ATTACHMENT D2

LEWIS COUNTY

WETLAND SWVM FORMS/WETLAND DELINEATION FORM/PHOTOS

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	39.111745	Lon.	-80.587352
STREAM/SITE ID AND SITE DESCR	RIPTION:			٧	V-B57, I	Pipeline ROW/Temporary Access Ro	ad	
(% stream slope, watershed size {a	creage}, unaltered	l or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-B57	Emergent	0.0336	Emergent					
						PART III - Advanced		n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0336				Fathurtad		
Wetland O		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent Total Scrub-Shrub			0.0336			\$2,016.00		
Total Forested			0			φ2,016.00		
Total Open Water			0	_				
otal Open water			U	<u></u>				

Project/Site: MVP	City/County: _	Lewis		Sampling Date: 06/06/2015		
Applicant/Owner: MVP				Sampling Point: W-B57		
Investigator(s): C. Ansari, M. Whitten, M. Brice	Section, Tow	nship, Range: N/				
Landform (hillslope, terrace, etc.): Terrace				Slone (%)· 2		
Subregion (LRR or MLRA): LRRN Lat						
Subregion (LRR or MLRA): LRRN Lat: 39.111774 Long: -80.587239 Datum: NAD 83 Soil Map Unit Name: Gilpin-Upshur silt loams, 25 to 35 percent slopes (GuE) NWI classification: None						
		_				
Are climatic / hydrologic conditions on the site typical for	· · · · · · · · · · · · · · · · · · ·			,		
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal	Circumstances" p	resent? Yes No		
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, e	explain any answei	rs in Remarks.)		
SUMMARY OF FINDINGS – Attach site n	nap showing sampling	point location	ns, transects	, important features, etc.		
Underskydie Versetsdier Breesst?	Ne					
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	No	Sampled Area	./			
Wetland Hydrology Present?	No within	a Wetland?	Yes	No		
Remarks:						
Cowardin Code: PEM HGM: SLOPE WT: N	IRPWW					
Information listed on this form represents th	ne data collected in 2015	. The wetland	d was revisited	on 10/01/2019. The		
presence of wetland hydrology, hydrophytic	vegetation, and hydric	soils was una	ble to be confi	med because the wetland		
was obstructed by timber matting.						
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indica	tors (minimum of two required)		
Primary Indicators (minimum of one is required; chec	k all that apply)		Surface Soil	Cracks (B6)		
Surface Water (A1)	Sparsely Veg	jetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Odor (C1)		Drainage Pat	terns (B10)		
Saturation (A3)	Moss Trim Li	nes (B16)				
Water Marks (B1)	Presence of Reduced Iron (C	4)	Dry-Season \	Water Table (C2)		
Sediment Deposits (B2)	Recent Iron Reduction in Tille	ed Soils (C6)	Crayfish Burr			
Drift Deposits (B3)	Thin Muck Surface (C7)			sible on Aerial Imagery (C9)		
	Other (Explain in Remarks)			ressed Plants (D1)		
Iron Deposits (B5)			Geomorphic			
Inundation Visible on Aerial Imagery (B7)			Shallow Aqui			
✓ Water-Stained Leaves (B9)				phic Relief (D4)		
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)		
Field Observations:	Danth (inches)					
	Depth (inches): Depth (inches):					
	Depth (inches):	Wetler d I	hadaalaan Daasaa	t? Yes No		
Saturation Present? Yes No	Depth (inches):	wettand n	iyarology Presen	tr res <u> </u>		
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous in	spections), if ava	ilable:			
Remarks:						
Slope wetland that forms above the road. T	he road has altered the	feature to follo	ow the road to	a low point then		
discharges downhill into sheet flow. There						

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

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: W-B57
20'		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?	<u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
2				
3				Total Number of Dominant Species Across All Strata: 2 (B)
4		-		Species Across Air Strata (b)
				Percent of Dominant Species That Are OBL FACW or FAC: 100% (A/B)
5				That Are OBL, FACW, or FAC: (A/B)
6		-		Prevalence Index worksheet:
7	0	T-1-1-0		Total % Cover of: Multiply by:
50% of total cover: 0		= Total Cov	_	OBL species x 1 =
	20% 01	total cover.		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')				FAC species x 3 =
1				FACU species x 4 =
2				UPL species x 5 =
3				Column Totals: (A) (B)
4		· 		Column rotals (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
•		= Total Cov	_	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:0	20% of	total cover:	0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				Problematic Hydrophytic Vegetation¹ (Explain)
1. Panicum virgatum	20		F <u>AC</u>	Problematic Hydrophytic Vegetation (Explain)
2. Carex vulpinoidea	15		OBL	1 adjectors of budge soil and watland budgelogy must
3. Juncus effusus	10		F <u>ACW</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Microstegium vimineum	45		F <u>AC</u>	Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7.				more in diameter at breast height (DBH), regardless of height.
8				
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.				
· ··	90	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		total cover:		or ores, and moosy plante loss than ores it tam
Woody Vine Stratum (Plot size: 15')	_			Woody vine – All woody vines greater than 3.28 ft in
1.				height.
2				
3.		-		
				Hydrophytic
5	0	Total Cov		Vegetation Present?
50% of total cover: 0		= Total Cov total cover:	_	
		total cover.		
Remarks: (Include photo numbers here or on a separate s	neet.)			

SOIL Sampling Point: W-B57

Depth Matrix Redox Features Color (moist) % Type¹ Loc² Texture Remarks	
0-12 10YR 4/2 90 10yr 4/6 10 C M/PL L	
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ² Location: PL=Pore Lining, M=Matrix.	. 3
Hydric Soil Indicators: Indicators for Problematic Hydric Soi	ils":
Histosol (A1) Dark Surface (S7) 2 cm Muck (A10) (MLRA 147)	
Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Redox (A16)	
Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148)	
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (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)	
Depleted Below Bark Surface (A11) Depleted Bark Surface (17) Other (Explain in Remarks) 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) ³ Indicators of hydrophytic vegetation a	and
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.	
Restrictive Layer (if observed):	
Type:	
Depth (inches): Hydric Soil Present? Yes V No	
Remarks:	
Nemains.	

Wetland Photograph Page

Wetland ID W-B57



Photograph Direction South

Date: 06/06/2015

Comments: 2015 wetland delineation.



Photograph Direction West

Date: 10/01/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	City/County: Lewis	Sampling Date: 06/06/2015
Applicant/Owner: MVP	. ,	State: WV Sampling Point: W-B57-UP
Investigator(s): C. Ansari, M. Whitten, M. Bi	rice Section, Township, Range	
Landform (hillslope, terrace, etc.): Terrace		
Subregion (LRR or MLRA): LRRN		-80.587102° Datum: NAD 83
Soil Map Unit Name: Gilpin-Upshur silt loam:		
Are climatic / hydrologic conditions on the site typic	_	
		rmal Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology		ed, explain any answers in Remarks.)
		ations, transects, important features, etc.
	V No Is the Semular Ar	, , , ,
	No.	
	No within a Wetland?	Yes No
Upland		
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; of	check all that apply)	Surface Soil Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Saturation (A3)	Oxidized Rhizospheres on Living Roots (C	
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6)	
Drift Deposits (B3) Algal Mat or Crust (B4)	Thin Muck Surface (C7) Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)Stunted or Stressed Plants (D1)
Iron Deposits (B5)	Other (Explain in Kemarks)	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):	
Water Table Present? Yes No	Depth (inches):	
Saturation Present? Yes No (includes capillary fringe)	Depth (inches): Wetlan	nd Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitor	ing well, aerial photos, previous inspections), if	available:
Remarks:		
Upland plot		

Sampling	Point: W-B57-UP1
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Troo Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:
Tiee Stratum (Flot Size)		Species?		Number of Dominant Species
1. Quercus alba	30		<u>FACU</u>	That Are OBL, FACW, or FAC:3 (A)
2. Acer rubrum	5		FAC	Total Number of Deminent
3				Total Number of Dominant Species Across All Strata: 4 (B)
4				(2)
				Percent of Dominant Species That Are OBL_FACW_or FAC: 75% (A/B)
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
4-7		= Total Cov		
50% of total cover: <u>17.</u>	20% of	total cover		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Rosa virginiana	5		FAC	FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
				Column Totals: (A) (B)
4				
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8			. <u> </u>	✓ 2 - Dominance Test is >50%
9				
	_	= Total Cov	er er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 2.5				4 - Morphological Adaptations ¹ (Provide supporting
E!	2070 01	total oover		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5 1. Vernonia gigantea	15	~	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
			F <u>AC</u>	
2. Apocynum androsaemifolium	5		F <u>ACU</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Microstegium vimineum	30		F <u>AC</u>	be present, unless disturbed or problematic.
4. Panicum virgatum	10		F <u>AC</u>	Definitions of Four Vegetation Strata:
5. Oxalis corniculata	10		FACU	Johnson G. F. Gar. 10 gotamon Grana.
6. Trifolium pratense	5		FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				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
	75	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>37.5</u>	5 20% of	total cover	15	We advise All we advise a property them 2.00 ft in
Woody Vine Stratum (Plot size:15')				Woody vine – All woody vines greater than 3.28 ft in height.
1				noight.
2				
3	<u> </u>	-		
4				Hydrophytic
5				Vegetation
_		= Total Cov	_	Present? Yes No
50% of total cover:0	20% of	total cover	. 0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

SOIL Sampling Point: W-B57-UP1

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator	or confirm	the abser	nce of indicators.)
Depth	Matrix		Redo	x Feature:	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-11	10yr 5/3	90	7.5yr 5/6	10	C	M	L	
11-16	10yr 4/3	100					L	
							-	
					-	-	-	
						· ——	-	
					·			
							-	
							-	
			_				-	
							-	
1Type: C-C	oncentration, D=Depl	etion RM-F	Peduced Matrix MS	S-Maskad	I Sand Gr	aine	² Location	: PL=Pore Lining, M=Matrix.
Hydric Soil		elion, Kivi=r	Reduced Matrix, Mi	3=IVIASKEU	i Sanu Gi	allis.		dicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(97)				2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		ce (S8) (N	/II RA 147.	148)	Coast Prairie Redox (A16)
Black Hi			Thin Dark Su				,	(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye	, ,	•	,,		Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma		,			(MLRA 136, 147)
2 cm Mu	ıck (A10) (LRR N)		Redox Dark	Surface (F	- 6)			_ Very Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Da					Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre					
	lucky Mineral (S1) (L	RR N,	Iron-Mangan		es (F12) (LRR N,		
	A 147, 148)		MLRA 13	•			3	
	Gleyed Matrix (S4)		Umbric Surfa					Indicators of hydrophytic vegetation and
-	Redox (S5) Matrix (S6)		Piedmont Florage Red Parent M					wetland hydrology must be present, unless disturbed or problematic.
	Layer (if observed):		Neu Faieill i	viateriai (i	Z1) (IVILIN	A 121, 141	') 	unless disturbed of problematic.
Type: Ro								
	ches): 16						Usalaia C	Sail Brasant2 Vos No V
	cnes): 10						nyaric s	Soil Present? Yes No
Remarks:								

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	39.095056	Lon.	-80.584787
STREAM/SITE ID AND SITE DESCR	IPTION:				*	W-K33-PEM, 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-K33	Emergent	0.1544	Emergent					
						PART III - Advanced		on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.1544						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.1544			#0.004.00		
Total Scrub-Shrub			0	_		\$9,264.00		
Total Forested			0					
Total Open Water			0					

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 05/28/2015
Applicant/Owner: MVP		,			Sampling Point: W-K33-PSS
Investigator(s): J. Hart, D. S	antillo, J. Potrikus	Section	on, Township, Range: N/		
Landform (hillslope, terrace, etc					Slope (%): 1
Subregion (LRR or MLRA): LF					Datum: NAD 83
Soil Map Unit Name: Lobdell-			=	NWI classific	
Are climatic / hydrologic condition		or this time of year? Y			
·	* *	· ·			present? Yes No
Are Vegetation, Soil				explain any answe	
_					, important features, etc.
Hydrophytic Vegetation Prese Hydric Soil Present?	ent? Yes Yes	No No	Is the Sampled Area		
Wetland Hydrology Present?	Yes V	No	within a Wetland?	Yes	No
Remarks:	100				
2015 comments: Wetland plot feature occurs in cleared pastu Information listed on this form hydrophytic vegetation, and hy	re area. represents the data coll	ected in 2015. The we	tland was revisited on 09	9/20/2019. Presen	ce of wetland hydrology,
HYDROLOGY					
Wetland Hydrology Indicato	rs:			Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum o		k all that apply)		Surface Soil	·
Surface Water (A1)	-	True Aquatic Plants (B14)		getated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Pa	
Saturation (A3)			es on Living Roots (C3)	_	
Water Marks (B1)	<u>—</u>	Presence of Reduced	l Iron (C4)	Dry-Season	Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reduction	n in Tilled Soils (C6)	Crayfish Bur	rows (C8)
Drift Deposits (B3)	_	Thin Muck Surface (C	27)	Saturation V	isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	<u>—</u>	Other (Explain in Rer	narks)	Stunted or S	tressed Plants (D1)
Iron Deposits (B5)				Geomorphic	Position (D2)
Inundation Visible on Aeri	al Imagery (B7)			Shallow Aqu	itard (D3)
Water-Stained Leaves (B	9)				aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:					
Surface Water Present?	Yes No		0		
Water Table Present?	Yes No No		8		
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):	2 Wetland H	lydrology Preser	nt? Yes V No No
Describe Recorded Data (stre	am gauge, monitoring	well, aerial photos, pre	vious inspections), if ava	ilable:	
Remarks:					

Sampling Point: W-K33-PSS	Sampling	Point W-I	K33-PSS
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30	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		Number of Dominant Species
1. Salix nigra	20		OBL	That Are OBL, FACW, or FAC:5 (A)
2				Total Number of Dominant
3				Species Across All Strata: 5 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC:100(A/B)
6				That Are OBE, I AGW, OF I AG.
7				Prevalence Index worksheet:
/·	20	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 10				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')	20 /0 01	total cover.		FACW species x 2 =
1. Salix nigra	60	~	OBL	FAC species x 3 =
2. Sambucus nigra	10			FACU species x 4 =
			FAC	
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
9.				✓ 2 - Dominance Test is >50%
<u> </u>	70	= Total Cov		3 - Prevalence Index is ≤3.0 ¹
50% of total cover:35		total cover:		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')		10101 00101		data in Remarks or on a separate sheet)
1. Leersia oryzoides	30	~	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Polygonum argyrocoleon	15			
	15	~	OBL_	¹ Indicators of hydric soil and wetland hydrology must
3. Chrysosplenium americanum			OBL	be present, unless disturbed or problematic.
4. Impatiens capensis	10		F <u>ACW</u>	Definitions of Four Vegetation Strata:
5. Carex vulpinoidea	10		<u>OBL</u>	- W
6. Amphicarpaea bracteata	10		F <u>AC</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
9.				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11.				,
11	90	T 0		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		= Total Cov total cover:		of size, and woody plants less than 3.26 it tall.
	20% 01	total cover.		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes V No No
50% of total cover:0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			
Remaining cover in herb stratum is bareground.				

SOIL Sampling Point: W-K33-PSS

Profile Desc	cription: (Describe to	o the depti	n needed to docur	nent the i	ndicator	or confirn	n the ab	sence of indicat	tors.)
Depth	Matrix		Redo	x Feature:	S				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		ure	Remarks
0-16	10YR 4/2	95	10YR 4/6	5	С	M	С	L	
					-				
	·								
							-		
					·-		· ·		
			-						
¹ Type: C=C	oncentration, D=Deple	etion, RM=I	Reduced Matrix, MS	S=Masked	Sand Gr	ains.	² Locat	ion: PL=Pore Lir	ning, M=Matrix.
Hydric Soil								Indicators for F	Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)				2 cm Muck	(A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be	. ,	ce (S8) (N	ILRA 147,	, 148)		ie Redox (A16)
	istic (A3)		Thin Dark Su				,	(MLRA 1	
	en Sulfide (A4)		Loamy Gleye	. ,	•				loodplain Soils (F19)
Stratified	d Layers (A5)		Depleted Ma					(MLRA 1	36, 147)
2 cm Mu	uck (A10) (LRR N)		Redox Dark	Surface (F	⁻ 6)			Very Shallo	w Dark Surface (TF12)
	d Below Dark Surface	(A11)	Depleted Dar					Other (Expl	ain in Remarks)
	ark Surface (A12)		Redox Depre						
	Mucky Mineral (S1) (L l	RR N,	Iron-Mangan		es (F12) (LRR N,			
	A 147, 148)		MLRA 13					3	
	Gleyed Matrix (S4)		Umbric Surfa						hydrophytic vegetation and
-	Redox (S5)		Piedmont Flo					-	ology must be present,
	Matrix (S6)		Red Parent N	/laterial (F	21) (WLR	A 127, 14	<u>/)</u>	uniess distur	bed or problematic.
	Layer (if observed):								
Type:									
Depth (in	ches):						Hydr	ic Soil Present?	Yes No
Remarks:									
Soil very lo	ose and wet belo	w 12 in							

Wetland Photograph Page

Wetland ID W-K33-PSS



Photograph Direction West

Date: 05/28/2015

Comments: 2015 wetland delineation.



Photograph Direction West

Date: 09/20/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	City/C	County: Lewis		Sampling Date: 05/28/2015		
Applicant/Owner: MVP			State: WV	Sampling Point: W-K33-UP		
Investigator(s): J. Hart, D. Santillo, J. Po						
Landform (hillslope, terrace, etc.): Hillslope				Slope (%): 3		
Subregion (LRR or MLRA): LRRN						
Soil Map Unit Name: Lobdell-Holly silt loa						
Are climatic / hydrologic conditions on the site						
Are Vegetation, Soil, or Hydrok				<u>.</u>		
Are Vegetation, Soil, or Hydrok						
SUMMARY OF FINDINGS – Attach						
				,		
	s No s No	Is the Sampled Area				
	s No	within a Wetland?	Yes	No		
Remarks:	<u> </u>					
Upland Upland plot paired with W-K33(PSS)	occurs on hillslope bety	veen road and wetlar	nd			
opiana piet panea wiiii W Roo(i Go)	occaro on rimolopo bott	voon road and world	iu.			
HYDROLOGY						
Wetland Hydrology Indicators:				ors (minimum of two required)		
Primary Indicators (minimum of one is require			Surface Soil Cracks (B6)			
Surface Water (A1)	True Aquatic Plants		Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)	Hydrogen Sulfide Od		Drainage Pat			
Saturation (A3)	Oxidized Rhizospher		Moss Trim Lir			
Water Marks (B1)	Presence of Reduce			Vater Table (C2)		
Sediment Deposits (B2)	Recent Iron Reduction		Crayfish Burr			
Drift Deposits (B3)	Thin Muck Surface (Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4) Iron Deposits (B5)	Other (Explain in Re	ilaiks)	Geomorphic I	ressed Plants (D1)		
Inundation Visible on Aerial Imagery (B7)	' \	-	Geomorphic i			
Water-Stained Leaves (B9)	,	-	Microtopographic Relief (D4)			
Aquatic Fauna (B13)		-	FAC-Neutral			
Field Observations:		<u> </u>				
	No Depth (inches):					
	No Depth (inches):					
	No Depth (inches):		drology Present	t? Yes No ✓		
(includes capillary fringe) Describe Recorded Data (stream gauge, mor	nitoring well aerial photos pre	evious inspections) if avail	ahle.			
Describe Resorded Data (stream gauge, mor	mitoring won, admar priotos, pro	rious inspections), ii avaii	ubio.			
Remarks:						
No hydrology						

Sampling	Point: W-K33-UP1
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Troo Stratum (Plot size: 30'	Absolute		Indicator	Dominance Test worksheet:
Tiee Stratum (Flot size)		Species?		Number of Dominant Species _
1. Robinia pseudoacacia	20		<u>FACU</u>	That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 10 (B)
4				
5		-		Percent of Dominant Species That Are OBL FACW or FAC: 50 (A/B)
				That Are OBL, FACW, or FAC: (A/B)
6		-		Prevalence Index worksheet:
7	20			Total % Cover of: Multiply by:
50% - (() () - () - () - ()		= Total Co		OBL species x 1 =
50% of total cover: 10	20% of	total cove	r: _	FACW species x 2 =
Sapinig/Grido Gratum (1 lot size:)	40	,		
1. Juglans nigra	40		FACU_	FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Developed by S/A
6		-		Prevalence Index = B/A =
		-		Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8		-		2 - Dominance Test is >50%
9	40			3 - Prevalence Index is ≤3.0 ¹
		= Total Co		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 20	20% of	total cove	r: <u>8</u>	data in Remarks or on a separate sheet)
Herb Stratum (Plot size:5')				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Bromus inermis	20		<u>UPL</u>	1 Toblematic Trydrophytic Vegetation (Explain)
2. Dichanthelium clandestinum	15		F <u>AC</u>	1
3. Solidago canadensis	15	~	FACU_	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Impatiens capensis	10	~	FACW	
5. Boehmeria cylindrica	10	~	FACW	Definitions of Four Vegetation Strata:
6. Stellaria media	10		UPL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Panicum capillare	10			more in diameter at breast height (DBH), regardless of
8. Amphicarpaea bracteata	10		FAC	height.
· ·			FAC	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	total cover	r: <u>20</u>	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				· · · · · · · · · · · · · · · · · · ·
2.				
3.		-		
	-	-		
4				Hydrophytic
5	0			Vegetation Present? Yes No ✔
500/ (/ /)		= Total Co	_	1103cm: 103 NO
50% of total cover:0		total cove	r:	
Remarks: (Include photo numbers here or on a separate s	heet.)			

SOIL Sampling Point: W-K33-UP1

Profile Desc	ription: (Describe t	o the depth	needed to docun	ent the ir	ndicator	or confirm	the absence	e of indicat	ors.)		
Depth	Matrix		Redox	c Features	5						
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	_	Remark	KS	
0-16	10YR 4/3	100					CL				
								_			
·								_			
								_			
								_			
								_			
											
¹ Type: C=Co	oncentration, D=Depl	etion, RM=R	educed Matrix, MS	=Masked	Sand Gra	ins.		PL=Pore Lin			
Hydric Soil I	ndicators:						Indi	cators for P	roblematic	Hydric Soi	ls³:
Histosol	(A1)		Dark Surface	(S7)				2 cm Muck	(A10) (MLR	A 147)	
Histic Ep	pipedon (A2)		Polyvalue Be	low Surfac	ce (S8) (M	LRA 147,	148)	Coast Prairi	e Redox (A1	16)	
Black Hi	stic (A3)		Thin Dark Su	rface (S9)	(MLRA 1	47, 148)		(MLRA 1	47, 148)		
	n Sulfide (A4)		Loamy Gleye		=2)		_	Piedmont Fl		ils (F19)	
	I Layers (A5)		Depleted Mat					(MLRA 1			
	ck (A10) (LRR N)		Redox Dark S	•	,			Very Shallo		. ,	
	Below Dark Surface	(A11)	Depleted Dar				_	Other (Expla	ain in Remai	rks)	
	rk Surface (A12)		Redox Depre								
	lucky Mineral (S1) (L	RR N,	Iron-Mangane		es (F12) (I	LRK N,					
	147, 148)		MLRA 130		MI DA 40	c 400\	31				
	leyed Matrix (S4) edox (S5)		Umbric Surfa Piedmont Flo					ndicators of hi vetland hydro		-	ina
	Matrix (S6)		Red Parent M					vetiand nydr inless disturl			
	-ayer (if observed):		Red Falent N	iateriai (F2	ZI) (WILK	4 121, 141	1	ii iiess uistuii	bed of proble	emanc.	
	Layer (II Observed).										
Type:			<u> </u>								
	ches):						Hydric Sc	il Present?	Yes	No _	
Remarks:											

Project/Site: MVP		City/C	ounty: Lewis		Sampling Date: 05/28/2015		
Applicant/Owner: MVP					Sampling Point: W-K33-PEM		
Investigator(s): P johnson Section, Township, Range: N/A							
Landform (hillslope, terrace, etc.)					Slope (%): 0		
Subregion (LRR or MLRA): LR					Datum: NAD 83		
Soil Map Unit Name: Lobdell-I							
Are climatic / hydrologic condition							
Are Vegetation, Soil					present? Yes No		
Are Vegetation, Soil							
-				explain any answe	s, important features, etc.		
			ipinig point location	ono, transcott	, important reatures, etc.		
Hydrophytic Vegetation Presen			Is the Sampled Area				
Hydric Soil Present?		No	within a Wetland?	Yes	No		
Wetland Hydrology Present?	Yes	No					
Remarks: Cowardin Code: PEM HG	M· Riverine WT	· RPWWD					
			n 2015. The wetland	d was revisited	I on 09/20/2019. Presence		
of wetland hydrology, hyd	•						
Supplement delineation m		ion, and mydric son	was committed asi	ing the OOAOL	Livii Regional		
HYDROLOGY	letriodology.						
Wetland Hydrology Indicator	e:			Secondary Indica	ators (minimum of two required)		
Primary Indicators (minimum of		ack all that apply)			_		
Surface Water (A1)	i one is required, cri	True Aquatic Plants (D14)	Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)	_	Hydrogen Sulfide Ode		✓ Drainage Patterns (B10)			
Saturation (A3)	-	Oxidized Rhizosphere					
Water Marks (B1)	_	_ Presence of Reduced	=		Water Table (C2)		
Sediment Deposits (B2)	_	Recent Iron Reductio		Crayfish Burrows (C8)			
Drift Deposits (B3)		Thin Muck Surface (C		Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	_	Other (Explain in Ren			tressed Plants (D1)		
Iron Deposits (B5)				✓ Geomorphic	Position (D2)		
Inundation Visible on Aeria	al Imagery (B7)			Shallow Aqu	itard (D3)		
Water-Stained Leaves (B9)			Microtopogra	aphic Relief (D4)		
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)		
Field Observations:							
Surface Water Present?		Depth (inches):					
Water Table Present?		Depth (inches):					
Saturation Present?	Yes No	Depth (inches):	Wetland I	Hydrology Preser	nt? Yes No		
(includes capillary fringe) Describe Recorded Data (strea	ım gauge, monitorin	g well, aerial photos, pre	vious inspections), if ava	ailable:			
(33.,	5 - , , , , , , , ,	.,,				
Remarks:							

Sampling	Point:	W-K33-PEM
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30'	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:30') 1	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC:2 (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: 67 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	_	OBL species x 1 =
50% of total cover:0_	20% of	total cover	:0	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Dravalance Index D/A
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9.				✓ 2 - Dominance Test is >50%
9	0	= Total Cov		3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 0		total cover	_	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')	20 /0 01	total cover		data in Remarks or on a separate sheet)
1. Bromus inermus	30	~	UPL	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Eleocharis tenuous	25			
	25		FACW_	¹ Indicators of hydric soil and wetland hydrology must
3. Scirpus atrovirens			FACW_	be present, unless disturbed or problematic.
4. Carex vulpinoidea	15		FACW_	Definitions of Four Vegetation Strata:
5. Juncus bufonius	15		F <u>ACW</u>	Total Washington and allowed to 10 (7.0 and an
6. Poa pratensis	5		F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				Canling/Chaule Mandonlagte avaluation visco lass
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11.				Harb All barbassas (ran was do) plants reportless
	115	= Total Cov	/or	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>57.5</u>	20% of	total cover	23	
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in
1				height.
2.				
3		-		
4				Hydrophytic
5	0			Vegetation Present? Yes No
50% of total cover: 0		= Total Cover	_	100 100
		total cover		
Remarks: (Include photo numbers here or on a separate s	neet.)			

SOIL Sampling Point: W-K33-PEM

Profile Desc	cription: (Describe t	o the dept	h needed to docur	nent the i	ndicator	or confirn	n the abs	sence of indica	ators.)	
Depth	Matrix		Redo	x Feature	S					
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Text		Remarks	
0-12	10 YR 4/2	85	10 YR 4/6	15	С	PL	SC	L		
12+									Bedroc	k
					-		-		Beardo	
										_
					-					
										_
					-		-			
¹ Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gr	ains.	² Locati	on: PL=Pore L	ining, M=Matrix.	
Hydric Soil								Indicators for	Problematic H	ydric Soils³:
Histosol	(A1)		Dark Surface	(S7)				2 cm Mucl	k (A10) (MLRA 1	147)
	pipedon (A2)		Polyvalue Be		ce (S8) (N	ILRA 147,	, 148)		irie Redox (A16)	
	istic (A3)		Thin Dark Su				•		147, 148)	
Hydroge	en Sulfide (A4)		Loamy Gleye	d 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 Shall	ow Dark Surface	e (TF12)
	d Below Dark Surface	(A11)	Depleted Dar					Other (Exp	olain in Remarks	5)
	ark Surface (A12)		Redox Depre							
	Nucky Mineral (S1) (L	RR N,	Iron-Mangan		es (F12) (LRR N,				
	A 147, 148)		MLRA 13					3		
	Bleyed Matrix (S4)		Umbric Surfa						f hydrophytic veg	
-	Redox (S5)		Piedmont Flo					-	drology must be	-
	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 147	7)	unless distu	irbed or problem	atic.
	Layer (if observed):									
Type: Be										
Depth (in	_{ches):} <u>12</u>		<u></u>				Hydri	c Soil Present	? Yes <u>/</u>	No
Remarks:										

Wetland Photograph Page

Wetland ID W-K33-PEM



Photograph Direction SE

Date: 05/28/2015

Comments: 2015 wetland delineation.



Photograph Direction South

Date: 09/20/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 05/28/2015
Applicant/Owner: MVP					Sampling Point: W-K33-UP
Investigator(s): P. Johnson, C. W	eber, N. Katsi				
Landform (hillslope, terrace, etc.): Va					Slope (%): 0
Subregion (LRR or MLRA): LRRN			•		
Soil Map Unit Name: Lobdell-Holly					
Are climatic / hydrologic conditions on	the site typical fo				
Are Vegetation, Soil, c	or Hydrology	significantly distur	bed? Are "Normal	Circumstances" p	resent? Yes No
Are Vegetation, Soil, c				· explain any answer	
SUMMARY OF FINDINGS –					
Hydrophytic Vegetation Present?	Yes	No V			
Hydric Soil Present?	Yes		Is the Sampled Area	Vaa	No
Wetland Hydrology Present?	Yes	_	within a Wetland?	res	NO
Upland					
HYDROLOGY				O transfer d'ann	() () () () () () () () () ()
Wetland Hydrology Indicators:	ta as as too dead about	-II di -tl-A			tors (minimum of two required)
Primary Indicators (minimum of one	•		D4.4)	Surface Soil (
Surface Water (A1)		True Aquatic Plants (etated Concave Surface (B8)
High Water Table (A2) Saturation (A3)		Hydrogen Sulfide Odd Oxidized Rhizosphere	es on Living Roots (C3)	Drainage Pate Moss Trim Lir	
Water Marks (B1)		Presence of Reduced	= : : :		Vater Table (C2)
Sediment Deposits (B2)	·	Recent Iron Reductio	, ,	Crayfish Burre	
Drift Deposits (B3)		Thin Muck Surface (C		-	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Ren			ressed Plants (D1)
Iron Deposits (B5)				Geomorphic I	Position (D2)
Inundation Visible on Aerial Image	gery (B7)			Shallow Aquit	ard (D3)
Water-Stained Leaves (B9)					phic Relief (D4)
Aquatic Fauna (B13)			ľ	FAC-Neutral	Test (D5)
Field Observations:	/	Death (tealers)			
		Depth (inches):			
		Depth (inches):		lydrology Present	t? Yes No 🗸
(includes capillary fringe)		. , ,			ir res No
Describe Recorded Data (stream ga	uge, monitoring w	ell, aerial photos, pre	vious inspections), if ava	ilable:	
Remarks:					
. tomano.					

Sampling	Point: W-K33-UP1
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Tree Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:		
Tiee Stratum (Flot Size)	% Cover		<u>Status</u>	Number of Dominant Species		
1				That Are OBL, FACW, or FAC: (A)		
2				Total Number of Dominant		
3				Species Across All Strata:2 (B)		
4						
5				Percent of Dominant Species That Are OBL, FACW, or FAC:0 (A/B)		
6				That Are OBL, FACW, OF FAC.		
				Prevalence Index worksheet:		
7	0	Tatal Car		Total % Cover of: Multiply by:		
50% of total cover: 0		= Total Cov		OBL species x 1 =		
451	20 /6 01	total cover		FACW species x 2 =		
Caping/ornab oratain (1 lot 3126				FAC species x 3 =		
2		-		FACU species x 4 =		
3				UPL species x 5 =		
4				Column Totals: (A) (B)		
5				Prevalence Index = B/A =		
6						
7				Hydrophytic Vegetation Indicators:		
8				1 - Rapid Test for Hydrophytic Vegetation		
9.				2 - Dominance Test is >50%		
<u> </u>	0 .	= Total Cov		3 - Prevalence Index is ≤3.0 ¹		
50% of total cover:0				4 - Morphological Adaptations ¹ (Provide supporting		
Herb Stratum (Plot size: 5')	2070 01	10101 00101		data in Remarks or on a separate sheet)		
1. Bromus inermus	35	~	UPL	Problematic Hydrophytic Vegetation ¹ (Explain)		
2. Anthozanthum odoratum	30	<u></u>				
3. Trifolium pratense	15		<u>UPL</u>	¹ Indicators of hydric soil and wetland hydrology must		
	15		<u>UPL</u>	be present, unless disturbed or problematic.		
4. Trifolium repens			<u>UPL</u>	Definitions of Four Vegetation Strata:		
5. Solanum carolinense	15	-	<u>UPL</u>	Tree Meady plants avaluding vines 2 in (7.6 cm) or		
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of		
7				height.		
8				Senting/Shrub Weedy plants evaluating vines less		
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.				Harb. All back assess (as a superd National assessment		
· · ·	110 .	= Total Cov	uor .	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.		
50% of total cover: 55	20% of	total cover	22	of oles, and woody planto loss than oles it tail.		
Woody Vine Stratum (Plot size: 15')		1010. 0010.		Woody vine – All woody vines greater than 3.28 ft in		
				height.		
1						
2		-				
3						
4				Hydrophytic		
5				Vegetation		
	0	= Total Cov	er _	Present? Yes No		
50% of total cover:0	20% of	total cover	: 0			
Remarks: (Include photo numbers here or on a separate s	heet.)					

SOIL Sampling Point: W-K33-UP1

Profile Desc	cription: (Describe t	o the depth	needed to docum	nent the i	indicator	or confirm	n the absence	of indicators.)
Depth	Matrix		Redo	x Feature	S1	. 2		
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-14	10YR 4/4	99	10YR 4/6	1	<u>C</u>	PL	SL	
¹ Type: C=C	oncentration, D=Depl	etion, RM=R	educed Matrix, MS	S=Masked	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil								ators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2	cm Muck (A10) (MLRA 147)
Histic E _l	oipedon (A2)		Polyvalue Be	low Surfa	ce (S8) (I	VILRA 147,	148) C	Coast Prairie Redox (A16)
	istic (A3)		Thin Dark Su			147, 148)		(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye		(F2)		P	riedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Mat					(MLRA 136, 147)
	uck (A10) (LRR N)	(444)	Redox Dark S					(ery Shallow Dark Surface (TF12)
	d Below Dark Surface ark Surface (A12)	e (A11)	Depleted Dar Redox Depre					Other (Explain in Remarks)
	Mucky Mineral (S1) (L	RR N	Iron-Mangan			IRRN		
	A 147, 148)	1111 14,	MLRA 13		C3 (1 12) (LIXIX IV,		
	Gleyed Matrix (S4)		Umbric Surfa		(MLRA 13	36. 122)	³ Ind	icators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo					etland hydrology must be present,
	Matrix (S6)		Red Parent N					less disturbed or problematic.
Restrictive	Layer (if observed):							
Type:								
Depth (in	ches):		<u></u>				Hydric Soil	Present? Yes No
Remarks:								

ON:	Mountain Valley Pipeline				39.093945	Lon.	-80.58546
				W-	-K34-PEM, Timber Mat Crossing		
age}, unaltered	or impairments)						
8/10/	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetland Indicators							
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0253	Emergent					
					PART III - Advanced I	Mitigatio	n
					Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
	0.0253						
	Init Scores						
ification					ILF Costs		
					¢4 E40 00		
		-		L	\$1,518.00		
		The state of the s					
	8/10/ PART I - Wetl Impact Wetland classification Emergent	8/10/2015 PART I - Wetland Indicators Impact	8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0253 Emergent 0.0253 PART II - Unit Scores	8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0253 Emergent 0.0253 PART II - Unit Scores fication Replacement Unit(s) 0.0253 0 0	R/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0253 Emergent 0.0253 PART II - Unit Scores fication Replacement Unit(s) 0.0253 0 0	### Recipitation Past 48 Hrs: ### PART II - Wetland Indicators Impact Impacts Wetland Classification	8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts (acreage) Wetland Classification Emergent 0.0253 Emergent PART III - Advanced Mitigation (Y or N) PART III - Unit Scores Impact Method (acreage) Wetland (acreage) Sustainable Determination Made on Advanced Mitigation (Y or N) PART III - Unit Scores Impact Method (acreage) Wetland (acreage) Wetland (Classification) PART III - Advanced Mitigation (Y or N) Impact Method (acreage) Wetland (Classification) PART III - Advanced Mitigation (Y or N) Impact Method (acreage) Wetland (Classification) PART III - Unit Scores Impact Method (acreage) Wetland (Classification) Impact Method (acreage) Wetland (Classification) PART III - Advanced Mitigation (Y or N) Impact Method (Acreage) Wetland (Classification) PART III - Unit Scores Impact Method (acreage) Wetland (Classification) Impact Method (acreage) Wetland (Classification) PART III - Unit Scores Impact Method (acreage) Wetland (Classification) Impact Method (acreage) Wetland (Classification) PART III - Unit Scores Impact Method (acreage) Wetland (Classification) Impact Method (acreage) Wetland (Classification) PART III - Unit Scores Impact Method (acreage) Wetland (Classification) Impact Method (acreage) Wetland (Classification) Impact Method (acreage) Wetland (Classification) PART III - Unit Scores Impact Method (Acreage) Wetland (Classification) Impact Method (Acreage) Wetland (Acreage) Wetland (Acreage) Impact Method (Acreage) Wetland (Acreage) Impact Metho

Project/Site: MVP		City/County: Lev	wis	s	ampling Date: 05/28/2015
Applicant/Owner: MVP			State		Sampling Point: W-K34-PEN
Investigator(s): P. Johnson, C. We	eber, N. Katsiafica	S Section. Townsh			
Landform (hillslope, terrace, etc.): Va			-	ncave	Slope (%): 0
Subregion (LRR or MLRA): LRRN	Lat: 39.0	93845			Datum: NAD 83
Soil Map Unit Name: Vandalia silt I	oam. 15 to 25 perc	cent slopes			
Are climatic / hydrologic conditions on					
·	* *	*			
Are Vegetation, Soil, o					
Are Vegetation, Soil, o			(If needed, explain a	-	
SUMMARY OF FINDINGS – A	Attach site map si	nowing sampling po	int locations, tr	ansects, i	mportant features, etc.
Hydrophytic Vegetation Present?	Yes No_	Is the Sa	npled Area		
Hydric Soil Present?	Yes No_	within a \	-	res	No
Wetland Hydrology Present?	Yes V No				
Remarks:					
Cowardin Code: PEM HGM: Slope					
WT: RPWWD					
VVI. KEVVVVD					
HYDROLOGY					
Wetland Hydrology Indicators:			Second	dary Indicato	rs (minimum of two required)
Primary Indicators (minimum of one i	s required; check all tha	at apply)		ırface Soil Cr	·
✓ Surface Water (A1)	True <i>F</i>	Aquatic Plants (B14)			ated Concave Surface (B8)
High Water Table (A2)	Hydro	gen Sulfide Odor (C1)	✓ Dr	ainage Patte	
Saturation (A3)		ed Rhizospheres on Living	· · · —	oss Trim Line	
Water Marks (B1)		nce of Reduced Iron (C4)			ater Table (C2)
Sediment Deposits (B2)		t Iron Reduction in Tilled S		ayfish Burrov	
Drift Deposits (B3)		fluck Surface (C7)			ble on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other	(Explain in Remarks)		unted or Stre eomorphic Po	ssed Plants (D1)
Iron Deposits (B5) Inundation Visible on Aerial Image	vory (P7)			eomorpnic Po iallow Aquitai	
Water-Stained Leaves (B9)	jery (D7)				nic Relief (D4)
Aquatic Fauna (B13)				ιC-Neutral Τε	
Field Observations:					
Surface Water Present? Yes _	✓ No Depth	n (inches):>1			
	No Depth				
	✓ No Depth		Wetland Hydrolo	gy Present?	Yes <u> </u>
(includes capillary fringe) Describe Recorded Data (stream gau	ugo monitoring well as	rial photos, provious inone	ations) if available:		
Describe Recorded Data (Stream gat	ige, monitoring well, ae	nai priotos, previous inspe	ctions), ii avaliable.		
Remarks:					

Sampling Point: W-K34-PEM	Sampling	Point:	W-K34-PEM
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	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC:5 (A)
2				T. III. 1 (5)
3				Total Number of Dominant Species Across All Strata:5 (B)
				Opecies Across Air citata.
5.				Percent of Dominant Species
				That Are OBL, FACW, or FAC:100 (A/B)
6				Prevalence Index worksheet:
7		· 		Total % Cover of: Multiply by:
		= Total Cov		
50% of total cover: 0	20% of	total cover:		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Salix nigra	5		OBL	FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				
				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: <u>2.5</u>	20% of	total cover:	1	
Herb Stratum (Plot size: 5'				data in Remarks or on a separate sheet)
1. Typha angustifolia	20	~	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Poa compressa	20	~	FAC	
3. Schoenoplectus tabernaemontani	15		OBL	¹ Indicators of hydric soil and wetland hydrology must
4. Juncus effusus	15			be present, unless disturbed or problematic.
5. Carex lurida	10		FACW_	Definitions of Four Vegetation Strata:
			FACW_	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Eupatorium perfoliatum	5		F <u>ACW</u>	more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11.				Howle All books account (non-viscoshi) plants, no nondless
	85	= Total Cov	or	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 42.5				or orze, and weday plante loos than orze it tall
Woody Vine Stratum (Plot size: 15')	2070 01	total oover.		Woody vine – All woody vines greater than 3.28 ft in
				height.
1		-		
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes No
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			
	,			

SOIL Sampling Point: W-K34-PEM

Profile Desc	cription: (Describe t	o the dept	h needed to docun	nent the	indicator	or confirm	the absence	e of indicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4	10YR 2/2	100			С	PL	CL	
4-12	10YR 4/2	95	10YR 4/6	5	С	M/PL	CL	
	10111 4/2		1011(4/0		<u>U</u>	IVI/I L		·
						- ——		·
							-	
				-	-		-	· -
						- ———		
¹ Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	d 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 E _l	pipedon (A2)		Polyvalue Be	low Surfa	ice (S8) (N	VILRA 147 ,	148) (Coast Prairie Redox (A16)
Black H	istic (A3)		Thin Dark Su	rface (S9) (MLRA '	147, 148)		(MLRA 147, 148)
Hydroge	en Sulfide (A4)		Loamy Gleye	d Matrix	(F2)		F	Piedmont Floodplain Soils (F19)
Stratified	d Layers (A5)		Depleted Mat	trix (F3)				(MLRA 136, 147)
	uck (A10) (LRR N)		Redox Dark S					Very Shallow Dark Surface (TF12)
	d Below Dark Surface	(A11)	Depleted Dar				(Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre					
	Mucky Mineral (S1) (L	RR N,	Iron-Mangan		es (F12) ((LRR N,		
	A 147, 148)		MLRA 13	-			3.	
	Sleyed Matrix (S4)		Umbric Surfa					dicators of hydrophytic vegetation and
-	Redox (S5)		Piedmont Flo					etland hydrology must be present,
	Matrix (S6)		Red Parent N	/laterial (F	·21) (MLR	A 127, 147	') ur	nless disturbed or problematic.
	Layer (if observed):							
Type: Be			<u></u>					
Depth (in	ches): <u>12</u>						Hydric Soi	I Present? Yes V No No
Remarks:								

Wetland Photograph Page

Wetland ID $\underline{\text{W-K34-PEM}}$ Date $\underline{\text{05/28/201}}$ 5



Photograph Direction North

Comments:			

Project/Site: MVP	City/C	County: Lewis		Sampling Date: 05/28/2015		
Applicant/Owner: MVP		· 	State: WV	Sampling Point: W-K34-UP		
Investigator(s): J. Hart, D. Santillo, J. Pot				_ ,		
Landform (hillslope, terrace, etc.): Hillslope				Slope (%): 3		
Subregion (LRR or MLRA): LRRN				Datum: NAD 83		
Soil Map Unit Name: Vandalia silt loam, 15						
Are climatic / hydrologic conditions on the site ty	pical for this time of year? Y	∕es No	(If no, explain in R	emarks.)		
Are Vegetation, Soil, or Hydrolog	gy significantly distur	bed? Are "Normal	Circumstances" p	oresent? Yes No		
Are Vegetation, Soil, or Hydrolog						
SUMMARY OF FINDINGS – Attach						
Hydrophytic Vegetation Present? Yes	No. V					
	No	Is the Sampled Area	Voc	No 🗸		
	No 🗸	within a Wetland?	res	NO		
Remarks: Upland Upland plot paired with W-K34 occurs	on a hillslope adjacent	t to the wetland.				
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indica	tors (minimum of two required)		
Primary Indicators (minimum of one is required	l; check all that apply)		Surface Soil	Cracks (B6)		
Surface Water (A1)	True Aquatic Plants ((B14)		getated Concave Surface (B8)		
High Water Table (A2)	Hydrogen Sulfide Od	lor (C1)	Drainage Patterns (B10)			
Saturation (A3)	Oxidized Rhizospher	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 Reduction	on in Tilled Soils (C6)	Crayfish Buri	rows (C8)		
Drift Deposits (B3)	Thin Muck Surface (0		Saturation Vi	sible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Other (Explain in Rer	marks)	Stunted or S	tressed Plants (D1)		
Iron Deposits (B5)			Geomorphic			
Inundation Visible on Aerial Imagery (B7)			Shallow Aqui			
Water-Stained Leaves (B9)				phic Relief (D4)		
Aquatic Fauna (B13)		T	FAC-Neutral	Test (D5)		
Field Observations: Surface Water Present? Yes No	Depth (inches):					
	Depth (inches):					
	Depth (inches):			10 V N- V		
Saturation Present? Yes No (includes capillary fringe)	Deptn (inches):	wetland h	lydrology Presen	t? Yes No		
Describe Recorded Data (stream gauge, monit	oring well, aerial photos, pre	evious inspections), if ava	ilable:			
Remarks:	_					
No hydrology						
The rivarology						

Sampling	Point: W-K34-UP1
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Tree Stratum (Plot size: 30'		Dominant		Dominance Test worksheet:
Tiee Stratum (Flot Size)	% Cover	Species?	<u>Status</u>	Number of Dominant Species
1				That Are OBL, FACW, or FAC:1 (A)
2				Total Number of Dominant
3				Species Across All Strata: 7 (B)
4				Descrit of Descionat Conscion
5				Percent of Dominant Species That Are OBL, FACW, or FAC:14 (A/B)
6				
7				Prevalence Index worksheet:
	0 .	= Total Cov	/er	Total % Cover of: Multiply by:
50% of total cover: 0				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
				FACU species x 4 =
2				UPL species x 5 =
3				Column Totals: (A) (B)
4		-		(1)
5		-		Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	0	= Total Cov	ver .	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:0	20% of	total cover	:0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				
1. Dactylis glomerata	30		F <u>ACU</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Anthoxanthum odoratum	15		FACU_	4
3. Bromus inermis	10	~	UPL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Trifolium pratense	10	~	F <u>ACU</u>	
5. Carex vulpinoidea	10	~	OBL	Definitions of Four Vegetation Strata:
6. Trifolium repens	10		FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Plantago lanceoleta	10		F <u>ACU</u>	more in diameter at breast height (DBH), regardless of
8. Daucus carota	5	-	UPL	height.
			UPL	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	400			Herb – All herbaceous (non-woody) plants, regardless
50		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50	20% of	total cover	: 20	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:15')				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0 =	= Total Cov	/er	Present? Yes No
50% of total cover:0		total cover	_	
Remarks: (Include photo numbers here or on a separate sl	neet.)			I.
	,			

SOIL Sampling Point: W-K34-UP1

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the i	ndicator	or confirm	the abs	sence of indicators.)	
Depth	Matrix		Redo	x Features	3				
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Text		_
0-10	10YR 4/2	99	10YR 4/6	1	С	M	SC	CL	
						·			-
									_
					-				_
									-
									_
									_
									-
									_
									_
¹ Type: C=C	oncentration, D=Depl	etion, RM=R	educed Matrix, MS	S=Masked	Sand Gr	ains.		ion: PL=Pore Lining, M=Matrix.	
Hydric Soil	Indicators:							Indicators for Problematic Hydric Soils ³ :	
Histosol	(A1)		Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)	
Histic Ep	pipedon (A2)		Polyvalue Be	low Surfac	ce (S8) (N	/ILRA 147,	148)	Coast Prairie Redox (A16)	
Black Hi	stic (A3)		Thin Dark Su	ırface (S9)	(MLRA	147, 148)		(MLRA 147, 148)	
Hydroge	en Sulfide (A4)		Loamy Gleye	ed Matrix (F2)			Piedmont Floodplain Soils (F19)	
	d Layers (A5)		Depleted Ma	trix (F3)				(MLRA 136, 147)	
	uck (A10) (LRR N)		Redox Dark					Very Shallow Dark Surface (TF12)	
	d Below Dark Surface	(A11)	Depleted Dai					Other (Explain in Remarks)	
	ark Surface (A12)		Redox Depre						
	Mucky Mineral (S1) (L	RR N,	Iron-Mangan		es (F12) (LRR N,			
	A 147, 148)		MLRA 13	•	MI DA 4)C 400\		31. diagram of harden haris an extension and	
	Gleyed Matrix (S4)		Umbric Surfa				١٥١	³ Indicators of hydrophytic vegetation and	
-	Redox (S5)		Piedmont Flo Red Parent N					wetland hydrology must be present,	
	Matrix (S6) Layer (if observed):		Red Falelit is	nateriai (i	ZI) (IVILIN	A 121, 141	')	unless disturbed or problematic.	
Type: Co									
							l		
	ches): 10		_				Hydri	c Soil Present? Yes No	
Remarks:									
No hydric i	ndicators								

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	39.052952	Lon.	-80.582437
STREAM/SITE ID AND SITE DESCR	RIPTION:					W-I22-PEM, 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 - Wetland Indicators							
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-I22-PEM-ATWS	Emergent	0.0018	Emergent					
						PART III - Advanced Sustainable Determination Made on		on
						Advanced Mitigation (Y or N)		Υ
Total Impact		0.0018						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0018			6400.00		
Total Scrub-Shrub			0			\$108.00		
Total Forested			0					
Total Open Water			0	1				

Mountain Valley Pipeline			COORDINATES:	Lat.	39.052768	Lon.	-80.582196
TION:				W	/-I22-PEM, Timber Mat Crossing		
reage}, unaltered	or impairments)						
8/10/2015		WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetland Indicators							
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0162	Emergent					
				[PART III - Advanced	Mitigatio	n
					Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
	0.0162			r			
	Jnit Scores						
ssification					ILF Costs		
					\$972.00		
				Į.	φ972.00		
	8/10 PART I - Wetl Impact Wetland Classification Emergent	PTION: reage}, unaltered or impairments) 8/10/2015 PART I - Wetland Indicators Impact (acreage) Classification Emergent 0.0162 0.0162 PART II - Unit Scores	PTION: reage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland Classification Emergent 0.0162 Emergent 0.0162 PART II - Unit Scores	PTION: reage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0162 Emergent 0.0162 PART II - Unit Scores ssification Replacement Unit(s) 0.0162 0 0	PTION: reage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts (acreage) Wetland Classification Emergent 0.0162 Emergent 0.0162 PART II - Unit Scores ssification Replacement Unit(s) 0 0 0 0	TION: reage}, unaltered or impairments) ### ### ### ### ### ### ### ### ### #	TION: reage}, unaltered or impairments) ### RECIPITATION PAST 48 HRS: ### PART I - Wetland Indicators Impact Wetland (acreage) Classification #### Emergent #### PART III - Advanced Mitigation Classification

Project/Site: MVP		City/C	_{ounty:} Lewis		Sampling Date: 05/19/2015		
Applicant/Owner: MVP			,	State: WV	Sampling Point: W-I22 PEM		
Investigator(s): SET SJT G	S						
					Slope (%): 10-15		
Subregion (LRR or MLRA): L							
Soil Map Unit Name: Vandal							
Are climatic / hydrologic condit			_				
· · · · · · · · · · · · · · · · · · ·		· ·			resent? Yes No		
Are Vegetation, Soil				explain any answei	, important features, etc.		
				, iranocoto	, important routures, etc.		
Hydrophytic Vegetation Pres			Is the Sampled Area				
Hydric Soil Present?	Yes		within a Wetland?	Yes	No		
Wetland Hydrology Present?	Yes	No					
Remarks: Cowardin Code:PEM H	GM: RIVERINE WT:	RPWWD					
			2015. The wetland	d was revisited	on 09/25/2019. Presence		
of wetland hydrology, hy	•						
Supplement delineation		i, and flydric sone	was committed asi	ng the boator	Livii regional		
HYDROLOGY	methodology.						
Wetland Hydrology Indicate	ore:			Secondary Indica	tors (minimum of two required)		
Primary Indicators (minimum		all that apply)		Secondary Indicators (minimum of two required)			
	•	****	D14\	Surface Soil Cracks (B6)			
Surface Water (A1) High Water Table (A2)		True Aquatic Plants (I Hydrogen Sulfide Odd		Sparsely Vegetated Concave Surface (B8)✓ Drainage Patterns (B10)			
Saturation (A3)			es on Living Roots (C3)	_			
Water Marks (B1)		Presence of Reduced	=	Moss Trim Lines (B16)			
				Dry-Season Water Table (C2)			
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Thin Muck Surface (C7)				Crayfish Burrows (C8)			
					ration Visible on Aerial Imagery (C9) ted or Stressed Plants (D1)		
Algal Mat or Crust (B4) Other (Explain in Remarks) Iron Deposits (B5)			Geomorphic Position (D2)				
Intri Deposits (B5) Inundation Visible on Aerial Imagery (B7)				Shallow Aquitard (D3)			
			phic Relief (D4)				
Aquatic Fauna (B13)	,			FAC-Neutral			
Field Observations:					,		
Surface Water Present?	Yes No _ 🗸	Depth (inches):					
Water Table Present?	Yes No		12				
Saturation Present?			8 Wetland H	lydrology Presen	t? Yes ✔ No		
(includes capillary fringe)		,		,			
Describe Recorded Data (stre	eam gauge, monitoring w	ell, aerial photos, pre	vious inspections), if ava	iilable:			
Remarks:							
romano.							
1							

ΕM

Tree Stratum (Plot size: 30'	Absolute		t Indicator	Dominance Test worksheet:		
Tiee Stratum (Flot Size)		Species?	Status	Number of Dominant Species		
1				That Are OBL, FACW, or FAC:2 (A)		
2				Total Number of Dominant		
3				Species Across All Strata:3 (B)		
4				Descrit of Descional Conscion		
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)		
6				(42)		
7				Prevalence Index worksheet:		
	0	= Total Co	ver	Total % Cover of: Multiply by:		
50% of total cover: 0				OBL species x 1 =		
Sapling/Shrub Stratum (Plot size: 15')	_			FACW species x 2 =		
1				FAC species x 3 =		
2				FACU species x 4 =		
				UPL species x 5 =		
3				Column Totals: (A) (B)		
4		-		Column Totals (7) (5)		
5		-		Prevalence Index = B/A =		
6				Hydrophytic Vegetation Indicators:		
7		·		1 - Rapid Test for Hydrophytic Vegetation		
8				✓ 2 - Dominance Test is >50%		
9				3 - Prevalence Index is ≤3.0 ¹		
	0	= Total Co	ver	4 - Morphological Adaptations ¹ (Provide supporting		
50% of total cover: 0	20% of	total cove	r: <u> </u>			
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)		
1. Acorus americanus	40		OBL	Problematic Hydrophytic Vegetation ¹ (Explain)		
2. Mentha spicata	15	~	FACW			
3. Trifolium repens	10		FACU	¹ Indicators of hydric soil and wetland hydrology must		
4 Dactylis glomerata	25		FACU	be present, unless disturbed or problematic.		
5. Carex lurida	5		OBL	Definitions of Four Vegetation Strata:		
6. Securigera varia	10		UPL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or		
7. Galium palustre	5			more in diameter at breast height (DBH), regardless of		
8. Equisetum arvense	5		OBL	height.		
	10	-	FAC	Sapling/Shrub – Woody plants, excluding vines, less		
9. Poa sp.	5	-	_ <u>ND</u>	than 3 in. DBH and greater than or equal to 3.28 ft (1		
10. Iris pseudacorus			<u>OBL</u>	m) tall.		
11				Herb – All herbaceous (non-woody) plants, regardless		
		= Total Co		of size, and woody plants less than 3.28 ft tall.		
50% of total cover: 65	20% of	total cove	r: <u>26</u>	Woody vine – All woody vines greater than 3.28 ft in		
Woody Vine Stratum (Plot size: 15')				height.		
1						
2						
3						
4				Undrankutia		
5.				Hydrophytic Vegetation		
	0	= Total Co	ver	Present? Yes V No		
50% of total cover: 0		total cove	_			
Remarks: (Include photo numbers here or on a separate sl						
Trainiania (matata printa nambara nara ar ar a saparara	,					

SOIL Sampling Point: W-I22 PEM

cription: (Describe	to the dep	th needed to docur	nent the i	indicator	or confirm	the absence	of indicators.)	
Matrix								
Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	Remarks]
10YR 5/3	60					SaLo		
10YR 5/1	40							
10YR 5/2	80	7.5YR 5/6	20	С	M	SaC		_
Gley1 4/N	100					SaC		
							_	
· -		-						
Concentration, D=Depl	letion. RM=	=Reduced Matrix. MS	S=Masked	d Sand Gra	ains.	² Location: P		
			· · · · · · · · · · · · · · · · · · ·					3:
l (A1)		Dark Surface	e (S7)			2	cm Muck (A10) (MLRA 147)	
				ce (S8) (N	ILRA 147,	148) C	oast Prairie Redox (A16)	
					47, 148)		(MLRA 147, 148)	
, ,				(F2)		P		
				-c\		V		
, , ,	e (A11)						•	
	. ()					_ `	e. (274)	
	.RR N,				LRR N,			
								t
		Red Parent N	viateriai (F	(WILK	A 127, 147	r) un	ess disturbed or problematic.	
Layer (ii observeu).								
ochoc):						Hydric Soil	Brosont? Vos V No	
						Hyuric 30ii	rieseitt: ies No	_
	Matrix Color (moist) 10YR 5/3 10YR 5/1 10YR 5/2 Gley1 4/N Concentration, D=Depindicators: Il (A1) Ipipedon (A2) Idistic (A3) Idistic (A3) Idistic (A1) Idistic (A3) Idistic (A1) Idistic (A3) Idistic (A3) Idistic (A3) Idistic (A1) Idistic (A3) Idiatic (A3) Idistic (A3) Idistic (A3) Idiatic (A3) Idiatic (A3) Idiatic (A4) Idiatic (A5) Idiatic (A	Matrix Color (moist)	Matrix Redo Color (moist) % Color (moist) 10YR 5/3 60 10YR 5/1 40 10YR 5/2 80 7.5YR 5/6 Gley1 4/N 100 Concentration, D=Depletion, RM=Reduced Matrix, MS Indicators: I (A1) Dark Surface (A2) Polyvalue Be in properties (A3) Thin Dark Surface (A3) Polyvalue Be in Sulfide (A4) Loamy Gleye in Color (A2) Depleted Matrix (A3) Polyvalue Be in Color (A4) Polyvalue Be in Col	Matrix Color (moist) % Color (Matrix	Matrix	Matrix	Color (moist)

Wetland Photograph Page

Wetland ID W-I22 PEM



Photograph Direction East

Date: 05/19/2015

Comments: 2015 wetland delineation.



Photograph Direction NE

Date: 09/25/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 05/19/2015			
Applicant/Owner: MVP					Sampling Point: W-I22-UP1			
		Section	on, Township, Range: N/		_			
Landform (hillslope, terrace, etc.): Valle					Slope (%): 0-5			
Subregion (LRR or MLRA): LRRN					Datum: NAD 83			
Soil Map Unit Name: Vandalia silt loa	ım, 15 to 25	percent slopes (VaD)	NWI classification	ation: None			
Are climatic / hydrologic conditions on the	site typical for	this time of year? Y	es / No	(If no, explain in Re	emarks.)			
Are Vegetation, Soil, or H	ydrology	significantly distur	bed? Are "Normal	Circumstances" p	resent? Yes No			
Are Vegetation, Soil, or H				explain any answer				
SUMMARY OF FINDINGS – Att	-							
Hydrophytic Vegetation Present?	Yes	No. V			· · · · · · · · · · · · · · · · · · ·			
Hydric Soil Present?	Yes	No V		Vaa	No. V			
Wetland Hydrology Present?	Yes		within a Wetland?	Yes	No			
Upland								
HYDROLOGY				On an alamata d'an	to a fairi and a fair and a fair			
Wetland Hydrology Indicators:	and and about	all that and b			tors (minimum of two required)			
Primary Indicators (minimum of one is re			D4.4)	Surface Soil (
Surface Water (A1)		Γrue Aquatic Plants (Hydrogen Sulfide Od		Sparsely Vegetated Concave Surface (B8)Drainage Patterns (B10)				
High Water Table (A2) Saturation (A3)			es on Living Roots (C3)	Moss Trim Li				
Water Marks (B1)		Presence of Reduced	= : : :		Water Table (C2)			
Sediment Deposits (B2)	·	Recent Iron Reductio	, ,	Crayfish Burr				
Drift Deposits (B3)		Γhin Muck Surface (C		-	sible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)		Other (Explain in Ren			ressed Plants (D1)			
Iron Deposits (B5)				Geomorphic	Position (D2)			
Inundation Visible on Aerial Imagery	y (B7)			Shallow Aqui	tard (D3)			
Water-Stained Leaves (B9)					phic Relief (D4)			
Aquatic Fauna (B13)			ľ	FAC-Neutral	Test (D5)			
Field Observations:	N: /	Describe (See describ						
		Depth (inches):						
		Depth (inches):		landa al a sua Dua a a su	40 Vaa Na V			
Saturation Present? Yes (includes capillary fringe)	No	Depth (inches):	wetland F	lydrology Presen	t? Yes No			
Describe Recorded Data (stream gauge	, monitoring we	ell, aerial photos, pre	vious inspections), if ava	ilable:				
Remarks:								
remarks.								

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

Sampling Poin	t: <u>W-I22-</u> l	JP1
Test worksheet:		
Oominant Species	0	(Δ)

·	Absolute	- Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		
1.		<u> </u>		Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)
				That Ale OBE, I ACW, OI I AC (A)
2				Total Number of Dominant
3				Species Across All Strata:3 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 0 (A/B)
6				
7				Prevalence Index worksheet:
	0	= Total Cov	ıρr	Total % Cover of: Multiply by:
50% of total cover: 0				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')	2070 01	total oover		FACW species x 2 =
Caping/Onrab Otratam (Flot Size				FAC species x 3 =
1				
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				
				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	0	= Total Cov	/er	
50% of total cover:0	20% of	total cover	:0	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Trifolium repens	25	✓	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Plantago lanceolata	15		UPL	
3. Allium canadense	5			¹ Indicators of hydric soil and wetland hydrology must
			F <u>ACU</u>	be present, unless disturbed or problematic.
4. Achillea millefolium	20		F <u>ACU</u>	Definitions of Four Vegetation Strata:
5. Taraxacum offionale	25		F <u>ACU</u>	
6. Glechome hederacea	5		F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Dactylus glomerata	30	✓	FACU_	more in diameter at breast height (DBH), regardless of height.
8. Poa sp.	10		ND	g.m
0			110	Sapling/Shrub – Woody plants, excluding vines, less
9		-		than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11			- ——	Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 67.5	5 20% of	total cover	: <u>27</u>	Woody vine All woody vines greater than 2.29 ft in
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1				-10.g.m
2				
		-		
3		-		
4				Hydrophytic
5		-		Vegetation
	0	= Total Cov	/er	Present? Yes No
50% of total cover:0	20% of	total cover	:0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

SOIL Sampling Point: W-I22-UP1

Profile Desc	cription: (Describe t	o the depth	needed to docur	ment the i	ndicator o	or confirm	the ab	sence of indicat	ors.)	
Depth	Matrix		Redo	x Features	S					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		ure	Remarks	
0-12	10YR 4/4	100					Sal	Lo		
	-									
							-			
			_							
			_							
			_							
¹ Type: C=C	oncentration, D=Deple	etion, RM=R	educed Matrix, MS	S=Masked	Sand Gra	ains.	² Locati	ion: PL=Pore Lin	ing, M=Matrix.	
Hydric Soil			·					Indicators for P	roblematic Hy	dric Soils³:
Histosol	(A1)		Dark Surface	e (S7)				2 cm Muck ((A10) (MLRA 1	47)
	pipedon (A2)		Polyvalue Be		ce (S8) (M	LRA 147,	148)	Coast Prairie	· , •	-
	istic (A3)		Thin Dark Su				•	(MLRA 14	, ,	
	en Sulfide (A4)		Loamy Gleye			•			oodplain Soils ((F19)
Stratified	d Layers (A5)		Depleted Ma	trix (F3)				(MLRA 1	36, 147)	
	uck (A10) (LRR N)		Redox Dark	Surface (F	6)				w Dark Surface	
	d Below Dark Surface	(A11)	Depleted Da					Other (Expla	ain in Remarks)	
	ark Surface (A12)		Redox Depre							
	Mucky Mineral (S1) (L	RR N,	Iron-Mangan		es (F12) (I	_RR N,				
	A 147, 148)		MLRA 13					3, , , , ,		
	Gleyed Matrix (S4)		Umbric Surfa				١٥)		ydrophytic veg	
	Redox (S5)		Piedmont Flo						ology must be p	
	Matrix (S6) Layer (if observed):		Red Parent N	viateriai (F.	21) (WLR)	4 127, 147	')	uniess disturt	ped or problema	atic.
	Layer (ii observed):									
Type:			_							
Depth (in	ches):		_				Hydri	ic Soil Present?	Yes	No
Remarks:										

	Mountain	Valley Pipeline	COORDINATES:	Lat.	39.01782	Lon.	-80.596977
PTION:					W-KK6, Timber Mat Crossing		
reage}, unaltered	or impairments)						
8/10/	2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetla	and Indicators					•	
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0212	Emergent					
]		PART III - Advanced I	Vitigatio	n
					Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
	0.0212				F-Constant		
	init Scores	Danie a mant linit/->					
ISSITICATION					ILF Costs		
					\$1 272 00		
		-	+		Ψ1,272.00		
	PART I - Wetland Union Classification Emergent	PTION: sreage}, unaltered or impairments) 8/10/2015 PART I - Wetland Indicators Impact Wetland Classification Emergent 0.0212 PART II - Unit Scores	8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact (acreage) Wetland Classification Emergent 0.0212 Emergent 0.0212 PART II - Unit Scores	PTION: Preage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts Wetland Classification Classification Emergent 0.0212 Emergent	PTION: preage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts Wetland Classification Classification Emergent 0.0212 Emergent	PTION: reage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Metland (acreage) Wetland Classification Emergent 0.0212 Emergent Sustainable Determination Made on Advanced Mitigation (Y or N) PART II - Unit Scores Replacement Unit(s) 0.0212 1	PTION: reage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0212 Emergent 9ART II - Unit Scores PART II - Unit Scores Selfication Replacement Unit(s) 0.0212 9 0 \$1,272.00

Project/Site: MVP City/County: Lewis	_ Sampling Date: 08/14/2015				
Applicant/Owner: MVP State: WV					
Investigator(s): D. Hadersbeck A. Hatfield C. Carver Section, Township, Range: N/A					
Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave	Slope (%): 0				
Subregion (LRR or MLRA): LRRN Lat: 39.017834 Long: -80.597066	Datum: NAD 83				
Soil Map Unit Name: Sensabaugh silt loam NWI classif					
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in					
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances"	present? Yes No				
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answ					
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transect					
Hydrophytic Vegetation Present? Yes No N					
Is the Sampled Area	, No				
Wetland Hydrology Present? Yes V No within a Wetland? Yes V	NO				
Cowardin Code: PEM HGM: Riverine WT: RPWWD 2019 comments: Slight depression in topography limits wetland boundary and separates from upland Information listed on this form represents the data collected in 2015. The wetland was revisited on 09/24/2019. Prese hydrophytic vegetation, and hydric soils was confirmed using the USACE EMP Regional Supplement delineation meti	,				
HYDROLOGY	- ((
	cators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Out(and Water (Ad)) Surface Soil	, ,				
	egetated Concave Surface (B8)				
 High Water Table (A2) Saturation (A3) Hydrogen Sulfide Odor (C1) Drainage P. Oxidized Rhizospheres on Living Roots (C3) Moss Trim 	atterns (B10) Lines (B16)				
	n Water Table (C2)				
<u> </u>					
	Visible on Aerial Imagery (C9)				
	Stressed Plants (D1)				
Iron Deposits (B5)	c Position (D2)				
Inundation Visible on Aerial Imagery (B7) Shallow Aq	uitard (D3)				
<u> </u>	raphic Relief (D4)				
Aquatic Fauna (B13)	al Test (D5)				
Field Observations:					
Surface Water Present? Yes No Depth (inches):					
Water Table Present? Yes No Depth (inches):					
Saturation Present? Yes No _ Depth (inches): Wetland Hydrology Prese (includes capillary fringe)	ent? Yes V No				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:					
Remarks:					

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

/EGETATION (Four Strata) – Use scien	tific names of	plants.		Sampling Point: W-KK06
201	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')	<u>% Cover</u>			Number of Dominant Species That Are OBL, FACW, or FAC:3 (A)
2				
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				Openies Across Air Strata.
5				Percent of Dominant Species That Are OBL_FACW_or_FAC: 100 (A/B)
				That Are OBL, FACW, or FAC: 100 (A/B)
6			·	Prevalence Index worksheet:
<i>r</i>	0	= Total Cov		Total % Cover of: Multiply by:
50% of total cover	0 20% of		_	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15'	2070 01	total cover		FACW species x 2 =
	<u></u> /			FAC species x 3 =
		-		FACU species x 4 =
2				UPL species x 5 =
3				Column Totals: (A) (B)
4			<u> </u>	(5)
5			<u> </u>	Prevalence Index = B/A =
6			. ——	Hydrophytic Vegetation Indicators:
7		-		1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov	_	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover	: <u> </u>	total cover	:0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')	20		- 40	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Amphicarpaea bracteata			F <u>AC</u>	
2. Carex Iurida	25		<u>OBL</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Microstegium vimineum	25		F <u>AC</u>	be present, unless disturbed or problematic.
4. Dichanthelium clandestinum			<u>OBL</u>	Definitions of Four Vegetation Strata:
_{5.} Typha latifolia	6		<u>OBL</u>	
6. Carex vulpinoidea	5		OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				Sanling/Shrub Woody plants evaluding vines loss
9		_		Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10			<u> </u>	m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	_ 111 _ :	= Total Cov	/er	of size, and woody plants less than 3.28 ft tall.
	55.5 20% of	total cover	22.2	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')			height.
1				-
2				
3				
4				Undranhytia
5				Hydrophytic Vegetation
	0	= Total Cov	/er	Present? Yes No
50% of total cover	0 20% of	total cover	<u> </u>	
Remarks: (Include photo numbers here or on a sep	parate sheet.)			

