	ng to an adjacent	gas pump stati	on. The plot is ap	proximately 2-3 feet higher

HYDROLOGY

Secondary Indicators (minimum of two required)
Surface Soil Cracks (B6)
 Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
FAC-Neutral Test (D5)
Hydrology Present? Yes <u>V</u> No

Sampling Point: W-A2a UPL

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: 1 (A)
2				Total Number of Deminent
3.				Species Across All Strata: 1 (B)
4				
5				Percent of Dominant Species
				That Are OBL, FACW, or FAC: (A/B)
b		·		Prevalence Index worksheet:
7		·		Total % Cover of: Multiply by:
	0	= Total Cove	er	
50% of total cover: 0	20% of	total cover:	0	$\begin{array}{c} \text{OBL species} \\ \hline \\ 15 \\ \hline \\ 20 \\ 20$
Sapling/Shrub Stratum (Plot size: 15')				FACW species $15 \times 2 = 50$
1. Panicum virgatum	70	<u> </u>	FAC	FAC species 70 x 3 = 210
2. Phalaris arundinacea	15		FACW	FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: 85 (A) 240 (B)
4				
5		·		Prevalence Index = B/A = 2.82
6				Hydrophytic Vegetation Indicators:
7		. <u> </u>		1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 Dominanco Tost is >50%
9.				
	85	= Total Cove	er.	<u> </u>
50% of total cover: 42.5	5 20% of	total cover:	17	4 - Morphological Adaptations' (Provide supporting
Herb Stratum (Plot size: 5')		·····		data in Remarks or on a separate sheet)
				Problematic Hydrophytic Vegetation ¹ (Explain)
¹		·	. <u> </u>	
2				¹ Indicators of hydric soil and wetland hydrology must
3		. <u> </u>		be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7		. <u> </u>		more in diameter at breast height (DBH), regardless of
7				neight.
8		·		Sapling/Shrub – Woody plants, excluding vines, less
9		·	<u> </u>	than 3 in. DBH and greater than or equal to 3.28 ft (1
10			<u> </u>	m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	0	= Total Cove	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover:0	20% of	total cover:	0	
Woody Vine Stratum (Plot size: 30')				Woody vine – All woody vines greater than 3.28 ft in beight
1				
·		·	<u> </u>	
2		·	<u> </u>	
3			<u> </u>	
4			<u> </u>	Hydrophytic
5				Vegetation
	0	= Total Cove	er	Present? Yes V No
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	sheet)	-		
See photo $W_{-}\Delta 2$ -P1				
Once in the bank strets is in the back 4500 b				
Cover in the nerb stratum included ~15% bare (ground.			

Profile Description: (Desc	cribe to the depth	n needed to docun	nent the indicato	r or confirm	the absence	of indicators	s.)
Depth Ma	trix	Redox	x Features				
(inches) Color (mois	<u>st) %</u>	Color (moist)	<u>%</u> Type		Texture		Remarks
0-4 10YR 4/	3 100				silt loam		
16-20 10YR 4/	4 100				SCL		
			<u> </u>				
·			. <u> </u>				
·			·				
			<u> </u>				
¹ Type: C=Concentration, D	=Depletion, RM=F	Reduced Matrix, MS	S=Masked Sand (Grains.	² Location: PL	=Pore Lining	g, M=Matrix.
Hydric Soil Indicators:	• •				Indica	tors for Pro	blematic Hydric Soils ³ :
Histosol (A1)		Dark Surface	(S7)		2	cm Muck (A1	10) (MLRA 147)
Histic Epipedon (A2)		Polyvalue Be	low Surface (S8)	(MLRA 147,	148) Co	oast Prairie F	Redox (A16)
Black Histic (A3)		Thin Dark Su	rface (S9) (MLRA	147, 148)		(MLRA 147	, 148)
Hydrogen Sulfide (A4)		Loamy Gleye	d Matrix (F2)		Pi	edmont Floo	odplain Soils (F19)
Stratified Layers (A5)		Depleted Mat	trix (F3)			(MLRA 136	, 147)
2 cm Muck (A10) (LRR	N)	Redox Dark S	Surface (F6)		Ve	ery Shallow [Dark Surface (TF12)
Depleted Below Dark S	urface (A11)	Depleted Dar	k Surface (F7)		Or	her (Explain	in Remarks)
Thick Dark Surface (A1	2)	Redox Depre	ssions (F8)				
Sandy Mucky Mineral (S1) (LRR N,	Iron-Mangane	ese Masses (F12)	(LRR N,			
MLRA 147, 148)		MLRA 130	6)				
Sandy Gleyed Matrix (S	64)	Umbric Surfa	ce (F13) (MLRA	136, 122)	³ Indi	cators of hyc	drophytic vegetation and
Sandy Redox (S5)		Piedmont Flo	odplain Soils (F1	9) (MLRA 14	•8) wet	land hydrolo	gy must be present,
Stripped Matrix (S6)		Red Parent M	Aaterial (F21) (ML	RA 127, 147	') unl	ess disturbed	d or problematic.
Restrictive Layer (if obser	ved):						
Туре:							
Depth (inches):					Hydric Soil	Present?	Yes No
Remarks:							

USACE FILE NO./Project Name:		Mountain	/alley Pipleline	COORDINATES:	Lat.	39.544642	Lon.	-80.542833
STREAM/SITE ID AND SITE DESCRIPTION:						W-A4a, 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 - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-A4a	Emergent	0.007	Emergent					
						PART III - Advanced	Mitigatio	n
				_		Advanced Mitigation		Y
							ļ	
Total Impact		0.007						
	PART II -	Unit Scores				Estimated		
Wetland Cla	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.007			A		
Total Scrub-Shrub			0			\$420.00		
Total Forested			0					
Total Open Water			0					

Project/Site: MVP	City/County: Wetzel	Sampling Date: 10/18/2014
Applicant/Owner: MVP		State: Sampling Point:W-A4a
Investigator(s): ES,CM,DM,MW	Section, Township, Range; N	/A
Landform (hillslope terrace etc.) hillslope	l ocal relief (concave, convex, no	ne) concave Slope (%) 0
Subrogion (LBB or MLBA): LBBN	Lot: 39-544628	.542844 Dotum: NAD 83
Gilpin-Beabody comp	_ Lat Long Long	
Soil Map Unit Name: Glipin-Feabody comp		NWI classification:
Are climatic / hydrologic conditions on the site typ	vical for this time of year? Yes No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	y significantly disturbed? Are "Norma	I Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	y naturally problematic? (If needed, or	explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach si	ite map showing sampling point location	ons, transects, important features, etc.
Hydrophytic Vegetation Present?		
Hydrophytic Vegetation Tesent: Tes	V No Is the Sampled Area	Y Y N
Wetland Hydrology Present? Yes	✓ No within a Wetland?	Yes No
Remarks:		
PEM depressional wetland is located o	n the surface of an old logging road that v	vas cut along a hillside.
Cowardin: PEM		
HGM: slope		
WT: NRPWW		
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required;	check all that apply)	Surface Soil Cracks (B6)
✓ Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
✓ High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
✓ Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)	1	FAC-Neutral Test (D5)
Field Observations:	Depth (inches): 1	
Water Table Present? Yes Vos	Depth (inches): 0	
Soturation Dresent? Yes Voc	Depth (inches): 0	
(includes capillary fringe)		Tydrology Present? fes <u>↓</u> No
Describe Recorded Data (stream gauge, monito	pring well, aerial photos, previous inspections), if ava	ailable:
Remarks:		
Shallow ponded surface water adjacen	t to the soil pit.	