SOIL Sampling Point: W-KK06

Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Dark Surface (S7) Polyvalue Below Surface (S8) (MLRA 147, 148) Loamy Gleyed Matrix (F2) Depleted Matrix (F2) Depleted Matrix (F2) Depleted Matrix (F3) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Redox (S5) Seminary Mucky (S6) Dark Surface (S7) Loamy Gleyed Matrix (F2) Depleted Matrix (F2) Depleted Matrix (F3) MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Thick Dark Surface (A12) Loamy Gleyed Matrix (S4) MLRA 136, 122) January Gleyed Matrix (S4) January Gleyed Matrix (S4) MLRA 136, 122) January Gleyed Matrix (S4) MLRA 136, 127 January Gleyed Matrix (S4) MLRA 136, 147) MLRA 136	Trome Description: (Describe to	me deptn r	eeded to docun	nent the i	ndicator	or confirm	the absence	of indicators.)
1 Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 1 Hydric Soil Indicators: Histor Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (S9) (MLRA 147, 148) Depleted Below Dark Surface (F3) Depleted Below Dark Surface (F3) Depleted Below Dark Surface (F13) (MLRA 147) Depleted Dark Surface (F13) (MLRA 147) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Depleted Dark Surface (F13) (MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Sirtipped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Deplet (Iron-bas): 16 Hydric Soil Present? Yes No Hydric Soil Present? Yes No Hydric Soil Present? Yes No Hydric Soil Present?	Depth <u>Matrix</u>		Redox		S	-		
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Hydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Black Histic (A3) Stratified Layers (A5) Stratified Layers (A5) Depleted Matrix (F3) Depleted Dark Surface (F6) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 186, 147) Depleted Dark Surface (F12) (MLRA 186, 147) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136, 147) MLRA 136, 147) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 136, 122) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Restrictive Layer (if observed): Type: Gravel from river Depth (inches): 16 Hydric Soil Present? Yes V No								Remarks
Hydric Soil Indicators: Histosol (A1)	0-16 7.5YR 4/2	90	5YR 3/4	10	<u>C</u>	M	Silt loam	
Hydric Soil Indicators: Histosol (A1)								
Hydric Soil Indicators: Histosol (A1)								
Hydric Soil Indicators: Histosol (A1)				-				
Hydric Soil Indicators: Histosol (A1)						· ——		
Hydric Soil Indicators: Histosol (A1)								
Hydric Soil Indicators: Histosol (A1)								
Hydric Soil Indicators: Histosol (A1)								
Hydric Soil Indicators: Histosol (A1)								
Hydric Soil Indicators: Histosol (A1)						· 		
Hydric Soil Indicators: Histosol (A1)								
Hydric Soil Indicators: Histosol (A1)								
Histosol (A1)	¹ Type: C=Concentration, D=Depletion	on, RM=Re	duced Matrix, MS	S=Masked	Sand Gr	ains.	² Location: Pl	L=Pore Lining, M=Matrix.
Histic Epipedon (A2)	Hydric Soil Indicators:							
Hydrogen Sulfide (A4) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Redox (S5) Sandy Redox (S5) Stripped Matrix (S4) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Red Surface (S9) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Redox (S5) Stripped Matrix (S4) Red Parent Material (F21) (MLRA 148) Restrictive Layer (if observed): Type: Gravel from river Depth (inches): 16 Hydric Soil Present? Yes No	Histosol (A1)	_	Dark Surface	(S7)			2	cm Muck (A10) (MLRA 147)
Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Matrix (F3) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Redox Depressions (F12) (LRR N, MLRA 146, 147, 148) Sandy Redox (S5) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Gravel from river Depth (inches): 16 Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Type: Gravel from river Depth (inches): 16 Loamy Gleyed Matrix (F2) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Newaras (F12) (LRR N, MLRA 136, 122) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Iron-Manganese Masses (F12) (MLRA 136, 122) Iron-Manganese Masses (F12)	Histic Epipedon (A2)	_	Polyvalue Be	low Surfa	ce (S8) (I	/ILRA 147,	148) C	coast Prairie Redox (A16)
Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Depth (inches): 16 CMLRA 136, 147) Very Shallow Dark Surface (TF12) Very Shallow Dark Surface (F13) Very Shallow		=	Thin Dark Su	rface (S9)	(MLRA	147, 148)		(MLRA 147, 148)
2 cm Muck (A10) (LRR N)	, , ,	_			F2)		P	
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Depth (inches): 16 Depleted Dark Surface (F7) Depleted Dark Surface (F12) (LRR N, Depleted Dark Surf		_						
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Gravel from river Depth (inches): 16 Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Iron-Manganese Masses (F12) (MLRA 136, 122) MLRA 136, 122) "MURA 136, 122) "Indicators of hydrophytic vegetation and wetland hydrology must be present, Iron-Manganese Masses (F12) (MLRA 136, 122) "MURA 136, 122) "Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No		-		•	,			
Sandy Mucky Mineral (S1) (LRR N,		A11) _					0	other (Explain in Remarks)
MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Gravel from river Depth (inches): 16 MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No		_ D NI				IDDN		
Sandy Gleyed Matrix (S4)		` I \ , _			es (F12 <i>)</i> (LKK N,		
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. Restrictive Layer (if observed): Type: Gravel from river Depth (inches): 16 Hydric Soil Present? Yes No				-	MLRA 13	36, 122)	³ Ind	icators of hydrophytic vegetation and
Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) unless disturbed or problematic. Restrictive Layer (if observed): Type: Gravel from river Depth (inches): 16 Hydric Soil Present? Yes No		_						
Restrictive Layer (if observed): Type: Gravel from river Depth (inches): 16 Hydric Soil Present? Yes No								
Depth (inches): 16 Hydric Soil Present? Yes V No	Restrictive Layer (if observed):							•
	Type: Gravel from river		_					
	Depth (inches): 16						Hydric Soil	Present? Yes V No

Wetland Photograph Page

Wetland ID W-KK06



Photograph Direction SE

Date: 08/14/2015

Comments: 2015 wetland delineation.



Photograph Direction South

Date: 09/24/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 08/14/2015
Applicant/Owner: MVP					Sampling Point: W-KK06-U
Investigator(s): D. Hadersbeck A	Hatfield C. Ca	arver _{Sectio}	on, Township, Range: N/		
Landform (hillslope, terrace, etc.): Description					Slone (%): 1
Subregion (LRR or MLRA): LRRN	Lat: S	39.017833			Datum: NAD 83
Soil Map Unit Name: Sensabaugh	Lat. <u>-</u> Silt loam				
Are climatic / hydrologic conditions or					_
Are Vegetation, Soil,	or Hydrology	_ significantly distur	bed? Are "Normal	Circumstances" p	present? Yes No
Are Vegetation, Soil,	or Hydrology	_ naturally problema	atic? (If needed, e	explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS -	Attach site ma	p showing sam	npling point location	ns, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes	No. V			
Hydric Soil Present?	Yes	No 🗸	Is the Sampled Area	Vaa	No 🗸
Wetland Hydrology Present?	Yes	No V	within a Wetland?	res	NO
Remarks:					
Upland					
HYDROLOGY					
Wetland Hydrology Indicators:				Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one	is required; check a	all that apply)		Surface Soil	Cracks (B6)
Surface Water (A1)		rue Aquatic Plants (getated Concave Surface (B8)
High Water Table (A2)		lydrogen Sulfide Od		Drainage Pa	
Saturation (A3)			es on Living Roots (C3)	Moss Trim L	
Water Marks (B1)		resence of Reduced			Water Table (C2)
Sediment Deposits (B2)			n in Tilled Soils (C6)	Crayfish Bur	
Drift Deposits (B3)		hin Muck Surface (C			isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	0	ther (Explain in Rer	narks)		tressed Plants (D1)
Iron Deposits (B5)	(D7)				Position (D2)
Inundation Visible on Aerial Ima	agery (B7)			Shallow Aqu	
Water-Stained Leaves (B9) Aquatic Fauna (B13)				FAC-Neutral	aphic Relief (D4)
Field Observations:				I AC-Neullai	1631 (00)
	No 🗸	Depth (inches):			
Water Table Present? Yes	No	Depth (inches):			
	_	Depth (inches):		lydrology Preser	nt? Yes No
(includes capillary fringe)	NO 1	Deptit (inches)	Wetiand in	iyurology Fresei	it: 165 NO
Describe Recorded Data (stream ga	auge, monitoring we	ll, aerial photos, pre	vious inspections), if ava	ilable:	
Remarks:					
remarks.					

Sampling Point: W-KK06-U	Jp	-U)6	< C	Κŀ	٧-	۷	Point:	lina	mn	Sa
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	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30')		Species?	Status	Number of Dominant Species	
_{1.} Juglans sp.	8		ND	1	A)
2. Acer negundo	5		<u>FAC</u>	Total Number of Dominant	
3				O+	B)
4.					,
5				Percent of Dominant Species That Are OBL FACW or FAC: 50	۸ /D)
6.				That Are OBL, FACW, or FAC: 50 (A/B)
				Prevalence Index worksheet:	
7	13	= Total Cov		Total % Cover of: Multiply by:	
50% of total cover: 6.5				OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15')	20 % 01	lotal cover		FACW species x 2 =	
				FAC species x 3 =	
1				FACU species x 4 =	
2					
3	-	. <u></u>		UPL species x 5 =	(5)
4				Column Totals: (A)	(B)
5				Prevalence Index = B/A =	
6					
7				Hydrophytic Vegetation Indicators:	
8				1 - Rapid Test for Hydrophytic Vegetation	
9.				2 - Dominance Test is >50%	
<u> </u>	0	= Total Cov	uor.	3 - Prevalence Index is ≤3.0 ¹	
50% of total cover: 0		total cover	_	4 - Morphological Adaptations ¹ (Provide suppo	rting
Herb Stratum (Plot size: 5')	2070 01	10101 00101		data in Remarks or on a separate sheet)	
1. Amphicarpaea bracteata	25	~	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)	
2. Helianthus sp.	10	<u> </u>			
	6		ND	¹ Indicators of hydric soil and wetland hydrology mu	st
3. Vernonia fasiciculata			F <u>ACU</u>	be present, unless disturbed or problematic.	
4				Definitions of Four Vegetation Strata:	
5				- W	,
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm more in diameter at breast height (DBH), regardles	
7				height.	3 01
8.					
9.				Sapling/Shrub – Woody plants, excluding vines, lethan 3 in. DBH and greater than or equal to 3.28 ft	
10.				m) tall.	('
11					
· · · · · · · · · · · · · · · · · · ·	41	Tatal Car		Herb – All herbaceous (non-woody) plants, regardl of size, and woody plants less than 3.28 ft tall.	ess
50% of total cover: _ 20.5		= Total Cov		of size, and woody plants less than 3.20 it tall.	
Woody Vine Stratum (Plot size: 15')	<u>20</u> / ₀ 01	lotal cover		Woody vine – All woody vines greater than 3.28 ft	in
woody vine Stratum (Flot Size)				height.	
1					
2					
3					
4				Hydrophytic	
5				Vegetation	
	0	= Total Cov	ver	Present? Yes No	
50% of total cover: 0	20% of	total cover	: 0		
Remarks: (Include photo numbers here or on a separate s	heet.)				
ND - Not Determined					
*Vegetation not ID'd down to species level is no	t included	d in the d	ominance	e test	
		u.o u			

SOIL Sampling Point: W-KK06-Up

Profile Desc	ription: (Describe t	o the depth	needed to docun	nent the i	indicator	or confirr	n the absence	of indicators.)
Depth	Matrix		Redo	x Feature	s		_	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20	7.5YR 4/3	97	7.5YR 4/6	3	С	M	Silt loam	
							·	
						- ——		
			_			-		
					-			
¹ Type: C=Ce	oncentration, D=Depl	etion, RM=R	Reduced Matrix, MS	S=Masked	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil		•						ators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2	cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be		ice (S8) (I	MLRA 147		coast Prairie Redox (A16)
Black Hi			Thin Dark Su			147, 148)		(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		(F2)		P	iedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Mat					(MLRA 136, 147)
	ick (A10) (LRR N)	(4.4.4)	Redox Dark S	,	,			ery Shallow Dark Surface (TF12)
	d Below Dark Surface ark Surface (A12)	(A11)	Depleted Dar Redox Depre				0	other (Explain in Remarks)
	fucky Mineral (S1) (L	RR N	Iron-Mangan			I RR N		
	147, 148)	ixix i x ,	MLRA 13		C3 (1 12 <i>)</i> (LIXIX IV,		
	Gleyed Matrix (S4)		Umbric Surfa		(MLRA 13	36, 122)	³ Ind	icators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo					tland hydrology must be present,
	Matrix (S6)		Red Parent N					less disturbed or problematic.
Restrictive I	Layer (if observed):							•
Type:			<u></u>					
Depth (in	ches):		<u></u>				Hydric Soil	Present? Yes No
Remarks:	, <u>-</u>							

Mountain Valley Pipeline			COORDINATES:	Lat.	38.968609	Lon.	-80.592042
IPTION:			W-I15, Pipeline ROW				
creage}, unaltered	or impairments)				•		
8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetl	and Indicators						
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0631	Emergent					
							n
					Sustainable Determination Made or Advanced Mitigation (Y or N)		Y
	0.0631						
	Jnit Scores	Darles and Halff					
assification					ILF Costs		
			-		\$3 786 00		
		-	-		φ3,7 00.00		
		-	+				
	PART I - Wetl Impact Wetland Classification Emergent	IPTION: Icreage}, unaltered or impairments) 8/10/2015 PART I - Wetland Indicators Impact Wetland Classification Emergent 0.0631 0.0631 PART II - Unit Scores	IPTION: Icreage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0631 Emergent 0.0631 PART II - Unit Scores	INTION: Icreage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0631 Emergent 0.0631 PART II - Unit Scores lassification Replacement Unit(s) 0 0 0	IPTION: Icreage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland Classification Emergent 0.0631 Emergent 0.0631 PART II - Unit Scores lassification Replacement Unit(s) 0.0631 0 0	### PART II - Unit Scores PART II - Unit Scores	IPTION: creage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts (acreage) Wetland Classification Emergent 0.0631 Emergent PART III - Advanced Mitigation Made on Advanced Mitigation (Y or N) PART III - Inti Scores Condition Condi

Project/Site: MVP	City/County: Lewis		Sampling Date: 05/16/2015				
Applicant/Owner: MVP			Sampling Point: W-I15				
Investigator(s): G. Stevens, S. Townsend, S. Therkildson Section, Township, Range: N/A							
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concave, co	nvex, none): Convex	Slope (%): N/A				
Subregion (LRR or MLRA): LRRN Lat: 38.			Datum: NAD 83				
Soil Map Unit Name: Gilpin-Upshur silt loams, 35 to 70 percentage of the state of t							
Are climatic / hydrologic conditions on the site typical for this	s time of year? Yes No	(If no, explain in Re	marks.)				
Are Vegetation, Soil, or Hydrologys	significantly disturbed? Are	"Normal Circumstances" pr	esent? Yes V No				
Are Vegetation, Soil, or Hydrology n	-						
SUMMARY OF FINDINGS – Attach site map							
Hydrophytic Vegetation Present? Yes N	0						
, , , , <u> </u>	is the Sample		No				
	within a Wetla	and? Yes	_ NO				
Remarks:							
Cowardin Code:PEM; HGM: Slope; WT: RPWV	VN						
Information listed on this form represents the da	ata collected in 2015. The	wetland was revisited	on 09/25/2019. The				
presence of wetland hydrology, hydrophytic vec	getation, and hydric soils w	vas unable to be confir	med because the wetland				
was obstructed by timber matting.							
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Indicate	ors (minimum of two required)				
Primary Indicators (minimum of one is required; check all t	that apply)	Surface Soil C					
	e Aquatic Plants (B14)		etated Concave Surface (B8)				
	rogen Sulfide Odor (C1)	<u>✓</u> Drainage Patte					
	dized Rhizospheres on Living Roo	-					
	sence of Reduced Iron (C4)		Vater Table (C2)				
	ent Iron Reduction in Tilled Soils						
Drift Deposits (B3) Thin	Muck Surface (C7)	Saturation Vis	ible on Aerial Imagery (C9)				
Algal Mat or Crust (B4) Othe	er (Explain in Remarks)	Stunted or Str	essed Plants (D1)				
Iron Deposits (B5)		Geomorphic F	Position (D2)				
Inundation Visible on Aerial Imagery (B7)		Shallow Aquita	ard (D3)				
Water-Stained Leaves (B9)		Microtopographic Relief (D4)					
Aquatic Fauna (B13)		FAC-Neutral T	Test (D5)				
Field Observations:							
Surface Water Present? Yes No Dep	oth (inches):						
Water Table Present? Yes No Dep							
Saturation Present? Yes No Dep	oth (inches): W	Vetland Hydrology Present	? Yes 🗸 No				
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, a	aerial photos, previous inspection	ns), if available:					
	zonai priotos, promodo moposiio.	10), 11 a rando 101					
Remarks:							
Connects to W-I14, separately delineated due t	o change in cowardin type	during 2015 surveys.					

Sampling	Point:	W-I	115
Samunina	COIIII.	V V I	

,	A I I I .	<u>.</u>	La Pastan	Danila and Tradescale Land
Tree Stratum (Plot size: 30')		Dominant Species?		Dominance Test worksheet:
			·	Number of Dominant Species That Are OBL FACW or FAC: 5 (A)
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Demisers
3				Total Number of Dominant Species Across All Strata: 6 (B)
				Species Across All Strata (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 83 (A/B)
6				
				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	_	
50% of total cover: 0	20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Elaeagnus umbellata	5	/	UPL	FAC species x 3 =
				FACU species x 4 =
2. Salix nigra	5		<u>OBL</u>	
3. Platanus occidentalis	5	✓	FACW	UPL species x 5 =
4. Fraxinus pennsylvanica	5	~	FACW	Column Totals: (A) (B)
			1/1011	, , ,
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7			_	, , ,
				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	20	= Total Cov	er	
50% of total cover:10		total cover	_	4 - Morphological Adaptations ¹ (Provide supporting
	2070 01	total oover		data in Remarks or on a separate sheet)
Tiero Stratum (Fiot Size)	0.5			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Carex stricta	35		OBL	1 Toblematio Tryarophytic Vegetation (Explain)
2. Equisetum arvense	15		F <u>AC</u>	
3. Microstegium vimineum	50		FAC	¹ Indicators of hydric soil and wetland hydrology must
		· <u> </u>		be present, unless disturbed or problematic.
4. Polygonum sp.	5		ND	Definitions of Four Vegetation Strata:
5. Toxicodendron radicans	5		F <u>AC</u>	
6. Solidago sp.	5		ND	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7 Trifolium repens	15			more in diameter at breast height (DBH), regardless of
7. Thiolium repens			F <u>ACU</u>	height.
8				Continue/Charle Manda along
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
				m) tall.
10		-		inj tali.
11				Herb – All herbaceous (non-woody) plants, regardless
	130	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 65		total cover		
		10101 00101		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	^	= Total Cov		Present? Yes V No No
50% of total cover: 0		total cover:		
		total cover.		
Remarks: (Include photo numbers here or on a separate s	heet.)			
Adjacent to W-I14 PFO				
,				
ND - Not Determined.				

Sampling Point: W-I15

SOIL



Photograph Direction NE

Date: 05/16/2015

Comments: 2015 wetland delineation.



Photograph Direction SW

Date: 09/25/19

Project/Site: MVP				City/	County: Lewis			Sampling	Date: 05/16/2015	
Applicant/Owner: MVP						Sta			ng Point: W-I14-UP1, I15-UP	
Investigator(s): G. Stevens	, S. Tow	nsend, S	. Therkild	dson _{Sect}					<u> </u>	
Landform (hillslope, terrace, e							Convex		Slope (%): 15-20	
Subregion (LRR or MLRA): L									Datum: NAD 83	
Soil Map Unit Name: Gilpin-U									· · · · · · · · · · · · · · · · · · ·	
•								·		
Are climatic / hydrologic condi									•	
Are Vegetation, Soil						ormal Circ	umstances"	present?	Yes No	
Are Vegetation, Soil	, or H	lydrology _	natu	urally problem	natic? (If need	ded, explai	in any answ	ers in Rema	arks.)	
SUMMARY OF FINDIN	IGS – At	tach site	map sh	owing sa	mpling point loc	cations,	transect	s, import	ant features, etc.	
Lludraphytic Variation Dres		Vaa	No	~						
Hydrophytic Vegetation Pres Hydric Soil Present?	entr		No_ No_	<u> </u>	Is the Sampled A				. /	
Wetland Hydrology Present?	,		No	✓	within a Wetland	?	Yes	No		
Remarks: Upland										
оріапо 										
HYDROLOGY										
Wetland Hydrology Indicat	ors:					Sec	ondary Indic	ators (minin	num of two required)	
Primary Indicators (minimum	of one is r	equired; ch	eck all tha	t apply)			Surface Soi	l Cracks (B6	3)	
Surface Water (A1)		•	True A	quatic Plants	(B14)				ncave Surface (B8)	
High Water Table (A2)		_		jen Sulfide O			Drainage Patterns (B10)			
Saturation (A3)		_			eres on Living Roots (Moss Trim Lines (B16)			
Water Marks (B1)		_	Presen	ce of Reduce	ed Iron (C4)		Dry-Season Water Table (C2)			
Sediment Deposits (B2)		_	Recent	Iron Reducti	on in Tilled Soils (C6	S)	Crayfish Burrows (C8)			
Drift Deposits (B3)		_	Thin M	uck Surface ((C7)		Saturation \	/isible on A	erial Imagery (C9)	
Algal Mat or Crust (B4)		-	Other (Explain in Re	emarks)		Stunted or S	Stressed Pla	ants (D1)	
Iron Deposits (B5)							Geomorphic	Position (E	02)	
Inundation Visible on Ae	rial Imager	y (B7)					Shallow Aqu	uitard (D3)		
Water-Stained Leaves (F	B9)						Microtopogr			
Aquatic Fauna (B13)							FAC-Neutra	l Test (D5)		
Field Observations:		4								
Surface Water Present?				(inches):						
Water Table Present?				(inches):						
Saturation Present? (includes capillary fringe)	Yes	No	Depth	(inches):	Wetla	and Hydro	ology Prese	nt? Yes_	No	
Describe Recorded Data (str	ream gauge	e, monitorin	g well, aer	ial photos, pr	revious inspections),	if available	e :			
Remarks:	6 - 1 - 11 - 11 - 1									
Serves as upland point	tor both	vv-114 an	a w-115							

	***	<u> </u>			
Tree Stratum (Plot size: 30')		Species:	t Indicator	Dominance Test worksheet:	
				Number of Dominant Species That Are OBL FACW or FAC: 1 (A)	
1				That Are OBL, FACW, or FAC: (A)	
2				Total Number of Dominant	
3				Species Across All Strata: 5 (B)	
4					
				Percent of Dominant Species That Are OBL FACW or FAC: 20% (A/B)	
5				That Are OBL, FACW, or FAC:(A/B)	
6				Prevalence Index worksheet:	
7					
	0	= Total Co	ver	Total % Cover of: Multiply by:	
50% of total cover: 0	20% of	f total cove	r: 0	OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =	
1. Quercus alba	5	~	FACU	FAC species x 3 =	
Hamanalia vivolaiana					
2. Hamamelis virginiana		<u> </u>	<u>FACU</u>	FACU species x 4 =	
3				UPL species x 5 =	
4				Column Totals: (A) (B)	
5				Prevalence Index = B/A =	
6				Hydrophytic Vegetation Indicators:	
7				1 - Rapid Test for Hydrophytic Vegetation	
8					
9				2 - Dominance Test is >50%	
	4 ^	T-1-1-0-		3 - Prevalence Index is ≤3.0 ¹	
500/ ft / L		= Total Co		4 - Morphological Adaptations ¹ (Provide supporting	
50% of total cover: 5	20% of	r total cove	r: <u> 2 </u>	data in Remarks or on a separate sheet)	
Herb Stratum (Plot size: 5'				•	
1. Packera aurea	5		FACW_	Problematic Hydrophytic Vegetation ¹ (Explain)	
2. Glechoma hederacea	5		FACU_		
3. Trifolium repens	30		FACU	¹ Indicators of hydric soil and wetland hydrology must	
	15			be present, unless disturbed or problematic.	
4. Plantago lanceolata		<u> </u>	<u>UPL</u>	Definitions of Four Vegetation Strata:	
5. Carex scoparia	5		_ F <u>ACW</u>		
6. Anthoxanthum hirtum	5		FACW_	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or	
7. Polygonum sp.	5		ND	more in diameter at breast height (DBH), regardless of height.	
8. Dicanthelium clandestinum	10			noight.	
9 Toxicodendron radicans		- —	_ F <u>AC</u>	Sapling/Shrub – Woody plants, excluding vines, less	
0	5	than 3 in. DBH and greater than of equ			
_{10.} Solidago sp.	5		<u>ND</u>	m) tall.	
11.				Herb – All herbaceous (non-woody) plants, regardless	
	90	= Total Co	or	of size, and woody plants less than 3.28 ft tall.	
50% of total cover: 45		f total cove		or orze, and woody planto less than orze it tall.	
	20 /6 0	i lolai cove	1	Woody vine – All woody vines greater than 3.28 ft in	
Woody Vine Stratum (Plot size: 15')				height.	
1					
2					
3					
4				Hydrophytic	
5				Vegetation	
	0	= Total Co	over	Present? Yes No	
50% of total cover: 0	20% of	f total cove	r: 0		
Remarks: (Include photo numbers here or on a separate s	heet)				
ND - Not Determined.	11001.)				
Not Determined.					

Sampling Point: W-I14-UP1, I15-UP1

Profile Description: (Describe to the dep	th needed to document the indicator or confirm	the absence of indicat	ors.)
Depth Matrix	Redox Features		
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture	Remarks
0-6 2.5YR 5/4		SiCl	
			_
			_
			_
	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lin	
Hydric Soil Indicators:			roblematic Hydric Soils ³ :
Histosol (A1)	Dark Surface (S7)		(A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147,		e Redox (A16)
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148)	(MLRA 1	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		oodplain Soils (F19)
Stratified Layers (A5)	Depleted Matrix (F3)	(MLRA 1	
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)		w Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	Other (Expla	ain in Remarks)
Thick Dark Surface (A12)	Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N,	Iron-Manganese Masses (F12) (LRR N,		
MLRA 147, 148)	MLRA 136)	3Indiantors of h	ydrophytic vegetation and
Sandy Gleyed Matrix (S4)Sandy Redox (S5)	Umbric Surface (F13) (MLRA 136, 122)Piedmont Floodplain Soils (F19) (MLRA 14)		plogy must be present,
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147		ped or problematic.
Restrictive Layer (if observed):	Ned Falent Material (F21) (MERA 121, 141)	uriless distuit	bed of problematic.
Type: Gravel			
			
Depth (inches): 6"	<u> </u>	Hydric Soil Present?	Yes No
Remarks:			

Project/Site: MVP				City/	County: Lewis			Sampling	Date: 05/16/2015	
Applicant/Owner: MVP						Sta			ng Point: W-I14-UP1, I15-UP	
Investigator(s): G. Stevens	, S. Tow	nsend, S	. Therkild	dson _{Sect}					<u> </u>	
Landform (hillslope, terrace, e							Convex		Slope (%): 15-20	
Subregion (LRR or MLRA): L									Datum: NAD 83	
Soil Map Unit Name: Gilpin-U									· · · · · · · · · · · · · · · · · · ·	
•								·		
Are climatic / hydrologic condi									•	
Are Vegetation, Soil						ormal Circ	umstances"	present?	Yes No	
Are Vegetation, Soil	, or H	lydrology _	natu	urally problem	natic? (If need	ded, explai	in any answ	ers in Rema	arks.)	
SUMMARY OF FINDIN	IGS – At	tach site	map sh	owing sa	mpling point loc	cations,	transect	s, import	ant features, etc.	
Lludraphytic Variation Dres		Vaa	No	~						
Hydrophytic Vegetation Pres Hydric Soil Present?	entr		No_ No_	<u> </u>	Is the Sampled A				. /	
Wetland Hydrology Present?	,		No	✓	within a Wetland	?	Yes	No		
Remarks: Upland										
оріапо 										
HYDROLOGY										
Wetland Hydrology Indicat	ors:					Sec	ondary Indic	ators (minin	num of two required)	
Primary Indicators (minimum	of one is r	equired; ch	eck all tha	t apply)			Surface Soi	l Cracks (B6	3)	
Surface Water (A1)		•	True A	quatic Plants	(B14)				ncave Surface (B8)	
High Water Table (A2)		_		jen Sulfide O			Drainage Patterns (B10)			
Saturation (A3)		_			eres on Living Roots (Moss Trim Lines (B16)			
Water Marks (B1)		_	Presen	ce of Reduce	ed Iron (C4)		Dry-Season Water Table (C2)			
Sediment Deposits (B2)		_	Recent	Iron Reducti	on in Tilled Soils (C6	S)	Crayfish Burrows (C8)			
Drift Deposits (B3)		_	Thin M	uck Surface ((C7)		Saturation \	/isible on A	erial Imagery (C9)	
Algal Mat or Crust (B4)		-	Other (Explain in Re	emarks)		Stunted or S	Stressed Pla	ants (D1)	
Iron Deposits (B5)							Geomorphic	Position (E	02)	
Inundation Visible on Ae	rial Imager	y (B7)					Shallow Aqu	uitard (D3)		
Water-Stained Leaves (F	B9)						Microtopogr			
Aquatic Fauna (B13)							FAC-Neutra	l Test (D5)		
Field Observations:		4								
Surface Water Present?				(inches):						
Water Table Present?				(inches):						
Saturation Present? (includes capillary fringe)	Yes	No	Depth	(inches):	Wetla	and Hydro	ology Prese	nt? Yes_	No	
Describe Recorded Data (str	ream gauge	e, monitorin	g well, aer	ial photos, pr	revious inspections),	if available	e :			
Remarks:	6 - 1 - 11 - 11 - 1									
Serves as upland point	tor both	vv-114 an	a w-115							

	***	<u> </u>			
Tree Stratum (Plot size: 30')		Species:	t Indicator	Dominance Test worksheet:	
				Number of Dominant Species That Are OBL FACW or FAC: 1 (A)	
1				That Are OBL, FACW, or FAC: (A)	
2				Total Number of Dominant	
3				Species Across All Strata: 5 (B)	
4					
				Percent of Dominant Species That Are OBL FACW or FAC: 20% (A/B)	
5				That Are OBL, FACW, or FAC:(A/B)	
6				Prevalence Index worksheet:	
7					
	0	= Total Co	ver	Total % Cover of: Multiply by:	
50% of total cover: 0	20% of	f total cove	r: 0	OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =	
1. Quercus alba	5	~	FACU	FAC species x 3 =	
Hamanalia vivolaiana					
2. Hamamelis virginiana		<u> </u>	<u>FACU</u>	FACU species x 4 =	
3				UPL species x 5 =	
4				Column Totals: (A) (B)	
5				Prevalence Index = B/A =	
6				Hydrophytic Vegetation Indicators:	
7				1 - Rapid Test for Hydrophytic Vegetation	
8					
9				2 - Dominance Test is >50%	
	4 ^	T-1-1-0-		3 - Prevalence Index is ≤3.0 ¹	
500/ ft / L		= Total Co		4 - Morphological Adaptations ¹ (Provide supporting	
50% of total cover: 5	20% of	r total cove	r: <u> 2 </u>	data in Remarks or on a separate sheet)	
Herb Stratum (Plot size: 5'				•	
1. Packera aurea	5		FACW_	Problematic Hydrophytic Vegetation ¹ (Explain)	
2. Glechoma hederacea	5		FACU_		
3. Trifolium repens	30		FACU	¹ Indicators of hydric soil and wetland hydrology must	
	15			be present, unless disturbed or problematic.	
4. Plantago lanceolata		<u> </u>	<u>UPL</u>	Definitions of Four Vegetation Strata:	
5. Carex scoparia	5		_ F <u>ACW</u>		
6. Anthoxanthum hirtum	5		FACW_	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or	
7. Polygonum sp.	5		ND	more in diameter at breast height (DBH), regardless of height.	
8. Dicanthelium clandestinum	10			noight.	
9 Toxicodendron radicans		- —	_ F <u>AC</u>	Sapling/Shrub – Woody plants, excluding vines, less	
0	5	than 3 in. DBH and greater than of equ			
_{10.} Solidago sp.	5		<u>ND</u>	m) tall.	
11.				Herb – All herbaceous (non-woody) plants, regardless	
	90	= Total Co	or	of size, and woody plants less than 3.28 ft tall.	
50% of total cover: 45		f total cove		or orze, and woody planto less than orze it tall.	
	20 /6 0	i lolai cove	1	Woody vine – All woody vines greater than 3.28 ft in	
Woody Vine Stratum (Plot size: 15')				height.	
1					
2					
3					
4				Hydrophytic	
5				Vegetation	
	0	= Total Co	over	Present? Yes No	
50% of total cover: 0	20% of	f total cove	r: 0		
Remarks: (Include photo numbers here or on a separate s	heet)				
ND - Not Determined.	11001.)				
Not Determined.					

Sampling Point: W-I14-UP1, I15-UP1

Profile Description: (Describe to the dep	th needed to document the indicator or confirm	the absence of indicat	ors.)
Depth Matrix	Redox Features		
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture	Remarks
0-6 2.5YR 5/4		SiCl	
			_
			_
			_
	Reduced Matrix, MS=Masked Sand Grains.	² Location: PL=Pore Lin	
Hydric Soil Indicators:			roblematic Hydric Soils ³ :
Histosol (A1)	Dark Surface (S7)		(A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147,		e Redox (A16)
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148)	(MLRA 1	
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		oodplain Soils (F19)
Stratified Layers (A5)	Depleted Matrix (F3)	(MLRA 1	
2 cm Muck (A10) (LRR N)	Redox Dark Surface (F6)		w Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)	Other (Expla	ain in Remarks)
Thick Dark Surface (A12)	Redox Depressions (F8)		
Sandy Mucky Mineral (S1) (LRR N,	Iron-Manganese Masses (F12) (LRR N,		
MLRA 147, 148)	MLRA 136)	3Indiantors of h	ydrophytic vegetation and
Sandy Gleyed Matrix (S4)Sandy Redox (S5)	Umbric Surface (F13) (MLRA 136, 122)Piedmont Floodplain Soils (F19) (MLRA 14)		plogy must be present,
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147		ped or problematic.
Restrictive Layer (if observed):	Ned Falent Material (F21) (MERA 121, 141)	uriless distuit	bed of problematic.
Type: Gravel			
			
Depth (inches): 6"	<u> </u>	Hydric Soil Present?	Yes No
Remarks:			

	Mountain	Valley Pipeline	COORDINATES:	Lat.	38.964758	Lon.	-80.590881
IPTION:				_	W-I16, Timber Mat Crossing		
creage}, unaltered	l or impairments)						
8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetl	and Indicators						
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0177	Emergent					
							n
					Sustainable Determination Made on Advanced Mitigation (Y or N)		Υ
	0.0177						
	Jnit Scores	Bardan and Halff					
assification					ILF Costs		
					\$1,062,00		
			-		φ1,062.00		
	8/10 PART I - Wetl Impact Wetland Classification Emergent	IPTION: creage}, unaltered or impairments) 8/10/2015 PART I - Wetland Indicators Impact Wetland Classification Emergent 0.0177 0.0177 PART II - Unit Scores	Receage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0177 Emergent 0.0177 PART II - Unit Scores	IPTION: creage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0177 Emergent 0.0177 PART II - Unit Scores assification Replacement Unit(s) 0 0 0	IPTION: creage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland Classification Emergent 0.0177 Emergent 0.0177 PART II - Unit Scores assification Replacement Unit(s) 0.0177 0 0	PTION: creage), unaltered or impairments) ### WHI6, Timber Mat Crossing ### WHI6, Timber Mat Crossing ### WHI6, Timber Mat Crossing ### PRECIPITATION PAST 48 HRS: ### PART I - Wetland Indicators ### Wetland Impacts	PTION: creage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0177 Emergent Emergent 0.0177 Emergent 0.0177 Emergent 0.0177 Emergent 1

Project/Site: MVP	City/County: Lewis	Sampling Date: 05/16/2015
Applicant/Owner: MVP	. , , _	State: WV Sampling Point: W-I16
	Section, Township, Range: N	
Landform (hillslope, terrace, etc.): Hill slope		
Subregion (LRR or MLRA): LRRN L		.590885 Datum: NAD 83
Soil Map Unit Name: Gilpin-Upshur silt loams, 35 to		
Are climatic / hydrologic conditions on the site typical		
Are Vegetation, Soil, or Hydrology _	 •	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 location	ons, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No Is the Sampled Area	
Hydric Soil Present? Yes	No.	Yes ✔ No
Wetland Hydrology Present? Yes	No within a Wetland?	Yes No
Remarks:		
Cowardin Code: PEM; HGM: slope; WT:	NRPWW	
Information listed on this form represents	the data collected in 2015. The wetland	d was revisited on 09/25/2019. Presence
of wetland hydrology, hydrophytic vegeta	tion, and hydric soils was confirmed usi	ng the USACE EMP Regional
Supplement delineation methodology. Or	nly small remnant of the originally deline	ated wetland currently exists within LOD.
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)
	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)
	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):4	
	Depth (inches): 8	
1	_	hadrata wa Brassanio - Wasan M
Saturation Present? Yes No (includes capillary fringe)	Depth (inches):0 Wetland I	Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitorin	g well, aerial photos, previous inspections), if ava	ilable:
Remarks:		
Wetland along access road, surface water	er in depression created by truck ruts, be	ut water table at about 8"

Sampling	Point:	W-	1	6
Samplinu	r on it.			v

	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30')		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: 3 (A)
2				
3				Total Number of Dominant Species Across All Strata: 5 (B)
4				Species Across Air Strata (B)
4				Percent of Dominant Species
5		-		That Are OBL, FACW, or FAC:60 (A/B)
6		-		Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov	_	
50% of total cover: 0	20% of	total cover:	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15'				FACW species x 2 =
1. Rosa multiflora	5		FACU	FAC species x 3 =
2. Rubus allegheniensis	5	V	FACU_	FACU species x 4 =
3. Salix nigra	5	V	OBL	UPL species x 5 =
4		(<u></u>	Column Totals: (A) (B)
		-		
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		
50% of total cover: 7.5	20% of	total cover:	3	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5'				data in Remarks or on a separate sheet)
1. Juncus effusus	5		FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Scirpus atrovirens	20	(OBL	
3. Eleocharis sp.	5	-	ND ND	¹ Indicators of hydric soil and wetland hydrology must
4 Potentilla simplex	5			be present, unless disturbed or problematic.
**	10		FACU	Definitions of Four Vegetation Strata:
5. Packera aurea			FACW_	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Microstegium vimineum	35		F <u>AC</u>	more in diameter at breast height (DBH), regardless of
7. Carex Iurida	30		OBL	height.
8. Toxicodendron radicans	5		F <u>AC</u>	Canling/Chrub Woody plants avaluding vines loss
9. Rumex crispus	5		F <u>AC</u>	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				
	120	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 60		total cover:		or oles, and woody plante loss than oles it tail.
Woody Vine Stratum (Plot size: 15')	2070 01	total oover.		Woody vine – All woody vines greater than 3.28 ft in
,				height.
1		-		
2				
3		-		
4				Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes No
50% of total cover: 0	20% of	total cover:	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			
` '	,			

W-I16

Profile Desc	ription: (Describe t	o the dept	th needed to docur	nent the i	ndicator	or confirm	n the absence	of indicators.)
Depth	Matrix		Redo	x Features	s			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-7	7.5yr 5/6	100					Clay	
7-14	7.5yr 5/2	90	Gley2 6/5bg	10			SaCl	Sandy clay
					-			
						-		
1- 0.0							2, , ,	
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gr	ains.		L=Pore Lining, M=Matrix. ators for Problematic Hydric Soils ³ :
Hydric Soil				(=-)				•
Histosol			Dark Surface		(00) 7	u DA 44=		cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be				148) C	Coast Prairie Redox (A16)
Black Hi	stic (A3) en Sulfide (A4)		Thin Dark Su			47, 148)	_	(MLRA 147, 148)
	, ,		Loamy Gleye Depleted Ma		F2)		<u> </u>	Piedmont Floodplain Soils (F19)
	d Layers (A5) ick (A10) (LRR N)		Redox Dark		.e)		\/	(MLRA 136, 147) Yery Shallow Dark Surface (TF12)
	d Below Dark Surface	(Δ11)	Depleted Dai		,			Other (Explain in Remarks)
	ark Surface (A12)	, (, (, 1, 1,	Redox Depre				_ ~	The (Explain in Remarks)
	lucky Mineral (S1) (L	RR N.	Iron-Mangan			LRR N.		
	\ 147, 148)	•	MLRA 13		· / ·	,		
	Bleyed Matrix (S4)		Umbric Surfa		MLRA 13	6, 122)	³ Ind	licators of hydrophytic vegetation and
Sandy R	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	l8) we	etland hydrology must be present,
Stripped	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 147	7) un	less disturbed or problematic.
	Layer (if observed):							
Type: <u>G</u> ı	avel							
Depth (in	ches): <u>14</u>						Hydric Soil	Present? Yes V No No
Remarks:								



Photograph Direction NNE

Date: 05/16/2015

Comments: 2015 wetland delineation.



Photograph Direction North

Date: 09/25/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 05/16/2015
Applicant/Owner: MVP		· ·			Sampling Point: W-I16-UP1
Investigator(s): SET SJT GS		Section	on, Township, Range: N/	/A	
Landform (hillslope, terrace, etc.): Hills					Slope (%): N/A
Subregion (LRR or MLRA): LRRN					Datum: NAD 83
Soil Map Unit Name: Gilpin-Upshur silt					
Are climatic / hydrologic conditions on t					·
Are Vegetation, Soil, or		-			
Are Vegetation, Soil, or		-			
SUMMARY OF FINDINGS – A	-				
			.p9 po	,	, p
Hydrophytic Vegetation Present?	Yes		Is the Sampled Area		
Hydric Soil Present? Wetland Hydrology Present?	Yes Yes	_	within a Wetland?	Yes	No
Remarks:	163				
Upland					
HYDROLOGY					
Wetland Hydrology Indicators:					tors (minimum of two required)
Primary Indicators (minimum of one is	-			Surface Soil (
Surface Water (A1)		True Aquatic Plants (etated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Pat	
Saturation (A3)			es on Living Roots (C3)	Moss Trim Li	
Water Marks (B1)		Presence of Reduced Recent Iron Reduction	, ,		Nater Table (C2)
Sediment Deposits (B2) Drift Deposits (B3)		Thin Muck Surface (C		Crayfish Burr	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Rer			ressed Plants (D1)
Iron Deposits (B5)	_	Curor (Explain III real	namo,	Geomorphic	
Inundation Visible on Aerial Image	ery (B7)			Shallow Aqui	, ,
Water-Stained Leaves (B9)	, ,				phic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	
Field Observations:					
Surface Water Present? Yes _	No	Depth (inches):			
		Depth (inches):			
Saturation Present? Yes (includes capillary fringe)	No	Depth (inches):	Wetland H	lydrology Presen	t? Yes No
Describe Recorded Data (stream gauge	ge, monitoring w	vell, aerial photos, pre	vious inspections), if ava	ilable:	
Remarks:					
Modified veg/soils due to acces	ss road durin	a 2015 survey.			
		g = 0 : 0 0 a : 0 y .			

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

Sampling	Point:	W-I	116-	UP1

30'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				
5		·		Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6				That Are OBL, FACW, OF FAC.
				Prevalence Index worksheet:
7	0	Total Co		Total % Cover of: Multiply by:
50% of total cover:0		= Total Cov		OBL species x 1 =
AFI	20% 01	total cover		FACW species x 2 =
<u>Japinig/Ortrab Ottatum</u> (1 lot 3126				FAC species x 3 =
1				
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5		-		Provolence Index - P/A -
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
9	0	Tatal Ca		3 - Prevalence Index is ≤3.0 ¹
50% of total cover:0		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
E!	20% 01	total cover		data in Remarks or on a separate sheet)
Helb Stratum (Flot Size)	15		E4011	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Asclepias syriaca			F <u>ACU</u>	
2. Solidago canadensis	20		F <u>ACU</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Trifolium repens	50		F <u>ACU</u>	be present, unless disturbed or problematic.
4. Parthenocissus quinquefoil	5		F <u>ACU</u>	Definitions of Four Vegetation Strata:
5. Persicaria sagitata	15		OBL	
6. Carex novae-angliae	5		F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				
11	110	T-1-1-0		Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: 55		= Total Cover		of size, and woody plants less than 3.28 ft tall.
4.51	20% 01	total cover		Woody vine - All woody vines greater than 3.28 ft in
, voody vine Stratum (i lot size.				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cov	ver	Present? Yes No
50% of total cover: 0	20% of	total cover	· <u> </u>	
Remarks: (Include photo numbers here or on a separate s	heet.)			
				l l

SOIL Sampling Point: W-I16-UP1

Profile Desc	cription: (Describe t	o the depth	needed to docun	nent the in	ndicator	or confirm	the ab	sence of indicat	ors.)	
Depth	Matrix			x Features						
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Text		Remarks	<u> </u>
0-2	2.5yr 7/6	100					C	; 		
2-10	10yr 6/4	100					C	;		
										_
			_							_
							-			
¹ Type: C=C	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gra	ins.	² Locat	ion: PL=Pore Lin	ning, M=Matri	x.
Hydric Soil								Indicators for P	roblematic I	Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)				2 cm Muck ((A10) (MLRA	147)
	oipedon (A2)		Polyvalue Be	low Surfac			148)		e Redox (A16	
	stic (A3)		Thin Dark Su	, ,	•	47, 148)		(MLRA 1		
	en Sulfide (A4)		Loamy Gleye		=2)				oodplain Soil	s (F19)
	d Layers (A5)		Depleted Mat	. ,				(MLRA 1		
	uck (A10) (LRR N)	(0.4.4)	Redox Dark S						w Dark Surfac	
	d Below Dark Surface ark Surface (A12)	(ATT)	Depleted Dar Redox Depre					Other (Expia	ain in Remark	(S)
	Mucky Mineral (S1) (L	RR N	Iron-Mangane			RR N				
	A 147, 148)	ixix i x ,	MLRA 130		,3 (1 12) (1	-1111 14,				
	Gleyed Matrix (S4)		Umbric Surfa	-	MLRA 13	6, 122)		³ Indicators of h	nydrophytic ve	egetation and
	Redox (S5)		Piedmont Flo				l8)	wetland hydro		
	Matrix (S6)		Red Parent M					unless disturb		
Restrictive	Layer (if observed):									
Type:			<u></u>							
Depth (in	ches):		<u></u>				Hydri	ic Soil Present?	Yes	No
Remarks:	•									

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.964195	Lon.	-80.590961
STREAM/SITE ID AND SITE DESCR	RIPTION:					W-I17, Timber Mat Crossing		
(% stream slope, watershed size {a	creage}, unaltered	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-117	Emergent	0.0017	Emergent					
						PART III - Advanced		n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0017						
Walla		Jnit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent Total Scrub-Shrub			0.0017	-		\$102.00		
Total Scrub-Shrub Total Forested			0	-		\$102.00		
				-				
Total Open Water			0	1				

Project/Site: MVP	City/County: Lewi	S	Sampling Date: 05/16/2015
Applicant/Owner: MVP		State: WV	
Investigator(s): G. Stevens, S. Townsend, S. Th			
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concave,	convex, none): Convex	Slope (%): N/A
Subregion (LRR or MLRA): LRRN Lat:			Datum: NAD 83
Soil Map Unit Name: Gilpin-Upshur silt loams, 35 to 70			
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes N	o (If no, explain in R	demarks.)
Are Vegetation, Soil, or Hydrology			_
Are Vegetation, Soil, or Hydrology			
SUMMARY OF FINDINGS – Attach site ma			
Hydrophytic Vegetation Present? Yes	No In the Same		
	No.		N -
Wetland Hydrology Present?	No within a We	tiano? Yes	No
Remarks:			
Cowardin Code:pem; HGM: depressional; W	T: NRPWW		
Information listed on this form represents the	data collected in 2015. Th	e wetland was revisited	I on 09/25/2019. Presence
of wetland hydrology, hydrophytic vegetation	, and hydric soils was confi	rmed using the USACE	EMP Regional
Supplement delineation methodology.			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is required; check	all that apply)	Surface Soil	
	rue Aquatic Plants (B14)		getated Concave Surface (B8)
	Hydrogen Sulfide Odor (C1)	Drainage Pa	
	Oxidized Rhizospheres on Living F		
Water Marks (B1) F	Presence of Reduced Iron (C4)	Dry-Season	Water Table (C2)
Sediment Deposits (B2) F	Recent Iron Reduction in Tilled So	ls (C6) Crayfish Bur	rows (C8)
Drift Deposits (B3) 1	hin Muck Surface (C7)	Saturation V	isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or S	tressed Plants (D1)
Iron Deposits (B5)		Geomorphic	Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aqu	itard (D3)
Water-Stained Leaves (B9)			aphic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutral	Test (D5)
Field Observations:			
Surface Water Present? Yes No	Depth (inches): 3		
Water Table Present? Yes No	Depth (inches):		
Saturation Present? Yes No (includes capillary fringe)	Depth (inches):	Wetland Hydrology Preser	nt? Yes 🔽 No
Describe Recorded Data (stream gauge, monitoring we	ell, aerial photos, previous inspect	ons), if available:	
Remarks:			
On access road			

Sampling Point: W-I17

20'	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:)		Species?	Status	Number of Dominant Species
1. Carpinus caroliniana	10		FAC	That Are OBL, FACW, or FAC:5 (A)
2 Acer saccharinum	3	/	FACW	
			1.71.011	Total Number of Dominant Species Across All Strata: 6 (B)
3				Species Across All Strata: 6 (B)
4			- ——	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 83.3% (A/B)
6				(7.5)
				Prevalence Index worksheet:
7	13			Total % Cover of: Multiply by:
0.5		= Total Co		OBL species x 1 =
50% of total cover: 6.5	20% of	total cover	:	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Smilax rotundifolia	10	~	FAC	FAC species x 3 =
2. Quercus montana	3		UPL	FACU species x 4 =
·			UFL	UPL species x 5 =
3			- ——	
4				Column Totals: (A) (B)
5				5 50
				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				
		= Total Co	/Or	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 6.5		total cove		4 - Morphological Adaptations ¹ (Provide supporting
	20% 01	iolai cove		data in Remarks or on a separate sheet)
Tierb Stratum (Flot size)				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Leersia oryzoides	50		OBL	1 Toblematio Tryarophytic Vegetation (Explain)
2. Bidens sp.	25		ND	
3. Rubus idaeus	20		FAC	
4 Microstegium vimineum	40			
···				Definitions of Four Vegetation Strata:
5				
		FAC FAC FAC FAC FAC Indicators of hydric soil and wetland hydrology must 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		
6				
6				more in diameter at breast height (DBH), regardless of
6				
6				more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less
6				more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
6				more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less
6				more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
6				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
6	135	= Total Co		more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
6	135	= Total Co		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
6	135	= Total Co		more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
6	135 5 20% of	= Total Co	/er :	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6	135 20% of	= Total Co	/er :27	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6	135 20% of	= Total Co	/er :27	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6		= Total Co total cover	/er :27	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in
6		= Total Co total cover	/er :27	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height.
6	135 5 20% of	= Total Co total cover	/er :27	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6	135 	= Total Co total cover	/er 27	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.
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6		= Total Co total cover	/er 27	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6		= Total Co total cover	/er 27	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6		= Total Co total cover	/er 27	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6		= Total Co total cover	/er 27	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6		= Total Co total cover	/er 27	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation
6		= Total Co total cover	/er 27	more in diameter at breast height (DBH), regardless of height. Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall. Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic Vegetation

W-I17

Depth	cription: (Describe to Matrix	o tne dept		nent tne x Feature		or confirm	n the absence	of indicato	rs.)	
(inches)	Color (moist)	%	Color (moist)	<u> % realure</u>	Type ¹	Loc ²	Texture		Remarks	
0-2	10yr5/1	80	7.5yr5/3	20	С	M/PL	SiLo			
2-12	10yr7/1	40	2.5yr4/8	40	С	M/PL	SiCL			
			7.5yr 6/6	20	C	M/PL	SiCL			
40.40	Class 4 F/N	400	7.5yi 0/0							
12-16	Gley 1 5/N	100			·		C			
				<u>, </u>						
								-		
						-				
					· -					
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Maske	d Sand G	rains.			ng, M=Matrix.	
Hydric Soil	Indicators:						Indica	ators for Pr	oblematic Hyd	dric Soils³:
Histosol	, ,		Dark Surface						A10) (MLRA 14	17)
	pipedon (A2)		Polyvalue Be				, 148) C		Redox (A16)	
	istic (A3)		Thin Dark Su			147, 148)		(MLRA 147	•	=
	en Sulfide (A4)		Loamy Gleye		(F2)		P		odplain Soils (⊦ 19)
	d Layers (A5)		Depleted Ma		E6)		1	(MLRA 130	6, 147) Dark Surface	(TE10)
	uck (A10) (LRR N) d Below Dark Surface	(Δ11)	Redox Dark : Depleted Dark :	•	,				in in Remarks)	(1712)
	d Below Dark Sunace ark Surface (A12)	(7.1.1)	Redox Depre					Tarior (Expiai	III INGIIIAINS)	
	/Jucky Mineral (S1) (L	RR N,	Iron-Mangan			(LRR N,				
	A 147, 148)	,	MLRA 13		(/	(=::::,				
	Gleyed Matrix (S4)		Umbric Surfa	-	(MLRA 1	36, 122)	³ Ind	icators of hy	drophytic vege	etation and
	Redox (S5)		Piedmont Flo						logy must be p	
Stripped	Matrix (S6)		Red Parent N	/laterial (F	- 21) (MLF	RA 127, 14	7) un	less disturbe	ed or problema	itic.
Restrictive I	Layer (if observed):									
Type:										
Depth (in	ches):		<u> </u>				Hydric Soil	Present?	Yes 🗸	No
Remarks:										



Photograph Direction North

Date: 05/16/2015

Comments: 2015 wetland delineation.



Photograph Direction SE

Date: 09/25/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP		City/County: Lewis		Sampling Date: 05/16/2015			
Applicant/Owner: MVP				Sampling Point: W-I17-UP1			
Investigator(s): G. Stevens, S. Townse	end, S. Therkildson						
Landform (hillslope, terrace, etc.): Hill slope		- '	-	Slope (%): N/A			
Subregion (LRR or MLRA): LRRN				Datum: NAD 83			
Soil Map Unit Name: Gilpin-Upshur silt loan		_					
Are climatic / hydrologic conditions on the si	te typical for this time of	/ear? Yes <u>✓</u> No	(If no, explain in R	emarks.)			
Are Vegetation, Soil, or Hydi	rologysignificant	ly disturbed? Are "N	lormal Circumstances" p	oresent? Yes No			
Are Vegetation, Soil, or Hydi							
SUMMARY OF FINDINGS – Attac							
Hydrophytic Vegetation Present?	Yes No	Is the Sampled A	Aroa				
	Yes No	within a Wetland		No			
Wetland Hydrology Present?	Yes No	_					
HYDROLOGY			-				
Wetland Hydrology Indicators:			·	tors (minimum of two required)			
Primary Indicators (minimum of one is requ	• • •		Surface Soil Cracks (B6)				
Surface Water (A1)	True Aquatic		Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Su		Drainage Par				
Saturation (A3)		cospheres on Living Roots Reduced Iron (C4)					
Water Marks (B1) Sediment Deposits (B2)		Reduced Iron (C4) Reduction in Tilled Soils (C6)		Water Table (C2)			
Drift Deposits (B3)	Thin Muck Su			sible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)		n in Remarks)		tressed Plants (D1)			
Iron Deposits (B5)	Outer (2Aprel		Geomorphic				
Inundation Visible on Aerial Imagery (I	B7)		Shallow Aqui				
Water-Stained Leaves (B9)	,			phic Relief (D4)			
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)			
Field Observations:							
	No V Depth (inche						
	No Depth (inche						
Saturation Present? Yes (includes capillary fringe)	No Depth (inche	es): Weti	land Hydrology Presen	t? Yes No			
Describe Recorded Data (stream gauge, n	nonitoring well, aerial pho	tos, previous inspections),	if available:				
Remarks:							

Sampling	Point:	W-I1	7-UP1
----------	--------	------	-------

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30')		Species?		Number of Dominant Species	
1. Carpinus caroliniana	40	✓	FAC	That Are OBL, FACW, or FAC: 4 (A))
2					'
				Total Number of Dominant Species Across All Strate: 5 (B)	
3				Species Across All Strata:5 (B))
4				Percent of Dominant Species	
5				That Are OBL, FACW, or FAC: 80 (A/	/B)
6				Providence by to consider the of	
7				Prevalence Index worksheet:	
	40	= Total Cov	er	Total % Cover of: Multiply by:	
50% of total cover: 20	20% of	total cover:	8	OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15')	<u></u>			FACW species x 2 =	
1. Rubus allegheniensis	40	/	FACU	FAC species x 3 =	
· · · · · · · · · · · · · · · · · · ·			1.7100	FACU species x 4 =	
2					
3					٠,
4				Column Totals: (A) (E	3)
5				Prevalence Index = B/A =	
6					
7				Hydrophytic Vegetation Indicators:	
				1 - Rapid Test for Hydrophytic Vegetation	
8		-		✓ 2 - Dominance Test is >50%	
9	40			3 - Prevalence Index is ≤3.0 ¹	
20		= Total Cov	_	4 - Morphological Adaptations ¹ (Provide supporti	ina
50% of total cover: 20	20% of	total cover:	8	data in Remarks or on a separate sheet)	9
Herb Stratum (Plot size: 5')				• • • • • • • • • • • • • • • • • • • •	
1. Asclepius syriaca	5		F <u>ACU</u>	Problematic Hydrophytic Vegetation ¹ (Explain)	
2. Rubus idaeus	25	✓	F <u>AC</u>		
3. Microstegium vimineum	15	~	FAC	¹ Indicators of hydric soil and wetland hydrology must	t
4. Bohmeria cylindrica	10		FACW	be present, unless disturbed or problematic.	
5. Smilax rotundifolia	20			Definitions of Four Vegetation Strata:	
5. Sitiliax fotulidilolla			F <u>AC</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm)	or
6				more in diameter at breast height (DBH), regardless	
7				height.	
8				One line (Ohanda - Wanda alanda ayahadi ayahadi a	
9.				Sapling/Shrub – Woody plants, excluding vines, les than 3 in. DBH and greater than or equal to 3.28 ft (1	
10.				m) tall.	•
11					
· · · · · · · · · · · · · · · · · · ·	75	T 0		Herb – All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3.28 ft tall.	SS
500/ of total account 37 5		= Total Cov		or size, and woody plants less than 3.26 it tall.	
50% of total cover: 37.5	20% of	total cover	13	Woody vine – All woody vines greater than 3.28 ft in	ı
Woody Vine Stratum (Plot size: 15")				height.	
1					
2					
3.					
4.					
_		-		Hydrophytic	
5	0	T 0		Vegetation Present? Yes ✓ No	
500/ (1/1)		= Total Cov		11000iii 100 <u> </u>	
50% of total cover:0		total cover:	0		
Remarks: (Include photo numbers here or on a separate sl	heet.)				

SOIL Sampling Point: W-I17-UP1

Profile Desc	cription: (Describe to	the depth	needed to docun	nent the i	ndicator	or confirm	the abs	sence of indicat	ors.)	
Depth	Matrix		Redox	K Features	3					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Textu	ure	Remarks	
0-12	10yr 6/4	93	7.5yr 6/6	7	С	M	Sac	CI	Sandy c	lay
										
					-	· ——	-			
				·			·-			_
·					-	· ——	-	 -		
					-	· ——	-			
										_
						· ——	-			
	oncentration, D=Deple	etion, RM=R	educed Matrix, MS	S=Masked	Sand Gr	ains.		on: PL=Pore Lin		
Hydric Soil								Indicators for P		=
Histosol			Dark Surface						(A10) (MLRA	
	pipedon (A2)		Polyvalue Be		. , .		148)		e Redox (A16))
	istic (A3)		Thin Dark Su			147, 148)		(MLRA 1		(= (=)
	en Sulfide (A4)		Loamy Gleye		F2)				loodplain Soils	(F19)
	d Layers (A5)		Depleted Mat		·c)			(MLRA 1:	•	o (TE40)
	uck (A10) (LRR N) d Below Dark Surface	(Δ11)	Redox Dark S Depleted Dar						w Dark Surface ain in Remarks	
	ark Surface (A12)	(7(1)	Redox Depre					Other (Expire	alli ili Kolliaike	?)
	Mucky Mineral (S1) (L l	RR N.	Iron-Mangane			LRR N.				
	A 147, 148)	,	MLRA 136			,				
	Gleyed Matrix (S4)		Umbric Surfa	•	MLRA 13	6, 122)		³ Indicators of h	nydrophytic ve	getation and
Sandy F	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	l8)	wetland hydro	ology must be	present,
Stripped	d Matrix (S6)		Red Parent M	faterial (F	21) (MLR	A 127, 147	7)	unless disturb	bed or problem	natic.
Restrictive	Layer (if observed):									
Type:			_							
Depth (in	ches):		<u></u>				Hydri	c Soil Present?	Yes	No 🗸
Remarks:							ı			

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.962362	Lon.	-80.590607
STREAM/SITE ID AND SITE DESCR						W-I20, Timber Mat Crossing		
(% stream slope, watershed size {a	creage}, unaltered	l or impairments)						
FORM OF MITIGATION:								
DATE:	8/10/2015 WE		WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wetl	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-I20	Emergent	0.0379	Emergent					
				_		PART III - Advanced		on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
					ļ	II OF NI		
Total Impact		0.0379			1			
PART II - Unit Scores						Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0379			00.074.00		
Total Scrub-Shrub			0			\$2,274.00		
Total Forested			0					
Total Open Water			0					

Project/Site: MVP	_ City/County: Lewis	Sampling Date: 05/17/2015
Applicant/Owner: MVP	State: WV	· -
Investigator(s): G. Stevens, S. Townsend, S. Therkildson		<u> </u>
Landform (hillslope, terrace, etc.): Hillslope		Slana (9/): N/A
Subregion (LRR or MLRA): LRRN Lat: 38.96194		
Soil Map Unit Name: Gilpin-Upshur silt loams, 35 to 70 percent slop		
Are climatic / hydrologic conditions on the site typical for this time of		
Are Vegetation, Soil, or Hydrology significan	tly disturbed? Are "Normal Circumstances" p	oresent? Yes No
Are Vegetation, Soil, or Hydrology naturally		
SUMMARY OF FINDINGS – Attach site map showing	ng sampling point locations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes No		
Hydric Soil Present? Yes V No	is the Sampleu Area	Na
Wetland Hydrology Present? Yes V No	within a wetland: Tes	No
Remarks:	- I	
Cowardin Code: pem; HGM: slope; WT: NRPWW		
Information listed on this form represents the data coll	ected in 2015. The wetland was revisited	on 09/25/2019. The
presence of wetland hydrology, hydrophytic vegetation	n, and hydric soils was unable to be confi	rmed because the wetland
was obstructed by timber matting.		
HYDROLOGY		
Wetland Hydrology Indicators:	Secondary Indica	ators (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 Ve	getated Concave Surface (B8)
✓ High Water Table (A2) Hydrogen St	ulfide Odor (C1) V Drainage Pa	tterns (B10)
Saturation (A3) Oxidized Rh	zospheres on Living Roots (C3) Moss Trim Li	ines (B16)
Water Marks (B1) Presence of	Reduced Iron (C4) Dry-Season	Water Table (C2)
Sediment Deposits (B2) Recent Iron	Reduction in Tilled Soils (C6) Crayfish Bur	rows (C8)
Drift Deposits (B3) Thin Muck S		isible on Aerial Imagery (C9)
Algal Mat or Crust (B4) Other (Expla		tressed Plants (D1)
Iron Deposits (B5)		Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aqu	
Water-Stained Leaves (B9)		aphic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutral	Test (D5)
Field Observations:	. 6	
Surface Water Present? Yes No Depth (inch		
Water Table Present? Yes No Depth (inch		
Saturation Present? Yes No Depth (inch (includes capillary fringe)	es):8 Wetland Hydrology Preser	nt? Yes V No
Describe Recorded Data (stream gauge, monitoring well, aerial ph	otos, previous inspections), if available:	
Remarks:	and tarrage historically until the access re	and was constructed
Wetlands forming on access road. Probably was wetla	-	ad was constructed.
Surface water present with salamanders and tadpoles	. Epnemeral. During 2015 survey.	

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

____)

50% of total cover: 4.5

Hydrophytic Vegetation

Present?

0 = Total Cover

50% of total cover: 0 20% of total cover: 0

50% of total cover: 62.5 20% of total cover: 25

50% of total cover: 0 20% of total cover:

30'

Tree Stratum (Plot size: __

Sapling/Shrub Stratum (Plot size: 15'

1. Fraxinus pennsylvanica

3. Acer rubrum

2. Rubus allegheniensis

Herb Stratum (Plot size: _

2. Scirpus atrovirens

4. Carex vulpinoidea

6. Persicaria sagitata

8. Impatiens capensis

5. Polygonum sp.

7. Carex lurida

9. Rumex crispus

10. Galium aparine

1. Dichanthelium clandestinum

3. Microstegium vimineum

mes of	plants.		Sampling Point: W-I20					
Absolute		Indicator	Dominance Test worksheet:					
% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 5	(A)				
		- ——— - ———	Total Number of Dominant Species Across All Strata: 6	(B)				
			Percent of Dominant Species That Are OBL, FACW, or FAC:83	(A/B)				
			Prevalence Index worksheet:					
0 .	= Total Co	· · · · · · · · · · · · · · · · · · ·	Total % Cover of: Multiply by	<u>y:</u>				
	total cover	^	OBL species x 1 =					
			FACW species x 2 =					
3	✓	FACW	FAC species x 3 =					
3	~	FACU	FACU species x 4 =					
3	~	FAC	UPL species x 5 =					
			Column Totals: (A)	(B)				
			Prevalence Index = B/A =					
			Hydrophytic Vegetation Indicators:					
			1 - Rapid Test for Hydrophytic Vegetation	nn				
			2 - Dominance Test is >50%					
			3 - Prevalence Index is ≤3.0¹					
9 :	= Total Co		4 - Morphological Adaptations ¹ (Provide	supporting				
_ 20% of	total cover	: <u>1.8</u>	data in Remarks or on a separate sh					
40			Problematic Hydrophytic Vegetation ¹ (E:					
10		FAC	resistance rigarophysic vegetation (Ex	лріант)				
5		<u>OBL</u>	¹ Indicators of hydric soil and wetland hydrolc	av must				
40		F <u>AC</u>	be present, unless disturbed or problematic.					
10	-	OBL	Definitions of Four Vegetation Strata:					
10		ND	Tree – Woody plants, excluding vines, 3 in. ((7.6 cm) or				
15		<u>OBL</u>	more in diameter at breast height (DBH), reg					
15		<u>OBL</u>	height.					
10		FACW_	Sapling/Shrub – Woody plants, excluding vi	ines. less				
		FAC	than 3 in. DBH and greater than or equal to					
5		F <u>ACU</u>	m) tall.					
125	= Total Co	ver	Herb – All herbaceous (non-woody) plants, r of size, and woody plants less than 3.28 ft ta	•				
	total cover		Woody vine – All woody vines greater than height.					

Remarks: (Include photo numbers here or on a separate sheet.)

Woody Vine <u>Stratum</u> (Plot size: ______)

Yes V No ____

SOIL Sampling Point: W-I20

	cription: (Describe	to the dep				or confirr	n the abser	nce of indicators.)
Depth (inches)	Matrix Color (moist)	%	Color (moist)	x Feature %	S Type ¹	Loc ²	Texture	e Remarks
0-4	10yr 4/2	50	10yr 5/2	40	C Type	M	SiLo	
	10y1 4/2						-	
			7.5yr 5/6	10	С	M	SiC	
4-12	10YR 8/2	60	7.5yr 6/8	25	С	M	SiC	
			7.5yr 4/6	15	С	M	SiC	
								 -
						·		
						·		
	· -				С			
¹ Type: C=C	concentration, D=Dep	letion, RM:	Reduced Matrix, M	S=Masked	d Sand Gr	ains.		: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						In	dicators for Problematic Hydric Soils ³ :
Histoso	I (A1)		Dark Surface	e (S7)				_ 2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				, 148)	Coast Prairie Redox (A16)
	listic (A3)		Thin Dark Su			147, 148)		(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye		(F2)		_	Piedmont Floodplain Soils (F19)
	d Layers (A5) uck (A10) (LRR N)		Depleted Ma Redox Dark		-6)			(MLRA 136, 147) Very Shallow Dark Surface (TF12)
	ed Below Dark Surface	e (A11)	Depleted Da		,		_	Other (Explain in Remarks)
	ark Surface (A12)	- ()	Redox Depre					
	Mucky Mineral (S1) (L	RR N,	Iron-Mangan			LRR N,		
	A 147, 148)		MLRA 13					
	Gleyed Matrix (S4)		Umbric Surfa					³ Indicators of hydrophytic vegetation and
-	Redox (S5)		Piedmont Flo					wetland hydrology must be present,
	d Matrix (S6) Layer (if observed):		Red Parent N	viateriai (F	·21) (MLR	A 127, 14	<u>/)</u>	unless disturbed or problematic.
	Layer (II observed).							
Type:	-1						11	Dail Brancouro Van V
Depth (in	icnes):						Hydric	Soil Present? Yes No
Remarks:	I finds within mati	riv						
viixed coa	ı imas witnin mati	rix.						



Photograph Direction SW

Date: 05/17/2015

Comments: 2015 wetland delineation.