Sampling Point: W-A4a

Tree Stratum (Plot size: 30	Toes Statum (Plot size:30	Situating (Plot size: 30		Absolute	Dominant I	ndicator	Dominance Test worksheet:
1. That Are OBL, FACW, or FAC: 3 (A) 2. Total Number of Dominant 3 (B) 3. Sector Total Number of Dominant (B) 5. Sector Total Number of Dominant (B) 5. Sector Total Number of Dominant (C) 7. Sol% of total cover: 0 20% of total cover: 0 1. Sector Sector X =	1	That Are OBL, FACW, or FAC: 3 (A) Tail Number of Dominant 3 (B) Percent of Dominant Species 100 (AB) Trail Number of Dominant Species 100 (AB) Sofk of total cover: 0 = Total Ker CBL, FACW, or FAC: 100 (AB) IndShub Stratum (Plot size: 15') (A) (A) (B) Frequence Index worksheet: Tatal % Cover of Multiply br: (A) (B) IndShub Stratum (Plot size: 15') (A) (B) Frequence Index = BA =	Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
2	2	Total Number of Dominant Species Across Al Strate: 3 (B) Prevalence Index workshoet: 100 (x/s) So% of total cover: 0 = Total Cover So% of total cover: 0 = Total Cover Ind/Shub Stratum 0 = Total Cover So% of total cover: 0 = Total Cover Cover 0 = Total Cover So% of total cover: 0 = Total Cover Cover 0 = Total Cover So% of total cover: 25 ✓ Prevalence Index so of segnate sheet) - Prevalence Index so of segnate sheet) - So% of total cover: 2.5 ✓<	1.				That Are OBL, FACW, or FAC: 3 (A)
a	3	Total Number of Dominant Species 3 (B) Percent of Dominant Species Total Access Across All Strata: 3 (B) Percent of Dominant Species Total Access Across All Strata: 100 (Arb) Solve of total cover: 0 = Total Cover 0 Percent of Dominant Species X =	2				
1	3	Species Arcsa Al Strate:	2			·······	Total Number of Dominant
4	4	Percent of Dominant Species 100	3				Species Across All Strata:3 (B)
5.	5	Inst Are CBL, FACW, or FAC: 100 (A/B) ing/Shub Stratum 0 = Total Cover 0 ing/Shub Stratum (Plot size: 15) ing/Shub Stratum (Plot size: 16 (Plot size: ing/Shub Stratum (Plot size: 0 = Total Cover 0 = Total Cover 0 = Total Cover 1 Sofk of total cover: 0 20% of total cover: 0 = Total Cover Sofk of total cover: 0 20% of total cover: 0 = Problemaic Hydrophytic Vegetation ipus soperitorus 25 FACW Produption Index is 31.01 - - - - - - Problemaic Hydrophytic Vegetation Hydrophytic Vegetation ipus soperitorus 25 FACW - - - Sofk of total cover: 0 - <t< td=""><td>4</td><td></td><td></td><td></td><td>Percent of Dominant Species</td></t<>	4				Percent of Dominant Species
6.	6	Prevalence Index worksheet: 50% of total cover: 0 10a/Shrub_Stratum (Plot size: 15 10a/Shrub_Stratum (Plot size: 16 10a/Shrub_Strub_Stratum (Plot size: 16	5		. <u> </u>		That Are OBL, FACW, or FAC: 100 (A/B)
7.	7. 0. = Total Cover 0. = Total Cover Saaina_Shub_Stratum (Plot size: 15) 15 7. ACW species x 2 = 2. ACW species x 2 = FAC species x 3 = 2. ACW species x 4 = 3. FAC species x 3 = 4. FAC species x 3 = 4. 4. 9.	Prevalence index worksheet: Total Scorer	6				
O	S0% of total cover: 0 = Total Cover 0 SaailandShrub Stratum (Plot size: 15' Cover 0 1 2 Cover Cover Cover 2 Cover Cover Cover Cover 3 Cover Cover Cover Cover 4 Cover Cover Cover Cover 5 Cover Cover Cover Cover 3 Cover Cover Cover Cover 4 Cover Cover Cover Cover 5 Cover Cover Cover Cover 4 Cover Cover Cover Cover 3 Cover Cover Cover Cover 4 Cover Cover Cover Cover 5 Cover FACU Cover Cover 4 Cover Cover Cover Cover 5 Cover FACU Cover Cover 4 Cover Soft total cover Cover Cover <td>50% of total cover: 0 = Total Cover indeShub_Stratum (Plot size: 15' </td> <td>7.</td> <td></td> <td></td> <td></td> <td>Prevalence Index worksheet:</td>	50% of total cover: 0 = Total Cover indeShub_Stratum (Plot size: 15'	7.				Prevalence Index worksheet:
50% of total cover: 0 20% of total cover: 0 Saaling/Shrub Stratum (Plot size: 1.5''. 1.	Soly of total cover: 0 20% of total cover: 0 Sading/Shrub Stratum (Plot size: 15' - 1. - - FAC W species × 2 =	50% of total cover: 0 20% of total cover: 0 PAC species x 1 = FACW species x 2 = FAC species x 3 = FACU species x 3 = FAC species x 4 = 0 Provesting x 4 = 0 y 2 = x 4 = 0 y 2 = x 4 = 0 y 2 = x 4 = 0 y 2 = x 4 = 0 y 2 = x 4 = 0 y 2 = x 4 = 0 y 2 = x 4 = 0 y 2 = x 4 = 0 y 2 = x 4 =		0	= Total Cove	r	Total % Cover of: Multiply by:
Sapiling/Shub_Stratum (Plot size: 15") Image: Shub Stratum (Plot size: 15") FAC species models is solved in the species models is species models is solved in the species models is species models is species models is species models is solved in the species models is specint species models is species models is specie	SatisfingShrub_Stratum (Plot size: 15') FACW species	indiShub Stratum (Plot size: 15") FACW species x 3 = FACU species x 4 = UPL species x 5 = Colum Totals: (A) (B) Prevalence index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation 2 - Drainance Test is >50% of total cover: 0 20% of total cover: 17 dv Vine Stratum (Plot size: 30') 30 40 Behandstration frour Vegetation Strate. Tree - Noddy plants, excluding vines, iss than 3 in. DBH and greater than or equal to 3.28 ft (1 m) ial. 30 30 30 30 41 Behand greater than or equal to 3.28 ft (1 m) ial. 31 32 33 34 35 36% of total cover: 0 20% of total cover: 0<	50% of total cover: 0	20% of	total cover:	0	OBL species x 1 =
Samularity Shilds Stratum (rior size:	Saturd of the Stratum (Piol size:	Bind Stratum (Prot Stze	Conling/Chruh Stratum (Dist size) 15'	2070 01	total 00101.		FACW species x 2 =
1	1	Image: Solution of the second seco	<u>Saping/Sinub Stratum</u> (Flot size)				EAC species x 3 -
2	2	Provide species x 4 =	1				
3.	3. UPL species X5 = 4.	Image: Solution of the set of the s	2				FACU species x 4 =
4. Column Totals: (A) (B) 5. Column Totals: (A) (B) 6.	4. Column Totals: (A) 5. 6. Prevalence Index = B/A =	Column Totals:	3				UPL species x 5 =
5.	5.	Prevalence Index = B/A =	4.				Column Totals: (A) (B)
6	6	Image: Solution of total cover: 0 = Total Cover 0 = Total Cover 1 Rapid Test for Hydrophytic Vegetation 2: Stratum (Plot size: 50% of total cover: 0 = Total Cover 0: Stratum (Plot size: 50% of total cover: 0 = Total Cover 0: Stratum (Plot size: 50% of total cover: 0 = Problematic Hydrophytic Vegetation' (Protection Stratum Cover in data in Remarks or on a separate sheet) - Problematic Hydrophytic Vegetation' (Explain)	5				
0.	0.	Hydrophytic Vegetation Indicators:	e				Prevalence Index = B/A =
1	1. Rapid Test for Hydrophytic Vegetation 8. 0 = Total Cover 9. 0 = Total Cover 50% of total cover: 0 20% of total cover: 1. 0 = Total Cover 3. 0 ✓ OBL 2. 0 = Total Cover - 3. 0 ✓ OBL 2. 0 = Total Cover - 3. 0 ✓ OBL 2. 0 = Total Cover - 3. Microstegium vimineum 25 ✓ 4. Onoclea sensibilis 5 FACW 5. - FACW Definitions of Four Vegetation Yees is not no separate sheet) 7. - - - Tree -Woody plants, excluding vines, in r, 7 s c 6. - - - - - 7. - - - - - 10. - - - - - 11. - - - - -		0			·	Hydrophytic Vegetation Indicators:
8.	8.		/			. <u> </u>	1 - Rapid Test for Hydrophytic Vegetation
9.	9.		8				\checkmark 2 - Dominance Test is >50%
0 = Total Cover 0 20% of total cover: 0 20% of total cover: 0 4. Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet) 1. Typha angustifolia 30 ✓ OBL Problematic Hydrophytic Vegetation' (Explain) 2. Scirpus cyperinus 25 ✓ FACW Problematic Hydrophytic Vegetation' (Explain) 3. Microstegium vimineum 25 ✓ FACW Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 4. Onoclea sensibilis 5 FACW FACW Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 5		0 = Total Cover 0 - " Total Cover 50% of total cover: 0 20% of total cover: 0 25 tratum (Plot size: 5 - Problematic - ypha angustifolia 30 ✓ OBL - - Problematic -	9				$\frac{1}{2} = \frac{1}{2} = \frac{1}$
50% of total cover: 0 20% of total cover: 0 Hetb Stratum (Plot size: 5) 1 Typha angustifolia 30 ✓ OBL Problematic Hydrophytic Vegetation* (Ervoide supporting) 2. Scirpus cyperinus 25 ✓ FACW FACW Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 3. Microstegium vimineum 25 ✓ FACW Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 4. Onoclea sensibilis 5 FACW Indicators of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height. 8.	50% of total cover: 0 20% of total cover: 0 Herb Stratum (Plot size: 5')) 1 1. Typha angustifolia 30 ✓ OBL Problematic Hydrophytic Vegetation 1 (Explain 2) 2. Scirpus cyperinus 25 ✓ FACW Indicators of hydric soil and wetland hydrology m be present, unless disturbed or problematic. 4. Onoclea sensibilis 5 FACW Indicators of Four Vegetation Strata: 5. . . . Definitions of Four Vegetation Strata: 6. Definitions of Four Vegetation Strata: 7. Definitions of Four Vegetation Strata: 8. Definitions of Four Vegetation Strata: 10. Definitions of Four Vegetation Strata: 11. .	50% of total cover: 0 20% of total cover: 0 2 Stratum (Plot size: 5 0 0 cirpus cyperinus 25 ✓ FACW icrostegium vimineum 25 ✓ FACW incoclea sensibilis 5 FACW Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. icrostegium vimineum 25 ✓ FACW incoclea sensibilis 5 FACW icrostegium vimineum 25 ✓ icrostegium vimineum 6 FacW icrostegium vimineum 5 FACW icrostegium vimineum 6 FacW </td <td></td> <td>0</td> <td>= Total Cove</td> <td>r</td> <td></td>		0	= Total Cove	r	
Herb Stratum (Plot size: _5') 30 ✓ OBL 1. Typha angustifolia 30 ✓ OBL 2. Scirpus cyperinus 25 ✓ FACW 3. Microstegium vimineum 25 ✓ FACW 4. Onoclea sensibilis 5 FACW Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 5. - - - Definitions of Four Vegetation Strate: 7. - - - - Definitions of Four Vegetation Strate: 8. - - - - - Definitions of Four Vegetation Strate: 10. - - - - - - - 10. - - - - - - - 11.	Herb Stratum (Plot size: 5') 30 ✓ OBL data in Remarks or on a separate sheet) 1. Typha angustifolia 30 ✓ OBL Problematic Hydrophytic Vegetation ¹ (Explain 2. Scirpus cyperinus 25 ✓ FACW Indicators of hydric soil and wetland hydrology m be present, unless disturbed or problematic. 4. Onoclea sensibilis 5 FACW FAC 6. — — — 7. — — — 8. — — — 9. — — — 10. — — — 11.	2. Stratum (Plot size: 5') ypha angustifolia 30 ✓ OBL ypha angustifolia 25 ✓ FACW icrostegium virnineum 5 ✓ FACW	50% of total cover: 0	20% of	total cover:	0	4 - Morphological Adaptations' (Provide supporting
1. Typha angustifolia 30 ✓ OBL	1. Typha angustifolia 30 ✓ OBL Problematic Hydrophytic Vegetation ¹ (Explain 1. Typha angustifolia 2. Scirpus cyperinus 25 ✓ FACW 3. Microstegium vimineum 25 ✓ FACW 4. Oncolea sensibilis 5 FACW be present, unless disturbed or problematic. 5. 6. — — Definitions of Four Vegetation Strata: 7. — — — Definitions of Four Vegetation Strata: 7. — — — Definitions of Four Vegetation Strata: 7. — — — Definitions of Four Vegetation Strata: 8. — — — — Definitions of Four Vegetation Strata: 10. … … … Sapling/Shrub – Woody plants, excluding vines, 3 in. (7.6 c more in diameter at breast height (DBH), regardle height. 11. … … … … Sapling/Shrub – Woody plants, excluding vines, 40.000 vines, 20.000 vines, 30.000 vines, 20.000 vi	Containing (in the constraint of t	Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1 Type of unguisdrating 20 ✓ FACW 2. Scirpus cyperinus 25 ✓ FACW 3. Microstegium vimineum 25 ✓ FACW 4. Onoclea sensibilis 5 FACW 5. 5 FACW 6.	1	print ungedenional 00 ✓ FACV 'Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. be present, unless disturbed or problematic. noclea sensibilis 5 FACV	<u>Treb dratam</u> (Flot size:)	30	~	OBI	Problematic Hydrophytic Vegetation ¹ (Explain)
2 2.5. µ Conclea sensibilis 25 ✓ FAC W Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 4. Onoclea sensibilis 5 FAC W FAC W Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. 5. 5 FAC W FAC W Definitions of Four Vegetation Strata: 7. 6 — — — Definitions of Four Vegetation Strata: 7. — — — — — — 8. — — — — — mere in diameter at breast height (DBH), regardless of height. 9. … … … … … … … 10. … … … … … Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. … 11. … … … … … … 2. … … … … … … 3. … … … … … … 4. … …	2.3. µDr Syperints 2.3 ✓ FAC 3. Microstegium vimineum 25 ✓ FAC 4. Onoclea sensibilis 5 FACW FACW 5. 5 FACW Definitions of Four Vegetation Strata: 6. — — — 7. — — — 8. — — — 9. — — — 10. — — — 11. _ _ — — 50% of total cover: 42.5 20% of total cover: 17 Woody Vine Stratum (Plot size: 30') 1 — 2. _ _ — — — 3. _ _ _ _ Mody vine Stratum (Plot size: 30' 1. _ _ _ _ _ _ Hail 4. _ _ _ _ _ No _ 5. _ _ _ _ _ No _ <td>Lipus cypenints 23 ✓ FACW Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Inclea sensibilis 5 ✓ FACW Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in, (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sample from Vegetation Strata: </td> <td>Poirpue evperinue</td> <td>25</td> <td></td> <td></td> <td></td>	Lipus cypenints 23 ✓ FACW Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. Inclea sensibilis 5 ✓ FACW Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in, (7.6 cm) or more in diameter at breast height (DBH), regardless of height. Sample from Vegetation Strata:	Poirpue evperinue	25			
3. Microstegium vimneum 25 ✓ FAC Interesting for each problematic. 4. Onoclea sensibilis 5 FACV be present, unless disturbed or problematic. 5.	3. Microstegium vimineum 25 ✓ FAC 4. Onoclea sensibilis 5 FACW 5. 5 FACW 6. — — 7. — — 8. — — 9. — — 10. — — 11. _ — 50% of total cover: 42.5 20% of total cover: 17 Woody Vine Stratum (Plot size: 30') 1 _ 2. _ _ _ _ 3. _ _ _ _ No 1. _ _ _ _ _ 2. _ _ _ _ _ 3. _ _ _ _ _ 3. _ _ _ _ No _ 1. _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ </td <td>ictrostegium vimneum 25 V FAC noclea sensibilis 5 FACW be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or 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. idy Vine Stratum (Plot size: 30°) 0 = Total Cover 50% of total cover: 0 0 = Total Cover 50% of total cover: 0 0 = Total Cover 50% of total cover: 0 0 = Total Cover 50% of total cover: 0 20% of total cover: 0 20% of total cover: 0 20% of total cover: 0 50% of total cover: 0 20% of total cover: 0<td>2. Scipus cyperinus</td><td>25</td><td></td><td>FACW</td><td>¹Indicators of hydric soil and wetland hydrology must</td></td>	ictrostegium vimneum 25 V FAC noclea sensibilis 5 FACW be present, unless disturbed or problematic. Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or 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. idy Vine Stratum (Plot size: 30°) 0 = Total Cover 50% of total cover: 0 0 = Total Cover 50% of total cover: 0 0 = Total Cover 50% of total cover: 0 0 = Total Cover 50% of total cover: 0 20% of total cover: 0 20% of total cover: 0 20% of total cover: 0 50% of total cover: 0 20% of total cover: 0 <td>2. Scipus cyperinus</td> <td>25</td> <td></td> <td>FACW</td> <td>¹Indicators of hydric soil and wetland hydrology must</td>	2. Scipus cyperinus	25		FACW	¹ Indicators of hydric soil and wetland hydrology must
4. Onoclea sensibilis 5 FACW 5.	4. Onoclea sensibilis 5 FACW 5.	noclea sensibilis 5 FACW Definitions of Four Vegetation Strata: Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or 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. Befinitions of total cover: 42.5 50% of total cover: 42.5 20% of total cover: 1 0 = Total Cover 0 20% of total cover: 0 20% of total cover<	3. Microstegium vimineum	25	~	FAC	be present, unless disturbed or problematic.
5	5	Image: Second Strate Image: Second Strate Image: Second	4. Onoclea sensibilis	5		FACW	Definitions of Four Vegetation Strata
6.	6.		5				
7	7	more in diameter at breast height (DBH), regardless of height.	6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
no	<i>n </i>	Image: Integrit. Saping/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tail. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tail. Mody Vine Stratum (Plot size:)	7				more in diameter at breast height (DBH), regardless of
8	8	Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.					neight.
9	9	minipage minipage <td< td=""><td>8</td><td></td><td></td><td></td><td>Sapling/Shrub – Woody plants, excluding vines, less</td></td<>	8				Sapling/Shrub – Woody plants, excluding vines, less
10	10	m) tall. m) tall. m) tall. 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 Present? Yes <u>V</u> No <u></u> tarks: (Include photo numbers here or on a separate sheet.) % of herb layer was bare ground. photo W-A4-P1.	9				than 3 in. DBH and greater than or equal to 3.28 ft (1
11. 85 = Total Cover 50% of total cover: 42.5 2. 30' 3. - 4. - 5. 0 50% of total cover: 0 0 = Total Cover Vegetation Present? Yes Yes No - - 50% of total cover: 0 2. - 3. - 4. - 50% of total cover: 0 0 = Total Cover 50% of total cover: 0 20% of	11.		10				m) tall.
$\frac{85}{20\% \text{ of total cover}} = \text{Total Cover} \text{ for size, and woody plants, regulated of size, and woody plants less than 3.28 ft tall.} Woody Vine Stratum (Plot size: 30')) 1$			11				Herb – All berbaceous (non-woody) plants, regardless
50% of total cover: 42.5 20% of total cover: 17 Woody Vine Stratum (Plot size: 30') 1	50% of total cover: 42.5 20% of total cover: 17 Woody Vine Stratum (Plot size: 30') 1	50% of total cover: 42.5 20% of total cover: 17 woody vine Stratum (Plot size: 30')		85	= Total Cove	r	of size, and woody plants less than 3.28 ft tall.
Woody Vine Stratum (Plot size:)	Woody Vine Stratum (Plot size:30') 1	woody vine Stratum (Plot size:)	50% of total cover: 42.	5 20% of	total cover:	17	
$\frac{1}{1} \underbrace{\frac{1}{2}}_{2} \underbrace{\frac{1}{2}}_{3} \underbrace{\frac{1}{2}}_{4} \underbrace{\frac{1}{2}}_{5} \underbrace{\frac{1}{2}}_{5} \underbrace{\frac{1}{2}}_{5} \underbrace{\frac{1}{2}}_{5} \underbrace{\frac{1}{2}}_{5} \underbrace{\frac{1}{2}}_{2} \underbrace{\frac{1}{2}}_$	1	height.	Woody Vine Stratum (Plot size: 30')				Woody vine – All woody vines greater than 3.28 ft in
1.	1. 2. 3. 4. 5. 50% of total cover: 0 20% of total cover: 0 Yes No The sent? Yes No Yes No The sent? Yes No						height.
2	2		¹				
3.	3.		2				
4	4		3				
5. 0 = Total Cover Vegetation 50% of total cover: 0 20% of total cover: 0 Remarks: (Include photo numbers here or on a separate sheet.) ~15% of herb layer was bare ground. Vegetation	5.		4				Hydrophytic
O = Total Cover 50% of total cover: 0 20% of total cover: 0 Present? Yes ✓ No No Remarks: (Include photo numbers here or on a separate sheet.) ~15% of herb layer was bare ground.	O = Total Cover 50% of total cover: 0 20% of total cover: 0 Present? Yes <u>✓</u> No Remarks: (Include photo numbers here or on a separate sheet.) ~15% of herb layer was bare ground. See photo W-A4-P1.	0 = Total Cover 50% of total cover: 0 20% of total cover: 0 Present? Yes _ ✓ _ No harks: (Include photo numbers here or on a separate sheet.) % of herb layer was bare ground. photo W-A4-P1.	5.				Vegetation
50% of total cover: 0 20% of total cover: 0 Remarks: (Include photo numbers here or on a separate sheet.) ~15% of herb layer was bare ground.	50% of total cover: 0 20% of total cover: 0 Remarks: (Include photo numbers here or on a separate sheet.) ~15% of herb layer was bare ground. See photo W-A4-P1.	50% of total cover: <u>0</u> 20% of total cover: <u>0</u> harks: (Include photo numbers here or on a separate sheet.) % of herb layer was bare ground. photo W-A4-P1.		0		r	Present? Yes <u>V</u> No
Remarks: (Include photo numbers here or on a separate sheet.) ~15% of herb layer was bare ground.	Remarks: (Include photo numbers here or on a separate sheet.) ~15% of herb layer was bare ground. See photo W-A4-P1.	parks: (Include photo numbers here or on a separate sheet.) % of herb layer was bare ground. photo W-A4-P1.	50% of total cover: 0	20% of	total cover:	0	
~15% of herb layer was bare ground.	~15% of herb layer was bare ground. See photo W-A4-P1.	% of herb layer was bare ground. photo W-A4-P1.	Demorika: (Include phote numbers here or on a constrate a	2070 01			
~15% of herb layer was bare ground.	~15% of herb layer was bare ground. See photo W-A4-P1.	% of herb layer was bare ground. photo W-A4-P1.	Remarks: (include photo numbers here or on a separate s	neet.)			
	See photo W-A4-P1.	photo W-A4-P1.	~15% of herb layer was bare ground.				
	See photo W-A4-P1.	photo W-A4-P1.					
See photo W-A4-P1.			See photo W-A4-P1.				