Photograph Direction SSE

Date: 09/25/19

Project/Site: MVP		City/County: Lewi	S	Sampling Date: 05/17/2015			
Applicant/Owner: MVP		<u> </u>		Sampling Point: W-I20-UP1			
Investigator(s): G. Stevens, S. Tov	wnsend, S. Therkilds	on Section, Township.					
Landform (hillslope, terrace, etc.): Hills			<u> </u>	Slope (%): N/A			
Subregion (LRR or MLRA): LRRN				Datum: NAD 83			
Soil Map Unit Name: Gilpin-Upshur silt							
•				<u></u>			
Are climatic / hydrologic conditions on t							
Are Vegetation, Soil, or	Hydrology signific	cantly disturbed? A	re "Normal Circumstances	" present? Yes No			
Are Vegetation, Soil, or	Hydrologynatura	ally problematic? (I	f needed, explain any ansv	wers in Remarks.)			
SUMMARY OF FINDINGS - A	ttach site map sho	wing sampling poir	nt locations, transec	ts, important features, etc.			
Hydrophytic Vegetation Present?	Yes No	v					
Hydric Soil Present?	Yes No	Is the Samp		•			
Wetland Hydrology Present?	Yes No	within a We	tland? Yes	No			
Remarks:							
Upland							
HYDROLOGY							
Wetland Hydrology Indicators:			Secondary Ind	icators (minimum of two required)			
Primary Indicators (minimum of one is	required; check all that a	pply)	Surface So				
Surface Water (A1)	•	atic Plants (B14)		/egetated Concave Surface (B8)			
High Water Table (A2)		Sulfide Odor (C1)		Drainage Patterns (B10)			
Saturation (A3)	· · ·	Rhizospheres on Living R	-	Lines (B16)			
Water Marks (B1)	Presence	of Reduced Iron (C4)	Dry-Seaso	on Water Table (C2)			
Sediment Deposits (B2)	Recent Ir	on Reduction in Tilled Soi	ls (C6) Crayfish B	urrows (C8)			
Drift Deposits (B3)	Thin Muc	k Surface (C7)	Saturation	Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Other (Ex	plain in Remarks)	Stunted or	Stressed Plants (D1)			
Iron Deposits (B5)			Geomorph	nic Position (D2)			
Inundation Visible on Aerial Imag	ery (B7)		Shallow A	quitard (D3)			
Water-Stained Leaves (B9)				graphic Relief (D4)			
Aquatic Fauna (B13)			FAC-Neut	ral Test (D5)			
Field Observations:	.,,						
Surface Water Present? Yes _	No Depth (ir	nches):					
	No V Depth (in			_			
	No V Depth (ir	nches):	Wetland Hydrology Pres	ent? Yes No			
(includes capillary fringe) Describe Recorded Data (stream gauge)	ge, monitoring well, aerial	photos, previous inspecti	ons), if available:				
Remarks:							

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

2. Liriodendron tulipifera

Tree Stratum (Plot size: _

Sapling/Shrub Stratum (Plot size: 15'

1. Betula allegheniensis

2 Rosa multiflora

Herb Stratum (Plot size: _ 1. Asclepius syriaca

2. Erigeron annuus

5. Carex lurida

3. Scirpus atrovirens

6. Persicaria saggitata

7. Impatiens capensis

4. Microstegium vimineum

8. Parthenocissus quinquefolia

1. Acer rubrum

50% of total cover: 15 20% of total cover: 6

50% of total cover: $10 \frac{10}{20\%}$ of total cover: 4

50% of total cover: 52.5 20% of total cover: 21

50% of total cover: 0 20% of total cover:

ames of	plants.		Sampling Point: W-I20-UF	1							
Absolute			Dominance Test worksheet:								
15	Species?	Status FAC	Number of Dominant Species That Are OBL, FACW, or FAC: 4	(A)							
15 		FACU_	Total Number of Dominant Species Across All Strata: 6	(B)							
			Percent of Dominant Species That Are OBL, FACW, or FAC: 66.6%	(A/B)							
			Prevalence Index worksheet:								
30	= Total Cov	er	Total % Cover of: Multiply by:								
	total cover:	_	OBL species x 1 =	_							
			FACW species x 2 =	_							
5	✓	FAC	FAC species x 3 =	_							
15		FACU	FACU species x 4 =	_							
		1 <u>700</u>	UPL species x 5 =								
			Column Totals: (A)	(B)							
			Prevalence Index = B/A =	_ (/							
			Hydrophytic Vegetation Indicators:	_							
			1 - Rapid Test for Hydrophytic Vegetation								
			2 - Dominance Test is >50%								
			3 - Prevalence Index is ≤3.0¹								
20	= Total Cov	er	4 - Morphological Adaptations¹ (Provide sup	nortina							
20% of	total cover:	4	data in Remarks or on a separate sheet)	porting							
15		F <u>ACU</u>	Problematic Hydrophytic Vegetation ¹ (Expla	in)							
5		F <u>ACU</u>	¹ Indicators of hydric soil and wetland hydrology r	nuet							
5		OBL	be present, unless disturbed or problematic.	iiust							
40		F <u>AC</u>	Definitions of Four Vegetation Strata:								
5		OBL									
25		OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 more in diameter at breast height (DBH), regardl	cm) or							
5		FACW_	height.	C33 OI							
5		F <u>ACU</u>	Sapling/Shrub – Woody plants, excluding vines than 3 in. DBH and greater than or equal to 3.28 m) tall.								
105	= Total Cov		Herb – All herbaceous (non-woody) plants, rega of size, and woody plants less than 3.28 ft tall.	rdless							
20% of	total cover:	21	Woody vine – All woody vines greater than 3.28 height.	ft in							
	= Total Cov	^	Hydrophytic Vegetation Present? Yes No								

Remarks: (Include photo numbers here or on a separate sheet.)

10._____

Woody Vine <u>Stratum</u> (Plot size: ______)

SOIL Sampling Point: W-I20-UP1

Profile Desc	cription: (Describe t	o the depth	needed to docur	nent the i	ndicator o	or confirm	the abs	sence of indicat	ors.)	
Depth	Matrix			x Features						
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type'	Loc ²	Text		Remar	ks
0-3	10YR 4/6	100					SaC	<u> </u>		
3+								Re	fusal: Hai	d pan clay
										<u> </u>
-	-									
			_							
	-		_							
							-			
¹ Type: C=C	oncentration, D=Depl	etion, RM=R	educed Matrix, MS	S=Masked	Sand Gra	ins.		on: PL=Pore Lir		
Hydric Soil	Indicators:							Indicators for P	roblematic	Hydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)				2 cm Muck	(A10) (MLR	A 147)
	oipedon (A2)		Polyvalue Be		ce (S8) (M	LRA 147,	148)	Coast Prairi		
Black H	stic (A3)		Thin Dark Su	ırface (S9)	(MLRA 1	47, 148)		(MLRA 1	47, 148)	
Hydroge	en Sulfide (A4)		Loamy Gleye	ed Matrix (F2)			Piedmont Fl	loodplain Sc	oils (F19)
Stratified	d Layers (A5)		Depleted Ma	trix (F3)				(MLRA 1	36, 147)	
2 cm Mu	uck (A10) (LRR N)		Redox Dark	Surface (F	6)			Very Shallo	w Dark Surf	ace (TF12)
	d Below Dark Surface	(A11)	Depleted Da	rk Surface	(F7)			Other (Expla	ain in Rema	rks)
	ark Surface (A12)		Redox Depre							
	Mucky Mineral (S1) (L	RR N,	Iron-Mangan		es (F12) (I	RR N,				
	A 147, 148)		MLRA 13					2		
	Sleyed Matrix (S4)		Umbric Surfa							vegetation and
-	Redox (S5)		Piedmont Flo					wetland hydro		•
	Matrix (S6)		Red Parent N	Material (F	21) (MLR	A 127, 147	7)	unless disturb	ped or probl	ematic.
	Layer (if observed):									
Туре: <u>На</u>	ard pan clay		<u> </u>							
Depth (in	ches): <u>3</u>		<u> </u>				Hydri	c Soil Present?	Yes	No <u> </u>
Remarks:										
Wetland ve	eg forming over to	p of hard	pan layer, no h	ydric soi	ils, no h	/drology	' .			

	Mountain	Valley Pipeline	COORDINATES:	Lat.	38.962126	Lon.	-80.590741
RIPTION:					W-I21, Timber Mat Crossing		
creage}, unaltered	or impairments)						
8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetl	and Indicators						
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0631	Emergent					
							n
					Advanced Mitigation (Y or N)		Y
	0.0631						
	Init Scores						
iassification					ILF Costs		
					\$2.786.00		
					\$3,766.00		
		-					
	PART I - Weti Impact Wetland Classification Emergent	RIPTION: acreage}, unaltered or impairments) 8/10/2015 PART I - Wetland Indicators Impact Wetland Classification Emergent 0.0631 0.0631 PART II - Unit Scores	S/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0631 Emergent O.0631 Emergent O.0631 PART II - Unit Scores	RIPTION: Increage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts Wetland Classification Emergent 0.0631 Emergent 0.0631 PART II - Unit Scores Iassification Replacement Unit(s) 0 0 0	RPTION: Increage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland Classification Emergent 0.0631 Emergent 0.0631 PART II - Unit Scores lassification Replacement Unit(s) 0 0 0	BPTION: Creage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts (acreage) Wetland Classification Emergent 0.0631 Emergent PART III - Advanced Sustainable Determination Made on Advanced Mitigation (Y or N) PART III - Unit Scores Condition Bestimated Classification Classification PART III - Unit Scores Condition Bestimated Classification Bestimated Classification PART III - Unit Scores Condition Bestimated Classification Bestimated Classification PART III - Unit Scores Bestimated Classification Bestimated Classification	BPTION: Creage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts (acreage) Wetland Classification Emergent 0.0631 Emergent Emergent 0.0631 Emergent O.0631 Emergent Sustainable Determination Made on Advanced Mitigation (Y or N) PART II - Unit Scores assification Replacement Unit(s) 0.0631 0 0 1 \$3,786.00

Project/Site: MVP	City/County: Lewis		_ Sampling Date: 05/17/2015				
Applicant/Owner: MVP			Sampling Point: W-I21				
	Section, Township, Range: N/A						
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concave, convex, none): Convex Slope (%): N						
Subregion (LRR or MLRA): LRRN	Lat: 38.964281 Long	-80.59092					
Soil Map Unit Name: Gilpin-Upshur silt loams, 35							
Are climatic / hydrologic conditions on the site typic	cal for this time of year? Yes No	(If no, explain in I	Remarks.)				
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "N	Normal Circumstances"	present? Yes No				
Are Vegetation, Soil, or Hydrology	naturally problematic? (If nee	eded, explain any answ	ers in Remarks.)				
SUMMARY OF FINDINGS – Attach sit		cations, transect	s, important features, etc.				
Hydrophytic Vegetation Present? Yes	V No						
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	Is the Sampled /						
Wetland Hydrology Present? Yes	within a Wetland	d? Yes	No				
Remarks:							
Cowardin Code:pem HGM: depressiona	al WT: NRPWW						
Information listed on this form represent	ts the data collected in 2015. The we	etland was revisited	d on 09/25/2019. The				
presence of wetland hydrology, hydroph	nytic vegetation, and hydric soils was	s unable to be conf	firmed because the wetland				
was obstructed by timber matting.							
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Indic	cators (minimum of two required)				
Primary Indicators (minimum of one is required;	check all that apply)	Surface Soi	l Cracks (B6)				
✓ Surface Water (A1)	True Aquatic Plants (B14)		egetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Odor (C1)		atterns (B10)				
Saturation (A3)	Oxidized Rhizospheres on Living Roots						
Water Marks (B1)	Presence of Reduced Iron (C4)		Water Table (C2)				
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (Co						
Drift Deposits (B3)	Thin Muck Surface (C7)		/isible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Remarks)		Stressed Plants (D1)				
Iron Deposits (B5)		✓ Geomorphic					
Inundation Visible on Aerial Imagery (B7)		Shallow Aqu					
Water-Stained Leaves (B9)		Microtopogr	raphic Relief (D4)				
Aquatic Fauna (B13)		FAC-Neutra	al Test (D5)				
Field Observations:							
Surface Water Present? Yes No	Depth (inches):0.5						
	Depth (inches):						
Saturation Present? Yes No _	Depth (inches): Wet	land Hydrology Prese	nt? Yes <u> </u>				
(includes capillary fringe) Describe Recorded Data (stream gauge, monitor	ring well, aerial photos, previous inspections).	. if available:					
, , ,							
Remarks:							

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

Sampling Point: W-I21

Trop Strotum (Blot size: 30'	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tiee Stratum (Flot size.		Species?		Number of Dominant Species _
1. Eleagnus umbellata	10		<u>UPL</u>	That Are OBL, FACW, or FAC:5 (A)
2				Total Niverbay of Dansinger
3				Total Number of Dominant Species Across All Strata: 7 (B)
4				Openies / toross / tir etrata.
		· 		Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 71.4% (A/B)
6				Prevalence Index worksheet:
7				
		= Total Co		
50% of total cover:5	20% of	total cove	r: <u> 2 </u>	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Rosa multiflora	10	✓	FACU	FAC species x 3 =
2				FACU species x 4 =
		· -		UPL species x 5 =
3				Column Totals: (A) (B)
4				(b)
5		· 		Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9		· ·		
<u> </u>	4.0	= Total Co	vor	3 - Prevalence Index is ≤3.0¹
50% of total cover: 5				4 - Morphological Adaptations ¹ (Provide supporting
E!	20 /0 01	total cove	'. <u> </u>	data in Remarks or on a separate sheet)
Herb Stratum (Plot Size:)	35	~	ODI	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Typha angustifolia		. —	OBL	
2. Scirpus cyperinus	20		F <u>ACW</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Carex vulpinoidea	20		OBL	be present, unless disturbed or problematic.
4. Carex Iurida	25	✓	OBL	Definitions of Four Vegetation Strata:
5. Microstegium vimineum	20	✓	FAC	Definitions 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
7				height.
8	-	· 		Sapling/Shrub – Woody plants, excluding vines, less
9		· -		than 3 in. DBH and greater than or equal to 3.28 ft (1
10		·		m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	120	= Total Co	ver	of size, and woody plants less than 3.28 ft tall.
50% of total cover:60		total cove		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
,				neigni.
1				
3	-	· 		
4		· -		Hydrophytic
5				Vegetation
	0	= Total Co	ver	Present? Yes No
50% of total cover:0	20% of	total cove	r: <u> </u>	
Remarks: (Include photo numbers here or on a separate s	heet.)			
` '	,			

)IL	intion. (Describe	to the dent	h needed to docun	ont the	indicator	or confirm	n the cheenee	Sampling Point:\
		to the dept				or commi	ii the absence	or mulcators.)
epth nches)	Matrix Color (moist)	%	Color (moist)	<u>k Feature</u> %	Type ¹	Loc²	Texture	Remarks
0-8	2.5yr 5/2	90	7.5yr 4/6	10	C	M	SiCl	romano
8-16	10yr 7/1	60	Gley1 5/N	40		 M	Clay	
	_							-
					· 			
					С			
		lation DM	Deduced Metric MC	NA1			21	Daniel Malan M. Materia
ype: C=Co ∕dric Soil Ir		letion, RIVI=	Reduced Matrix, MS	=IVIasked	Sand G	rains.		_=Pore Lining, M=Matrix. tors for Problematic Hydric Soils ³ :
_ Histosol (Dark Surface	(S7)				cm Muck (A10) (MLRA 147)
	pedon (A2)		Polyvalue Be		ice (S8) (MLRA 147		oast Prairie Redox (A16)
Black His			Thin Dark Su					(MLRA 147, 148)
	Sulfide (A4)		Loamy Gleye			· · · , · · · · ,	Pi	edmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat		` ,			(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark S		- 6)		V	ery Shallow Dark Surface (TF12)
	Below Dark Surface	e (A11)	Depleted Dar	•	•			ther (Explain in Remarks)
Thick Da	rk Surface (A12)		Redox Depre	ssions (F	(8)			
_ Sandy Mi	ucky Mineral (S1) (L	.RR N,	Iron-Mangan	ese Mass	es (F12)	(LRR N,		
MLRA	147, 148)		MLRA 13	6)				
	eyed Matrix (S4)		Umbric Surfa					cators of hydrophytic vegetation and
_ Sandy Re			Piedmont Flo		•		•	tland hydrology must be present,
	Matrix (S6)		Red Parent N	1aterial (F	-21) (MLF	RA 127, 14	7) unl	ess disturbed or problematic.
estrictive L	ayer (if observed):							
Type:								
Depth (inc	hes):						Hydric Soil	Present? Yes V No



Photograph Direction South

Date: 05/17/2015

Comments: 2015 wetland delineation.



Photograph Direction North

Date: 09/25/19

Project/Site: MVP	City/County: Lewis		Sampling Date: 05/16/2015				
Applicant/Owner: MVP			Sampling Point: W-I21-UP1				
Investigator(s): SET SJT GS	· · · · · · · · · · · · · · · · · · ·						
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concave, conve		Slope (%): N/A				
Subregion (LRR or MLRA): LRRN			Datum: NAD 83				
Soil Map Unit Name: Gilpin-Upshur silt loams, 35							
Are climatic / hydrologic conditions on the site typic	_		<u></u>				
Are Vegetation ✓, Soil ✓, or Hydrology	-						
Are Vegetation, Soil, or Hydrology		ded, explain any answe					
SUMMARY OF FINDINGS – Attach sit	•	. ,	·				
		•					
	No ✓ Is the Sampled A		. /				
	—— No <u>▼</u> within a Wetland	!? Yes	No <u> </u>				
Remarks:							
Upland							
HYDROLOGY							
Wetland Hydrology Indicators:			ators (minimum of two required)				
Primary Indicators (minimum of one is required; of	· · ·	Surface Soil					
Surface Water (A1)	True Aquatic Plants (B14)		getated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Pa					
Saturation (A3)	Oxidized Rhizospheres on Living Roots						
Water Marks (B1)	Presence of Reduced Iron (C4)		Water Table (C2)				
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (Co	•					
Drift Deposits (B3)	Thin Muck Surface (C7)		isible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Remarks)		tressed Plants (D1) Position (D2)				
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)		Geomorphic Shallow Aqu					
Water-Stained Leaves (B9)			aphic Relief (D4)				
Aquatic Fauna (B13)		FAC-Neutral	•				
Field Observations:			1001 (20)				
	✓ Depth (inches):						
	Depth (inches):						
Saturation Present? Yes No		land Hydrology Preser	nt? Yes No✓				
(includes capillary fringe) Describe Recorded Data (stream gauge, monitor	ing well aerial photos previous inspections)	if available					
Describe Necorded Data (Stream gauge, monitor	ing wen, denai priotos, previous inspections,,	ii avaliable.					
Remarks:							
Modified veg/soils due to access road							

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

30'

6._____

50% of total cover: ___0

Tree Stratum (Plot size: __

Herb Stratum (Plot size: _

1. Asclepias syriaca

Sapling/Shrub Stratum (Plot size: 15'

____)

Sampling Point: W-I21-UP1 Absolute Dominant Indicator Dominance Test worksheet: **Number of Dominant Species** 0____(A) That Are OBL, FACW, or FAC: **Total Number of Dominant** 2 _{_ (B)} Species Across All Strata: Percent of Dominant Species 0% _ (A/B) That Are OBL, FACW, or FAC: Prevalence 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) _____ (B) Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0¹ ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)

2 _. Solidago canadensis	20		FACU_	1
3. Trifolium repens	50	✓	F <u>ACU</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Parthenocissus quinquefoil	5		FACU_	Definitions of Four Vegetation Strata:
5. Persicaria sagitata	15		OBL	Definitions of Four Vegetation Strata.
Carex novae-angliae	5		F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
3				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
50% of total cover: 55 Noody Vine Stratum (Plot size: 15')	110 20% of	= Total Cov total cover:	er 22	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.
1	20% of	= Total Cov total cover:	_	Hydrophytic Vegetation Present? Yes No _✓
Remarks: (Include photo numbers here or on a separate sh	eet.)			

% Cover Species? Status

_ = Total Cover

0 _ = Total Cover

20% of total cover: 0

FACU

50% of total cover: ___0 __ 20% of total cover: ___0

SOIL Sampling Point: W-I21-UP1

Profile Desc	ription: (Describe t	o the depth	needed to docun	ent the i	ndicator	or confirm	the ab	sence of indicators.)
Depth	Matrix		Redox	κ Features	5			
(inches)	Color (moist)	<u>%</u> _	Color (moist)	%	Type ¹	Loc ²		ure Remarks
0-2	2.5yr 7/6	_100					C	
2-10	10yr 6/4	100					С	,
								 -
¹ Type: C=Co	oncentration, D=Depl	etion, RM=R	educed Matrix, MS	= =Masked	Sand Gra	ins.	² Locati	ion: PL=Pore Lining, M=Matrix.
Hydric Soil		343117 14111 14		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	04114 011			Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Be		ce (S8) (N	ILRA 147,	148)	Coast Prairie Redox (A16)
Black Hi			Thin Dark Su				•	(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix (I	F2)			Piedmont Floodplain Soils (F19)
	l Layers (A5)		Depleted Mat					(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark S					Very Shallow Dark Surface (TF12)
	Below Dark Surface	e (A11)	Depleted Dar					Other (Explain in Remarks)
	ork Surface (A12)	DD N	Redox Depre			DD N		
-	lucky Mineral (S1) (L \ 147, 148)	KK N,	Iron-Mangane		es (F12) (1	_KK N,		
	leyed Matrix (S4)		Umbric Surfa		MI RA 13	6 122)		³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo				8)	wetland hydrology must be present,
-	Matrix (S6)		Red Parent N					unless disturbed or problematic.
	ayer (if observed):					<u> </u>	Í	· ·
J	ches):		_				Hydri	ic Soil Present? Yes No _✓
Remarks:			_				1.74	
Remarks.								

Project/Site: MVP	City/County: Lewis		Sampling Date: 05/16/2015				
Applicant/Owner: MVP			Sampling Point: W-I21-UP1				
Investigator(s): SET SJT GS	· · · · · · · · · · · · · · · · · · ·						
Landform (hillslope, terrace, etc.): Hillslope	Local relief (concave, conve		Slope (%): N/A				
Subregion (LRR or MLRA): LRRN			Datum: NAD 83				
Soil Map Unit Name: Gilpin-Upshur silt loams, 35							
Are climatic / hydrologic conditions on the site typic	_						
Are Vegetation ✓, Soil ✓, or Hydrology	-						
Are Vegetation, Soil, or Hydrology		ded, explain any answe					
SUMMARY OF FINDINGS – Attach sit	•	. ,	·				
		•					
	No ✓ Is the Sampled A		. /				
	—— No <u>▼</u> within a Wetland	!? Yes	No <u> </u>				
Remarks:							
Upland							
HYDROLOGY							
Wetland Hydrology Indicators:			ators (minimum of two required)				
Primary Indicators (minimum of one is required; of	· · ·	Surface Soil					
Surface Water (A1)	True Aquatic Plants (B14)		getated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Pa					
Saturation (A3)	Oxidized Rhizospheres on Living Roots						
Water Marks (B1)	Presence of Reduced Iron (C4)		Water Table (C2)				
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (Co	•					
Drift Deposits (B3)	Thin Muck Surface (C7)		isible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Remarks)		tressed Plants (D1) Position (D2)				
Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7)		Geomorphic Shallow Aqu					
Water-Stained Leaves (B9)			aphic Relief (D4)				
Aquatic Fauna (B13)		FAC-Neutral	•				
Field Observations:			1001 (20)				
	✓ Depth (inches):						
	Depth (inches):						
Saturation Present? Yes No		land Hydrology Preser	nt? Yes No✓				
(includes capillary fringe) Describe Recorded Data (stream gauge, monitor	ing well aerial photos previous inspections)	if available					
Describe Necorded Data (Stream gauge, monitor	ing wen, denai priotos, previous inspections,,	ii avaliable.					
Remarks:							
Modified veg/soils due to access road							

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

30'

6._____

50% of total cover: ___0

Tree Stratum (Plot size: __

Herb Stratum (Plot size: _

1. Asclepias syriaca

Sapling/Shrub Stratum (Plot size: 15'

____)

Sampling Point: W-I21-UP1 Absolute Dominant Indicator Dominance Test worksheet: **Number of Dominant Species** 0____(A) That Are OBL, FACW, or FAC: **Total Number of Dominant** 2 _{_ (B)} Species Across All Strata: Percent of Dominant Species 0% _ (A/B) That Are OBL, FACW, or FAC: Prevalence 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) _____ (B) Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0¹ ___ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation¹ (Explain)

2 _. Solidago canadensis	20		FACU_	1
3. Trifolium repens	50	✓	F <u>ACU</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Parthenocissus quinquefoil	5		FACU_	Definitions of Four Vegetation Strata:
5. Persicaria sagitata	15		OBL	Definitions of Four Vegetation Strata.
Carex novae-angliae	5		F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.
3				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
50% of total cover: 55 Noody Vine Stratum (Plot size: 15')	110 20% of	= Total Cov total cover:	er 22	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.
1	20% of	= Total Cov total cover:	_	Hydrophytic Vegetation Present? Yes No _✓
Remarks: (Include photo numbers here or on a separate sh	eet.)			

% Cover Species? Status

_ = Total Cover

0 _ = Total Cover

20% of total cover: 0

FACU

50% of total cover: ___0 __ 20% of total cover: ___0

SOIL Sampling Point: W-I21-UP1

Profile Desc	ription: (Describe t	o the depth	needed to docun	ent the i	ndicator	or confirm	the ab	sence of indicators.)
Depth	Matrix		Redox	κ Features	5			
(inches)	Color (moist)	<u>%</u> _	Color (moist)	%	Type ¹	Loc ²		ure Remarks
0-2	2.5yr 7/6	_100					C	
2-10	10yr 6/4	100					С	,
								 -
¹ Type: C=Co	oncentration, D=Depl	etion, RM=R	educed Matrix, MS	= =Masked	Sand Gra	ins.	² Locati	ion: PL=Pore Lining, M=Matrix.
Hydric Soil		343117 14111 14		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	04114 011			Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Be		ce (S8) (N	ILRA 147,	148)	Coast Prairie Redox (A16)
Black Hi			Thin Dark Su				•	(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix (I	F2)			Piedmont Floodplain Soils (F19)
	l Layers (A5)		Depleted Mat					(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark S					Very Shallow Dark Surface (TF12)
	Below Dark Surface	e (A11)	Depleted Dar					Other (Explain in Remarks)
	ork Surface (A12)	DD N	Redox Depre			DD N		
-	lucky Mineral (S1) (L \ 147, 148)	KK N,	Iron-Mangane		es (F12) (1	_KK N,		
	leyed Matrix (S4)		Umbric Surfa		MI RA 13	6 122)		³ Indicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo				8)	wetland hydrology must be present,
-	Matrix (S6)		Red Parent N					unless disturbed or problematic.
	ayer (if observed):					<u> </u>	Í	· ·
J	ches):		_				Hydri	ic Soil Present? Yes No _✓
Remarks:			_				1.74	
Remarks.								

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	38.933646	Lon.	-80.585074
STREAM/SITE ID AND SITE DESCRIPTION:						W-UU7, 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-UU7	Emergent	0.0038	Emergent					
						PART III - Advanced		on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0038			ı			
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0038			¢220.00		
Total Scrub-Shrub Total Forested			0			\$228.00		
			0					
Total Open Water			U	1				

Project/Site: MVP	City/County: Lew	is	Sampling Date: 09/27/2015					
Applicant/Owner: MVP		State: WV						
Investigator(s): Townsend, Therkildson, Pulver, Gracie Section, Township, Range: N/A								
Landform (hillslope, terrace, etc.): Slope		•	Slope (%): 5%					
Subregion (LRR or MLRA): LRRN		Long: -80.585047						
Soil Map Unit Name: Gilpin-Upshur silt loams	· · · · · ·	•						
Are climatic / hydrologic conditions on the site typic	al for this time of year? Yes N	lo (If no, explain in R	emarks.)					
Are Vegetation, Soil, or Hydrology _	significantly disturbed?	Are "Normal Circumstances" p	resent? Yes V No					
Are Vegetation, Soil, or Hydrology _								
SUMMARY OF FINDINGS – Attach site		•						
Hydrophytic Vegetation Present? Yes	Nola the Sam							
Hydric Soil Present? Yes	Is the Sam							
Wetland Hydrology Present? Yes	No within a W	etland? Yes	No					
Remarks:								
Cowardin Code: PEM; HGM: slope; WT:	nrpww							
Information on this form represents the o	lata collected in 2015. The wet	land was revisited on 09	/26/2019. Presence of					
wetland hydrology, hydrophytic vegetation	on, and hydric soils was confirn	ned using the USACE E	MP Regional Supplement					
delineation methodology.	•	· ·	0					
HYDROLOGY								
Wetland Hydrology Indicators:		Secondary Indica	tors (minimum of two required)					
Primary Indicators (minimum of one is required; c	heck all that apply)	Surface Soil						
Surface Water (A1)	True Aquatic Plants (B14)		getated Concave Surface (B8)					
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage Pat						
Saturation (A3)	 Oxidized Rhizospheres on Living I 							
Water Marks (B1)	Presence of Reduced Iron (C4)		Dry-Season Water Table (C2)					
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Sc							
Drift Deposits (B3)	Thin Muck Surface (C7)		sible on Aerial Imagery (C9)					
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or St	tressed Plants (D1)					
Iron Deposits (B5)		✓ Geomorphic	Position (D2)					
Inundation Visible on Aerial Imagery (B7)		Shallow Aqui	tard (D3)					
Water-Stained Leaves (B9)		Microtopogra	phic Relief (D4)					
Aquatic Fauna (B13)		FAC-Neutral	Test (D5)					
Field Observations:								
	Depth (inches):							
Water Table Present? Yes No	L Depth (inches):							
	✓ Depth (inches):	Wetland Hydrology Presen	t? Yes 🗸 No					
(includes capillary fringe) Describe Recorded Data (stream gauge, monitori	ng well, aerial photos, previous inspec	ions), if available:						
Bootise Noserada Bata (otroain gauge, memen	ng wen, dendi prietes, previede inopes	iono), ii availabio.						
Remarks:								
No saturation. In field, narrow band of w	etland which drains to ravine d	uring 2015 survey.						

EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: W-UU7
30'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	<u>Status</u>	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				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% of	total cover	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5 6				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8			· ——	2 - Dominance Test is >50%
9	0			3 - Prevalence Index is ≤3.0 ¹
500/ 244242 22000		= Total Cov	_	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:0	20% of	total cover		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')	35	./	E4 0)4/	Problematic Hydrophytic Vegetation ¹ (Explain)
1. Cyperus odoratus			F <u>ACW</u>	
2. Schoenoplectus tabernaemontani	15		<u>OBL</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Rosa sp.	5		ND	be present, unless disturbed or problematic.
4. Poa annua	20		F <u>ACU</u>	Definitions of Four Vegetation Strata:
_{5.} Arthraxon hispidus	10		F <u>AC</u>	Tree Meady plants and discovering 2 in (7.0 are) as
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				Sanling/Shrub Woody plants evaluding vines loss
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	85	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 42.5				Manada and Allera de Cara and Allera de Cara d
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1				no.g.m
2				
3				
4				
<u></u> 5.		-		Hydrophytic Vegetation
o	0	= Total Cov	or	Present? Yes V No
50% of total cover: 0		total cover	_	
Remarks: (Include photo numbers here or on a separate s		10101 00101	·	
Tremains. (include prioto numbers here of on a separate s	neet.)			

SOIL Sampling Point: W-UU7

Profile Desc	cription: (Describe	to the dep	th needed to docur	nent the	indicator	or confirn	n the abs	sence of indicators.)
Depth	Matrix			x Feature				
(inches) 0-1	Color (moist) 10YR 3/1	<u>%</u> 100	Color (moist)	%	Type ¹	Loc ²	<u>Text</u>	
1-16	10YR 4/4	35					Clay	
	10YR 4/1	60	5yr4/6	5	С	M/PL	Clay	
	1011(1)1							
¹Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Masked	d Sand Gr	ains.	² Locati	ion: PL=Pore Lining, M=Matrix.
Hydric Soil		,						Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		ice (S8) (N	ILRA 147	148)	Coast Prairie Redox (A16)
	istic (A3)		Thin Dark Su				, 140)	(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye			,,		Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma		(· -)			(MLRA 136, 147)
	uck (A10) (LRR N)		Redox Dark		- 6)			Very Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Dai	•				Other (Explain in Remarks)
	ark Surface (A12)	- ()	Redox Depre					
	Mucky Mineral (S1) (L	.RR N.	Iron-Mangan			LRR N.		
	A 147, 148)		MLRA 13		, (,		
	Gleyed Matrix (S4)		Umbric Surfa		(MLRA 13	6. 122)		³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo				18)	wetland hydrology must be present,
-	d Matrix (S6)		Red Parent N					unless disturbed or problematic.
	Layer (if observed):		Red r drent n	natoriai (i	Z I) (III LIX	A 127, 14	·,	unicos distarbea or problematic.
	Layer (ii observeu).							
Type:								
Depth (in	ches):						Hydri	ic Soil Present? Yes 🔽 No
Mottles are	e faint but abunda	ant and c	xidized rhizosph	ieres pr	esent du	ıring 201	15 surve	rey.

Wetland Photograph Page

Wetland ID W-UU7



Photograph Direction South

Date: 09/27/2015

Comments: 2015 wetland delineation.



Photograph Direction WSW

Date: 09/26/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	City/County:	Lewis	Sampling Date: 09/27/2015			
Applicant/Owner: MVP			Sampling Point: W-UU7-UP			
Investigator(s): Townsend, Therkildson, Pulv						
Landform (hillslope, terrace, etc.): Slope			ch Slope (%): 5%			
Subregion (LRR or MLRA): LRRN		Long: 535963.80 e				
Soil Map Unit Name: Gilpin-Upshur silt loams		·				
Are climatic / hydrologic conditions on the site typical	al for this time of year? Yes	No (If no, explain in	Remarks.)			
Are Vegetation, Soil, or Hydrology _	significantly disturbed?	Are "Normal Circumstances	"present? Yes V No			
Are Vegetation, Soil, or Hydrology _						
SUMMARY OF FINDINGS – Attach site						
Hydrophytic Vegetation Present? Yes	No ls the					
	No V	Sampled Area	No✓			
	No	n a Wetland? Yes	NO			
Remarks:						
Cowardin Code:						
HGM:						
WT:						
HYDROLOGY						
Wetland Hydrology Indicators:		Secondary Indi	icators (minimum of two required)			
Primary Indicators (minimum of one is required; ch	neck all that apply)	Surface So				
Surface Water (A1)	True Aquatic Plants (B14)		Sparsely Vegetated Concave Surface (B8)Drainage Patterns (B10)			
High Water Table (A2)	Hydrogen Sulfide Odor (C1)					
Saturation (A3)	Oxidized Rhizospheres on L	_				
Water Marks (B1)	Presence of Reduced Iron (0	= : :	n Water Table (C2)			
Sediment Deposits (B2)	Recent Iron Reduction in Till	· — ·	urrows (C8)			
Drift Deposits (B3)	Thin Muck Surface (C7)		Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Other (Explain in Remarks)		Stressed Plants (D1)			
Iron Deposits (B5)		Geomorph	ic Position (D2)			
Inundation Visible on Aerial Imagery (B7)		Shallow Ad	quitard (D3)			
Water-Stained Leaves (B9)		Microtopog	graphic Relief (D4)			
Aquatic Fauna (B13)		FAC-Neuti	ral Test (D5)			
Field Observations:						
	Depth (inches):					
	Depth (inches):					
Saturation Present? Yes No (includes capillary fringe)	Depth (inches):	Wetland Hydrology Pres	ent? Yes No			
Describe Recorded Data (stream gauge, monitoring	ng well, aerial photos, previous in	nspections), if available:				
Devent						
Remarks: Fill materials begin at 4" and prevented f	urther digging at 12" Ang	ular 2"∓ rock				
I ili materiais begin at 4 and prevented i	untiler digging at 12 . Ang	ulai Z + IOCK.				

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

EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Poin	t: <u>W-UU7-U</u>	IP1
Trac Chartery (Blat size 30'		Dominant Indic		t worksheet:		
Tree Stratum (Plot size: 30')		Species? Sta	 Number of Domi 		1	(4)
1		·	That Are OBL, F	ACVV, OF FAC: _	<u> </u>	(A)
3		·	Total Number of Species Across		3	(B)
4.		·	· ·	_		(D)
5.		· <u></u>	Percent of DominThat Are OBL, F		33	(A/B)
	<u> </u>					(/////)
7	-		Prevalence Inde			
	0	= Total Cover		er of:		
50% of total cover: 0	20% of	total cover: 0		x 1 :		
Sapling/Shrub Stratum (Plot size: 15')				x 2 :		
1				x 3 :		
2		·		x 4 : x 5 :		
3		·		X 5 : (A)		
4 -		· — —	— Column rotals.	(A)		_ (b)
5		·	— Prevalence	e Index = B/A = _		_
0		·	Hydrophytic Ve	getation Indicato	rs:	
·			1 - Rapid Te	st for Hydrophytic	Vegetation	
o 9.		·		ce Test is >50%		
o	0	= Total Cover		ce Index is ≤3.0 ¹		
50% of total cover:0		_		ogical Adaptations ¹		porting
Herb Stratum (Plot size: 5')				emarks or on a se	•	
1. Panicum anceps	30	FAC	Problematic	Hydrophytic Vege	tation (Expla	in)
2. Trifolium repens	15	FAC	J lindicators of but	dria aail and watlar	ad budralagur	must
3. Eupatorium capillifolium	5	F <u>AC</u>		dric soil and wetlar ss disturbed or pro		nust
_{4.} Solanum sp.	5	N <u>D</u>	-	our Vegetation S		
5. Chamaesyce prostrata	15	FAC	<u>J</u>	_		am) ar
6	-	· — —		ants, excluding vir r at breast height (
7			height.		, .	
8		·	Sapling/Shrub -	- Woody plants, ex	cluding vines	, less
9		· ——	than 3 in. DBH a	nd greater than or		
10		· ——	m) tall.			
11	70			ceous (non-woody dy plants less than		rdless
50% of total cover: 35	20% of	= Total Cover total cover: 14	· ·	uy piants less than	1 3.20 II laii.	
Woody Vine Stratum (Plot size: 15')	2070 01		Woody vine – A	II woody vines gre	ater than 3.28	ft in
1.			height.			
2						
3						
4		·				
5			Vegetation			
		= Total Cover	Present?	Yes	No	
50% of total cover:0	20% of	total cover: 0				

Remarks: (Include photo numbers here or on a separate sheet.)

ND - Species not determined

Species labeled ND were not included in dominance test

SOIL Sampling Point: W-UU7-UP1

Profile Description: (Describe to the	depth needed to document the indicator or confirm	the absence of	of indicators.)
Depth Matrix	Redox Features		
(inches) Color (moist) %	Color (moist) % Type ¹ Loc ²	Texture	Remarks
0-12" 10yr5/4 10	0	Clay silt	
			
	<u> </u>		
		3	
	RM=Reduced Matrix, MS=Masked Sand Grains.		=Pore Lining, M=Matrix.
Hydric Soil Indicators:	D 1 0 ((0=)		tors for Problematic Hydric Soils ³ :
Histosol (A1)	Dark Surface (S7)		cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Below Surface (S8) (MLRA 147,		past Prairie Redox (A16)
Black Histic (A3)	Thin Dark Surface (S9) (MLRA 147, 148)		(MLRA 147, 148)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)		edmont Floodplain Soils (F19)
Stratified Layers (A5) 2 cm Muck (A10) (LRR N)	Depleted Matrix (F3) Redox Dark Surface (F6)		(MLRA 136, 147) ery Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11			her (Explain in Remarks)
Thick Dark Surface (A12)	Redox Depressions (F8)	0.	Tel (Explain in Nemarko)
Sandy Mucky Mineral (S1) (LRR N			
MLRA 147, 148)	MLRA 136)		
Sandy Gleyed Matrix (S4)	Umbric Surface (F13) (MLRA 136, 122)	³ India	cators of hydrophytic vegetation and
Sandy Redox (S5)	Piedmont Floodplain Soils (F19) (MLRA 14		land hydrology must be present,
Stripped Matrix (S6)	Red Parent Material (F21) (MLRA 127, 147		ess disturbed or problematic.
Restrictive Layer (if observed):			
_{Type:} Gravel			
Depth (inches): 12"		Hydric Soil I	Present? Yes No
Remarks:			

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	38.93329	Lon.	-80.584765
STREAM/SITE ID AND SITE DESCR	IPTION:				*	W-H103, 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-H103 ATWS	Emergent	0.0037	Emergent					
						PART III - Advanced		on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0037						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0037			¢222.00		
Total Scrub-Shrub Total Forested			0		ļ	\$222.00		
			0					
Total Open Water			U	I				

Mountain Valley Pipeline			COORDINATES:	Lat.	38.93329	Lon.	-80.584765
IPTION:				,	W-H103, Timber Mat Crossing		
creage}, unaltered	l or impairments)						
DATE: 8/10/2015					PRECIPITATION PAST 48 HRS:		
PART I - Wet	land Indicators						
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.005	Emergent					
							on
					Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
	0.005						
	Unit Scores						
assification					ILF Costs		
			-		\$300.00		
		-	-		\$300.00		
		-	=				
	PART I - Wet Impact Wetland Classification Emergent	IPTION: creage}, unaltered or impairments) 8/10/2015 PART I - Wetland Indicators Impact (acreage) Classification Emergent 0.005 0.005 PART II - Unit Scores	IPTION: creage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.005 Emergent 0.005 PART II - Unit Scores	IPTION: creage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.005 Emergent 0.005 PART II - Unit Scores assification Replacement Unit(s) 0 0 0	IPTION: creage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.005 Emergent 0.005 PART II - Unit Scores assification Replacement Unit(s) 0 0 0	PTION: creage), unaltered or impairments) ### WH103, Timber Mat Crossing ### WH103, Timber Mat Crossing ### WH103, Timber Mat Crossing ### PRECIPITATION PAST 48 HRS: ### PART I - Wetland Indicators ### Wetland Impacts (acreage) Wetland Classification ### Emergent	IPTION: creage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts (acreage) Wetland Classification Emergent 0.005 Emergent Emergent 0.005 Emergent Sustainable Determination Made on Advanced Mitigation (Y or N) PART II - Unit Scores assification Replacement Unit(s) 0.005 0 0 \$300.00

Project/Site: MVP		City/C	ounty: Lewis		Sampling Date: 05/19/2015			
Applicant/Owner: MVP					Sampling Point: W-H103			
Investigator(s): A.Stott, A.Gre	ch, D. McCullough							
Landform (hillslope, terrace, etc.):					Slope (%): 0-3%			
Subregion (LRR or MLRA): LRR					Datum: NAD 83			
Soil Map Unit Name: Chagrin s					•			
Are climatic / hydrologic condition	s on the site typical for	this time of year? Y	es No (If	no, explain in R	demarks.)			
Are Vegetation, Soil	, or Hydrology	significantly distur	bed? Are "Normal C	Circumstances";	present? Yes V No			
Are Vegetation, Soil								
-					s, important features, etc.			
Hydrophytic Vegetation Present	? Yes_	No						
Hydric Soil Present?	Yes V		Is the Sampled Area	Yes 🗸	Na			
Wetland Hydrology Present?	Yes 🗸	No	within a Wetland?	res	No			
Remarks:								
Cowardin Code: PEM; HG	M: depression; WT	Γ: rpwwn						
Information listed on this fo	orm represents the	data collected in	n 2015. The wetland	was revisited	I on 09/26/2019. Presence			
of wetland hydrology, hydr	ophytic vegetation	, and hydric soils	s was confirmed using	g the USACE	EMP Regional			
Supplement delineation me		•			G			
HYDROLOGY								
Wetland Hydrology Indicators	:		5	Secondary Indica	ators (minimum of two required)			
Primary Indicators (minimum of		all that apply)	_					
Surface Water (A1)		rue Aquatic Plants (I		Surface Soil Cracks (B6) Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)		lydrogen Sulfide Odd						
Saturation (A3)		-	es on Living Roots (C3)	 Drainage Patterns (B10) Moss Trim Lines (B16)				
Water Marks (B1)		resence of Reduced	- · · · · · · · · · · · · · · · · · · ·					
Sediment Deposits (B2)			n in Tilled Soils (C6)	Dry-Season Water Table (C2) Crayfish Burrows (C8)				
Drift Deposits (B3)		hin Muck Surface (C		-	isible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)		other (Explain in Ren			tressed Plants (D1)			
Iron Deposits (B5)		(=-			Position (D2)			
Inundation Visible on Aerial	Imagery (B7)		_	Shallow Aqu				
Water-Stained Leaves (B9)	=		-		aphic Relief (D4)			
Aquatic Fauna (B13)			-	FAC-Neutral	, ,			
Field Observations:					· ,			
	Yes No [Depth (inches):						
			0"					
			0" Wetland Hy	drology Preser	nt? Yes ✔ No			
(includes capillary fringe)		, , , ,			n: 165 165			
Describe Recorded Data (stream	n gauge, monitoring we	ell, aerial photos, pre	vious inspections), if availa	able:				
Remarks:								
Remarks.								

	Sampl	ina	Point:	W	'-H1	03
--	-------	-----	--------	---	------	----

	A1 1 .	<u>.</u>		
Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?		Dominance Test worksheet:
			Status	Number of Dominant Species That Are OBL FACW or FAC: 3 (A)
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 3* (B)
4		•	· ·	(,
				Percent of Dominant Species
5		-		That Are OBL, FACW, or FAC: 100 (A/B)
6				Prevalence Index worksheet:
7				
	0	= Total Cov	/er	Total % Cover of: Multiply by:
50% of total cover:0				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
Caping/ornab chatani (1 lot size				FAC species x 3 =
1				
2				FACU species x 4 =
3				UPL species x 5 =
4.				Column Totals: (A) (B)
				,
5		-		Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				
9.				2 - Dominance Test is >50%
э	0	T		3 - Prevalence Index is ≤3.0 ¹
1		= Total Cov	_	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:0	20% of	total cover	:0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				,
1. Lysimachia nummularia	30	✓	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Scirpus atrocinctus	20	V	FACW	
3. Eleocharis acicularis	15		OBL	¹ Indicators of hydric soil and wetland hydrology must
	15	· — -		be present, unless disturbed or problematic.
4. Carex sp.			ND	Definitions of Four Vegetation Strata:
_{5.} Juncus tenuis	10		F <u>AC</u>	
6. Acorus calamus	5		OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7 Trifolium pratense	5		FACU	more in diameter at breast height (DBH), regardless of height.
8. Holcus lanatus	5	· -		Height.
8. Holous lanatus			F <u>AC</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.				Hark All barbaras (consumate a la consumate a consumat
	105	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: _ 52.				of size, and woody plants less than 5.20 it tall.
4.51	20% UI	lotal cover		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size:)				height.
1				
2				
3				
4		·		Hydrophytic
5	_			Vegetation
	0	= Total Cov	ver .	Present? Yes No
50% of total cover:0	20% of	total cover	:0	
Remarks: (Include photo numbers here or on a separate s	theet)			
ND - Not Determined.				
IND - INOL Determined.				
* Vegetation not ID'd to species level not include	ed in dom	ninance to	est.	
·				

SOIL Sampling Point: W-H103

Profile Desc	cription: (Describe	to the dep	h needed to docur	nent the	indicator	or confirm	the abse	ence of indicators.)
Depth	Matrix			x Feature	es .			
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Textur	
0-8"	5yr 4/2	90	7.5yr 4/6	10	<u>C</u>	M/PL	CL	
8-20"	5yr 4/3	100					GrS	3
							-	
					· -	· ——	-	
					. ———			
					· -	· ——	-	
¹ Type: C=C	oncentration, D=Depl	etion. RM=	Reduced Matrix. MS	S=Masked	d Sand Gr	ains.	² Locatio	on: PL=Pore Lining, M=Matrix.
Hydric Soil			· · · · · · · · · · · · · · · · · · ·					ndicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)				2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be	. ,	ace (S8) (N	/ILRA 147,		Coast Prairie Redox (A16)
Black Hi	istic (A3)		Thin Dark Su				. –	(MLRA 147, 148)
Hydroge	en Sulfide (A4)		Loamy Gleye	ed Matrix	(F2)		_	Piedmont Floodplain Soils (F19)
Stratified	d Layers (A5)		Depleted Ma	trix (F3)				(MLRA 136, 147)
	uck (A10) (LRR N)		Redox Dark		,		_	Very Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Da		. ,		_	Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre					
	Mucky Mineral (S1) (L	.RR N,	Iron-Mangan		ses (F12) (LRR N,		
	A 147, 148) Gleyed Matrix (S4)		MLRA 13 Umbric Surfa	•	/MI D A 12	e 122\		³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo				8)	wetland hydrology must be present,
-	Matrix (S6)		Red Parent N					unless disturbed or problematic.
	Layer (if observed):		1100 1 010111	viatoriai (i	21) (2 10		′	amos distance of problematic.
Type:								
	ches):						Lludria	Soil Present? Yes No
	Ciles).						Hyunc	Son Flesent: Tes No
Remarks:								

Wetland Photograph Page

Wetland ID W-H103



Photograph Direction East

Date: 05/19/2015

Comments: 2015 wetland delineation.



Photograph Direction East

Date: 09/26/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP		City/C	County: Lewis		Sampling Date: 05/19/2015			
Applicant/Owner: MVP		,	,		Sampling Point: W-H102,103, 104-UF			
Investigator(s): A.Stott, A.Grech, D. Mo	Culloug	h _{Sectio}	on, Township, Range: N					
Landform (hillslope, terrace, etc.): Valley b					Slope (%): 0-3%			
Subregion (LRR or MLRA): LRRN			Long: <u>-</u> 80					
Soil Map Unit Name: Chagrin silt loam, 0			_					
Are climatic / hydrologic conditions on the sit			_					
· · ·	• •	•		•	,			
Are Vegetation, Soil, or Hydr								
Are Vegetation, Soil, or Hydr	ology	naturally problemate	atic? (If needed, e	explain any answe	rs in Remarks.)			
SUMMARY OF FINDINGS – Attac	h site m	ap showing san	npling point location	ons, transects	, important features, etc.			
Hydrophytic Vegetation Present? Y	es	No. 🗸						
	es		Is the Sampled Area	V = =	No			
	es		within a Wetland?	res	NO			
HYDROLOGY								
Wetland Hydrology Indicators:				Secondary Indica	ators (minimum of two required)			
Primary Indicators (minimum of one is requ	ired: check	k all that apply)		Surface Soil Cracks (B6)				
Surface Water (A1)		True Aquatic Plants ((B14)		getated Concave Surface (B8)			
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Patterns (B10)				
Saturation (A3)		-	es on Living Roots (C3)	-				
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				
Drift Deposits (B3)		Thin Muck Surface (0			isible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	_	Other (Explain in Rer	marks)		tressed Plants (D1)			
Iron Deposits (B5)) 7 \				Position (D2)			
 Inundation Visible on Aerial Imagery (E Water-Stained Leaves (B9)	57)			Shallow Aqui	aphic Relief (D4)			
Aquatic Fauna (B13)				FAC-Neutral				
Field Observations:								
Surface Water Present? Yes	No _	Depth (inches):						
Water Table Present? Yes	No 🗸	Depth (inches):						
		Depth (inches):		Hydrology Preser	nt? Yes No			
(includes capillary fringe) Describe Recorded Data (stream gauge, m	onitoring w	voll porial photos pro	vious inspections), if ava	pilable:				
Describe Recorded Data (stream gauge, in	ormorning v	ven, aeriai priotos, pre	vious inspections), ii ave	mable.				
Remarks:								

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

___)

50% of total cover: ___0

50% of total cover: _ 0

30'

Sapling/Shrub Stratum (Plot size: 15')

Tree Stratum (Plot size: __

Herb Stratum (Plot size: _

2. Dactylis glomerata

3. Trifolium pratense

4. Asclepias exaltata

5. Ranunculus sp.

6. Phleum pratense

1. Holcus lanatus

Sampling	Poin	t: <u>W-H1</u>	02,103, 10)4-UP
Dominance Test worksheet	::			
Number of Dominant Species That Are OBL, FACW, or FAC		1		(A)
Total Number of Dominant Species Across All Strata:	_	3	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC		33.3	3%	(A/B)
Prevalence Index workshee	et:			
Total % Cover of:		Multipl	y by:	
OBL species	x 1	=		_
FACW species	x 2	=		_

Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0¹ ___ 4 - Morphological Adaptations¹ (Provide supporting 20% of total cover: 0 Problematic Hydrophytic Vegetation¹ (Explain) FAC **FACU FACU** FACU ND ____ F<u>ACU</u>

Absolute Dominant Indicator

% Cover Species? Status

_ = Total Cover

__ 20% of total cover:__ 0

0 = Total Cover

90 = Total Cover

0 = Total Cover

20

10

10

10

50% of total cover: 45 20% of total cover: 18

50% of total cover: 0 20% of total cover:

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

data in Remarks or on a separate sheet)

FAC species _____ x 3 = ____ FACU species _____ x 4 = ____ UPL species _____ x 5 = ____ Column Totals: _____ (A) _____ (B)

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.

Hydrophytic Vegetation Present?

Yes ____ No 🗸

Remarks: (Include photo numbers here or on a separate sheet.)

ND - Not Determined.

Woody Vine Stratum (Plot size: 15'

SOIL Sampling Point: W-H102,103, 104-UP

Profile Desc	ription: (Describe t	o the depth	needed to docun	ent the ir	ndicator o	or confirm	the ab	sence of indicat	ors.)	
Depth	Matrix			c Features						
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type ¹	Loc ²	Text		Remark	<u>s</u>
0-10"	5yr 4/3	100					CI	<u> </u>		
10-20"	5yr 4/3	100					S			
							-			
										_
	-						-			
							-			
							-			
¹ Type: C=Co	oncentration, D=Depl	etion, RM=R	educed Matrix, MS	=Masked	Sand Gra	ins.	² Locati	on: PL=Pore Lin		
Hydric Soil	Indicators:							Indicators for P	roblematic	Hydric Soils ³ :
Histosol	(A1)		Dark Surface					2 cm Muck ((A10) (MLRA	147)
Histic Ep	pipedon (A2)		Polyvalue Be				148)	Coast Prairie		6)
Black Hi			Thin Dark Su			47, 148)		(MLRA 14		
	n Sulfide (A4)		Loamy Gleye	,	- 2)			Piedmont FI		ls (F19)
	d Layers (A5)		Depleted Mat		0)			(MLRA 1		(TE40)
	ick (A10) (LRR N) d Below Dark Surface	(//11)	Redox Dark S Depleted Dar					Very Snallov	w Dark Surfa	
	ark Surface (A12)	(Д11)	Redox Depre					Other (Expla	alli ili iXelliali	N3)
	lucky Mineral (S1) (L	RR N.	Iron-Mangane			RR N.				
	A 147, 148)	,	MLRA 130		, ,	,				
	Bleyed Matrix (S4)		Umbric Surfa	ce (F13) (I	MLRA 13	6, 122)		³ Indicators of h	ydrophytic v	egetation and
Sandy R	Redox (S5)		Piedmont Flo	odplain So	oils (F19)	(MLRA 14	l8)	wetland hydro	ology must be	e present,
	Matrix (S6)		Red Parent M	laterial (F2	21) (MLR	4 127, 147	7)	unless disturb	oed or proble	matic.
Restrictive I	Layer (if observed):									
Type:										_
Depth (inc	ches):		<u>—</u>				Hydri	c Soil Present?	Yes	No
Remarks:							•			
In cow pas	ture									

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	38.933168	Lon.	-80.58499
STREAM/SITE ID AND SITE DESCR						W-H102, 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 - Wetl	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-H102	Emergent	0.0129	Emergent					
						PART III - Advanced		on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
					Į.	t i Ot Ni		
Total Impact		0.0129			ī			
,,,,,,		Jnit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0129			677400		
Total Scrub-Shrub			0			\$774.00		
Total Forested			0					
Total Open Water			0					

Project/Site: MVP State: WV Sampling Date: 05/19/2015 Applicant/Owner: MVP Sampling Date: 05/19/2019 Applicant/Owner: 05/19/2019 Applicant/
Astott, A.Grech, D. McCullough Section, Township, Range: N/A
Landform (hillslope, terrace, etc.): Valley bottom Local relief (concave, convex, none): Concave Subregion (LRR or MLRA): LRRN Lat: 38.933172 Long: -80.58499 Datum: NAD 83 Soil Map Unit Name: Chagfin silt loam, 0 to 3 percent slopes, occasionally flooded (Cn) Are vegetation, Soil, or Hydrology, significantly 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 features, etc. Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No Wetland Hydrology Present? Yes No Is the Sampled Area within a Wetland? Yes No Wetland Hydrology, hydrophytic vegetation, and hydric soils was confirmed using the USACE EMP Regional Supplement delineation methodology. HYDROLOGY Wetland Hydrology Indicators: 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) Water Marks (B1) Presence of Reduced Iron (C4) Sparsely Vegetated Concave Surface (B8) Water Marks (B1) Presence of Reduced Iron (C4) Sparsely Vegetated Concave Surface (B8) Dirit Deposits (B3)
Subregion (LRR or MLRA): LRRN Lat: 38.933172 Long: -80.58499 Datum: NAD 83 Soil Map Unit Name: Chagrin silt loam, 0 to 3 percent slopes, occasionally flooded (Cn) NWI classification: None Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.) Are Vegetation Soil, or Hydrology significantly 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 features, etc. Hydrophytic Vegetation Present? Yes No Is the Sampled Area within a Wetland? Yes No No Wetland Hydrology Present? Yes No Is the Sampled Area within a Wetland? Yes No Remarks: Cowardin Code: PEM; HGM: depression; WT: rpwwn Information listed on this form represents the data collected in 2015. The wetland was revisited on 09/26/2019. Presence of wetland hydrology, hydrophytic vegetation, and hydric soils was confirmed using the USACE EMP Regional Supplement delineation methodology. HYDROLOGY Wetland Hydrology Indicators: Secondary Indicators (minimum of two required) Primary Indicators (minimum of one is required: check all that apply) Surface Soil Cracks (B6) Surface Water (A1) True Aquatic Plants (B14) Sparsely Vegetated Concave Surface (B8) Yeligh Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patterns (B10) Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Water Table (C2) Sediment Deposits (B3) Thin Muck Surface (C7) Saturation Visible on Aerial Imagery (C9) Algal Mat or Crust (B4) Other (Explain in Remarks)
Are Climatic / hydrologic conditions on the site typical for this time of year? Yes
Are Vegetation, Soil, or Hydrology significantly 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 features, etc. Hydrophytic Vegetation Present?
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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 features, etc. Hydrophytic Vegetation Present?
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc. Hydrophytic Vegetation Present? Yes V No Isthe Sampled Area within a Wetland? Yes No
Hydric Soil Present? Wetland Hydrology Present? Yes
Hydric Soil Present? Wetland Hydrology Present? Yes V No Wetland Hydrology Present? Remarks: Cowardin Code: PEM; HGM: depression; WT: rpwwn Information listed on this form represents the data collected in 2015. The wetland was revisited on 09/26/2019. Presence of wetland hydrology, hydrophytic vegetation, and hydric soils was confirmed using the USACE EMP Regional Supplement delineation methodology. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Water (A1) High Water Table (A2) Hydrogen Sulfide Odor (C1) 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) Algal Mat or Crust (B4) Iron Deposits (B5) Inundation Visible on Aerial Imagery (B7) Water-Stained Leaves (B9) Within a Wetland? Yes Vegetated Con 09/26/2019. Presence on Using Roots (C3) No Judicators (minimum of two required) Secondary Indicators (minimum of two required) Puriange Patterns (B10) Sparsely Vegetated Concave Surface (B8) Surface Soil Cracks (B6) Drianage Patterns (B10) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Crayfish Burrows (C8) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
Wetland Hydrology Present? Yes V No
Remarks: Cowardin Code: PEM; HGM: depression; WT: rpwwn Information listed on this form represents the data collected in 2015. The wetland was revisited on 09/26/2019. Presence of wetland hydrology, hydrophytic vegetation, and hydric soils was confirmed using the USACE EMP Regional Supplement delineation methodology. HYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cracks (B6) Surface Water (A1) Hydrogen Sulfide Odor (C1) Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16) Water Marks (B1) Sediment Deposits (B2) Prisence of Reduced Iron (C4) Sediment Deposits (B3) Thin Muck Surface (C7) Algal Mat or Crust (B4) Iton Deposits (B5) Geomorphic Position (D2) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4)
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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)
Primary Indicators (minimum of one is required; check all that apply) _ Surface Water (A1) _ High Water Table (A2) _ Hydrogen Sulfide Odor (C1) _ Saturation (A3) _ Water Marks (B1) _ Sediment Deposits (B2) _ Drift Deposits (B3) _ Thin Muck Surface (C7) _ Algal Mat or Crust (B4) _ Iron Deposits (B5) _ Inundation Visible on Aerial Imagery (B7) _ Water-Stained Leaves (B9) _ Surface Soil Cracks (B6) _ Surface Soil Cracks (B6) _ Sparsely Vegetated Concave Surface (B8) _ Drainage Patterns (B10) _ Moss Trim Lines (B16) _ Dry-Season Water Table (C2) _ Crayfish Burrows (C8) _ Crayfish Burrows (C8) _ Saturation Visible on Aerial Imagery (C9) _ Stunted or Stressed Plants (D1) _ Geomorphic Position (D2) _ Shallow Aquitard (D3) _ Microtopographic Relief (D4)
Surface Water (A1)
✓ ✓ 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)
✓ ✓ Saturation (A3)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)
✓ Saturation (A3)
Water Marks (B1)
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) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Microtopographic Relief (D4)
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)
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)
Iron Deposits (B5) Geomorphic Position (D2) Inundation Visible on Aerial Imagery (B7) Shallow Aquitard (D3) Water-Stained Leaves (B9) Microtopographic Relief (D4)
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):0"
Saturation Present? Yes No Depth (inches): 0" Wetland Hydrology Present? Yes No
(includes capillary fringe)
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Remarks:

	Sampling	Point.	W.	-H1	02
--	----------	--------	----	-----	----

0.01	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC:3 (A)
2		ī		Total Number of Dominant
3				Species Across All Strata: 3 (B)
4				` ,
5				Percent of Dominant Species That Are OBL FACW or FAC: 100 (A/B)
6			· ——	That Are OBL, FACW, or FAC:(A/B)
			· -	Prevalence Index worksheet:
7	0	Tatal Car		Total % Cover of: Multiply by:
50% of total cover: 0		= Total Cov		OBL species x 1 =
	20 /6 01	total cover		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')				FAC species x 3 =
1			. ——	FACU species x 4 =
2				-
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9.				✓ 2 - Dominance Test is >50%
v	0	= Total Cov	or .	3 - Prevalence Index is ≤3.0¹
50% of total cover: 0		total cover	_	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')	2070 01	total oover		data in Remarks or on a separate sheet)
1. Lysimachia nummularia	40	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Juncus tenuis	20			
	20		FAC	¹ Indicators of hydric soil and wetland hydrology must
3. Scirpus atrocinctus			F <u>ACW</u>	be present, unless disturbed or problematic.
4. Unknown carex (pics)	10		ND	Definitions of Four Vegetation Strata:
5. Festuca rubra	10		F <u>ACU</u>	Trans. Mancharlanta analastica aire Oir (70 an) an
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7		ī		height.
8.				
9.				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11				, '
· · ·	100	Tatal Car		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50		= Total Cover		or size, and woody plants less than 3.20 it tall.
Woody Vine Stratum (Plot size: 15')	20 /6 01	total cover		Woody vine - All woody vines greater than 3.28 ft in
, voody vine Stratum (Flot Size)				height.
1			· -	
2				
3			·	
4			<u> </u>	Hydrophytic
5				Vegetation
	0	= Total Cov	er er	Present? Yes No
50% of total cover:0	20% of	total cover	. 0	
Remarks: (Include photo numbers here or on a separate s	heet.)			
ND - Not Determined.	,			

SOIL Sampling Point: W-H102

Profile Desc	cription: (Describe	to the dep	th needed to docur	nent the	indicator	or confirm	the abse	ence of indicators.)
Depth	Matrix			x Feature	es .			
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u>	Type ¹	Loc ²	Textur	
0-8"	5yr 4/2	90	7.5yr 4/6	10	<u>C</u>	M/PL	CL	
8-20"	5yr 4/3	100					GrS	8
							-	
					· <u></u>			
				·-	•			
						· ——		
					· ·			
¹ Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gr	ains.	² Locatio	on: PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators:							ndicators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)			_	2 cm Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Be	elow Surfa	ace (S8) (N	/ILRA 147,	148) _	Coast Prairie Redox (A16)
	istic (A3)		Thin Dark Su			147, 148)		(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye		(F2)		_	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma					(MLRA 136, 147)
	uck (A10) (LRR N)	(444)	Redox Dark		,		_	Very Shallow Dark Surface (TF12)
	d Below Dark Surface ark Surface (A12)	e (A11)	Depleted Date Redox Depre		. ,		_	Other (Explain in Remarks)
	Aucky Mineral (S1) (L	RR N	Iron-Mangan			IRRN		
	A 147, 148)	,	MLRA 13		(1 12) (LIXIX IV,		
	Gleyed Matrix (S4)		Umbric Surfa	•	(MLRA 13	36, 122)		³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo				8)	wetland hydrology must be present,
-	Matrix (S6)		Red Parent M					unless disturbed or problematic.
Restrictive	Layer (if observed):							·
Type:								
Depth (in	ches):						Hydric	Soil Present? Yes No
Remarks:							1	
rtomanto.								

Wetland Photograph Page

Wetland ID W-H102



Photograph Direction NE

Date: 05/19/2015

Comments: 2015 wetland delineation.



Photograph Direction NNE

Date: 09/26/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP		City/C	County: Lewis		Sampling Date: 05/19/2015			
Applicant/Owner: MVP		,	,		Sampling Point: W-H102,103, 104-UF			
Investigator(s): A.Stott, A.Grech, D. Mo	Culloug	h _{Sectio}	on, Township, Range: N					
Landform (hillslope, terrace, etc.): Valley b					Slope (%): 0-3%			
Subregion (LRR or MLRA): LRRN			Long: <u>-</u> 80					
Soil Map Unit Name: Chagrin silt loam, 0			_					
Are climatic / hydrologic conditions on the sit			_					
· · ·	• •	•		•	,			
Are Vegetation, Soil, or Hydr								
Are Vegetation, Soil, or Hydr	ology	naturally problemate	atic? (If needed, e	explain any answe	rs in Remarks.)			
SUMMARY OF FINDINGS – Attac	h site m	ap showing san	npling point location	ons, transects	, important features, etc.			
Hydrophytic Vegetation Present? Y	es	No. 🗸						
	es		Is the Sampled Area	V = =	No			
	es		within a Wetland?	res	NO			
HYDROLOGY								
Wetland Hydrology Indicators:				Secondary Indica	ators (minimum of two required)			
Primary Indicators (minimum of one is requ	ired: check	k all that apply)		Surface Soil Cracks (B6)				
Surface Water (A1)		True Aquatic Plants ((B14)		getated Concave Surface (B8)			
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Patterns (B10)				
Saturation (A3)		-	es on Living Roots (C3)	-				
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				
Drift Deposits (B3)		Thin Muck Surface (0			isible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	_	Other (Explain in Rer	marks)		tressed Plants (D1)			
Iron Deposits (B5)) 7 \				Position (D2)			
 Inundation Visible on Aerial Imagery (E Water-Stained Leaves (B9)	57)			Shallow Aqui	aphic Relief (D4)			
Aquatic Fauna (B13)				FAC-Neutral				
Field Observations:								
Surface Water Present? Yes	No _	Depth (inches):						
Water Table Present? Yes	No 🗸	Depth (inches):						
		Depth (inches):		Hydrology Preser	nt? Yes No			
(includes capillary fringe) Describe Recorded Data (stream gauge, m	onitoring w	voll porial photos pro	vious inspections), if ava	pilable:				
Describe Recorded Data (stream gauge, in	ormorning v	ven, aeriai priotos, pre	vious inspections), ii ave	mable.				
Remarks:								

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

___)

50% of total cover: ___0

50% of total cover: _ 0

30'

Sapling/Shrub Stratum (Plot size: 15')

Tree Stratum (Plot size: __

Herb Stratum (Plot size: _

2. Dactylis glomerata

3. Trifolium pratense

4. Asclepias exaltata

5. Ranunculus sp.

6. Phleum pratense

1. Holcus lanatus

Sampling	Poin	t: <u>W-H1</u>	02,103, 10)4-UP
Dominance Test worksheet	::			
Number of Dominant Species That Are OBL, FACW, or FAC		1		(A)
Total Number of Dominant Species Across All Strata:	_	3	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC		33.3	3%	(A/B)
Prevalence Index workshee	et:			
Total % Cover of:		Multipl	y by:	
OBL species	x 1	=		_
FACW species	x 2	=		_

Prevalence Index = B/A = _____ Hydrophytic Vegetation Indicators: ___ 1 - Rapid Test for Hydrophytic Vegetation ___ 2 - Dominance Test is >50% ___ 3 - Prevalence Index is ≤3.0¹ ___ 4 - Morphological Adaptations¹ (Provide supporting 20% of total cover: 0 Problematic Hydrophytic Vegetation¹ (Explain) FAC **FACU FACU** FACU ND ____ F<u>ACU</u>

Absolute Dominant Indicator

% Cover Species? Status

_ = Total Cover

__ 20% of total cover:__ 0

0 = Total Cover

90 = Total Cover

0 = Total Cover

20

10

10

10

50% of total cover: 45 20% of total cover: 18

50% of total cover: 0 20% of total cover:

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

data in Remarks or on a separate sheet)

FAC species _____ x 3 = ____ FACU species _____ x 4 = ____ UPL species _____ x 5 = ____ Column Totals: _____ (A) _____ (B)

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.

Hydrophytic Vegetation Present?

Yes ____ No 🗸

Remarks: (Include photo numbers here or on a separate sheet.)

ND - Not Determined.

Woody Vine Stratum (Plot size: 15'

SOIL Sampling Point: W-H102,103, 104-UP

Profile Desc	ription: (Describe t	o the depth	needed to docun	ent the ir	ndicator o	or confirm	the ab	sence of indicat	ors.)	
Depth	Matrix			c Features						
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type ¹	Loc ²	Text		Remark	<u>s</u>
0-10"	5yr 4/3	100					CI	<u> </u>		
10-20"	5yr 4/3	100					S			
							-			
										_
	-						-			
							-			
							-			
¹ Type: C=Co	oncentration, D=Depl	etion, RM=R	educed Matrix, MS	=Masked	Sand Gra	ins.	² Locati	on: PL=Pore Lin		
Hydric Soil	Indicators:							Indicators for P	roblematic	Hydric Soils ³ :
Histosol	(A1)		Dark Surface					2 cm Muck ((A10) (MLRA	147)
Histic Ep	pipedon (A2)		Polyvalue Be				148)	Coast Prairie		6)
Black Hi			Thin Dark Su			47, 148)		(MLRA 14		
	n Sulfide (A4)		Loamy Gleye	,	- 2)			Piedmont FI		ls (F19)
	d Layers (A5)		Depleted Mat		0)			(MLRA 1		(TE40)
	ick (A10) (LRR N) d Below Dark Surface	(//11)	Redox Dark S Depleted Dar					Very Snallov	w Dark Surfa	
	ark Surface (A12)	(Д11)	Redox Depre					Other (Expla	alli ili iXelliali	N3)
	lucky Mineral (S1) (L	RR N.	Iron-Mangane			RR N.				
	A 147, 148)	,	MLRA 130		, ,	,				
	Bleyed Matrix (S4)		Umbric Surfa	ce (F13) (I	MLRA 13	6, 122)		³ Indicators of h	ydrophytic v	egetation and
Sandy R	Redox (S5)		Piedmont Flo	odplain So	oils (F19)	(MLRA 14	l8)	wetland hydro	ology must be	e present,
	Matrix (S6)		Red Parent M	laterial (F2	21) (MLR	4 127, 147	7)	unless disturb	oed or proble	matic.
Restrictive I	Layer (if observed):									
Type:										
Depth (inc	ches):		<u>—</u>				Hydri	c Soil Present?	Yes	No
Remarks:							•			
In cow pas	ture									

USACE FILE NO./Project Name:		Mountain Valley Pipeline			Lat.	38.932901	Lon.	-80.5842
STREAM/SITE ID AND SITE DESCR						W-H107, 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 - Wetland Indicators							
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-H107	Emergent	0.0328	Emergent					
					ı	2.07		
						PART III - Advanced		<u>n</u>
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Υ
					ļ	TI OLINI		
Total Impact		0.0328			,			
W		Jnit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0328	-		\$4.0co.00		
Total Scrub-Shrub Total Forested			0	-		\$1,968.00		
			0	-				
Total Open Water			U					

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 05/19/2015			
Applicant/Owner: MVP		,			Sampling Point: W-H107			
Investigator(s): A.Stott, A.Gre	ech, D. McCullou				_ ,			
Landform (hillslope, terrace, etc.)					Slope (%): 3-8%			
Subregion (LRR or MLRA): LRI								
Soil Map Unit Name: Sensaba								
Are climatic / hydrologic condition	ns on the site typical f	for this time of year? Y	res No (I	f no, explain in R	emarks.)			
Are Vegetation, Soil								
Are Vegetation, Soil								
-					, important features, etc.			
Hydrophytic Vegetation Presen	t2 Vas V	No_						
Hydric Soil Present?		No	Is the Sampled Area	Yes 🗸	Ma			
Wetland Hydrology Present?		No	within a Wetland?	Yes	No			
Remarks:		<u> </u>						
Cowardin Code: PEM; HC	3M: slope; WT: rp	owwd						
Information listed on this	data form represe	ents the data collec	cted in 2015. The we	tland was rev	isited on 09/26/2019.			
Presence of wetland hydr	ology, hydrophyti	c vegetation, and	hydric soils was conf	irmed using tl	ne USACE EMP Regional			
Supplement delineation m	nethodology.							
HYDROLOGY								
Wetland Hydrology Indicators	 S:			Secondary Indica	tors (minimum of two required)			
Primary Indicators (minimum of		ck all that apply)	_	Surface Soil				
Surface Water (A1)		True Aquatic Plants (Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Patterns (B10)				
Saturation (A3)								
Water Marks (B1)		Presence of Reduced	=		Water Table (C2)			
Sediment Deposits (B2)		Recent Iron Reductio		Crayfish Bur				
Drift Deposits (B3)		Thin Muck Surface (C		-	sible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)		Other (Explain in Ren			tressed Plants (D1)			
Iron Deposits (B5)			, <u>-</u>		Position (D2)			
Inundation Visible on Aeria	l Imagery (B7)		- -	 Shallow Aqu				
Water-Stained Leaves (B9)			_	Microtopographic Relief (D4)				
Aquatic Fauna (B13)				FAC-Neutral				
Field Observations:								
Surface Water Present?	Yes No	Depth (inches):						
	Yes No No		0"					
	Yes No No		0" Wetland Hy	/drology Preser	nt? Yes ✔ No			
(includes capillary fringe)		_ , , , ,			··· ··· <u>——</u> ··· <u>——</u>			
Describe Recorded Data (strea	m gauge, monitoring	well, aerial photos, pre	vious inspections), if avail	able:				
Remarks:								
remarks.								

EGETATION (Four Strata) – Use scientific n	ames of	piants.		Sampling Point: W-H107
Troo Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:30') 1		Species?		Number of Dominant Species That Are OBL, FACW, or FAC:3 (A)
2		-		
3		-		Total Number of Dominant Species Across All Strata: 3 (B)
				Species Across All Strata:3 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100 (A/B)
6				Prevalence Index worksheet:
7				
•		= Total Cov		
50% of total cover: 0	20% of	total cover	:0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Dravalance Index - P/A -
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9			-	2 - Dominance Test is >50%
<u>. </u>	^	= Total Cov	/Or	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 0				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')	2070 01	total oover		data in Remarks or on a separate sheet)
1. Eleocharis palustris	45	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Holcus lanatus	35			
3. Scirpus atrocinctus	25		FAC	¹ Indicators of hydric soil and wetland hydrology must
	10		F <u>ACW</u>	be present, unless disturbed or problematic.
4. Persicaria saggitata			<u>OBL</u>	Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				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
	115	= Total Cov	/er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 57.5				
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1				neight.
2.			-	
•			-	
4				Hydrophytic
5	0			Vegetation Present? Yes ✓ No
50% of total cover: 0		= Total Cov	_	1763CH. 165 160
		total cover	:	
Remarks: (Include photo numbers here or on a separate s	heet.)			

SOIL Sampling Point: W-H107

Profile Desc	ription: (Describe t	o the dep	th needed to docur	nent the	indicator	or confirm	the absenc	e of indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	<u>Remarks</u>
0-8"	5yr 4/1	85	7.5yr 4/6	15	<u>C</u>	M/PL	CL	
8-12"	7.5yr 5/1	85	7.5yr 4/6	15	С	M/PL	GrC	
12+"								Refusal: hardpan
				-				
								
					·			
1							2	
	oncentration, D=Depl	etion, RM=	=Reduced Matrix, MS	S=Masked	d Sand Gr	ains.	Location: I	PL=Pore Lining, M=Matrix.
Hydric Soil				(0=)				cators for Problematic Hydric Soils ³ :
Histosol			Dark Surface		(00) (1	N DA 447		2 cm Muck (A10) (MLRA 147)
Histic Ep	oipedon (A2)		Polyvalue Be				148)	Coast Prairie Redox (A16)
	en Sulfide (A4)		Thin Dark Su Loamy Gleye			147, 140)		(MLRA 147, 148) Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma		(1-2)		_	(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark		- 6)			Very Shallow Dark Surface (TF12)
	d Below Dark Surface	(A11)	Depleted Dar	•	,			Other (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre	essions (F	8)			
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Mass	es (F12) (LRR N,		
	A 147, 148)		MLRA 13	-				
	Gleyed Matrix (S4)		Umbric Surfa					dicators of hydrophytic vegetation and
-	Redox (S5)		Piedmont Flo					vetland hydrology must be present,
	Matrix (S6) Layer (if observed):		Red Parent N	vlateriai (F	-21) (MLR	A 127, 147) u	nless disturbed or problematic.
	rdpan clay							
• • • • • • • • • • • • • • • • • • • •			<u></u>					" TO Y Y Y
	ches): 12						Hydric So	il Present? Yes No
Remarks:								

Wetland Photograph Page

Wetland ID W-H107



Photograph Direction East

Date: 05/19/2015

Comments: 2015 wetland delineation.



Photograph Direction NNW

Date: 09/26/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP		City/County: Lewis		Sampling Date: 05/19/2015		
Applicant/Owner: MVP				Sampling Point: W-H107-UP1		
Investigator(s): A.Stott, A.Grech, D. McC	Cullough	Section Township Range N				
Landform (hillslope, terrace, etc.): Side-slop				Slone (%): 3-6%		
Subregion (LRR or MLRA): LRRN				Datum: NAD 83		
Soil Map Unit Name: Sensabaugh silt loa						
			NWI classifi			
Are climatic / hydrologic conditions on the site						
Are Vegetation, Soil, or Hydrold	ogy significantly	disturbed? Are "Norma	Il Circumstances"	present? Yes No		
Are Vegetation, Soil, or Hydrold	ogy naturally pr	oblematic? (If needed,	explain any answe	ers in Remarks.)		
SUMMARY OF FINDINGS – Attach	site map showing	g sampling point location	ons, transects	s, important features, etc.		
Hydrophytic Vegetation Present? Yes	s No_ 🗸					
	No	Is the Sampled Area	Vee	No		
	No	within a Wetland?	res	NO		
Remarks:						
Upland						
HYDROLOGY			Casandaniladia	-t (:-:		
Wetland Hydrology Indicators:	لا با مرجم فحملة الحراج وحماء بامر		·	ators (minimum of two required)		
Primary Indicators (minimum of one is require			Surface Soil	` '		
Surface Water (A1)	True Aquatic F Hydrogen Sulf		Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10) Moss Trim Lines (B16)			
High Water Table (A2) Saturation (A3)		ospheres on Living Roots (C3)				
Water Marks (B1)		educed Iron (C4)		Water Table (C2)		
Sediment Deposits (B2)		eduction in Tilled Soils (C6)	Crayfish Bu			
Drift Deposits (B3)	Thin Muck Sur			isible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)	Other (Explain			Stressed Plants (D1)		
Iron Deposits (B5)			Geomorphic	Position (D2)		
Inundation Visible on Aerial Imagery (B7)	1		Shallow Aqu	uitard (D3)		
Water-Stained Leaves (B9)			Microtopogr	aphic Relief (D4)		
Aquatic Fauna (B13)			FAC-Neutra	I Test (D5)		
Field Observations:	•					
	o Depth (inches					
	o Depth (inches					
	o Depth (inches	s): Wetland I	Hydrology Prese	nt? Yes No		
(includes capillary fringe) Describe Recorded Data (stream gauge, mor	nitoring well, aerial phot	os, previous inspections), if ava	ailable:			
Remarks:						

Sampling	Point: W-H107-UP1
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	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?	Status	Number of Dominant Species
1		ī		That Are OBL, FACW, or FAC:1 (A)
2				
3.				Total Number of Dominant Species Across All Strata: 3 (B)
4			· ——	Opecies Across All ottata.
F				Percent of Dominant Species That Are OBL_FACW_or FAC: 33.3% (A/B)
5				That Are OBL, FACW, or FAC: 33.3% (A/B)
6			. ——	Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Cov		OBL species x 1 =
50% of total cover: 0	20% of	total cover	:0	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1			<u> </u>	FAC species x 3 =
2				FACU species x 4 =
3		ī		UPL species x 5 =
4				Column Totals: (A) (B)
5				
6				Prevalence Index = B/A =
			· -	Hydrophytic Vegetation Indicators:
7		-	· ——	1 - Rapid Test for Hydrophytic Vegetation
8			· ——	2 - Dominance Test is >50%
9			· -	3 - Prevalence Index is ≤3.0 ¹
0		= Total Cov	_	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	total cover	:0	data in Remarks or on a separate sheet)
TIEID Stratum (1 lot size)	00	,		Problematic Hydrophytic Vegetation ¹ (Explain)
1. Holcus lanatus	20		F <u>AC</u>	Troblematic Tryatophytic Vegetation (Explain)
2. Dactylis glomerata	20		F <u>ACU</u>	1 Indicators of hydric cail and watland hydrology must
3. Trifolium pratense	20		FACU_	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Asclepias exaltata	10		F <u>ACU</u>	Definitions of Four Vegetation Strata:
_{5.} Ranunculus sp.	10		ND	Deminions of Four Vegetation offata.
6. Phleum pratense	10		FACU	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
8.	-			noight.
0			· -	Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10			. ——	iii) taii.
11				Herb - All herbaceous (non-woody) plants, regardless
45		= Total Cov	4.0	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		ī		
4.				Hadran bad's
5.		·		Hydrophytic Vegetation
	0	= Total Cov	/er	Present? Yes No
50% of total cover: 0		total cover		
Remarks: (Include photo numbers here or on a separate s			·	
ND - Not Determined.	11001.)			
Not Betermined.				

SOIL Sampling Point: W-H107-UP1

Profile Desc	ription: (Describe t	o the depth	needed to docun	ent the ir	ndicator o	or confirm	the ab	sence of indicat	ors.)	
Depth	Matrix			c Features						
(inches)	Color (moist)		Color (moist)	<u>%</u>	Type ¹	Loc ²	Text		Remark	<u>s</u>
0-10"	5yr 4/3	100					CI	<u> </u>		
10-20"	5yr 4/3	100					S			
							-			
										_
	-						-			
							-			
							-			
¹ Type: C=Co	oncentration, D=Depl	etion, RM=R	educed Matrix, MS	=Masked	Sand Gra	ins.	² Locati	on: PL=Pore Lin		
Hydric Soil	Indicators:							Indicators for P	roblematic	Hydric Soils ³ :
Histosol	(A1)		Dark Surface					2 cm Muck ((A10) (MLRA	147)
Histic Ep	pipedon (A2)		Polyvalue Be				148)	Coast Prairie		6)
Black Hi			Thin Dark Su			47, 148)		(MLRA 14		
	n Sulfide (A4)		Loamy Gleye	,	- 2)			Piedmont FI		ls (F19)
	d Layers (A5)		Depleted Mat		0)			(MLRA 1		(TE40)
	ick (A10) (LRR N) d Below Dark Surface	(//11)	Redox Dark S Depleted Dar					Very Snallov	w Dark Surfa	
	ark Surface (A12)	(Д11)	Redox Depre					Other (Expla	alli ili iXelliali	N3)
	lucky Mineral (S1) (L	RR N.	Iron-Mangane			RR N.				
	A 147, 148)	,	MLRA 130		, ,	,				
	Bleyed Matrix (S4)		Umbric Surfa	ce (F13) (I	MLRA 13	6, 122)		³ Indicators of h	ydrophytic v	egetation and
Sandy R	Redox (S5)		Piedmont Flo	odplain So	oils (F19)	(MLRA 14	l8)	wetland hydro	ology must be	e present,
	Matrix (S6)		Red Parent M	laterial (F2	21) (MLR	4 127, 147	7)	unless disturb	oed or proble	matic.
Restrictive I	Layer (if observed):									
Type:										
Depth (inc	ches):		<u>—</u>				Hydri	c Soil Present?	Yes	No
Remarks:							•			
In cow pas	ture									

USACE FILE NO./Project Name:		Valley Pipeline	COORDINATES:	Lat.	38.925868	Lon.	-80.578367	
STREAM/SITE ID AND SITE DESCR					V	V-H98, 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-H98	Emergent	0.0032	Emergent					
						PART III - Advanced	Mitigatio	on
						Sustainable Determination Made on		
						Advanced Mitigation		Y
					l	(Y or N)		
Total Impact		0.0032						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0032					
Total Scrub-Shrub			0			\$192.00		
Total Forested			0	_				
Total Open Water			0					

Project/Site: MVP	City/County: Lo	ewis	Sampling Date: 05/18/2015				
Applicant/Owner: MVP		State: WV					
Investigator(s): A.Stott, A.Grech, D. McCullough Section, Township, Range: N/A							
Landform (hillslope, terrace, etc.): Terrace			Slope (%): 0-3%				
Subregion (LRR or MLRA): LRRN L		Long: -80.577918					
Soil Map Unit Name: Gilpin-Upshur silt loams, 35 to		_					
Are climatic / hydrologic conditions on the site typica	I for this time of year? Yes	No (If no, explain in I	Remarks.)				
Are Vegetation, Soil, or Hydrology							
Are Vegetation, Soil, or Hydrology _							
SUMMARY OF FINDINGS – Attach site							
Lindrophytic Vegetation Present?	, No le the S						
Hydrophytic Vegetation Present? Yes	, No	ampled Area					
Wetland Hydrology Present?	No within a	Wetland? Yes	No				
Remarks:							
Cowardin Code: PEM HGM: slope WT: ni	pww						
Information listed on this form represents	the data collected in 2015.	The wetland was revisited	d on 10/1/2019. Presence				
of wetland hydrology, hydrophytic vegeta	ion, and hydric soils was co	onfirmed using the USACI	E EMP Regional				
Supplement delineation methodology.	•	· ·	· ·				
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Indic	ators (minimum of two required)				
Primary Indicators (minimum of one is required; ch	eck all that apply)	Surface Soi					
✓ Surface Water (A1)	_ True Aquatic Plants (B14)		egetated Concave Surface (B8)				
High Water Table (A2)	Hydrogen Sulfide Odor (C1)		atterns (B10)				
	 Oxidized Rhizospheres on Livir 	_					
	Presence of Reduced Iron (C4)		Water Table (C2)				
Sediment Deposits (B2)	Recent Iron Reduction in Tilled	-					
Drift Deposits (B3)	_ Thin Muck Surface (C7)		/isible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	_ Other (Explain in Remarks)		Stressed Plants (D1)				
Iron Deposits (B5)			Position (D2)				
Inundation Visible on Aerial Imagery (B7)		Shallow Aqu	` '				
Water-Stained Leaves (B9)			Microtopographic Relief (D4)				
Aquatic Fauna (B13)		FAC-Neutra					
Field Observations:							
Surface Water Present? Yes No	Depth (inches): 1"						
	Depth (inches): 0"						
Saturation Present? Yes V No		Wetland Hydrology Prese	nt? Yes ✔ No				
(includes capillary fringe)							
Describe Recorded Data (stream gauge, monitoring	g well, aerial photos, previous insp	pections), if available:					
Remarks:							
Heavy rain previous day							
In cow pasture.							

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

Tree Stratum (Plot size: 30')		Dominant	Indicator	Daniel Tark and the Control of
1	% Cover			Dominance Test worksheet:
		Species?	<u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
2				That Ale OBE, I AOW, OI I AO (A)
2				Total Number of Dominant Species Across All Strata: 5 (B)
			·	Species Across All Strata:5 (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC:100 (A/B)
6		-		Prevalence Index worksheet:
7	0		<u> </u>	Total % Cover of: Multiply by:
50% of total cover:		= Total Cov		OBL species x 1 =
	20% 01	total cover		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')				FAC species x 3 =
1				FACU species x 4 =
2				UPL species x 5 =
3			<u> </u>	Column Totals: (A) (B)
4				Column Totals (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8			·	✓ 2 - Dominance Test is >50%
9			<u> </u>	3 - Prevalence Index is ≤3.0 ¹
,		= Total Cov	_	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:() 20% of	total cover	:0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')	05			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Microstegium vimineum	_ 25		FAC	
2. Poa trivialis			F <u>ACW</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Pilea pumila	_ 15		F <u>ACW</u>	be present, unless disturbed or problematic.
4. Juncus tenuis	15		F <u>AC</u>	Definitions of Four Vegetation Strata:
_{5.} Persicaria saggitata	15		OBL	- W
6. Impatiens capensis	5		FACW_	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7. Onoclea sensibilis	5		F <u>ACW</u>	height.
8				Sanling/Shrub Woody plants evaluding vines loss
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10		-	<u> </u>	m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	100	= Total Cov	/er	of size, and woody plants less than 3.28 ft tall.
50% of total cover:5	0 20% of	total cover	<u>: 20 </u>	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1		-	<u> </u>	
2		-	<u> </u>	
3		-	<u> </u>	
4				Hydrophytia
5				Hydrophytic Vegetation
	0	= Total Cov	/er	Present? Yes No
50% of total cover:	20% of	total cover	:0	
Remarks: (Include photo numbers here or on a separate	sheet.)			

Sampling Point: W-H98

Profile Desc	ription: (Describe	to the dep	th needed to docur	nent the	indicator	or confirm	the abse	nce of indicators.)	
Depth	Matrix			x Feature	es .				
(inches)	Color (moist)	<u></u> %	Color (moist)	%	Type ¹	Loc ²	Texture	e Ren	narks
0-6"	5yr 4/2	90	2.5y 5/4	10	<u>C</u>	M/PL	CL		
6-20"	5yr 4/4	100					С		
			-				-		_
				-	· -	· ——	-		
					•				_
						· ——			
					. ——				
					·				
¹ Type: C=Co	oncentration, D=Depl	letion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gr	ains.	² Location	: PL=Pore Lining, M=N	Matrix.
Hydric Soil I	ndicators:						In	dicators for Problema	atic Hydric Soils³:
Histosol	(A1)		Dark Surface	e (S7)				_ 2 cm Muck (A10) (M	LRA 147)
	pipedon (A2)		Polyvalue Be	low Surfa	ace (S8) (N	/ILRA 147,	148)	_ Coast Prairie Redox	(A16)
Black Hi			Thin Dark Su			147, 148)		(MLRA 147, 148)	
	n Sulfide (A4)		Loamy Gleye		(F2)		_	_ Piedmont Floodplain	
	Layers (A5)		Depleted Ma		>			(MLRA 136, 147)	
	ck (A10) (LRR N)	~ (^44)	Redox Dark		,		_	Very Shallow Dark S	
	l Below Dark Surface ark Surface (A12)	÷ (A11)	Depleted Date Redox Depre		. ,		_	_ Other (Explain in Re	marks)
	lucky Mineral (S1) (L	RR N.	Iron-Mangan			LRR N.			
	147, 148)	,	MLRA 13		,00 (i i.e.) (
	leyed Matrix (S4)		Umbric Surfa	-	(MLRA 13	36, 122)	;	3Indicators of hydrophy	tic vegetation and
	edox (S5)		Piedmont Flo					wetland hydrology mu	_
-	Matrix (S6)		Red Parent N					unless disturbed or pr	
Restrictive I	ayer (if observed):								
Type:			<u></u>						
Depth (inc	ches):						Hydric S	Soil Present? Yes _	✓ No
Remarks:	-						1 -		

SOIL

Wetland Photograph Page

Wetland ID W-H98



Photograph Direction SW

Date: 05/18/2015

Comments: 2015 wetland delineation.



Photograph Direction SW

Date: 10/01/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	Ci	ty/County: Lewis		Sampling Date: 05/18/2015		
Applicant/Owner: MVP				Sampling Point: W-H98-UP1		
Investigator(s): A.Stott, A.Grech, D. McCullough Section, Township, Range: N/A						
Landform (hillslope, terrace, etc.): Si	·			Slone (%): 4-8%		
Subregion (LRR or MLRA): LRRN				Datum: NAD 83		
Soil Map Unit Name: Gilpin-Upshu						
Are climatic / hydrologic conditions on						
Are Vegetation, Soil,	or Hydrology significantly di	sturbed? Are "Normal	Circumstances"	present? Yes No		
Are Vegetation, Soil,	or Hydrology naturally probl	ematic? (If needed, e	explain any answe	ers in Remarks.)		
SUMMARY OF FINDINGS -	Attach site map showing s	sampling point location	ns, transects	s, important features, etc.		
Lludraphytic Variation Procest?	Vac No V					
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes No Yes No	Is the Sampled Area		4		
Wetland Hydrology Present?	Yes No	within a Wetland?	Yes	No		
Remarks:						
Upland						
'						
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indica	ators (minimum of two required)		
Primary Indicators (minimum of one	is required: check all that apply)		Surface Soil			
Surface Water (A1)	True Aquatic Plar	nts (B14)	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)	Hydrogen Sulfide		Drainage Patterns (B10)			
Saturation (A3)		heres on Living Roots (C3)				
Water Marks (B1)	Presence of Redu			Water Table (C2)		
Sediment Deposits (B2)	Recent Iron Redu	iction in Tilled Soils (C6)	Crayfish Bur	rows (C8)		
Drift Deposits (B3)	Thin Muck Surfac	e (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)				Position (D2)		
Inundation Visible on Aerial Ima	igery (B7)		Shallow Aquitard (D3)			
Water-Stained Leaves (B9)			Microtopographic Relief (D4)			
Aquatic Fauna (B13)			FAC-Neutra	l Test (D5)		
Field Observations:	4					
Surface Water Present? Yes	No Depth (inches):_					
	No Depth (inches):					
Saturation Present? Yes (includes capillary fringe)	No Depth (inches):_	Wetland H	lydrology Presei	nt? Yes No		
Describe Recorded Data (stream ga	auge, monitoring well, aerial photos,	previous inspections), if ava	ilable:			
Remarks:						
Í						

Sampling	Point: W-H98-UP1
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,	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		Number of Dominant Species
1. Quercus rubra	15	/	FACU	That Are OBL, FACW, or FAC: 0 (A)
2				
3				Total Number of Dominant Species Across All Strata: 4* (B)
				opecies Across Air Strata.
4				Percent of Dominant Species That Are OBL FACW or FAC: 0% (A/B)
5				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7	15			Total % Cover of: Multiply by:
7.5		= Total Cov		OBL species x 1 =
50% of total cover: 7.5	20% of	total cover	:3	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')				
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				
7				Hydrophytic Vegetation Indicators:
8			-	1 - Rapid Test for Hydrophytic Vegetation
9.				2 - Dominance Test is >50%
5. <u> </u>	0	= Total Cov		3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 0		f total cover	_	4 - Morphological Adaptations ¹ (Provide supporting
E!	20 /0 01	i total covel		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5) 1 Festuca rubra	30	/	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Ranunculus sp.	15	<u> </u>		
3. Achillea millefolium	15	· ·	ND	¹ Indicators of hydric soil and wetland hydrology must
		·	FACU_	be present, unless disturbed or problematic.
4. Potentilla indica	15		FACU_	Definitions of Four Vegetation Strata:
5. Prunella vulgaris	5		F <u>ACU</u>	Tree Mondy plants evaluating vince 2 in (7.6 am) or
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				Continue/Charak Manda alanta analadia antina da
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.				Horb. All borb cooks (con supply) plants recording
	80	= Total Cov	/er	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 40		f total cover		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in
1.				height.
•				
2				
3		· ———		
4				Hydrophytic
5				Vegetation No. 1
•		= Total Cov	_	Present? Yes No
50% of total cover: 0	20% of	f total cover	:0	
Remarks: (Include photo numbers here or on a separate s	sheet.)			
ND - Not Determined.				
* Vegetation not ID'd to species level not include	ed in don	ninance te	est.	
•				

SOIL Sampling Point: W-H98-UP1

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator o	or confirm	the absen	ce of indicators	s.)	
Depth	Matrix			x Features	-					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-12"	5yr 4/3	100					SiCL	_		
12-16"	5yr 4/4	100					SiCL			
16+"								Re	efusal: bedr	ock
								<u> </u>		
								_		_
								_		
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gra	ins.	² Location:	PL=Pore Lining	g, M=Matrix.	3
Hydric Soil I							Ind	licators for Prol	-	
Histosol			Dark Surface		(OO) /N	I DA 447		2 cm Muck (A1		7)
Histic Ep	pipedon (A2)		Polyvalue Be Thin Dark Su				148)	Coast Prairie R (MLRA 147,		
	n Sulfide (A4)		Loamy Gleye	, ,	•	47, 140)		Piedmont Floor		19)
	Layers (A5)		Depleted Mar	,	- -)			(MLRA 136,		,
	ick (A10) (LRR N)		Redox Dark	, ,	6)			Very Shallow D		ΓF12)
	d Below Dark Surface	e (A11)	Depleted Dar					Other (Explain	in Remarks)	
	ark Surface (A12)		Redox Depre							
	lucky Mineral (S1) (L \ 147, 148)	RR N,	Iron-Mangan		es (F12) (L	LKK N,				
	ileyed Matrix (S4)		Umbric Surfa		MLRA 13	6. 122)	³ I	ndicators of hyd	rophytic veget	ation and
	edox (S5)		Piedmont Flo					wetland hydrolog		
-	Matrix (S6)		Red Parent N					unless disturbed		
	ayer (if observed):									
Type: Be										
Depth (inc	ches): <u>16</u>						Hydric S	oil Present?	Yes	No 🔽
Remarks:							•			
In cow pas	ture									

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	38.918766	Lon.	-80.573564
STREAM/SITE ID AND SITE DESCR			W-H108, Timber Mat Crossing					
(% stream slope, watershed size {a								
FORM OF MITIGATION:								
DATE:	8/10	8/10/2015 WEATHER CONDITIONS:				PRECIPITATION PAST 48 HRS:		
	PART I - Wetl	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-H108	Emergent	0.0278	Emergent					
						PART III - Advanced		n
						Sustainable Determination Made or Advanced Mitigation (Y or N)		Y
Total Impact		0.0278						
W		Jnit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent Total Scrub-Shrub			0.0278	-		\$4.669.00		
Total Scrub-Shrub Total Forested			0	-		\$1,668.00		
			-					
Гotal Open Water			0					

Project/Site: MVP		City/C	_{ounty:} Lewis		Sampling Date: 05/19/2015				
Applicant/Owner: MVP				Sampling Point: W-H108					
Investigator(s): A.Stott, A.Grech, D. McCullough Section, Township, Range: N/A									
• ,,					Slope (%): 0-4%				
Subregion (LRR or MLRA): L	RRN La	_{t:} 38.918701	Long: -80	.573688	Datum: NAD 83				
	Soil Map Unit Name: Gilpin-Upshur silt loams, 35 to 70 percent slopes, severely eroded (GwF3) NWI classification: None								
Are climatic / hydrologic condit	ions on the site typical	for this time of year? Y	es <u>/</u> No ((If no, explain in Re	emarks.)				
					resent? Yes No				
Are Vegetation, Soil									
_					, important features, etc.				
				<u> </u>					
Hydrophytic Vegetation Present?	Yes Yes		Is the Sampled Area	./					
Wetland Hydrology Present?		No	within a Wetland?	Yes	No				
Remarks:	100								
Cowardin Code: PEM; H	IGM: depression; \	NT: rpwwn							
•	•	•	n 2015. The wetland	d was revisited	on 10/1/2019. Presence				
of wetland hydrology, hy	-								
Supplement delineation		on, and my and com	, was sommined don	g	Zim regiona.				
HYDROLOGY	moundadingy.								
Wetland Hydrology Indicate	ors:			Secondary Indicat	tors (minimum of two required)				
Primary Indicators (minimum		ck all that apply)		Surface Soil (
Surface Water (A1)	•	_ True Aquatic Plants (l	B14)		etated Concave Surface (B8)				
High Water Table (A2)	_	_ Hydrogen Sulfide Ode		Drainage Pat					
Saturation (A3)	<u></u>		es on Living Roots (C3)	Moss Trim Li					
Water Marks (B1)		Presence of Reduced	-		Vater Table (C2)				
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Burn					
Drift Deposits (B3)		Thin Muck Surface (C			sible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)		Other (Explain in Ren			ressed Plants (D1)				
Iron Deposits (B5)	_	- \ '	,	Geomorphic I					
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aquitard (D3)					
Water-Stained Leaves (E	39)			Microtopographic Relief (D4)					
Aquatic Fauna (B13)				FAC-Neutral					
Field Observations:									
Surface Water Present?	Yes No	Depth (inches): 0	.5"						
Water Table Present?	Yes No		0"						
Saturation Present?		Depth (inches):	O" Wetland H	lydrology Presen	t? Yes ✔ No				
(includes capillary fringe)									
Describe Recorded Data (stre	eam gauge, monitoring	well, aerial photos, pre	vious inspections), if ava	ilable:					
Remarks:									
itemarks.									

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: W-H108
30'	Absolute			Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30')	% Cover	Species?	<u>Status</u>	Number of Dominant Species That Are OBL FACW or FAC: 3 (A)
1		. ———		That Are OBL, FACW, or FAC:3 (A)
2		. ———		Total Number of Dominant
3				Species Across All Strata:3 (B)
4		. ———		Percent of Dominant Species
5		. ———		That Are OBL, FACW, or FAC:100 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
500/ -f4-4-1		= Total Cov	_	OBL species x 1 =
50% of total cover: 0	20% of	total cover	r: <u> </u>	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')				FAC species x 3 =
1				FACU species x 4 =
2				UPL species x 5 =
3		- ——		Column Totals: (A) (B)
4				Column Totals (A) (B)
5				Prevalence Index = B/A =
6		.		Hydrophytic Vegetation Indicators:
7		<u> </u>	- ——	1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9		<u> </u>		3 - Prevalence Index is ≤3.0 ¹
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	total cover	:0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')	40			Problematic Hydrophytic Vegetation¹ (Explain)
1. Poa trivialis	40		FACW_	Floblematic Hydrophytic vegetation (Explain)
2. Carex lurida	15		<u>OBL</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Packera aurea	15		FACW_	be present, unless disturbed or problematic.
4. Pilea pumila	10	<u> </u>	FACW_	Definitions of Four Vegetation Strata:
5. Trifolium pratense	10	<u> </u>	FACU_	
6. Scirpus atrovirens	10		<u>OBL</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
9		<u> </u>		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.		· 	<u> </u>	Herb – All herbaceous (non-woody) plants, regardless
	100	= Total Cov	ver	of size, and woody plants less than 3.28 ft tall.
50% of total cover:50		f total cover		We always Allowed with a constant has 0.00 ft in
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1				· · · · · · · · · · · · · · · · · · ·
2.				
3				
4				
5.				Hydrophytic Vegetation
<u> </u>		= Total Cov	ver	Present? Yes No
50% of total cover: 0		f total cover	_	
Remarks: (Include photo numbers here or on a separate s				
Tromano. (includo prioto namboro noto di on a coparato o	11001.7			

SOIL Sampling Point: W-H108

Profile Desc	cription: (Describe to	the depth	needed to docun	nent the	indicator	or confirn	n the ab	sence of indicators.)
Depth	Matrix		Redox	k Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	
0-5"	5yr 4/3	95	7.5yr 4/6	5	С	PL		<u> </u>
5+"			_		•			Refusal: Coarse Fragments
	·				· <u> </u>		-	
				-	· <u></u>			
								<u> </u>
				-			-	
1							2.	 .
	oncentration, D=Deple	etion, RM=F	Reduced Matrix, MS	S=Masked	d Sand Gr	ains.	² Locat	tion: PL=Pore Lining, M=Matrix.
Hydric Soil								Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface		(- -)			2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				, 148)	Coast Prairie Redox (A16)
	istic (A3)		Thin Dark Su			147, 148)		(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye		(F2)			Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Mat		Te)			(MLRA 136, 147) Very Shallow Dark Surface (TF12)
	uck (A10) (LRR N) d Below Dark Surface	(Δ11)	Redox Dark S Depleted Dar	,	,			Other (Explain in Remarks)
	ark Surface (A12)	(Δ11)	Redox Depre					Other (Explain in Nemarks)
	/lucky Mineral (S1) (Ll	RR N.	Iron-Mangane			LRR N.		
	A 147, 148)	,	MLRA 130		,00 (i i.e.) (,		
	Gleyed Matrix (S4)		Umbric Surfa	-	(MLRA 13	6. 122)		³ Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo				48)	wetland hydrology must be present,
-	Matrix (S6)		Red Parent M					unless disturbed or problematic.
	Layer (if observed):						ĺ	·
Type: CC	parse fragments							
Depth (in							Hvdr	ic Soil Present? Yes No
Remarks:			_				11,741.	
Nemaiks.								

Wetland Photograph Page

Wetland ID W-H108



Photograph Direction SW

Date: 05/19/2015

Comments: 2015 wetland delineation.



Photograph Direction SW

Date: 10/01/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP		City/County: Lewis		Sampling Date: 05/19/2015
Applicant/Owner: MVP		, ,		Sampling Point: W-H108-UP1
Investigator(s): A.Stott, A.Grech, D. Mc	Cullough			
Landform (hillslope, terrace, etc.): Side-slo				Slone (%): 3-6%
Subregion (LRR or MLRA): LRRN				Datum: NAD 83
Soil Map Unit Name: Gilpin-Upshur silt loa				
•		_		
Are climatic / hydrologic conditions on the site	**		,	
Are Vegetation, Soil, or Hydro	logy significantly	y disturbed? Are "Norma	I Circumstances"	present? Yes No
Are Vegetation, Soil, or Hydro	ology naturally pr	roblematic? (If needed,	explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attack	n site map showing	g sampling point location	ons, transects	s, important features, etc.
Hydrophytic Vegetation Present? You	es No_ 🗸			
	es No	Is the Sampled Area	Vaa	No
	es No V	within a Wetland?	res	No
Remarks:				
Upland				
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is requi	red; check all that apply)		Surface Soil	Cracks (B6)
Surface Water (A1)	True Aquatic F	Plants (B14)	Sparsely Ve	getated Concave Surface (B8)
High Water Table (A2)		ide Odor (C1)	Drainage Pa	
Saturation (A3)	Oxidized Rhiz	ospheres on Living Roots (C3)	Moss Trim L	
Water Marks (B1)	Presence of R	educed Iron (C4)	Dry-Season	Water Table (C2)
Sediment Deposits (B2)	Recent Iron R	eduction in Tilled Soils (C6)	Crayfish Bur	rows (C8)
Drift Deposits (B3)	Thin Muck Su	rface (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	
Inundation Visible on Aerial Imagery (B	7)		Shallow Aqu	
Water-Stained Leaves (B9)				aphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutra	l Test (D5)
Field Observations:		,		
	No Depth (inches			
	No Depth (inches			
Saturation Present? Yes (includes capillary fringe)	No Depth (inches	s): Wetland	Hydrology Prese	nt? Yes No
Describe Recorded Data (stream gauge, mo	onitoring well, aerial phot	tos, previous inspections), if ava	ailable:	
Domorko				
Remarks:				

· · · · · ·	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30'		Species?		
1 Liriodendron tulipifera	10	<u> </u>	FACU	Number of Dominant Species That Are OBL, FACW, or FAC:3 (A)
2. Acer saccharum	10		FACU	MacAio Obe, i Aow, di i Ao.
3. Juglans nigra	5			Total Number of Dominant Species Across All Strata: 6* (B)
3. dagians nigra			FACU_	Species Across All Strata: (B)
4				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 50% (A/B)
6				
7				Prevalence Index worksheet:
	25	= Total Co	/er	Total % Cover of: Multiply by:
50% of total cover: <u>12.5</u>				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Carpinus caroliniana	5	~	FAC	FAC species x 3 =
· · · · · · · · · · · · · · · · · · ·			1/10	FACU species x 4 =
2				
3				UPL species x 5 =
4	-			Column Totals: (A) (B)
5				Provolonce Index = P/A =
6				Prevalence Index = B/A =
7			-	Hydrophytic Vegetation Indicators:
		·		1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9		·		3 - Prevalence Index is ≤3.0 ¹
2 -		= Total Co		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 2.5	20% of	total cover	:1	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				·
1. Packera aurea	20		F <u>ACW</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Microstegium vimineum	20	~	FAC	
3. Woodfern sp.	20		ND	¹ Indicators of hydric soil and wetland hydrology must
4. Impatiens capensis	10			be present, unless disturbed or problematic.
		· 	FACU	Definitions of Four Vegetation Strata:
5. Galium aparine	10		FACU_	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Polystichum acrostichoides	10		F <u>ACU</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 ft (1
10				m) tall.
10		-		,
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Co		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>45</u>	20% of	total cover	:Ιδ	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4	-			Hydrophytic
5				Vegetation Present? Yes No ✓
2		= Total Co	_	i resent: resNO
50% of total cover: 0	20% of	total cover	:0	
Remarks: (Include photo numbers here or on a separate s	heet.)			•
ND - Not Determined.				
* Vegetation not ID'd to species level not include	ad in dan	ninance t	2St	
v ogotation hot ib a to species level hot illolade	ou iii uull	ווומווטט ני		

SOIL Sampling Point: W-H108-UP1

Profile Description: (Describe to	the depth	needed to document the	indicator or confirm	n the absen	ce of indicators.)
Depth Matrix		Redox Feature			
(inches) Color (moist)	%	Color (moist) %	Type ¹ Loc ²	<u>Texture</u>	Remarks
0-6" 7.5yr 2/1	100			SiL	
6+"					Refusal: Coarse Fragments
					
					
			- <u></u>		
					
					
			<u> </u>		
¹ Type: C=Concentration, D=Deple	tion, RM=Re	educed Matrix, MS=Maske	d Sand Grains.		PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:				Ind	licators for Problematic Hydric Soils ³ :
Histosol (A1)		Dark Surface (S7)			2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)		Polyvalue Below Surfa	ace (S8) (MLRA 147 ,	148)	Coast Prairie Redox (A16)
Black Histic (A3)		Thin Dark Surface (S9) (MLRA 147, 148)		(MLRA 147, 148)
Hydrogen Sulfide (A4)		Loamy Gleyed Matrix	(F2)		Piedmont Floodplain Soils (F19)
Stratified Layers (A5)		Depleted Matrix (F3)			(MLRA 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			Other (Explain in Remarks)
Thick Dark Surface (A12)		Redox Depressions (F			
Sandy Mucky Mineral (S1) (LR	RN,	Iron-Manganese Mass	ses (F12) (LRR N,		
MLRA 147, 148)		MLRA 136)			
Sandy Gleyed Matrix (S4)		Umbric Surface (F13)			ndicators of hydrophytic vegetation and
Sandy Redox (S5)		Piedmont Floodplain S			wetland hydrology must be present,
Stripped Matrix (S6)		Red Parent Material (I	F21) (MLRA 127, 14 7	7)	unless disturbed or problematic.
Restrictive Layer (if observed):					
Type: Coarse Fragments		=			
Depth (inches): 6		_		Hydric S	oil Present? Yes No 🔽
Remarks:					
In cow pasture					
·					

ON: ge}, unaltered or i	mpairments)				W-H96, Timber Mat Crossing		
ge}, unaltered or i	mpairments)						
8/10/201	5	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetland	Indicators						
-	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0039	Emergent					
			-	ļ			1
					Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
	0.0039						
	Scores	Double common (11 of 12)					
rication					ILF Costs		
					\$234.00		
		-	-	L	\$234.00		
			-				
	PART I - Wetland Impact Wetland lassification Emergent	Wetland (acreage) lassification Emergent 0.0039 0.0039 PART II - Unit Scores	PART I - Wetland Indicators Impact Impacts Wetland (acreage) Wetland Classification Emergent 0.0039 Emergent 0.0039 PART II - Unit Scores	Impact Impacts (acreage) Wetland (acreage) Emergent Emergent 0.0039 Emergent 0.0039 PART II - Unit Scores ication Replacement Unit(s) 0.0039 0 0	Impact Impacts (acreage) Wetland assification Emergent 0.0039 Emergent 0.0039 PART II - Unit Scores ication Replacement Unit(s) 0.0039 0 0	PART II - Wetland Indicators Impact	PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0039 Emergent PART III - Advanced Mitigation Sustainable Determination Made on Advanced Mitigation (Y or N) PART III - Lunit Scores ication Replacement Unit(s) 0.0039 \$234.00

Project/Site: MVP	City/County: _	_ewis	_ Sampling Date: 05/16/2015
Applicant/Owner: MVP			Sampling Point: W-H96
Investigator(s): A.Stott, A.Grech, D. McCullo	ugh Section, Towr		
Landform (hillslope, terrace, etc.): Side-slope	Local relief (conc	ave, convex, none): Concave	Slope (%): 6-10%
Subregion (LRR or MLRA): LRRN L	at: 38.913938	Long: -80.571897	
Soil Map Unit Name: Gilpin-Upshur silt loams, 35 to	`		
Are climatic / hydrologic conditions on the site typica	I for this time of year? Yes	No (If 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, explain any answ	vers in Remarks.)
SUMMARY OF FINDINGS – Attach site	map showing sampling	point locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes	, No Latte		
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	Is the	Sampled Area	
Wetland Hydrology Present?	No Within	a Wetland? Yes	No
Remarks:			
Cowardin Code: PEM; HGM: riverine; W	T: rpwwd		
Information listed on this form represents	the data collected in 2015	. The wetland was revisite	d on 10/01/2019. Presence
of wetland hydrology, hydrophytic vegeta	tion, and hydric soils was o	confirmed using the USAC	E EMP Regional
Supplement delineation methodology.			
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary India	cators (minimum of two required)
Primary Indicators (minimum of one is required; ch	eck all that apply)	Surface So	il Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely V	egetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)		atterns (B10)
Saturation (A3)	 Oxidized Rhizospheres on Liv 	ring Roots (C3) Moss Trim	Lines (B16)
Water Marks (B1)	Presence of Reduced Iron (C	4) Dry-Seasoi	n Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tille	d Soils (C6) Crayfish Bu	ırrows (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)		Geomorphi	c Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aq	uitard (D3)
Water-Stained Leaves (B9)		Microtopog	raphic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutra	al Test (D5)
Field Observations:	,		
	Depth (inches):		
Water Table Present? Yes No			
	Depth (inches):0"	Wetland Hydrology Prese	ent? Yes V No No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitorin	g well, aerial photos, previous ins	spections), if available:	
Remarks:			

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

/EGETATION (Four Strata) – Use scientific na	ames of	plants.		Sampling Point: W-H96
20'	Absolute			Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:30') 1		Species?		Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
2				
3				Total Number of Dominant Species Across All Strata: 1 (B)
4				Operico Atribus Air Strata.
5				Percent of Dominant Species That Are OBL FACW or FAC: 100 (A/B)
				That Are OBL, FACW, or FAC: (A/B)
6		-		Prevalence Index worksheet:
1	0	Total Cov		Total % Cover of: Multiply by:
50% of total cover: 0			-	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')	20 /6 01	total cover.		FACW species x 2 =
				FAC species x 3 =
·				FACU species x 4 =
2				UPL species x 5 =
3				Column Totals: (A) (B)
4		-		Column Totals (N) (D)
5				Prevalence Index = B/A =
6		-		Hydrophytic Vegetation Indicators:
7		-		✓ 1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
		= Total Cov	_	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	total cover:	0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')	50	,		Problematic Hydrophytic Vegetation ¹ (Explain)
1. Scirpus cyperinus	50		FACW_	residential right opiny to vogetation (Explain)
2. Juncus effusus	10		F <u>ACW</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Persicaria saggitata	10		OBL	be present, unless disturbed or problematic.
4. Microstegium vimineum	10		F <u>AC</u>	Definitions of Four Vegetation Strata:
5. Mimulus ringens	5		OBL	
6. Verbesina alternifolia	5		F <u>AC</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
9				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.		'		Herb – All herbaceous (non-woody) plants, regardless
	90	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		total cover:		W 1 2 4 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1				g.m.
2.				
3.		·		
4		'		
5		'		Hydrophytic Vegetation
	0	= Total Cov	er	Present? Yes V No No
50% of total cover: 0		total cover:	_	
Remarks: (Include photo numbers here or on a separate sh	neet.)			1
	,			

SOIL Sampling Point: W-H96

Profile Desc	ription: (Describe to	the depth	needed to docun	nent the i	ndicator	or confirn	n the absen	ce of indicators.)
Depth	Matrix			x Features				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-20"	5yr 4/2	90	7.5yr 4/6	10	С	PL	SiCL	
	_		_					
								-
			_					
					-			
1 _T 0. 0.			and the second Material MC			-:	21	DI Dese Lining M Matrix
Hydric Soil	oncentration, D=Deple	etion, Rivi=R	reduced Matrix, MS	s=iviasked	Sand Gr	ains.	Location:	PL=Pore Lining, M=Matrix. licators for Problematic Hydric Soils ³ :
-			Davis Confess	(07)			inc	•
Histosol			Dark Surface		oo (CO) /	II D A 447	440\	2 cm Muck (A10) (MLRA 147) Coast Prairie Redox (A16)
Histic Ep	pipedon (A2)		Polyvalue Be Thin Dark Su				, 140)	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			47, 140)		Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat		· <i>-</i>)			(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S	. ,	6)			Very Shallow Dark Surface (TF12)
	d Below Dark Surface	(A11)	Depleted Dar					Other (Explain in Remarks)
Thick Da	ark Surface (A12)		Redox Depre	ssions (F	3)			
Sandy M	lucky Mineral (S1) (L l	RR N,	Iron-Mangan	ese Masse	es (F12) (LRR N,		
	\ 147, 148)		MLRA 13					
	lleyed Matrix (S4)		Umbric Surfa					Indicators of hydrophytic vegetation and
-	edox (S5)		Piedmont Flo					wetland hydrology must be present,
	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 14	7)	unless disturbed or problematic.
	_ayer (if observed):							
Type:			<u> </u>					. 4
Depth (inc	ches):						Hydric S	oil Present? Yes No
Remarks:								

Wetland Photograph Page

Wetland ID W-H96



Photograph Direction South

Date: 05/16/2015

Comments: 2015 wetland delineation.



Photograph Direction East

Date: 10/01/19

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP			City/0	County: Lewis		Sampling Date: 05/16/2015		
Applicant/Owner: MVP				•		Sampling Point: W-H96-UP		
Investigator(s): A.Stott, A.Grech, D. M.	/IcCulloug	h						
Landform (hillslope, terrace, etc.): Side-s				· · · · · · · · ·		Slope (%): 4-8%		
Subregion (LRR or MLRA): LRRN						Datum: NAD 83		
Soil Map Unit Name: Vandalia silt loar								
Are climatic / hydrologic conditions on the	site typical fo	or this time	of year?	Yes ✓ _ No	(If no, explain in R	temarks.)		
Are Vegetation, Soil, or Hy	drology	signific	cantly distu	rbed? Are "Norma	al Circumstances" r	present? Yes V No		
Are Vegetation, Soil, or Hyd					explain any answe			
SUMMARY OF FINDINGS – Atta								
Hydrophytic Vegetation Present?	Yes 🗸	No						
	Yes		/	Is the Sampled Area within a Wetland?	Vos	No 🗸		
Wetland Hydrology Present?	Yes			within a wettand:	165			
HYDROLOGY								
Wetland Hydrology Indicators:						ators (minimum of two required)		
Primary Indicators (minimum of one is rec				(2.4)	Surface Soil			
Surface Water (A1)			atic Plants		Sparsely Vegetated Concave Surface (B8)Drainage Patterns (B10)			
High Water Table (A2)		-	Sulfide Od	dor (C1) res on Living Roots (C3)	_			
Saturation (A3) Water Marks (B1)				d Iron (C4)				
Sediment Deposits (B2)	·			on in Tilled Soils (C6)	Dry-Season Water Table (C2) ils (C6) Crayfish Burrows (C8)			
Drift Deposits (B3)			k Surface (Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)			plain in Re		Saturation visible on Aerial imagely (03) Stunted or Stressed Plants (D1)			
Iron Deposits (B5)				•		Position (D2)		
Inundation Visible on Aerial Imagery	(B7)				Shallow Aqu	itard (D3)		
Water-Stained Leaves (B9)					Microtopogra	aphic Relief (D4)		
Aquatic Fauna (B13)					FAC-Neutral	Test (D5)		
Field Observations:								
	_ No							
	_ No					.,		
Saturation Present? Yes (includes capillary fringe)	_ No	Depth (in	iches):	Wetland	Hydrology Preser	nt? Yes No		
Describe Recorded Data (stream gauge,	monitoring w	vell, aerial	photos, pre	evious inspections), if av	ailable:			
Demorker								
Remarks:								

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

1. Elaeagnus umbellata 25 ✓

Sapling/Shrub Stratum (Plot size: 15')

Tree Stratum (Plot size: 30'

Herb Stratum (Plot size: ___

2. Holcus lanatus

1. Verbesina alternifolia

_{4.} Poa sp _____

3. Microstegium vimineum 10

– Use scientific n	Absolute	Dominant	Indicator	Sampling Point: W-H96-UP1 Dominance Test worksheet:
)		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: (A)
				Total Number of Dominant Species Across All Strata:3 (B)
				Percent of Dominant Species That Are OBL, FACW, or FAC: 66.6% (A/E
				Prevalence Index worksheet:
	0	= Total Cov	er	Total % Cover of: Multiply by:
% of total cover: 0		total cover:	_	OBL species x 1 =
15'				FACW species x 2 =
	25	~	UPL	FAC species x 3 =
				FACU species x 4 =
	-			UPL species x 5 =
				Column Totals: (A) (B
				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
40.5		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
% of total cover: <u>12.5</u>	20% of	total cover:	5	data in Remarks or on a separate sheet)
)	00			Problematic Hydrophytic Vegetation ¹ (Explain)
	30		F <u>AC</u>	
	20		F <u>AC</u>	¹ Indicators of hydric soil and wetland hydrology must
_	10		F <u>AC</u>	be present, unless disturbed or problematic.
	10		ND	Definitions of Four Vegetation Strata:
				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) of 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.
	70	Total Cov		Herb – All herbaceous (non-woody) plants, regardles of size, and woody plants less than 3.28 ft tall.
% of total cover: <u>35</u> 15'		total cover:		Woody vine – All woody vines greater than 3.28 ft in
				height.
				Hydrophytic Vegetation Present? Yes No
		= Total Cov	_	Present? Yes V No No
)% of total cover: 0	20% of	total cover:	0	

Remarks: (Include photo numbers here or on a separate sheet.)

Woody Vine Stratum (Plot size: 15')

SOIL Sampling Point: W-H96-UP1

Profile Desc	ription: (Describe t	o the depth	needed to docum	ent the indi	cator or confirm	n the ab	sence of indicators.)	
Depth	Matrix		Redox	Features				
(inches)	Color (moist)		Color (moist)		ype ¹ Loc ²		ture Remarks]
0-20"	10yr 4/4	100				Gr	SL	
	-					-		
						-		
						-		
1						-		
	oncentration, D=Deple	etion, RM=Re	educed Matrix, MS=	Masked Sa	ınd Grains.	² Locat	tion: PL=Pore Lining, M=Matrix.	3.
Hydric Soil				 \			Indicators for Problematic Hydric Soils	:
Histosol		;	Dark Surface ((00) (44) 5: :=	4.40	2 cm Muck (A10) (MLRA 147)	
	pipedon (A2)			,	(S8) (MLRA 147,	, 148)	Coast Prairie Redox (A16)	
	stic (A3)				LRA 147, 148)		(MLRA 147, 148)	
	en Sulfide (A4)	•	Loamy Gleyed Depleted Matri				Piedmont Floodplain Soils (F19)	
	d Layers (A5) uck (A10) (LRR N)		Depleted Math	, ,			(MLRA 136, 147) Very Shallow Dark Surface (TF12)	
	d Below Dark Surface	(Δ11)	Depleted Dark		7)		Other (Explain in Remarks)	
	ark Surface (A12)	(/(1/)	Redox Depres		,		Other (Explain in Remarks)	
	Mucky Mineral (S1) (L	RR N.	Iron-Manganes		F12) (LRR N.			
	A 147, 148)	· · · · · · · · · · · · · · · · · · ·	MLRA 136		, , , , , , , , , , , , , , , , , , , ,			
	Gleyed Matrix (S4)		Umbric Surfac		RA 136, 122)		³ Indicators of hydrophytic vegetation and	d
	Redox (S5)				(F19) (MLRA 1 4	48)	wetland hydrology must be present,	
	Matrix (S6)				(MLRA 127, 14		unless disturbed or problematic.	
Restrictive	Layer (if observed):							
Type:			_					
Depth (in	ches):					Hydr	ic Soil Present? Yes No	•
Remarks:	, -					1 -		

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.913311	Lon.	-80.571953
STREAM/SITE ID AND SITE DESCR	RIPTION:				,	W-H95, Timber Mat Crossing		
(% stream slope, watershed size {a	creage}, unaltered							
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-H95	Emergent	0.0414	Emergent					
						PART III - Advanced Sustainable Determination Made on		
						Advanced Mitigation (Y or N)		Y
Total Impact		0.0414						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0414			\$2,404.00		
Total Scrub-Shrub			0			\$2,484.00		
Total Forested			0	-				
Total Open Water			0	1				

Project/Site: MVP	City/County: L6	wis	Sampling Date: 05/16/2015		
Applicant/Owner: MVP			Sampling Point: W-H95		
Investigator(s): A.Stott, A.Grech, D. McC	ullough Section Townsh				
Landform (hillslope, terrace, etc.): Side-slope			Slone (%): 0-4%		
Subregion (LRR or MLRA): LRRN		Long: -80.571925			
Soil Map Unit Name: Vandalia silt loam, 15					
Are climatic / hydrologic conditions on the site ty					
Are Vegetation, Soil, or Hydrolog		Are "Normal Circumstances"	present? Yes No		
Are Vegetation, Soil, or Hydrolog	yy naturally problematic?	(If needed, explain any answe	ers in Remarks.)		
SUMMARY OF FINDINGS – Attach	site map showing sampling p	oint locations, transects	s, important features, etc.		
Lhudanahutia Vanatatian Brassat2	No Is the Sa				
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	No.	ampled Area			
Wetland Hydrology Present? Yes	within a	Wetland? Yes	No		
Remarks:					
Cowardin Code: PEM					
HGM: riverine					
WT: rpwwd					
HYDROLOGY					
Wetland Hydrology Indicators:		Secondary Indic	ators (minimum of two required)		
Primary Indicators (minimum of one is required	i; check all that apply)	Surface Soil	l Cracks (B6)		
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Ve	egetated Concave Surface (B8)		
High Water Table (A2)	Hydrogen Sulfide Odor (C1)		atterns (B10)		
Saturation (A3)	Oxidized Rhizospheres on Livin	_			
Water Marks (B1)	Presence of Reduced Iron (C4)		Water Table (C2)		
Sediment Deposits (B2)	Recent Iron Reduction in Tilled	·			
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation \	Saturation Visible 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	ll Test (D5)		
Field Observations:		T			
	Depth (inches):				
Water Table Present? Yes No	Depth (inches):4"				
	Depth (inches):0"	Wetland Hydrology Prese	nt? Yes <u>✓</u> No		
(includes capillary fringe) Describe Recorded Data (stream gauge, moni	taring wall, garial photos, provious insp	octions) if available:			
Describe Recorded Data (stream gauge, mon	oning well, aerial priotos, previous inspi	ections), ii avaliable.			
Remarks:					

mes of	piants.		Sampling Point: W-H95
Absolute			Dominance Test worksheet:
% Cover	Species?	<u>Status</u>	Number of Dominant Species
			That Are OBL, FACW, or FAC: 4 (A)
			Total Number of Dominant
			Species Across All Strata:5 (B)
	-		Percent of Dominant Species
			That Are OBL, FACW, or FAC: 80% (A/B)
			Prevalence Index worksheet:
		_	Total % Cover of: Multiply by:
20% of	total cover	. 0	OBL species x 1 =
_			FACW species x 2 =
		FAC	FAC species x 3 =
5		<u>UPL</u>	FACU species x 4 =
			UPL species x 5 =
			Column Totals: (A) (B)
			Dravelence Index - B/A
			Prevalence Index = B/A =
			Hydrophytic Vegetation Indicators:
			1 - Rapid Test for Hydrophytic Vegetation
			✓ 2 - Dominance Test is >50%
10	- Total Cov	er	3 - Prevalence Index is ≤3.0¹
			4 - Morphological Adaptations ¹ (Provide supporting
_			data in Remarks or on a separate sheet)
30	✓	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
30			
			¹ Indicators of hydric soil and wetland hydrology must
			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.
20% of	total cover	10	Woody vine – All woody vines greater than 3.28 ft in
00			height.
30		<u>FAC</u>	
		·	
			Hydrophytic
			Vegetation
30	= Total Cov	rer	Vegetation Present? Yes <u>✓</u> No
	0 20% of 5 5 10 20% of 30 30 10 5 5 80 20% of 30 30 10 5 5	0 = Total Coverses 0 = Total Coverses 5	% Cover Species? Status 0 = Total Cover 20% of total cover: 0 5 ✓ FAC 5 ✓ UPL 10 = Total Cover 20% of total cover: 2 30 ✓ FACW 5 FAC 5 FACW 5 FAC 5 FAC 80 = Total Cover 20% of total cover: 16 30 ✓ FAC

SOIL Sampling Point: W-H95

i ionic best	cription: (Describe t	o the dept	h needed to docun	nent the i	indicator	or confirn	n the absence	e of indicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	<u>Remarks</u>
0-3"	5yr 3/3	100					GrCS	_
3-20"	5yr 3/1	95	7.5yr 3/4	5	С	M	GrCS	
						· 		
								_
	-							
	-							
¹ Type: C=C	oncentration, D=Depl	etion RM=	Reduced Matrix MS	S=Masked	Sand Gr	ains	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil		Cuon, ruii-	readoca Matrix, Me	J-Masket	d Garia Gr	uii 10.		cators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		ce (S8) (N	ILRA 147		Coast Prairie Redox (A16)
	istic (A3)		Thin Dark Su				, ,	(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye			, ,		Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Mat					(MLRA 136, 147)
	uck (A10) (LRR N)		Redox Dark S					Very Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Dar					Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre					
	Mucky Mineral (S1) (L	RR N,	Iron-Mangan		es (F12) (LRR N,		
	A 147, 148) Gleyed Matrix (S4)		MLRA 136 Umbric Surfa		(MI D A 13	6 122\	31,	ndicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo					vetland hydrology must be present,
	d Matrix (S6)		Red Parent N					unless disturbed or problematic.
	Layer (if observed):			iatoriai (i	, (1	processing the proces
Type:	, ,							
Depth (in	ches):						Hydric Sc	oil Present? Yes 🗸 No
Remarks:	ones).						Tryullo oc	711 Tesent: 165 No
Nemaiks.								



Photograph Direction North

Comments:		

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 05/16/2015			
Applicant/Owner: MVP					Sampling Point: W-H95-UP			
Investigator(s): A.Stott, A.Grech, D.	McCullougl	h Section						
Landform (hillslope, terrace, etc.): Side					Slope (%): 0-2%			
Subregion (LRR or MLRA): LRRN					Datum: NAD 83			
Soil Map Unit Name: Vandalia silt loa		percent slopes ((VaD)	NWI classification	ation: None			
Are climatic / hydrologic conditions on the								
Are Vegetation, Soil, or H		•						
Are Vegetation, Soil, or H				explain any answer				
SUMMARY OF FINDINGS – At	-							
	Yes			<u> </u>	· ·			
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes		Is the Sampled Area		🗸			
Wetland Hydrology Present?	Yes	_	within a Wetland?	Yes	No			
Upland								
HYDROLOGY								
Wetland Hydrology Indicators:					tors (minimum of two required)			
Primary Indicators (minimum of one is r	-		5.0	Surface Soil (
Surface Water (A1)		True Aquatic Plants (etated Concave Surface (B8)			
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Pat				
Saturation (A3) Water Marks (B1)		Presence of Reduced	es on Living Roots (C3)	Moss Trim Li				
Sediment Deposits (B2)	·	Recent Iron Reduction	, ,	Dry-Season Water Table (C2) oils (C6) Crayfish Burrows (C8)				
Drift Deposits (B3)		Thin Muck Surface (C		-	sible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)		Other (Explain in Rer		Saturation visible on Aerial imagely (Cs) Stunted or Stressed Plants (D1)				
Iron Deposits (B5)			,	Geomorphic				
Inundation Visible on Aerial Imager	y (B7)			Shallow Aqui	` '			
Water-Stained Leaves (B9)					phic Relief (D4)			
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)			
Field Observations:								
		Depth (inches):						
		Depth (inches):						
Saturation Present? Yes (includes capillary fringe)	No	Depth (inches):	Wetland F	lydrology Presen	t? Yes No			
Describe Recorded Data (stream gauge	e, monitoring w	vell, aerial photos, pre	vious inspections), if ava	ilable:				
Remarks:								
. tomains								

Sampling	Point: W-H95-UP1
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,	Ahsoluta	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:1 (A)
2				
3				Total Number of Dominant Species Across All Strata: 2* (B)
				Species Across Air Strata.
4				Percent of Dominant Species
5	-			That Are OBL, FACW, or FAC:50% (A/B)
6	-			Prevalence Index worksheet:
7		· ——		Total % Cover of: Multiply by:
		= Total Cov	ver _	
50% of total cover: 0	20% of	f total cover	:0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Eleagnus umbellata	25		<u>UPL</u>	FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
				Column Totals: (A) (B)
4				
5				Prevalence Index = B/A =
6		· ———		Hydrophytic Vegetation Indicators:
7		·		1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0¹
	25	= Total Cov	/er	
50% of total cover:12.	5 20% of	f total cover	<u>: 5</u>	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Trifolium repens	30	~	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Ranunculus sp.	20		ND	
3. Achillea millefolium	10			¹ Indicators of hydric soil and wetland hydrology must
	10		FACU_	be present, unless disturbed or problematic.
4. Poa sp.		· ——	<u>ND</u>	Definitions of Four Vegetation Strata:
5. Plantago lanceolata	10	·	<u>UPL</u>	Tree Woody plants evaluding vines 2 in /7 6 cm) or
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				
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	80	T		Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: 40		= Total Cover f total cover		of size, and woody plants less than 3.28 ft tall.
	20% 0	total cover		Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2		<u> </u>		
3				
4				Hydrophytic
5.			_	Hydrophytic Vegetation
	0	= Total Cov	/er	Present? Yes No
50% of total cover: 0		f total cover	_	
Remarks: (Include photo numbers here or on a separate s			<u> </u>	
ND - Not Determined.	oricet.)			
ND - Not Determined.				
* Vegetation not ID'd to species level not include	ed in don	ninance te	est.	

SOIL Sampling Point: W-H95-UP1

Profile Desc	ription: (Describe t	o the depth	needed to docun	ent the ir	ndicator o	or confirm	the absend	ce of indicato	rs.)		
Depth	Matrix		Redox	(Features	<u> </u>						
(inches)	Color (moist)	%	Color (moist)	<u></u> %	Type ¹	Loc ²	Texture	_	Remark	S	
0-10"	10yr 4/4	100					GrSL				
10+"								Refusa	al: Coarse	Fragments	
											_
	-										-
							-				
							-				
1			Na dana di Maricha MC		010		21 1'	DI Daniel Cali	M. M. ()		
Hydric Soil	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	=Masked	Sand Gra	ins.		PL=Pore Linir		x. Hydric Soils³:	
•				(0-)			ma			•	
Histosol	, ,		Dark Surface		· · (OO) (N	I DA 447		2 cm Muck (A	, .	•	
	oipedon (A2)		Polyvalue Be				148)	Coast Prairie	•	0)	
Black Hi	en Sulfide (A4)		Thin Dark Su	, ,	•	47, 148)		(MLRA 147 Piedmont Flo		lo (E10)	
	d Layers (A5)		Loamy Gleye Depleted Mat		-2)		_	(MLRA 130		15 (F19)	
	ick (A10) (LRR N)		Redox Dark S		6)			Very Shallow		ce (TF12)	
	d Below Dark Surface	(A11)	Depleted Dar					Other (Explai		. ,	
	ark Surface (A12)	()	Redox Depre					(=		,	
	lucky Mineral (S1) (L	RR N,	Iron-Mangane			RR N,					
	\ 147, 148)		MLRA 136		· , ·						
	Bleyed Matrix (S4)		Umbric Surfa		MLRA 13	6, 122)	³ lı	ndicators of hy	drophytic v	egetation and	
Sandy R	edox (S5)		Piedmont Flo	odplain So	oils (F19)	(MLRA 14	8) \	wetland hydrol	ogy must be	e present,	
Stripped	Matrix (S6)		Red Parent M	laterial (F2	21) (MLR	A 127, 147	') (unless disturbe	ed or proble	matic.	
Restrictive I	_ayer (if observed):										
Туре: <u>С</u> С	parse Fragments										
Depth (inc	ches): 10		<u></u>				Hydric So	oil Present?	Yes	No 🗸	_
Remarks:							1				

USACE FILE NO./Project Name:		Mountain Valley Pipeline			Lat.	38.904701	Lon.	-80.563951
STREAM/SITE ID AND SITE DESCR	RIPTION:					W-VV9, 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-VV9	Emergent	0.0534	Emergent					
						PART III - Advanced	Mitigatio	on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0534						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent Total Scrub-Shrub			0.0534			\$2.204.00		
Total Forested			0		ļ	\$3,204.00		
			0					
Total Open Water			U	1				

Project/Site: MVP	City/County: Lewis	_ Sampling Date: 12/10/2015
Applicant/Owner: MVP		Sampling Point: W-VV9
Investigator(s): Jason McGuirk, Kevin Pulver		
Landform (hillslope, terrace, etc.): valley bottom		Slope (%): 1-2
Subregion (LRR or MLRA): LRRN Lat: 38.90	04826 Long: -80.563874	
Soil Map Unit Name: Vandalia silt loam, 25 to 35 percent sl	opes NWI classif	
Are climatic / hydrologic conditions on the site typical for this ti		
Are Vegetation, Soil, or Hydrology sign		·
Are Vegetation, Soil, or Hydrology nate SUMMARY OF FINDINGS – Attach site map sh		•
Hydrophytic Vegetation Present? Hydric Soil Present? Yes No No	is the bampied Area	,
Wetland Hydrology Present? Yes No_ No_	within a wetland: Tes	No
Remarks:		
Cowardin Code: PEM		
HGM: Slope		
WT: RPWWD		
LIVERGLOOV		
HYDROLOGY	Casasdanilladi	
Wetland Hydrology Indicators:		cators (minimum of two required)
Primary Indicators (minimum of one is required; check all tha		` '
		egetated Concave Surface (B8) atterns (B10)
1 - · · · · · · · · · · · · · · ·	ed Rhizospheres on Living Roots (C3) Moss Trim	
<u> </u>		n Water Table (C2)
<u> </u>	t Iron Reduction in Tilled Soils (C6) Crayfish Bu	
		Visible on Aerial Imagery (C9)
		Stressed Plants (D1)
Iron Deposits (B5)	Geomorphi	c Position (D2)
Inundation Visible on Aerial Imagery (B7)	Shallow Aq	uitard (D3)
Water-Stained Leaves (B9)	· · · · · · · · · · · · · · · · · · ·	raphic Relief (D4)
Aquatic Fauna (B13)	FAC-Neutra	al Test (D5)
Field Observations:	25	
Surface Water Present? Yes No Depth		
Water Table Present? Yes No Depth		
Saturation Present? Yes No Depth (includes capillary fringe)	(inches): 0 Wetland Hydrology Prese	ent? Yes V No
Describe Recorded Data (stream gauge, monitoring well, aer	ial photos, previous inspections), if available:	
Remarks:		

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

Sampling Point: W-VV9	
st worksheet:	_

Tree Stratum (Plot size: 30'	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30') 1 Platanus occidentalis	% Cover	Species? ✓	FACW	Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)
2 Carpinus caroliniana	10	~	FAC	
3				Total Number of Dominant Species Across All Strata:5 (B)
4				
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
6			<u> </u>	Bassalana la description
7				Prevalence Index worksheet:
40		= Total Cov		Total % Cover of: Multiply by: OBL species x 1 =
50% of total cover:10_	20% of	total cover	:4	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')				FAC species x 3 =
1				FACU species x 4 =
2				UPL species x 5 =
3				Column Totals: (A) (B)
4				Goldmin Totals (A) (B)
5			-	Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
<u>. </u>	0 .	= Total Cov	/er	3 - Prevalence Index is ≤3.0¹
50% of total cover: 0				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Carex lurida	25	✓	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Dichanthelium clandestinum	10		FAC	4
3. Microstegium vimineum	20		FAC	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Mimulus ringens	15		<u>OBL</u>	Definitions of Four Vegetation Strata:
5. Scirpus atrovirens	10		OBL	
6. Juncus effusus	10		FACW_	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7. Typha latifolia	5		OBL	height.
8. Scirpus cyperinus	5		OBL	Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10			<u> </u>	m) tall.
11	100	-		Herb – All herbaceous (non-woody) plants, regardless
50		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover:	20% of	total cover	: 20	Woody vine – All woody vines greater than 3.28 ft in
				height.
Woody Vine Stratum (Plot size:15') 1				
1				
1				
1				Hydrophytic
1				Hydrophytic Vegetation Present? Yes _ ✓ No
1	0 .	= Total Cov	_	Vegetation

SOIL Sampling Point: W-VV9

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the i	indicator	or confirn	n the absence	of indicators.)
Depth	Matrix		Redox	k Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10yr 5/2	90	10yr 5/6	10	С	M/PL	SiL	
3-16	10yr 4/1	90	10yr 5/6	10	С	M/PL	CL	
							•	
						<u> </u>		
							·	
1- 0.0						·	2	
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gr	ains.		L=Pore Lining, M=Matrix. ators for Problematic Hydric Soils ³ :
Hydric Soil			5 1 5 1	(0-1)				•
Histosol	, ,		Dark Surface		(00) (cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				148) C	Coast Prairie Redox (A16)
Black Hi			Thin Dark Su			147, 148)	5	(MLRA 147, 148)
	en Sulfide (A4) d Layers (A5)		Loamy Gleye		(F2)		P	Piedmont Floodplain Soils (F19)
	ick (A10) (LRR N)		Depleted Mat Redox Dark S		=e)		V	(MLRA 136, 147) Yery Shallow Dark Surface (TF12)
	d Below Dark Surface	(Δ11)	Depleted Dar	,	,			Other (Explain in Remarks)
	ark Surface (A12)	(A11)	Redox Depre				`	otter (Explain in Nemarks)
	lucky Mineral (S1) (L	RR N	Iron-Mangane			I RR N		
	147, 148)	,	MLRA 136		05 (1 12) (LIXIX 14,		
	Gleyed Matrix (S4)		Umbric Surfa		(MLRA 13	36. 122)	³ Ind	licators of hydrophytic vegetation and
-	Redox (S5)		Piedmont Flo					etland hydrology must be present,
-	Matrix (S6)		Red Parent M					less disturbed or problematic.
	Layer (if observed):						Í	'
Type:	,							
Depth (inc	chas).						Hydric Soil	Present? Yes V No
							Tiyane con	Tresent: Tes No
Remarks:								



Photograph Direction SW

Comments:		

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 12/10/2015		
Applicant/Owner: MVP					Sampling Point: W-vv8, vv9, vv10, vv11		
Investigator(s): Jason McGuirk, h	Cevin Pulver	Section					
Landform (hillslope, terrace, etc.): Va			· · · · · · · · ·		Slope (%): 1-2		
Subregion (LRR or MLRA): LRRN					Datum: NAD 83		
Soil Map Unit Name: Vandalia silt lo				NWI classific			
Are climatic / hydrologic conditions on							
· -		· ·					
Are Vegetation, Soil, o							
Are Vegetation, Soil, c			•	explain any answe			
SUMMARY OF FINDINGS –	Attach site m	ap snowing san	ipling point location	ons, transects	s, important features, etc.		
Hydrophytic Vegetation Present?	Yes		Is the Sampled Area				
Hydric Soil Present?	Yes		within a Wetland?	Yes	No <u> </u>		
Wetland Hydrology Present? Remarks:	Yes	_ No					
HYDROLOGY							
Wetland Hydrology Indicators:					ators (minimum of two required)		
Primary Indicators (minimum of one	-			Surface Soil			
Surface Water (A1)		True Aquatic Plants (getated Concave Surface (B8)		
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Pa			
Saturation (A3) Water Marks (B1)		Presence of Reduced	es on Living Roots (C3)				
Sediment Deposits (B2)		Recent Iron Reduction		 Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) 			
Drift Deposits (B3)		Thin Muck Surface (C					
Algal Mat or Crust (B4)		Other (Explain in Rer			Stressed Plants (D1)		
Iron Deposits (B5)			,	✓ Geomorphic			
Inundation Visible on Aerial Ima	gery (B7)			Shallow Aqu	itard (D3)		
Water-Stained Leaves (B9)					aphic Relief (D4)		
Aquatic Fauna (B13)				FAC-Neutral	l Test (D5)		
Field Observations:							
Surface Water Present? Yes	No	Depth (inches):					
		Depth (inches):					
Saturation Present? Yes (includes capillary fringe)	No	Depth (inches):	Wetland	Hydrology Preser	nt? Yes No		
Describe Recorded Data (stream ga	uge, monitoring w	vell, aerial photos, pre	vious inspections), if ava	ailable:			
Remarks:							

Sampling	Point:	W-vv8,	vv9,	vv10,	vv11-L	JΡΙ
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	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?	Status	Number of Dominant Species
1	-			That Are OBL, FACW, or FAC:1 (A)
2				Total Newhord Davis and
3				Total Number of Dominant Species Across All Strata:5 (B)
4				
5				Percent of Dominant Species That Are OBL FACW or FAC: 20 (A/B)
6.		-		That Are OBL, FACW, or FAC: (A/B)
7.	-			Prevalence Index worksheet:
·	0	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 0				OBL species x 1 =
	20 /6 01	total cover		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15') 1. Prunus serotina	5	~	FACU	FAC species x 3 =
· ·			FACU	FACU species x 4 =
2				
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
9.				2 - Dominance Test is >50%
	5	= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: <u>2.5</u>		total cover		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Verbesina alternifolia	10		FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Phleum pratense	15		F <u>ACU</u>	
3. Daucus carata	15		UPL	¹ Indicators of hydric soil and wetland hydrology must
4. Rubus allegheniensis	15			be present, unless disturbed or problematic.
	5		FACU	Definitions of Four Vegetation Strata:
5. Trifolium pratense			F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Microstegium vimineum	15		F <u>AC</u>	more in diameter at breast height (DBH), regardless of
7. Juncus effusus	5		F <u>ACW</u>	height.
8. Scirpus atrovirens	5		<u>OBL</u>	Sapling/Shrub – Woody plants, excluding vines, less
9. Dichanthelium clandestinum	5		F <u>AC</u>	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
	90	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		total cover		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1.				neight.
2.	-			
		-		
3		-		
		-		Hydrophytic
5	0			Vegetation Present? Yes No ✓
50% -{\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot		= Total Cov	_	103 No
50% of total cover:0		total cover	0	
Remarks: (Include photo numbers here or on a separate si	heet.)			