Profile Desc	ription: (Describe to	o the depth	n needed to docum	ent the i	ndicator o	or confirm	the absence of indicators.)	
Depth	Matrix		Redox	Features	3			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture Remarks	
0-6	10YR 4/1	60	10YR 4/6	40	С	Μ	si-cl-lm	
6-14	2.5Y 6/3	70	10YR 4/6	30	С	Μ	si-cl-lm	
						·		
						<u> </u>		
						·		
		<u> </u>			. <u> </u>	. <u> </u>		
		<u> </u>				. <u> </u>		
1							2	
Type: C=Co	oncentration, D=Deple	etion, RM=F	Reduced Matrix, MS	=Masked	Sand Gra	ains.	² Location: PL=Pore Lining, M=Matrix.	3.
				(a -)			Indicators for Problematic Hydric Solis	5.
Histosol	(A1)		Dark Surface	(S7)			2 cm Muck (A10) (MLRA 147)	
Histic Ep	oipedon (A2)		Polyvalue Bel	ow Surfac	ce (S8) (M	LRA 147,	148) Coast Prairie Redox (A16)	
	STIC (A3)			Tace (59)		47, 148)	(MLRA 147, 148) Diadmant Electrolatic Calls (E10)	
Hydroge					-2)			
			Depieted Mati	IX (F3)	C)		(MILRA 130, 147)	
2 cm ivit	N Rolow Dork Surface	(11)	Redux Dark 3		0) (E7)		Other (Explain in Remarka)	
Depieted	a Below Dark Surface	(ATT)	Depieted Darr		(<i>Г1)</i> 2)			
Thick Da	ark Surface (A12) Aucky Minoral (S1) /I				2) 22 (E12) (I			
Sanuy w	147, 148)	ΛΓΛ ΙΝ ,	IIOII-Mangane	30 Masse	5 (F12) (-NN N,		
Sandy G	eved Matrix (S4)		Umbric Surfac	, ce (F13) (MLRA 13	6. 122)	³ Indicators of hydrophytic vegetation an	ıd
Sandy R	edox (S5)		Piedmont Floo	odplain S	oils (F19)	(MLRA 14	8) wetland hydrology must be present.	
Stripped	Matrix (S6)		Red Parent M	aterial (F	21) (MLR	、 A 127, 147	 unless disturbed or problematic. 	
Restrictive I	_ayer (if observed):							
Type: De	ense clay							
Depth (ind	ches): <u>14</u>						Hydric Soil Present? Yes 🖌 No	
Remarks:								

Wetland ID <u>W-A4a</u> Date <u>10/18/201</u>4



Photograph Direction NE

Comments:

Project/Site: MVP	City/County: W	/etzel	Sampling Date: 10/18/2014
Applicant/Owner: MVP		State: WV	Sampling Point: W-A4a UPL
Investigator(s): ES,CM,DM,MW	Section, Townsl	hip, Range: <mark>N/A</mark>	
Landform (hillslope, terrace, etc.): hillslope	_ Local relief (concav	ve, convex, none): CONVEX	Slope (%): 35
Subregion (LRR or MLRA): LRRN Lat: 39.5446	62895	Long:80.54280311	Datum: NAD 83
Soil Map Unit Name: Gilpin-Peabody complex, 35 to 70	percent slopes	NWI classific	cation: N/A
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes 🗹	_ No (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology signific	antly disturbed?	Are "Normal Circumstances" p	oresent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology natural	lly problematic?	(If needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	wing sampling p	oint locations, transects	, important features, etc.

Hydrophytic Vegetation Present?	Yes 🖌	No	lo the Compled Area		
Hydric Soil Present?	Yes	No 🖌	is the Sampled Area within a Wetland?	Yes	No 🖌
Wetland Hydrology Present?	Yes	No			
Remarks:					

Upland plot is located on a 35% slope on the uphill side of wetland W-A4. The plot is approximately 2-3 feet higher than wetland W-A4.

HYDROLOGY

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

Sampling Point: W-A4a UPL

0.01	Absolute	Dominant I	ndicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species
1. Robinia pseudoacacia	50	~	FACU	That Are OBL FACW or FAC: 3 (A)
0		·		
Z		·		Total Number of Dominant
3				Species Across All Strata:4 (B)
4				
5				Percent of Dominant Species
		·		That Are OBL, FACW, or FAC: (A/B)
6		·		Brovalanca Index workshoot:
7		. <u></u>		
	50	= Total Cove	r	Total % Cover of: Multiply by:
50% of total cover: 25	20% of	total cover:	10	OBL species x 1 =
$\frac{15'}{15}$	20/0 01			FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 19)	05		-	$135 \times 2 = 405$
1. Rubus idaeus	60	<u> </u>	FAC	FAC species $100 \times 3 = 400$
_{2.} Robinia pseudoacacia	10		FACU	FACU species $60 \times 4 = 240$
3				UPL species x 5 =
		·		Column Totals: 195 (A) 645 (B)
4		·		
5		·		Prevalence Index = R/A = -3.30
6.				
7		·		Hydrophytic Vegetation Indicators:
· ·		·		1 - Rapid Test for Hydrophytic Vegetation
8		<u></u>		✓ 2 - Dominance Test is >50%
9.				
	75			3 - Prevalence Index is ≤3.0°
50% of total assess 37 F	5 000/ -4		15	4 - Morphological Adaptations ¹ (Provide supporting
	<u> </u>	total cover:	10	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5)				Droblematic Lludrophytic Magatation ¹ (Evaluin)
1. Microstegium vimineum	40	~	FAC	
2 Conoclinium coelestinum	30	~	FAC	
2		·		¹ Indicators of hydric soil and wetland hydrology must
3		·		be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata
5.				Sommone of Four Vogetation Ortala
°		. <u> </u>		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
o		·		more in diameter at breast height (DBH), regardless of
7		·		height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less
0				m) tall
10		·		11) tan.
11				Herb – All herbaceous (non-woody) plants, regardless
	70	= Total Cove	r	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 35	20% of	total cover:	14	
Weady Vine Stratum (Plat size: 30'				Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2				
3				
		· · · · · · · · · · · · · · · · · · ·		
4		·		Hydrophytic
5				Vegetation
	0	= Total Cove	r	Present? Yes V No
50% of total cover: 0	20% of	total cover:	0	
Demorker (include photo numbero hero er en e concrete e	heat)			
Remarks: (include photo numbers here of on a separate s	neet.)			
See photo W-A4-P1.				
Within the herb layer there was $\sim 30\%$ have grou	Ind			

Depth	Matrix	· · · · · · ·	Redo	x Feature	s		······································	
(inches)	Color (moist)	%	Color (moist)	<u>% 1 catalo</u>	Type ¹	Loc ²	Texture Remarks	
0-4	10YR 4/3	100					silt loam	
4-16	10YR 5/4	100					silt loam	
		·						
		·						
		·						
		·						
	oncentration D-Den	letion RM-	-Reduced Matrix M	S-Maskor	1 Sand Gra	aine	² Location: PL-Pore Lining M-Matrix	
Hydric Soil	Indicators:					uno.	Indicators for Problematic H	ydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)			2 cm Muck (A10) (MLRA *	- 147)
Histic E	pipedon (A2)		Polyvalue Be	low Surfa	ce (S8) (M	LRA 147,	148) Coast Prairie Redox (A16))
Black H	istic (A3)		Thin Dark Su	Irface (S9)) (MLRA 1	47, 148)	(MLRA 147, 148)	
Hydroge	en Sulfide (A4)		Loamy Gleye	ed Matrix ((F2)		Piedmont Floodplain Soils	(F19)
Stratifie	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	e (TF12)
Deplete	d Below Dark Surface	e (A11)	Depleted Date	rk Surface	e (F7)		Other (Explain in Remarks)	5)
Thick D	ark Surface (A12)		Redox Depre	essions (F	8)			
Sandy M	/lucky Mineral (S1) (L	.RR N,	Iron-Mangan	ese Mass	es (F12) (I	_RR N,		
MLR	A 147, 148)		MLRA 13	6)				
Sandy C	Gleyed Matrix (S4)		Umbric Surfa	ice (F13)	(MLRA 13	6, 122)	³ Indicators of hydrophytic ve	getation and
Sandy F	Redox (S5)		Piedmont Flo	odplain S	ioils (F19)	(MLRA 14	8) wetland hydrology must be	present,
Stripped	Matrix (S6)		Red Parent M	Material (F	21) (MLR	A 127, 147	') unless disturbed or problem	natic.
Restrictive	Layer (if observed):							
Type:								
Depth (in	ches):						Hydric Soil Present? Yes	No 🖌
Remarks:								

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	39.505764	Lon.	-80.541781
STREAM/SITE ID AND SITE DESCRI	PTION:					W-IJ31, ATWS		
(% 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-IJ31 ATWS	Emergent	0.0992	Emergent					
				_				
				-				
					1	PART III - Advanced	Mitigatio	n
				-		Sustainable Determination Made or Advanced Mitigation (Y or N)	ו	Y
				-				
				_				
Total Impact		0.0992						
	PART II -	Unit Scores				Estimated		
Wetland Cl	assification		Replacement Unit(s)	_		ILF Costs		
Total Emergent			0.0992	-		A		
I otal Scrub-Shrub			0			\$5,952.00		
Total Forested			0					
Total Open Water			0					

Project/Site: MVP	City/County: Wetzel	Sampling Date: 06/13/2016
Applicant/Owner: MVP	State: WV Sampling Point: W-IJ31	
Investigator(s); E. Foster, S. Therkildson, C. S.	Sorden Section, Township, Range: N/	A
Landform (hillslope terrace etc.) Slope		e) Concave Slope (%) 2
Subrogion (LRB or MLRA): LRR N	29 505771	541782 Datum: NAD 83
Sublegion (ERK of MERA) La		
Soli Map Unit Name: <u>United of States y Iouri</u>		
Are climatic / hydrologic conditions on the site typical	for this time of year? Yes <u>No</u> (f no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Normal	Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	naturally problematic? (If needed, et	xplain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site	map showing sampling point locatio	ns, transects, important features, etc.
	No	
Hydrophylic Vegetation Present? Yes V	Is the Sampled Area	
Wetland Hydrology Present? Yes	No within a Wetland?	Yes No
Remarks: Cowardin Code: REM	HGM: Slope Water Type: F	
Cowardin Code. PEM	i Givi. Slope Water Type. P	AF VV VVIN As united as the superval fill us statistics larger
Disturbed roadside swale adjacent to unm	apped NHD stream outside of ATWS. N	larginal solis, gravel fill restrictive layer.
Dominated by dense Carex, suricus, and	Scilpus.	
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; che	ck all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	_ Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3)	_ Oxidized Rhizospheres on Living Roots (C3)	Moss Trim Lines (B16)
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	_ Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Drift Deposits (B3)	_ Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutral Test (D5)
Field Observations:	Denth (inches)	
Surface water Present? Yes No Voc	Depth (inches):	
vvater Table Present? Yes No	Deptn (inches):	
Saturation Present? Yes No	Depth (inches): Wetland H	ydrology Present? Yes <u>V</u> No
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspections), if avai	lable:
Remarks:		
Clav and gravel fill perching water		

Sampling Point: W-IJ31

, ,	Absoluto	• Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> ')	<u>% Cover</u>	Species?	Status	Number of Dominant Spacing
1.				That Are OBL, FACW, or FAC: 2 (A)
2				
2				Total Number of Dominant
3				Species Across All Strata: <u>2</u> (B)
4				Percent of Dominant Species
5			.	That Are OBL, FACW, or FAC: 100 (A/B)
6				
7		_		Prevalence Index worksheet:
	0	= Total Cov	/er	Total % Cover of: Multiply by:
50% of total cover: 0	20% 0	f total cover	: 0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				
3			.	
4				Column Totals: (A) (B)
5				Brouplance Index - D/A
6.				
7				Hydrophytic Vegetation Indicators:
o				1 - Rapid Test for Hydrophytic Vegetation
0			<u> </u>	✓ 2 - Dominance Test is >50%
9			<u> </u>	3 - Prevalence Index is ≤3.0 ¹
	0	= Total Cov	/er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% o	f total cover	:0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				Deckless stick to deckles the tick (sector is a 1 (For their))
1. Carex lurida	30	 ✓ 	OBL	Problematic Hydrophytic Vegetation (Explain)
2. Carex vulpinoidea	30	~	FACW	
3 Scirpus atrovirens	10		OBL	¹ Indicators of hydric soil and wetland hydrology must
A Holcus lanatus	15		FAC	be present, unless disturbed or problematic.
- luncus effusus	20			Definitions of Four Vegetation Strata:
5. Julicus ellusus	20		FAGW	Tree – Woody plants, excluding vines, 3 in (7.6 cm) or
6			.	more in diameter at breast height (DBH), regardless of
7				height.
8		_		One line (Ohmethin Missister Leafer and Alice states and
9.				Sapling/Shrub – Woody plants, excluding vines, less than 3 in DBH and greater than or equal to 3.28 ft (1
10			·	m) tall.
11			·	,
· · · · · · · · · · · · · · · · · · ·	105			Herb – All herbaceous (non-woody) plants, regardless
500((()) 50)	<u> </u>	= Total Cov	/er 21	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>50%</u>	<u>5</u> 20% o	f total cover	<u> </u>	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 13)				height.
1				
2				
3.				
4				
		_	- <u> </u>	Hydrophytic
- J	0			Present? Yes V No
50% (4.4.4		= Iotal Cov	/er	
	20% 0	t total cover	:	
Remarks: (Include photo numbers here or on a separate s	sheet.)			