Sampling Point: W-vv8, vv9, vv10, vv11-UPL

Profile Desc	ription: (Describe t	to the dept	h needed to docum	ent the i	indicator	or confirn	n the absence	of indicators.)	
Depth	Matrix		Redox	(Feature					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Re	emarks
0-6	10yr 4/2	100			-		GrSiL		
6-12	7.5 yr 4/3	95	7.5yr 5/6	5	С	М	GrCL		
						· 	-		-
					-	· 			
								-	
									
¹ Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	=Masked	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=	=Matrix.
Hydric Soil	Indicators:						Indica	ators for Problen	natic Hydric Soils ³ :
Histosol			Dark Surface					cm Muck (A10) (I	MLRA 147)
	oipedon (A2)		Polyvalue Bel				. 148) C	Coast Prairie Redo	
	stic (A3)		Thin Dark Sui			147, 148)		(MLRA 147, 148	
	en Sulfide (A4)		Loamy Gleye		(F2)		P	Piedmont Floodpla	
	d Layers (A5)		Depleted Mat		-0)			(MLRA 136, 147	
	ick (A10) (LRR N) d Below Dark Surface	Δ (Δ11)	Redox Dark S Depleted Dark					/ery Shallow Dark Other (Explain in R	
	ark Surface (A12)	5 (A11)	Redox Depre					oner (Explain in K	emarks)
	Mucky Mineral (S1) (L	.RR N.	Iron-Mangane			LRR N.			
	A 147, 148)	,	MLRA 136		(, (,			
	Gleyed Matrix (S4)		Umbric Surfac	-	(MLRA 13	86, 122)	³ Ind	licators of hydroph	nytic vegetation and
Sandy F	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	18) we	etland hydrology m	nust be present,
Stripped	l Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) un	less disturbed or p	oroblematic.
Restrictive	Layer (if observed):								
Type:									
Depth (in	ches):						Hydric Soil	Present? Yes	No <u> </u>
Remarks:							- 11		

Project/Site: MVP		City/C	City/County: Lewis Sampling Date: 12/10/2					
Applicant/Owner: MVP				_ State: WV	Sampling Point: W-vv8, vv9, vv10, vv11-UP			
Investigator(s): Jason McGuirk, h	Cevin Pulver	Section						
Landform (hillslope, terrace, etc.): Va			· · · · · · · · ·		Slope (%): 1-2			
Subregion (LRR or MLRA): LRRN					Datum: NAD 83			
Soil Map Unit Name: Vandalia silt lo				NWI classific				
Are climatic / hydrologic conditions on								
· -		· ·						
Are Vegetation, Soil, o								
Are Vegetation, Soil, c			•	explain any answe				
SUMMARY OF FINDINGS –	Attach site m	ap snowing san	ipling point location	ons, transects	s, important features, etc.			
Hydrophytic Vegetation Present?	Yes		Is the Sampled Area					
Hydric Soil Present?	Yes		within a Wetland?	Yes	No <u> </u>			
Wetland Hydrology Present? Remarks:	Yes	_ No						
HYDROLOGY								
Wetland Hydrology Indicators:					ators (minimum of two required)			
Primary Indicators (minimum of one	-			Surface Soil				
Surface Water (A1)		True Aquatic Plants (getated Concave Surface (B8)			
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Pa				
Saturation (A3) Water Marks (B1)		Presence of Reduced	es on Living Roots (C3)	Moss Trim Lines (B16)Dry-Season Water Table (C2)Crayfish Burrows (C8)				
Sediment Deposits (B2)		Recent Iron Reduction						
Drift Deposits (B3)		Thin Muck Surface (C		•	isible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)		Other (Explain in Rer			Stressed Plants (D1)			
Iron Deposits (B5)		` '	,	✓ Geomorphic				
Inundation Visible on Aerial Ima	gery (B7)			Shallow Aqu	itard (D3)			
Water-Stained Leaves (B9)					aphic Relief (D4)			
Aquatic Fauna (B13)				FAC-Neutral	l Test (D5)			
Field Observations:								
Surface Water Present? Yes	No	Depth (inches):						
		Depth (inches):						
Saturation Present? Yes (includes capillary fringe)	No	Depth (inches):	Wetland	Hydrology Preser	nt? Yes No			
Describe Recorded Data (stream ga	uge, monitoring w	vell, aerial photos, pre	vious inspections), if ava	ailable:				
Remarks:								

Sampling	Point:	W-vv8,	vv9,	vv10,	vv11-L	JΡΙ
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	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?	Status	Number of Dominant Species
1	-			That Are OBL, FACW, or FAC:1 (A)
2				Total Newhord Davis and
3				Total Number of Dominant Species Across All Strata:5 (B)
4				
5				Percent of Dominant Species That Are OBL FACW or FAC: 20 (A/B)
6.		-		That Are OBL, FACW, or FAC: (A/B)
7.	-			Prevalence Index worksheet:
·	0	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 0				OBL species x 1 =
	20 /6 01	total cover		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15') 1. Prunus serotina	5	~	FACU	FAC species x 3 =
· ·			FACU	FACU species x 4 =
2				
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
9.				2 - Dominance Test is >50%
	5	= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: <u>2.5</u>		total cover		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Verbesina alternifolia	10		FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Phleum pratense	15		F <u>ACU</u>	
3. Daucus carata	15		UPL	¹ Indicators of hydric soil and wetland hydrology must
4. Rubus allegheniensis	15			be present, unless disturbed or problematic.
	5		FACU	Definitions of Four Vegetation Strata:
5. Trifolium pratense			F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Microstegium vimineum	15		F <u>AC</u>	more in diameter at breast height (DBH), regardless of
7. Juncus effusus	5		F <u>ACW</u>	height.
8. Scirpus atrovirens	5		<u>OBL</u>	Sapling/Shrub – Woody plants, excluding vines, less
9. Dichanthelium clandestinum	5		F <u>AC</u>	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
	90	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		total cover		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1.				neight.
2.	-			
		-		
3		-		
		-		Hydrophytic
5	0			Vegetation Present? Yes No ✓
50% -{\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot		= Total Cov	_	103 No
50% of total cover:0		total cover	0	
Remarks: (Include photo numbers here or on a separate si	heet.)			

Sampling Point: W-vv8, vv9, vv10, vv11-UPL

Profile Desc	ription: (Describe t	to the dept	h needed to docum	ent the i	indicator	or confirn	n the absence	of indicators.)	
Depth	Matrix		Redox	(Feature					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Re	emarks
0-6	10yr 4/2	100			-		GrSiL		
6-12	7.5 yr 4/3	95	7.5yr 5/6	5	С	М	GrCL		
						· 	-		-
					-	· 			
								-	
									
¹ Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	=Masked	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=	=Matrix.
Hydric Soil	Indicators:						Indica	ators for Problen	natic Hydric Soils ³ :
Histosol			Dark Surface					cm Muck (A10) (I	MLRA 147)
	oipedon (A2)		Polyvalue Bel				. 148) C	Coast Prairie Redo	
	stic (A3)		Thin Dark Sui			147, 148)		(MLRA 147, 148	
	en Sulfide (A4)		Loamy Gleye		(F2)		P	Piedmont Floodpla	
	d Layers (A5)		Depleted Mat		-0)			(MLRA 136, 147	
	ick (A10) (LRR N) d Below Dark Surface	Δ (Δ11)	Redox Dark S Depleted Dark					/ery Shallow Dark Other (Explain in R	
	ark Surface (A12)	5 (A11)	Redox Depre					oner (Explain in K	emarks)
	Mucky Mineral (S1) (L	.RR N.	Iron-Mangane			LRR N.			
	A 147, 148)	,	MLRA 136		(, (,			
	Gleyed Matrix (S4)		Umbric Surfac	-	(MLRA 13	86, 122)	³ Ind	licators of hydroph	nytic vegetation and
Sandy F	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	18) we	etland hydrology m	nust be present,
Stripped	l Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) un	less disturbed or p	oroblematic.
Restrictive	Layer (if observed):								
Type:									
Depth (in	ches):						Hydric Soil	Present? Yes	No <u> </u>
Remarks:							- 11		

	Mountain	Valley Pipeline	COORDINATES: Lat. 38.904074			Lon.	-80.563709
PTION:					W-CD17, Timber Mat Crossing		
creage}, unaltered	or impairments)						
8/10/	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetl	and Indicators						
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0335	Emergent					
							n
					Sustainable Determination Made on Advanced Mitigation (Y or N)		Υ
	0.0335						
	Init Scores						
assification					ILF Costs		
					\$2,040,00		
		The state of the s			\$2,010.00		
		· ·	-				
	PART I - Wetl Impact Wetland Classification Emergent	PTION: creage}, unaltered or impairments) 8/10/2015 PART I - Wetland Indicators Impact Wetland Classification Emergent 0.0335 0.0335 PART II - Unit Scores	8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland Classification Emergent 0.0335 Emergent 0.0335 PART II - Unit Scores	PTION: Creage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact	PTION: creage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0335 Emergent Impact Wetland Classification Emergent 0.0335 Emergent O.0335 PART II - Unit Scores assification Replacement Unit(s) 0.0335 0 0	PTION: creage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0335 Emergent PART II - Unit Scores 10,0335 PART II - Unit Scores 10,0335 PART II - Unit Scores 10,0335 10,0335 10,0335 10,000 10,	PTION: creage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact (acreage) Wetland Classification Emergent 0.0335 Emergent Emergent 0.0335 Emergent O.0335 Emergent O.0335 Emergent Emergent 0.0335 Estimated on Advanced Mitigation (Y or N) PART II - Unit Scores 10 0.0335 Estimated (ILF Costs) 11 0.0335 Estimated (ILF Costs) 12 0.0335 Estimated (ILF Costs) 13 0.0335 Estimated (ILF Costs) 14 0.0335 Estimated (ILF Costs) 15 0.0335 Estimated (ILF Costs) 16 0 Estimated (ILF Costs)

Project/Site: MVP	City/0	County: Lewis	Sampling Date: 06/09/2016			
Applicant/Owner: MVP			Sampling Point: W-CD17			
Investigator(s): HBS, CV	Sect	<u> </u>				
		elief (concave, convex, none): Concav	re Slope (%): 0-3			
		Long: -80.563696				
		NWI clas				
		Yes No (If no, explain				
		rbed? Are "Normal Circumstance	es" present? Yes No			
Are Vegetation, Soil, or	Hydrology naturally problem	natic? (If needed, explain any an	swers in Remarks.)			
SUMMARY OF FINDINGS – A	Attach site map showing sar	mpling point locations, transe	cts, important features, etc.			
Hydrophytic Vegetation Present?	Yes No					
Hydric Soil Present?	Yes V No	Is the Sampled Area within a Wetland? Yes	✓ No			
Wetland Hydrology Present?	Yes No	within a wettand:	NO			
Remarks: Cowardin Code: Pt	EM HGM: Riverine	Water Type: RPWWD				
Abuts S-CD16 in an exc		Trate. Type. Til VVVD				
Abuts 3-CD to in an exc	avated Toadside ditch.					
HYDROLOGY						
Wetland Hydrology Indicators:			dicators (minimum of two required)			
Primary Indicators (minimum of one is			Surface Soil Cracks (B6)			
Surface Water (A1)	True Aquatic Plants		Vegetated Concave Surface (B8)			
High Water Table (A2)	Hydrogen Sulfide Oo		Patterns (B10)			
Saturation (A3)			m Lines (B16)			
Water Marks (B1) Sediment Deposits (B2)	Presence of Reduce Recent Iron Reducti		Dry-Season Water Table (C2)			
Sediment Deposits (B2) Drift Deposits (B3)	Thin Muck Surface (Crayfish Burrows (C8)			
Algal Mat or Crust (B4)	Other (Explain in Re		Saturation Visible on Aerial Imagery (C9)Stunted or Stressed Plants (D1)			
Iron Deposits (B5)	<u> </u>	_	Geomorphic Position (D2)			
Inundation Visible on Aerial Imag	ery (B7)		Shallow Aquitard (D3)			
Water-Stained Leaves (B9)	, ,		Microtopographic Relief (D4)			
Aquatic Fauna (B13)		FAC-Neu	tral Test (D5)			
Field Observations:						
Surface Water Present? Yes _	✓ No Depth (inches):	1				
Water Table Present? Yes _	✓ No Depth (inches):	5				
Saturation Present? Yes _	✓ No Depth (inches):	0 Wetland Hydrology Pre	sent? Yes <u> </u>			
(includes capillary fringe) Describe Recorded Data (stream gau	ige monitoring well aerial photos pr	evious inspections) if available:				
Besonse Recorded Bata (Stream gad	ge, monitoring well, dendi priotos, pr	evicus inspections), il available.				
Remarks:						

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Sapling/Shrub Stratum (Plot size: 30' / % 50% of total cover: 0 Sapling/Shrub Stratum (Plot size: 15')	0 = 20% of t	= Total Cov total cover:	er	Prevalence Index worksheet:	4 (A) 4 (B) 100% (A/I	
50% of total cover: 0 Sapling/Shrub Stratum (Plot size: 15')	0 = 20% of f	= Total Cov total cover:	 er	Species Across All Strata: Percent of Dominant Species That Are OBL, FACW, or FAC: Prevalence Index worksheet:	1000/	
50% of total cover: 0 Sapling/Shrub Stratum (Plot size: 15')	0 = 20% of t	= Total Cov total cover:		That Are OBL, FACW, or FAC: Prevalence Index worksheet:	100% (A/I	
50% of total cover: 0 Sapling/Shrub Stratum (Plot size: 15')	0 = 20% of t	Total Cov total cover:		Total % Cover of: Mul		
50% of total cover: 0 Sapling/Shrub Stratum (Plot size: 15')	20% of t	total cover:				
Sapling/Shrub Stratum (Plot size: 15')	20% of t	total cover:			Itiply by:	
Sapling/Shrub Stratum (Plot size: 15')				OBL species x 1 =		
				FACW species x 2 =		
·				FAC species x 3 =		
				FACU species x 4 =		
				UPL species x 5 = _		
				Column Totals: (A)		
L.				Column rotale: (v) _	(2	
				Prevalence Index = B/A =		
				Hydrophytic Vegetation Indicators:		
· <u> </u>				1 - Rapid Test for Hydrophytic Ve	getation	
·				✓ 2 - Dominance Test is >50%		
·				3 - Prevalence Index is ≤3.0 ¹		
		= Total Cov	_	4 - Morphological Adaptations ¹ (P	rovide supporti	
50% of total cover: 0	20% of 1	total cover:		data in Remarks or on a separ		
icib dilatam (i lot size.	05			Problematic Hydrophytic Vegetati		
Acorus calamus	25		OBL		(=//p/a)	
Poa trivialis	15		FACW_	¹ Indicators of hydric soil and wetland h	nydrology must	
Onoclea sensibilis	15		FACW_	 be present, unless disturbed or problematic. 		
Equisetum arvense	15		F <u>AC</u>	Definitions of Four Vegetation Strat	ta:	
Dichanthelium clandestinum	5		F <u>AC</u>			
Impatiens capensis	5		FACW_	Tree – Woody plants, excluding vines more in diameter at breast height (DB		
Carex lurida	3		OBL	height.	rij, regaraioss (
Carex vulpinoidea	3		OBL			
)				Sapling/Shrub – Woody plants, exclution than 3 in. DBH and greater than or eq		
0				m) tall.	dar to 0.20 ft (1	
1				Herb – All herbaceous (non-woody) pl	lanta ragardias	
	86 =	Total Cov	<u></u>	of size, and woody plants less than 3.2		
50% of total cover: 43		total cover:				
Voody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greate height.	r than 3.28 ft in	
·				neight.		
-						
 J.						
·				Hydrophytic		
j	0	T-1-1-0		Vegetation Present? Yes ✓ No)	
50% of total cover: 0		Total Cov total cover:	_			
50% of total cover:U Remarks: (Include photo numbers here or on a separate shee		total cover.				

Depth	ription: (Describe t	to the depth	needed to document the indicator o Redox Features	r confirm the a	bsence of indicate	ors.)	
(inches)	Color (moist)	%	Color (moist) % Type ¹	Loc ² Tex	cture	Remarks	
0-2	10YR 3/1	100		M	uck		
2 - 14	10YR 3/2	100			SiL		
					·		
					· ·		
							
1Type: C-C	anaontration D-Dani	otion DM_D	aduced Matrix, MS-Masked Sand Cra	2l 000	ation: PL=Pore Lini	na M-Motriy	
Hydric Soil I		elion, Rivi=Re	educed Matrix, MS=Masked Sand Grai	ins. Loca	Indicators for P		ric Soils ³ :
Histosol			Dark Surface (S7)			A10) (MLRA 14	
	pipedon (A2)		Polyvalue Below Surface (S8) (MI	_RA 147, 148)		Redox (A16)	• ,
Black Hi			Thin Dark Surface (S9) (MLRA 14		(MLRA 14		
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)			oodplain Soils (l	F19)
	Layers (A5)		Depleted Matrix (F3)		(MLRA 13		
	ick (A10) (LRR N) d Below Dark Surface	. (111)	Redox Dark Surface (F6)			Dark Surface in in Remarks)	(TF12)
	ark Surface (A12)	# (ATT)	Depleted Dark Surface (F7)Redox Depressions (F8)		Other (Expla	iii iii Remarks)	
	lucky Mineral (S1) (L	.RR N,	Iron-Manganese Masses (F12) (L	RR N,			
	A 147, 148)		MLRA 136)				
	leyed Matrix (S4)		Umbric Surface (F13) (MLRA 136		³ Indicators of h		
	edox (S5)		Piedmont Floodplain Soils (F19) (logy must be pr	
	Matrix (S6)		Red Parent Material (F21) (MLRA	127, 147)	unless disturb	ed or problema	tic.
	_ayer (if observed):						
Type:	-1>		_		-!- 0-!! D10	V V	NI.
	ches):		_	нуа	ric Soil Present?	Yes	No
Remarks:							



Photograph Direction South

Comments:	

Project/Site: MVP				c	City/County: Lewis	i		Sampling Dat	e: 06/09/2016		
Applicant/Owner: MVP									o _{int:} W-CD16/17-UP		
Investigator(s): HBS, CV				S	Section, Township, F	Range: N/					
Landform (hillslope, terrace, e	etc.): Hills	lope			al relief (concave, co				Slope (%): 3-5		
Subregion (LRR or MLRA): _	_RRN		Lat: 38.	903786	L	ona: -80	.563538	Da	tum: NAD 83		
Soil Map Unit Name: Vandal											
Are climatic / hydrologic cond											
Are Vegetation, Soil _									✓ No		
Are Vegetation, Soil _											
SUMMARY OF FINDIN		-					explain any answe		•		
SOMINART OF FINDIN	103 – At	iacii Sii	е шар	Silowing		liocatio	nis, transects	s, important	reatures, etc.		
Hydrophytic Vegetation Pres	sent?		No Is the Sampled Area			ed Area					
Hydric Soil Present?			N		within a Wet		Yes	No	, 		
Wetland Hydrology Present	<u> </u>	Yes	N	o <u> </u>							
Remarks: Cowardin C	Code: UP	LAND	HG	M:	Wate	r Type:					
HYDROLOGY											
Wetland Hydrology Indica	tors:						Secondary Indica	ators (minimum	of two required)		
Primary Indicators (minimun	n of one is i	required; c	heck all t	hat apply)			Surface Soil	Cracks (B6)			
Surface Water (A1) True Aq					ants (B14)		Sparsely Ve	parsely Vegetated Concave Surface (B8)			
High Water Table (A2)			-	rogen Sulfide			Drainage Patterns (B10)				
Saturation (A3)					pheres on Living Ro	oots (C3)	· · · ·				
Water Marks (B1)					duced Iron (C4)	(00)	Dry-Season Water Table (C2)				
Sediment Deposits (B2) Drift Deposits (B3)	i.			ent Iron Red Muck Surfa	luction in Tilled Soils	s (C6)	Crayfish Burrows (C8)Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)				er (Explain in			Saturation visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)				
Iron Deposits (B5)			•	. (=Apia	······································			Position (D2)	(= .)		
Inundation Visible on A	erial Image	ry (B7)					Shallow Aqu	, ,			
Water-Stained Leaves (B9)						Microtopogr	aphic Relief (D4	1)		
Aquatic Fauna (B13)							FAC-Neutra	l Test (D5)			
Field Observations:			,								
Surface Water Present?				oth (inches):							
Water Table Present?				oth (inches):							
Saturation Present? (includes capillary fringe)	Yes	No	Dep	oth (inches):	\ \	Netland H	lydrology Prese	nt? Yes	No		
Describe Recorded Data (st	ream gaug	e, monitor	ng well, a	aerial photos	s, previous inspectio	ns), if ava	ilable:				
Remarks:											

Sampling	Point:	W-CD16	6/17-UP
Jannonnu	I OIIIL.		

30'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size:30')	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC:1 (A)
2				Total Number of Dominant
3				Species Across All Strata: 3 (B)
4				
5				Percent of Dominant Species That Are OBL FACW or FAC: 33% (A/B)
				That Are OBL, FACW, or FAC: 33% (A/B)
6	-			Prevalence Index worksheet:
7	0			Total % Cover of: Multiply by:
500% of total account		= Total Cov		OBL species x 1 =
50% of total cover: 0 Sanling/Shrub Stratum (Plot size: 15')	20% of	total cover	0	FACW species x 2 =
<u>Japinig/Ornab Otratum</u> (1 lot 3126)				
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				5 1 1 50
6				Prevalence Index = B/A =
7				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9	^			3 - Prevalence Index is ≤3.0 ¹
0		= Total Cov	_	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	total cover	0	data in Remarks or on a separate sheet)
Tiero Stratum (Fiot Size)	5 0			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Bromus inermis	50		<u>UPL</u>	1 Toblematio Trydrophytio Vegetation (Explain)
2. Carex frankii	10		OBL	11. Parton of house and and house a sure
3. Trifolium repens	10		FACU_	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Solidago gigantea	5		FACW	Definitions of Four Vegetation Strata:
5. Apocynum cannabinum	5		FACU	Definitions of Four Vegetation Strata.
6. Trifolium campestre	5		UPL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Dactylis glomerata	5		FACU	more in diameter at breast height (DBH), regardless of
			1 700	height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45	20% of	total cover	18	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1	-			_
2				
3				
4				
5.				Hydrophytic
J	0	T-1-1-0		Vegetation Present? Yes No ✓
50% of total cover: 0		= Total Cover total cover	_	
		total cover		
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth	Matrix		Redo	x Features	3					
	or (moist)	%	Color (moist)	%	Type ¹	Loc ²	Textur		Remarks	
0-3 10	OYR 3/3	100					GrSi	<u>L</u>		
	_									
								<u> </u>		
										
	<u>.</u>									
								<u> </u>		
1- 0.0							21			
¹ Type: C=Concentra		etion, RM=Re	educed Matrix, MS	S=Masked	Sand Gra	iins.		n: PL=Pore Lini		
Hydric Soil Indicate	ors:						II	ndicators for Pi		-
Histosol (A1)	(4.0)		Dark Surface		(00) (11		_		A10) (MLRA	•
Histic Epipedon	. ,		Polyvalue Be				148) _	Coast Prairie	•)
Black Histic (A3			Thin Dark Su			47, 148)		(MLRA 14		· (E10)
Hydrogen Sulfice Stratified Layers			Loamy Gleye Depleted Material		-2)		_	Piedmont Flo (MLRA 13		S (F 19)
2 cm Muck (A10			Redox Dark \$		6)			•	v Dark Surfac	۵ (TF12)
Depleted Below		(A11)	Depleted Dar				_		in in Remarks	, ,
Thick Dark Surf		(,,,,	Redox Depre				_			-,
Sandy Mucky M		RR N,	Iron-Mangan			RR N,				
MLRA 147, 1			MLRA 13							
Sandy Gleyed N	Matrix (S4)		Umbric Surfa	ce (F13) (I	MLRA 13	6, 122)		³ Indicators of h	ydrophytic ve	getation and
Sandy Redox (S	85)		Piedmont Flo	odplain So	oils (F19)	(MLRA 14	8)	wetland hydro	logy must be	present,
Stripped Matrix			Red Parent N	Naterial (F2	21) (MLR	A 127, 147	')	unless disturb	ed or problen	natic.
Restrictive Layer (i	f observed):									
_{Type:} Gravel			_							
Depth (inches):	3		_				Hydric	Soil Present?	Yes	No <u> </u>
Remarks:							1			

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	38.903722	Lon.	-80.563418
STREAM/SITE ID AND SITE DESCRIPTION:			W-CD16, Temporary Access Road/ATWS					
(% stream slope, watershed size {acreage}, unaltered or impairments)								
FORM OF MITIGATION:	FORM OF MITIGATION:							
DATE:	8/10/2015		WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-CD16 TEMP AR/ATWS	Emergent	0.0023	Emergent					
					ĺ	PART III - Advanced I		n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0023			,			
PART II - Unit Scores						Estimated		
			Replacement Unit(s)			ILF Costs		
Total Emergent Table Counts Charles		0.0023	-		\$138.00			
			0	-	ļ	\$136.00		
Total Open Water 0				-				
otal Open water			U	1				

	Mountain Valley Pipeline				38.903722	Lon.	-80.563418
RIPTION:			W-CD16, Pipeline ROW				
creage}, unaltered	or impairments)						
8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetl	and Indicators						
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0226	Emergent					
							n
					Sustainable Determination Made or Advanced Mitigation (Y or N)		Y
	0.0226						
	Jnit Scores						
lassification					ILF Costs		
					¢4 256 00		
					\$1,356.00		
	PART I - Wetl Impact Wetland Classification Emergent	RPTION: Roreage	IPTION: Icreage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0226 Emergent 0.0226 PART II - Unit Scores	BIPTION: Icreage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts Wetland (acreage) Wetland Classification Emergent 0.0226 Emergent 0.0226 PART II - Unit Scores Jassification Replacement Unit(s) 0.0226 0 0	### PART II - Unit Scores PART II - Unit Scores Part II - Unit Scores	BPTION: Creage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts Wetland Classification Emergent 0.0226 Emergent 0.0226 PART III - Advanced Sustainable Determination Made on Advanced Mitigation (Y or N) Estimated assification Replacement Unit(s) 0.0226 0 \$1,356.00	BPTION: Creage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts (acreage) Wetland Classification Emergent 0.0226 Emergent DAVAINGE Mitigation (Y or N) PART II - Unit Scores Bassification Replacement Unit(s) 0.0226 0 0 \$1,356.00

Project/Site: MVP	City/County: Lew	is	Sampling Date: 06/09/2016
Applicant/Owner: MVP		State: WV	
Investigator(s): HBS, CV	Section, Township		
Landform (hillslope, terrace, etc.): Hillslope			Slope (%): 5-8
Subregion (LRR or MLRA): LRRN L			
Soil Map Unit Name: Vandalia silt loam, 25 to 35		NWI classifica	
Are climatic / hydrologic conditions on the site typica	I for this time of year? Yes	No (If no, explain in Re	marks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances" pr	esent? Yes No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answers	s in Remarks.)
SUMMARY OF FINDINGS – Attach site			
Hadaratai Vandalia Barrata	, N.		-
Hydrophytic Vegetation Present? Yes	No Is the Sam		
Wetland Hydrology Present?	No within a W	etland? Yes	_ No
Remarks: Cowardin Code: PEM	HGM: Slope Wa	ter Type: RPWWN	
Adjacent to S-VV12 & S-VV13. Dis	•	• •	oils. Low drainage
collection point at the intersection of two		mpaotoa ama alotarboa o	ono. Low dramago
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indicate	ors (minimum of two required)
Primary Indicators (minimum of one is required; ch	eck all that apply)	Surface Soil C	
Surface Water (A1)	True Aquatic Plants (B14)		etated Concave Surface (B8)
	Hydrogen Sulfide Odor (C1)	Drainage Patt	
Saturation (A3)	Oxidized Rhizospheres on Living	Roots (C3) Moss Trim Lin	es (B16)
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season W	/ater Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tilled So		
	Thin Muck Surface (C7)	Saturation Vis	ible on Aerial Imagery (C9)
	Other (Explain in Remarks)	4	essed Plants (D1)
Iron Deposits (B5)		Geomorphic P	` '
Inundation Visible on Aerial Imagery (B7)		<u>✓</u> Shallow Aquita	
Water-Stained Leaves (B9)			ohic Relief (D4)
Aquatic Fauna (B13)		<u>✓</u> FAC-Neutral T	est (D5)
Field Observations: Surface Water Present? Yes No	Depth (inches):		
	Depth (inches):		
	Depth (inches):	Wetland Hydrology Present	? Yes 🗸 No
(includes capillary fringe)		,	: res NO
Describe Recorded Data (stream gauge, monitoring	g well, aerial photos, previous inspec	tions), if available:	
Remarks:			

VI

ee Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species
				That Are OBL, FACW, or FAC:1 (A)
			-	(1)
	_			Total Number of Dominant Species Across All Strata: 2 (B)
			· ——	Species Across All Strata: 2 (B)
				Percent of Dominant Species
				That Are OBL, FACW, or FAC: 60 (A/B
				Prevalence Index worksheet:
	0		· ——	Total % Cover of: Multiply by:
50% of total cover: 0		= Total Cov f total cover	_	OBL species 45 x 1 = 45
1 <i>E</i> !	20% 01	total cover		FACW species5 x 2 =10
apling/Shrub Stratum (Plot size: 15)				FAC species 10 x 3 = 30
				FACU species $5 \times 4 = 20$
			· ——	UPL species 20 x 5 = 100
	-			Column Totals: 85 (A) 205 (B)
				Column rotals (A) (B)
	. .			Prevalence Index = B/A =2.41
	. .			Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
				2 - Dominance Test is >50%
				✓ 3 - Prevalence Index is ≤3.0 ¹
_		= Total Cov	_	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:0	20% of	total cover	:0	data in Remarks or on a separate sheet)
erb Stratum (Plot size: 5')	40			Problematic Hydrophytic Vegetation ¹ (Explain)
Carex frankii	40		OBL	1 Toblematic Trydrophytic Vegetation (Explain)
Bromus inermis	15		<u>UPL</u>	¹ Indicators of hydric soil and wetland hydrology must
Juncus tenuis	10		FAC	be present, unless disturbed or problematic.
Trifolium campestre	5		<u>UPL</u>	Definitions of Four Vegetation Strata:
Trifolium pratense	5		FACU_	
Carex vulpinoidea	5		OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
Scirpus atrovirens	5		FACW_	height.
	_			October 10 to 10 t
				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
ı <u>. </u>				m) tall.
				Herb – All herbaceous (non-woody) plants, regardless
	85	= Total Cov	/er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 42				W 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
oody Vine Stratum (Plot size:15')				Woody vine – All woody vines greater than 3.28 ft in height.
				Tolgin.
	_			Hydrophytic Vegetation
	0	= Total Cov	/er	Present? Yes V No No
50% of total cover: 0		f total cover	_	
emarks: (Include photo numbers here or on a separate			-	

Profile Desc	ription: (Describe t	o the deptl	h needed to docun	nent the i	ndicator	or confirm	the absence	of indicate	ors.)	
Depth	Matrix		Redox	K Features	S					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	3
0-3	7.5YR 4/3	100					SiL			
3-6	5YR 4/3	83	7.5YR 4/6	2_	С	PL	GrSiL			
	5YR 5/1	<u>15</u>					SiL_			
					-					
										_
			_							
1			Dadisa d Matria MC				21 11	Daniel Lin	NA . NA . ()	
Hydric Soil I	oncentration, D=Depl	etion, RM=I	Reduced Matrix, MS	s=Masked	Sand Gr	ains.	² Location: Pl			x. Hydric Soils ³ :
-			Douls Confood	(07)						-
Histosol	pipedon (A2)		Dark Surface Polyvalue Be		ca (S8) (N	II RA 1 <i>4</i> 7			A10) (MLRA e Redox (A16	-
Black Hi			Thin Dark Su		. , .		0	(MLRA 14		5)
	n Sulfide (A4)		Loamy Gleye			47, 140)	Р		oodplain Soil	s (F19)
	Layers (A5)		Depleted Mat		,			(MLRA 13		(* 15)
	ck (A10) (LRR N)		Redox Dark S		·6)		v		v Dark Surfa	ce (TF12)
Depleted	l Below Dark Surface	(A11)	Depleted Dar	k Surface	(F7)		<u>~</u> 0	ther (Expla	in in Remark	(s)
	ark Surface (A12)		Redox Depre							
	lucky Mineral (S1) (L	RR N,	Iron-Mangane		es (F12) (LRR N,				
	147, 148)		MLRA 136	-			3			
	leyed Matrix (S4)		Umbric Surfa							egetation and
	edox (S5) Matrix (S6)		Piedmont Flo Red Parent M					-	ology must be	-
	-ayer (if observed):		Red Falelit iv	ialeriai (F	21) (WLK	A 121, 141) uni	ess distuit	ed or proble	matic.
Type: Gr										
Depth (inc							Hydric Soil	Drocont?	Yes 🗸	No
	cries). <u> </u>						nyunc 3011	rieseiit?	Tes	
Remarks:	c soils due to dis	turhance	from dirt road d	evelonn	nent Sc	nile are d	isturhed and	hiahly a	romnacted	I from road
				-					-	
	nt. It is likely that			-	or riyo	inc son a	evelopmeni	. nowev	er, nyarop	riyuc
vegetation	is dominant and	wetiand r	nyarology is pre	sent.						



Photograph Direction NE

Comments:		

Project/Site: MVP			City/County: Lewis Sampling Date: 06/09/						e: 06/09/2016			
Applicant/Owner: MVP							Sampling Point: W-CD16/17					
Investigator(s): HBS, CV				S	Section, Township, F	Range: N/						
	.andform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex								Slope (%): 3-5			
Subregion (LRR or MLRA): LRRN Lat: 38.903786 Long: -							.563538	Da	tum: NAD 83			
Soil Map Unit Name: Vandalia silt Ioam, 25 to 35 percent slopes												
Are climatic / hydrologic cond												
Are Vegetation, Soil _									✓ No			
Are Vegetation, Soil _												
SUMMARY OF FINDIN		-					explain any answe		•			
SOMINART OF FINDIN	103 – At	iacii Sii	е шар	Silowing		liocatio	nis, transects	s, important	reatures, etc.			
Hydrophytic Vegetation Pres	Hydrophytic Vegetation Present? Yes				Is the Sampl	ed Area						
Hydric Soil Present?				No within a Wetland?			Yes	No	, 			
Wetland Hydrology Present	<u> </u>	Yes	N	o <u> </u>								
Remarks: Cowardin C	Code: UP	LAND	HG	M:	Wate	r Type:						
HYDROLOGY												
Wetland Hydrology Indica	tors:						Secondary Indica	ators (minimum	of two required)			
Primary Indicators (minimun	n of one is i	required; c	heck all t	hat apply)			Surface Soil Cracks (B6)					
Surface Water (A1)				Aquatic Pla			Sparsely Vegetated Concave Surface (B8)					
High Water Table (A2)			-	rogen Sulfide			Drainage Patterns (B10)					
Saturation (A3)					pheres on Living Ro	oots (C3)	Moss Trim L					
Water Marks (B1)					duced Iron (C4)	(00)		Water Table (C	;2)			
Sediment Deposits (B2) Drift Deposits (B3)	·			ent Iron Red Muck Surfa	luction in Tilled Soils	s (C6)	Crayfish Bu	rrows (C8) /isible on Aerial	Imagany (CQ)			
Algal Mat or Crust (B4)				er (Explain in				Stressed Plants				
Iron Deposits (B5)			•	. (=Apia	······································			Position (D2)	(= .)			
Inundation Visible on A	erial Image	ry (B7)					Shallow Aqu	, ,				
Water-Stained Leaves (B9)						Microtopogr	aphic Relief (D4	1)			
Aquatic Fauna (B13)							FAC-Neutra	l Test (D5)				
Field Observations:			,									
Surface Water Present?				oth (inches):								
Water Table Present?				oth (inches):								
Saturation Present? (includes capillary fringe)	Yes	No	Dep	oth (inches):	\ \	Netland H	lydrology Prese	nt? Yes	No			
Describe Recorded Data (st	ream gaug	e, monitor	ng well, a	aerial photos	s, previous inspectio	ns), if ava	ilable:					
Remarks:												

Sampling	Point:	W-CD1	6/17-UP
Jannonnu	I OIIIL.		· · · · ·

30'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size:30')	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC:1 (A)
2				Total Number of Deminent
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				(2)
		-		Percent of Dominant Species That Are OBL FACW or FAC: 33% (A/B)
5				That Are OBL, FACW, or FAC: 33% (A/B)
6		-		Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co		OBL species x 1 =
50% of total cover: 0	20% of	total cover	:0	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5		-		
		-		Prevalence Index = B/A =
6		-		Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
_		= Total Co	_	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:0	20% of	total cover	:0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				
1. Bromus inermis	50		UPL	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Carex frankii	10	✓	OBL	
3. Trifolium repens	10	~	FACU	¹Indicators of hydric soil and wetland hydrology must
4. Solidago gigantea	5		FACW	be present, unless disturbed or problematic.
5. Apocynum cannabinum	5	-	FACU	Definitions of Four Vegetation Strata:
6. Trifolium campestre	5		UPL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Dactylis glomerata	5			more in diameter at breast height (DBH), regardless of
· · · · · · · · · · · · · · · · · · ·			FACU_	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
	90	= Total Co	/er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		total cover		W 1 2 4 4 4 4 6 6 6 6 7
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1				noight.
2				
		-		
3		-		
4				Hydrophytic
5				Vegetation
0		= Total Co	_	Present? Yes No
50% of total cover: 0	20% of	total cover	:0	
Remarks: (Include photo numbers here or on a separate s	heet.)			
				l l

Profile Desc	ription: (Describe t	o the depth	needed to docur	nent the ir	ndicator	or confirm	the abse	ence of indicate	ors.)	
Depth	Matrix		Redo	x Features	3					
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-3	10YR 3/3	100					GrSi	<u>L </u>		
							-			
							-			
										_
1- 0.0				 .			21			-
	oncentration, D=Deple	etion, RM=Re	educed Matrix, MS	S=Masked	Sand Gra	iins.		n: PL=Pore Lini		
Hydric Soil							ın	ndicators for Pi		-
Histosol	, ,	,	Dark Surface		(00) (1)				A10) (MLRA	•
	oipedon (A2)		Polyvalue Be				148) _	_ Coast Prairie)
Black Hi	stic (A3) n Sulfide (A4)	•	Thin Dark Su			47, 148)		(MLRA 14 Piedmont Flo		· (F10)
	d Layers (A5)	•	Loamy Gleye Depleted Ma		-2)		_	Pledillont Fit		(F19)
	ick (A10) (LRR N)		Redox Dark \$		6)			•	/ Dark Surfac	e (TF12)
	d Below Dark Surface	(A11)	Depleted Dar				_		in in Remarks	, ,
	ark Surface (A12)		Redox Depre				_			,
	lucky Mineral (S1) (L	RR N,	Iron-Mangan			RR N,				
	\ 147, 148)		MLRA 13							
Sandy G	Bleyed Matrix (S4)		Umbric Surfa	ce (F13) (I	MLRA 13	6, 122)		³ Indicators of h	ydrophytic ve	getation and
	ledox (S5)	,	Piedmont Flo					wetland hydro	logy must be	present,
	Matrix (S6)		Red Parent N	/laterial (F2	21) (MLR	A 127, 147	')	unless disturb	ed or problen	natic.
	_ayer (if observed):									
Type: Gr			_							
Depth (inc	ches): <u>3</u>		_				Hydric	Soil Present?	Yes	No
Remarks:										

USACE FILE NO./Project Name:		Mountain Valley Pipeline			Lat.	38.903514	Lon.	-80.563258
STREAM/SITE ID AND SITE DESCR	RIPTION:			W-VV8, 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-VV8	Emergent	0.0708	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0708						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0708	_		¢4.040.00		
Total Scrub-Shrub			0	-		\$4,248.00		
Total Coan Water			0	-				
Total Open Water			U	1				

Project/Site: MVP	City/County: Lewis Sampling Date: 12/10/2015				
Applicant/Owner: MVP	State: WV Sampling Point: W-VV8				
Investigator(s): Jason McGuirk, Kevin Pulver Section, Township, Range: NA					
	Local relief (concave, convex, none): Concave Slope (%): 1-2				
Subregion (LRR or MLRA): LRRN Lat: 38.903	519 Long: -80.563147 Datum: NAD 83				
Soil Map Unit Name: Vandalia silt loam, 25 to 35 percent slope	es NWI classification: None				
Are climatic / hydrologic conditions on the site typical for this time					
	cantly disturbed? Are "Normal Circumstances" present? Yes No				
Are Vegetation, Soil, or Hydrology natura SUMMARY OF FINDINGS – Attach site map show	Ily problematic? (If needed, explain any answers in Remarks.) wing sampling point locations, transects, important features, etc.				
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No	is the bampied Area				
Wetland Hydrology Present? Yes No No	Within a Wetland: Tes NO				
Remarks:					
Cowardin Code: PEM					
HGM: Riverine					
WT: RPWWD					
HYDROLOGY					
Wetland Hydrology Indicators:	Secondary Indicators (minimum of two required)				
Primary Indicators (minimum of one is required; check all that a					
	atic Plants (B14) Sparsely Vegetated Concave Surface (B8) Sulfide Odor (C1) Drainage Patterns (B10)				
1 — • • • • • • • • • • • • • • • • • •	Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)				
	of Reduced Iron (C4) Dry-Season Water Table (C2)				
<u> </u>	on Reduction in Tilled Soils (C6) Crayfish Burrows (C8)				
	k Surface (C7) Saturation Visible on Aerial Imagery (C9)				
	plain 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 (in					
Water Table Present? Yes No Depth (in					
Saturation Present? Yes No Depth (in (includes capillary fringe)	nches): 0 Wetland Hydrology Present? Yes V No				
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous inspections), if available:				
Remarks:					

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

Sampling	Point: W-VV8
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Troo Stratum (Plot cizo: 30'	Absolute	Dominant		Dominance Test worksheet:		
Tiee Stratum (Flot Size.		Species?		Number of Dominant Species	_	
1. Platanus occidentalis	10		<u>FACW</u>	That Are OBL, FACW, or FAC:	5	(A)
2. Prunus serotina	5		FACU_	Total Number of Dominant		
3				Species Across All Strata:	6	(B)
4						. ()
				Percent of Dominant Species	83	
5				That Are OBL, FACW, or FAC:	0.5	(A/B)
6				Prevalence Index worksheet:		
7				Total % Cover of:	Multiply by:	
		= Total Cov				
50% of total cover: 7.5	20% of	total cover:	3	OBL species x 1		
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2		
1. Lindera benzoin	20	✓	FAC	FAC species x 3	=	_
2. Acer negundo	5	~	FAC	FACU species x 4	=	_
			1 ///	UPL species x 5		
3				Column Totals: (A)		
4		-		Column Totals (A)		_ (b)
5				Prevalence Index = B/A =		
6				Hydrophytic Vegetation Indicate		_
7						
8				1 - Rapid Test for Hydrophytic	c vegetation	
				2 - Dominance Test is >50%		
9	0.5			3 - Prevalence Index is ≤3.0 ¹		
() 10.1		= Total Cov		4 - Morphological Adaptations	s1 (Provide sup	porting
50% of total cover: 12.	20% of	total cover	5	data in Remarks or on a se	eparate sheet))
Herb Stratum (Plot size: 5')				Problematic Hydrophytic Vege	•	
1. Dichanthelium clandestinum	45		FAC	Froblematic Hydrophytic vego	etation (Expia	uii <i>i)</i>
2. Microstegium vimineum	35	✓	F <u>AC</u>			
3. Scirpus atrovirens	10		OBL	¹ Indicators of hydric soil and wetla		must
4. Boehmeria cylindrica	5		FACW	be present, unless disturbed or pre-		
5. Onoclea sensibilis		-	FACW	Definitions of Four Vegetation S	Strata:	
<u> </u>			IACW	Tree – Woody plants, excluding vi	ines. 3 in. (7.6	cm) or
6				more in diameter at breast height		
7				height.		
8				Sapling/Shrub – Woody plants, e	voludina vino	logo
9				than 3 in. DBH and greater than o		
10				m) tall.	. 04444. 10 0121	(.
11.				,		
11	100	T		Herb – All herbaceous (non-wood		ardless
500/ //	100	= Total Cov	er	of size, and woody plants less tha	n 3.28 it taii.	
50% of total cover: <u>50</u>	20% of	total cover:		Woody vine – All woody vines gre	eater than 3.28	8 ft in
Woody Vine Stratum (Plot size: 15')				height.		
1						
2						
3						
4		-				
			-	Hydrophytic		
5				Vegetation Present? Yes ✓	No	
•		= Total Cov	•	Present? Yes	NO	
50% of total cover:0	20% of	total cover:	0			
Remarks: (Include photo numbers here or on a separate s	sheet.)					

SOIL Sampling Point: W-VV8

Profile Desc	ription: (Describe t	o the depth	needed to docum	nent the	indicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redox	k Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-10	7.5yr 4/2	95	10yr 5/6	5	С	M/PL	CL	
10+			_					Disturbed - fill
			.					
	-							
	-			-		· ——		
	-							
	-			-		· ——		
					· -			
¹Type: C=Co	oncentration, D=Depl	etion RM=F	Reduced Matrix MS	=Masker	d Sand Gr	ains	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil I		<i>54.011, 14.11</i>	toddood matrix, me	-Maono	a cana ci	anio.		ators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(\$7)				cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Bel		re (S8) (I	/II RΔ 147		Coast Prairie Redox (A16)
Black His			Thin Dark Sui				, 0	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			147, 140)	Þ	riedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Mat		(1 2)		'	(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark S		- 6)		V	ery Shallow Dark Surface (TF12)
	Below Dark Surface	(A11)	Depleted Dark	•	•			Other (Explain in Remarks)
	ark Surface (A12)	(,	Redox Depre					(=)
	lucky Mineral (S1) (L	RR N.	Iron-Mangane			LRR N.		
	147, 148)	,	MLRA 136		, ,	,		
	leyed Matrix (S4)		Umbric Surfac	-	(MLRA 13	36. 122)	³ Ind	icators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo					etland hydrology must be present,
	Matrix (S6)		Red Parent M					less disturbed or problematic.
	ayer (if observed):				, ,	<u> </u>	Ì	·
Type:	,							
Depth (inc	shes).		_				Hydric Soil	Present? Yes V No No
			<u>——</u>				Tiyane oon	11636HC: 163 NO
Remarks:	ill material on old	road bos	I					
Disturbed i	III matemai on olu	roau bec	l					



Photograph Direction East

Comments:		

Project/Site: MVP		City/County: Lewis			Sampling Date: 12/10/2015		
Applicant/Owner: MVP				_ State: WV	Sampling Point: W-vv8, vv9, vv10, vv11-UP		
Investigator(s): Jason McGuirk, h	Cevin Pulver	Section					
Landform (hillslope, terrace, etc.): Va			· · · · · · · · · · · · · · · · · · ·		Slope (%): 1-2		
Subregion (LRR or MLRA): LRRN					Datum: NAD 83		
Soil Map Unit Name: Vandalia silt lo				NWI classific			
Are climatic / hydrologic conditions on							
· -		· ·					
Are Vegetation, Soil, o							
Are Vegetation, Soil, c			•	explain any answe			
SUMMARY OF FINDINGS –	Attach site m	ap snowing san	ipling point location	ons, transects	s, important features, etc.		
Hydrophytic Vegetation Present?	Yes		Is the Sampled Area				
Hydric Soil Present?	Yes		within a Wetland?	Yes	No <u> </u>		
Wetland Hydrology Present? Remarks:	Yes	_ No					
HYDROLOGY							
Wetland Hydrology Indicators:					ators (minimum of two required)		
Primary Indicators (minimum of one	-			Surface Soil			
Surface Water (A1)		True Aquatic Plants (getated Concave Surface (B8)		
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Pa			
Saturation (A3) Water Marks (B1)		Presence of Reduced	es on Living Roots (C3)		Water Table (C2)		
Sediment Deposits (B2)		Recent Iron Reduction					
Drift Deposits (B3)		Thin Muck Surface (C		Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)		Other (Explain in Rer			Stressed Plants (D1)		
Iron Deposits (B5)			,	✓ Geomorphic			
Inundation Visible on Aerial Ima	gery (B7)			Shallow Aqu	itard (D3)		
Water-Stained Leaves (B9)					aphic Relief (D4)		
Aquatic Fauna (B13)				FAC-Neutral	l Test (D5)		
Field Observations:							
Surface Water Present? Yes	No	Depth (inches):					
		Depth (inches):					
Saturation Present? Yes (includes capillary fringe)	No	Depth (inches):	Wetland	Hydrology Preser	nt? Yes No		
Describe Recorded Data (stream ga	uge, monitoring w	vell, aerial photos, pre	vious inspections), if ava	ailable:			
Remarks:							

Sampling	Point:	W-vv8,	vv9,	vv10,	vv11-L	JΡΙ
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	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?	Status	Number of Dominant Species
1	-			That Are OBL, FACW, or FAC:1 (A)
2				Total Newhord Dominant
3				Total Number of Dominant Species Across All Strata:5 (B)
4				
5				Percent of Dominant Species That Are OBL FACW or FAC: 20 (A/B)
6.		-		That Are OBL, FACW, or FAC: (A/B)
7.	-			Prevalence Index worksheet:
·	0	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 0				OBL species x 1 =
	20 /6 01	total cover		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15') 1. Prunus serotina	5	~	FACU	FAC species x 3 =
· ·			FACU	FACU species x 4 =
2				
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
9.				2 - Dominance Test is >50%
	5	= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: <u>2.5</u>		total cover		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Verbesina alternifolia	10		FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Phleum pratense	15		F <u>ACU</u>	
3. Daucus carata	15		UPL	¹ Indicators of hydric soil and wetland hydrology must
4. Rubus allegheniensis	15			be present, unless disturbed or problematic.
	5		FACU	Definitions of Four Vegetation Strata:
5. Trifolium pratense			F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Microstegium vimineum	15		F <u>AC</u>	more in diameter at breast height (DBH), regardless of
7. Juncus effusus	5		F <u>ACW</u>	height.
8. Scirpus atrovirens	5		<u>OBL</u>	Sapling/Shrub – Woody plants, excluding vines, less
9. Dichanthelium clandestinum	5		F <u>AC</u>	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
	90	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		total cover		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1.				neight.
2.	-			
		-		
3		-		
		-		Hydrophytic
5	0			Vegetation Present? Yes No ✓
50% -{\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot		= Total Cov	_	103 No
50% of total cover:0		total cover	0	
Remarks: (Include photo numbers here or on a separate si	heet.)			

Sampling Point: W-vv8, vv9, vv10, vv11-UPL

Profile Desc	ription: (Describe t	to the dept	h needed to docum	ent the i	indicator	or confirn	n the absence	of indicators.)	
Depth	Matrix		Redox	(Feature					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Re	emarks
0-6	10yr 4/2	100			-		GrSiL		
6-12	7.5 yr 4/3	95	7.5yr 5/6	5	С	М	GrCL		
							-		-
					-	· 			
								-	
									
¹ Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	=Masked	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=	=Matrix.
Hydric Soil	Indicators:						Indica	ators for Problen	natic Hydric Soils ³ :
Histosol			Dark Surface					cm Muck (A10) (I	MLRA 147)
	oipedon (A2)		Polyvalue Bel				. 148) C	Coast Prairie Redo	
	stic (A3)		Thin Dark Sui			147, 148)		(MLRA 147, 148	
	en Sulfide (A4)		Loamy Gleye		(F2)		P	Piedmont Floodpla	
	d Layers (A5)		Depleted Mat		-0)			(MLRA 136, 147	
	ick (A10) (LRR N) d Below Dark Surface	Δ (Δ11)	Redox Dark S Depleted Dark					/ery Shallow Dark Other (Explain in R	
	ark Surface (A12)	5 (A11)	Redox Depre					oner (Explain in K	emarks)
	Mucky Mineral (S1) (L	.RR N.	Iron-Mangane			LRR N.			
	A 147, 148)	,	MLRA 136		(, (,			
	Gleyed Matrix (S4)		Umbric Surfac	-	(MLRA 13	86, 122)	³ Ind	licators of hydroph	nytic vegetation and
Sandy F	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	18) we	etland hydrology m	nust be present,
Stripped	l Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) un	less disturbed or p	oroblematic.
Restrictive	Layer (if observed):								
Type:									
Depth (in	ches):						Hydric Soil	Present? Yes	No <u> </u>
Remarks:							- 11		

Project/Site: MVP		City/County: Lewis			Sampling Date: 12/10/2015		
Applicant/Owner: MVP				_ State: WV	Sampling Point: W-vv8, vv9, vv10, vv11-UP		
Investigator(s): Jason McGuirk, h	Cevin Pulver	Section					
Landform (hillslope, terrace, etc.): Va			· · · · · · · · · · · · · · · · · · ·		Slope (%): 1-2		
Subregion (LRR or MLRA): LRRN					Datum: NAD 83		
Soil Map Unit Name: Vandalia silt lo				NWI classific			
Are climatic / hydrologic conditions on							
· -		· ·					
Are Vegetation, Soil, o							
Are Vegetation, Soil, c			•	explain any answe			
SUMMARY OF FINDINGS –	Attach site m	ap snowing san	ipling point location	ons, transects	s, important features, etc.		
Hydrophytic Vegetation Present?	Yes		Is the Sampled Area				
Hydric Soil Present?	Yes		within a Wetland?	Yes	No <u> </u>		
Wetland Hydrology Present? Remarks:	Yes	_ No					
HYDROLOGY							
Wetland Hydrology Indicators:					ators (minimum of two required)		
Primary Indicators (minimum of one	-			Surface Soil			
Surface Water (A1)		True Aquatic Plants (getated Concave Surface (B8)		
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Pa			
Saturation (A3) Water Marks (B1)		Presence of Reduced	es on Living Roots (C3)		Water Table (C2)		
Sediment Deposits (B2)		Recent Iron Reduction					
Drift Deposits (B3)		Thin Muck Surface (C		Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)		Other (Explain in Rer			Stressed Plants (D1)		
Iron Deposits (B5)			,	✓ Geomorphic			
Inundation Visible on Aerial Ima	gery (B7)			Shallow Aqu	itard (D3)		
Water-Stained Leaves (B9)					aphic Relief (D4)		
Aquatic Fauna (B13)				FAC-Neutral	l Test (D5)		
Field Observations:							
Surface Water Present? Yes	No	Depth (inches):					
		Depth (inches):					
Saturation Present? Yes (includes capillary fringe)	No	Depth (inches):	Wetland	Hydrology Preser	nt? Yes No		
Describe Recorded Data (stream ga	uge, monitoring w	vell, aerial photos, pre	vious inspections), if ava	ailable:			
Remarks:							

Sampling	Point:	W-vv8,	vv9,	vv10,	vv11-L	JΡΙ
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	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?	Status	Number of Dominant Species
1	-			That Are OBL, FACW, or FAC:1 (A)
2				Total Newhord Dominant
3				Total Number of Dominant Species Across All Strata:5 (B)
4				
5				Percent of Dominant Species That Are OBL FACW or FAC: 20 (A/B)
6.		-		That Are OBL, FACW, or FAC: (A/B)
7.	-			Prevalence Index worksheet:
·	0	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 0				OBL species x 1 =
	20 /6 01	total cover		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15') 1. Prunus serotina	5	~	FACU	FAC species x 3 =
· ·			FACU	FACU species x 4 =
2				
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
9.				2 - Dominance Test is >50%
	5	= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: <u>2.5</u>		total cover		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Verbesina alternifolia	10		FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Phleum pratense	15		F <u>ACU</u>	
3. Daucus carata	15		UPL	¹ Indicators of hydric soil and wetland hydrology must
4. Rubus allegheniensis	15			be present, unless disturbed or problematic.
	5		FACU	Definitions of Four Vegetation Strata:
5. Trifolium pratense			F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Microstegium vimineum	15		F <u>AC</u>	more in diameter at breast height (DBH), regardless of
7. Juncus effusus	5		F <u>ACW</u>	height.
8. Scirpus atrovirens	5		<u>OBL</u>	Sapling/Shrub – Woody plants, excluding vines, less
9. Dichanthelium clandestinum	5		F <u>AC</u>	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
	90	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		total cover		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1.				neight.
2.	-			
		-		
3		-		
		-		Hydrophytic
5	0			Vegetation Present? Yes No ✓
50% -{\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot		= Total Cov	_	103 No
50% of total cover:0		total cover	0	
Remarks: (Include photo numbers here or on a separate si	heet.)			

Sampling Point: W-vv8, vv9, vv10, vv11-UPL

Profile Desc	ription: (Describe t	to the dept	h needed to docum	ent the i	indicator	or confirn	n the absence	of indicators.)	
Depth	Matrix		Redox	(Feature					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Re	emarks
0-6	10yr 4/2	100			-		GrSiL		
6-12	7.5 yr 4/3	95	7.5yr 5/6	5	С	М	GrCL		
						· 	-		-
					-	· 			
								-	
									
¹ Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	=Masked	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=	=Matrix.
Hydric Soil	Indicators:						Indica	ators for Problen	natic Hydric Soils ³ :
Histosol			Dark Surface					cm Muck (A10) (I	MLRA 147)
	oipedon (A2)		Polyvalue Bel				. 148) C	Coast Prairie Redo	
	stic (A3)		Thin Dark Sui			147, 148)		(MLRA 147, 148	
	en Sulfide (A4)		Loamy Gleye		(F2)		P	Piedmont Floodpla	
	d Layers (A5)		Depleted Mat		-0)			(MLRA 136, 147	
	ick (A10) (LRR N) d Below Dark Surface	Δ (Δ11)	Redox Dark S Depleted Dark					/ery Shallow Dark Other (Explain in R	
	ark Surface (A12)	5 (A11)	Redox Depre					oner (Explain in K	emarks)
	Mucky Mineral (S1) (L	.RR N.	Iron-Mangane			LRR N.			
	A 147, 148)	,	MLRA 136		(, (,			
	Gleyed Matrix (S4)		Umbric Surfac	-	(MLRA 13	86, 122)	³ Ind	licators of hydroph	nytic vegetation and
Sandy F	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	18) we	etland hydrology m	nust be present,
Stripped	l Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) un	less disturbed or p	oroblematic.
Restrictive	Layer (if observed):								
Type:									
Depth (in	ches):						Hydric Soil	Present? Yes	No <u> </u>
Remarks:							- 11		

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	38.902751	Lon.	-80.564644
STREAM/SITE ID AND SITE DESCR	RIPTION:				W	-CD18, Temporary Access Road		
(% stream slope, watershed size {a	creage}, unaltered	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-CD18	Emergent	0.0322	Emergent					
						PART III - Advanced		n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Υ
Total Impact		0.0322						
		Jnit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent Total Scrub-Shrub			0.0322	-		¢4 022 00		
Total Forested			0	-		\$1,932.00		
			0	-				
Гotal Open Water			U	1				

Project/Site: MVP	City/Co	_{ounty:} Lewis		Sampling Date: 06/09/2016
Applicant/Owner: MVP				Sampling Point: W-CD18
	Sectio	n. Township, Range: N/		_ ,
Landform (hillslope, terrace, etc.): Valley				Slope (%)· 0-3
Subregion (LRR or MLRA): LRRN				Datum: NAD 83
Soil Map Unit Name: Vandalia silt loam, 25				
·				
Are climatic / hydrologic conditions on the site				
Are Vegetation, Soil, or Hydrol			Circumstances" p	resent? Yes No
Are Vegetation, Soil, or Hydrol	ogy naturally problema	tic? (If needed, e.	xplain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach	site map showing sam	pling point locatio	ns, transects	, important features, etc.
Hydrophytic Vegetation Present? Ye	s No			
, , , , , , , , , , , , , , , , , , , ,	s / No	Is the Sampled Area	Yes 🗸	No
	s / No	within a Wetland?	res	NO
Remarks: Cowardin Code: PEM	HGM: Slope	Water Type: F	RPWWD	
Abutting S-VV13. Follows dito	•	114(0) 1)p0.1	******	
Abditing 5-7 v 15. 1 ollows dite	in abutting access road.			
HYDROLOGY				
Wetland Hydrology Indicators:				tors (minimum of two required)
Primary Indicators (minimum of one is requir			Surface Soil	` '
Surface Water (A1)	True Aquatic Plants (E			getated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odd		Drainage Pat	
Saturation (A3)		es on Living Roots (C3)	Moss Trim Li	
Water Marks (B1)	Presence of Reduced		-	Water Table (C2)
Sediment Deposits (B2) Drift Deposits (B3)	Recent Iron ReductionThin Muck Surface (C		Crayfish Burr	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Rem			tressed Plants (D1)
Iron Deposits (B5)	Other (Explain in Non	iano)	Geomorphic	
Inundation Visible on Aerial Imagery (B7)		Shallow Aqui	
Water-Stained Leaves (B9)	,			phic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)
Field Observations:				
Surface Water Present? Yes N	lo Depth (inches):0	.5		
Water Table Present? Yes N	lo Pepth (inches):			
	lo Depth (inches):	Wetland H	ydrology Presen	t? Yes 🗸 No
(includes capillary fringe) Describe Recorded Data (stream gauge, mo	nitoring well, aerial photos, prev	vious inspections), if avai	lable:	
December 1655 and Jana (chibam gauge, me	micining men, demai priotoc, pro-			
Remarks:				

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

30'

Sapling/Shrub Stratum (Plot size: 15')

Tree Stratum (Plot size: __

Herb Stratum (Plot size: ___

2. Carex frankii

3. Carex crinita

1. Dulichium arundinaceum

4. Leersia oryzoides

____)

50% of total cover: ___0

50% of total cover: 42.5 20% of total cover: 17

50% of total cover: 0 20% of total cover: 0

50% of total cover: 0 20% of total cover: 0

				- W 00 40						
ames of _l	plants.		Sampling	Point: W-CD18						
Absolute % Cover	Dominant Species?		Dominance Test worksheet Number of Dominant Species That Are OBL, FACW, or FAC	3	(A)					
		·	Total Number of Dominant Species Across All Strata:	3	(B)					
			Percent of Dominant Species That Are OBL, FACW, or FAC	D: <u>100%</u>	(A/B)					
			Prevalence Index workshee	et:						
0 =	Total Cov	rer	Total % Cover of:	Multiply by:						
	total cover:	^	OBL species	x 1 =	_					
			FACW species	x 2 =	_					
			FAC species	x 3 =	_					
			FACU species	x 4 =	_					
	-	·	UPL species	x 5 =						
			Column Totals:	(A)	(B)					
	_		Prevalence Index = B/A		_					
			Hydrophytic Vegetation Indicators: ✓ 1 - Rapid Test for Hydrophytic Vegetation							
			l · · ·							
			2 - Dominance Test is >5							
0 =	Total Cov	er	3 - Prevalence Index is ≤							
	total cover	^	4 - Morphological Adapta		-					
			data in Remarks or or							
30		OBL	Problematic Hydrophytic	Vegetation (Expla	in)					
20		OBL	1							
20	'	OBL	¹ Indicators of hydric soil and be present, unless disturbed		must					
15		OBL	Definitions of Four Vegetat	-						
			Tree – Woody plants, excludi more in diameter at breast he height.							
			Sapling/Shrub – Woody plar than 3 in. DBH and greater th m) tall.							
	= Total Cov		Herb – All herbaceous (non-vof size, and woody plants less		rdless					
20% of	total cover:	17	Woody vine – All woody vine height.	es greater than 3.28	3 ft in					
	= Total Cov	^	Hydrophytic Vegetation Present? Yes <u>V</u>	<u>′</u> No						

Remarks: (Include photo numbers here or on a separate sheet.)

Woody Vine <u>Stratum</u> (Plot size: 15')

Depth	Matrix		needed to document the indicator or Redox Features			·	
(inches)	Color (moist)	<u>%</u>	Color (moist) % Type ¹	Loc ² Textu		Remarks	
0-6	10YR 3/2	100		MI	<u>K</u>	Muck	
6+					 -	Refusal	
				·			
							
		etion, RM=Re	educed Matrix, MS=Masked Sand Grain		on: PL=Pore Lini		3
Hydric Soil I			D 1 0 ((07)		Indicators for Pr		
Histosol	(A1) pipedon (A2)		Dark Surface (S7)Polyvalue Below Surface (S8) (MLI	DA 147 149)		A10) (MLRA 14 Redox (A16)	7)
Histic Ep			Thin Dark Surface (S9) (MLRA 147		Coast Plaine		
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	, ,		oodplain Soils (F	- 19)
	Layers (A5)		Depleted Matrix (F3)		(MLRA 13		
	ck (A10) (LRR N)		Redox Dark Surface (F6)			Dark Surface ((TF12)
	d Below Dark Surface ork Surface (A12)	e (A11)	Depleted Dark Surface (F7)Redox Depressions (F8)		Other (Expla	in in Remarks)	
	lucky Mineral (S1) (L	RR N	Redox Depressions (F6) Iron-Manganese Masses (F12) (LR	R N			
	147, 148)	,	MLRA 136)	,			
	leyed Matrix (S4)		Umbric Surface (F13) (MLRA 136,	122)	³ Indicators of h	ydrophytic vege	tation and
	edox (S5)		Piedmont Floodplain Soils (F19) (M			logy must be pr	
	Matrix (S6)		Red Parent Material (F21) (MLRA	127, 147)	unless disturb	ed or problemat	tic.
	ayer (if observed): avel/Clay						
• • • • • • • • • • • • • • • • • • • •	ches): 6+		_	l le calmi	- Cail Duanauto	V /	N.
. ,	cnes): O1		_	Hydric	c Soil Present?	Yes	No
Remarks:							



Photograph Direction NE

Comments:		

Project/Site: MVP	City/County	Lewis	Sampling Date: 06/09/2016
Applicant/Owner: MVP			Sampling Point: W-CD18/CD19-UP
Investigator(s): HBS, CV	Section, To		
Landform (hillslope, terrace, etc.): Valley			Slope (%): 3-5
Subregion (LRR or MLRA): LRRN			
Soil Map Unit Name: Vandalia silt loam, 25 to		NWI class	
Are climatic / hydrologic conditions on the site ty		_	
	•		
Are Vegetation, Soil, or Hydrolog			
Are Vegetation, Soil, or Hydrolog	ynaturally problematic?	(If needed, explain any ans	wers in Remarks.)
SUMMARY OF FINDINGS – Attach s	ite map showing samplin	g point locations, transec	ts, important features, etc.
Hydrophytic Vegetation Present? Yes	V No ls th		
	No 🗸	e Sampled Area	No
	No V	in a Wetland? Yes	NO
Remarks: Cowardin Code: UPLAND	L .	Water Type:	
Cowardin Code. OF EAIND	i iowi.	vvater Type.	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Ind	licators (minimum of two required)
Primary Indicators (minimum of one is required	; check all that apply)	<u> </u>	oil Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B14)		Vegetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1		Patterns (B10)
Saturation (A3)		Living Roots (C3) Moss Trim	
Water Marks (B1)	Presence of Reduced Iron	(C4) Dry-Seaso	on Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in T	illed Soils (C6) Crayfish E	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	r Stressed Plants (D1)
Iron Deposits (B5)			nic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow A	
Water-Stained Leaves (B9)			graphic Relief (D4)
Aquatic Fauna (B13)		FAC-Neut	ral Test (D5)
Field Observations:	V Danth (inch as)		
Surface Water Present? Yes No	Depth (inches): Depth (inches):	-	
			10 V
Saturation Present? Yes No (includes capillary fringe)	Depth (inches):	Wetland Hydrology Pres	sent? Yes No
Describe Recorded Data (stream gauge, monit	oring well, aerial photos, previous	inspections), if available:	
Domostro			
Remarks:			

Sampling Point: W-CD18/CD19-UF	Sampling	Point:	W-CD1	8/CD'	19-UP
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30'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		Number of Dominant Species
1. Acer saccharum	15		<u>FACU</u>	That Are OBL, FACW, or FAC:6 (A)
2. Platanus occidentalis	10		FACW_	Total Number of Dominant
3. Acer negundo	10		FAC	Species Across All Strata: 7 (B)
				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 86% (A/B)
6		-		Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
47.0		= Total Cov		OBL species x 1 =
50% of total cover: 17.5	20% of	total cover		
Sapling/Shrub Stratum (Plot size: 15')	40	,		FACW species x 2 =
1. Lindera benzoin	10		FAC	FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0¹
	10	= Total Cov	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:5	20% of	total cover	2	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Symphyotrichum prenanthoides	30		F <u>AC</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Equisetum arvense	20		F <u>AC</u>	1
3. Dichanthelium clandestinum	15		F <u>AC</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Verbesina alternifolia	5		FAC	Definitions of Four Vegetation Strata:
5				Definitions of Four Vegetation Strata.
6.			<u> </u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
8				
9.				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11.				, and the second
	70	= Total Cov	or.	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 35		total cover		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in
1				height.
2.				
3				
4				Hydrophytic
5	0	T-1-1-0		Vegetation Present?
50% of total cover: 0		Total Cover total cover	_	
Remarks: (Include photo numbers here or on a separate s		total cover		
Remarks. (include prioto numbers here of on a separate s	neet.)			