Profile Desc	cription: (Describe t	o the depth	needed to docu	ment the indic	ator or co	onfirm	the absence of indicators.)
Depth	Matrix		Redo	x Features	1 .		
(inches)	Color (moist)		Color (moist)	<u>%</u> Ty	/pe' Lo	00-	Texture Remarks
0-18	10YR 5/3	60		. <u> </u>			C 50% gravel fill
	5YR 4/4	40					
		<u> </u>			·		
					·		
				<u> </u>			
. <u> </u>	. <u> </u>					<u> </u>	
¹ Turney C. C.			aduarad Matrice M				² Lessting DL Dave Lining M. Metric
Type: C=Co	oncentration, D=Deple	etion, RIVI=R	educed Matrix, M	S=Masked Sar	nd Grains.		Location: PL=Pore Lining, M=Matrix.
			Daril Oracia	(07)			
Histosol	(A1)		Dark Surface	€ (S7) slave Curfaga (6			2 cm Muck (A10) (MLRA 147)
HISTIC Ep	bipedon (AZ)		Polyvalue Be	elow Surface (S		4 147, 1 4 4 0 \	(ML DA 447, 449)
	SIIC (AS) (AA)			anace (39) (IVIL ad Matrix (E2)	_KA 147,	140)	(INIERA 147, 140) Diadmant Eleadolain Saila (E10)
Tryuruge	d Lavers (A5)		Loaniy Gleye	eu watrix (F2)			
Oradined	uck (A10) (I RR N)		Bedox Dark	Surface (F6)			Very Shallow Dark Surface (TE12)
Depleter	d Below Dark Surface	(A11)	Depleted Da	rk Surface (F7))		 Very enaliew bank editate (11.12) Very enaliew bank editate (11.12) Very enaliew bank editate (11.12)
Thick Da	ark Surface (A12)	(/)	Redox Depre	essions (F8)	/		
Sandy M	/ucky Mineral (S1) (L	RR N.	Iron-Mangan	iese Masses (F		N.	
MLRA	A 147. 148)	,	MLRA 13	(i) (i)	, (,	
Sandy G	Bleved Matrix (S4)		Umbric Surfa	ace (F13) (MLF	RA 136. 12	22)	³ Indicators of hydrophytic vegetation and
Sandy R	Redox (S5)		Piedmont Flo	oodplain Soils ((F19) (ML	, RA 148	B) wetland hydrology must be present.
Stripped	Matrix (S6)		Red Parent I	Material (F21)	MLRA 12	27, 147)	unless disturbed or problematic.
Restrictive	Layer (if observed):			. , , ,	-		·
Type:							
Depth (in	ches):						Hydric Soil Present? Yes 🖌 No
Remarks:	,						

Problematic disturbed roadside swale, possible old borrow pit developing wetland hydrology and vegetation due to compaction. Half gravel fill.

Wetland ID <u>W-IJ31</u> Date <u>06/13/2016</u>



Photograph Direction North

Comments:

Project/Site: MVP	City/County: Wetzel	Sampling Date: 06/13/2016
Applicant/Owner: MVP	State:	WV Sampling Point: W-IJ31-UP
Investigator(s): E. Foster, S. Therkildson, C. Sorden	Section, Township, Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Hillslope	ocal relief (concave, convex, none): Line	ear Slope (%): <u>12</u>
Subregion (LRR or MLRA): LRR N Lat: 39.50588	Long: -80.54164	Datum: NAD 83
Soil Map Unit Name: Skidmore gravelly loam	NWI	classification: None
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes 🖌 No (If no, exp	lain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	v disturbed? Are "Normal Circumst	ances" present? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic? (If needed, explain an	y answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, trai	nsects, important features, etc.

Hydrophytic Hydric Soil I Wetland Hyd	Vegetation Present? Present? drology Present?	Yes Yes Yes	No No No	Is the Sampled Area within a Wetland?	Yes	No	<u> </u>
Remarks:	Cowardin Code: UPI	LAND	HGM:	Water Type:			

HYDROLOGY

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

Sampling Point: W-IJ31-UP

	Abaaluta	Dominant	Indicator	Dominance Test worksheet
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Dominance rest worksneet:
Platanus occidentalis	<u>15</u>			Number of Dominant Species
	10	·	FACW	That Are OBL, FACW, or FAC: 2 (A)
2. Quercus alba	20	<u> </u>	FACU	Total Number of Dominant
3. Acer sacharum	5		FACU	Species Across All Strata: 5 (B)
4	-		1.000	
4		·	·	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 40 (A/B
6.				
7				Prevalence Index worksheet:
1	40		·	Total % Cover of: Multiply by:
	40	= Total Cov	rer	
50% of total cover: <u>20</u>	20% of	total cover	8	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1 Bosa multiflora	5	~	FACU	FAC species x 3 =
			1/100	
2		·		FACU species x 4 =
3.				UPL species x 5 =
1				Column Totals: (A) (B)
-		· <u> </u>		、,
5			·	Prevalence Index = $B/A =$
6				Hydrophytic Vagatation Indicators:
7.				Hydrophytic vegetation indicators.
		· · ·		1 - Rapid Test for Hydrophytic Vegetation
8		·	·	2 - Dominance Test is >50%
9				3 - Prevalence Index is < 3.01
	5	= Total Cov	rer	
50% of total cover: 2.5	20% of	total cover	1	4 - Morphological Adaptations (Provide supportin
5°			·	data in Remarks or on a separate sheet)
Herb Stratum (Plot size:)	0			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Leucanthemum vulgare	8	<u> </u>	UPL	
2. Plantanus occidentalis	8	~	FACW	
3 Trifolium repens	5		FACU	¹ Indicators of hydric soil and wetland hydrology must
Microstogium viminoum	5	· <u> </u>		be present, unless disturbed or problematic.
			FAC	Definitions of Four Vegetation Strata:
5		·		
6.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o
_	-	·		more in diameter at breast height (DBH), regardless o
1		·	·	height.
8				Sanling/Shrub Weady planta evaluding vines less
9.				than 3 in DBH and greater than or equal to 3.28 ft (1
10				m) tall.
10			·	
11		·		Herb – All herbaceous (non-woody) plants, regardless
	26	= Total Cov	rer	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 13	20% of	total cover	5.2	
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 covor:	20%	total cover	0	
	20 /6 01			
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Desc	ription: (Describe to	o the dep	th needed to documen	nt the indicator of	or confirm	the absence of	indicators.)	
Depth	Matrix		Redox F	eatures				
(inches)	Color (moist)	%	Color (moist)	<u>% Type¹</u>	Loc ²	Texture	Remark	S
0-5	10YR 4/3	70				L		
	5Y 6/4	30						
	010/1							
		<u> </u>						
					·			
		······						
	,					·		
¹ Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS=N	Aasked Sand Gra	ins.	² Location: PL=F	Pore Lining, M=Matr	ix.
Hydric Soil I	ndicators:					Indicato	rs for Problematic	Hydric Soils":
Histosol	(A1)		Dark Surface (S	7)		2 cm	Muck (A10) (MLRA	A 147)
Histic Ep	ipedon (A2)		Polyvalue Below	/ Surface (S8) (M	LRA 147,	148) <u>Coas</u>	st Prairie Redox (A1	6)
Black Hi	stic (A3)		Thin Dark Surface	ce (S9) (MLRA 1	47, 148)	(N	ILRA 147, 148)	
Hydroge	n Sulfide (A4)		Loamy Gleyed N	/latrix (F2)		Pied	mont Floodplain Soi	ils (F19)
Stratified	l Layers (A5)		Depleted Matrix	(F3)		(N	ILRA 136, 147)	
2 cm Mu	ck (A10) (LRR N)		Redox Dark Sur	face (F6)		Very	Shallow Dark Surfa	ice (TF12)
Depleted	Below Dark Surface	(A11)	Depleted Dark S	Surface (F7)		Othe	er (Explain in Remar	ks)
Thick Da	rk Surface (A12)		Redox Depressi	ons (F8)				
Sandy M	lucky Mineral (S1) (Ll	RR N,	Iron-Manganese	e Masses (F12) (L	.RR N,			
MLRA	. 147, 148)		MLRA 136)			0		
Sandy G	leyed Matrix (S4)		Umbric Surface	(F13) (MLRA 13	6, 122)	³ Indicat	tors of hydrophytic v	regetation and
Sandy R	edox (S5)		Piedmont Flood	plain Soils (F19)	(MLRA 14	8) wetlar	nd hydrology must b	e present,
Stripped	Matrix (S6)		Red Parent Mate	erial (F21) (MLR	A 127, 147) unless	s disturbed or proble	ematic.
Restrictive L	ayer (if observed):							
Type: <u>sa</u>	ndstone bedrock							
Depth (inc	hes): <u>5</u>					Hydric Soil Pre	esent? Yes	No 🖌
Remarks:								

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	39.502356	Lon.	-80.52342
STREAM/SITE ID AND SITE DESCRI	PTION:					W-A27-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-A27-PEM	Emergent	0.0497	Emergent					
				-				
				_		PART III - Advanced	wiitigatio	n
						Advanced Mitigation (Y or N)	1	Y
				-				
Total Impact		0.0497		-				
	PART II -	Unit Scores		-		Estimated		
Wetland Cla	assification		Replacement Unit(s)	-		ILF Costs		
Total Emergent			0.0497	-				
Total Scrub-Shrub			0	-		\$2,982.00		
Total Forested			0	-				
Total Open Water			0					

Applicant/Owner: MVP State: WV Sampling Point: WV Investigator(s): SY, RS, KL Section, Township, Range: N/A Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): Concave Slope (%)	1/2015
Investigator(s): SY, RS, KL Section, Township, Range: N/A Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): Concave Slope (%	-A27-PFC
Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): Concave Slope (%	
	.): 1
Subregion (LRR or MLRA): LRRN Lat: 39.502159 Long: 80.523411 Datum: NA	AD 83
Soil Map Unit Name: Skidmore gravelly loam NWI classification: None	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)	
Are Vegetation, Soil, or Hydrologysignificantly disturbed? Are "Normal 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 locations, transects, important feature	res, etc.

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

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply)	Surface Soil Cracks (B6)		
✓ Surface Water (A1) True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)		
High Water Table (A2) Hydrogen Sulfide Odor (C1)	 Drainage Patterns (B10) Moss Trim Lines (B16) Dry-Season Water Table (C2) 		
✓ Saturation (A3) Oxidized Rhizospheres on Living Roots (C3			
Water Marks (B1) Presence of Reduced Iron (C4)			
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)		
Drift Deposits (B3) Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)		
Algal Mat or Crust (B4) Other (Explain in Remarks)	Stunted or Stressed Plants (D1)		
Iron Deposits (B5)	 Geomorphic Position (D2) 		
Inundation Visible on Aerial Imagery (B7)	Shallow Aquitard (D3)		
Water-Stained Leaves (B9)	Microtopographic Relief (D4)		
Aquatic Fauna (B13)	FAC-Neutral Test (D5)		
Field Observations:			
Surface Water Present? Yes 🖌 No Depth (inches): .25			
Water Table Present? Yes No Depth (inches):			
Saturation Present? Yes <u>Ves</u> No Depth (inches): 0 Wetland	l Hydrology Present? Yes 🖌 No		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if a	vailable:		
Remarks:			

PFO/PEM wetland complex with Sycamore on the perimeters of the system and a stream running along the perimeter as well.

Sampling Point: W-A27-PFO

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> ')	% Cover	Species?	Status	Number of Dominant Species
1. Acer rubrum	25	~	FAC	That Are OBL, FACW, or FAC: 8 (A)
2 Platanus occidentalis	20	~		
2			IACIV	Total Number of Dominant
3		. <u> </u>	·	Species Across All Strata: 9 (B)
4		·	·	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 89 (A/B)
6				
7.				Prevalence Index worksheet:
	45	- Total Cov		Total % Cover of: Multiply by:
50% of total cover: 22 !	5 20% of	f total cover	. 9	OBL species x 1 =
	2078 01		. <u> </u>	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 10)				EAC opposing x 2 =
1		·	·	FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				
<u> </u>				Prevalence Index = B/A =
6		·	·	Hydrophytic Vegetation Indicators:
7			·	1 - Rapid Test for Hydrophytic Vegetation
8				\checkmark 2 - Dominance Test is >50%
9.				
	0	= Total Cov	er	
50% of total cover: 0	20% of	f total cover	0	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot cize: 5	20 /0 0.		·	data in Remarks or on a separate sheet)
<u>Held Stratum</u> (Plot Size:)	20	./		Problematic Hydrophytic Vegetation ¹ (Explain)
	30	· <u>·</u>	OBL	
2. Carex scoparia	10	<u> </u>	F <u>ACW</u>	¹ Indicators of hydric soil and watland hydrology must
3. Carex vulpinoidea	10	<u> </u>	<u>OBL</u>	be present unless disturbed or problematic
4. Poa pratensis	10	~	FACU	Definitions of Four Vegetation Strate:
5 Scirpus atrovirens	10	~	OBI	Definitions of Four vegetation Strata:
c Microstegium vimineum	10	~		Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
	E	· _ •		more in diameter at breast height (DBH), regardless of
	5		FACW	height.
8. Glyceria striata	5	· <u> </u>	OBL	Sanling/Shrub - Woody plants, excluding vines, less
_{9.} Spiraea alba	20	~	FACW	than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11				
	110	Total Car		Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: 55	20% of	= Total Cov	22	
15'	20 % 01	lotal cover		Woody vine – All woody vines greater than 3.28 ft in
voody vine Stratum (Plot size:)				height.
1		. <u> </u>	·	
2				
3			<u></u>	
4.				
5				Hydrophytic
	0	Total Car		Present? Yes V No
E0% of total any art 0				
	20% 0			
Remarks: (Include photo numbers here or on a separate s	heet.)			

JUIL								
Profile Desc	ription: (Describe to	o the depth	needed to docun	nent the i	ndicator	or confirm	the absence	e of indicators.)
Depth	Matrix		Redox	K Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 4/2	95	7.5YR 4/6	5	С	M/PL	L	
3-15	10YR 4/2	90	7.5YR 4/6	10	C	M/PL	CL	
						·		
						·		
						·		·
		<u> </u>			·	·		
						·		
		<u> </u>				·		
						·		
¹ Type: C=Co	oncentration, D=Deple	etion, RM=R	educed Matrix, MS	S=Maskec	Sand Gr	ains.	² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Indic	ators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Be	low Surfa	ce (S8) (N	ILRA 147,	148) (Coast Prairie Redox (A16)
Black His	stic (A3)		Thin Dark Su	rface (S9)	(MLRA 1	47, 148)		(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix (F2)		F	Piedmont Floodplain Soils (F19)
Stratified	I Layers (A5)		Depleted Mat	rix (F3)				(MLRA 136, 147)
2 cm Mu	ck (A10) (LRR N)		Redox Dark S	Surface (F	6)		<u> </u>	Very Shallow Dark Surface (TF12)
Depleted	Below Dark Surface	(A11)	Depleted Dar	k Surface	(F7)		(Other (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre	ssions (F	8)			
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangane	ese Mass	es (F12) (LRR N,		
MLRA	147, 148)		MLRA 130	5)				
Sandy G	leyed Matrix (S4)		Umbric Surfa	, ce (F13) (MLRA 13	6, 122)	³ Inc	dicators of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	8) w	etland hydrology must be present,
Stripped	Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147) ur	nless disturbed or problematic.
Restrictive L	ayer (if observed):							
Туре:								
Depth (inc	ches):	<u></u>					Hydric Soi	il Present? Yes 🖌 No
Remarks:								

Wetland ID W-A27-PFO Date 06/01/2015



Photograph Direction South

Comments:

Project/Site: MVP	City/County: Wetzel	Sampling Date: 06/01/2015
Applicant/Owner: MVP		State: WV Sampling Point: W-A27-PEN
Investigator(s): SY, RS, KL	Section, Township, Range: N	/A
Landform (hillslope, terrace, etc.); valley	Local relief (concave, convex, no	ne); Concave Slope (%); 1
Subregion (LRR or MLRA): LRRN	at: 39.502291 Long: -80	.523399 Datum: NAD83
Soil Map Lipit Name: Skidmore gravelly loam	Long	NWI classification: None
Are elimetic / hydrologic conditions on the site typics		
	nor this time of year? res No	
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Normal	Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology _	naturally problematic? (If needed, e	explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site	map showing sampling point locatio	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No Is the Sampled Area	
Hydric Soil Present? Yes _	No No within a Wetland?	Yes 🖌 No
Wetland Hydrology Present? Yes _	No	
PFO/PEM wetland complex with Sycamo Cowardin Code:PEM HGM:Slope WT:RPWWD	re on the perimeters and a stream runn	ing along the perimeter as well.
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)	Moss Trim Lines (B16)
Sediment Denosits (B2)	Presence of Reduced from (C4) Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2) Cravifish Burrows (C8)
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		✓ Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutral Test (D5)
Field Observations:	Depth (inches): 25	
Water Table Present? Yes Vos	Depth (inches):	
Saturation Present? Ves V	Depth (inches): 0 Wetland b	lydrology Present? Ves 🖌 No
(includes capillary fringe)		
Describe Recorded Data (stream gauge, monitorin	g well, aerial photos, previous inspections), if ava	ilable:
Remarks:		
stream running along the perimeter S-A1	18	

Sampling Point: W-A27-PEM

	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: (A)
3			·	Total Number of Dominant Species Across All Strata: 7 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: <u>86</u> (A/B)
6				Prevalence Index worksheet:
7	0			Total % Cover of: Multiply by:
50% of total covor:	20% of	= I otal Cov	/er . 0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')	20 % 01			FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
2				UPL species x 5 =
3				Column Totals: (A) (B)
5				
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				$3 - $ Prevalence Index is $\leq 30^{1}$
	0	= Total Cov	/er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	total cover	:0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Carex Iurida	30	<u> </u>	OBL	
2. Carex scoparia	10	<u> </u>	FACW	¹ Indicators of hydric soil and wetland hydrology must
3. Carex vulpinoidea	10	<u> </u>	<u>OBL</u>	be present, unless disturbed or problematic.
4. Poa pratensis	10	<u> </u>	F <u>ACU</u>	Definitions of Four Vegetation Strata:
5. Scirpus atrovirens	10	<u> </u>	OBL	Tree Weady plants, evoluting visco, 2 in (7.6 cm) or
6. Microstegium vimineum	10	<u> </u>	F <u>AC</u>	more in diameter at breast height (DBH), regardless of
7. Juncus effusus	5		FACW	height.
8. Glyceria striata	5		OBL	Sapling/Shrub – Woody plants, excluding vines, less
9. Spiraea alba	20	<u> </u>	FACW	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
Fox () FE	110	= Total Cov	/er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>Woody Vine Stratum</u> (Plot size:)	20% of	total cover	:	Woody vine – All woody vines greater than 3.28 ft in height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
		= Total Cov	/er	Present? res <u>v</u> No
50% of total cover: 0	20% of	total cover	:	
Remarks: (Include photo numbers here or on a separate s	heet.)			
Complex (diverse) herbaceous layer.				

Profile Desc	ription: (Describe t	o the depth	needed to docum	nent the i	ndicator	or confirm	the absence	e of indicators.)
Depth	Matrix		Redox	Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 4/2	95	7.5YR 4/6	5	С	M/PL	L	
3-15	10YR 4/2	90	7.5YR 4/6	10	С	M/PL	CL	
						·		
				<u> </u>				
						·		
				·		·		
1 							2	
Type: C=Co	ncentration, D=Deple	etion, RM=F	Reduced Matrix, MS	=Maskec	Sand Gr	ains.	Location: I	PL=Pore Lining, M=Matrix.
History	(A1)		Dark Surface	(87)			man	
Histic Er	(AT) binedon (A2)		Polyvalue Bel	(S7) ow Surfa	ce (S8) (N	NI RA 147	148)	Coast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Sur	face (S9)	(MLRA 1	47. 148)	140) <u> </u>	(MLRA 147, 148)
Hvdroae	n Sulfide (A4)		Loamy Gleve	d Matrix (F2)	,,		Piedmont Floodplain Soils (F19)
Stratified	Layers (A5)		Depleted Mat	rix (F3)	,			(MLRA 136, 147)
2 cm Mu	ick (A10) (LRR N)		Redox Dark S	Surface (F	6)		,	Very Shallow Dark Surface (TF12)
Depleted	Below Dark Surface	(A11)	Depleted Darl	k Surface	(F7)			Other (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depres	ssions (F	8)			
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangane	ese Mass	es (F12) (LRR N,		
MLRA	A 147, 148)		MLRA 136	5)				
Sandy G	ileyed Matrix (S4)		Umbric Surfac	ce (F13) (MLRA 13	6, 122)	³ In	dicators of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Floe	odplain S	oils (F19)	(MLRA 148	8) w	retland hydrology must be present,
<u> </u>	Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147) u	nless disturbed or problematic.
Restrictive L	_ayer (if observed):							
Туре:								_
Depth (inc	ches):						Hydric So	il Present? Yes 🖌 No
Remarks:								

Wetland Photograph Page

Wetland ID W-A27-PEM Date 06/01/2015



Photograph Direction <u>SE</u>

Comments:

Project/Site: MVP	City/County: Wetze	el Sa	mpling Date: 06/01/2015
Applicant/Owner: MVP		State: WV	Sampling Point: W-A27 UP
Investigator(s): S.Yarbrough, K.Lugo, R.Sparhawk	Section, Township, I	Range: <u>N/A</u>	
Landform (hillslope, terrace, etc.): Valley bottom	ocal relief (concave, c	onvex, none): Planar	Slope (%): <u>2</u>
Subregion (LRR or MLRA): LRRN Lat: 39.502448	L	_{-ong:} -80.523262	Datum: NAD 83
Soil Map Unit Name: Skidmore gravelly loam (Sk)		NWI classificatio	_{n:} None
Are climatic / hydrologic conditions on the site typical for this time of ye	ear?Yes 🔽 No	o (If no, explain in Rema	arks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Ar	re "Normal Circumstances" prese	ent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (If	needed, explain any answers in	Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling poin	t locations, transects, in	nportant features, etc.

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

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

HYDROLOGY

Sampling Point: W-A27 UP

	Absoluto	- Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Dominance rest worksneet.
Platanus occidentalis	10	v	FACW	Number of Dominant Species
1		·	1/10/11	$\frac{11}{11} \text{ (A)} = \frac{1}{100} \text{ (A)}$
2				Total Number of Dominant
3		<u></u>		Species Across All Strata: 4 (B)
4				
			·	Percent of Dominant Species
D		·		That Are OBL, FACW, or FAC: 50 (A/B)
6		. <u> </u>		Development in development of
7.				Prevalence Index worksheet:
	10	- Total Cov	/or	Total % Cover of: Multiply by:
50% of total anyor 5	200/ 01		. 2	OBL species $0 x_{1} = 0$
50% of total cover	20% 0			= 15 x 2 $= 30$
Sapling/Shrub Stratum (Plot size: 13)				$\frac{1}{2} = \frac{1}{2} = \frac{1}$
1				FAC species $23 \times 3 = 73$
2				FACU species $70 \times 4 = 280$
				UPL species x 5 =
3		·		$\frac{110}{385}$
4				Column Totals: $(A) = 303$ (B)
5			<u> </u>	Prevalence index $= B/A = 3.5$
6			. <u> </u>	Hvdrophytic Vegetation Indicators:
7				1. Donid Toot for Lludrath tis Verstation
8				1 - Rapid Test for Hydrophytic Vegetation
0		· · · · · · · · · · · · · · · · · · ·		2 - Dominance Test is >50%
9				3 - Prevalence Index is $≤3.0^{1}$
	0	= Total Cov	/er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	f total cover	: <u>0</u>	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
	30	~		Problematic Hydrophytic Vegetation ¹ (Explain)
		·	FACU	
2. Holcus lanatus	20	~	FAC	
3. Poa pratensis	20	~	FACU	he present upless disturbed or problematic
↓ Dactvlis glomerata	10		FACU	be present, unless disturbed of problematic.
Solidogo conodonaio	10	·	<u>FACU</u>	Definitions of Four Vegetation Strata:
5. Solidago carladerisis		·	FAC	Tree March relate evolution visco 2 in (7.0 ere) er
6. Juncus tenuis	5		FAC	Tree – woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH) regardless of
7 Spirea alba	5		FACW	height
0			1/10/11	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				
	100			Herb – All herbaceous (non-woody) plants, regardless
50	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	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15)				height.
1				
Z		·		
3				
4.				Hadaaa hada
5				Hydrophytic
0	0			Present? Ves No
		= Total Cov	/er	
50% of total cover: 0	20% of	f total cover	: 0	
Remarks: (Include photo numbers here or on a separate sl	neet.)			
	,			

Profile Desc	ription: (Describe f	to the dept	h needed to docur	nent the	indicator	or confirn	n the absence	e of indicators.)	
Depth <u>Matrix</u>		Redox Features							
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc ²	<u>Texture</u>	Remarks	
0-4	10YR 3/4	100			.		L		
4-15	10YR 4/4	98	7.5YR 5/6	2	С	PL	CL		
						·			
			,						
'Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Maske	d Sand G	ains.	² Location: P	L=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:						Indic	ators for Problematic Hydric Soils":	
<u> </u>	(A1)		Dark Surface (S7)				2	2 cm Muck (A10) (MLRA 147)	
Histic Ep	pipedon (A2)		Polyvalue Be	low Surfa	ace (S8) (I	MLRA 147,	, 148) (Coast Prairie Redox (A16)	
Black Hi	stic (A3)		Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148)						
Hydroge	n Sulfide (A4)		Loamy Gieyed Matrix (F2) Pleamont Floodplain Solis (F19)						
Stratified Layers (A5)									
2 cm IVIU	ICK (A1U) (LKK N) d Bolow Dork Surfood	Depleted Dark Surface (F7) Other (Evolution Dark Surface (F7)							
Depieted	ark Surface (A12)	Redox Depressions (F8)							
Sandy M	lucky Mineral (S1) (I	RRN	Iron-Mangan	ese Mass	0) ses (F12) (
Sandy G	eleved Matrix (S4)		Umbric Surfa	ce (F13)	(MLRA 1	36, 122)	³ Inc	licators of hydrophytic vegetation and	
Sandy R	edox (S5)		Piedmont Flo	odplain S	Soils (F19)	(MLRA 14	48) we	etland hydrology must be present.	
Stripped	Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147				7) un	less disturbed or problematic.	
Restrictive I	_aver (if observed):				/ (,		· · · · ·	
Type:	,								
Depth (in	chas).						Hydric Soil	Present? Yes No 🗸	
Deptil (ill							Tryane oon		
Remarks:									

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	39.491159	Lon.	-80.520537
STREAM/SITE ID AND SITE DESCRI	PTION:					W-A35, 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-A35	Emergent	0.0066	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made or Advanced Mitigation (Y or N)	ו	Y
				-				
Total Impact		0.0066						
PART II - Unit Scores				-		Estimated		
Wetland Cl	assification		Replacement Unit(s)	-		ILF Costs		
I otal Emergent			0.0066	-		*~~~ ~~		
I otal Scrub-Shrub			0	-		\$396.00		
			0					
l otal Open water			0					

Project/Site: MVP		City/County: Wetzel		Sampling Date: 06/03/2015				
Applicant/Owner: MVP			State: WV	Sampling Point: W-A35				
Investigator(s). S. Yarbrough, R. Sparhawk, W. Shattenberg, K. Lugo								
Landform (billslope terrace etc.) Hillslo		cal relief (concave, convex, no	ne). Concave	Slope (%) 1				
Subragian (LDD or MLDA): LBBN	<u>, 39 491268</u>) 520722	Otope (<u>%).</u>				
Subregion (LRR or MLRA):	Lat: 00:101200	Long:		Datum: 10 10 00				
Soil Map Unit Name: Glipin-Feabody	complex, 35 to 70 per		NWI classifica	ation: NOTE				
Are climatic / hydrologic conditions on the	site typical for this time of ye	ear? Yes 🔽 No	(If no, explain in Re	emarks.)				
Are Vegetation, Soil, or Hy	/drology significantly	y disturbed? Are "Norma	I Circumstances" p	resent? Yes No _				
Are Vegetation, Soil, or Hy	/drology naturally pr	oblematic? (If needed,	explain any answer	rs in Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.								
Hydrophytic Vegetation Present?	Yes 🖌 No							
Hydric Soil Present?	Yes 🖌 No	Is the Sampled Area	Voc 🗸	No				
Wetland Hydrology Present?	Yes 🖌 No		165	NO				
Remarks:								
Cowardin Code: PEM								
HGM: slope								
WT: NRPWW								
			O					
Wetland Hydrology Indicators:			Secondary Indicat	tors (minimum of two required)				
Primary Indicators (minimum of one is re	quired; check all that apply)		Surface Soll (Cracks (B6)				
Lich Water Table (A2)	True Aquatic F	Plants (B14)	Sparsely Veg	terms (P10)				
✓ Fign Water Table (A2)		1000000000000000000000000000000000000	 Drainage Pat Moss Trim Lie 	nes (B16)				
Water Marks (B1)	Presence of R	educed Iron (C4)	Dry-Season V	Nater Table (C2)				
Sediment Deposits (B2)	Recent Iron R	eduction in Tilled Soils (C6)	Cravfish Burn	rable (02)				
Drift Deposits (B3)	Thin Muck Sur	face (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	r (B7)		Shallow Aquit	tard (D3)				
✓ Water-Stained Leaves (B9)			Microtopogra	phic Relief (D4)				
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)				
Field Observations:								
Surface Water Present? Yes	_ No <u>/</u> Depth (inches	s):						
Water Table Present? Yes	No Depth (inches	s):						
Saturation Present? Yes <u>Yes</u>	, No Depth (inches	s): <u>0</u> Wetland	Hydrology Presen	t? Yes 🖌 No				
Describe Recorded Data (stream gauge.	, monitoring well, aerial phot	os, previous inspections), if av	ailable:					
	0 1 1							
Remarks:								
Old access road. This wetland is a PEM that lies against the slope. The slope above is ~30%.								