Profile Desc	ription: (Describe to	the depth	needed to docun	nent the in	dicator o	or confirm	the abse	nce of indicato	ors.)	
Depth	Matrix		Redo	K Features	- 4					
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
<u>0-8</u>	7.5YR 4/3	100					SIL			_
8+									Refusa	al
			_							
							-			-
										_
¹ Type: C=Co	oncentration, D=Deple	etion, RM=Re	educed Matrix, MS	S=Masked	Sand Gra	ins.	² Location	n: PL=Pore Lini	ng, M=Matrix.	
Hydric Soil								dicators for Pr		
Histosol	(A1)		Dark Surface	(S7)				_ 2 cm Muck (/	A10) (MLRA 1	147)
Histic Ep	pipedon (A2)		Polyvalue Be	low Surfac	e (S8) (M	LRA 147,	148)	_ Coast Prairie	Redox (A16)	1
Black Hi	stic (A3)	•	Thin Dark Su	rface (S9)	(MLRA 1	47, 148)		(MLRA 14	7, 148)	
	n Sulfide (A4)	•	Loamy Gleye		⁻ 2)		_	_ Piedmont Flo		(F19)
	Layers (A5)		Depleted Mat					(MLRA 13		
	ck (A10) (LRR N)	(111)	Redox Dark S				_		Dark Surface	, ,
	d Below Dark Surface ork Surface (A12)	(A11)	Depleted Dar Redox Depre				_	_ Other (Expla	in in Remarks	5)
	lucky Mineral (S1) (L l	RR N	Iron-Mangan			RR N				
	147, 148)	,	MLRA 13		5 (1 12) (1	-1111 14,				
	leyed Matrix (S4)		Umbric Surfa		MLRA 130	6, 122)		³ Indicators of hy	ydrophytic ve	getation and
	edox (S5)	•	Piedmont Flo					wetland hydro		_
	Matrix (S6)		Red Parent N					unless disturb		
	ayer (if observed):									
Type: <u>G</u> r	avel		_							
Depth (inc	hes): <u>8</u>		_				Hydric	Soil Present?	Yes	No 🗸
Remarks:							1			

	Mountain	Valley Pipeline	COORDINATES:	Lat.	38.902618	Lon.	-80.564694
PTION:				W	-CD19, Temporary Access Road	-	
creage}, unaltered	l or impairments)						
8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetl	and Indicators						
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.008	Emergent					
				ĺ	PART III - Advanced	Mitigatio	n
					Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
				·			
	0.008			ı	Fatherstad		
	Unit Scores	Davidson (Half)					
assirication					ILF Costs		
			_		¢490.00		
		-		Į.	\$480.00		
	PART I - Wett Impact Wetland Classification Emergent	PTION: creage}, unaltered or impairments) 8/10/2015 PART I - Wetland Indicators Impact Wetland Classification Emergent 0.008 0.008 PART II - Unit Scores	8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.008 Emergent 0.008 PART II - Unit Scores	PTION: Creage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact	PTION: Creage), unaltered or impairments) ### WEATHER CONDITIONS: ### PART I - Wetland Indicators Impact	PTION: creage), unaltered or impairments) ### W-CD19, Temporary Access Road ### W-CD19, Temporary Access Road ### W-CD19, Temporary Access Road #### PRECIPITATION PAST 48 HRS: #### PART II - Wetland Indicators #### W-CD19, Temporary Access Road #### PART II - Wetland Indicators #### W-CD19, Temporary Access Road #### PART II - Wetland Indicators ##### Wetland Indicators #### PART III - Advanced #### Sustainable Determination Made on Advanced Mitigation #### (Y or N) #### Advanced Mitigation #### O.008 #### PART II - Unit Scores #### Beautiful Indicators #### Beautiful Indicators #### Wetland Indicators #### PART III - Advanced #### Sustainable Determination Made on Advanced Mitigation #### (Y or N) #### Determination Made on Advanced Mitigation #### (Y or N) #### Beautiful Indicators #### Determination Made on Advanced Mitigation #### O.008 #### PART II - Unit Scores #### Beautiful Indicators #### Determination Made on Advanced Mitigation #### (Y or N) #### Beautiful Indicators #### Beautiful Indica	PTION: creage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts (acreage) Wetland Classification Emergent 0.008 Emergent Emergent 0.008 Emergent O.008 Emergent Sustainable Determination Made on Advanced Mitigation (Y or N) PART II - Unit Scores assification Replacement Unit(s) 0.008 PART II - Unit Scores 1. Estimated ILF Costs 1.

Project/Site: MVP		City/C	_{ounty:} Lewis		Sampling Date: 06/09/2016
Applicant/Owner: MVP					Sampling Point: W-CD19
			n, Township, Range: N		
Landform (hillslope, terrace, etc.): Valley					Slope (%): 3-5
Subregion (LRR or MLRA): LRRN					
Soil Map Unit Name: Vandalia silt loam, 25					
Are climatic / hydrologic conditions on the site	e typical for this	time of year? Y	es No	(If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydro	ology s	ignificantly disturb	ped? Are "Normal	Circumstances" p	present? Yes V No
Are Vegetation, Soil, or Hydro					
SUMMARY OF FINDINGS – Attac					
Hydrophytic Vegetation Present? Y	es V No	o			
, , ,		D	Is the Sampled Area		
		o	within a Wetland?	Yes	No
Remarks:		M: Riverine	Water Type:		
. —…	110	w. niverine	water Type.	RPWWD	
Abuts S-VV13					
HYDROLOGY					
Wetland Hydrology Indicators:				Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is requ	red; check all t	hat apply)		Surface Soil	
Surface Water (A1)		Aquatic Plants (I	314)		getated Concave Surface (B8)
High Water Table (A2)		rogen Sulfide Odo		Drainage Pa	
Saturation (A3)	-	-	es on Living Roots (C3)	Moss Trim L	
Water Marks (B1)		ence of Reduced	-		Water Table (C2)
Sediment Deposits (B2)	Rece	ent Iron Reduction	n in Tilled Soils (C6)	Crayfish Bur	rows (C8)
Drift Deposits (B3)	Thin	Muck Surface (C	7)	Saturation V	isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Othe	er (Explain in Rem	narks)	Stunted or S	tressed Plants (D1)
Iron Deposits (B5)				✓ Geomorphic	Position (D2)
Inundation Visible on Aerial Imagery (B	7)			Shallow Aqu	itard (D3)
Water-Stained Leaves (B9)					aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:					
		oth (inches):			
		oth (inches):			
	No V Dep	oth (inches):	Wetland H	lydrology Preser	nt? Yes <u>/</u> No
(includes capillary fringe) Describe Recorded Data (stream gauge, more stream)	onitoring well a	erial photos pre	vious inspections) if ava	ilahle.	
Booting Nooraca Bata (oricani gauge, in	ormorning won, c	ional photos, pro	riodo iriopodilorio), ir ava	mabro.	
Remarks:					

EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: W-CD19
30'	Absolute		t Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: 30')	% Cover	Species'	? Status	Number of Dominant Species That Are OBL FACW or FAC: 3 (A)
1				That Are OBL, FACW, or FAC:3 (A)
2				Total Number of Dominant
3				Species Across All Strata:3 (B)
4		·		Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 100% (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co	_	OBL species x 1 =
50% of total cover: 0	20% of	total cove	r:0	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0¹
		= Total Co		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:0	20% of	total cove	r: <u> </u>	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				• • • • • • • • • • • • • • • • • • • •
1. Symphyotrichum prenanthoides	20		F <u>AC</u>	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Microstegium vimineum	20		FAC	11. Part of the distance of th
3. Carex crinita	15		OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Carex Iurida	5		OBL	Definitions of Four Vegetation Strata:
5. Dichanthelium clandestinum	5		FAC	_
6. Allium cernuum	5		FACU_	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7. Impatiens capensis	5		FACW	height.
8. Leersia oryzoides	5		OBL	
9. Persicaria sagittata	5		OBL	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.				Horto All back cooks (cooks) along to record the
	85	= Total Co	ver	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 42.5				
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in
1				height.
2				
3				
<u> </u>				Hydrophytic
5	0	Total Co		Vegetation Present?
50% of total cover: 0		= Total Co total cove	^	
		total cove	'. <u> </u>	
Remarks: (Include photo numbers here or on a separate s	heet.)			

epth	Matrix	0/		x Features	e ¹ Loc ²	Toyeturo		Domorko	
nches) 0-4	Color (moist) 5YR 4/2	<u>%</u> 100	Color (moist)	<u>%</u> <u>Typ</u>	<u> LOC</u>	Texture SSiL		Remarks	
	-								
4 - 18	5YR 4/1	90	5YR 6/8	<u>10</u> <u>C</u>	<u>M</u>	<u>SSiL</u>			
							-		
ne: C=Co	oncentration, D=Dep	etion, RM=	Reduced Matrix, MS	S=Masked Sand	Grains.	² Location: PI	 _=Pore Lini	ng, M=Matrix	
	ndicators:							oblematic H	
Histosol	(A1)		Dark Surface	e (S7)		2	cm Muck (A	410) (MLRA 1	147)
Histic Ep	ipedon (A2)			low Surface (S8) (MLRA 147 ,	. 148) C	oast Prairie	Redox (A16))
Black His	stic (A3)		Thin Dark Su	ırface (S9) (MLF	A 147, 148)		(MLRA 14	7, 148)	
Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matrix (F2)		P	edmont Flo	odplain Soils	(F19)
	Layers (A5)		Depleted Ma				(MLRA 13		, ,
	ck (A10) (LRR N)		Redox Dark			V		Dark Surface	e (TF12)
	Below Dark Surface	e (A11)		rk Surface (F7)			•	in in Remarks	, ,
	rk Surface (A12)		Redox Depre						,
	lucky Mineral (S1) (L	RR N		ese Masses (F1	2) (I RR N				
-	147, 148)	,	MLRA 13		E) (E IXIX I X ,				
	leyed Matrix (S4)			o) ace (F13) (MLR<i>A</i>	136 133)	³ Indi	cators of b	ydrophytic ve	actation and
									-
	edox (S5)			oodplain Soils (F			-	logy must be	
	Matrix (S6)		Red Parent N	Material (F21) (N	LRA 127, 14	/) uni	ess disturb	ed or problem	natic.
	ayer (if observed):								
Type: Depth (inc	ches):					Hydric Soil	Present?	Yes_	No
marks:						11,4			
iiaiks.									



Photograph Direction NE

Comments:	

Project/Site: MVP	City/County	Lewis	Sampling Date: 06/09/2016				
Applicant/Owner: MVP			Sampling Point: W-CD18/CD19-UP				
Investigator(s): HBS, CV	Section, To						
Landform (hillslope, terrace, etc.): Valley			Slope (%): 3-5				
Subregion (LRR or MLRA): LRRN							
Soil Map Unit Name: Vandalia silt loam, 25 to		NWI class					
Are climatic / hydrologic conditions on the site ty		_					
	•						
Are Vegetation, Soil, or Hydrolog							
Are Vegetation, Soil, or Hydrolog	ynaturally problematic?	(If needed, explain any ans	wers in Remarks.)				
SUMMARY OF FINDINGS – Attach s	ite map showing samplin	g point locations, transec	ts, important features, etc.				
Hydrophytic Vegetation Present? Yes	V No ls th						
	No 🗸	e Sampled Area	No				
	No V	in a Wetland? Yes	NO				
Remarks: Cowardin Code: UPLAND	L .	Water Type:					
Cowardin Code. of EAND	TIOW.	vvater Type.					
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Ind	licators (minimum of two required)				
Primary Indicators (minimum of one is required	; check all that apply)	<u> </u>	Surface Soil Cracks (B6)				
Surface Water (A1)	True Aquatic Plants (B14)		Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10)				
High Water Table (A2)	Hydrogen Sulfide Odor (C1						
Saturation (A3)		Living Roots (C3) Moss Trim					
Water Marks (B1)	(C4) Dry-Seaso	Dry-Season Water Table (C2) Crayfish Burrows (C8)					
Sediment Deposits (B2)	illed Soils (C6) Crayfish E						
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or	r Stressed Plants (D1)				
Iron Deposits (B5)			nic Position (D2)				
Inundation Visible on Aerial Imagery (B7)		Shallow A					
Water-Stained Leaves (B9)			graphic Relief (D4)				
Aquatic Fauna (B13)		FAC-Neut	ral Test (D5)				
Field Observations:	V Danth (inch as)						
Surface Water Present? Yes No	Depth (inches): Depth (inches):	-					
			10 V				
Saturation Present? Yes No (includes capillary fringe)	Depth (inches):	Wetland Hydrology Pres	sent? Yes No				
Describe Recorded Data (stream gauge, monit	oring well, aerial photos, previous	inspections), if available:					
Domostro							
Remarks:							

Sampling Point: W-CD18/CD19-UF	Sampling	Point:	W-CD1	8/CD'	19-UP
--------------------------------	----------	--------	-------	-------	-------

30'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		Number of Dominant Species
1. Acer saccharum	15		<u>FACU</u>	That Are OBL, FACW, or FAC:6 (A)
2. Platanus occidentalis	10		FACW_	Total Number of Dominant
3. Acer negundo	10		FAC	Species Across All Strata: 7 (B)
				Percent of Dominant Species
5		-		That Are OBL, FACW, or FAC: 86% (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
17.1		= Total Cov		OBL species x 1 =
50% of total cover: 17.5	20% of	total cover:		
Sapinig/Siriub Stratum (Flot size	10		540	FAC appaies x 2 =
1. Lindera benzoin	10		FAC	FACUlanceira x 3 =
2				FACU species x 4 =
3		-		UPL species x 5 =
4				Column Totals: (A) (B)
5		-		Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0¹
		= Total Cov	er	4 - Morphological Adaptations¹ (Provide supporting
50% of total cover:5	20% of	total cover:	2	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				Problematic Hydrophytic Vegetation¹ (Explain)
1. Symphyotrichum prenanthoides	30		F <u>AC</u>	1 Toblematic Trydrophytic Vegetation (Explain)
2. Equisetum arvense	20		F <u>AC</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Dichanthelium clandestinum	15		FAC	be present, unless disturbed or problematic.
4. Verbesina alternifolia	5	-	F <u>AC</u>	Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10		-		m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	70	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>35</u>	20% of	total cover	14	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes No
50% of total cover:0	20% of	total cover	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Profile Desc	ription: (Describe to	the depth	needed to docun	nent the in	dicator o	or confirm	the abse	nce of indicate	ors.)	
Depth	Matrix		Redo	K Features	- 1					
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	<u> </u>	Remarks	
<u>0-8</u>	7.5YR 4/3	100					SIL			
8+									Refus	al
								<u></u>		
								<u> </u>		
							-			-
¹ Type: C=Co	oncentration, D=Deple	etion, RM=Re	educed Matrix, MS	S=Masked	Sand Gra	ins.	² Location	: PL=Pore Lini	ng, M=Matrix	
Hydric Soil								dicators for Pr		
Histosol	(A1)		Dark Surface	(S7)			_	_ 2 cm Muck (A10) (MLRA	147)
Histic Ep	pipedon (A2)		Polyvalue Be	low Surfac	e (S8) (M	LRA 147,	148)	_ Coast Prairie	Redox (A16))
Black Hi	stic (A3)	•	Thin Dark Su	rface (S9)	(MLRA 1	47, 148)		(MLRA 14	7, 148)	
	n Sulfide (A4)	•	Loamy Gleye		⁻ 2)		_	_ Piedmont Flo		s (F19)
	Layers (A5)		Depleted Mat					(MLRA 13		
	ck (A10) (LRR N)	(111)	Redox Dark S				_	_ Very Shallow		, ,
	d Below Dark Surface ork Surface (A12)	(A11)	Depleted Dar Redox Depre				_	_ Other (Expla	in in Remarks	5)
	lucky Mineral (S1) (L l	RR N	Iron-Mangan			RR N				
	147, 148)	,	MLRA 13		5 (1 12) (2	-1111 14,				
	leyed Matrix (S4)		Umbric Surfa		VILRA 136	6, 122)		³ Indicators of h	ydrophytic ve	getation and
	edox (S5)	•	Piedmont Flo					wetland hydro		-
	Matrix (S6)		Red Parent N					unless disturb		•
	ayer (if observed):									
Type: <u>G</u> r	avel		_							
Depth (inc	hes): <u>8</u>		_				Hydric	Soil Present?	Yes	No 🗸
Remarks:							1			

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	38.901049	Lon.	-80.566582
STREAM/SITE ID AND SITE DESCR		W	-CD21, Temporary Access Road					
(% stream slope, watershed size {a								
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetland Indicators								
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-CD21	Emergent	0.0161	Emergent					
						PART III - Advanced Sustainable Determination Made on		n
						Advanced Mitigation (Y or N)		Y
Total Impact		0.0161						
		Jnit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0161			#000 00		
Total Scrub-Shrub			0	_		\$966.00		
Total Forested			0	_				
Total Open Water			0					

Project/Site: MVP		City/C	ounty: Lewis		Sampling Date: 06/09/2016	
Applicant/Owner: MVP					Sampling Point: W-CD21	
Investigator(s): HBS, CV		Section, Township, Range: N/A				
Landform (hillslope, terrace, etc.):					Slope (%): 0-3	
Subregion (LRR or MLRA): LRRN Lat: 38.901136 Long: -80.566482 Datum: None Soil Map Unit Name: Vandalia silt loam, 25 to 35 percent slopes NWI classification: None					ation: None	
Are climatic / hydrologic conditions o	n the site typical for	r this time of year? Y	es No	(If no, explain in R	emarks.)	
Are Vegetation, Soil,	or Hydrology	significantly distur	bed? Are "Norma	l Circumstances" p	present? Yes No	
Are Vegetation, Soil,						
SUMMARY OF FINDINGS -						
Hydrophytic Vegetation Present?	Yes 🗸	No	In the Complet Area			
Hydric Soil Present?	Yes 🔽	No	Is the Sampled Area within a Wetland?	Yes 🗸	No	
Wetland Hydrology Present?	Yes	No	William a Wolland			
Remarks: Cowardin Code:	PEM	HGM: Slope	Water Type:	RPWWN		
HADBOLOGA						
HYDROLOGY Wetland Hydrology Indicators:				Cocondon, Indian	store (minimum of two required)	
, ,,	o io roquirod: obook	all that apply)			crocks (RS)	
Primary Indicators (minimum of one Surface Water (A1)	-		D14)	Surface Soil	getated Concave Surface (B8)	
High Water Table (A2)		True Aquatic Plants (Hydrogen Sulfide Od		✓ Drainage Pa		
Saturation (A3)			es on Living Roots (C3)	Moss Trim L		
Water Marks (B1)		Presence of Reduced	-		Water Table (C2)	
Sediment Deposits (B2)		Recent Iron Reductio		Crayfish Bur		
Drift Deposits (B3)		Thin Muck Surface (C	27)	Saturation V	sible on Aerial Imagery (C9)	
Algal Mat or Crust (B4)	(Other (Explain in Ren	narks)	Stunted or S	tressed Plants (D1)	
Iron Deposits (B5)				Geomorphic		
Inundation Visible on Aerial Im-	agery (B7)			Shallow Aqu		
Water-Stained Leaves (B9)					aphic Relief (D4)	
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)	
Field Observations: Surface Water Present? Yes	. V No	Depth (inches): 0	.25			
Water Table Present? Yes	No -	Depth (inches):				
		Depth (inches):		Hydrology Preser	nt? Yes ✔ No	
(includes capillary fringe)		/		-		
Describe Recorded Data (stream g	auge, monitoring w	ell, aerial photos, pre	vious inspections), if ava	ailable:		
Remarks:						

30'

Sapling/Shrub Stratum (Plot size: 15')

2. Carex vulpinoidea

5. Dichanthelium clandestinum

Woody Vine <u>Stratum</u> (Plot size: ______)

Tree Stratum (Plot size: __

1. Salix interior

4. Lysimachia nummularia

3. Rosa multiflora

6. Packera aurea

___)

50% of total cover: ___1

% Cover Species? Status

_ = Total Cover

2 = Total Cover

10

10

50% of total cover: <u>32.5</u> 20% of total cover: <u>13</u>

50% of total cover: 0 20% of total cover:

10

20% of total cover:_ 0.4

✓ <u>FACW</u>

✓ FACU

✓ _ FACW

✓ FAC

5 FACW

65 _ = Total Cover

0 = Total Cover

OBL

50% of total cover: 0 20% of total cover: 0

	oin	t: <u>W-CD21</u>						
Dominance Test worksheet:								
Number of Dominant Species That Are OBL, FACW, or FAC	;: _	4	(A)					
Total Number of Dominant Species Across All Strata:	_	5	(B)					
Percent of Dominant Species That Are OBL, FACW, or FAC): _	80%	(A/B)					
Prevalence Index worksheet	t:							
Total % Cover of:		Multiply by:						
OBL species	x 1	=	_					
FACW species	x 2	=	_					
		=						
		=						
		=						
Column Totals:								
Column Foldis.	(八)		_ (D)					
Prevalence Index = B/A	_ =		_					
Hydrophytic Vegetation Indi	cato	rs:						
1 - Rapid Test for Hydrop	hytic	Vegetation						
2 - Dominance Test is >50	0%	•						
3 - Prevalence Index is ≤3.0 ¹								
4 - Morphological Adaptations¹ (Provide supporting								
data in Remarks or on a separate sheet)								
Problematic Hydrophytic Vegetation ¹ (Explain)								
1 Toblematic Hydrophytic	vege	itation (Expla	111 <i>)</i>					
¹ Indicators of hydric soil and w be present, unless disturbed of	vetla	nd hydrology i oblematic.	must					
Definitions of Four Vegetation	on S	trata:						
Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.								
Sapling/Shrub – Woody plan than 3 in. DBH and greater tham) tall.								
Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.								
Woody vine – All woody vines	s gre	eater than 3.28	3 ft in					
height.								
height.								
height.								
height.								

Remarks:	(Include	photo	numbers	here	or or	a se	eparate	sheet.)	
----------	----------	-------	---------	------	-------	------	---------	---------	--

Depth	Matrix			x Features			_		_	
(inches)	Color (moist)	<u>%</u>	Color (moist)		Type ¹	Loc ²	<u>Texture</u>		Remarks	
0-16	5YR 4/2	90	7.5YR 4/6	10	C	M	CL			
			_							
								-		
			_					'		
	·									
								-		
Type: C=Co	oncentration, D=Depl	etion. RM=F	Reduced Matrix, MS	S=Masked S	Sand Gra	ins.	² Location: P	I =Pore I ini	ing, M=Matrix.	
	ndicators:	<u> </u>	toddood matrix, me	, maone a					roblematic Hy	
_ Histosol			Dark Surface	(S7)					A10) (MLRA 1	
	pipedon (A2)		Polyvalue Be		(S8) (M	LRA 147,		,	Redox (A16)	•
Black Hi			Thin Dark Su				, <u>—</u>	(MLRA 14		
_ Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix (F2	2)		F	Piedmont Flo	oodplain Soils	(F19)
_ Stratified	l Layers (A5)		Depleted Mat	trix (F3)				(MLRA 13		
	ick (A10) (LRR N)		Redox Dark S	, ,					v Dark Surface	
	Below Dark Surface	(A11)	Depleted Dar				_ (Other (Expla	in in Remarks)
	ark Surface (A12)		Redox Depre							
	lucky Mineral (S1) (L	RR N,	Iron-Mangan		(F12) (I	RR N,				
	147, 148) sleyed Matrix (S4)		MLRA 136 Umbric Surfa	-	I D A 12	2 422\	3lnc	licatora of h	ydrophytic veg	rotation and
	edox (S5)		Piedmont Flo						ology must be	
	Matrix (S6)		Red Parent N						ed or problem	
	_ayer (if observed):		rear arenen	natorial (i Z i	i) (IIII	1 127, 147	,	iloso distarb	ea or problem	iutio.
Type:	, (,-									
	ches):						Hydric Soi	Dresent?	Yes_	No
	Jiles)		<u> </u>				Tiyane 301	i i ieseiit:	163	
emarks:										



Photograph Direction SW

Comments:	

unaltered or impairment	s)		W-CD23, Temporary Access Road		
·	s)				
8/10/2015					
8/10/2015					
0/10/2010	WEATHER CONDITIONS:		PRECIPITATION PAST 48 HRS:		
T I - Wetland Indicators					
land (acreage)	Mitigation Wetland Classification				
rgent 0.0349					
			PART III - Advanced	Mitigatio	n
					Y
0.0349					
on			ILF Costs		
		-	\$0.00		
			\$0.00		
	cland (acreage) fication 0.0349	TI - Wetland Indicators Pact Impacts Wetland (acreage) Wetland Classification Pagent 0.0349 0.0349 O.0349 PART II - Unit Scores	TI - Wetland Indicators Dact Impacts (acreage) Wetland Fication Classification Propert 0.0349 DART II - Unit Scores O 0 O 0	T I - Wetland Indicators Dact Impacts (acreage) Wetland (Classification Grant 0.0349 PART III - Advanced Sustainable Determination Made on Advanced Mitigation (Y or N) O.0349 PART III - Unit Scores On Replacement Unit(s) 0 0 \$0.00	T I - Wetland Indicators Janet Impacts (acreage) Wetland Classification Findent 0.0349 FART III - Advanced Mitigation Sustainable Determination Made on Advanced Mitigation (Y or N) FART III - Unit Scores O Replacement Unit(s) 0 \$0.000

Project/Site: MVP	City/C	ounty: Lewis		Sampling Date: 06/09/2016
Applicant/Owner: MVP				Sampling Point: W-CD23
	Section	on, Township, Range: N/		_
Landform (hillslope, terrace, etc.): Valley				Slone (%): 3-5
Subregion (LRR or MLRA): LRRN		Long: <u>-80</u>	,	Datum: NAD 83
Soil Map Unit Name: Vandalia silt loam, 1				
Are climatic / hydrologic conditions on the sit				
Are Vegetation, Soil, or Hydr			Circumstances" p	oresent? Yes No
Are Vegetation, Soil, or Hydr	ology naturally problema	atic? (If needed, e	explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attac	ch site map showing sam	pling point location	ns, transects	, important features, etc.
Hydrophytic Vegetation Present?	/es No			
, , , , , , , , , , , , , , , , , , , ,	/es No	Is the Sampled Area	/	
,	res No	within a Wetland?	Yes	No
Remarks: Cowardin Code: PEM	HGM: Slope	Water Type:	DD\\\\\\\	
	ridivi. Slope	vvater Type.	nrwwD	
Abuts S-VV13				
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum of one is requ			Surface Soil	` '
Surface Water (A1)	True Aquatic Plants (getated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Od		<u>✓</u> Drainage Pa	
Saturation (A3)	✓ Oxidized Rhizosphere		Moss Trim Li	
Water Marks (B1)	Presence of Reduced	` ,		Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reductio		Crayfish Buri	
Drift Deposits (B3)	Thin Muck Surface (C Other (Explain in Ren			sible on Aerial Imagery (C9) tressed Plants (D1)
Algal Mat or Crust (B4) Iron Deposits (B5)	Other (Explain in Ker	ilaiks)	Geomorphic	
Inundation Visible on Aerial Imagery (E	37)		Shallow Aqui	
Water-Stained Leaves (B9)	5.,			aphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	
Field Observations:				· ·
Surface Water Present? Yes	No Depth (inches):			
Water Table Present? Yes	No Depth (inches):			
	No Depth (inches):		lydrology Presen	it? Yes 🗸 No
(includes capillary fringe) Describe Recorded Data (stream gauge, m	ponitoring well porial photos pro	vious inspections) if avo	ilabla	
Describe Recorded Data (Stream gauge, ii	ionitoring well, aerial priotos, pre	vious irispections), ii ava	liable.	
Remarks:				

30'

Sapling/Shrub Stratum (Plot size: 15')

5. Equisetum arvense

Woody Vine <u>Stratum</u> (Plot size: ______)

Tree Stratum (Plot size: __

Herb Stratum (Plot size: _ 1. Carex vulpinoidea

3. Bromus inermis

7. Dulichium arundinaceum

4. Persicaria sagittatum

2. Carex lurida

6. Poa trivialis

____)

50% of total cover: ___0

% Cover Species? Status

_ = Total Cover

0 = Total Cover

20

5

10

50% of total cover: 42.5 20% of total cover: 17

50% of total cover: 0 20% of total cover: 0

5

20% of total cover:_ 0

85 = Total Cover

0 = Total Cover

50% of total cover: 0 20% of total cover: 0

lants.	Sampling Point: W-CD23							
Dominant Indicator	Dominance Test worksheet:							
Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC: 2							
	Total Number of Dominant Species Across All Strata: 3	_ (B)						
	Percent of Dominant Species That Are OBL, FACW, or FAC: 67	_ (A/B)						
	Prevalence Index worksheet:							
Tatal Cause	Total % Cover of: Multiply by:							
Total Cover otal cover: 0	OBL species x 1 =							
otal cover	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 ≤3.0 ¹							
Total Cover otal cover: 0	4 - Morphological Adaptations ¹ (Provide supporting							
otal cover	data in Remarks or on a separate sheet)						
✓ OPI	Problematic Hydrophytic Vegetation ¹ (Expl	ain)						
OBL	-							
✓ OBL ✓ UPL	Indicators of hydric soil and wetland hydrology	must						
	be present, unless disturbed or problematic.							
OBL FAC	Definitions of Four Vegetation Strata:							
FACW OBL	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 vine than 3 in. DBH and greater than or equal to 3.2 m) tall.							
Total Cover	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.							
otal cover: 17	Woody vine – All woody vines greater than 3.28 ft in height.							
	- - - - Hydrophytic - Vegetation							

Remarks: (Include photo numbers here or on a separate sheet.)

Sampling Point: W-CD23

SOIL

Depth Marix Color (molst) % Tupe Loc Teature Remarks	Profile Desc	ription: (Describe	to the depth	needed to docun	nent the i	ndicator	or confirm	the absence	of indicators.)
0-8 5YR 4/2 90 5YR 4/6 10 C M CSiL Coal frags				Redox		<u> </u>	. 2	_	
S-15 5YR 4/2 80% 5YR 4/6 20 C M/PL CSiL Coal frags		•							
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. PL=Pore Lining, M=Matrix. Hydric Soil Indicators: Indicators for Problematic Hydric Soils³: Histosol (A1) Black Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Coast Prairie Redox (A16) (MLRA 147, 148) Guast Prairie Redox (A16) (MLRA 147, 148) Stratified Layers (A5) Zorn Muck (A10) (LRR N) Depleted Below Dark Surface (F6) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Redox Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland 136, 122) ³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Type: Type: Depth (inches): Depth (inches): Hydric Soil Present? Yes No Hard 136, 122 No Hydric Soil Present? Yes No Hydric Soil Present?	0-8	5YR 4/2	90	5YR 4/6	10	С	M	CSiL	Coal frags
Hydric Soil Indicators: Histosol (A1)	8-15	5YR 4/2	80%	5YR 4/6	20	<u>C</u>	M/PL	CSiL	Coal frags
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)				_			·		
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)									
Hydric Soil Indicators: Histosol (A1)	¹ Type: C=C	oncentration. D=Depl	etion. RM=F	Reduced Matrix. MS	= S=Masked	Sand Gr	ains.	² Location: Pl	L=Pore Lining, M=Matrix.
Histic Epipedon (A2)			<u> </u>	toddood mann, me		<u> </u>			
Hydrogen Sulfide (A4) Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S4) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Restrictive Layer (if observed): Type: Depth (inches): Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 147, 148) Piedmont Floodplain Soils (F12) (LRR N, MLRA 136, 122) Piedmont Floodplain Soils (F19) (MLRA 148) Wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No	Histosol	(A1)		Dark Surface	(S7)			2	cm Muck (A10) (MLRA 147)
Hydrogen Sulfide (A4) Stratified Layers (A5) 2 cm Muck (A10) (LRR N) Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Loamy Gleyed Matrix (F2) Depleted Matrix (F3) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Other (Explain in Remarks) Very Shallow Dark Surface (TF12) Depleted Dark Surface (F7) Depleted Matrix (F2) Depleted Matrix (F3) Depleted Matrix (F2) Depleted Matrix (F3) Depleted Matrix (F2) Depl						ce (S8) (N	ILRA 147,		
Stratified Layers (A5)	Black Hi	stic (A3)		Thin Dark Su	rface (S9)	(MLRA	47, 148)		(MLRA 147, 148)
2 cm Muck (A10) (LRR N)						- 2)		P	
Depleted Below Dark Surface (A11) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Stripped Matrix (S6) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Depth (inches): Depth (in		• • •			, ,				
Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) MLRA 136) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Restrictive Layer (if observed): Type: Depth (inches): Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Whith Material (F13) (MLRA 136, 122) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 136, 122) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Umbric Surface (F13) (MLRA 127, 147) Whith Material (F13) (MLRA 148) Wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes V No			(/////			,			• • • • • • • • • • • • • • • • • • • •
Sandy Mucky Mineral (S1) (LRR N,			(A11)					0	iner (Explain in Remarks)
MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Restrictive Layer (if observed): Depth (inches): Depth (inches): Sandy Gleyed Matrix (S4) Sandy Redox (S5) Umbric Surface (F13) (MLRA 136, 122) MLRA 136, 122) MLRA 136, 122) Alndicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. Hydric Soil Present? Yes No			RR N.				LRR N.		
Sandy Gleyed Matrix (S4)			,			/o (i :=/ (,		
Sandy Redox (S5)						MLRA 13	6, 122)	³ Indi	icators of hydrophytic vegetation and
Restrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	Sandy F	Redox (S5)						8) we	tland hydrology must be present,
Type: Depth (inches): Hydric Soil Present? Yes No				Red Parent M	faterial (F	21) (MLR	A 127, 147) unl	ess disturbed or problematic.
Depth (inches): No	Restrictive	Layer (if observed):							
									4
Remarks:	Depth (in	ches):						Hydric Soil	Present? Yes V No No
	Remarks:								



Photograph Direction North

Comments:		

Project/Site: MVP	City/County: _	Lewis		Sampling Date: 06/09/2016	
Applicant/Owner: MVP				Sampling Point: W-CD23,24-UP	
• •	Section, Tow	nship. Range: N/			
Landform (hillslope, terrace, etc.): Valley				Slope (%): 3-5	
Subregion (LRR or MLRA): LRRN Lat: 3					
Soil Map Unit Name: Vandalia silt loam, 15 to 25 perc			NWI classific		
		_			
Are climatic / hydrologic conditions on the site typical for	•				
Are Vegetation, Soil, or Hydrology		Are "Normal	Circumstances" p	oresent? Yes No	
Are Vegetation, Soil, or Hydrology	_ naturally problematic?	(If needed, e	xplain any answe	ers in Remarks.)	
SUMMARY OF FINDINGS – Attach site ma	p showing sampling	point locatio	ns, transects	s, important features, etc.	
Hydrophytic Vegetation Present? Yes	No V				
Hydric Soil Present? Yes	No. V	Sampled Area a Wetland?	Voc	No 🗸	
Wetland Hydrology Present? Yes	WILLIAM	a welland?	165		
Remarks: Cowardin Code: UPLAND H	IGM:	Water Type:			
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indica	ators (minimum of two required)	
Primary Indicators (minimum of one is required; check a			Surface Soil	` '	
	rue Aquatic Plants (B14)		Sparsely Vegetated Concave Surface (B8)		
I	ydrogen Sulfide Odor (C1)	. 5 . (20)	Drainage Pa		
1	xidized Rhizospheres on Li		Moss Trim L		
<u> </u>	resence of Reduced Iron (Cecent Iron Reduction in Tille	•	Dry-Season Crayfish Bur	Water Table (C2)	
	hin Muck Surface (C7)	ed 30118 (C0)	· ·	isible on Aerial Imagery (C9)	
	ther (Explain in Remarks)			tressed Plants (D1)	
Iron Deposits (B5)	()			Position (D2)	
Inundation Visible on Aerial Imagery (B7)			Shallow Aqu		
Water-Stained Leaves (B9)			Microtopogra	aphic Relief (D4)	
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)	
Field Observations:					
	Depth (inches):				
	Depth (inches):				
	Depth (inches):	Wetland H	ydrology Preser	nt? Yes No	
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring we	II, aerial photos, previous in	spections), if ava	lable:		
Remarks:					

Sampling	Point:	W-CD23,2	24-UP
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0.01	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 New Law of Dani's and
3				Total Number of Dominant Species Across All Strata:3 (B)
4				
5				Percent of Dominant Species That Are OBL FACW or FAC: 33% (A/B)
				That Are OBL, FACW, or FAC: 33% (A/B)
		-		Prevalence Index worksheet:
7	0	T-1-1-0		Total % Cover of: Multiply by:
50% of total cover: 0		= Total Cov		OBL species x 1 =
	20% 01	total cover		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')				FAC species x 3 =
1				
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				
7		·		Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9.				2 - Dominance Test is >50%
J	0	= Total Cov		3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 0		total cover	_	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')	20 /0 01	total cover		data in Remarks or on a separate sheet)
1. Glechoma hederacea	20	~	FACIL	Problematic Hydrophytic Vegetation ¹ (Explain)
	20		FACU_	
2. Microstegium vimineum			FAC	¹ Indicators of hydric soil and wetland hydrology must
3. Bromus inermis	15		<u>UPL</u>	be present, unless disturbed or problematic.
4. Symphyotrichum prenanthoides	10		F <u>AC</u>	Definitions of Four Vegetation Strata:
5. Packera aurea	10		FACW_	
6. Holcus lanatus	10		F <u>AC</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7. Dactylis glomerata	5		FACU	height.
8.				
9.				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11				
11	90			Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: 45		= Total Cov	4.0	of size, and woody plants less than 3.28 ft tall.
4.F.I	20% 01	total cover	10	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15)				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes No
50% of total cover:0	20% of	total cover	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			
	,			

Depth	Matrix	to the depth	needed to document the indicator or co Redox Features	illillilli tile at	sence of indicate	115.)	
(inches)	Color (moist)	%	Color (moist) % Type ¹ Lo		ture	Remarks	
0-6	5YR 4/3	100		S	<u> </u>		
6-9	5YR 4/3	100		Gr	SiL_		
				 -			
	-	· -					
		· -					
		· 					
		letion, RM=Re	educed Matrix, MS=Masked Sand Grains.	² Loca	tion: PL=Pore Lini		
-	Indicators:				Indicators for P		-
Histosol			Dark Surface (S7)	4.47 .4.40)		A10) (MLRA	•
Histic Ep Black Hi	oipedon (A2)		Polyvalue Below Surface (S8) (MLRAThin Dark Surface (S9) (MLRA 147, 1		Coast Prairie	e Redox (A16))
	en Sulfide (A4)		Loamy Gleyed Matrix (F2)	40)		oodplain Soils	: (F19)
	d Layers (A5)		Depleted Matrix (F3)		(MLRA 13		3 (1 13)
	ick (A10) (LRR N)		Redox Dark Surface (F6)			v Dark Surfac	e (TF12)
	d Below Dark Surface	e (A11)	Depleted Dark Surface (F7)		Other (Expla	in in Remarks	s)
	ark Surface (A12)		Redox Depressions (F8)				
	lucky Mineral (S1) (L	.RR N,	Iron-Manganese Masses (F12) (LRR I	N,			
	A 147, 148)		MLRA 136)	_,	3		
	Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 12:		³ Indicators of h		
	Redox (S5) Matrix (S6)		Piedmont Floodplain Soils (F19) (MLRRed Parent Material (F21) (MLRA 127		wetland hydro unless disturb		
	Layer (if observed):		Red Falent Material (F21) (MERA 121	, 147)	uniess disturb	ed of problem	nauc.
Type: gr							
Depth (in			_	Hydi	ric Soil Present?	Yes	No 🗸
	Ciles). <u>-</u>		_	Tiyui	ic John Fresent:	163	
emarks:							

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.898648	Lon.	-80.568238
STREAM/SITE ID AND SITE DESCR	IPTION:				W	-CD24, Temporary Access Road		
(% stream slope, watershed size {a	creage}, unaltered	or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetland Indicators								
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-CD24	Emergent	0.0094	Emergent					
						PART III - Advanced		n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0094						
		Jnit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0094			¢504.00		
Total Scrub-Shrub			0	_		\$564.00		
Total Forested			0	-				
Total Open Water			0					

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 06/09/2016				
Applicant/Owner: MVP		,			Sampling Point: W-CD24				
			on, Township, Range: N						
5 () <u> </u>				ve, convex, none): Concave					
Subregion (LRR or MLRA): LRRN					Datum: NAD 83				
Soil Map Unit Name: Vandalia silt loam, 1									
Are climatic / hydrologic conditions on the si	te typical f	or this time of year? Y	es / No	(If no, explain in R	Remarks.)				
Are Vegetation, Soil, or Hyd	ology	significantly distur	bed? Are "Norma	I Circumstances" p	present? Yes No				
Are Vegetation, Soil, or Hyd									
SUMMARY OF FINDINGS – Attac									
Hydrophytia Vagatatian Brasant?	res 🗸	No							
, , , ,		No	Is the Sampled Area						
	res 🔽	No	within a Wetland?	Yes	No				
Demonstra		HGM: Slope	Water Type:	RDWWD					
Abuts S-VV13		1 IOW. Clope	water type.	III VVVVD					
Abuls 5-VV13									
HYDROLOGY									
Wetland Hydrology Indicators:				Secondary Indica	ators (minimum of two required)				
Primary Indicators (minimum of one is requ	uired; chec	k all that apply)		Surface Soil Cracks (B6)					
Surface Water (A1)		True Aquatic Plants (getated Concave Surface (B8)				
High Water Table (A2)		Hydrogen Sulfide Od		✓ Drainage Pa	tterns (B10)				
Saturation (A3)		Oxidized Rhizosphere	es on Living Roots (C3)	Moss Trim L	, ,				
Water Marks (B1)		Presence of Reduced	, ,	Dry-Season Water Table (C2)					
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Burrows (C8)					
Drift Deposits (B3)		Thin Muck Surface (C			isible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)		Other (Explain in Rer	narks)		tressed Plants (D1)				
Iron Deposits (B5)					Position (D2)				
Inundation Visible on Aerial Imagery (I	37)			Shallow Aqu					
Water-Stained Leaves (B9)					aphic Relief (D4)				
Aquatic Fauna (B13)			1	FAC-Neutral	Test (D5)				
Field Observations:	N= 1	Danth (inches)							
		Depth (inches): Depth (inches):							
Saturation Present? Yes (includes capillary fringe)	No	_ Depth (inches):	Wetland I	Hydrology Preser	nt? Yes <u>/</u> No				
Describe Recorded Data (stream gauge, n	nonitoring	well, aerial photos, pre	vious inspections), if ava	ailable:					
Remarks:									

30'

Sapling/Shrub Stratum (Plot size: 15')

Tree Stratum (Plot size: __

Herb Stratum (Plot size: __ 1. Carex vulpinoidea

4. Persicaria sagittatum

3. Bromus inermis

7 Dulichium arundinaceum

5. Equisetum arvense

Woody Vine <u>Stratum</u> (Plot size: ______)

2. Carex lurida

6. Poa trivialis

- Use scientific n	ames of	plants.			ling Point	: <u>VV-CD24</u>	
\	Absolute	Dominant		Dominance Test work	sheet:		
)	% Cover	Species?	Status	Number of Dominant Sp That Are OBL, FACW, of		2	(A)
				Total Number of Domini Species Across All Stra		3	(B)
				Percent of Dominant Sp That Are OBL, FACW, o		67	_ (A/I
				Prevalence Index work	ksheet:		
	0	= Total Cov		Total % Cover of:		Multiply by:	
% of total cover:			_	OBL species	x 1 =	:	
15'				FACW species	x 2 =	·	_
				FAC species	x 3 =	·	_
				FACU species	x 4 =	:	_
				UPL species	x 5 =	:	_
				Column Totals:	(A)		(E
				Prevalence Index	= B/A =		
				Hydrophytic Vegetation	n Indicator	s:	
				1 - Rapid Test for H	lydrophytic '	Vegetation	
				✓ 2 - Dominance Tes	t is >50%		
			· ——	3 - Prevalence Inde	ex is ≤3.0 ¹		
)% of total cover: 0		Total Cover total cover	•	4 - Morphological A	daptations1	(Provide su	pporti
% of total cover:0	20% 01	total cover	:	data in Remarks	or on a sep	oarate sheet)
)	20	~	OBL	Problematic Hydror	hytic Veget	ation ¹ (Expl	ain)
	15		OBL				
	20		UPL	¹ Indicators of hydric soil			must
	5		OBL	be present, unless distu			
	10		FAC	Definitions of Four Ve	getation St	rata:	
	10		FACW	Tree – Woody plants, e	xcluding vin	es, 3 in. (7.6	cm)
	5		OBL	more in diameter at bre- height.	ast height ([DBH), regard	lless
			- <u></u>	Sapling/Shrub – Wood than 3 in. DBH and grea			
				m) tall. Herb – All herbaceous	non-woody) nlants reg	ardlag
		= Total Cov	er -	of size, and woody plan			u.oc
0% of total cover: <u>42.5</u> 15')	5_ 20% of	total cover	: 17	Woody vine – All wood height.	y vines grea	ater than 3.2	8 ft in
				Hydrophytic			
		-	· ——	Vegetation		No	
0% of total cover: 0		= Total Cov total cover	_	Present? Yes	s_ / _	No	

Remarks: (Include photo numbers here or on a separate sheet.)

Sampling Point: W-CD24

SOIL

Depth	ription: (Describe Matrix		Redo	x Features					
(inches)	Color (moist)	<u>%</u>	Color (moist)		ype ¹ Loc ²			Remarks	
0-8	5YR 4/2	90	5YR 4/6	10 (CSiL		Coal fraç	gs
8-15	5YR 4/2	80%	5YR 4/6		<u>M/PL</u>	<u>CSiL</u>		Coal frag	gs
Tupo: C-Co	oncentration, D=Dep	Notion PM	Poduced Metrix M	S-Maakad Sa	and Croins	² l continue D	II – Doro Linis	ng, M=Matrix.	
lydric Soil I		netion, Kivi=	Reduced Matrix, Mi	S=IVIASKEU Sa	and Grains.			roblematic Hy	dric Soils ³ :
Black His Hydroge Stratified 2 cm Mu Depleted Thick Da Sandy M MLRA Sandy G Sandy R Stripped	ipedon (A2)	LRR N,	Thin Dark Su Loamy Gleye Depleted Ma Redox Dark Depleted Dai Redox Depre Iron-Mangan MLRA 13 Umbric Surfa Piedmont Flo	elow Surface (urface (S9) (M ed Matrix (F2) trix (F3) Surface (F6) rk Surface (F7 essions (F8) ese Masses (6) ace (F13) (ML codplain Soils		7, 148) C F \ \ _ 0	Coast Prairie (MLRA 14 Piedmont Flo (MLRA 13 Very Shallow Other (Explain dicators of hyetland hydrol	odplain Soils	(F19) (TF12) etation and present,
Depth (inc	shoc):					Hydric Soil	Drocont2	Yes_ 🗸	No
Remarks:									



Photograph Direction South

Comments:		

Project/Site: MVP	City/County: _	Lewis		Sampling Date: 06/09/2016
Applicant/Owner: MVP				Sampling Point: W-CD23,24-UP
• •	Section, Tow	nship. Range: N/		
Landform (hillslope, terrace, etc.): Valley				Slope (%): 3-5
Subregion (LRR or MLRA): LRRN Lat: 3				
Soil Map Unit Name: Vandalia silt loam, 15 to 25 perc			NWI classific	
		_		
Are climatic / hydrologic conditions on the site typical for	•			
Are Vegetation, Soil, or Hydrology		Are "Normal	Circumstances" p	oresent? Yes No
Are Vegetation, Soil, or Hydrology	_ naturally problematic?	(If needed, e	xplain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	p showing sampling	point locatio	ns, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes	No V			
Hydric Soil Present? Yes	No. V	Sampled Area a Wetland?	Voc	No 🗸
Wetland Hydrology Present? Yes	WILLIAM	a welland?	165	
Remarks: Cowardin Code: UPLAND H	IGM:	Water Type:		
HYDROLOGY				
Wetland Hydrology Indicators:			Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one is required; check a			Surface Soil	` '
	rue Aquatic Plants (B14)		-	getated Concave Surface (B8)
I	ydrogen Sulfide Odor (C1)	. 5 . (20)	Drainage Pa	
1	xidized Rhizospheres on Li		Moss Trim L	
<u> </u>	resence of Reduced Iron (Cecent Iron Reduction in Tille	•	Dry-Season Crayfish Bur	Water Table (C2)
	hin Muck Surface (C7)	ed 30118 (C0)	· ·	isible on Aerial Imagery (C9)
	ther (Explain in Remarks)			tressed Plants (D1)
Iron Deposits (B5)	()			Position (D2)
Inundation Visible on Aerial Imagery (B7)			Shallow Aqu	
Water-Stained Leaves (B9)			Microtopogra	aphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)
Field Observations:				
	Depth (inches):			
	Depth (inches):			_
	Depth (inches):	Wetland H	ydrology Preser	nt? Yes No
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring we	II, aerial photos, previous in	spections), if ava	lable:	
Remarks:				

Sampling	Point:	W-CD23,2	24-UP
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0.01	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 New Law of Dani's and
3				Total Number of Dominant Species Across All Strata:3 (B)
4				
5				Percent of Dominant Species That Are OBL FACW or FAC: 33% (A/B)
				That Are OBL, FACW, or FAC: 33% (A/B)
		-		Prevalence Index worksheet:
7	0	T-1-1-0		Total % Cover of: Multiply by:
50% of total cover: 0		= Total Cov		OBL species x 1 =
	20% 01	total cover		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')				FAC species x 3 =
1				
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				
7		·		Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
9.				2 - Dominance Test is >50%
J	0	= Total Cov		3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 0		total cover	_	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')	20 /0 01	total cover		data in Remarks or on a separate sheet)
1. Glechoma hederacea	20	~	FACIL	Problematic Hydrophytic Vegetation ¹ (Explain)
	20		F <u>ACU</u>	
2. Microstegium vimineum			FAC	¹ Indicators of hydric soil and wetland hydrology must
3. Bromus inermis	15		<u>UPL</u>	be present, unless disturbed or problematic.
4. Symphyotrichum prenanthoides	10		F <u>AC</u>	Definitions of Four Vegetation Strata:
5. Packera aurea	10		FACW_	
6. Holcus lanatus	10		F <u>AC</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7. Dactylis glomerata	5		FACU	height.
8.				
9.				Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11				
11	90			Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: 45		= Total Cov	4.0	of size, and woody plants less than 3.28 ft tall.
4.F.I	20% 01	total cover	10	Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15)				height.
1				
2				
3				
4				Hydrophytic
5				Vegetation
	0	= Total Cov	er	Present? Yes No
50% of total cover:0	20% of	total cover	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			
	,			

Depth	Matrix	to the depth	needed to document the indicator or co Redox Features	illillilli tile at	sence of indicate	115.)	
(inches)	Color (moist)	%	Color (moist) % Type ¹ Lo		ture	Remarks	
0-6	5YR 4/3	100		S	<u> </u>		
6-9	5YR 4/3	100		Gr	SiL_		
		· -		 -			
	-	· -					
		· -					
		· 					
		letion, RM=Re	educed Matrix, MS=Masked Sand Grains.	² Loca	tion: PL=Pore Lini		
-	Indicators:				Indicators for P		-
Histosol			Dark Surface (S7)	4.47 .4.40)		A10) (MLRA	•
Histic Ep Black Hi	oipedon (A2)		Polyvalue Below Surface (S8) (MLRAThin Dark Surface (S9) (MLRA 147, 1		Coast Prairie	e Redox (A16))
	en Sulfide (A4)		Loamy Gleyed Matrix (F2)	40)		oodplain Soils	: (F19)
	d Layers (A5)		Depleted Matrix (F3)		(MLRA 13		3 (1 13)
	ick (A10) (LRR N)		Redox Dark Surface (F6)			v Dark Surfac	e (TF12)
	d Below Dark Surface	e (A11)	Depleted Dark Surface (F7)		Other (Expla	in in Remarks	s)
	ark Surface (A12)		Redox Depressions (F8)				
	lucky Mineral (S1) (L	.RR N,	Iron-Manganese Masses (F12) (LRR I	N,			
	A 147, 148)		MLRA 136)	_,	3		
	Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 12:		³ Indicators of h		
	Redox (S5) Matrix (S6)		Piedmont Floodplain Soils (F19) (MLRRed Parent Material (F21) (MLRA 127		wetland hydro unless disturb		
	Layer (if observed):		Red Falent Material (F21) (MERA 121	, 147)	uniess disturb	ed of problem	nauc.
Type: gr							
Depth (in			_	Hydi	ric Soil Present?	Yes	No 🗸
	Ciles). <u>-</u>		_	Tiyui	ic John Fresent:	163	
emarks:							

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.898177	Lon.	-80.568287
STREAM/SITE ID AND SITE DESCR	IPTION:				W	-CD36, Temporary Access Road		
(% stream slope, watershed size {a	creage}, unaltered	or impairments)						
FORM OF MITIGATION:								
DATE:	8/10/2015 WE		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-CD36	Emergent	0.0049	Emergent					
						PART III - Advanced		n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Υ
Total Impact		0.0049						
W. (1. 1. 0.		Jnit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent Total Scrub-Shrub			0.0049	-		\$294.00		
Total Scrub-Shrub Total Forested			0	-		\$294.00		
			-	-				
otal Open Water			0	1				

Project/Site: MVP		City/Coun	_{ty:} Lewis		Sampling Date: 06/09/2016
Applicant/Owner: MVP		,			Sampling Point: W-CD36
		Section, T	ownship, Range: N		_
Landform (hillslope, terrace, etc.): Valley					Slone (%)· 0-3
Subregion (LRR or MLRA): LRRN					Datum: NAD 83
Soil Map Unit Name: Vandalia silt loam,					
			4		
Are climatic / hydrologic conditions on the s		· ·			
Are Vegetation, Soil, or Hyd				Circumstances" p	oresent? Yes No
Are Vegetation, Soil, or Hyd	drologyn	aturally problematic?	(If needed, e	explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Atta	ch site map	showing sampli	ng point locatio	ons, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes V N	0ls :			
Hydric Soil Present?			the Sampled Area	Yes 🗸	Al -
Wetland Hydrology Present?		o	thin a Wetland?	res	No
Remarks: Cowardin Code: PEM	HG	M: Slope	Water Type:	RD\\\\\\\\	
Adjacent to S-VV13	110	W. Glope	water type.	IXE VVVVIN	
Adjacent to 3-VV13					
HYDROLOGY					
Wetland Hydrology Indicators:					tors (minimum of two required)
Primary Indicators (minimum of one is rec	-		_	Surface Soil	` '
Surface Water (A1)		Aquatic Plants (B14)			getated Concave Surface (B8)
High Water Table (A2)	· · · · · · · · · · · · · · · · · · ·	rogen Sulfide Odor (C		✓ Drainage Par	
Saturation (A3) Water Marks (B1)		lized Rhizospheres of ence of Reduced Iron		Moss Trim Li	Water Table (C2)
Sediment Deposits (B2)		ent Iron Reduction in		Crayfish Buri	
Drift Deposits (B3)		Muck Surface (C7)	Tilled Collo (CO)		sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		er (Explain in Remark	s)		tressed Plants (D1)
Iron Deposits (B5)	_		-,	Geomorphic	
Inundation Visible on Aerial Imagery	(B7)			Shallow Aqui	
Water-Stained Leaves (B9)					phic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:					
Surface Water Present? Yes	_ No <u> </u>	oth (inches):	_		
Water Table Present? Yes	_ No Dep	oth (inches):	_		
	_ No <u> </u>	oth (inches):	Wetland H	lydrology Presen	t? Yes <u>/</u> No
(includes capillary fringe) Describe Recorded Data (stream gauge,	monitoring well, a	aerial photos, previou	s inspections), if ava	ilable:	
33.,	3 · , ·	,	,		
Remarks:					
Ĭ					

30' ____)

Sapling/Shrub Stratum (Plot size: 15')

Tree Stratum (Plot size: ___

Herb Stratum (Plot size: ___

6. Carex vulpinoidea

7. Carex lurida

2. Bromus inermis

_{5.} Poa trivialis

1. Microstegium vimineum

3. Symphyotrichum prenanthoides

Woody Vine Stratum (Plot size: 15')

4. Dichanthelium clandestinum

– Use scientific na				Sampling Point: W-CD3	
)	Absolute % Cover	Dominant Species?		Dominance Test worksheet:	
	70 GGVC1		Otatas	Number of Dominant Species That Are OBL, FACW, or FAC: 5	(A)
				Total Number of Dominant Species Across All Strata: 6	(B)
				Percent of Dominant Species That Are OBL, FACW, or FAC: 83	(A/E
				Prevalence Index worksheet:	
	0	= Total Cov		Total % Cover of: Multiply by	<u>y:</u>
% of total cover: 0		total cover	•	OBL species x 1 =	
15'				FACW species x 2 =	
				FAC species x 3 =	
				FACU species x 4 =	
				UPL species x 5 =	
				Column Totals: (A)	(B)
				Prevalence Index = B/A =	
				Hydrophytic Vegetation Indicators:	
				1 - Rapid Test for Hydrophytic Vegetation	on
				✓ 2 - Dominance Test is >50%	
	0	Total Cox		3 - Prevalence Index is ≤3.0 ¹	
% of total cover: 0		Total Cover total cover	_	4 - Morphological Adaptations ¹ (Provide	supportin
)	2070 01	total oover	·	data in Remarks or on a separate sh	
/	20	~	FAC	Problematic Hydrophytic Vegetation ¹ (Ex	xplain)
	20	~	UPL		
des	10	~	FAC	¹ Indicators of hydric soil and wetland hydrolo	
_	10	~	FAC	be present, unless disturbed or problematic.	
_	10	~	FACW	Definitions of Four Vegetation Strata:	
	10		OBL	Tree – Woody plants, excluding vines, 3 in. (
	5		OBL	more in diameter at breast height (DBH), reg height.	gardless o
				Sapling/Shrub – Woody plants, excluding vithan 3 in. DBH and greater than or equal to m) tall.	
	85	= Total Cov	rer	Herb – All herbaceous (non-woody) plants, r of size, and woody plants less than 3.28 ft ta	
0% of total cover: <u>42.5</u> 15')	20% of	total cover	17	Woody vine – All woody vines greater than height.	3.28 ft in
				Hydrophytic	
			·	Vegetation Present? Yes ✓ No	
		= Total Cov	er	i legelit: 169 NO	

Remarks: (Include photo numbers here or on a separate sheet.)

Depth	ription: (Describe	to the dopt		x Features	0. 0. 00		marcatorol,	
inches)	Color (moist)	%	Color (moist)	%Type	Loc ²	Texture	Rema	arks
0-4	5YR 4/3	100				SiL		
4-16	5YR 4/2	90	5YR 4/6	10C	M	SiL		
	-							
		·						
								
	-	- ——						
	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	S=Masked Sand	Grains.		Pore Lining, M=M	
-	Indicators:		5 . 6 .	(0-)				ic Hydric Soils ³ :
_ Histosol			Dark Surface		/MI DA 447		n Muck (A10) (ML	•
Histic Ep Black Hi	oipedon (A2)			elow Surface (S8) urface (S9) (MLR	•		st Prairie Redox (ILRA 147, 148)	A16)
	en Sulfide (A4)			ed Matrix (F2)	A 147, 140)		mont Floodplain	Soile (F10)
	d Layers (A5)		Depleted Ma				/ILRA 136, 147)	30113 (1-19)
	ick (A10) (LRR N)		Redox Dark				Shallow Dark Su	ırface (TF12)
	d Below Dark Surface	e (A11)		rk Surface (F7)			er (Explain in Rem	, ,
	ark Surface (A12)		Redox Depre	essions (F8)				
	lucky Mineral (S1) (L	_RR N,		ese Masses (F12	2) (LRR N,			
	A 147, 148)		MLRA 13	•		3		
	Gleyed Matrix (S4)			ice (F13) (MLRA			tors of hydrophyti	
	ledox (S5)			oodplain Soils (F1			nd hydrology mus	
	Matrix (S6) _ayer (if observed):		Red Parent N	Material (F21) (M	LRA 127, 14	7) unies:	s disturbed or pro	biematic.
	Layer (ii Observeu).	•						
Type:	ahaa\.					Usalaia Sail Da	esent? Yes	✓ No
	ches):					Hydric Soil Pr	esent? res	No
emarks:								



Photograph Direction South

Comments:	

Project/Site: MVP	City/County:	Lewis		Sampling Date: 06/09/2016
Applicant/Owner: MVP				Sampling Point: W-CD25,36-UP
Investigator(s): HBS, CV	Section, Tow	nship. Range: N		
				Slope (%): 3-5
Subregion (LRR or MLRA): LRRN Lat: 38.8980				
Soil Map Unit Name: Vandalia silt loam, 15 to 25 percent slop				
			NWI classific	
Are climatic / hydrologic conditions on the site typical for this time	-			
Are Vegetation, Soil, or Hydrology signification		Are "Norma	I Circumstances" p	present? Yes No
Are Vegetation, Soil, or Hydrology naturall	ly problematic?	(If needed,	explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	ving sampling	point location	ons, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes No_ V	,			
Hydric Soil Present? Yes No_	,	Sampled Area a Wetland?	Vac	No 🗸
Wetland Hydrology Present? Yes No	<u></u>	i a welland?	1es	
Remarks: Cowardin Code: UPLAND HGM:	L	Water Type:		
HYDROLOGY				
Wetland Hydrology Indicators:			•	ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that ap			Surface Soil	` '
	tic Plants (B14)			getated Concave Surface (B8)
	Sulfide Odor (C1)	inima Danta (CO)	Drainage Pa	
	Rhizospheres on Li of Reduced Iron (C	-	Moss Trim L	Water Table (C2)
	n Reduction in Till	•	Crayfish Bur	
	Surface (C7)	ca cono (co)	· ·	isible on Aerial Imagery (C9)
	plain in Remarks)			tressed Plants (D1)
Iron Deposits (B5)	•			Position (D2)
Inundation Visible on Aerial Imagery (B7)			Shallow Aqu	itard (D3)
Water-Stained Leaves (B9)			Microtopogra	aphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)
Field Observations:				
Surface Water Present? Yes No Depth (inc				
Water Table Present? Yes No Depth (inc				
Saturation Present? Yes No Depth (includes capillary fringe)	ches):	Wetland I	Hydrology Preser	nt? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial p	ohotos, previous ir	spections), if ava	ailable:	
Damarka				
Remarks:				

Sampling	Point:	W-CD25	,36-UP
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30'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
2.				
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				` ,
5	-		<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)
6				Prevalence Index worksheet:
7		· <u></u>		Total % Cover of: Multiply by:
500/ //		= Total Cov		OBL species x 1 =
50% of total cover: 0	20% of	total cover	:	FACW species x 2 =
Japinig/Ornab Ottatum (1 lot size				FAC species x 3 =
1				
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	0	= Total 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. Glechoma hederacea	20		F <u>ACU</u>	Problematic Hydrophytic Vegetation (Explain)
2. Microstegium vimineum	20		FAC	1
3. Bromus inermis	15		UPL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Symphyotrichum prenanthoides	10		FAC	Definitions of Four Vegetation Strata:
_{5.} Packera aurea	10		FACW	Definitions of Four Vegetation Strata.
6. Holcus lanatus	10		FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Dactylis glomerata	5		FACU	more in diameter at breast height (DBH), regardless of height.
8				noight.
9.		-		Sapling/Shrub – Woody plants, excluding vines, less
10.				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
			·	, '
11	90	T-1-1-0		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		= Total Cover total cover		or size, and woody plants less than 3.26 it tall.
Woody Vine Stratum (Plot size: 15')	20 /0 01	total cover		Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2				
3			·	
4		· -		Hydrophytic
5	0			Vegetation Present? Yes No _✓
500/ -(1-1-1		= Total Cov	_	riesent: res No
50% of total cover: 0		total cover	:0	
Remarks: (Include photo numbers here or on a separate s	neet.)			

Depth	Matrix	to the depth	needed to document the indicator or co Redox Features	illillilli tile at	sence of indicate	115.)	
(inches)	Color (moist)	%	Color (moist) % Type ¹ Lo		ture	Remarks	
0-6	5YR 4/3	100		S	<u> </u>		
6-9	5YR 4/3	100		Gr	SiL_		
		· -		 -			
	-	· -					
		· -					
		· 					
		letion, RM=Re	educed Matrix, MS=Masked Sand Grains.	² Loca	tion: PL=Pore Lini		
-	Indicators:				Indicators for P		-
Histosol			Dark Surface (S7)	4.47 .4.40)		A10) (MLRA	•
Histic Ep Black Hi	oipedon (A2)		Polyvalue Below Surface (S8) (MLRAThin Dark Surface (S9) (MLRA 147, 1		Coast Prairie	e Redox (A16))
	en Sulfide (A4)		Loamy Gleyed Matrix (F2)	40)		oodplain Soils	: (F19)
	d Layers (A5)		Depleted Matrix (F3)		(MLRA 13		3 (1 13)
	ick (A10) (LRR N)		Redox Dark Surface (F6)			v Dark Surfac	e (TF12)
	d Below Dark Surface	e (A11)	Depleted Dark Surface (F7)		Other (Expla	in in Remarks	s)
	ark Surface (A12)		Redox Depressions (F8)				
	lucky Mineral (S1) (L	.RR N,	Iron-Manganese Masses (F12) (LRR I	N,			
	A 147, 148)		MLRA 136)	_,	3		
	Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 12:		³ Indicators of h		
	Redox (S5) Matrix (S6)		Piedmont Floodplain Soils (F19) (MLRRed Parent Material (F21) (MLRA 127		wetland hydro unless disturb		
	Layer (if observed):		Red Falent Material (F21) (MERA 121	, 147)	uniess disturb	ed of problem	nauc.
Type: gr							
Depth (in			_	Hydi	ric Soil Present?	Yes	No 🗸
	Ciles). <u>-</u>		-	Tiyui	ic John Fresent:	163	
emarks:							

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	38.898021	Lon.	-80.568159
STREAM/SITE ID AND SITE DESCR	RIPTION:				W	-CD25, Temporary Access Road		
(% stream slope, watershed size {a	creage}, unaltered	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-CD25	Emergent	0.01	Emergent					
						PART III - Advanced		n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.01						
W		Jnit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent Total Scrub-Shrub			0.01	-		\$600.00		
Total Forested			0	-		\$600.00		
			0	-				
Гotal Open Water			U	1				

Project/Site: MVP		City/County: Lewis		Sampling Date: 06/09/2016
Applicant/Owner: MVP				Sampling Point: W-CD25
		Section, Township, R		_
Landform (hillslope, terrace, etc.): Valley				Slone (%): 0-3
Subregion (LRR or MLRA): LRRN		•	ng:80.568181	Datum: NAD 83
Soil Map Unit Name: Vandalia silt loam,			NWI classific	
•				
Are climatic / hydrologic conditions on the	* *			
Are Vegetation, Soil, or Hy			"Normal Circumstances" p	present? Yes No
Are Vegetation, Soil, or Hy	drologynatur	ally problematic? (If r	needed, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Atta	ch site map sho	wing sampling point	locations, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes _ V No_			
Hydric Soil Present?	Yes No	is the bample	,	M -
Wetland Hydrology Present?	Yes / No_	within a wette	ind? Yes <u>*</u>	No
Remarks: Cowardin Code: PEM	HGM:	Slone Water	Type: RPWWN	
Adjacent to S-VV13	i ioivi.	olope water	Type. KF WWWW	
Adjacent to 3-VV13				
HYDROLOGY				
Wetland Hydrology Indicators:			·	ators (minimum of two required)
Primary Indicators (minimum of one is rec	•		Surface Soil	` '
Surface Water (A1)		uatic Plants (B14)		getated Concave Surface (B8)
High Water Table (A2)		n Sulfide Odor (C1)	✓ Drainage Pa	
Saturation (A3) Water Marks (B1)		Rhizospheres on Living Roo e of Reduced Iron (C4)		Water Table (C2)
Sediment Deposits (B2)	· 	ron Reduction in Tilled Soils	· ·	
Drift Deposits (B3)		ck Surface (C7)		isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		xplain in Remarks)		tressed Plants (D1)
Iron Deposits (B5)		,	Geomorphic	` '
Inundation Visible on Aerial Imagery	(B7)		Shallow Aqu	, ,
Water-Stained Leaves (B9)			Microtopogra	aphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)
Field Observations:				
Surface Water Present? Yes	_ No Depth (nches):		
Water Table Present? Yes	_ No Depth (nches):		
	_ No <u> </u>	nches): W	etland Hydrology Preser	nt? Yes <u>/</u> No
(includes capillary fringe) Describe Recorded Data (stream gauge,	monitoring well, aeria	l photos, previous inspection	s), if available:	
33.,		.,,,	-,	
Remarks:				
Ĭ				

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001	Absolute	Dominant	Indicator	Dominance Test worksheet:		
ree Stratum (Plot size: 30')	% Cover	Species?	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/B)
				Prevalence Index worksheet:		
	0	Total Cov		Total % Cover of:	Multiply by:	
50% of total cover: 0				OBL species x 1 :	=	
Sapling/Shrub Stratum (Plot size: 15')	2070 01	total covor.		FACW species x 2 :	=	
· · · · · · · · · · · · · · · · · · ·				FAC species x 3 =	=	
				FACU species x 4		
·		-		UPL species x 5		
·				Column Totals: (A)		
		-		Column rotals (7.)		. (5)
		-		Prevalence Index = B/A = _		
				Hydrophytic Vegetation Indicato	rs:	
			-	1 - Rapid Test for Hydrophytic	Vegetation	
·				✓ 2 - Dominance Test is >50%		
				3 - Prevalence Index is ≤3.0 ¹		
		= Total Cov	_	4 - Morphological Adaptations	1 (Provide supp	ortin
50% of total cover:0	20% of	total cover:		data in Remarks or on a se		
Herb Stratum (Plot size: 5')	20			Problematic Hydrophytic Vege		1)
Microstegium vimineum	30		F <u>AC</u>		()	,
Symphyotrichum prenanthoides	20		FAC	¹ Indicators of hydric soil and wetlar	nd hydrology m	ust
Verbesina alternifolia	10		FAC	be present, unless disturbed or pro		uot
Dichanthelium clandestinum	10		F <u>AC</u>	Definitions of Four Vegetation S	trata:	
Poa trivialis	10		FACW_	Topo Mando planta avaludina viir	0:- (7.C -	\
Acer negundo	5		F <u>AC</u>	Tree – Woody plants, excluding vir more in diameter at breast height (
Persicaria virginiana	5		FAC	height.	,,g	
J				Sapling/Shrub – Woody plants, ex	valudina vines	locc
				than 3 in. DBH and greater than or	,	
0				m) tall.	·	•
1	· <u> </u>			Herb – All herbaceous (non-wood)	v) plants regard	lless
	90	= Total Cov	er	of size, and woody plants less than		11000
50% of total cover: 45	20% of	total cover:	18	Woody vine – All woody vines gre	otor than 2 20 t	ft in
Voody Vine Stratum (Plot size:15')				height.		LIII
				The ignored		
).		·	· ·			
ł.				Hydrophytic Vegetation		
l					No	
; ;	0	– Total Cov				
i		= Total Cov	_			
550% of total cover:0	20% of	= Total Cov total cover:	_			
i	20% of		_			
550% of total cover:0	20% of		_			
550% of total cover:0	20% of		_			

Color (moist) % Type¹ Loc² Texture 0-4 5YR 4/3 100 SiL 4-16 5YR 4/2 90 5YR 4/6 10 C M SiL	Remarks
4-16	
	-
pe: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 2Location: PL=Pore Lining,	
	lematic Hydric Soils ³ :
Histosol (A1) Dark Surface (S7) 2 cm Muck (A10 Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Re	
Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Coast Prairie Re Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) (MLRA 147, 147, 148)	
Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Piedmont Flood	
Stratified Layers (A5) Depleted Matrix (F3) (MLRA 136, 1	
	ark Surface (TF12)
Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Other (Explain in	n Remarks)
Thick Dark Surface (A12) Redox Depressions (F8)	
Sandy Mucky Mineral (S1) (LRR N, Iron-Manganese Masses (F12) (LRR N,	
MLRA 147, 148) MLRA 136)	
	ophytic vegetation and
Sandy Redox (S5) — Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology Stripped Matrix (S6) — Red Parent Material (F21) (MLRA 127, 147) unless disturbed of	y must be present,
estrictive Layer (if observed):	Ji problematic.
Type:	
	es 🗸 No
emarks:	es <u> </u>
marks.	