Sampling Point: W-A35

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: <u>30</u> ')	% Cover	Species?	Status	Number of Dominant Species		
1				That Are OBL, FACW, or FAC: (A)		
2				Total Number of Dominant		
3				Species Across All Strata: 4 (B)		
4.						
5.				Percent of Dominant Species		
6.				$\frac{1}{1} \frac{1}{1} \frac{1}$		
7		·		Prevalence Index worksheet:		
··	0	- 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				FAC species x 3 =		
1		·		FACU species x 4 =		
2				UPL species x 5 =		
3		·		$\begin{array}{c} column Totals: \\ \hline (A) \\ \hline (B) \\ \hline \end{array}$		
4		·				
5				Prevalence Index = B/A =		
6		·		Hydrophytic Vegetation Indicators:		
7				1 - Rapid Test for Hydrophytic Vegetation		
8		. <u></u>		\checkmark 2 - Dominance Test is >50%		
9				$3 - $ Prevalence Index is $\leq 3.0^{1}$		
	0	= Total Cov	/er	A Morphological Adaptations ¹ (Provide supporting		
50% of total cover: 0	20% of	total cover	: 0	4 - Morphological Adaptations (Fronde supporting		
Herb Stratum (Plot size: 5')				Desklasse tie Underske tie Manager (Ferdeie)		
_{1.} Typha latifolia	20	<u> </u>	OBL	Problematic Hydrophytic Vegetation (Explain)		
2. Carex vulpinoidea	20	~	OBL	1		
3. Microstegium vimineium	25	~	FAC	Indicators of hydric soil and wetland hydrology must		
4. Scirpus atrovirens	10		OBL	Definitions of Four Verstation Starter		
5 Juncus tenuis	5		FAC	Definitions of Four vegetation Strata:		
6 Arthraxon hispidus	5		FAC	Tree - Woody plants, excluding vines, 3 in. (7.6 cm) or		
7 Carex scoparia	5	·		more in diameter at breast height (DBH), regardless of		
			<u>FAGW</u>	neight.		
8		·		Sapling/Shrub – Woody plants, excluding vines, less		
9		·		than 3 in. DBH and greater than or equal to 3.28 ft (1		
10		·		m) tan.		
11		·		Herb - All herbaceous (non-woody) plants, regardless		
	90	= Total Cov	ver	of size, and woody plants less than 3.28 ft tall.		
50% of total cover: <u>45</u>	20% of	total cover	: 18	Woody vine – All woody vines greater than 3.28 ft in		
Woody Vine Stratum (Plot size: 15)	_			height.		
1. Smilax rotundifolia	5	<u> </u>	FAC			
2						
3						
4				Underschutig		
5.				nyarophytic Vegetation		
	5	= Total Cov	/er	Present? Yes 🖌 No		
50% of total cover: 2.5	20% of	total cover	· <u>1</u>			
Remarks: (Include photo numbers here or on a separate s	sheet.)					
, , ,	,					

Old access road is likely holding water and providing wet habitat for herb stratum. Tree stratum is largely upland species overhanging the road, rooted outside the bounds of the delineated wetland. These species included Quercus montana, Acer rubrum, Robinia pseudoacacia, and Quercus coccinea.
SOIL

Sampling Point: W-A35

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)									
Depth Matrix Redox Features									
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks	
1-0								Leaf litter/organic matter	
0-1	10YR 2/1	100					Muck		
1-7	10YR 6/3	85	Gley1 6/10Y	10	D	М	Clay		
			7.5YR 5/8	5	С	М	Clay		
7-8	7.5YR 4/6	90	7.5YR 5/8	10	С	М	Clay loam		
8-14	10YR 3/2	95	7.5YR 5/8	5					
14+								Refusal	
¹ Type: C=Co	oncentration. D=Depl	etion. RM=	Reduced Matrix. MS	=Masked	d Sand Gr	ains.	² Location: PL	=Pore Lining, M=Matrix,	
Hydric Soil I	Indicators:	0					Indicat	tors for Problematic Hydric Soils ³ :	
<u> </u>	(A1)		Dark Surface	(S7)			20	cm Muck (A10) (MLRA 147)	
Histic Ep	oipedon (A2)		Polyvalue Bel	ow Surfa	ce (S8) (N	ILRA 147	, 148) Co	oast Prairie Redox (A16)	
Black Hi	stic (A3)		Thin Dark Sur	face (S9)) (MLRA 1	47, 148)		(MLRA 147, 148)	
Hydroge	n Sulfide (A4)		Loamy Gleyed	d Matrix ((F2)		Pie	edmont Floodplain Soils (F19)	
<u> </u> Stratified	d Layers (A5)		Depleted Mate	rix (F3)			(MLRA 136, 147)		
👱 2 cm Mu	ick (A10) (LRR N)		Redox Dark S	Surface (F	-6)		Very Shallow Dark Surface (TF12)		
Depleted	d Below Dark Surface	e (A11)	Depleted Dark	< Surface	e (F7)		Ot	her (Explain in Remarks)	
Thick Da	ark Surface (A12)		Redox Depres	ssions (F	8)				
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangane	ese Mass	es (F12) (LRR N,			
MLRA	A 147, 148)		MLRA 136	5)					
Sandy G	eleyed Matrix (S4)		Umbric Surface	ce (F13)	(MLRA 13	6, 122)	³ Indicators of hydrophytic vegetation and		
Sandy R	edox (S5)		Piedmont Floor	odplain S	ioils (F19)	(MLRA 1	18) wetland hydrology must be present,		
<u> Stripped</u>	Matrix (S6)		Red Parent M	aterial (F	21) (MLR	A 127, 14	7) unle	ess disturbed or problematic.	
Restrictive L	_ayer (if observed):								
_{Туре:} Со	ourse Fragments								
Depth (inc	ches): <u>14</u>						Hydric Soil I	Present? Yes 🖌 No	
Remarks:									

Wetland Photograph Page

Wetland ID <u>W-A35</u> Date <u>06/03/2015</u>



Photograph Direction North

Comments:

Project/Site: MVP	_ City/County: Wetzel Sampling Date: 06/03/2015
Applicant/Owner: MVP	State: WV Sampling Point: W-A35 UP
Investigator(s): <u>S. Yarbrough</u> , R. Sparhawk, W. Shattenberg, K. Lugo	_ Section, Township, Range: <u>N/A</u>
Landform (hillslope, terrace, etc.): Hillslope	ocal relief (concave, convex, none): <u>None</u> Slope (%): <u>35</u>
Subregion (LRR or MLRA): LRRN Lat: 39.491385	5
Soil Map Unit Name: Gilpin-Peabody complex, 35 to 70 per	rcent slopes (GpF) NWI classification: None
Are climatic / hydrologic conditions on the site typical for this time of y	/ear? Yes No (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology significantly	ly disturbed? Are "Normal Circumstances" present? Yes 🗾 No
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.

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

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

HYDROLOGY

Sampling Point: W-A35 UP

001	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u>)	% Cover	Species?	Status	Number of Dominant Species
1. Quercus montana	70	~	UPL	That Are OBL, FACW, or FAC: (A)
2 Magnolia acuminata	15		FACU	
2			<u></u>	Total Number of Dominant
- S				Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 20% (A/B)
6			<u> </u>	
7.				Prevalence Index worksheet:
	85	- Total Cov	/or	Total % Cover of: Multiply by:
50% of total cover: 42.	5 20% of	total cover	· 17	OBL species x 1 =
Capling/Chryth Ctreature (Dist sing) 15'	2070 01		·	FACW species x 2 =
Sapling/Snrub Stratum (Plot size:)	20		FAOL	
1. Kaimia latilolia		<u> </u>	FACU	FAC species x 3 =
2. Amelanchier laevis	30	<u> </u>	<u>UPL</u>	FACU species x 4 =
3.				UPL species x 5 =
4				Column Totals: (A) (B)
- T				
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7			<u> </u>	1. Danid Toot for Hydrophytic Vegetation
8.				
0			- <u> </u>	2 - Dominance Test is >50%
9	60		·	3 - Prevalence Index is ≤3.0 ¹
	00	= Total Cov	/er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 30	20% of	total cover	:	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5)				Deckless of a Haster best a Magnetic field (Fordation)
1. Vaccinium stamineum	30	~	FACU	Problematic Hydrophytic Vegetation (Explain)
2				
2				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6.				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of
·				noight.
o				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 borbaccous (non woody) plants, regardlass
	30	- Total Cov	/or	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 15	20% of	total cover	· 6	
15'	2070 01			Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:)	45			height.
1. Smilax rotundifolia	15	~	FAC	
2				
3.				
4				
4				Hydrophytic
5				Vegetation
	15	= Total Cov	/er	Present? Yes No V
50% of total cover: 7.5	20% of	total cover	:3	
Remarks: (Include photo numbers here or on a separate s	sheet.)			1
	,			

Profile Desc	ription: (Describe to	o the dept	th needed to document the indicator or confirm	the absence	e of indicators.)			
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist) % Type ¹ Loc ²	Texture	Remarks			
0-8	10YR3/3	100		L				
8-12	10YR4/3	100		CL				
12+					Refusal			
¹ Type: C=Co	oncentration, D=Deple	etion, RM=	Reduced Matrix, MS=Masked Sand Grains.	² Location: I	PL=Pore Lining, M=Matrix.			
Hydric Soil I	ndicators:			India	cators for Problematic Hydric Soils ³ :			
Histosol	(A1)		Dark Surface (S7)	2	2 cm Muck (A10) (MLRA 147)			
Histic Ep	pipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147,	148)	Coast Prairie Redox (A16)			
Black Hi	stic (A3)		Thin Dark Surface (S9) (MLRA 147, 148)		(MLRA 147, 148)			
Hydroge	n Sulfide (A4)		Loamy Gleyed Matrix (F2)		Piedmont Floodplain Soils (F19)			
Stratified	I Layers (A5)		Depleted Matrix (F3)		(MLRA 136, 147)			
2 cm Mu	ck (A10) (LRR N)		Redox Dark Surface (F6)	Very Shallow Dark Surface (TF12)				
Depleted	Below Dark Surface	(A11)	Depleted Dark Surface (F7) Other (Explain in Remarks)					
Thick Da	ark Surface (A12)		Redox Depressions (F8)					
Sandy M	lucky Mineral (S1) (Ll	RR N,	Iron-Manganese Masses (F12) (LRR N,					
MLRA	147, 148)		MLRA 136)					
Sandy G	leyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122)	³ In	dicators of hydrophytic vegetation and			
Sandy R	edox (S5)		Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present					
Stripped	Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147	') u	nless disturbed or problematic.			
Restrictive I	ayer (if observed):							
Type: Co	ourse Fragments							
Depth (ind	ches): <u>12</u>			Hydric So	il Present? Yes No 🖌			
Remarks:								
No primary	or secondary inc	licators of	of hydric soils.					
, ,	,		,					

USACE FILE NO./Project Name:		Mountain Valley Pipeline			Lat.	39.489742	Lon.	-80.52075
STREAM/SITE ID AND SITE DESCRI	PTION:				W-A34, Timber Mat Crossing			
(% stream slope, watershed size {a	creage}, unaltered	l or impairments)						
FORM OF MITIGATION:								
DATE:	8/10/2015					PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-A34	Emergent	0.0296	Emergent					
				-				
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
				-				
				_				
Total Impact		0.0296						
PART II - Unit Scores						Estimated		
Wetland Cl	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0296	-		.		
Total Scrub-Shrub			0	-		\$1,776.00		
Total Forested			0	_				
Total Open Water			0					

Project/Site: MVP	_{City/County:} Wetzel	Sampling Date: 06/03/2015		
Applicant/Owner: MVP	State	: WV Sampling Point: W-A34		
Investigator(s). S. Yarbrough, R. Sparhawk, W. Shattenberg, K. Lugo	Section Township Range N/A			
Landform (hillslope terrace etc.): Valley Bottom	_ cost relief (concave, convex, none). C	oncave Slope (%): 0		
Cuberciae (I DD as MI DA): LBBN	9	98 Deture NAD 83		
Subregion (LRR or MLRA): LINK Lat: 00.40000	<u>S</u> Long: <u>CC:C2CC</u>			
Soil Map Unit Name: Validalia Silly Clay Idam, 15 to 25 per	cent slopes (vab) N	WI classification: NOTE		
Are climatic / hydrologic conditions on the site typical for this time of	year? Yes No (If no, e	explain in Remarks.)		
Are Vegetation, Soil, or Hydrology significan	tly disturbed? Are "Normal Circur	nstances" present? Yes No		
Are Vegetation, Soil, or Hydrology naturally	problematic? (If needed, explain	any answers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map showin	ng sampling point locations, tr	ansects, important features, etc.		
Hydrophytic Vegetation Present? Yes <u>Ves</u> No	- Is the Sampled Area			
Hydric Soil Present? Yes Ves No	- within a Wetland?	Yes 🖌 No		
Wetland Hydrology Present? Yes <u>V</u> No				
Remarks: Cowardin Code: PEM HGM: SLOPE WT: RPWWD				
Information listed on this form represents the data collected in 2015 hydrophytic vegetation, and hydric soils was confirmed using the US	. The wetland was revisited on 09/17/20 SACE EMP Regional Supplement deline	 Presence of wetland hydrology, ation methodology. 		
HYDROLOGY				
Wetland Hydrology Indicators:	Secon	dary Indicators (minimum of two required)		
Primary Indicators (minimum of one is required; check all that apply	y)S	urface Soil Cracks (B6)		
✓ Surface Water (A1) True Aquatic	Plants (B14) S	parsely Vegetated Concave Surface (B8)		
High Water Table (A2) Hydrogen Su	Ilfide Odor (C1) D	Drainage Patterns (B10)		
Saturation (A3)	zospheres on Living Roots (C3) M	oss Trim Lines (B16)		
Water Marks (B1) Presence of	Reduced Iron (C4) D	ry-Season Water Table (C2)		
Sediment Deposits (B2) Recent Iron	Reduction in Tilled Soils (C6) C	rayfish Burrows (C8)		
Drift Deposits (B3) Thin Muck S	urface (C7) Sa	aturation Visible on Aerial Imagery (C9)		
Algal Mat or Crust (B4) Other (Expla	in in Remarks) Si	unted or Stressed Plants (D1)		
Iron Deposits (B5)	G	Geomorphic Position (D2)		
Water-Stained Leaves (B9)	SI	icrotopographic Relief (D4)		
Aquatic Fauna (B13)	M	AC-Neutral Test (D5)		
Field Observations:				
Surface Water Present? Yes V No Depth (inch.	es) [.] 0.25			
Water Table Present? Yes V No Depth (inch	es). 14			
Saturation Present? Yes V No Depth (inch-	es): 0 Wetland Hydrold	ogy Present? Yes 🖌 No		
(includes capillary fringe)	, <u> </u>			
Describe Recorded Data (stream gauge, monitoring well, aerial pho	otos, previous inspections), if available:			
Remarks:				
There is evidence of groundwater seeping out of the h	illside in this location that suppo	rts this wetland.		
1				

Sampling Point: W-A34

	Absoluto	- Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> ')	<u>% Cover</u>	Species?	Status	Number of Dominant Species
1.				That Are OBL, FACW, or FAC: 2 (A)
2				
2	-			Total Number of Dominant
3				Species Across All Strata: $\underline{}$ (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100 (A/B)
6				Brovelence Index workeheet:
7				
	0	= Total Cov	ər	<u>FO</u>
50% of total cover:0	20% of	total cover:	0	OBL species $30 \times 1 = 30$
Sapling/Shrub Stratum (Plot size: 15')				FACW species $0 x 2 = 0$
1.				FAC species 40 x 3 =120
2.				FACU species x 4 =
3				UPL species x 5 =
3. <u> </u>				Column Totals: 90 (A) 170 (B)
4				(-)
5				Prevalence Index = B/A = 1.89
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				\checkmark 2 Dominance rest is 2007
	0	= Total Cov	ər	$\frac{1}{2}$ 3 - Flevalence index is ≤ 3.0
50% of total cover: 0	20% of	total cover:	0	4 - Morphological Adaptations (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1 Glyceria grandis	50	~	OBI	Problematic Hydrophytic Vegetation ¹ (Explain)
2 Microstegium vimineium	30	~		
 Poa nemoralis 	10			¹ Indicators of hydric soil and wetland hydrology must
3.100 10101010	10		FAC	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				Tree Woody plants evoluting vince 2 in (7.6 cm) or
6				more in diameter at breast height (DBH) regardless of
7				height.
8.				
9.				Sapling/Shrub – Woody plants, excluding vines, less
10				m) tall.
10				
11	00			Herb – All herbaceous (non-woody) plants, regardless
50% of total access 45	90	= I otal Cov	er 19	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>45</u>	20% of	total cover:	10	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 13)				height.
1				
2				
3				
4.				
5				Hydrophytic
	0	- Total Carr		Present? Yes V No
50% of total cover 0	200% of		0	
Demortes (lackede shafe see)	20% 0I			
Remarks: (Include photo numbers here or on a separate s	neet.)			

This wetland is dominated by wetland plants in the herbaceous layer. There is a tight ring of upland trees and shrubs around the perimeter of this wetland system. There is also Carex vulpinoidea and Carex lurida common in this system beyond the limit of the 5' sample plot.

Sampling Point: W-A34

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the	indicator	or confirm	the absence	of indicators.)		
Depth	Matrix		Redo	x Feature	S					
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type'		Texture	Remarks		
0-4	10YR3/3	95	7.5YR5/8	5	С	M				
4-10	10YR4/2	90	10YR5/8	10	С	M/PL	C			
10-18	10YR4/2	85	10YR4/2	15	С	M/PL	С			
						·				
						·				
		<u> </u>		. <u></u>		·				
						·				
¹ Type: $C=Cc$	oncentration, D=Depl	etion. RM=F	Reduced Matrix, M	S=Masked	d Sand Gr	ains.	² Location: PL	=Pore Lining, M=Matrix		
Hydric Soil I	ndicators:						Indica	tors for Problematic Hydric Soils ³ :		
Histosol	(A1)		Dark Surface	e (S7)			2	cm Muck (A10) (MLRA 147)		
Histic Ep	pipedon (A2)		Polyvalue Be	low Surfa	ice (S8) (N	ILRA 147,	148) Co	past Prairie Redox (A16)		
Black His	stic (A3)		Thin Dark Sι	ırface (S9) (MLRA ′	47, 148)		(MLRA 147, 148)		
Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matrix	(F2)		Pie	edmont Floodplain Soils (F19)		
Stratified	Layers (A5)		Depleted Ma	trix (F3)	-0)		(MLRA 136, 147)			
2 cm IVIU	CK (A10) (LKR N) I Below Dark Surface	(A11)	Redox Dark	Surface (F	-6) (E7)		Very Shallow Dark Surface (TF12)			
Depleted	ark Surface (A12)	; (ATT)	Depleted Da	essions (F	; (F7) (8)		0			
Sandy M	lucky Mineral (S1) (L	RR N.	Iron-Mangan	ese Mass	es (F12) (LRR N,				
MLRA	147, 148)	,	MLRA 13	6)		,				
Sandy G	leyed Matrix (S4)		Umbric Surfa	ice (F13)	(MLRA 13	6, 122)	³ India	cators of hydrophytic vegetation and		
Sandy R	edox (S5)		Piedmont Flor	Piedmont Floodplain Soils (F19) (MLRA 148				land hydrology must be present,		
Stripped	Matrix (S6)		Red Parent Material (F21) (MLRA 127, 147			A 127, 147	7) unle	ess disturbed or problematic.		
Restrictive L	ayer (if observed):									
Type:										
Depth (inc	ches):						Hydric Soil	Present? Yes <u>V</u> No		
Remarks:										

Wetland Photograph Page

Wetland ID W-A34



Photograph Direction West

Date: 06/03/2015

Comments: 2015 wetland delineation.



Photograph Direction West

Date: 09/17/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	City/County: Wet	zel	Sampling Date: 06/03/2015
Applicant/Owner: MVP		State: WV	_ Sampling Point: W-A34 UP1
Investigator(s): S. Yarbrough, R. Sparhawk, W. Shattenberg, K.	Lugo Section, Township	, _{Range:} N/A	
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concave,	convex, none): None	Slope (%): 10
Subregion (LRR or MLRA): LRRN Lat: 39	9.489839	Long: -80.520598	Datum: NAD 83
Soil Map Unit Name: Vandalia silty clay loam, 15 to	o 25 percent slopes (VaD) NWI classifica	ation: None
Are climatic / hydrologic conditions on the site typical for th	his time of year? Yes N	٥ (If no, explain in Re	emarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances" p	resent? Yes 🖌 No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling poi	nt locations, transects,	, important features, etc.
Hydrophytic Vegetation Present? Yes		wlad Area	

Hydrophytic Vegetation Present?	Yes	No_	<u> </u>	Is the Sampled Area		
Hydric Soil Present?	Yes	No_	~	within a Wetland?	Yes	No 🖌
Wetland Hydrology Present?	Yes	No_	✓	Within a Welland.	100	<u> </u>
Remarks:						
Upland						

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

HYDROLOGY

Sampling Point: W-A34 UP1

, , ,	A I I (.	-	L. P. star	Deminence Test we disk ast
= $30'$	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:)	% Cover	Species?	Status	Number of Dominant Species
1. Quercus alba	30	V	UPL	That Are OBL, FACW, or FAC: 2 (A)
2 Fagus grandifolia	30	~		
			ACW	Total Number of Dominant
3. Carya ovata	20	<u> </u>	FACU	Species Across All Strata: 7 (B)
₄ Fraxinus americana	20	~	FACU	
T			. <u></u>	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 28.5% (A/B)
6				
-				Prevalence Index worksheet:
7				Total 9/ Cayor of Multiply by
	100	= Total Cov	er	
50% of total cover: 50	20% of	total cover	20	OBL species x 1 =
15'	2070.01			
Sapling/Shrub Stratum (Plot size: 13)				1 ACW species X Z =
1. Lindera benzoin	15	~	FAC	FAC species x 3 =
				FACII species x 4 -
2				1 ACO species X 4 =
3.				UPL species x 5 =
		-		Column Totals: (A) (B)
4				
5.				
	-			Prevalence Index = B/A =
0				Hydrophytic Vegetation Indicators:
7				4 Denial Test for Lively where the Manual Ali
0				1 - Rapid Test for Hydrophytic Vegetation
ð				2 - Dominance Test is >50%
9				\sim 2. Drevelence index is <2.0 ¹
	15	- Total Cov	or	3 - Prevalence index is \$3.0
500/ // / 75			2	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 7.5	20% of	total cover		data in Remarks or on a senarate sheet)
Herb Stratum (Plot size: 5')				data in remains of on a separate sheet
A Podophyllum peltatum	30	~	EACU	Problematic Hydrophytic Vegetation' (Explain)
			PACO	
2				1
2				'Indicators of hydric soil and wetland hydrology must
٥				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata
5				Deminions of Four Vegetation of ata.
				Tree – Woody plants, excluding vines, 3 in, (7.6 cm) or
6				more in diameter at breast height (DBH) regardless of
7				height
··				neight.
8				Sanling/Shrub Weedy plants excluding vines less
9				than 2 in DBH and groater than or equal to 2.28 ft (1
		-		m) toll
10				11) tali.
11.				Herb All berbacoous (non woody) plants, regardless
	30	Tatal Car		of size, and weady plants loss than 2.28 ft tall
		= Total Cov	er	of size, and woody plants less than 5.20 it tall.
50% of total cover: 15	20% of	total cover	6	Woody vine All woody vince greater than 2.29 ft in
Woody Vine Stratum (Plot size: 15')				beight
· Poso multifloro	10	~	FAOL	neight.
1. <u>105a mullinora</u>	10		FACU	
2.				
3				
4.				the described in
5				Hydropnytic
J	- 10			
	10	= Total Cov	er	Present? Yes No V
50% of total cover: 5	20% of	total cover	2	
			·	
Remarks: (Include photo numbers here or on a separate s	heet.)			
Lots of leaf litter on the ground here.				

Profile Desc	ription: (Describe to	o the depth	needed to docum	ent the ir	ndicator o	or confirm	the absence	e of indicato	rs.)	
Depth	Matrix		Redox	Features						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	<u> </u>	Remarks	
0-12	10YR4/6	100					Loam			
12+								<u> </u>	Refusal	
12+					······				Refusal	l
¹ Type: C=Co	oncentration, D=Deple	tion, RM=R	educed Matrix, MS	=Masked	Sand Gra	ains.	² Location: F	PL=Pore Linir	ng, M=Matrix.	
Hydric Soil I	ndicators:						Indic	ators for Pro	oblematic Hy	dric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2	2 cm Muck (A	10) (MLRA 1 4	47)
Histic Ep	vipedon (A2)		Polyvalue Bel	ow Surfac	e (S8) (M	LRA 147,	148) (Coast Prairie	Redox (A16)	
Black His	stic (A3)		Thin Dark Sur	face (S9)	(MLRA 1	47, 148)		(MLRA 147	7, 148)	
Hydroge	n Sulfide (A4)		Loamy Gleyed	d Matrix (F	-2)		F	Piedmont Flo	odplain Soils ((F19)
Stratified	l Layers (A5)		Depleted Mate	rix (F3)				(MLRA 136	6, 147)	
2 cm Mu	ck (A10) (LRR N)		Redox Dark S	Surface (F	6)		\	Very Shallow	Dark Surface	(TF12)
Depleted	Below Dark Surface	(A11)	Depleted Dark	<pre>Surface</pre>	(F7)		(Other (Explaii	n in Remarks)	1
Thick Da	rk Surface (A12)		Redox Depres	ssions (F8	3)					
Sandy M	lucky Mineral (S1) (Lf	₹R N,	Iron-Mangane	se Masse	es (F12) (L	_RR N,				
MLRA	147, 148)		MLRA 136	5) (= (a) (=			3.			
Sandy G	leyed Matrix (S4)		Umbric Surfac	ce (⊦13) (I	MLRA 13	6, 122)	°Inc	dicators of hy	drophytic veg	etation and
Sandy R	edox (S5)		Piedmont Floo	odplain Sc	DIIS (F19)	(MLRA 14	8) W	etland hydrol	ogy must be p	present,
Stripped	Matrix (S6)		Red Parent M	aterial (F2	21) (WLR/	4 127, 147) ur	niess disturbe	a or problema	atic.
	ayer (if observed):									
Type: CC			_							
Depth (inc	thes): 12		_				Hydric Soi	il Present?	Yes	No 🔽
Remarks:										
No indicato	rs of hydric soils.									