Photograph Direction North

Comments:		

Project/Site: MVP	City/County:	Lewis		Sampling Date: 06/09/2016
Applicant/Owner: MVP				Sampling Point: W-CD25,36-UP
Investigator(s): HBS, CV	Section, Tov	vnship. Range: N		
				Slope (%): 3-5
Subregion (LRR or MLRA): LRRN Lat: 38.898				
Soil Map Unit Name: Vandalia silt loam, 15 to 25 percent slop				
			NWI classific	
Are climatic / hydrologic conditions on the site typical for this time	-			
Are Vegetation, Soil, or Hydrology signific		Are "Norma	I Circumstances" p	present? Yes No
Are Vegetation, Soil, or Hydrology natura	Illy problematic?	(If needed,	explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map show	wing sampling	point location	ons, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes No	/			
Hydric Soil Present? Yes No	Is the Sampled Area within a Wetland?		Vas	No 🗸
Wetland Hydrology Present? Yes No	v within	n a vvenanu :	1es	
Remarks: Cowardin Code: UPLAND HGM:	l .	Water Type:		
HYDROLOGY				
Wetland Hydrology Indicators:			•	ators (minimum of two required)
Primary Indicators (minimum of one is required; check all that a			Surface Soil	` '
	atic Plants (B14)			getated Concave Surface (B8)
	Sulfide Odor (C1)		Drainage Pa	
	Rhizospheres on L of Reduced Iron (-	Moss Trim L	Water Table (C2)
	on Reduction in Til	•	Crayfish Bur	
	k Surface (C7)	100 00113 (00)		isible on Aerial Imagery (C9)
	plain in Remarks)			tressed Plants (D1)
Iron Deposits (B5)				Position (D2)
Inundation Visible on Aerial Imagery (B7)			Shallow Aqu	itard (D3)
Water-Stained Leaves (B9)			Microtopogra	aphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)
Field Observations:				
Surface Water Present? Yes No Depth (ir				
Water Table Present? Yes No Depth (ir				
Saturation Present? Yes No Depth (ir (includes capillary fringe)	nches):	Wetland I	Hydrology Preser	nt? Yes No
Describe Recorded Data (stream gauge, monitoring well, aerial	photos, previous in	nspections), if ava	ailable:	
Domorko				
Remarks:				

Sampling	Point:	W-CD25	,36-UP
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30'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
2.				
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				` ,
5	-		<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)
6				Prevalence Index worksheet:
7		· <u></u>		Total % Cover of: Multiply by:
500/ //		= Total Cov		OBL species x 1 =
50% of total cover: 0	20% of	total cover	:	FACW species x 2 =
Japinig/Ornab Ottatum (1 lot size				FAC species x 3 =
1				
2				FACU species x 4 =
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	0	= Total 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. Glechoma hederacea	20		F <u>ACU</u>	Problematic Hydrophytic Vegetation (Explain)
2. Microstegium vimineum	20		FAC	1
3. Bromus inermis	15		UPL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Symphyotrichum prenanthoides	10		FAC	Definitions of Four Vegetation Strata:
_{5.} Packera aurea	10		FACW	Definitions of Four Vegetation Strata.
6. Holcus lanatus	10		FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Dactylis glomerata	5		FACU	more in diameter at breast height (DBH), regardless of height.
8				noight.
9.		-		Sapling/Shrub – Woody plants, excluding vines, less
10.				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
			·	, '
11	90	T-1-1-0		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		= Total Cover total cover		or size, and woody plants less than 3.26 it tall.
Woody Vine Stratum (Plot size: 15')	20 /0 01	total cover		Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2				
3			·	
4		· -		Hydrophytic
5	0			Vegetation Present? Yes No _✓
500/ -(1-1-1		= Total Cov	_	riesent: res No
50% of total cover: 0		total cover	:0	
Remarks: (Include photo numbers here or on a separate s	neet.)			

Depth	Matrix	to the depth	needed to document the indicator or cor Redox Features	iiiiiii tile abs	sence of indicate)is.j	
(inches)	Color (moist)	%	Color (moist) % Type ¹ Loc			Remarks	
0-6	5YR 4/3	100		Si	<u>L</u>		
6-9	5YR 4/3	100		Gr	SiL_		
	-	· -					
		· -					
		· 					
		letion, RM=Re	educed Matrix, MS=Masked Sand Grains.		on: PL=Pore Lini		
-	Indicators:				Indicators for Pi		-
Histosol			Dark Surface (S7)	4.47 .4.40)		A10) (MLRA	•
Histic Ep Black Hi	oipedon (A2)		Polyvalue Below Surface (S8) (MLRA 1Thin Dark Surface (S9) (MLRA 147, 14		Coast Prairie (MLRA 14)
	en Sulfide (A4)		Loamy Gleyed Matrix (F2)	10)		oodplain Soils	: (F19)
	d Layers (A5)		Depleted Matrix (F3)		(MLRA 13		s (1 13)
	ick (A10) (LRR N)		Redox Dark Surface (F6)			v Dark Surfac	e (TF12)
	d Below Dark Surface	e (A11)	Depleted Dark Surface (F7)			in in Remarks	
	ark Surface (A12)		Redox Depressions (F8)				
	lucky Mineral (S1) (L	.RR N,	Iron-Manganese Masses (F12) (LRR N	l,			
	A 147, 148)		MLRA 136)		3		
	Gleyed Matrix (S4)		Umbric Surface (F13) (MLRA 136, 122		³ Indicators of h		
	Redox (S5) Matrix (S6)		Piedmont Floodplain Soils (F19) (MLR.Red Parent Material (F21) (MLRA 127)		wetland hydro unless disturb		
	Layer (if observed):		Red Farent Material (F21) (MICRA 121)	, 147)	uniess disturb	ed of problem	natic.
_{Type:} gr							
Depth (in			_	Hydri	c Soil Present?	Yes	No 🗸
	Ciles). <u>-</u>		-	Hydri	C John Fresent:	163	
emarks:							

USACE FILE NO./Project Name:		Mountain Valley Pipeline				38.897805	Lon.	-80.568155
STREAM/SITE ID AND SITE DESCR	RIPTION:				W	-CD26, Temporary Access Road		
(% stream slope, watershed size {a	creage}, unaltered	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-CD26	Emergent	0.0114	Emergent					
						PART III - Advanced		n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0114						
		Jnit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent Total Scrub-Shrub			0.0114			\$684.00		
Total Scrub-Shrub Total Forested			0	-		\$684.00		
			0					
Total Open Water			U	1				

Project/Site: MVP	City/C	_{ounty:} Lewis		Sampling Date: 06/09/2016
Applicant/Owner: MVP				Sampling Point: W-CD26
	Section			_ ,
Landform (hillslope, terrace, etc.): Floodpla	ain Local reli			Slope (%): 0-3
Subregion (LRR or MLRA): LRRN	Lat: 38.897495			
Soil Map Unit Name: Vandalia silt loam, 15				
Are climatic / hydrologic conditions on the site	typical for this time of year? Y	es <u> /</u> No ((If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydro	logy significantly distur	bed? Are "Normal	Circumstances" p	oresent? Yes No
Are Vegetation, Soil, or Hydro				
SUMMARY OF FINDINGS – Attach				
Hydrophytic Vegetation Present? Ye	es No			
	es <u>/</u> No	Is the Sampled Area		
	es / No	within a Wetland?	Yes	No
Damaria	HGM: Riverine	Water Type:	RPWWN	
Adjacent to S-VV13				
Adjacent to 3-VV13				
LIVEROLOGY				
HYDROLOGY			Cocondon India	toro (minimum of two required)
Wetland Hydrology Indicators:	rod, aboak all that apply)			tors (minimum of two required)
Primary Indicators (minimum of one is require			Surface Soil	
Surface Water (A1)	True Aquatic Plants (Hydrogen Sulfide Ode		✓ Drainage Pat	getated Concave Surface (B8)
High Water Table (A2) Saturation (A3)	✓ Oxidized Rhizosphere		Moss Trim Li	
Water Marks (B1)	Presence of Reduced	=		Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reductio	, ,	Crayfish Buri	
Drift Deposits (B3)	Thin Muck Surface (C		· ·	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Ren			tressed Plants (D1)
Iron Deposits (B5)	Outer (Explain in Nei	idikoj	Geomorphic	` '
Inundation Visible on Aerial Imagery (B7	7)		Shallow Aqui	
Water-Stained Leaves (B9)	• /			aphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	
Field Observations:				()
Surface Water Present? Yes	No Depth (inches):			
	No Depth (inches):			
	No Depth (inches):		lydrology Presen	it? Yes ✔ No
(includes capillary fringe)				
Describe Recorded Data (stream gauge, mo	onitoring well, aerial photos, pre	vious inspections), if ava	liable:	
Remarks:				

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

30'

Sapling/Shrub Stratum (Plot size: 15')

2. Carex vulpinoidea

Woody Vine <u>Stratum</u> (Plot size: ______)

Tree Stratum (Plot size: __

Herb Stratum (Plot size: __ 1. Bromus inermis

4. Scirpus atrovirens

6. Symphyotrichum prenanthoides

3. Holcus lanatus

5. Trifolium repens

7. Phleum pratense

___)

50% of total cover: ___0

50% of total cover: ______ 20% of total cover:____ 20

50% of total cover: 0 20% of total cover:

50% of total cover: 0 20% of total cover: 0

nes of p	olants.		Sampling I	Poin	t: <u>W-CD26</u>	
	Dominant		Dominance Test worksheet	:		
6 Cover	Species?	<u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC		2	_ (A)
			Total Number of Dominant Species Across All Strata:	_	3	_ (B)
			Percent of Dominant Species That Are OBL, FACW, or FAC		66%	_ (A/B
			Prevalence Index workshee	t:		
0 -			Total % Cover of:		Multiply by:	
	: Total Cov	^	OBL species		=	
20% 01 1	otal cover		FACW species			
			FAC species		=	
					=	_
			UPL species		= =	
			Column Totals:	(A)		(B)
			Prevalence Index = B/A	۱ = _		
			Hydrophytic Vegetation Ind	icato	rs:	
			1 - Rapid Test for Hydrop			
			2 - Dominance Test is >5		J	
			3 - Prevalence Index is ≤			
=	: Total Cov	_	4 - Morphological Adapta		1 (Provide su	pportir
20% of t	otal cover	:0	data in Remarks or or			
			Problematic Hydrophytic		•	,
25		<u>UPL</u>		vege	tation (Expi	ali 1 <i>)</i>
25 15	/	OBL FAC	¹ Indicators of hydric soil and v			must
10			be present, unless disturbed	or pro	blematic.	
10		OBL	Definitions of Four Vegetati	on S	trata:	
		FACU	Tree – Woody plants, excludi	na vir	nes 3 in <i>(</i> 7 f	cm) c
10 5		F <u>ACU</u>	more in diameter at breast he height.			
			Sapling/Shrub – Woody plan than 3 in. DBH and greater th m) tall.			
100 =	Total Cov	/er	Herb – All herbaceous (non-vof size, and woody plants less			ardless
20% of t	otal cover	: 20	Woody vine – All woody vine height.	s gre	ater than 3.2	8 ft in
	Total Covered cover	^	Hydrophytic Vegetation Present? Yes	<u>, </u>	No	

Remarks: (Include photo numbers here or on a separate sheet.)

Depth	ription: (Describe	to the dopt		x Features	o. o. oo		or maioate	,	
(inches)	Color (moist)	%	Color (moist)	%Type	Loc ²	Texture		Remarks	
0-5	5YR 4/2	100				SiL			
5-14	5YR 4/2	90	5YR 4/6	<u>10</u> C	M/PL	CSiL			
							-		
									
	-	· ——				-			
		· ——							
									
						2			
	oncentration, D=Dep Indicators:	letion, RM=	Reduced Matrix, MS	S=Masked Sand	Grains.			ng, M=Matrix. roblematic Hy	rdric Soils ³ :
			Dorle Curtoso	(07)				_	
_ Histosol	oipedon (A2)		Dark Surface	e(S7) elow Surface (S8)	/MI DA 1/17		•	A10) (MLRA 1 Redox (A16)	47)
_ Flistic Ep _ Black Hi				irface (S9) (MLR	•	0	MLRA 14)		
	n Sulfide (A4)			ed Matrix (F2)	, , ,	Pi		oodplain Soils	(F19)
	d Layers (A5)		Depleted Ma				(MLRA 13		,
_ 2 cm Mu	ick (A10) (LRR N)		Redox Dark			Ve	ery Shallow	/ Dark Surface	(TF12)
	d Below Dark Surface	e (A11)		rk Surface (F7)		0	ther (Explai	in in Remarks))
	ark Surface (A12)		Redox Depre						
	Mucky Mineral (S1) (L	_RR N,		ese Masses (F12	2) (LRR N ,				
	A 147, 148) Gleyed Matrix (S4)		MLRA 13	b) ice (F13) (MLRA	126 122\	³ Indi	iootoro of h	ydrophytic veg	otation and
	ledox (S5)			odplain Soils (F1				logy must be p	
	Matrix (S6)			Material (F21) (M				ed or problema	
	_ayer (if observed):					1			
Type:									
Depth (inc	ches):					Hydric Soil	Present?	Yes 🗸	No
emarks:	, -					1 -		<u> </u>	. '



Photograph Direction North

Comments:		

Project/Site: MVP	City/County:	_ewis	Sampling Date: 06/09/2016
Applicant/Owner: MVP		State: WV	Sampling Point: W-CD26
	Section, Towr		<u> </u>
Landform (hillslope, terrace, etc.): Floodplain			Slone (%): 0-3
Subregion (LRR or MLRA): LRRN	1 at: 38 897724	-80 568227	Olope (70)
Soil Map Unit Name: Vandalia silt loam, 15 to			·
Are climatic / hydrologic conditions on the site t			
Are Vegetation, Soil, or Hydrolo	gy significantly disturbed?	Are "Normal Circumstances"	present? Yes No
Are Vegetation, Soil, or Hydrolo	gy naturally problematic?	(If needed, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS – Attach	site map showing sampling	point locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes	No_ V		
Hydric Soil Present? Yes	No. V	Sampled Area	🗸
Wetland Hydrology Present? Yes	No within	a Wetland? Yes	No
Remarks: Cowardin Code: UPLAND		Water Type:	
Cowardin Code. OPLAND	TIGIVI.	water Type.	
HYDROLOGY			
Wetland Hydrology Indicators:		Secondary Indic	cators (minimum of two required)
Primary Indicators (minimum of one is require	d; check all that apply)	Surface Soi	il Cracks (B6)
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Ve	egetated Concave Surface (B8)
High Water Table (A2)	Hydrogen Sulfide Odor (C1)	Drainage P	atterns (B10)
Saturation (A3)	Oxidized Rhizospheres on Liv	ring Roots (C3) Moss Trim I	Lines (B16)
Water Marks (B1)	Presence of Reduced Iron (C-	1) Dry-Seasor	Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reduction in Tille	d Soils (C6) Crayfish Bu	rrows (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 S	Stressed Plants (D1)
Iron Deposits (B5)			c Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aq	uitard (D3)
Water-Stained Leaves (B9)			raphic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutra	al Test (D5)
Field Observations:			
Surface Water Present? Yes No	Depth (inches):		
	Depth (inches):		4
Saturation Present? Yes No (includes capillary fringe)	Depth (inches):	Wetland Hydrology Prese	ent? Yes No
Describe Recorded Data (stream gauge, mon	toring well, aerial photos, previous ins	pections), if available:	
Remarks:			

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

30'

Sapling/Shrub Stratum (Plot size: 15')

2. Phleum pratense

3. Bromus inermis

Woody Vine <u>Stratum</u> (Plot size: ______)

Tree Stratum (Plot size: __

Herb Stratum (Plot size: ___ 1. Holcus lanatus

4. Trifolium pratense

___)

50% of total cover: ___0

50% of total cover: 40 20% of total cover: 16

50% of total cover: 0 20% of total cover:

50% of total cover: 0 20% of total cover: 0

nes of p	lants.		Sampli	ng Point	: W-CD26	
	Dominant		Dominance Test works	heet:		
o Cover	Species?	Status	Number of Dominant Spe That Are OBL, FACW, or		1	_ (A)
			Total Number of Domina Species Across All Strata		3	(B)
			Percent of Dominant Spe That Are OBL, FACW, or		33	(A/E
			Prevalence Index works	sheet:		
0 =	Total Cov	er	Total % Cover of:	<u>N</u>	/lultiply by:	
	otal cover:		OBL species	x 1 =	:	
			FACW species	x 2 =	·	
			FAC species	x 3 =	:	
			FACU species	x 4 =	:	
			UPL species	x 5 =	:	
			Column Totals:	(A)	-	(B
			Prevalence Index =	- R/A -		
			Hydrophytic Vegetation		e-	
			1 - Rapid Test for Hy			
			2 - Dominance Test		vegetation	
			3 - Prevalence Index			
=	Total Cov	er	4 - Morphological Ac		(Drovido o	unnartii
20% of t	otal cover:	0	· -			
			data in Remarks			
30		F <u>AC</u>	Floblematic Hydropi	iylic vegel	alion (Exp	iaiii)
20		F <u>ACU</u>	¹ Indicators of hydric soil a	and wetlan	d bydrolog	v muet
20		UPL	be present, unless distur	bed or prob	olematic.	y musi
10		F <u>ACU</u>	Definitions of Four Veg	etation St	rata:	
			Tree – Woody plants, ex more in diameter at brea height.			
			Sapling/Shrub – Woody than 3 in. DBH and great m) tall.			
	Total Cov	4.0	Herb – All herbaceous (r of size, and woody plants			
20% OI I	otal cover:		Woody vine – All woody height.	vines grea	iter than 3.	28 ft in
0 =	Total Cov	 er	Hydrophytic Vegetation Present? Yes	'	No <u> </u>	_
20% of t	otal cover:	0				

Remarks: (Include photo numbers here or on a separate sheet.)

Profile Desc	ription: (Describe t	o the depth	needed to docun	nent the in	ndicator	or confirm	the absenc	e of indica	tors.)		
Depth	Matrix		Redox	k Features	s						
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture	_	Remarl	ks	
0-16	5YR 4/3	100					SiL				
	-										
								_			
	oncentration, D=Deple	etion, RM=R	educed Matrix, MS	S=Masked	Sand Gra	ins.			ning, M=Mat		
Hydric Soil I	ndicators:						Indi	cators for F	Problematic	Hydric Soi	ils³:
Histosol			Dark Surface	(S7)					(A10) (MLR	•	
Histic Ep	pipedon (A2)		Polyvalue Be				148)		ie Redox (A	16)	
Black Hi			Thin Dark Su			47, 148)		(MLRA 1			
	n Sulfide (A4)		Loamy Gleye		- 2)		_		loodplain Sc	oils (F19)	
	Layers (A5)		Depleted Mat					(MLRA 1			
	ck (A10) (LRR N)	(* (*)	Redox Dark S	•	,			•	w Dark Surf	. ,	
	Below Dark Surface	(A11)	Depleted Dar				_	Other (Expl	ain in Rema	rks)	
	ark Surface (A12) lucky Mineral (S1) (L l	DD N	Redox Depre			DD N					
	iucky Minerai (ST) (L . . 147, 148)	KK N,	Iron-Mangane		S (F 12) (I	-KK N,					
	eleyed Matrix (S4)		Umbric Surfa		MI DA 13	6 122)	³ lr	dicators of	hydrophytic	vegetation s	and
	edox (S5)		Piedmont Flo						ology must b	-	ariu
	Matrix (S6)		Red Parent M					-	bed or probl		
	ayer (if observed):				- · / (,	,		200 0. p. 02.		
Type:	,										
	shoo):						Hydria Ca	il Present?	Yes	No	/
	ches):		_				Hyuric 30	iii Fieseiit:	169	NO_	
Remarks:											

ION:							-80.567014
TREAM/SITE ID AND SITE DESCRIPTION:					-VV10, Temporary Acces Road		
age}, unaltered o	or impairments)						
8/10/2	2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetland Indicators							
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0091	Emergent					
				ļ			n
					Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
	0.0091						
	nit Scores						
incation				r	ILF Costs		
					¢546.00		
					\$546.00		
	8/10/2 PART I - Wetla Impact Wetland Classification Emergent	8/10/2015 PART I - Wetland Indicators Impact Wetland (acreage) Classification Emergent 0.0091 0.0091 PART II - Unit Scores	PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0091 Emergent 0.0091 PART II - Unit Scores	8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact	B/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0091 Emergent 0.0091 PART II - Unit Scores iffication Replacement Unit(s) 0.0091 0 0	8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts (acreage) Wetland Classification Emergent 0.0091 Emergent PART III - Advanced Sustainable Determination Made on Advanced Mitigation (Y or N) PART III - Linit Scores Iffication Replacement Unit(s) 0.0091 0 0 \$546.00	8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts Wetland (acreage) Wetland Classification Emergent 0.0091 Emergent PART III - Advanced Mitigation Sustainable Determination Made on Advanced Mitigation (Y or N) PART III - Unit Scores Iffication Replacement Unit(s) 0.0091 0 \$546.00

Project/Site: MVP	City/County: Lewis	Sampling Date: 12/10/2015			
Applicant/Owner: MVP		State: WV Sampling Point: W-VV10			
Investigator(s): Jason McGuirk, Kevin Pulv	er Section, Township, Range				
Landform (hillslope, terrace, etc.): hillslope	Local relief (concave, convex	k, none): Linear Slope (%): 2-5			
Subregion (LRR or MLRA): LRRN		-80.567018 Datum: NAD 83			
Soil Map Unit Name: Gilpin-Upshur silt loams, 3	=				
Are climatic / hydrologic conditions on the site typi	cal for this time of year? Yes No	(If no, explain in Remarks.)			
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "No	ormal Circumstances" present? Yes No			
Are Vegetation, Soil, or Hydrology		led, explain any answers in Remarks.)			
		ations, transects, important features, etc.			
Hydrophytic Vegetation Present? Yes	V No la the Sempled A				
Hydric Soil Present? Yes		. /			
Wetland Hydrology Present? Yes		resNo			
Remarks:					
Cowardin Code: PEM					
HGM: Riverine					
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)		FAC-Neutral Test (D5)			
Field Observations: Surface Water Present? Yes No	Depth (inches):				
	Depth (inches):				
	<u> </u>	and Hydrology Present? Yes No			
(includes capillary fringe)	Depth (inches) Wetia	ind Hydrology Present? Tes No			
Describe Recorded Data (stream gauge, monitor	ring well, aerial photos, previous inspections), i	f available:			
Remarks:					
Remarks.					

/EGETATION (Four Strata) – Use scientific n	ames of	plants.		Sampling Point: W-VV10
201		Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30') 1)		Species?		Number of Dominant Species That Are OBL, FACW, or FAC:1 (A)
2				
3				Total Number of Dominant Species Across All Strata: 1 (B)
4				
5			·	Percent of Dominant Species That Are OBL_FACW_or_FAC: 100 (A/B)
6			·	That Are OBL, FACW, or FAC: (A/B)
7				Prevalence Index worksheet:
·	0	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 0				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')	_			FACW species x 2 =
1				FAC species x 3 =
2			·	FACU species x 4 =
3				UPL species x 5 =
				Column Totals: (A) (B)
4 5.				
•				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8		· -		✓ 2 - Dominance Test is >50%
9	0			3 - Prevalence Index is ≤3.0 ¹
50% of total cover:0		= Total Cov	_	4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')	20 % 01	lotal cover		data in Remarks or on a separate sheet)
1. Carex Iurida	60	~	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Dichanthelium clandestinum	10			
3. Juncus effusus	10	· -	FAC	¹ Indicators of hydric soil and wetland hydrology must
4. Juncus tenuis	5		FACW_	be present, unless disturbed or problematic.
5. Microstegium vimineum	15	· -	FAC	Definitions of Four Vegetation Strata:
•			FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7		· <u></u>		height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9			- ——	than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11			·	Herb – All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>50</u>	20% of	total cover	:20	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4			·	Hydrophytic
5				Vegetation
2		= Total Cov	_	Present? Yes V No No
50% of total cover: 0	20% of	total cover	:0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

SOIL Sampling Point: W-VV10

Depth	cription: (Describe Matrix	-	Redox	k Feature	s			,	
(inches)	Color (moist)	%	Color (moist)	%	Type ¹		Texture	R	emarks
0-4	10yr 4/1	85	10yr 5/4	15	С	M/PL	CL		
4-16	7.5yr 4/4	100					CL		
		·		,					
								-	
		<u> </u>							
								-	
									
Type: C-C	oncentration, D=Dep	Jetion RM-	Reduced Matrix MS	-Maskar		raine	² Location: P	L=Pore Lining, M	I–Matriy
Type. C=C Tydric Soil		iletion, Kivi=	Neduced Matrix, Mc	=iviasket	J Sand G	iaiiis.			matic Hydric Soils ³ :
Histosol			Dark Surface	(\$7)				cm Muck (A10)	
	oipedon (A2)		Polyvalue Be	. ,	ca (S8) (MI RΔ 147		con Muck (A10)	•
	stic (A3)		Polyvalde Be				0, 0	MLRA 147, 14)	
	en Sulfide (A4)		Loamy Gleye	•		147, 140)	P	iedmont Floodpla	•
	d Layers (A5)		Depleted Mat		(1 2)		'	(MLRA 136, 14	
	uck (A10) (LRR N)		Redox Dark S		- 6)		V		Surface (TF12)
	d Below Dark Surfac	e (A11)	Depleted Dar	•	•			other (Explain in I	, ,
	ark Surface (A12)	` ,	Redox Depre					` .	,
	Mucky Mineral (S1) (I	_RR N,	Iron-Mangane			(LRR N,			
	A 147, 148)		MLRA 130						
Sandy G	Gleyed Matrix (S4)		Umbric Surfa	ce (F13)	(MLRA 1	36, 122)	³ Ind	icators of hydrop	hytic vegetation and
Sandy F	Redox (S5)		Piedmont Flo	odplain S	oils (F19) (MLRA 14	8) we	tland hydrology	must be present,
Stripped	Matrix (S6)		Red Parent M	1aterial (F	21) (ML I	RA 127, 147	') un	less disturbed or	problematic.
Restrictive	Layer (if observed):								
Type:									
Depth (in	ches):						Hydric Soil	Present? Yes	s <u> </u>
Remarks:									



Photograph Direction North

Comments:	

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 12/10/2015	
Applicant/Owner: MVP				_ State: WV	Sampling Point: W-vv8, vv9, vv10, vv11-UP	
Investigator(s): Jason McGuirk, h	Cevin Pulver	Section				
Landform (hillslope, terrace, etc.): Va			· · · · · · · · · · · · · · · · · · ·		Slope (%): 1-2	
Subregion (LRR or MLRA): LRRN					Datum: NAD 83	
Soil Map Unit Name: Vandalia silt lo				NWI classific		
Are climatic / hydrologic conditions on						
· -		· ·				
Are Vegetation, Soil, o						
Are Vegetation, Soil, c			•	explain any answe		
SUMMARY OF FINDINGS –	Attach site m	ap snowing san	ipling point location	ons, transects	s, important features, etc.	
Hydrophytic Vegetation Present?	Yes		Is the Sampled Area			
Hydric Soil Present?	Yes		within a Wetland?	Yes	No <u> </u>	
Wetland Hydrology Present? Remarks:	Yes	_ No				
HYDROLOGY						
Wetland Hydrology Indicators:					ators (minimum of two required)	
Primary Indicators (minimum of one	-			Surface Soil		
Surface Water (A1)		True Aquatic Plants (getated Concave Surface (B8)	
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Patterns (B10)		
Saturation (A3) Water Marks (B1)		Presence of Reduced	es on Living Roots (C3)		Water Table (C2)	
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Bur		
Drift Deposits (B3)		Thin Muck Surface (C		•	isible on Aerial Imagery (C9)	
Algal Mat or Crust (B4)		Other (Explain in Rer			Stressed Plants (D1)	
Iron Deposits (B5)		` '	,	C Geomorphic		
Inundation Visible on Aerial Ima	gery (B7)			Shallow Aqu	itard (D3)	
Water-Stained Leaves (B9)					aphic Relief (D4)	
Aquatic Fauna (B13)				FAC-Neutral	l Test (D5)	
Field Observations:						
Surface Water Present? Yes	No	Depth (inches):				
		Depth (inches):				
Saturation Present? Yes (includes capillary fringe)	No	Depth (inches):	Wetland	Hydrology Preser	nt? Yes No	
Describe Recorded Data (stream ga	uge, monitoring w	vell, aerial photos, pre	vious inspections), if ava	ailable:		
Remarks:						

Sampling	Point:	W-vv8,	vv9,	vv10,	vv11-L	JΡΙ
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	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?	Status	Number of Dominant Species
1	-			That Are OBL, FACW, or FAC:1 (A)
2				Total Newhord Davis and
3				Total Number of Dominant Species Across All Strata:5 (B)
4				
5				Percent of Dominant Species That Are OBL FACW or FAC: 20 (A/B)
6.		-		That Are OBL, FACW, or FAC: (A/B)
7.	-			Prevalence Index worksheet:
·	0	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 0				OBL species x 1 =
	20 /6 01	total cover		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15') 1. Prunus serotina	5	~	FACU	FAC species x 3 =
· ·			FACU	FACU species x 4 =
2				
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
9.				2 - Dominance Test is >50%
	5	= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: <u>2.5</u>		total cover		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Verbesina alternifolia	10		FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Phleum pratense	15		F <u>ACU</u>	
3. Daucus carata	15		UPL	¹ Indicators of hydric soil and wetland hydrology must
4. Rubus allegheniensis	15			be present, unless disturbed or problematic.
	5		FACU	Definitions of Four Vegetation Strata:
5. Trifolium pratense			F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Microstegium vimineum	<u>15</u>		F <u>AC</u>	more in diameter at breast height (DBH), regardless of
7. Juncus effusus	5		F <u>ACW</u>	height.
8. Scirpus atrovirens	5		<u>OBL</u>	Sapling/Shrub – Woody plants, excluding vines, less
9. Dichanthelium clandestinum	5		F <u>AC</u>	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
	90	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		total cover		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1.				neight.
2.	-			
		-		
3		-		
		-		Hydrophytic
5	0			Vegetation Present? Yes No ✓
50% -{\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot		= Total Cov	_	103 No
50% of total cover:0		total cover	0	
Remarks: (Include photo numbers here or on a separate si	heet.)			

Sampling Point: W-vv8, vv9, vv10, vv11-UPL

Profile Desc	ription: (Describe t	to the dept	h needed to docum	ent the i	indicator	or confirn	n the absence	of indicators.)	
Depth	Matrix		Redox	(Feature					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Re	emarks
0-6	10yr 4/2	100			-		GrSiL		
6-12	7.5 yr 4/3	95	7.5yr 5/6	5	С	М	GrCL		
						· 	-		-
					-	· 			
								-	
									
¹ Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	=Masked	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=	=Matrix.
Hydric Soil	Indicators:						Indica	ators for Problen	natic Hydric Soils ³ :
Histosol			Dark Surface					cm Muck (A10) (I	MLRA 147)
	oipedon (A2)		Polyvalue Bel				. 148) C	Coast Prairie Redo	
	stic (A3)		Thin Dark Sui			147, 148)		(MLRA 147, 148	
	en Sulfide (A4)		Loamy Gleye		(F2)		P	Piedmont Floodpla	
	d Layers (A5)		Depleted Mat		-0)			(MLRA 136, 147	
	ick (A10) (LRR N) d Below Dark Surface	Δ (Δ11)	Redox Dark S Depleted Dark					/ery Shallow Dark Other (Explain in R	
	ark Surface (A12)	5 (A11)	Redox Depre					oner (Explain in K	emarks)
	Mucky Mineral (S1) (L	.RR N.	Iron-Mangane			LRR N.			
	A 147, 148)	,	MLRA 136		(, (,			
	Gleyed Matrix (S4)		Umbric Surfac	-	(MLRA 13	86, 122)	³ Ind	licators of hydroph	nytic vegetation and
Sandy F	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	18) we	etland hydrology m	nust be present,
Stripped	l Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) un	less disturbed or p	oroblematic.
Restrictive	Layer (if observed):								
Type:									
Depth (in	ches):						Hydric Soil	Present? Yes	No <u> </u>
Remarks:							- 11		

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 12/10/2015	
Applicant/Owner: MVP				_ State: WV	Sampling Point: W-vv8, vv9, vv10, vv11-UP	
Investigator(s): Jason McGuirk, h	Cevin Pulver	Section				
Landform (hillslope, terrace, etc.): Va			· · · · · · · · · · · · · · · · · · ·		Slope (%): 1-2	
Subregion (LRR or MLRA): LRRN					Datum: NAD 83	
Soil Map Unit Name: Vandalia silt lo				NWI classific		
Are climatic / hydrologic conditions on						
· -		· ·				
Are Vegetation, Soil, o						
Are Vegetation, Soil, c			•	explain any answe		
SUMMARY OF FINDINGS –	Attach site m	ap snowing san	ipling point location	ons, transects	s, important features, etc.	
Hydrophytic Vegetation Present?	Yes		Is the Sampled Area			
Hydric Soil Present?	Yes		within a Wetland?	Yes	No <u> </u>	
Wetland Hydrology Present? Remarks:	Yes	_ No				
HYDROLOGY						
Wetland Hydrology Indicators:					ators (minimum of two required)	
Primary Indicators (minimum of one	-			Surface Soil		
Surface Water (A1)		True Aquatic Plants (getated Concave Surface (B8)	
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Patterns (B10)		
Saturation (A3) Water Marks (B1)		Presence of Reduced	es on Living Roots (C3)		Water Table (C2)	
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Bur		
Drift Deposits (B3)		Thin Muck Surface (C		•	isible on Aerial Imagery (C9)	
Algal Mat or Crust (B4)		Other (Explain in Rer			Stressed Plants (D1)	
Iron Deposits (B5)		` '	,	✓ Geomorphic		
Inundation Visible on Aerial Ima	gery (B7)			Shallow Aqu	itard (D3)	
Water-Stained Leaves (B9)					aphic Relief (D4)	
Aquatic Fauna (B13)				FAC-Neutral	l Test (D5)	
Field Observations:						
Surface Water Present? Yes	No	Depth (inches):				
		Depth (inches):				
Saturation Present? Yes (includes capillary fringe)	No	Depth (inches):	Wetland	Hydrology Preser	nt? Yes No	
Describe Recorded Data (stream ga	uge, monitoring w	vell, aerial photos, pre	vious inspections), if ava	ailable:		
Remarks:						

Sampling	Point:	W-vv8,	vv9,	vv10,	vv11-L	JΡΙ
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	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?	Status	Number of Dominant Species
1	-			That Are OBL, FACW, or FAC:1 (A)
2				Total Newhord Dominant
3				Total Number of Dominant Species Across All Strata:5 (B)
4				
5				Percent of Dominant Species That Are OBL FACW or FAC: 20 (A/B)
6.		-		That Are OBL, FACW, or FAC: (A/B)
7.	-			Prevalence Index worksheet:
·	0	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 0				OBL species x 1 =
	20 /6 01	total cover		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15') 1. Prunus serotina	5	~	FACU	FAC species x 3 =
· ·			FACU	FACU species x 4 =
2				
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
9.				2 - Dominance Test is >50%
	5	= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: <u>2.5</u>		total cover		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Verbesina alternifolia	10		FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Phleum pratense	15		F <u>ACU</u>	
3. Daucus carata	15		UPL	¹ Indicators of hydric soil and wetland hydrology must
4. Rubus allegheniensis	15			be present, unless disturbed or problematic.
	5		FACU	Definitions of Four Vegetation Strata:
5. Trifolium pratense			F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Microstegium vimineum	<u>15</u>		F <u>AC</u>	more in diameter at breast height (DBH), regardless of
7. Juncus effusus	5		F <u>ACW</u>	height.
8. Scirpus atrovirens	5		<u>OBL</u>	Sapling/Shrub – Woody plants, excluding vines, less
9. Dichanthelium clandestinum	5		F <u>AC</u>	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
	90	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		total cover		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1.				neight.
2.	-			
		-		
3		-		
		-		Hydrophytic
5	0			Vegetation Present? Yes No ✓
50% -{\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot		= Total Cov	_	103 No
50% of total cover:0		total cover	0	
Remarks: (Include photo numbers here or on a separate si	heet.)			

Sampling Point: W-vv8, vv9, vv10, vv11-UPL

Profile Desc	ription: (Describe t	to the dept	h needed to docum	ent the i	indicator	or confirn	n the absence	of indicators.)	
Depth	Matrix		Redox	(Feature					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Re	emarks
0-6	10yr 4/2	100			-		GrSiL		
6-12	7.5 yr 4/3	95	7.5yr 5/6	5	С	М	GrCL		
						· 	-		-
					-	· 			
								-	
									
¹ Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	=Masked	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=	=Matrix.
Hydric Soil	Indicators:						Indica	ators for Problen	natic Hydric Soils ³ :
Histosol			Dark Surface					cm Muck (A10) (I	MLRA 147)
	oipedon (A2)		Polyvalue Bel				. 148) C	Coast Prairie Redo	
	stic (A3)		Thin Dark Sui			147, 148)		(MLRA 147, 148	
	en Sulfide (A4)		Loamy Gleye		(F2)		P	Piedmont Floodpla	
	d Layers (A5)		Depleted Mat		-0)			(MLRA 136, 147	
	ick (A10) (LRR N) d Below Dark Surface	Δ (Δ11)	Redox Dark S Depleted Dark					/ery Shallow Dark Other (Explain in R	
	ark Surface (A12)	5 (A11)	Redox Depre					oner (Explain in K	emarks)
	Mucky Mineral (S1) (L	.RR N.	Iron-Mangane			LRR N.			
	A 147, 148)	,	MLRA 136		(, (,			
	Gleyed Matrix (S4)		Umbric Surfac	-	(MLRA 13	86, 122)	³ Ind	licators of hydroph	nytic vegetation and
Sandy F	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	18) we	etland hydrology m	nust be present,
Stripped	l Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) un	less disturbed or p	oroblematic.
Restrictive	Layer (if observed):								
Type:									
Depth (in	ches):						Hydric Soil	Present? Yes	No <u> </u>
Remarks:							- 11		

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 12/10/2015	
Applicant/Owner: MVP				_ State: WV	Sampling Point: W-vv8, vv9, vv10, vv11-UP	
Investigator(s): Jason McGuirk, h	Cevin Pulver	Section				
Landform (hillslope, terrace, etc.): Va			· · · · · · · · · · · · · · · · · · ·		Slope (%): 1-2	
Subregion (LRR or MLRA): LRRN					Datum: NAD 83	
Soil Map Unit Name: Vandalia silt lo				NWI classific		
Are climatic / hydrologic conditions on						
· -		· ·				
Are Vegetation, Soil, o						
Are Vegetation, Soil, c			•	explain any answe		
SUMMARY OF FINDINGS –	Attach site m	ap snowing san	ipling point location	ons, transects	s, important features, etc.	
Hydrophytic Vegetation Present?	Yes		Is the Sampled Area			
Hydric Soil Present?	Yes		within a Wetland?	Yes	No <u> </u>	
Wetland Hydrology Present? Remarks:	Yes	_ No				
HYDROLOGY						
Wetland Hydrology Indicators:					ators (minimum of two required)	
Primary Indicators (minimum of one	-			Surface Soil		
Surface Water (A1)		True Aquatic Plants (getated Concave Surface (B8)	
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Patterns (B10)		
Saturation (A3) Water Marks (B1)		Presence of Reduced	es on Living Roots (C3)		Water Table (C2)	
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Bur		
Drift Deposits (B3)		Thin Muck Surface (C		•	isible on Aerial Imagery (C9)	
Algal Mat or Crust (B4)		Other (Explain in Rer			Stressed Plants (D1)	
Iron Deposits (B5)		` '	,	✓ Geomorphic		
Inundation Visible on Aerial Ima	gery (B7)			Shallow Aqu	itard (D3)	
Water-Stained Leaves (B9)					aphic Relief (D4)	
Aquatic Fauna (B13)				FAC-Neutral	l Test (D5)	
Field Observations:						
Surface Water Present? Yes	No	Depth (inches):				
		Depth (inches):				
Saturation Present? Yes (includes capillary fringe)	No	Depth (inches):	Wetland	Hydrology Preser	nt? Yes No	
Describe Recorded Data (stream ga	uge, monitoring w	vell, aerial photos, pre	vious inspections), if ava	ailable:		
Remarks:						

Sampling	Point:	W-vv8,	vv9,	vv10,	vv11-L	JΡΙ
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	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?	Status	Number of Dominant Species
1	-			That Are OBL, FACW, or FAC:1 (A)
2				Total Newhord Dominant
3				Total Number of Dominant Species Across All Strata:5 (B)
4				
5				Percent of Dominant Species That Are OBL FACW or FAC: 20 (A/B)
6.		-		That Are OBL, FACW, or FAC: (A/B)
7.	-			Prevalence Index worksheet:
·	0	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 0				OBL species x 1 =
	20 /6 01	total cover		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15') 1. Prunus serotina	5	~	FACU	FAC species x 3 =
· ·			FACU	FACU species x 4 =
2				
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
9.				2 - Dominance Test is >50%
	5	= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: <u>2.5</u>		total cover		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Verbesina alternifolia	10		FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Phleum pratense	15		F <u>ACU</u>	
3. Daucus carata	15		UPL	¹ Indicators of hydric soil and wetland hydrology must
4. Rubus allegheniensis	15			be present, unless disturbed or problematic.
	5		FACU	Definitions of Four Vegetation Strata:
5. Trifolium pratense			F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Microstegium vimineum	<u>15</u>		F <u>AC</u>	more in diameter at breast height (DBH), regardless of
7. Juncus effusus	5		F <u>ACW</u>	height.
8. Scirpus atrovirens	5		<u>OBL</u>	Sapling/Shrub – Woody plants, excluding vines, less
9. Dichanthelium clandestinum	5		F <u>AC</u>	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
	90	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		total cover		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1.				neight.
2.	-			
		-		
3		-		
		-		Hydrophytic
5	0			Vegetation Present? Yes No ✓
50% -{\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot		= Total Cov	_	103 No
50% of total cover:0		total cover	0	
Remarks: (Include photo numbers here or on a separate si	heet.)			

Sampling Point: W-vv8, vv9, vv10, vv11-UPL

Profile Desc	ription: (Describe t	to the dept	h needed to docum	ent the i	indicator	or confirn	n the absence	of indicators.)	
Depth	Matrix		Redox	(Feature					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Re	emarks
0-6	10yr 4/2	100			-		GrSiL		
6-12	7.5 yr 4/3	95	7.5yr 5/6	5	С	М	GrCL		
						· 	-		-
					-	· 			
								-	
									
¹ Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	=Masked	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=	=Matrix.
Hydric Soil	Indicators:						Indica	ators for Problen	natic Hydric Soils ³ :
Histosol			Dark Surface					cm Muck (A10) (I	MLRA 147)
	oipedon (A2)		Polyvalue Bel				. 148) C	Coast Prairie Redo	
	stic (A3)		Thin Dark Sui			147, 148)		(MLRA 147, 148	
	en Sulfide (A4)		Loamy Gleye		(F2)		P	Piedmont Floodpla	
	d Layers (A5)		Depleted Mat		-0)			(MLRA 136, 147	
	ick (A10) (LRR N) d Below Dark Surface	Δ (Δ11)	Redox Dark S Depleted Dark					/ery Shallow Dark Other (Explain in R	
	ark Surface (A12)	5 (A11)	Redox Depre					oner (Explain in K	emarks)
	Mucky Mineral (S1) (L	.RR N.	Iron-Mangane			LRR N.			
	A 147, 148)	,	MLRA 136		(, (,			
	Gleyed Matrix (S4)		Umbric Surfac	-	(MLRA 13	86, 122)	³ Ind	licators of hydroph	nytic vegetation and
Sandy F	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	18) we	etland hydrology m	nust be present,
Stripped	l Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) un	less disturbed or p	oroblematic.
Restrictive	Layer (if observed):								
Type:									
Depth (in	ches):						Hydric Soil	Present? Yes	No <u> </u>
Remarks:							- 11		

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.892534	Lon.	-80.55668
STREAM/SITE ID AND SITE DESCR	RIPTION:				V	V-ST16, Temporary Anode Bed		
(% stream slope, watershed size {a	acreage}, 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-ST16	Emergent	0.0711	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Υ
Total Impact	,	0.0711			,			
Wednesd		Unit Scores	Barbara (Hall)			Estimated		
	lassification		Replacement Unit(s)	-		ILF Costs		
Total Emergent Total Scrub-Shrub			0.0711	-		\$4,266.00		
Total Forested			0	-	ļ	ψ+,200.00		
Total Open Water			0					

Project/Site: MVP	City/County: Lewis	Sampling Date: 07/19/2016
Applicant/Owner: MVP		State: WV Sampling Point: W-ST16
	C. Sorden Section, Township, Range: N	
- ' '	Local relief (concave, convex, no	
Subregion (LRR or MLRA): LRR N		0.556683 Datum: NAD 83
· · · · · · · · · · · · · · · · · · ·	o 3 percent slopes, occasionally flooded	
Are climatic / hydrologic conditions on the site typ	cal for this time of year? Yes No	(If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	significantly disturbed? Are "Norma	I Circumstances" present? Yes No
	naturally problematic? (If needed, or	
-		ons, transects, important features, etc.
	No Is the Sampled Area	,
Hydric Soil Present? Yes _ Wetland Hydrology Present? Yes _	within a wetiand:	Yes No
Remarks: Cowardin Code: PEM	HGM: Depressional Water Type:	RPWWN
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) Inundation Visible on Aerial Imagery (B7)		✓ Geomorphic Position (D2) Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutral Test (D5)
Field Observations:		
	Depth (inches):	
	Depth (inches):	
		Hydrology Present? Yes _ ✓ No
(includes capillary fringe)	, , ,	
Describe Recorded Data (stream gauge, monito	ring well, aerial photos, previous inspections), if ava	ailable:
Remarks:		

Sampling	Point: W-ST16
Sambilliu	F UII IL. · · · · · ·

Tree Stratum (Plot size: 30'	Absolute		Indicator	Dominance Test worksheet:		
Tiee Stratum (Flot size.	% Cover			Number of Dominant Species	0	
1. Salix nigra	10		OBL	That Are OBL, FACW, or FAC: _	9	(A)
2		-		Total Number of Dominant		
3				Species Across All Strata:	9	(B)
4				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC:	100	(A/B)
6		-				. ,
7		-		Prevalence Index worksheet:		
	10:	= Total Co	ver		Multiply by:	
50% of total cover:5				OBL species x 1 :	=	-
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 :		
1				FAC species x 3 :		l l
2				FACU species x 4 :	=	_
3				UPL species x 5 :	=	_
4				Column Totals: (A)		(B)
5						
6				Prevalence Index = B/A =		
7				Hydrophytic Vegetation Indicato		
				1 - Rapid Test for Hydrophytic	Vegetation	
8				✓ 2 - Dominance Test is >50%		
9	_	= Total Co	vor	3 - Prevalence Index is ≤3.0 ¹		
50% of total cover: 0				4 - Morphological Adaptations	¹ (Provide sup	porting
Herb Stratum (Plot size: 15')	20 /0 01	total oove	·	data in Remarks or on a se	parate sheet)	
1. Carex frankii	20	~	OBL	Problematic Hydrophytic Vege	tation ¹ (Expla	in)
2. Carex vulpinoidea	15		OBL			
3. Scirpus atrovirens	15		OBL	¹ Indicators of hydric soil and wetlar		must
4. Microstegium vimineum	10		FAC	be present, unless disturbed or pro		
5. Lysimachia nummularia	10		OBL	Definitions of Four Vegetation S	trata:	
6. Phalaris arundinacea	10			Tree – Woody plants, excluding vir	nes, 3 in. (7.6	cm) or
7. Persicaria perfoliata	10		FACW	more in diameter at breast height (
8. Cyperus esculatus	5		FAC	height.		
	5		FACW	Sapling/Shrub – Woody plants, ex	cluding vines	s, less
9. Verbesina alternifolia	5		FAC	than 3 in. DBH and greater than or	equal to 3.28	3 ft (1
10. Boehmeria cylindrica			FACW	m) tall.		
11. Impatiens capensis	10		FACW_	Herb – All herbaceous (non-woody		ırdless
		= Total Co		of size, and woody plants less than	1 3.28 ft tall.	
50% of total cover: <u>57.</u>	20% of	total cove	r: <u>23</u>	Woody vine – All woody vines gre	ater than 3.28	3 ft in
Woody Vine Stratum (Plot size: 15')				height.		
1						
2						
3		-				
4		-		Hydrophytic		
5				Vegetation		
	0	= Total Co	_	Present? Yes	No	
50% of total cover:0	20% of	total cove	r: <u> </u>			
Remarks: (Include photo numbers here or on a separate s	heet.)			•		

Sampling Point: W-ST16

SOIL

Depth	ription: (Describe t Matrix			x Features					,	
(inches)	Color (moist)	<u>%</u>	Color (moist)	<u>%</u> T		Loc²	Texture		Remarks	
0-8	7.5YR4/2	85	5YR 5/6	15 (<u> </u>	M/PL	SIC			
8-18	7.5YR 4/2	100					SIL			
			_					-		
								-		
								-		
	oncentration, D=Depl	etion, RM=F	Reduced Matrix, MS	S=Masked Sa	and Grain	S.	² Location: PL			
ydric Soil I	ndicators:						Indica	tors for Pr	roblematic H	ydric Soils³:
_ Histosol			Dark Surface						A10) (MLRA 1	•
	pipedon (A2)		Polyvalue Be				1 48) Co		Redox (A16)	1
_ Black Hi	, ,		Thin Dark Su			', 148)	ъ.	(MLRA 14		(540)
	n Sulfide (A4)		Loamy Gleye Depleted Mat)		Pi		oodplain Soils	(F19)
	d Layers (A5) ick (A10) (LRR N)		Redox Dark S				\/a	(MLRA 13	, 147) Dark Surface	a (TF12)
	d Below Dark Surface	e (A11)	Depleted Dar	, ,	7)				in in Remarks	
	ark Surface (A12)	, (, , , ,	Redox Depre		. ,			(=,,p.a.		•1
	lucky Mineral (S1) (L	RR N,	Iron-Mangane		(F12) (LR	R N,				
	A 147, 148)		MLRA 136							
	leyed Matrix (S4)		Umbric Surfa	ce (F13) (ML	.RA 136,	122)			ydrophytic ve	
	edox (S5)		Piedmont Flo						logy must be	
	Matrix (S6)		Red Parent M	1aterial (F21)	(MLRA	127, 147)	unl	ess disturb	ed or problem	natic.
estrictive l	_ayer (if observed):									
Type:									á	
Depth (inc	ches):						Hydric Soil	Present?	Yes	No
emarks:										

Project/Site: MVP		City/C	ounty: Lewis		Sampling Date: 07/19/2016			
Applicant/Owner: MVP					Sampling Point: W-ST16 UPL			
Investigator(s): J. McGuirk, S.	Therkildson, C.							
Landform (hillslope, terrace, etc.):					Slope (%): 0-3			
Subregion (LRR or MLRA): LRR			Long: <u>-</u> 80		Datum: NAD 83			
Soil Map Unit Name: Sensabaugh			_					
Are climatic / hydrologic conditions								
Are Vegetation, Soil					present? Yes No			
Are Vegetation, Soil	-			explain any answe				
SUMMARY OF FINDINGS	- Attach site m	ap showing sam	pling point location	ons, transects	s, important features, etc.			
Hydrophytic Vegetation Present?	Yes	No	Is the Sampled Area					
Hydric Soil Present?	Yes		within a Wetland?	Yes	No			
Wetland Hydrology Present?	Yes	_ No						
Remarks: Cowardin Code	00	HGM:	Water Type:					
Upland								
HYDROLOGY								
Wetland Hydrology Indicators:				Secondary Indica	ators (minimum of two required)			
Primary Indicators (minimum of o	ne is required; checl	call that apply)		Surface Soil	Cracks (B6)			
Surface Water (A1)	<u></u>	True Aquatic Plants (I	314)	Sparsely Ve	getated Concave Surface (B8)			
High Water Table (A2)		Hydrogen Sulfide Odd	or (C1)	Drainage Patterns (B10)				
Saturation (A3)	_	Oxidized Rhizosphere	es on Living Roots (C3)	Moss Trim L	ines (B16)			
Water Marks (B1)	_	Presence of Reduced	Iron (C4)	Dry-Season	Water Table (C2)			
Sediment Deposits (B2)		Recent Iron Reduction	n in Tilled Soils (C6)	Crayfish Bur	rows (C8)			
Drift Deposits (B3)	_	Thin Muck Surface (C			isible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	_	Other (Explain in Ren	narks)		tressed Plants (D1)			
Iron Deposits (B5)	(57)			<u>✓</u> Geomorphic				
Inundation Visible on Aerial I	magery (B7)			Shallow Aqu				
Water-Stained Leaves (B9) Aquatic Fauna (B13)				FAC-Neutral	aphic Relief (D4)			
Field Observations:				I AC-Neullai	Test (D3)			
	es No 🗸	Depth (inches):						
		Depth (inches):						
		Depth (inches):		Hydrology Preser	nt? Yes No			
(includes capillary fringe)								
Describe Recorded Data (stream	gauge, monitoring v	veii, aeriai pnotos, pre	vious inspections), if ava	aliable:				
Remarks:								
İ								

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

Sampling Point: W-ST16 UPL

Tree Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:		
inee ottatum (i lot size)	% Cover	Species?	<u>Status</u>	Number of Dominant Species	1	(4)
1		-		That Are OBL, FACW, or FAC:	<u> </u>	(A)
3				Total Number of Dominant Species Across All Strata:	4	(B)
4				Species Across Air Strata.	<u> </u>	(D)
5				Percent of Dominant Species	25	(A/B)
6				That Are OBL, FACW, or FAC:		(A/D)
7				Prevalence Index worksheet:		
	0 :	= Total Co	ver	Total % Cover of:	Multiply by:	
50% of total cover:0	20% of	total cover	: <u> </u>	OBL species x		
Sapling/Shrub Stratum (Plot size: 15')				FACW species x		
1				FAC species x		
2		-		FACU species x		
3		-		UPL species x		
4				Column Totals: (A)	(B)
5				Prevalence Index = B/A =		_
6				Hydrophytic Vegetation Indicate		
7				1 - Rapid Test for Hydrophyt	tic Vegetation	
8				2 - Dominance Test is >50%)	
9	_			3 - Prevalence Index is ≤3.0	1	
50% of total cover:0		= Total Co		4 - Morphological Adaptation	ns¹ (Provide sup	porting
Herb Stratum (Plot size: 5')	20% 01	lotal cover		data in Remarks or on a s	separate sheet)	
1. Trifolium pratense	20	~	FACU	Problematic Hydrophytic Veg	getation¹ (Expla	in)
2. Ipomoea cairica	20		FACU			
3. Dichanthelium clandestinum	20		FAC	¹ Indicators of hydric soil and wetl		must
4. Phleum pratense	20	~	FACU	be present, unless disturbed or p		
5. Allium canadense	15		FACU	Definitions of Four Vegetation	Strata:	
6. Daucus carota	5		UPL	Tree - Woody plants, excluding		
7. Echinochloa muricata	5		FACW	more in diameter at breast height height.	t (DBH), regardi	less of
8					and the Parameters	
9	-			Sapling/Shrub – Woody plants, than 3 in. DBH and greater than		
10				m) tall.	•	`
11				Herb – All herbaceous (non-woo	dy) plants, rega	rdless
	105 :	= Total Co	ver	of size, and woody plants less the		
50% of total cover: <u>52.5</u>	20% of	total cover	: 21	Woody vine – All woody vines q	reater than 3.28	3 ft in
Woody Vine Stratum (Plot size: 15')				height.		
1						
2						
3						
4				Hydrophytic		
5		= Total Co		Vegetation Present? Yes	No 🗸	
50% of total cover: 0		total cover	^		' <u></u>	
Remarks: (Include photo numbers here or on a separate s			·			
(,					

Depth	Matrix	-	needed to document the indicator Redox Features				
(inches)	Color (moist)	%	Color (moist) % Type ¹		exture	Remarks	
0-16	7.5YR 4/4	100			SL	Floodplain	
							
Type: C-Co	oncentration D-Deni	etion RM-Re	educed Matrix, MS=Masked Sand G	rains ² l oc	ation: PL=Pore Lir	ning M-Matrix	
lydric Soil I		Guori, Mivi–M	educed Matrix, MS-Masked Sand S	iairis. Loc		Problematic Hydric So	oils ³ :
Histosol			Dark Surface (S7)			(A10) (MLRA 147)	
	pipedon (A2)		Polyvalue Below Surface (S8) (MLRA 147. 148)	Coast Prairi		
Black Hi			Thin Dark Surface (S9) (MLRA		(MLRA 1		
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	· · · · · · · · · · · · · · · · · · ·		loodplain Soils (F19)	
	Layers (A5)		Depleted Matrix (F3)		(MLRA 1		
	ick (A10) (LRR N)		Redox Dark Surface (F6)			w Dark Surface (TF12)	
	Below Dark Surface	e (A11)	Depleted Dark Surface (F7)		Other (Expla	ain in Remarks)	
Thick Da	ark Surface (A12)		Redox Depressions (F8)				
	lucky Mineral (S1) (L	RR N,	Iron-Manganese Masses (F12)	(LRR N,			
	A 147, 148)		MLRA 136)				
	lleyed Matrix (S4)		Umbric Surface (F13) (MLRA 1			nydrophytic vegetation	
	edox (S5)		Piedmont Floodplain Soils (F19			ology must be present,	
	Matrix (S6)		Red Parent Material (F21) (MLI	RA 127, 147)	unless disturl	oed or problematic.	
	_ayer (if observed):						
Type:			_				
Depth (inc	ches):		<u> </u>	Hyd	dric Soil Present?	Yes No _	<u> </u>
Remarks:							

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	38.890576	Lon.	-80.554852
STREAM/SITE ID AND SITE DESCR	IPTION:				W	/-VV11, Temporary Access Road		
(% 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-VV11	Emergent	0.0246	Emergent					
						PART III - Advanced	Mitigatio	on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0246						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0246			64 470 00		
Total Scrub-Shrub			0			\$1,476.00		
Total Forested			0					
Total Open Water			0	_				

Project/Site: MVP	City/County: Lewis	Sampling Date: 12/10/2015
Applicant/Owner: MVP		State: WV Sampling Point: W-VV11
Investigator(s): Jason McGuirk, Kevin Pulv	ver Section, Township, Range: N	· -
	Local relief (concave, convex, no	
Subregion (LRR or MLRA): LRRN		0.554976 Datum: NAD 83
	35 to 70 percent slopes, severely eroded	
	oical for this time of year? Yes No	
, ,		
	y significantly disturbed? Are "Norma	
Are Vegetation, Soil, or Hydrology SUMMARY OF FINDINGS – Attach si		explain any answers in Remarks.) ons, transects, important features, etc.
		,,,
Hydrophytic Vegetation Present? Yes _	Is the Sampled Area	,
Hydric Soil Present? Yes _	within a wetland?	Yes No
Wetland Hydrology Present? Yes _ Remarks:	No	
Cowardin Code: PEM		
HGM: Depressional		
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) Stunted or Stressed Plants (D1)
Algal Mat or Crust (B4) Iron Deposits (B5)	Other (Explain in Remarks)	Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutral Test (D5)
Field Observations:		· · · · · · · · · · · · · · · · · · ·
Surface Water Present? Yes No _	Depth (inches):	
	Depth (inches): 0	
		Hydrology Present? Yes No
(includes capillary fringe)	pring well, aerial photos, previous inspections), if av	oilable
Describe Recorded Data (stream gauge, monito	oring well, aerial priotos, previous inspections), il ava	aliable.
Remarks:		

30'	Absolute			Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?		Number of Dominant Species That Are OBL, FACW, or FAC:5 (A)
L				Total Number of Dominant Species Across All Strata: 5 (B)
·				Percent of Dominant Species
·			• ——	That Are OBL, FACW, or FAC: (A/B
				Prevalence Index worksheet:
	0	= Total Cov	er er	Total % Cover of: Multiply by:
50% of total cover:0	20% of	total cover	0	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
		-	. <u> </u>	FAC species x 3 =
				FACU species x 4 =
8			·	UPL species x 5 =
				Column Totals: (A) (B)
i				Prevalence Index = B/A =
. <u> </u>				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
3				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
_		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 0	20% of	total cover	:0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				Problematic Hydrophytic Vegetation ¹ (Explain)
I. Mimulus ringens	25		OBL	Problematic Hydrophytic Vegetation (Explain)
2. Dichanthelium clandestinum	15		F <u>AC</u>	The structure of the state of the structure of the structure of
3. Juncus effusus	15		FACW_	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Epilobium coloratum	15		FACW_	Definitions of Four Vegetation Strata:
5. Microstegium vimineum	10		F <u>AC</u>	
_{3.} Carex lurida	20	~	QBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o
7.				more in diameter at breast height (DBH), regardless of height.
3			·	
).				Sapling/Shrub – Woody plants, excluding vines, less
10.			· ——	than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
in.				, ,
	100	= Total Cov	/er	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50	20% of	total cover	20	
Noody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in
l				height.
·				
			· ——	
3				
1				Hydrophytic
5	0			Vegetation Present? Yes ✓ No
50% -{\text{1-1-1}}		= Total Cov	_	1103CHL: 103
50% of total cover:0		total cover	:	
Remarks: (Include photo numbers here or on a separate s	heet.)			

SOIL Sampling Point: W-VV11

Profile Desc	ription: (Describe t	o the dept	n needed to docum	ent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redox	Feature	s			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10yr 4/2	95	7.5 yr 4/6	5	С	M	CL	
6-16	7.5 yr 4/2	100				·	C	
	7.0 yr 1/2				-			
	-				-			
					-			
						·		
					-			
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	=Masked	Sand Gr	ains.		_=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indica	tors for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2	cm Muck (A10) (MLRA 147)
Histic Ep	oipedon (A2)		Polyvalue Bel	ow Surfa	ce (S8) (N	ILRA 147,	148) C	oast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Su			47, 148)		(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		F2)		P	iedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Mat					(MLRA 136, 147)
	ick (A10) (LRR N)	(4.4.4)	Redox Dark S	•	,			ery Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Dar				0	ther (Explain in Remarks)
	ark Surface (A12)	DD N	Redox Depre			I DD N		
	lucky Mineral (S1) (L \ 147, 148)	KK N,	Iron-Mangane MLRA 136		es (F12) (LKK N,		
	Gleyed Matrix (S4)		Umbric Surfac		MIRA 13	6 122\	³ Indi	cators of hydrophytic vegetation and
	Redox (S5)							tland hydrology must be present,
	Matrix (S6)		Piedmont Floodplain Soils (F19) (MLRA 148Red Parent Material (F21) (MLRA 127, 147)					ess disturbed or problematic.
	Layer (if observed):		1100 1 0101111	iatoriai (i	, (, , , <u>, , , , , , , , , , , , , , , , </u>	1	oss distarbed of presistinguis.
Type:								
Depth (inc	ahaa):						Hydric Soil	Present? Yes V No No
							Tiyane 3011	riesent: res No
Remarks:								



Photograph Direction SW

Comments:		

Project/Site: MVP	City/County: Lewis	Sampling Date: 12/10/2015
Applicant/Owner: MVP		_ State: WV Sampling Point: W-vv8, vv9, vv10, vv11-UP
nvestigator(s): Jason McGuirk, Kevin Pulv	ver Section, Township, Range: N.	
Landform (hillslope, terrace, etc.): valley botto		ne): Linear Slope (%): 1-2
Subregion (LRR or MLRA): LRRN		0.563397 Datum: NAD 83
Soil Map Unit Name: Vandalia silt loam, 25 to 3		NWI classification: None
•	ical for this time of year? Yes No	
	-	
		I Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	•	explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach Si	te map snowing sampling point location	ons, transects, important features, etc.
	No Is the Sampled Area	
	No within a Wetland?	Yes No
Wetland Hydrology Present? Yes Remarks:	No	
HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required;	., .,	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)		
Water Marks (B1) Sediment Deposits (B2)	Presence of Reduced Iron (C4)Recent Iron Reduction in Tilled Soils (C6)	Dry-Season Water Table (C2) Crayfish Burrows (C8)
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutral Test (D5)
Field Observations:	,	
Surface Water Present? Yes No _	Depth (inches):	
	Depth (inches):	,
Saturation Present? Yes No _ (includes capillary fringe)	Depth (inches): Wetland H	Hydrology Present? Yes No
	ring well, aerial photos, previous inspections), if ava	ailable:
Remarks:		

Sampling	Point:	W-vv8,	vv9,	vv10,	vv11	-UP
Januaria	I OIIII.	,	,	,		

	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 Descinant
3				Total Number of Dominant Species Across All Strata: 5 (B)
4.				
5				Percent of Dominant Species That Are OBL FACW or FAC: 20 (A/R)
				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7	0	Total Car		Total % Cover of: Multiply by:
50% of total cover: 0		= Total Cov		OBL species x 1 =
	20 /6 01	total cover		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15') 1 Prunus serotina	5	~	FACU	FAC species x 3 =
·· ·		-	FACU	FACU species x 4 =
2				
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6	-			Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
9.	-			2 - Dominance Test is >50%
v	5	= Total Cov	or.	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 2.5				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')	2070 01	total cover		data in Remarks or on a separate sheet)
1. Verbesina alternifolia	10		FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Phleum pratense	15			
	15		F <u>ACU</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Daucus carata			<u>UPL</u>	be present, unless disturbed or problematic.
4. Rubus allegheniensis	15		F <u>ACU</u>	Definitions of Four Vegetation Strata:
5. Trifolium pratense	5		F <u>ACU</u>	Tree Meady plants and disputing 2 in (7.6 cm) or
6. Microstegium vimineum	15		F <u>AC</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7. Juncus effusus	5		FACW_	height.
8. Scirpus atrovirens	5		OBL	Octobra (Observe) West design and a state of the section of the se
9. Dichanthelium clandestinum	5		FAC	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.				Harle All back and a constant and a last a manufacture
	90	= Total Cov	or.	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		total cover		or orze, and woody plante look than orze it tall.
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
_		= Total Cov	_	Present? Yes No
50% of total cover:0	20% of	total cover		
Remarks: (Include photo numbers here or on a separate s	heet.)			•

Sampling Point: W-vv8, vv9, vv10, vv11-UPL

Profile Desc	ription: (Describe t	to the dept	h needed to docum	ent the i	indicator	or confirn	n the absence	of indicators.)	
Depth	Matrix		Redox	(Feature					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Re	emarks
0-6	10yr 4/2	100			-		GrSiL		
6-12	7.5 yr 4/3	95	7.5yr 5/6	5	С	М	GrCL		
						· 	-		-
					-	· 			
								-	
									
¹ Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	=Masked	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=	=Matrix.
Hydric Soil	Indicators:						Indica	ators for Problen	natic Hydric Soils ³ :
Histosol			Dark Surface					cm Muck (A10) (I	MLRA 147)
	oipedon (A2)		Polyvalue Bel				. 148) C	Coast Prairie Redo	
	stic (A3)		Thin Dark Sui			147, 148)		(MLRA 147, 148	
	en Sulfide (A4)		Loamy Gleye		(F2)		P	Piedmont Floodpla	
	d Layers (A5)		Depleted Mat		-0)			(MLRA 136, 147	
	ick (A10) (LRR N) d Below Dark Surface	Δ (Δ11)	Redox Dark S Depleted Dark					/ery Shallow Dark Other (Explain in R	
	ark Surface (A12)	5 (A11)	Redox Depre					oner (Explain in K	emarks)
	Mucky Mineral (S1) (L	.RR N.	Iron-Mangane			LRR N.			
	A 147, 148)	,	MLRA 136		(, (,			
	Gleyed Matrix (S4)		Umbric Surfac	-	(MLRA 13	86, 122)	³ Ind	licators of hydroph	nytic vegetation and
Sandy F	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	18) we	etland hydrology m	nust be present,
Stripped	l Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) un	less disturbed or p	oroblematic.
Restrictive	Layer (if observed):								
Type:									
Depth (in	ches):						Hydric Soil	Present? Yes	No <u> </u>
Remarks:							- 11		

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 12/10/2015		
Applicant/Owner: MVP				_ State: WV	Sampling Point: W-vv8, vv9, vv10, vv11-U		
Investigator(s): Jason McGuirk, h	Cevin Pulver	Section					
Landform (hillslope, terrace, etc.): Va			· · · · · · · · ·		Slope (%): 1-2		
Subregion (LRR or MLRA): LRRN					Datum: NAD 83		
Soil Map Unit Name: Vandalia silt lo				NWI classific			
Are climatic / hydrologic conditions on							
· -		· ·					
Are Vegetation, Soil, o							
Are Vegetation, Soil, c			•	explain any answe			
SUMMARY OF FINDINGS –	Attach site m	ap snowing san	ipling point location	ons, transects	s, important features, etc.		
Hydrophytic Vegetation Present?	Yes		Is the Sampled Area				
Hydric Soil Present?	Yes		within a Wetland?	Yes	No <u> </u>		
Wetland Hydrology Present? Remarks:	Yes	_ No					
HYDROLOGY							
Wetland Hydrology Indicators:					ators (minimum of two required)		
Primary Indicators (minimum of one	-			Surface Soil			
Surface Water (A1)		True Aquatic Plants (getated Concave Surface (B8)		
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Patterns (B10) Moss Trim Lines (B16)			
Saturation (A3) Water Marks (B1)		Presence of Reduced	es on Living Roots (C3)				
Sediment Deposits (B2)		Recent Iron Reduction		Dry-Season Water Table (C2) Crayfish Burrows (C8)			
Drift Deposits (B3)		Thin Muck Surface (C		•	isible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)		Other (Explain in Rer			Stressed Plants (D1)		
Iron Deposits (B5)			,	✓ Geomorphic			
Inundation Visible on Aerial Ima	gery (B7)			Shallow Aqu	itard (D3)		
Water-Stained Leaves (B9)					aphic Relief (D4)		
Aquatic Fauna (B13)				FAC-Neutral	l Test (D5)		
Field Observations:							
Surface Water Present? Yes	No	Depth (inches):					
		Depth (inches):					
Saturation Present? Yes (includes capillary fringe)	No	Depth (inches):	Wetland	Hydrology Preser	nt? Yes No		
Describe Recorded Data (stream ga	uge, monitoring w	vell, aerial photos, pre	vious inspections), if ava	ailable:			
Remarks:							

Sampling	Point:	W-vv8,	vv9,	vv10,	vv11-L	JΡΙ
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	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?	Status	Number of Dominant Species
1	-			That Are OBL, FACW, or FAC:1 (A)
2				Total Newhord Davis and
3				Total Number of Dominant Species Across All Strata:5 (B)
4				
5				Percent of Dominant Species That Are OBL FACW or FAC: 20 (A/B)
6.		-		That Are OBL, FACW, or FAC: (A/B)
7.	-			Prevalence Index worksheet:
·	0	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 0				OBL species x 1 =
	20 /6 01	total cover		FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15') 1. Prunus serotina	5	~	FACU	FAC species x 3 =
· ·			FACU	FACU species x 4 =
2				
3				UPL species x 5 =
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				
8				1 - Rapid Test for Hydrophytic Vegetation
9.				2 - Dominance Test is >50%
	5	= Total Cov	er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: <u>2.5</u>		total cover		4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Verbesina alternifolia	10		FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Phleum pratense	15		F <u>ACU</u>	
3. Daucus carata	15		UPL	¹ Indicators of hydric soil and wetland hydrology must
4. Rubus allegheniensis	15			be present, unless disturbed or problematic.
	5		FACU	Definitions of Four Vegetation Strata:
5. Trifolium pratense			F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Microstegium vimineum	15		F <u>AC</u>	more in diameter at breast height (DBH), regardless of
7. Juncus effusus	5		F <u>ACW</u>	height.
8. Scirpus atrovirens	5		<u>OBL</u>	Sapling/Shrub – Woody plants, excluding vines, less
9. Dichanthelium clandestinum	5		F <u>AC</u>	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
	90	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 45		total cover		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1.				neight.
2.	-			
		-		
3		-		
		-		Hydrophytic
5	0			Vegetation Present? Yes No ✓
50% -{\cdot\cdot\cdot\cdot\cdot\cdot\cdot\cdot		= Total Cov	_	103 No
50% of total cover:0		total cover	0	
Remarks: (Include photo numbers here or on a separate si	heet.)			

Sampling Point: W-vv8, vv9, vv10, vv11-UPL

Profile Desc	ription: (Describe t	to the dept	h needed to docum	ent the i	indicator	or confirn	n the absence	of indicators.)	
Depth	Matrix		Redox	(Feature					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Re	emarks
0-6	10yr 4/2	100			-		GrSiL		
6-12	7.5 yr 4/3	95	7.5yr 5/6	5	С	М	GrCL		
						· 	-		-
					-	· 			
								-	
									
¹ Type: C=C	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	=Masked	d Sand Gr	ains.	² Location: P	L=Pore Lining, M=	=Matrix.
Hydric Soil	Indicators:						Indica	ators for Problen	natic Hydric Soils ³ :
Histosol			Dark Surface					cm Muck (A10) (I	MLRA 147)
	oipedon (A2)		Polyvalue Bel				. 148) C	Coast Prairie Redo	
	stic (A3)		Thin Dark Sui			147, 148)		(MLRA 147, 148	
	en Sulfide (A4)		Loamy Gleye		(F2)		P	Piedmont Floodpla	
	d Layers (A5)		Depleted Mat		-0)			(MLRA 136, 147	
	ick (A10) (LRR N) d Below Dark Surface	Δ (Δ11)	Redox Dark S Depleted Dark					/ery Shallow Dark Other (Explain in R	
	ark Surface (A12)	5 (A11)	Redox Depre					oner (Explain in K	emarks)
	Mucky Mineral (S1) (L	.RR N.	Iron-Mangane			LRR N.			
	A 147, 148)	,	MLRA 136		(, (,			
	Gleyed Matrix (S4)		Umbric Surfac	-	(MLRA 13	86, 122)	³ Ind	licators of hydroph	nytic vegetation and
Sandy F	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	18) we	etland hydrology m	nust be present,
Stripped	l Matrix (S6)		Red Parent M	laterial (F	21) (MLR	A 127, 147	7) un	less disturbed or p	oroblematic.
Restrictive	Layer (if observed):								
Type:									
Depth (in	ches):						Hydric Soil	Present? Yes	No <u> </u>
Remarks:							- 11		

USACE FILE NO./Project Name:		Mountain Valley Pipeline		COORDINATES:	Lat.	38.890309	Lon.	-80.553784
STREAM/SITE ID AND SITE DESCR	IPTION:				W	-VV12, Temporary Access Road		
(% stream slope, watershed size {a	creage}, unaltered	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-VV12	Emergent	0.0277	Emergent					
						PART III - Advanced		n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0277						
		Jnit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0277	-		\$4,660,00		
Total Scrub-Shrub Total Forested			0	-		\$1,662.00		
Total Open Water			0	-				
rotal Open water			U					

Project/Site: MVP	City/County: Lewis		Sampling Date: 12/10/2015		
Applicant/Owner: MVP			Sampling Point: W-VV12		
Investigator(s): Jason McGuirk, Kevin Pulver	Section, Township, Range: N		•		
Landform (hillslope, terrace, etc.): hillslope			Slope (%): 2-4		
Subregion (LRR or MLRA): LRRN Lat: 38	3.89027 Long: -80	.553782	Datum: NAD 83		
Soil Map Unit Name: Gilpin-Upshur silt loams, 35 to 70 p					
Are climatic / hydrologic conditions on the site typical for th					
Are Vegetation, Soil, or Hydrology	<u> </u>	•	·		
Are Vegetation, Soil, or Hydrology SUMMARY OF FINDINGS – Attach site map		explain any answer	•		
			•		
Hydrophytic Vegetation Present? Hydric Soil Present? Yes Yes Yes	is the bampied Area				
	within a Wetland?	Yes	No		
Remarks:					
Cowardin Code: PEM					
HGM: Riverine					
WT: NRPWW					
LIVERGLOGY					
HYDROLOGY		0	(
Wetland Hydrology Indicators:	that and h	·	tors (minimum of two required)		
Primary Indicators (minimum of one is required; check all		Surface Soil (` '		
	e Aquatic Plants (B14) drogen Sulfide Odor (C1)	✓ Drainage Pat	etated Concave Surface (B8)		
1 4	dized Rhizospheres on Living Roots (C3)	Moss Trim Lir			
	sence of Reduced Iron (C4)		Vater Table (C2)		
	cent Iron Reduction in Tilled Soils (C6)	Crayfish Burre			
	n Muck Surface (C7)	-	sible on Aerial Imagery (C9)		
	er (Explain in Remarks)		ressed Plants (D1)		
Iron Deposits (B5)		✓ Geomorphic I	Position (D2)		
Inundation Visible on Aerial Imagery (B7)		Shallow Aquit	tard (D3)		
Water-Stained Leaves (B9)		Microtopographic Relief (D4)			
Aquatic Fauna (B13)		FAC-Neutral	Test (D5)		
Field Observations:					
Surface Water Present? Yes No De					
Water Table Present? Yes No De	ptii (iiioiios)		. 4		
Saturation Present? Yes No De (includes capillary fringe)	epth (inches): 0 Wetland I	lydrology Presen	t? Yes No		
Describe Recorded Data (stream gauge, monitoring well,	aerial photos, previous inspections), if ava	ailable:			
Remarks:					
Remarks.					

'EGETATION (Four Strata) – Use scientific na		Sampling Point: W-VV12			
20'	Absolute	Dominant		Dominance Test worksheet:	
<u>Tree Stratum</u> (Plot size: 30')		Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC:4 (A)	
2			·		
3			·	Total Number of Dominant Species Across All Strata: 4 (B)	
4				Operico Atribus Air Strata.	
5			·	Percent of Dominant Species That Are OBL FACW or FAC: 100 (A/B)	
6			·	That Are OBL, FACW, or FAC: (A/B)	
7.		-		Prevalence Index worksheet:	
	0	= Total Cov	/er	Total % Cover of: Multiply by:	
50% of total cover: 0				OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =	
1				FAC species x 3 =	
2			·	FACU species x 4 =	
3				UPL species x 5 =	
4				Column Totals: (A) (B)	
·					
5 6.				Prevalence Index = B/A =	
				Hydrophytic Vegetation Indicators:	
7				1 - Rapid Test for Hydrophytic Vegetation	
8				✓ 2 - Dominance Test is >50%	
9	0	= Total Cov		3 - Prevalence Index is ≤3.0 ¹	
50% of total cover:0		total cover	_	4 - Morphological Adaptations ¹ (Provide supporting	
Herb Stratum (Plot size: 5')	2070 01	total cover		data in Remarks or on a separate sheet)	
1. Dichanthelium clandestinum	20	~	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)	
2. Juncus effusus	20		FACW		
3. Epilobium coloratum	20	~	FACW	¹ Indicators of hydric soil and wetland hydrology must	
4. Microstegium vimineum	15		IACV	be present, unless disturbed or problematic.	
5. Carex Iurida	25		OBL	Definitions of Four Vegetation Strata:	
			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		-		Sapling/Shrub – Woody plants, excluding vines, less	
9		-		than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.	
10		-		m) tan.	
11	100			Herb – All herbaceous (non-woody) plants, regardless	
50% of total cover: 50	100 ;	= Total Cover	/er . 20	of size, and woody plants less than 3.28 ft tall.	
15!	20% 01	total cover		Woody vine - All woody vines greater than 3.28 ft in	
· (Flot Size)				height.	
1					
2					
3					
4		-		Hydrophytic	
5		-		Vegetation Present? Yes	
500/ (1.1.)		= Total Cov	_	Fresent: Tes NO	
50% of total cover:0		total cover	:0		
Remarks: (Include photo numbers here or on a separate sh	neet.)				

SOIL Sampling Point: W-VV12

Profile Desc	ription: (Describe t	o the dept	n needed to docum	ent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redox	Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10yr 4/2	95	7.5 yr 4/6	5	С	M	CL	
6-16	7.5 yr 4/2	100					C	
	7.0 yr 1/2				-			
					-			
						· ——		
	oncentration, D=Depl	etion, RM=I	Reduced Matrix, MS	=Masked	Sand Gr	ains.		L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indica	ators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2	cm Muck (A10) (MLRA 147)
Histic Ep	oipedon (A2)		Polyvalue Bel	ow Surfa	ce (S8) (N	/ILRA 147,	148) C	oast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Sur		•	147, 148)		(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye		F2)		Pi	iedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Mat					(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark S	,	,			ery Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Darl				0	ther (Explain in Remarks)
	ark Surface (A12)	DD N	Redox Depres			LDDN		
	Mucky Mineral (S1) (L	KK N,	Iron-Mangane		es (F12) (LKK N,		
	A 147, 148) Gleyed Matrix (S4)		MLRA 136 Umbric Surfac		MIDA 12	e 122\	3Indi	icators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo					tland hydrology must be present,
	Matrix (S6)		Red Parent M					ess disturbed or problematic.
	Layer (if observed):		Red r arent w	lateriai (i	21) (IVILIX	A 121, 141	, uiii	css disturbed of problematic.
Type:	-ayo. (obco. roa).							
	-l\.						Unadaia Cail	Present? Yes V No
Depth (inc	cnes).						Hydric Soil	Present? Yes No No No
Remarks:								



Photograph Direction NW

Comments:		

Project/Site: MVP		City/C	County: Lewis		Sampling Date: 12/10/2015		
Applicant/Owner: MVP		,	,	State: WV	Sampling Point: W-vv11, W-VV12-u		
Investigator(s): JMM, KP		Section	on, Township, Range: N				
Landform (hillslope, terrace, etc.): hil	Islope				Slope (%): 2-4		
Subregion (LRR or MLRA): LRRN	l at·				Datum: NAD 83		
Soil Map Unit Name: Gilpin-Upshur							
Are climatic / hydrologic conditions on							
· ·		•		•	,		
Are Vegetation, Soil, o							
Are Vegetation, Soil, o				explain any answe			
SUMMARY OF FINDINGS –	Attach site m	nap showing san	npling point location	ons, transects	, important features, etc.		
Hydrophytic Vegetation Present?	Yes	No 🗸					
Hydric Soil Present?	Yes		Is the Sampled Area	Vos	No✓		
Wetland Hydrology Present?	Yes		within a Wetland?	162			
HYDROLOGY							
Wetland Hydrology Indicators:				· ·	ators (minimum of two required)		
Primary Indicators (minimum of one	-		(5.4)	Surface Soil			
Surface Water (A1)		True Aquatic Plants (getated Concave Surface (B8)		
High Water Table (A2) Saturation (A3)		Hydrogen Sulfide Od	es on Living Roots (C3)	Drainage Pa Moss Trim L			
Water Marks (B1)		Presence of Reduced	-				
Sediment Deposits (B2)		Recent Iron Reduction		Dry-Season Water Table (C2) Crayfish Burrows (C8)			
Drift Deposits (B3)		Thin Muck Surface (0			isible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)		Other (Explain in Rer			tressed Plants (D1)		
Iron Deposits (B5)				Geomorphic	Position (D2)		
Inundation Visible on Aerial Imag	gery (B7)			Shallow Aqu	itard (D3)		
Water-Stained Leaves (B9)					aphic Relief (D4)		
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)		
Field Observations:		D 4 (1 1)					
		Depth (inches): Depth (inches):					
		Depth (inches):		Herdundanı Dunna	-42 Vaa Na V		
Saturation Present? Yes (includes capillary fringe)	NO _•	Depth (inches):	wetiand i	Hydrology Preser	nt? Yes No		
Describe Recorded Data (stream gar	uge, monitoring v	vell, aerial photos, pre	evious inspections), if ava	ailable:			
Remarks:							
Duplicate w-vv10 upland							
Daphoato W W To apiana							

Sampling	Point:	W-vv11,	W-VV	12-սբ
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	Absolute	Dominant	Indicator	Dominance Test worksheet:	\neg
Tree Stratum (Plot size: 30')		Species?	Status		
1. Quercus alba	40		FACU	Number of Dominant Species That Are OBL, FACW, or FAC: (A)	
2. Fagus grandifolia	10			That Are OBE, I AGW, OI I AG (A)	
			FACU_	Total Number of Dominant	
3. Quercus rubra	20		FACU_	Species Across All Strata: 5 (B)	
4. Populus grandidentata	10		FACU_	Develop of Developer Courses	
5				Percent of Dominant Species That Are OBL, FACW, or FAC:0 (A/B	a
6				(145)	,
7.				Prevalence Index worksheet:	
<i>I</i>	80	T 0		Total % Cover of: Multiply by:	
4 40		= Total Cov		OBL species x 1 =	
50% of total cover: 40	20% of	total cover:	16		
Sapling/Shrub Stratum (Plot size: 15'				FACW species x 2 =	
1. Fagus grandifolia	50		FACU_	FAC species x 3 =	
2. Populus grandidentata	10		FACU_	FACU species x 4 =	
3				UPL species x 5 =	
				Column Totals: (A) (B)	
4				(7)	
5				Prevalence Index = B/A =	
6				Hydrophytic Vegetation Indicators:	
7					
8				1 - Rapid Test for Hydrophytic Vegetation	
				2 - Dominance Test is >50%	
9				3 - Prevalence Index is ≤3.0 ¹	
00		= Total Cov	4.0	4 - Morphological Adaptations ¹ (Provide supportin	a
50% of total cover: 30	20% of	total cover:	12	data in Remarks or on a separate sheet)	9
Herb Stratum (Plot size: 5')					
1. Polystichum acrostichoides	10	~	FACU	Problematic Hydrophytic Vegetation ¹ (Explain)	
2. Andropogon virginicus	5		FACU		
			1 <u>7100</u>	¹ Indicators of hydric soil and wetland hydrology must	
3				be present, unless disturbed or problematic.	
4				Definitions of Four Vegetation Strata:	
5					
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) o	
7				more in diameter at breast height (DBH), regardless of height.	
8				Sapling/Shrub – Woody plants, excluding vines, less	
9				than 3 in. DBH and greater than or equal to 3.28 ft (1	
10				m) tall.	
11				Herb – All herbaceous (non-woody) plants, regardless	,
	15	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.	
50% of total cover: 7.5		total cover:	_		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in	
				height.	_
1					
2					
3					
4				Hydrophytic	
5				Vegetation	
	0	= Total Cov		Present? Yes No	
50% of total cover: 0		total cover:	_		
		total cover.			
Remarks: (Include photo numbers here or on a separate sl	neet.)				

Sampling Point: W-vv11, W-VV12-up

Profile Desc	cription: (Describe t	o the depth	needed to docum	nent the i	ndicator o	or confirm	the absence	of indicators	.)	
Depth	Matrix			x Features	3					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	-	Remarks	
0-6	7.5 yr 4/4	100					GrSL			
6+			_					Coa	arse fragm	ents
			-				-			-
								-		
	oncentration, D=Deple	etion, RM=R	educed Matrix, MS	S=Masked	Sand Gra	ins.		L=Pore Lining,		
Hydric Soil	Indicators:						Indic	ators for Prob	lematic Hyd	ric Soils³:
Histosol			Dark Surface					cm Muck (A10		7)
	pipedon (A2)		Polyvalue Be				148) C	Coast Prairie Re		
	istic (A3)		Thin Dark Su			47, 148)		(MLRA 147,		
	en Sulfide (A4)		Loamy Gleye		F2)		P	Piedmont Flood		⁻ 19)
	d Layers (A5)		Depleted Mat					(MLRA 136,		
	uck (A10) (LRR N)	(4.4.4)	Redox Dark S					ery Shallow D		TF12)
	d Below Dark Surface	(A11)	Depleted Dar					Other (Explain i	n Remarks)	
	ark Surface (A12)	DD N	Redox Depre			DD N				
	Mucky Mineral (S1) (L l A 147, 148)	KK N,	Iron-Mangan		8 (F 12) (L	KK N,				
	Gleyed Matrix (S4)		Umbric Surfa	-	MI DA 13	6 122)	³ Ind	licators of hydr	onhytic year	tation and
	Redox (S5)		Piedmont Flo					etland hydrolog		
	d Matrix (S6)		Red Parent N					lless disturbed	-	
	Layer (if observed):			iatoriai (i z	(, u	iiooo alotarboa	or problemat	
	oarse fragments									
,, <u> </u>	ches): 6						Hydric Soil	Procent2	/es	No 🗸
	cries). <u>-</u>		_				Hydric 30ii	i Fresent:		140
Remarks:										

	Mountain	Valley Pipeline	COORDINATES:	Lat.	38.86328	Lon.	-80.525705
				W	-VV4-PEM, Timber Mat Crossing		
creage}, unaltered	or impairments)						
8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
PART I - Wetl	and Indicators						
Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
Emergent	0.0131	Emergent					
			-				
					PART III - Advanced	Mitigatio	on
					Advanced Mitigation		Υ
	0.0131			Г	Februaria		
	Jnit Scores	Danis and Haller					
assification					ILF Costs		
			-		ቁ ን ያል በበ		
		-		_	\$700.00		
	8/10 PART I - Wetl Impact Wetland Classification Emergent	PTION: creage}, unaltered or impairments) 8/10/2015 PART I - Wetland Indicators Impact Wetland Classification Emergent 0.0131 0.0131 PART II - Unit Scores	8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Classification Emergent 0.0131 Emergent 0.0131 PART II - Unit Scores	PTION: creage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0131 Emergent 0.0131 PART II - Unit Scores assification Replacement Unit(s) 0 0 0	PTION: Creage), unaltered or impairments) ### WEATHER CONDITIONS: ### PART I - Wetland Indicators Impact	PTION: creage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts (acreage) Wetland Classification Emergent 0.0131 Emergent PART II - Unit Scores assification Replacement Unit(s) 0.0131 PART II - Unit Scores 1	PTION: creage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.0131 Emergent Emergent 0.0131 Emergent Sustainable Determination Made on Advanced Mitigation (Y or N) PART II - Unit Scores assification Replacement Unit(s) 0.0131 PART III - Unit Scores 1.5786.00

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 11/20/2015	
Applicant/Owner: MVP		-			Sampling Point: W-VV4 PEM	
		Section	on, Township, Range: N/			
Landform (hillslope, terrace, etc.): valley	bottom				Slope (%): 1-2	
Subregion (LRR or MLRA): LRRN	Lat:	38.863268	Long:80	.52571	NAD 83	
Soil Map Unit Name: Vandalia silt loam,						
Are climatic / hydrologic conditions on the	site typical fo					
Are Vegetation, Soil, or Hy	drology	significantly distur	bed? Are "Normal	Circumstances" p	present? Yes No	
Are Vegetation, Soil, or Hy						
SUMMARY OF FINDINGS – Atta						
Hydrophytic Vegetation Present?	Yes 🗸	No				
Hydric Soil Present?	Yes 🗸		Is the Sampled Area	Yes 🗸	No	
Wetland Hydrology Present?	Yes 🗸	No	within a Wetland?	res	NO	
Remarks:						
Cowardin Code: PEM						
HGM: Riverine WT: RPWWD						
WI: RPWWD						
HYDROLOGY						
Wetland Hydrology Indicators:				Secondary Indica	tors (minimum of two required)	
Primary Indicators (minimum of one is re	quired; check	k 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)	Drainage Pa	tterns (B10)	
Saturation (A3)	_	Oxidized Rhizospher	es on Living Roots (C3)	Moss Trim Li	ines (B16)	
Water Marks (B1)		Presence of Reduced	, ,	Dry-Season	Water Table (C2)	
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Bur		
Drift Deposits (B3)		Thin Muck Surface (C			sible on Aerial Imagery (C9)	
Algal Mat or Crust (B4)	_	Other (Explain in Rer	narks)		tressed Plants (D1)	
Iron Deposits (B5)	(DZ)			Geomorphic	, ,	
Inundation Visible on Aerial Imagery	(B7)			Shallow Aqui		
Water-Stained Leaves (B9) Aquatic Fauna (B13)				FAC-Neutral	aphic Relief (D4)	
Field Observations:				TAO Neuliai	1031 (00)	
	No 🗸	Depth (inches):				
		Depth (inches):				
		Depth (inches):		d Hydrology Present? Yes No		
(includes capillary fringe) Describe Recorded Data (stream gauge,		,				
Describe Recorded Data (Stream gauge,	monitoring w	veii, aeriai priotos, pre	vious irispections), ii ava	iliabie.		
Remarks:						

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

Sampling	Point: W-VV4 PEM	
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Tree Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:		
Tiee Stratum (Flot Size.	% Cover			Number of Dominant Species	1	
1,				That Are OBL, FACW, or FAC:		(A)
2				Total Number of Dominant		
3			· ——	Species Across All Strata:	1	(B)
4				Percent of Dominant Species		
5				That Are OBL, FACW, or FAC:	100	(A/B)
6				Prevalence Index worksheet:		
7				Total % Cover of:	Multiply by:	
		= Total Cov	_		Multiply by:	
50% of total cover: 0	20% of	total cover	:0	OBL species x 1		
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2		
1			·	FAC species x 3		
2				FACU species x 4		
3				UPL species x 5		
4				Column Totals: (A)		_ (B)
5				Prevalence Index = B/A = _		
6				Hydrophytic Vegetation Indicate		
7				1 - Rapid Test for Hydrophytic		
8				2 - Dominance Test is >50%	5 vegetation	
9						
	_	= Total Cov	er er	3 - Prevalence Index is ≤3.0¹	-1 (Danida	
50% of total cover:0	20% of	total cover	. 0	4 - Morphological Adaptations		porting
Herb Stratum (Plot size: 5'				data in Remarks or on a s		
1. Phalaris arundinacea	100		FACW_	Problematic Hydrophytic Veg	etation' (Explai	in)
2						
3			·	¹ Indicators of hydric soil and wetla		nust
4				be present, unless disturbed or pr		
5				Definitions of Four Vegetation S	otrata:	
6				Tree – Woody plants, excluding v		
7				more in diameter at breast height height.	(DBH), regardle	ess of
				noight.		
8				Sapling/Shrub – Woody plants, e		
				than 3 in. DBH and greater than on m) tall.	r equal to 3.28	π (1
10		-		,		
11	100	T		Herb – All herbaceous (non-wood of size, and woody plants less that		rdless
50% of total cover: 50	20% of	= Total Cov total cover	er · 20	or size, and woody plants less that	.11 3.20 II Iaii.	
Woody Vine Stratum (Plot size: 15')	20 /0 01	total cover		Woody vine – All woody vines gr	eater than 3.28	ft in
				height.		
1						
2		-				
3			·			
4				Hydrophytic		
5				Vegetation Present? Yes ✓	No	
· · · · · · · · · · · · · · · · ·		= Total Cov	_	rieseiit: ies	NO	
50% of total cover: 0		total cover	:0			
Remarks: (Include photo numbers here or on a separate s	heet.)					

Sampling Point: W-VV4 PEM

Color (moist)	Depth (inches)	Matrix		Redox Features		•	Dame	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histosol (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Stratified Layers (A5) Depleted Matrix (F3) Depleted Below Dark Surface (A10) Depleted Dark Surface (F6) Depleted Below Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N) MLRA 147, 148) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Piedmont Floodplain Soils (F19) Wery Shallow Dark Surface (TF12) ✓ Other (Explain in Remarks) **Other (Explain in Remarks) **Indicators for Problematic Hydric Soils*: 1 2 cm Muck (A10) (MLRA 147, 148) (MLRA 147, 148) Piedmont Floodplain Soils (F19) (MLRA 136, 147) ✓ Very Shallow Dark Surface (TF12) ✓ Other (Explain in Remarks) **Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. **Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) estrictive Layer (if observed): Type: Depth (inches): Depth (inches): Depth (inches): Depth (inches): Demarks: Oblematic Soils:		·		Color (moist) % Type 1		<u> </u>	Remarks	
ydric Soil Indicators: Histosol (A1)	0-12	10yr 4/2	100					
ydric Soil Indicators: _ Histosol (A1)								
ydric Soil Indicators: Histosol (A1)								
ydric Soil Indicators: _ Histosol (A1)								
ydric Soil Indicators: _ Histosol (A1)			·					
ydric Soil Indicators: Histosol (A1)								
ydric Soil Indicators: Histosol (A1)								
ydric Soil Indicators: Histosol (A1)								
ydric Soil Indicators: Histosol (A1)								
ydric Soil Indicators: Histosol (A1)								
ydric Soil Indicators: _ Histosol (A1)						<u> </u>		
ydric Soil Indicators: Histosol (A1)								
ydric Soil Indicators: _ Histosol (A1)			lation DM D	and a set of Markin MO Marked Oracle Oracle	21		NA . NA - 1 - 1 - 1	
Histosol (A1)			letion, RM=R	educed Matrix, MS=Masked Sand Grains				dria Caila³.
Histic Epipedon (A2)	-			David Occidence (07)	•••			
								47)
Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F3) MLRA 136, 147) Piedmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Stripped Matrix (S6) Piedmont Floodplain Soils (F19) (MLRA 136, 122) Stripped Matrix (S6) Bet Parent Material (F21) (MLRA 127, 147) Bet Parent Material (F21) (MLRA 127, 147) Hydric Soil Present? Yes No Hydric Soils:								
Stratified Layers (A5)					, 140)			(E10)
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) Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) Iron-Manganese Masses (F12) (LRR N, MLRA 136) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) 3Indicators 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. estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No roblematic soils:					_			(19)
Depleted Below Dark Surface (A11)		• , ,				•	•	(TF12)
Thick Dark Surface (A12)			e (A11)		<u>, </u>			
Sandy Mucky Mineral (S1) (LRR N,			- (_		,	
MLRA 147, 148) _ Sandy Gleyed Matrix (S4) _ Sandy Redox (S5) _ Stripped Matrix (S6) _ Red Parent Material (F21) (MLRA 127, 147)			_RR N,		R N,			
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. estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No emarks: roblematic soils:								
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. estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No emarks: roblematic soils:	Sandy G	leyed Matrix (S4)		Umbric Surface (F13) (MLRA 136,	122)	3Indicators of h	ydrophytic veg	etation and
roblematic soils: Type: Depth (inches): Hydric Soil Present? Yes No	Sandy R	edox (S5)				wetland hydro	logy must be p	resent,
Type:	Stripped	Matrix (S6)		Red Parent Material (F21) (MLRA 1	27, 147)	unless disturb	ed or problema	atic.
Depth (inches): Hydric Soil Present? Yes No emarks: roblematic soils:	Restrictive L	ayer (if observed):						
emarks: roblematic soils:	Type:			<u></u>				
emarks: roblematic soils:	Depth (inc	hes):			Hydric	Soil Present?	Yes_	No
roblematic soils:								
		soils:						
	oes not m	eet hydric soil ir	ndicators fo	or subregion LRR N. Determined	as sandy floor	dplain soils.		
				g				

Wetland Photograph Page

Wetland ID $\underline{\text{W-VV4 PEM}}$ Date $\underline{\text{11/20/201}}$ 5



Photograph Direction NW

Comments:			

Project/Site: MVP		Cit	y/County: Lewis		Sampling Date: 11/20/2015
Applicant/Owner: MVP			,		Sampling Point: W-VV4 PFO
Investigator(s): JM KP		Se	ction, Township, Range: N		
Landform (hillsland torrace ata	valley botto	om Local			Slone (%): 0-2
Subregion (LRR or MLRA): <u>LR</u>	RN	38 86318			Datum: NAD 83
Subregion (LRR or MLRA): LIN	cilt loom 15 to 1	Lat: _cc.ccc rc	=		
Soil Map Unit Name: Vandalia					
Are climatic / hydrologic condition		· · · · · · · · · · · · · · · · · · ·			
Are Vegetation, Soil	, or Hydrolog	y significantly dis	turbed? Are "Norma	al Circumstances" p	present? Yes No
Are Vegetation, Soil				explain any answe	
SUMMARY OF FINDING	S – Attach s	ite map showing sa	ampling point location	ons, transects	, important features, etc.
Hydrophytic Vegetation Preser	nt? Yes	✓ No_			
Hydric Soil Present?	Yes		Is the Sampled Area	Yes 🗸	No
Wetland Hydrology Present?	Yes _		within a Wetland?	res	NO
Remarks:					
Cowardin Code: PFO					
HGM: Riverine					
WT: RPWWD					
HYDROLOGY				Cocondon Indias	store (minimum of two required)
Wetland Hydrology Indicator		choole all that apply		·	etors (minimum of two required)
Primary Indicators (minimum o	or one is required;		- (D44)	Surface Soil	
Surface Water (A1)		True Aquatic Plant		Sparsely veg ✓ Drainage Pa	getated Concave Surface (B8)
High Water Table (A2) Saturation (A3)		Hydrogen Sulfide (neres on Living Roots (C3)		` '
Water Marks (B1)		Presence of Redu	= : :		Water Table (C2)
Sediment Deposits (B2)		· · · · · · · · · · · · · · · · · · ·	etion in Tilled Soils (C6)	Crayfish Bur	
Drift Deposits (B3)		Thin Muck Surface		-	isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in F			tressed Plants (D1)
Iron Deposits (B5)				✓ Geomorphic	
Inundation Visible on Aeria	al Imagery (B7)			Shallow Aqu	
Water-Stained Leaves (B9	9)				aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:					
Surface Water Present?		Depth (inches):			
Water Table Present?		Depth (inches):			
Saturation Present?	Yes No	Depth (inches):	Wetland	Hydrology Preser	nt? Yes V No No
(includes capillary fringe) Describe Recorded Data (streat	am gauge, monito	oring well, aerial photos,	orevious inspections), if ava	ailable:	
,			, ,,		
Remarks:					

VEGETATION (Fo

Free Stratum (Plot size: 30'		Absolute	Dominant		Dominance Test work	ksheet:		
ree Stratum (Plot size: 30" Platanus occidentalis)	<u>% Cover</u> 65	Species?	<u>Status</u> FACW	Number of Dominant S That Are OBL, FACW,		6	_ (A)
					Total Number of Domir Species Across All Stra		6	(B)
								_
					Percent of Dominant S That Are OBL, FACW,		100	(A/B
					mat Aic OBE, i AOW,	011A0		_ (///
					Prevalence Index wor	rksheet:		
		65	= Total Cov	/er	Total % Cover of:	<u>N</u>	<u>fultiply by:</u>	
	50% of total cover: 32				OBL species	x 1 =		
apling/Shrub Stratum (Plot size		<u></u>			FACW species	x 2 =		
Platanus occidentalis	,	30	/	FACW	FAC species	x 3 =		
Acer negundo		20	~	FAC	FACU species	x 4 =		
<u> </u>			-	. <u></u>		x 5 =		
					Column Totals:	(A)		(B)
					Prevalence Index			
					Hydrophytic Vegetati			_
					1 - Rapid Test for		vegetation	
					2 - Dominance Tes			
					2 Dravalance Ind			
		50	= Total Cov	/er	3 - Prevalence Ind			
	50% of total cover: 2		= Total Cover		4 - Morphological	Adaptations ¹		
F1	50% of total cover: 2					Adaptations ¹		
erb Stratum (Plot size: 5'	50% of total cover:2			: 10	4 - Morphological	Adaptations ¹ as or on a sep	arate shee	t)
erb Stratum (Plot size: 5' Elymus riparius	50% of total cover: 2	20% of	total cover	: 10 FACW	4 - Morphological A	Adaptations ¹ as or on a sep	arate shee	t)
erb Stratum (Plot size: 5' Elymus riparius Scirpus atrovirens	50% of total cover:2	20% of 15	total cover	<u>FACW</u> OBL	4 - Morphological Adata in Remark Problematic Hydro	Adaptations ¹ as or on a sepophytic Vegeta	parate shee ation ¹ (Exp	t) lain)
erb Stratum (Plot size: 5' Elymus riparius Scirpus atrovirens Onoclea sensibilis	50% of total cover:2	25 20% of 15 15 10	total cover	FACW OBL FACW	4 - Morphological Adata in Remark Problematic Hydro Indicators of hydric so be present, unless dist	Adaptations ¹ is or on a sep ophytic Vegeta ill and wetland urbed or prob	parate shee ation ¹ (Exp d hydrology blematic.	t) lain)
erb Stratum (Plot size: 5' Elymus riparius Scirpus atrovirens Onoclea sensibilis Microstegium vimineum	50% of total cover: 2	25 20% of 15 15 10 5	total cover	FACW OBL FACW FAC	4 - Morphological Adata in Remark Problematic Hydro	Adaptations ¹ is or on a sep ophytic Vegeta ill and wetland urbed or prob	parate shee ation ¹ (Exp d hydrology blematic.	t) lain)
erb Stratum (Plot size: 5' Elymus riparius Scirpus atrovirens Onoclea sensibilis Microstegium vimineum Allium cernuum	50% of total cover: 2	25 20% of 15 15 10 5 5	total cover	FACW OBL FACW FAC FACU	4 - Morphological Adata in Remark Problematic Hydro Indicators of hydric so be present, unless dist Definitions of Four Ve	Adaptations ¹ as or on a sepophytic Vegeta ill and wetland urbed or probe egetation Str	parate shee ation ¹ (Exp d hydrology blematic. rata:	t) lain) / must
erb Stratum (Plot size: 5' Elymus riparius Scirpus atrovirens Onoclea sensibilis Microstegium vimineum Allium cernuum	50% of total cover: 2	25 20% of 15 15 10 5	total cover	FACW OBL FACW FAC	4 - Morphological Adata in Remark Problematic Hydro Indicators of hydric so be present, unless dist	Adaptations ¹ as or on a sep ophytic Vegeta il and wetland urbed or prob egetation Str excluding vine	d hydrology oblematic. rata: es, 3 in. (7.	tt) lain) / must 6 cm) o
erb Stratum (Plot size: 5' Elymus riparius Scirpus atrovirens Onoclea sensibilis Microstegium vimineum Allium cernuum	50% of total cover: 2	25 20% of 15 15 10 5 5	total cover	FACW OBL FACW FAC FACU	4 - Morphological Adata in Remark Problematic Hydro Indicators of hydric so be present, unless dist Definitions of Four Vec Tree – Woody plants, e	Adaptations ¹ as or on a sep ophytic Vegeta il and wetland urbed or prob egetation Str excluding vine	d hydrology oblematic. rata: es, 3 in. (7.	tt) lain) / must 6 cm) o
erb Stratum (Plot size: 5' Elymus riparius Scirpus atrovirens Onoclea sensibilis Microstegium vimineum Allium cernuum Verbesina alternifolia		25 20% of 15 15 10 5 5 20	total cover	FACW OBL FACW FAC FACU	4 - Morphological Adata in Remark Problematic Hydro 1Indicators of hydric so be present, unless dist Definitions of Four Verence — Woody plants, emore in diameter at breakingth.	Adaptations ¹ is or on a sep ophytic Vegeta il and wetland urbed or prob egetation Str excluding vine east height (D	d hydrology olematic. rata: es, 3 in. (7.	tt) lain) / must 6 cm) o
erb Stratum (Plot size: 5' Elymus riparius Scirpus atrovirens Onoclea sensibilis Microstegium vimineum Allium cernuum Verbesina alternifolia		25 20% of 15 15 10 5 5 20	total cover	FACW OBL FACW FAC FACU FACU	4 - Morphological Adata in Remark Problematic Hydro 1 Indicators of hydric so be present, unless dist Definitions of Four Volume Woody plants, of more in diameter at breheight. Sapling/Shrub – Wood than 3 in. DBH and green data in Remarks Wood than 3 in. DBH and green data in Remarks Wood than 3 in. DBH and green data in Remarks Wood than 3 in. DBH and green data in Remarks Wood than 3 in. DBH and green data in Remarks Wood than 3 in. DBH and green data in Remarks	Adaptations ¹ as or on a sepophytic Vegeta il and wetland urbed or prob egetation Str excluding vine east height (D	d hydrology olematic. rata: es, 3 in. (7. DBH), regar	tt) lain) / must 6 cm) o dless of
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Sampling Point: W-VV4 PFO

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Five: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. 2 2 2 2 2 2 2 2 2	Depth	Matrix		Redox Features		T		D	
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. ydric Soil Indicators: Histosol (A1) Black Histic Epipedon (A2) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Loamy Gleyed Matrix (F2) Depleted Matrix (F3) 2 cm Muck (A10) (MLRA 147, 148) (MLRA 147, 148) (MLRA 147, 148) Pledmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (A11) Depleted Dark Surface (F7) Thick Dark Surface (A12) Sandy Mucky Mineral (S1) (LRR N, MLRA 136, 122) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Gleyed Matrix (S4) Sandy Redox (S5) Pledmont Floodplain Soils (F19) (MLRA 136, 147) Very Shallow Dark Surface (TF12) ✓ Other (Explain in Remarks) **Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic. **Stripped Matrix (S4) Red Parent Material (F21) (MLRA 127, 147) **Betrictive Layer (if observed): Type: Depth (inches): **Depth (inches): **Deptatic Soils resent? Yes ✓ No **No **Hydric Soil Present? Yes ✓ No **Hydric Soil Present? Yes ✓ No **Thining Matrix (S4) ### August 147, 148	nches)	Color (moist)	<u>%</u>	Color (moist) %	Type ¹ Loc ²	Texture		Remarks	
Histosol (A1)	0-12	5yr 3/2	100						
Histosol (A1)									
ydric Soil Indicators: Histosol (A1) Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Below Dark Surface (S1) Depleted Below Dark Surface (A11) Depleted Below Dark Surface (A11) Depleted Dark Surface (F7) Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148) Sandy Redox (S5) Stripped Matrix (S6) Sandy Redox (S5) Stripped Matrix (S6) Sandy Redox (S5) Depleted Matrix (S6) Sandy Redox (S5) Depleted Matrix (S6) Sandy Redox (S5) Depleted Matrix (S6) Bed Parent Material (F21) (MLRA 127, 147) Depth (inches): Depth (inches): Depth (inches): Dark Surface (S7) Derk Surface (S8) (MLRA 147, 148) MLRA 147, 148) MURA 147, 148) MURA 147, 148) Depleted Matrix (S6) Depleted Matrix (S6) Depleted Dark Surface (F7) Depleted Dark Surface (F7) Depleted Dark Surface (F7) Depleted Dark Surface (F7) Worth (Explain in Remarks) Type: Depth (inches): Depth (i									
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Histosol (A1)							<u>, </u>		
Histosol (A1)						21 .: -			
Histosol (A1)			etion, RM=Re	educed Matrix, MS=Masked	Sand Grains.				
Histic Epipedon (A2)	-			D 1 0 ((0T)					
Black Histic (A3)					- (OO) (MI DA 447				47)
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Sandy Mucky Mineral (S1) (LRR N,			, (, ,			 `	o. (=p.i.a.		
MLRA 147, 148) _ Sandy Gleyed Matrix (S4) _ Sandy Redox (S5) _ Stripped Matrix (S6) _ Stripped Matrix (S6) _ Stripped Matrix (S6) _ Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Hydric Soil Present? Yes No Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Stripped Matrix (S6) Red Parent Material (F21) (MLRA 127, 147) Stripped Matrix (S6) Stri			RR N.						
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Type:									
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oco not most nyano son maioatoro for subregion Ettit 14. Determined ao sandy nocapiam sono.	Restrictive La Type: Depth (inch Remarks:	ayer (if observed):		<u>-</u>		Hydric Soi	I Present?	Yes 🗸	No
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	Restrictive La Type: Depth (inch Remarks: Problematic	nes):	dicators fo	r subregion LRR N. De	etermined as sa			Yes	No
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Photograph [Direction
Comments:	

Project/Site: MVP		City/0	County: Lewis		Sampling Date: 11/20/2015
Applicant/Owner: MVP					Sampling Point: W-VV3&4-U
Investigator(s): JM KP		Secti	on, Township, Range: N/		
Landform (hillslope, terrace, etc.): Vi					Slope (%): 3-4
Subregion (LRR or MLRA): LRRN		38.863088	Long: -80.	.525428	Datum: NAD 83
Soil Map Unit Name: Vandalia silt lo			Long.		
Are climatic / hydrologic conditions or					
Are Vegetation, Soil,				Circumstances" p	present? Yes No
Are Vegetation, Soil,	or Hydrology	naturally problem	atic? (If needed, e	explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS –	Attach site m	ap showing san	npling point locatio	ns, transects	s, important features, etc.
Hydrophytic Vegetation Present?	Yes	No. V			
Hydric Soil Present?	Yes		Is the Sampled Area	V = =	No
Wetland Hydrology Present?	Yes	No 🗸	within a Wetland?	res	NO
Remarks: Upland					
Органа					
HYDROLOGY					
Wetland Hydrology Indicators:				Secondary Indica	ators (minimum of two required)
Primary Indicators (minimum of one	is required; checl	call that apply)		Surface Soil	Cracks (B6)
Surface Water (A1)		True Aquatic Plants	(B14)	Sparsely Ve	getated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Od	lor (C1)	Drainage Pa	itterns (B10)
Saturation (A3)		Oxidized Rhizospher	res on Living Roots (C3)	Moss Trim L	ines (B16)
Water Marks (B1)		Presence of Reduce	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 (isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Re	marks)		tressed Plants (D1)
Iron Deposits (B5)					Position (D2)
Inundation Visible on Aerial Ima	agery (B7)			Shallow Aqu	
Water-Stained Leaves (B9)					aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	l Test (D5)
Field Observations: Surface Water Present? Yes	No. V	Depth (inches):			
Water Table Present? Yes	No V	Depth (inches):			
	_			leedwala wee Bussass	-12 Van Na 🗸
Saturation Present? Yes (includes capillary fringe)	No	Depth (inches):	wetland H	iyarology Presei	nt? Yes No
Describe Recorded Data (stream ga	auge, monitoring v	vell, aerial photos, pre	evious inspections), if ava	ilable:	
Remarks:					
itemarks.					

	Sampling	Point: W-VV3&4-UP
--	----------	-------------------

Tree Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:		
Tiec otratum (Flot size.	% Cover			Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
1						(A)
3				Total Number of Dominant Species Across All Strata:	3	(B)
4						(-)
5				Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)
6						(,,,)
7				Prevalence Index worksheet:	Marile a la characteria	
		= Total Co	_	Total % Cover of:	Multiply by:	
50% of total cover: 0	20% of	total cover	:0	OBL species x 1		
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 FAC species x 3		
1				FACU species x 4		
2				UPL species x 5		
3				Column Totals: (A)		
4				Column Totals (A)		_ (b)
5				Prevalence Index = B/A =		_
6				Hydrophytic Vegetation Indicate	ors:	
7				1 - Rapid Test for Hydrophytic	c Vegetation	
8				2 - Dominance Test is >50%		
9	^	= Total Co	· · · · · · · · · · · · · · · · · · ·	3 - Prevalence Index is ≤3.0 ¹		
50% of total cover: 0				4 - Morphological Adaptations		
Herb Stratum (Plot size: 5')				data in Remarks or on a se	. ,	
1. Dactylis glomerata	20	~	FACU	Problematic Hydrophytic Veg	etation' (Expla	in)
2. Phleum pratense	20	~	FACU	4		
3. Galium aparine	20	'	FACU	¹ Indicators of hydric soil and wetla be present, unless disturbed or pr		must
4. Allium cernuum	5		F <u>ACU</u>	Definitions of Four Vegetation S		
5. Plantago lanceolata	5		<u>UPL</u>			
6. Poa sp.	15		ND	Tree – Woody plants, excluding vi more in diameter at breast height		
7. Trifolium pratense	5		F <u>ACU</u>	height.	(DDII), regard	1000 01
8				Sapling/Shrub – Woody plants, e	veludina vines	lace
9				than 3 in. DBH and greater than o	r equal to 3.28	3 ft (1
10				m) tall.		
11		-		Herb – All herbaceous (non-wood		rdless
T00/ / / / / / / / / / / / / / / / / / /		= Total Co		of size, and woody plants less tha	n 3.28 ft tall.	
50% of total cover: 45	20% of	total cover	: 10	Woody vine – All woody vines gre	eater than 3.28	3 ft in
Woody Vine Stratum (Plot size: 15')				height.		
1						
2						
3 4						
5.				Hydrophytic Vegetation		
	_	= Total Co	/er	Present? Yes	No 🗸	
50% of total cover:0		total cover	•			
Remarks: (Include photo numbers here or on a separate s	heet.)					

Sampling Point: W-VV3&4-UP

SOIL

Depth (inches)	Matrix Color (moist)	%	Redox Feature Color (moist) %	<u>Type¹ L</u>	oc² T	exture	Remark	(C
	•		Color (moist) %	<u>rype</u> <u>L</u>	<u> </u>	SiL	Reman	KS
0-12	10yr 3/2	100				SIL		
		·		·				
		· 				 -		
				·				
				·				
				·				
		letion, RM=	Reduced Matrix, MS=Maske	d Sand Grains	. 'Lo		re Lining, M=Mat	
	ndicators:						for Problematic	-
Histosol (Dark Surface (S7)				fluck (A10) (MLR	
•	pedon (A2)		Polyvalue Below Surfa				Prairie Redox (A1	16)
Black His			Thin Dark Surface (S9		148)		RA 147, 148)	" (510)
	Sulfide (A4)		Loamy Gleyed Matrix	(F2)			ont Floodplain Sc	olis (F19)
-	Layers (A5) ck (A10) (LRR N)		Depleted Matrix (F3) Redox Dark Surface (=6)			RA 136, 147) hallow Dark Surfa	200 (TE12)
	Below Dark Surface	a (Δ11)	Redox Dark Surface (Explain in Rema	
	rk Surface (A12)	5 (A11)	Redox Depressions (F			Other	LAPIAIII III INEIIIA	iks)
	ucky Mineral (S1) (L	RR N.	Iron-Manganese Mass		N.			
	147, 148)	-1111 11,	MLRA 136))CS (1 12) (LI (1	,			
	eyed Matrix (S4)		Umbric Surface (F13)	(MLRA 136. 1	22)	3Indicato	s of hydrophytic	vegetation and
Sandy Re			Piedmont Floodplain S				hydrology must b	-
	Matrix (S6)		Red Parent Material (I				listurbed or proble	
	ayer (if observed):				Ť			
								No 🗸
Туре:					н	dric Soil Pres	ent? Ves	
Type: Depth (incl			<u> </u>		H	dric Soil Pres	ent? Yes	
Type: Depth (incl			<u></u>		Hy	dric Soil Pres	ent? Yes	
Type: Depth (incl					Н	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Туре:					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	
Type: Depth (incl					H	ydric Soil Pres	ent? Yes	

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	38.862795	Lon.	-80.52519
STREAM/SITE ID AND SITE DESCR						W-VV3-PEM, Pipeline ROW		
(% stream slope, watershed size {a	creage}, unaltered	or impairments)						
FORM OF MITIGATION:								
DATE:	8/10/2015 WEATHER CO		WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-VV3 PEM	Emergent	0.0447	Emergent					
						PART III - Advanced	Mitigatio	on
						Sustainable Determination Made on		
						Advanced Mitigation		Υ
					ļ	(Y or N)		
Total Impact		0.0447						
		Jnit Scores				Estimated	· · · · · ·	
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0447					
Total Scrub-Shrub			0			\$2,682.00		
Total Forested			0					
Total Open Water			0					

Project/Site: MVP		City/C	County: Lewis		Sampling Date: 11/20/2015
Applicant/Owner: MVP		•	•		Sampling Point: W-VV3 PEN
Investigator(s): JM KP		Section	on, Township, Range: N		
Landform (hillslope, terrace, etc.): valle	ey bottom				Slope (%): 1-3
Subregion (LRR or MLRA): LRRN	Lat				Datum: NAD 83
Soil Map Unit Name: Vandalia silt Ioan					
Are climatic / hydrologic conditions on the	e site typical f				
Are Vegetation, Soil, or I		· ·			
Are Vegetation, Soil, or I					
SUMMARY OF FINDINGS – A	-				
	Yes 🗸				· ·
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes 🗸		Is the Sampled Area	4	
Wetland Hydrology Present?	Yes V	No	within a Wetland?	Yes	No
Remarks:		<u> </u>			
Cowardin Code: PEM					
HGM: Riverine					
WT: RPWWD					
LIVERGLOOV					
HYDROLOGY Wetland Hydrology Indicators:				Cocondon, Indian	store (minimum of two required)
	raquirad: aba	ok all that apply)		Surface Soil	crocks (PS)
Primary Indicators (minimum of one is Surface Water (A1)		True Aquatic Plants ((D14)		
High Water Table (A2)		Hydrogen Sulfide Od		✓ Sparsely Veg ✓ Drainage Pa	tterns (R10)
Saturation (A3)			es on Living Roots (C3)	Moss Trim L	ines (B16)
Water Marks (B1)		Presence of Reduced	= : : :		Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reduction	` '	Crayfish Bur	
Drift Deposits (B3)		Thin Muck Surface (0			isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Rer	marks)	Stunted or S	tressed Plants (D1)
Iron Deposits (B5)				✓ Geomorphic	Position (D2)
Inundation Visible on Aerial Image	ry (B7)			Shallow Aqu	itard (D3)
Water-Stained Leaves (B9)			Microtopographic Relief (D4)		
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:	./				
		_ Depth (inches):			
		_ Depth (inches):			•
Saturation Present? Yes (includes capillary fringe)	No	_ Depth (inches):	Wetland I	Hydrology Preser	nt? Yes <u>/</u> No
Describe Recorded Data (stream gaug	e, monitoring	well, aerial photos, pre	evious inspections), if ava	ilable:	
Remarks:					
i					

Sampling Poi	_{it} . W-VV3 PEM
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30'	Absolute		Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)
2				
3.				Total Number of Dominant Species Across All Strata: 3 (B)
4				` ,
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
6		-		Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
		= Total Co		OBL species x 1 =
50% of total cover: 0	20% of	total cover	r:U	FACW species x 2 =
Japinig/Ornab Ottatum (1 lot size				FAC species x 3 =
1				
2				FACU species x 4 =
3				UPL species x 5 =
4		-		Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
	0 :	= Total Co	ver	_
50% of total cover:0	20% of	total cover	r: <u> </u>	4 - Morphological Adaptations¹ (Provide supporting
Herb Stratum (Plot size: 5'				data in Remarks or on a separate sheet)
1. Scirpus atrovirens	25		OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Verbesina alternifolia	20	✓	F <u>AC</u>	
3. Cyperus esculentus	15	~	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Juncus effusus	10		FACW	
5. Juncus tenius	5	-	FAC	Definitions of Four Vegetation Strata:
6. Orchard grass	10		F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Microstegium vimineum	10	-	FAC	more in diameter at breast height (DBH), regardless of height.
8. Dichanthelium clandestinum	5		FAC	neight.
<u> </u>		-	1 <u>AC</u>	Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				, '
11	100			Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: 50	200/ of	= Total Cor total cover	ver 20	of size, and woody plants less than 3.28 ft tall.
	20% 01	total cover		Woody vine - All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1		-		
2	· ·	-		
3				
4				Hydrophytic
5				Vegetation Present? Yes ✔ No
0		= Total Co	_	Present? Yes No
50% of total cover: 0		total cover	:0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Sampling Point: W-VV3 PEM

SOIL

Profile Desc	ription: (Describe	to the dept	h needed to docun	nent the i	indicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redox	k Feature	s			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	5yr 3/2	100					L	
8-12	5yr 3/2	95	7.5 yr 5/4	5	С	M/PL	CL	
	-							
	-							
	-							
1T C. C.		lation DM	Dadwaad Matrix MC				21	Dona Linia a M. Matrix
Hydric Soil I	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	s=Masked	d Sand Gr	ains.		L=Pore Lining, M=Matrix. ators for Problematic Hydric Soils ³ :
•			5 1 6 7	(07)				· · · · · · · · · · · · · · · · · · ·
Histosol			Dark Surface		(00) (W D A 447		cm Muck (A10) (MLRA 147)
	nipedon (A2)		Polyvalue Be Thin Dark Su				148) C	Coast Prairie Redox (A16)
Black His	n Sulfide (A4)		Loamy Gleye			147, 140)	Б	(MLRA 147, 148) Piedmont Floodplain Soils (F19)
	I Layers (A5)		Loanly Gleye		,Γ <i>∠)</i>		<u> </u>	(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark S		- 6)		V	/ery Shallow Dark Surface (TF12)
	Below Dark Surface	e (A11)	Depleted Dar	,	,			Other (Explain in Remarks)
	ark Surface (A12)	5 (7111)	Redox Depre		. ,		~	outer (Explain in Nemano)
	lucky Mineral (S1) (L	.RR N.	Iron-Mangane			(LRR N.		
	147, 148)	,	MLRA 136			(
	leyed Matrix (S4)		Umbric Surfa	-	(MLRA 13	36, 122)	³ Ind	licators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo					etland hydrology must be present,
	Matrix (S6)		Red Parent M					less disturbed or problematic.
Restrictive L	ayer (if observed):							•
Туре:			<u></u>					
Depth (inc	ches):						Hydric Soil	Present? Yes No
Remarks:			<u> </u>				,	
rtomanto.								

Wetland Photograph Page

Wetland ID $\underline{\text{W-VV3 PEM}}$ Date $\underline{\text{11/20/2015}}$



Photograph Direction South

Comments:	

Project/Site: MVP	City/C	county: Lewis		Sampling Date: 11/20/2015	
Applicant/Owner: MVP				Sampling Point: W-VV3 PFO	
Investigator(s): JM KP	Section				
Landform (hillslope, terrace, etc.): hillslope	Local reli			Slope (%): 0-2	
Subregion (LRR or MLRA): LRRN	Lat: 38.862696			Datum: NAD 83	
Soil Map Unit Name: Vandalia silt Ioam, 15 to					
Are climatic / hydrologic conditions on the site					
Are Vegetation, Soil, or Hydrok					
Are Vegetation, Soil, or Hydrold			explain any answer		
SUMMARY OF FINDINGS – Attach					
			<u> </u>	•	
	No No	Is the Sampled Area	.		
	No	within a Wetland?	Yes	No	
Remarks:	<u> </u>				
Cowardin Code: PFO					
HGM: Riverine Riverine					
WT: RPWWD RPWWD					
HYDROLOGY					
Wetland Hydrology Indicators:			Secondary Indica	tors (minimum of two required)	
Primary Indicators (minimum of one is require	ed; check all that apply)		Surface Soil (_	
Surface Water (A1)	True Aquatic Plants (B14)		getated Concave Surface (B8)	
High Water Table (A2)	Hydrogen Sulfide Od		<u>✓</u> Drainage Pat		
Saturation (A3)	Oxidized Rhizosphere		Moss Trim Li		
Water Marks (B1)	Presence of Reduced	d Iron (C4)	Dry-Season \	Water Table (C2)	
Sediment Deposits (B2)	Recent Iron Reductio	n in Tilled Soils (C6)	Crayfish Burr	rows (C8)	
Drift Deposits (B3)	Thin Muck Surface (C			sible on Aerial Imagery (C9)	
Algal Mat or Crust (B4)	Other (Explain in Rer	marks)		ressed Plants (D1)	
Iron Deposits (B5)			Geomorphic	` '	
Inundation Visible on Aerial Imagery (B7)	1		Shallow Aqui		
Water-Stained Leaves (B9)		Microtopographic Relief (D4) ✓ FAC-Neutral Test (D5)			
Aquatic Fauna (B13)		T	FAC-Neutral	Test (D5)	
Field Observations: Surface Water Present? Yes N	lo Depth (inches):				
	lo Depth (inches):				
	lo Pepth (inches):		lydrology Presen	t? Yes ✔ No	
(includes capillary fringe)				1: 100 110	
Describe Recorded Data (stream gauge, mor	itoring well, aerial photos, pre	evious inspections), if ava	ailable:		
Remarks:	_				
Tromano.					

,	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size:)		Species?		Number of Dominant Species
1. Platanus occidentalis	50	~	FACW	That Are OBL, FACW, or FAC: 4 (A)
2				
		• •		Total Number of Dominant Species Across All Strata: 4* (B)
3		·		Species Across All Strata: 4 (B)
4		· ———		Percent of Dominant Species
5	-			That Are OBL, FACW, or FAC:100 (A/B)
6		<u> </u>		Prevalence Index worksheet:
7	-			
	50	= Total Co	ver	Total % Cover of: Multiply by:
50% of total cover: 25	20% of	f total cove	r: <u>10</u>	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Platanus occidentalis	30	✓	FACW	FAC species x 3 =
2. Rosa multiflora	5		FACU	FACU species x 4 =
	-	•	. 7.00	UPL species x 5 =
3				Column Totals: (A) (B)
4				(5)
5		· ·		Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				✓ 2 - Dominance Test is >50%
9				
	35	= Total Co	ver	3 - Prevalence Index is ≤3.0¹
50% of total cover:17.				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Elymus riparius	10	~	FACW	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Scirpus atroviens	10			
	10	·	OBL	¹ Indicators of hydric soil and wetland hydrology must
3. Carex sp.	. ———		ND	be present, unless disturbed or problematic.
4. Microstegium	5		F <u>AC</u>	Definitions of Four Vegetation Strata:
5. Onoclea sensibilis	5		FACW_	
6. Allium cernuum	5		FACU_	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7. Verbesina alternifolia	5		F <u>AC</u>	height.
8				
9.	-	•		Sapling/Shrub – Woody plants, excluding vines, less
	-	•		than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10	-	•		m) tall.
11				Herb - All herbaceous (non-woody) plants, regardless
0.5		= Total Co		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>25</u>	20% of	f total cove	r:1U	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2		· .		
3				
4				l
5				Hydrophytic
<u>. </u>	^	= Total Co		Vegetation Present? Yes ✓ No
50% of total cover: 0		f total cove	_	
		i ioiai cove	ı. <u> </u>	
Remarks: (Include photo numbers here or on a separate	sneet.)			
ND- Not determined				
*Vegetation not ID'd down to the species level	not includ	ed in dor	ninance t	test.
•				

Sampling Point: W-VV3 PFO

Profile Description: (Describe t	o the depth	needed to docun	nent the i	ndicator	or confirm	the absence	of indica	tors.)	
Depth <u>Matrix</u>		Redox	k Features						
(inches) Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remar	ks
0-12 5yr 3/2	100					S			
				-					
				-					
¹ Type: C=Concentration, D=Deple	otion DM-D	aduced Matrix MS		Sand Gr	nine	² Location: P	I –Poro Lii	ning M-Mat	riv
Hydric Soil Indicators:	ouon, min-n	educed Matrix, Mc	-iviaskeu	Sand On	ııı ı.				: Hydric Soils ³ :
Histosol (A1)		Dork Surface	(07)					(A10) (MLR	-
		Dark Surface Polyvalue Be		oo (SO) (N	II D A 147			ie Redox (A	•
Histic Epipedon (A2)Black Histic (A3)		Thin Dark Su				140) (MLRA 1		10)
Hydrogen Sulfide (A4)		Loamy Gleye	. ,	•	47, 140)	_		loodplain So	oile (E10)
Stratified Layers (A5)		Depleted Mat		(2)			(MLRA 1		5115 (1-19)
2 cm Muck (A10) (LRR N)		Redox Dark S		·6)		\		w Dark Surf	ace (TF12)
Depleted Below Dark Surface	(A11)	Depleted Dar	,	,				ain in Rema	
Thick Dark Surface (A12)	(/ ())	Redox Depre					otiloi (Expi	alli ili ittollia	iii(O)
Sandy Mucky Mineral (S1) (L	RR N.	Iron-Mangane			RR N				
MLRA 147, 148)	,	MLRA 130		33 (1 12) (
Sandy Gleyed Matrix (S4)		Umbric Surfa	-	MIRA 13	6 122)	³ Inc	licators of	hydronhytic	vegetation and
Sandy Redox (S5)		Piedmont Flo						ology must l	-
Stripped Matrix (S6)		Red Parent M					-	bed or probl	
Restrictive Layer (if observed):		Red r drone iv	iatoriai (i z	Z I) (III ZIX	A 127, 147	, u.,	ilcoo diotai	bed of probl	iomatio.
_									
Type:		_				Unadaia Cail	D=====40	V V	, Na
Depth (inches):						Hydric Soil	Present?	Yes_	No
Remarks:									
Problematic soils:									
Does not meet hydric soil in	dicators fo	or subregion LF	RR N. D	etermin	ed as sai	ndy floodpla	ain soils.		

Wetland Photograph Page

Wetland ID $\underline{\text{W-VV3 PFO}}$ Date $\underline{\text{11/20/201}}$ 5



Photograph Direction East

Comments:		

Project/Site: MVP		City/C	County: Lewis		Sampling Date: 11/20/2015		
Applicant/Owner: MVP					Sampling Point: W-VV3&4-U		
Investigator(s): JM KP		Secti	on, Township, Range: N/				
Landform (hillslope, terrace, etc.): Vi					Slope (%): 3-4		
Subregion (LRR or MLRA): LRRN		38.863088	Long: -80.	.525428	Datum: NAD 83		
Soil Map Unit Name: Vandalia silt lo			Long.				
Are climatic / hydrologic conditions or		•					
Are Vegetation, Soil,				Circumstances" p	oresent? Yes No		
Are Vegetation, Soil,	or Hydrology	naturally problem	atic? (If needed, e	explain any answe	ers in Remarks.)		
SUMMARY OF FINDINGS -	Attach site m	ap showing san	npling point locatio	ns, transects	s, important features, etc.		
Hydrophytic Vegetation Present?	Yes	No. 🗸					
Hydric Soil Present?	Yes		Is the Sampled Area	V = =	No 🗸		
Wetland Hydrology Present?	Yes	No 🗸	within a Wetland?	res	NO		
Remarks: Upland							
Органа							
HYDROLOGY							
Wetland Hydrology Indicators:				Secondary Indica	ators (minimum of two required)		
Primary Indicators (minimum of one	is required; check	all that apply)		Surface Soil	Cracks (B6)		
Surface Water (A1)		True Aquatic Plants ((B14)	Sparsely Ve	getated Concave Surface (B8)		
High Water Table (A2)		Hydrogen Sulfide Od	lor (C1)	Drainage Patterns (B10)			
Saturation (A3)		Oxidized Rhizospher	es on Living Roots (C3)	Moss Trim L	ines (B16)		
Water Marks (B1)		Presence of Reduce	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 (isible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)		Other (Explain in Re	marks)		tressed Plants (D1)		
Iron Deposits (B5)					Position (D2)		
Inundation Visible on Aerial Ima	agery (B7)			Shallow Aqu			
Water-Stained Leaves (B9)					aphic Relief (D4)		
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)		
Field Observations: Surface Water Present? Yes	No. V	Depth (inches):					
Water Table Present? Yes	No	Depth (inches):					
	_			leedwala wee Bussass	-42 V N- V		
Saturation Present? Yes (includes capillary fringe)	No	Depth (inches):	wetland H	iyarology Presei	nt? Yes No		
Describe Recorded Data (stream ga	auge, monitoring w	ell, aerial photos, pre	evious inspections), if ava	ilable:			
Remarks:							
itemarks.							

Sampling Point: W-VV3&4-UP

Tree Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:		
Tiec otratum (Flot size.	% Cover			Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
1						(A)
3				Total Number of Dominant Species Across All Strata:	3	(B)
4				· -		(-)
5				Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)
6						(,,,)
7				Prevalence Index worksheet:	8.4. let 1. l	
		= Total Co	_		Multiply by:	
50% of total cover: 0	20% of	total cover	:0	OBL species x 1		
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 FAC species x 3		
1				FACU species x 4		II.
2				UPL species x 5		
3				Column Totals: (A)		
4				Column rotation (v.y		_ (-)
5				Prevalence Index = B/A = _		_
6				Hydrophytic Vegetation Indicate		
8				1 - Rapid Test for Hydrophytic	: Vegetation	
9				2 - Dominance Test is >50%		
	^	= Total Co	ver	3 - Prevalence Index is ≤3.0¹	1.5	
50% of total cover:0	20% of	total cover	:0	4 - Morphological Adaptations		
Herb Stratum (Plot size: 5')				data in Remarks or on a se	. ,	
1. Dactylis glomerata	20		FACU_	Problematic Hydrophytic Vege	etation (Expla	in)
2. Phleum pratense	20		F <u>ACU</u>	¹ Indicators of hydric soil and wetla	and hydrology	muet
3. Galium aparine			F <u>ACU</u>	be present, unless disturbed or pre		iiust
4. Allium cernuum			F <u>ACU</u>	Definitions of Four Vegetation S	strata:	
5. Plantago lanceolata			UPL	Tree – Woody plants, excluding vi	ines 3 in /76	cm) or
6. Poa sp.	<u>15</u>		<u>ND</u>	more in diameter at breast height		
7. Trifolium pratense	5		F <u>ACU</u>	height.		
8				Sapling/Shrub - Woody plants, e	xcluding vines	, less
9				than 3 in. DBH and greater than on m) tall.	r equal to 3.28	3 ft (1
10				,		
11	90	= Total Co		Herb – All herbaceous (non-wood of size, and woody plants less that		rdless
50% of total cover: 45		total cover				
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines green height.	eater than 3.28	3 ft in
1				Tielgrit.		
2						
3						
4				Hydrophytic		
5				Vegetation		
•		= Total Co	•	Present? Yes	No	
50% of total cover:0		total cover	:0			
Remarks: (Include photo numbers here or on a separate s	heet.)					

Sampling Point: W-VV3&4-UP

SOIL

epth nches)	Matrix Color (moist)	%	Redox Features Color (moist) %	Type ¹ Loc ²	Texture		Remarks	
			Color (moist) %	Type Loc	SiL		Remarks	
0-12	10yr 3/2	100			SIL			
								
		<u> </u>						
	-				-			
	-							
					2			
		letion, RM=	Reduced Matrix, MS=Masked S	and Grains.	² Location: PL			
	ndicators:					tors for Pro	_	
Histosol			Dark Surface (S7)			cm Muck (A1		
	pipedon (A2)		Polyvalue Below Surface		, 148) C	oast Prairie F		
Black His			Thin Dark Surface (S9) (N		5.	(MLRA 147		(540)
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)	PI	iedmont Floo		(F19)
=	l Layers (A5) ck (A10) (LRR N)		Depleted Matrix (F3)Redox Dark Surface (F6)		V	(MLRA 136, ery Shallow [(TE12)
	d Below Dark Surfac	ο (Δ11)	Redox Dark Surface (F6) Depleted Dark Surface (F	7)		ther (Explain		
	ark Surface (A12)	C (ATT)	Redox Depressions (F8)	1)	_ 0	tilei (Explaili	III IXCIIIai Ko)
	lucky Mineral (S1) (L	RR N	Iron-Manganese Masses	(F12) (I RR N				
	147, 148)	-1111 14,	MLRA 136)	(1 12) (21(11),				
	leyed Matrix (S4)		Umbric Surface (F13) (MI	RA 136, 122)	³ Indi	icators of hyd	Irophytic ved	etation and
-	edox (S5)		Piedmont Floodplain Soils			tland hydrolo		
	Matrix (S6)		Red Parent Material (F21			ess disturbed		
	_ayer (if observed):			,,,	Í		<u> </u>	
Type:	,							
Depth (inc	shes).				Hydric Soil	Present?	Yes	No 🗸
	J1103).				Tryunc con	1 TOSCIIC:		
emarks:								