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	39.463909	Lon.	-80.502672
STREAM/SITE ID AND SITE DESCRIPTION:					V	/-WX5, Temporary Access Road		
(% stream slope, watershed size {acreage}, unaltered 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-WX5	Emergent	0.0011	Emergent					
						PART III - Advanced	Mitigatio	n
				-		Sustainable Determination Made or Advanced Mitigation (Y or N)	י	Y
				_				
Total Impact		0.0011						
Wetland Cla	PART II -	Unit Scores				Estimated		
Total Emergent	issincation		A 0011			ILF COSTS		
Total Scrub-Shrub			0.0011			00 332		
Total Forested			0			\$00.00		
Total Open Water			0					

Project/Site: MVP		City/C	_{County:} Wetzel		Sampling Date: 09/01/2016
Applicant/Owner: MVP			Sampling Point: W-WX5		
Investigator(s): C. Vileno J.					
Landform (hillslope terrace et	Depression		ief (concave, convex, no	ne). Concave	Slope (%) 0
Subragion (LBB or MLBA):	RRN 10		Long: -80	.502657	000pc (<u>%)</u>
Subregion (LKK of MLKA):	dmore gravelly loam	1. 00.400022	Long: 00		None
Soil Map Unit Name: 3K - 3Kit	unore gravelly loan			NWI classific	ation: NOTE
Are climatic / hydrologic conditi	ions on the site typical	for this time of year? Y	/es No	(If no, explain in R	emarks.)
Are Vegetation, Soil	, or Hydrology	significantly distur	bed? Are "Norma	I Circumstances" p	resent? Yes No
Are Vegetation, Soil	, or Hydrology	naturally problema	atic? (If needed,	explain any answei	rs in Remarks.)
SUMMARY OF FINDING	GS – Attach site r	nap showing sam	npling point location	ons, transects	, important features, etc.
Hydrophytic Vegetation Prese Hydric Soil Present? Wetland Hydrology Present?	ent? Yes <u></u> Yes <u></u> Yes <u></u>	No No No	Is the Sampled Area within a Wetland?	Yes 🔽	No
Remarks: Cowardin Co	ode: PEM	HGM: Riverine	Water Type:	RPWWD	
HYDROLOGY					
Wetland Hydrology Indicato	ors:			Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum	of one is required; che	ck all that apply)		Surface Soil	Cracks (B6)
Surface Water (A1)	—	_ True Aquatic Plants ((B14)	Sparsely Veg	etated Concave Surface (B8)
High Water Table (A2)	_	_ Hydrogen Sulfide Od	or (C1)	Drainage Pat	terns (B10)
Saturation (A3)		Oxidized Rhizosphere	es on Living Roots (C3)	Moss Trim Li	nes (B16)
Water Marks (B1)	—	Presence of Reduced	d Iron (C4)	Dry-Season \	Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reductio	on in Tilled Soils (C6)	Crayfish Burr	rows (C8)
Drift Deposits (B3)	—	I hin Muck Surface (C	57) 	Saturation vi	sible on Aerial Imagery (U9)
Algal Mat or Crust (D4)	—	Other (Explain in Ken	marks)	Stunted of St	
Iron Deposits (B5)	rial Imagary (PZ)			▲ Geomorphic Shellow Aqui	Position (D2)
Inundation Visible on Aer				Shallow Aqui	tard (D3)
Aquatic Fauna (B13)	39)			✓ Microtopogra	Test (D5)
Field Observations:					Test (D3)
Surface Water Present?	Yes No 🗸	Depth (inches):			
Water Table Present?	Yes V No	Depth (inches):	3		
Saturation Present?	Yes V No	_ Depth (inches):	0 Wetland I	Hydrology Presen	t? Yes 🖌 No
(includes capillary fringe) Describe Recorded Data (stre	eam gauge, monitoring	well, aerial photos, pre	vious inspections), if ava	ailable:	
Pomarka:					
Remarks.					

Sampling Point: W-WX5

,	Absolute	• Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30</u> ')	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				
3		·		Total Number of Dominant
3		·		Species Across All Strata. (B)
4		· <u> </u>		Percent of Dominant Species
5		·		That Are OBL, FACW, or FAC: 100 (A/B)
6				Provolance Index worksheet
7				
	0	= Total Cov	er	I otal % Cover of: Multiply by:
50% of total cover: 0	20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1.				FAC species x 3 =
2				FACU species x 4 =
2	-			UPL species x 5 =
3		· <u> </u>		Column Totals: (A) (B)
4		· - <u></u>		
5				Prevalence Index = B/A =
6		·		Hydrophytic Vegetation Indicators:
7				1 Danid Toot for Undranhutia Vegetation
8.				
9				2 - Dominance Test is >50%
··	0	- Total Cav	or	3 - Prevalence Index is ≤3.0 ⁺
50% of total cover: 0	20% of		0	4 - Morphological Adaptations ¹ (Provide supporting
So % of total cover:	20 % 01	IUIAI COVEI.		data in Remarks or on a separate sheet)
Herb Stratum (Plot size:)	50		EAC	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Microstegium vimineum	50	· ·		
2. Persicaria sagittata	30	<u> </u>	OBL	¹ Indiantara of hydria apil and watland hydrology must
3. Impatiens capensis	20		FACW	be present, unless disturbed or problematic.
_{4.} Solidago gigantea	10		FACW	Definitions of Four Vegetation Strate:
5				Demittoris of Four Vegetation Strata.
6		·		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				Herb - All herbaceous (non-woody) plants, regardless
	110	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 55	20% of	total cover:	22	
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in
1				neight.
l		·		
2		·		
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes <u>V</u> No
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet)			
Tremarks. (medde proto numbers nere of on a separate s	neet.)			

Profile Desc	cription: (Describe t	the dept	h needed to docun	nent the i	ndicator	or confirm	n the absence	e of indicators.)
Depth Matrix Redox Features								
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-5	10 YR 3/1	100					SCL	
5-16	10YR 3/1	80	10YR 5/6	20	С	М	CL	
						·		
						·		
	·	<u> </u>				·		
	·					·		
¹ Type: C=C	oncentration. D=Depl	etion. RM=	Reduced Matrix. MS	S=Masked	I Sand Gr	ains.	² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:		,				Indic	ators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2	2 cm Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Be	low Surfa	ce (S8) (N	ILRA 147,	148) (Coast Prairie Redox (A16)
Black Hi	istic (A3)		Thin Dark Su	rface (S9)	(MLRA 1	47, 148)		(MLRA 147, 148)
Hydroge	en Sulfide (A4)		Loamy Gleye	d Matrix (F2)		F	Piedmont Floodplain Soils (F19)
Stratified	d Layers (A5)		Depleted Mat	rix (F3)				(MLRA 136, 147)
2 cm Mu	uck (A10) (LRR N)		Kedox Dark S	Surface (F	6)		\	/ery Shallow Dark Surface (TF12)
Deplete	d Below Dark Surface	e (A11)	Depleted Dar	k Surface	(F7)		0	Other (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre	ssions (F	8)			
Sandy N	/lucky Mineral (S1) (L	.RR N,	Iron-Mangane	ese Mass	es (F12) (LRR N,		
MLR/ Sandy G	A 147, 148) Sloved Matrix (S4)		MLRA 130) co (E12) (6 122)	³ Inc	dicators of hydrophytic vogotation and
Sandy 6	Redox (S5)		Piedmont Flo	odolain S	oils (F19)	(MIRA 14	18) we	etland hydrology must be present
Stripped	Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) ur	hless disturbed or problematic.
Restrictive	Layer (if observed):			```	<i>,</i> ,			·
Type:								
Depth (in	ches):						Hydric Soi	l Present? Yes 🖌 No
Remarks:								

Wetland Photograph Page

Wetland ID <u>W-WX5</u> Date <u>09/01/2016</u>



Photograph Direction North

Comments:

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	39.463864	Lon.	-80.502581
STREAM/SITE ID AND SITE DESCRIPTION:					v	/-WX4, Temporary Access Road		
(% stream slope, watershed size {acreage}, unaltered 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-WX4	Emergent	0.0095	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made or Advanced Mitigation (Y or N)	י	Y
Total Impact		0.0095						
Wetland Ol	PART II -	Unit Scores				Estimated		
Wetland Cla	assification		Replacement Unit(s)	-		ILF Costs		
Total Scrub-Shrub			0.0095	-		\$570.00		
Total Forested			0	-		\$570.00		
Total Open Water			0					

Project/Site: MVP			City/C	_{County:} Wetzel		Sampling Date: 09/01/2016		
Applicant/Owner: MVP				Sampling Point: W-WX4				
Investigator(s): C. Vileno J	. Bittner		Secti	on, Township, Range; N	/A			
Landform (hillslope terrace e	tc). Depres	sion	l ocal rel	ief (concave, convex, no	ne). Concave	Slope (%): 0		
Subragion (I BB or MI BA):	 	Lot		Long: -80	.502593	Ordpe (76)		
	idmore gravel	Lai	. 00.400047	Long co		Datum: 14 (D CC		
Soil Map Unit Name: OK - OK	lumore graver	ly ioann			NWI classific	ation: NOTE		
Are climatic / hydrologic condi	itions on the site	e typical f	or this time of year? Y	′es No	(If no, explain in R	emarks.)		
Are Vegetation, Soil	, or Hydro	ology	significantly distur	bed? Are "Norma	I Circumstances" p	present? Yes <u>V</u> No		
Are Vegetation, Soil	, or Hydro	ology	naturally problem	atic? (If needed, o	explain any answe	rs in Remarks.)		
SUMMARY OF FINDIN	IGS – Attac	h site n	nap showing san	npling point location	ons, transects	, important features, etc.		
Hydrophytic Vegetation Pres Hydric Soil Present? Wetland Hydrology Present?	sent? Yo Yo ? Yo	es <u>/</u> es <u>/</u> es <u>/</u>	No No No	Is the Sampled Area within a Wetland?	Yes 🖌	No		
Remarks: Cowardin C	ode: PEM		HGM: Riverine	Water Type:	RPWWD			
HYDROLOGY								
Wetland Hydrology Indicat	tors:				Secondary Indica	tors (minimum of two required)		
Primary Indicators (minimum	<u>n of one is requi</u>	red; chec	ck 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 Od	or (C1)	V Drainage Pa	tterns (B10)		
Saturation (A3)			Oxidized Rhizospher	es on Living Roots (C3)	Moss Trim L	ines (B16)		
Water Marks (B1)			Presence of Reduced	d Iron (C4)	Dry-Season	Water Table (C2)		
Sediment Deposits (B2)		_	Recent Iron Reduction	on in Tilled Soils (C6)	Crayfish Bur	rows (C8)		
Drift Deposits (B3)			Thin Muck Surface (0	27)	Saturation V	sible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)			Other (Explain in Rer	narks)	Stunted or S	tressed Plants (D1)		
Iron Deposits (B5)			•••••• (✓ Geomorphic	Position (D2)		
Inundation Visible on Ae	erial Imagery (B	7)			Shallow Aqu	itard (D3)		
Water-Stained Leaves (R9)	• ,			Microtopographic Relief (D4)			
Aquatic Fauna (B13)					✓ FAC-Neutral	Test (D5)		
Field Observations:								
Surface Water Present?	Yes	No 🖌	Depth (inches):					
Water Table Present?	Yes 🖌	No	_ Depth (inches):	3				
Saturation Present?	Yes 🖌	No	Depth (inches):	0 Wetland H	Hydrology Preser	nt? Yes 🖌 No		
Describe Recorded Data (str	ream gauge, me	onitoring	well, aerial photos, pre	evious inspections), if ava	ailable:			
		_						
Remarks:								

Sampling Point: W-WX4

	Absoluto	- Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Demisert Oracies
1				Number of Dominant Species
			· ·	
2			·	Total Number of Dominant
3			. <u> </u>	Species Across All Strata: (B)
4				
5.				Thet Are ORL EACIAL or EAC: 100 (A/P)
6			- <u> </u>	That Ale OBL, FACW, OF FAC. (A/B)
-			·	Prevalence Index worksheet:
7			<u></u>	Total % Cover of Multiply by:
	0	= Total Cov	/er	
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			- <u> </u>	FACU species x 4 =
2			·	LIPL species x 5 -
3			- <u> </u>	
4			<u> </u>	Column Totals: (A) (B)
5				Dravalance Index D/A
6.				Prevalence index = B/A =
7			·	Hydrophytic Vegetation Indicators:
1			<u> </u>	1 - Rapid Test for Hydrophytic Vegetation
8			. <u> </u>	✓ 2 - Dominance Test is >50%
9			. <u> </u>	$3 - \text{Prevalence Index is } < 3.0^{1}$
	0	= Total Cov	/er	
50% of total cover: 0	20% of	total cover	: 0	4 - Morphological Adaptations (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
<u>A Microstegium vimineum</u>	50	~	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Persicaria sagittata	30	<u> </u>	OBL	¹ Indicators of hydric soil and wetland hydrology must
3. Impatiens capensis	15		FACW	be present, unless disturbed or problematic.
4. Cyperus esculentus	5		FACW	Definitions of Four Verstation Strate:
5 Carex lurida	5		OBI	Demittions of Four vegetation Strata:
<u></u>			OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				
9.				Sapling/Snrub – woody plants, excluding vines, less than 3 in DBH and greater than or equal to 3 28 ft (1
10			- <u> </u>	m) tall.
10			· ·	
11	405			Herb – All herbaceous (non-woody) plants, regardless
	105	= Total Cov	/er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>52.5</u>	20% of	total cover	: 21	Woody vine All woody vince greater than 2.39 ft in
Woody Vine Stratum (Plot size: 15')				height
1.				- reight
2			- <u> </u>	
2			·	
3			<u></u>	
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 sr	ieet.)			

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the i	ndicator	or confirn	n the absence o	of indicators.)
Depth Matrix Redox Features								
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 3/1	100					CL	
3-16	10YR 3/1	80	10YR 5/6	20	С	М	SCL	
						·		
						·		
						·		
						·		
						·	<u> </u>	
						·		
¹ Type: C=Ce	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	I Sand Gr	ains.	² Location: PL=	=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indicat	ors for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			<u> </u>	m Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Be	low Surfa	ce (S8) (N	ILRA 147,	, 148) Co	ast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Su	rface (S9)	(MLRA 1	47, 148)		(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix (F2)		Pie	edmont Floodplain Soils (F19)
Stratified	d Layers (A5)		Depleted Mat	rix (F3)				(MLRA 136, 147)
2 cm Mu	ick (A10) (LRR N)		Kedox Dark S	Surface (F	6)		Ve	ry Shallow Dark Surface (TF12)
Depleted	d Below Dark Surface	e (A11)	Depleted Dar	k Surface	(F7)		Oth	ner (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre	ssions (Fa	8)			
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangane	ese Mass	es (F12) (LRR N,		
MLRA	A 147, 148)		MLRA 130	6)				
Sandy G	eleyed Matrix (S4)		Umbric Surfa	ce (F13) (MLRA 13	6, 122)	³ Indic	ators of hydrophytic vegetation and
Sandy R	edox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	48) wetl	and hydrology must be present,
Stripped	Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) unle	ess disturbed or problematic.
Restrictive I	_ayer (if observed):							
Type:								
Depth (in	ches):						Hydric Soil F	²resent? Yes <u>✔</u> No
Remarks:								

Wetland ID <u>W-WX4</u> Date <u>09/01/2016</u>



Photograph Direction South

Comments: