ATTACHMENT D1

LEWIS COUNTY

WETLAND SWVM FORMS/WETLAND DELINEATION FORM/PHOTOS

USACE FILE NO./Project Name:		Valley Pipeline	COORDINATES:	Lat.	39.167631	Lon.	-80.578355	
STREAM/SITE ID AND SITE DESCR			W-J40, Pipeline ROW					
(% 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-J40 ROW	Emergent	0.2931	Emergent					
						PART III - Advanced		on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.2931						
W		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent Total Scrub-Shrub			0.2931			\$17,586.00	,	
Total Forested			0			\$17,506.00	,	
otal Open Water			0	I				

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	39.167564	Lon.	-80.5788
STREAM/SITE ID AND SITE DESCR	RIPTION:				١	N-J40 Temporary Access Road		
(% stream slope, watershed size {a	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-J40 TEMP AR	Emergent	0.1812	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.1812						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.1812			640.070.00		
Total Scrub-Shrub			0			\$10,872.00)	
Total Forested			0					
Total Open Water			0	I				

Project/Site: MVP	City/County: Lewis	Sampling Date: 06/05/2015						
Applicant/Owner: MVP		State: WV Sampling Point: W-J40						
Investigator(s): P. Johnson, C. Weber, N. Katsiaficas Section, Township, Range: N/A								
	m Local relief (concave, convex, no							
	Lat: 39.167855 Long: -80							
Soil Map Unit Name: Udifluvents and Fluvac		NWI classification: None						
•	ical for this time of year? Yes No							
	-							
	zsignificantly disturbed? Are "Norma							
Are Vegetation, Soil, or Hydrology SUMMARY OF FINDINGS – Attach si		explain any answers in Remarks.) ons, transects, important features, etc.						
		,,,,, por						
	Is the Sampled Area	<u>,</u>						
Hydric Soil Present? Yes _	within a wetland?	Yes No						
Wetland Hydrology Present? Yes _	No							
Remarks: Cowardin Code: PEM								
HGM: Riverine								
WT: RPWWD								
W-J40 is floodplain of Kincheloe Creek								
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 Surfaces (B8)						
Surface Water (A1) High Water Table (A2)	True Aquatic Plants (B14)Hydrogen Sulfide Odor (C1)	✓ Drainage Patterns (B10)						
Saturation (A3)	Nydrogen Suinde Cdor (C1)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):							
Water Table Present? Yes No _	✓ Depth (inches):							
	Depth (inches): 0 Wetland I	Hydrology Present? Yes 🔽 No						
(includes capillary fringe)	ring well, aerial photos, previous inspections), if ava	ailabla:						
Describe Recorded Data (Stream gauge, monto	ing well, aerial priotos, previous inspections), il avo	allable.						
Remarks:								

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

30'

Sapling/Shrub Stratum (Plot size: 15')

3. Carex vulpinoidea

5. Solanum carolinense

10._____

Woody Vine Stratum (Plot size: _______)

1. Apios americana

Tree Stratum (Plot size: __

Herb Stratum (Plot size: _ 1. Stellaria graminea

6. Persecaria sagittata

8. Dichanthelium clandestinum

2. Carex lurida

4. Poa palustris

7. Rumex crispis

___)

50% of total cover: ___0

50% of total cover: 58.5 20% of total cover: 23.4

50% of total cover: 7.5 20% of total cover: 3

50% of total cover: ___0 __ 20% of total cover:__0

mes of plants.	Sampling Point: W-J40
Absolute Dominant Indicato	
% Cover Species? Status	Number of Dominant Species That Are OBL, FACW, or FAC:4 (A)
	Total Number of Dominant Species Across All Strata: 4 (B)
	Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
	Prevalence Index worksheet:
0 = Total Cover	
20% of total cover: 0	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%
0 - Total Cover	3 - Prevalence Index is ≤3.0 ¹
= 10tal 00vci	4 - Morphological Adaptations ¹ (Provide supporting
_ 20% of total cover:0	data in Remarks or on a separate sheet)
5 FACU	Problematic Hydrophytic Vegetation ¹ (Explain)
1 <u>7100</u>	_
25	-
25	- Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
25	 Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
25	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
25	 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
25	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
25	 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
25	 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
25	 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
25	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.
25	 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. Woody vine – All woody vines greater than 3.28 ft in
25	 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. Woody vine – All woody vines greater than 3.28 ft in height.
25	 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. Woody vine – All woody vines greater than 3.28 ft in height.
25	 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. Woody vine – All woody vines greater than 3.28 ft in height. Hydrophytic
25	 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. Woody vine – All woody vines greater than 3.28 ft in height.

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

Depth	ription: (Describe	.s are dep		x Feature		5. John III	48361106		
(inches)	Color (moist)	%	Color (moist)	<u> %</u>	Type ¹	Loc ²	Texture	F	Remarks
0-6	10 YR 4/2	95	10 YR 4/6	5	С	PL	C/L		
6-12	10 YR 5/2	90	10YR 5/8	10	С	M/PL	C/L		
12-16	10 YR 6/2	60	10YR 5/8	40	C	M	C/L	•	
12-10	10 111 0/2		101113/0	_+0	<u> </u>	IVI			
					<u> </u>				
	·		-					-	
					·				
	-							-	
¹Type: C=Co	oncentration, D=Dep	letion, RM=	=Reduced Matrix, MS	S=Maske	d Sand G	rains.	² Location: P	L=Pore Lining, N	Л=Matrix.
Hydric Soil		,	,						ematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)				cm Muck (A10)	
	pipedon (A2)		Polyvalue Be		ace (S8) (MLRA 147,		oast Prairie Red	
Black Hi			Thin Dark Su		. , .			(MLRA 147, 14	
	n Sulfide (A4)		Loamy Gleye		(F2)		P	edmont Floodp	
	l Layers (A5)		Depleted Ma	. ,				(MLRA 136, 14	
	ick (A10) (LRR N)		Redox Dark						k Surface (TF12)
	Below Dark Surface	e (A11)	Depleted Date				C	other (Explain in	Remarks)
	ark Surface (A12)	DD N	Redox Depre			(I DD N			
	lucky Mineral (S1) (L	.RR N,	Iron-Mangan		ses (F12)	(LRR N,			
	147, 148) sleyed Matrix (S4)		MLRA 13 Umbric Surfa	-	/MIDA 1	26 122\	³ Ind	icators of bydro	phytic vegetation and
	edox (S5)		Piedmont Flo						must be present,
	Matrix (S6)		Red Parent N					less disturbed o	
	_ayer (if observed):				, (, u		. problemation
Type: No									
Depth (inc							Hydric Soil	Present? Ye	es No
Remarks:							Tiyano con	Tresent. Te	
Nemaiks.									



Photograph Direction SE

Comments:			

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 06/05/2015			
Applicant/Owner: MVP			• •		Sampling Point: W-J40-UP			
Investigator(s): P. Johnson, C. W	/eber, N. Kats				_ ,			
Landform (hillslope, terrace, etc.): To			· · · · · ·		Slope (%): 0-3			
Subregion (LRR or MLRA): LRRN					Datum: NAD 83			
Soil Map Unit Name: Udifluvents a			25119					
Are climatic / hydrologic conditions or	the site typical fo							
Are Vegetation, Soil,		•						
Are Vegetation, Soil,				explain any answe				
SUMMARY OF FINDINGS –								
			.p9 po	,	, p			
Hydrophytic Vegetation Present?	Yes		Is the Sampled Area		. 4			
Hydric Soil Present? Wetland Hydrology Present?	Yes Yes		within a Wetland?	Yes	No			
Remarks:	103							
LIVEROLOGY								
HYDROLOGY				Cocondon Indico	toro (minimum of two required)			
Wetland Hydrology Indicators:	ic required; check	Ir all that apply)		<u> </u>	tors (minimum of two required)			
Primary Indicators (minimum of one	•		D4.4)	Surface Soil				
Surface Water (A1) High Water Table (A2)		True Aquatic Plants (Hydrogen Sulfide Od		Sparsely veg	getated Concave Surface (B8)			
Saturation (A3)			es on Living Roots (C3)	Moss Trim Li				
Water Marks (B1)		Presence of Reduced	= : :		Water Table (C2)			
Sediment Deposits (B2)	 -	Recent Iron Reduction	, ,	Crayfish Buri				
Drift Deposits (B3)		Thin Muck Surface (C			sible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)		Other (Explain in Rer	marks)	Stunted or St	tressed Plants (D1)			
Iron Deposits (B5)				Geomorphic				
Inundation Visible on Aerial Ima	igery (B7)			Shallow Aquitard (D3)				
Water-Stained Leaves (B9)					phic Relief (D4)			
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)			
Field Observations: Surface Water Present? Yes	No. 🗸	Depth (inches):						
		Depth (inches):						
		Depth (inches):		lydrology Presen	t? Yes No 🗸			
(includes capillary fringe)		, , ,			it: lesNo			
Describe Recorded Data (stream ga	iuge, monitoring v	vell, aerial photos, pre	vious inspections), if ava	iilable:				
Remarks:								
. temante								

Sampling	Point: W-J40-UP1
----------	------------------

Tree Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:
Tiee Stratum (Flot Size)	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata:3 (B)
4				Dancest of Descious Consider
5				Percent of Dominant Species That Are OBL, FACW, or FAC:0 (A/B)
6				
7				Prevalence Index worksheet:
	0 .	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: 0		total cover:		OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')		•		FACW species x 2 =
1				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	er	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover:0	20% of	total cover:	0	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				
1. Phleum pratense	30		FACU_	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Glechoma hederacea	25	✓	F <u>ACU</u>	
3. Alium canadense	10		FACU	¹ Indicators of hydric soil and wetland hydrology must
4. Solanum carolinense	5		FACU	be present, unless disturbed or problematic.
5. Vicia americana	5		FACU	Definitions of Four Vegetation Strata:
6. Poa pratense	20		FACU_	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Dactylis glomerata	15		FACU	more in diameter at breast height (DBH), regardless of
8 Stellaria graminea	10			height.
<u> </u>			F <u>ACU</u>	Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	120	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 60	20% of	total cover:	24	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1				
2				
3				
4				Liverantic
5.				Hydrophytic Vegetation
	0 .	= Total Cov	<u></u>	Present? Yes No
50% of total cover: 0		total cover:	_	
Remarks: (Include photo numbers here or on a separate sl		•		
The manual (manual protest manual and a separate and	,			

SOIL Sampling Point: W-J40-UP1

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator	or confirm	the abse	nce of indicato	ors.)	
Depth	Matrix		Redo	x Features	3					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	<u> </u>	Remarks	_
0-4	10YR 3/3	100					C/L			
4-16	10YR 5/4	100					C/L			
										_
							-			-
										_
-										-
										_
¹Type: C=Co	oncentration, D=Depl	etion RM-	Reduced Matrix MS	S-Masked	Sand Gra	nins	² Location	n: PL=Pore Lini	ng M-Matrix	_
Hydric Soil		Ction, Itivi=	reduced Matrix, Me	J-IVIASKCA	Oana Ore		In	dicators for Pr	roblematic Hydric Soils ³ :	
Histosol			Dark Surface	(S7)					A10) (MLRA 147)	
	pipedon (A2)		Polyvalue Be		ce (S8) (M	LRA 147.	148)		e Redox (A16)	
Black Hi			Thin Dark Su					(MLRA 14		
	n Sulfide (A4)		Loamy Gleye			. ,		•	oodplain Soils (F19)	
Stratified	l Layers (A5)		Depleted Ma	trix (F3)				(MLRA 13	6, 147)	
	ick (A10) (LRR N)		Redox Dark						/ Dark Surface (TF12)	
	d Below Dark Surface	e (A11)	Depleted Dar					_ Other (Expla	in in Remarks)	
	ark Surface (A12)		Redox Depre							
	lucky Mineral (S1) (L	RR N,	Iron-Mangan		es (F12) (I	_RR N,				
	147, 148) sleyed Matrix (S4)		MLRA 13 Umbric Surfa		MI DA 12	6 122\		3Indicators of by	ydrophytic vegetation and	
	edox (S5)		Piedmont Flo						logy must be present,	
-	Matrix (S6)		Red Parent N					-	ed or problematic.	
	_ayer (if observed):		Roar aroner	natorial (i	/ (,	arricoo diotarb	od or problematic.	
Type: No										
Depth (inc							Hydric	Soil Present?	Yes No 🗸	
	Jiles)						Tiyunc	John Fresent:	16510	_
Remarks:										

USACE FILE NO./Project Name:		Valley Pipeline	COORDINATES:	Lat.	39.13782	Lon.	-80.576075	
STREAM/SITE ID AND SITE DESCR	RIPTION:				-	W-VV5, ATWS		
(% stream slope, watershed size {a								
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-VV5	Emergent	0.0202	Emergent					
						PART III - Advanced Sustainable Determination Made on		on
						Advanced Mitigation (Y or N)		Υ
Total Impact		0.0202						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0202			64 040 00		
Total Scrub-Shrub			0			\$1,212.00		
Total Forested			0					
Total Open Water			0	I				

Project/Site: MVP	City/Cou	_{inty:} Lewis		Sampling Date: 11/21/15			
Applicant/Owner: MVP				Sampling Point: W-VV5			
Investigator(s): J. McGuirk, K. Pulver	Section						
Landform (hillslope, terrace, etc.): Valley				Slone (%)· 2-4			
Subregion (LRR or MLRA): LRRN			Datum: NAD 83				
Soil Map Unit Name: Vandalia silt loam, 25 to 35							
•				•			
Are climatic / hydrologic conditions on the site typical	•						
Are Vegetation, Soil, or Hydrology _			ircumstances" p	resent? Yes No			
Are Vegetation, Soil, or Hydrology _	naturally problemation	c? (If needed, exp	olain any answe	rs in Remarks.)			
SUMMARY OF FINDINGS – Attach site	map showing samp	ling point locations	s, transects	, important features, etc.			
Hydrophytic Vegetation Present? Yes	/ No Is						
Hydric Soil Present? Yes	/ No	the Sampled Area	Yes 🗸	Ma			
Wetland Hydrology Present? Yes	w	vithin a Wetland?	Yes	No			
Remarks: Cowardin Code: PEM	HGM: Riverine	Water Type: RF	PWWD				
Sometani Sodo. I EM	110111111111111111111111111111111111111	1146. 1766.14	******				
LIVEROLOGY							
HYDROLOGY Western Hydrology Indicators			oondon/Indioo	toro (minimum of two required)			
Wetland Hydrology Indicators:	anck all that apply)	<u> </u>		tors (minimum of two required)			
Primary Indicators (minimum of one is required; ch		4)	_ Surface Soil	getated Concave Surface (B8)			
Surface Water (A1) High Water Table (A2)	True Aquatic Plants (B1Hydrogen Sulfide Odor		Sparsely veg Drainage Pat				
	Trydrogen Sumde OdorOxidized Rhizospheres	· ·	_ Drainage Fat _ Moss Trim Li				
, , ,	Presence of Reduced In	• • • •		Water Table (C2)			
Sediment Deposits (B2)	Recent Iron Reduction i	. ,	Crayfish Burr				
Drift Deposits (B3)	Thin Muck Surface (C7)			sible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Other (Explain in Remai			ressed Plants (D1)			
Iron Deposits (B5)			Geomorphic	Position (D2)			
Inundation Visible on Aerial Imagery (B7)		_	_ Shallow Aqui	tard (D3)			
Water-Stained Leaves (B9)		_	Microtopographic Relief (D4)				
Aquatic Fauna (B13)		<u>~</u>	FAC-Neutral	Test (D5)			
Field Observations:							
Surface Water Present? Yes No	Depth (inches):	<u> </u>					
	Depth (inches):						
	Depth (inches):	Wetland Hyd	drology Presen	t? Yes V No			
(includes capillary fringe) Describe Recorded Data (stream gauge, monitorir	ng well, aerial photos, previc	ous inspections), if availal	ble:				
Remarks:							

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

% Cover Species? Status

= Total Cover

10 **✓** OBL

0 = 10 at Cover50% of total cover: 0 = 20% of total cover: 0 = 20%

30'

Sapling/Shrub Stratum (Plot size: 15')

Tree Stratum (Plot size: __

1. Salix nigra

	Sampling F	oin	ıt: <u>\</u>	N-VV5	
	Dominance Test worksheet:				
1	Number of Dominant Species That Are OBL, FACW, or FAC			4	(A)
	Total Number of Dominant Species Across All Strata:	_		4	(B)
1	Percent of Dominant Species That Are OBL, FACW, or FAC): _		100	(A/B)
-	Prevalence Index worksheet	t:			
-	Total % Cover of:		Mu	ltiply by:	
	OBL species	x 1	= _		_
	FACW species	x 2	= _		_
	FAC species	х 3	= _		_
	FACU species	x 4	= _		_
	UPL species	x 5	= _		_
	Column Totals:	(A)	_		_ (B)
_	Prevalence Index = B/A	· = _			_
-	Hydrophytic Vegetation Indi	cato	rs:	1	
-	1 - Rapid Test for Hydrop	hytic	: Ve	egetation	
-	✓ 2 - Dominance Test is >50	0%			
-	3 - Prevalence Index is ≤3	-			
	4 - Morphological Adaptat	tions	¹ (F	Provide sup	porting
-	data in Remarks or on	a se	pa	rate sheet)	
	Problematic Hydrophytic \	Vege	etat	ion¹ (Explai	n)

9				3 - Prevalence Index is ≤3.0 ¹
		= Total Co		3 - Prevalence index is \$3.0 4 - Morphological Adaptations ¹ (Provide supporti
50% of total cover: 5	_ 20% o	of total cove	r: <u> 2 </u>	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				·
1. Scirpus atrovirens	40		OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Verbesina alternifolia	15	✓	FAC	
3. Juncus effusus	15	~	FACW	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
_{4.} Typha latifolia	5		OBL	Definitions of Four Vegetation Strata:
5. Microstegium vimineum	10		FAC	Definitions of Four Vegetation Strata.
6. Dicanthelium clandestinum	10		FAC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm)
7. Phalaris arundinacea	5		FACW	more in diameter at breast height (DBH), regardless of height.
8. Epilobium coloratum	5		FACW	
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, regardles
_	105	= Total Co	ver	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>52.5</u> <u>Woody Vine Stratum</u> (Plot size: <u>15'</u>)	_ 20% o	of total cove	r: <u>21</u>	Woody vine – All woody vines greater than 3.28 ft in height.
1				noight
2		_		
3				
4				Hydrophytic
_				Tiyaropiiyao

50% of total cover: ___0

0

= Total Cover

20% of total cover:____

Defini	tions	of	Four	Vegetation	Strata:	
-						(7 0)

ytic Vegetation Present?

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

Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. CL	Depth	ription: (Describe t Matrix		Redo	x Features				·	
Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. Coation: PL=Pore Lining, M=Matrix.	(inches)				·			-	Remarks	
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) (LRR N) Sandy Gleyed Matrix (S4) Sandy Redox (S5) MLRA 147, 148) MLRA 136, Sandy Redox (S5) Piedmont Floodplain Soils (F19) Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) MLRA 136, Sandy Gleyed Matrix (S4) Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes V No	0-12	10YR 4/1	80	7.5YR 4/6	<u>10</u> <u>C</u>	<u> </u>	CL			
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) (LRR N) Sandy Gleyed Matrix (S4) Sandy Redox (S5) MLRA 147, 148) MLRA 136, Sandy Redox (S5) Piedmont Floodplain Soils (F19) Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) MLRA 136, Sandy Gleyed Matrix (S4) Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes V No										
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) (LRR N) Sandy Gleyed Matrix (S4) Sandy Redox (S5) MLRA 147, 148) MLRA 136, Sandy Redox (S5) Piedmont Floodplain Soils (F19) Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) MLRA 136, Sandy Gleyed Matrix (S4) Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes V No										
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) (LRR N) Sandy Gleyed Matrix (S4) Sandy Redox (S5) MLRA 147, 148) MLRA 136, Sandy Redox (S5) Piedmont Floodplain Soils (F19) Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) MLRA 136, Sandy Gleyed Matrix (S4) Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes V No										
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) (LRR N) Sandy Gleyed Matrix (S4) Sandy Redox (S5) MLRA 147, 148) MLRA 136, Sandy Redox (S5) Piedmont Floodplain Soils (F19) Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) MLRA 136, Sandy Gleyed Matrix (S4) Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes V No							·			
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) (LRR N) Sandy Gleyed Matrix (S4) Sandy Redox (S5) MLRA 147, 148) MLRA 136, Sandy Redox (S5) Piedmont Floodplain Soils (F19) Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) MLRA 136, Sandy Gleyed Matrix (S4) Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes V No										
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) (LRR N) Sandy Gleyed Matrix (S4) Sandy Redox (S5) MLRA 147, 148) MLRA 136, Sandy Redox (S5) Piedmont Floodplain Soils (F19) Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) MLRA 136, Sandy Gleyed Matrix (S4) Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes V No										
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) (LRR N) Sandy Gleyed Matrix (S4) Sandy Redox (S5) MLRA 147, 148) MLRA 136, Sandy Redox (S5) Piedmont Floodplain Soils (F19) Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) MLRA 136, Sandy Gleyed Matrix (S4) Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes V No										
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) (LRR N) Sandy Gleyed Matrix (S4) Sandy Redox (S5) MLRA 147, 148) MLRA 136, Sandy Redox (S5) Piedmont Floodplain Soils (F19) Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) MLRA 136, Sandy Gleyed Matrix (S4) Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes V No										
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) (LRR N) Sandy Gleyed Matrix (S4) Sandy Redox (S5) MLRA 147, 148) MLRA 136, Sandy Redox (S5) Piedmont Floodplain Soils (F19) Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) MLRA 136, Sandy Gleyed Matrix (S4) Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes V No							·			
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) (LRR N) Sandy Gleyed Matrix (S4) Sandy Redox (S5) MLRA 147, 148) MLRA 136, Sandy Redox (S5) Piedmont Floodplain Soils (F19) Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) MLRA 136, Sandy Gleyed Matrix (S4) Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes V No										
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) (LRR N) Sandy Gleyed Matrix (S4) Sandy Redox (S5) MLRA 147, 148) MLRA 136, Sandy Redox (S5) Piedmont Floodplain Soils (F19) Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) MLRA 136, Sandy Gleyed Matrix (S4) Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes V No										
ydric Soil Indicators: Histosol (A1) Dark Surface (S7) Histic Epipedon (A2) Polyvalue Below Surface (S8) (MLRA 147, 148) Black Histic (A3) Thin Dark Surface (S9) (MLRA 147, 148) Hydrogen Sulfide (A4) Stratified Layers (A5) Depleted Matrix (F2) Depleted Below Dark Surface (A11) Depleted Dark Surface (F6) Sandy Mucky Mineral (S1) (LRR N) Sandy Gleyed Matrix (S4) Sandy Redox (S5) MLRA 147, 148) MLRA 136, Sandy Redox (S5) Piedmont Floodplain Soils (F19) Muck (A10) (LRR N) Redox Dark Surface (F6) Depleted Dark Surface (F7) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 136, 122) Sandy Mucky Mineral (S1) (LRR N, MLRA 136) Sandy Redox (S5) Piedmont Floodplain Soils (F19) MLRA 136, Sandy Gleyed Matrix (S4) Surface (F13) (MLRA 136, 122) Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. Estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes V No	Lyne: C=Co	ncentration D=Denl	etion RM=R	Reduced Matrix MS	S=Masked Sa	and Grains	² Location: PI	=Pore Linin	g M=Matrix	
Histosol (A1)			cuon, ruvi–i	toddood Matrix, Mc	z-maskea ee	ina Oraino.				dric Soils ³ :
Histic Epipedon (A2) Black Histic (A3) Hydrogen Sulfide (A4) Stratified Layers (A5) 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 (S4) Sandy Redox (S5) Stripped Matrix (S6) Depth (inches): Depth (inches): Hydric Soil Present? Yes No	-			Dark Surface	(S7)					
Black Histic (A3)						S8) (MLRA 147		•	, .	,
						· , •				
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 136) _ Sandy Gleyed Matrix (S4) _ Sandy Redox (S5) _ Stripped Matrix (S6) _ Stripped Matrix (S6) _ Stripped Matrix (S6) _ Stripped Matrix (S6) _ Depleted Matrix (F3) _ Cother (Explain in Remarks) _ Other (Explain in Remarks) _		, ,			. , .		Pi	•		F19)
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) Estrictive Layer (if observed): Type: Depth (inches): Depleted Dark Surface (F7) Depleted Dark Surface (F7) Surface (F12) (LRR N, MLRA 136) Surface (F12) (MLRA 136, 122) Surface (F13) (MLRA 136, 122) Surface (F13) (MLRA 148) Surface (F13) (MLRA 148) Surface (F13) (MLRA 148) Surface (F13) (MLRA 148) Surface (F7) Surface (F13) (MLRA 148) Surface (F7) Surface (F12) (MLRA 136, 122) Surface (F13) (MLRA 148) Surface (F7) Surface (F12) (MLRA 148) Surface (F13) (M		, ,								,
Thick Dark Surface (A12) Redox Depressions (F8) Iron-Manganese Masses (F12) (LRR N, MLRA 147, 148) Sandy Gleyed Matrix (S4) Umbric Surface (F13) (MLRA 136, 122) Indicators of hydrophytic vegetation and Sandy Redox (S5) Piedmont Floodplain Soils (F19) (MLRA 148) wetland hydrology must be present, unless disturbed or problematic. estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No	2 cm Mu	ck (A10) (LRR N)		Redox Dark S	Surface (F6)		Ve	ery Shallow	Dark Surface	(TF12)
Sandy Mucky Mineral (S1) (LRR N,	Depleted	l Below Dark Surface	(A11)	Depleted Dar	k Surface (F7	7)	0	ther (Explair	n in Remarks)	
MLRA 147, 148) _ Sandy Gleyed Matrix (S4) _ Sandy Redox (S5) _ Stripped Matrix (S6) _ Type: _ Depth (inches): _ Hydric Soil Present? Yes No										
Sandy Gleyed Matrix (S4)			RR N,			F12) (LRR 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					•		•			
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										
estrictive Layer (if observed): Type: Depth (inches): Hydric Soil Present? Yes No										
Type:				Red Parent N	faterial (F21)	(MLRA 127, 14	-7) unl	ess disturbe	d or problema	atic.
Depth (inches): No		.ayer (if observed):								
emarks:	Depth (ind	ches):					Hydric Soil	Present?	Yes	No
	Remarks:									



Photograph Direction SSW

Comments:		

Project/Site: MVP				City	//County: Lewis			_ Sampling [Date: 05/20/2015
Applicant/Owner: MVP							State: WV	Samplin	g Point: W-I25, vv5-UP
Investigator(s): G.Stevens	, S.Town	send, S.TI	nerkilds	on _{Sec}	ction, Township, Range				
Landform (hillslope, terrace,					-				Slope (%): 5-10
Subregion (LRR or MLRA): _					Long: _				
Soil Map Unit Name: Vanda									
Are climatic / hydrologic cond					_				
Are Vegetation, Soil _				-					es No
-		-	_	-					
Are Vegetation, Soil _		-					plain any answe		•
SUMMARY OF FINDIN	NGS – At	tach site	map sn	owing sa	mpling point loc	ation	s, transects	s, importa	int features, etc.
Hydrophytic Vegetation Pre	sent?	Yes	No_	✓	Is the Sampled A	roa			
Hydric Soil Present?		Yes	No	<u> </u>	within a Wetland		Yes	No	✓
Wetland Hydrology Present	?	Yes	No_						
Remarks: Upland									
HYDROLOGY									
Wetland Hydrology Indica	itors:					S	econdary Indic	ators (minim	um of two required)
Primary Indicators (minimur	n of one is r	required; che	ck all tha	t apply)			Surface Soil	Cracks (B6))
Surface Water (A1)		_	_ True A	quatic Plants	s (B14)	_	Sparsely Ve	getated Con	cave Surface (B8)
High Water Table (A2)		_	_ Hydrog	jen Sulfide C	Odor (C1)	_	Drainage Pa	atterns (B10)	
Saturation (A3)		_	_ Oxidize	ed Rhizosph	eres on Living Roots (C3) _	Moss Trim L		
Water Marks (B1)			_ Presen	ice of Reduc	ced Iron (C4)	_	_ Dry-Season	Water Table	(C2)
Sediment Deposits (B2)	_	_ Recent	Iron Reduct	tion in Tilled Soils (C6)) _	Crayfish Bu		
Drift Deposits (B3)		_		uck Surface		_			rial Imagery (C9)
Algal Mat or Crust (B4)		_	_ Other (Explain in R	emarks)	_		Stressed Plar	
Iron Deposits (B5)						_		Position (D2	2)
Inundation Visible on A	_	ry (B7)				_	Shallow Aqu		(D.1)
Water-Stained Leaves	(B9)					_		aphic Relief	(D4)
Aquatic Fauna (B13) Field Observations:						_	FAC-Neutra	i Test (D5)	
Surface Water Present?	Ves	No	, Denth	(inches):					
Water Table Present?		No							
Saturation Present?		No				nd Hv	drology Prese	nt? Vas	No✓
(includes capillary fringe)						_		iit: 163_	
Describe Recorded Data (s	tream gauge	e, monitoring	well, aer	ial photos, p	revious inspections), i	f availa	able:		
Remarks:									
Remarks.									
									1

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

, , , , , , , , , , , , , , , , , , , ,	Absolute	Dominant	Indicator	Dominance Test workshee	<u> </u>	
<u>Tree Stratum</u> (Plot size:)		Species?		Number of Dominant Specie		
_{1.} Picea rubens	50		<u>FACU</u>	That Are OBL, FACW, or FA		(A)
{2.} Fagus grandifolia	15		FACU	Total Number of Dominant		
3				Species Across All Strata:	4*	_ (B)
4				Description (Description (On a circ	-	
5				Percent of Dominant Species That Are OBL, FACW, or FA		(A/B)
6				·		_ (/
7				Prevalence Index workshe		
	65	= Total Co	ver	Total % Cover of:		
50% of total cover:	32.5 20% of	total cove	r: <u>13</u>	OBL species		
Sapling/Shrub Stratum (Plot size: 15')				FACW species		
_{1.} Quercus montana	5		<u>UPL</u>	FAC species		
2. Fraxinus pennsylvanica	5		FACW_	FACU species	_ x 4 =	
3. Dirca palustris	25		FAC	UPL species	_ x 5 =	
4				Column Totals:	_ (A)	(B)
5				Dravalance Index D	./^	
5				Prevalence Index = B	·	
7				Hydrophytic Vegetation In		
8				1 - Rapid Test for Hydro		
9				2 - Dominance Test is >		
	0.5	= Total Co	ver	3 - Prevalence Index is		
50% of total cover:	17.5 20% of	total cove	r: <u> </u>	4 - Morphological Adap		
Herb Stratum (Plot size: 5')				data in Remarks or o	•	,
_{1.} Achillea sp.	15		ND	Problematic Hydrophyti	c Vegetation' (Exp	lain)
_{2.} Potentilla simplex	10		F <u>ACU</u>			
3. Plantago lanceolata	5		UPL	¹ Indicators of hydric soil and be present, unless disturbed		must
Rubus allegheniensis			FACU	· ·	·	
5. Dactylis glomerata	15	~	FACU	Definitions of Four Vegeta	ilion Strata.	
6. Poa sp.	15	~	ND ND	Tree - Woody plants, exclu		
Poa sp.	50	~	ND	more in diameter at breast height.	ieight (DBH), regar	dless of
8			_ · <u>· =</u>			
9				Sapling/Shrub – Woody pla		
10		-		than 3 in. DBH and greater m) tall.	man or equal to 3.2	2011 (1
11.		-			12.1	
	115	= Total Co	vor	Herb – All herbaceous (non of size, and woody plants le		ardless
50% of total cover:						
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vir height.	nes greater than 3.2	28 ft in
1				neight.		
2						
3		-				
5 4						
				Hydrophytic Vegetation		
<u>. </u>	^	= Total Co		Vegetation Present? Yes	No 🗸	-
50% of total cover:		total cove	^			•
Remarks: (Include photo numbers here or on a separa		-510.00101				
ND - Not Determined	ito orioot.j					
1D - Not Determined						
Vegetation not ID'd to species level not incl	uded in dom	ninanca t	ost			
vogotation not ib a to openies level not indi	adod iii doll	iarioe l				

Sampling Point: W-I25, vv5-UP1

Profile Desc	ription: (Describe t	o the depth	needed to docun	nent the indica	ator or confirr	n the absence	of indicators.)	
Depth	Matrix		Redox	x Features				
(inches)	Color (moist)	%	Color (moist)	<u>%</u> Ty	pe ¹ Loc ²	<u>Texture</u>	Remar	rks
0-1							Organic	Matter
1-8	10YR 4/4	100				SiL	Refu	ıcal
1-0	10111 4/4	100					11010	usai
						·	-	
							-	
1						2		
	oncentration, D=Depl	etion, RM=R	Reduced Matrix, MS	S=Masked San	d Grains.		L=Pore Lining, M=Ma	
Hydric Soil							ators for Problemation	-
Histosol			Dark Surface				cm Muck (A10) (MLR	-
Histic Ep	pipedon (A2)				8) (MLRA 147	, 148) C	Coast Prairie Redox (A	(16)
Black Hi				rface (S9) (ML	RA 147, 148)		(MLRA 147, 148)	
	en Sulfide (A4)		Loamy Gleye			P	Piedmont Floodplain Se	oils (F19)
Stratified	d Layers (A5)		Depleted Mat	rix (F3)			(MLRA 136, 147)	
	ıck (A10) (LRR N)		Redox Dark S				ery Shallow Dark Sur	
	d Below Dark Surface	(A11)		k Surface (F7)		0	Other (Explain in Rema	arks)
Thick Da	ark Surface (A12)		Redox Depre					
	lucky Mineral (S1) (L	RR N,		ese Masses (F	12) (LRR N,			
MLRA	A 147, 148)		MLRA 130	6)				
Sandy G	Gleyed Matrix (S4)			ce (F13) (MLR			licators of hydrophytic	vegetation and
Sandy R	Redox (S5)		Piedmont Flo	odplain Soils (F19) (MLRA 1 4	48) we	etland hydrology must	be present,
Stripped	Matrix (S6)		Red Parent M	1aterial (F21)	MLRA 127, 14	7) un	less disturbed or prob	lematic.
Restrictive I	Layer (if observed):							
Type: Ro	oot mass							
Depth (in	ches). 8		<u> </u>			Hydric Soil	Present? Yes	No 🗸
Remarks:						,		
Remarks.								

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	39.131093	Lon.	-80.572126
STREAM/SITE ID AND SITE DESCRIPTION:					٧	V-IJ23, Temporary Access Road		
(% 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-IJ23	Emergent	0.0065	Emergent					
						PART III - Advanced I	Mitigatio	on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0065						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0065	_				
Total Scrub-Shrub			0			\$390.00		
Total Forested			0	_				
Total Open Water			0					

Project/Site: MVP	City/County: Lewis	Sampling Date: 05/05/2016
Applicant/Owner: MVP	State: WV Sampling Point: W-IJ23	
• •	Schrotenboer Section, Township, Range: N	
5 · /	Local relief (concave, convex, n	
	Lat: 39.131095 Long: -8	
Soil Map Unit Name: Lh: Lobdell-Holly Silt Loa		
	_	NWI classification: None
	ical for this time of year? Yes No	
	/ significantly disturbed? Are "Norm	al Circumstances" present? Yes No
Are Vegetation, Soil, or Hydrology	/ naturally problematic? (If needed,	explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach si	te map showing sampling point locat	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 _	within a wetland:	res No
Remarks: Cowardin Code: PEM	HGM: Slope Water Type	RPWWN
Pasture. Impacted by grazing ar	nd mowing. Adjacent but not abutting S-l	59.
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)Oxidized Rhizospheres on Living Roots (C3)	Drainage Patterns (B10)
Saturation (A3)	Presence of Reduced Iron (C4)	Moss Trim Lines (B16) Dry-Season Water Table (C2)
<pre>Water Marks (B1) Sediment Deposits (B2)</pre>	Recent Iron Reduction in Tilled Soils (C6)	Crayfish Burrows (C8)
Sediment Deposits (B2) Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)
Iron Deposits (B5)		Geomorphic Position (D2)
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)
Water-Stained Leaves (B9)		Microtopographic Relief (D4)
Aquatic Fauna (B13)		FAC-Neutral Test (D5)
Field Observations:		
	Depth (inches):	
Water Table Present? Yes No _	Depth (inches):9	
1	_	Hydrology Present? Yes <u>✓</u> No
(includes capillary fringe)	pring well, aerial photos, previous inspections), if a	ailahla.
Describe Necorded Data (stream gauge, monito	ming well, delial photos, previous inspections), il av	anable.
Remarks:		
Heavy rains past 24 hours.		

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

30'

Tree Stratum (Plot size:

Sampling Poi	nt: W-IJ23	
Dominance Test worksheet:		
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:		
Total % Cover of:	Multiply by:	

1				That Are OBL, FACW, or FA	40: <u>-</u>	_ (A)
2				Total Number of Dominant	•	
3				Species Across All Strata:	2	_ (B)
4				Percent of Dominant Specie	es	
5				That Are OBL, FACW, or FA	AC: 100	_ (A/B)
6				Prevalence Index worksho	oot:	
7				Total % Cover of:		
		= Total Cove	_	OBL species		
50% of total cover: 0	20% of	total cover:	0			
Sapling/Shrub Stratum (Plot size: 15')				FACW species		
1				FAC species		
2				FACU species		
3				UPL species		
4				Column Totals:	_ (A)	(B)
5				Prevalence Index = B	3/A =	
6				Hydrophytic Vegetation Ir		
7				✓ 1 - Rapid Test for Hydro		
8				✓ 2 - Dominance Test is:	· · ·	
9				3 - Prevalence Index is		
	0 =	= Total Cove	er	4 - Morphological Adap		ınnartin
50% of total cover:0	20% of	total cover:	0	· ·		
Herb Stratum (Plot size: 5')				data in Remarks or	•	,
1. Eleocharis obtusa	45		OBL	Problematic Hydrophyti	ic vegetation (Expi	iain)
2. Carex Iurida	15		OBL	1		
3. Anthoxanthum odoratum	10		F <u>ACU</u>	¹ Indicators of hydric soil and be present, unless disturbed		must
4. Scirpus atrovirens	5		OBL	Definitions of Four Vegeta	•	
5. Juncus effusus	12		FACW	Deminitions of Four Vegeta	ation Strata.	
6. Carex sp.	5		MD	Tree – Woody plants, exclu		
7. Lysimachia nummularia	12		FACW	more in diameter at breast I height.	neight (DBH), regar	dless of
8						
9				Sapling/Shrub – Woody plant than 3 in. DBH and greater		
10				m) tall.	triair or equal to 5.2	-011(1
11					1 \ 1	
···	104 -	= Total Cove		Herb – All herbaceous (non of size, and woody plants le		jardiess
50% of total cover: <u>52</u>	20% of	total cover:	20.8			
Woody Vine Stratum (Plot size: 15')		-		Woody vine – All woody vin height.	nes greater than 3.2	28 ft in
1.				neignt.		
2.						
3						
4.						
5.				Hydrophytic		
J	0 =	Total Carri		Vegetation Present? Yes	✓ No	
50% of total cover: 0		= Total Covertotal cover:				
50% of total cover:O	20% 01	iolai cover:				

Absolute Dominant Indicator

% Cover Species? Status

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

Unidentified Carex sp listed as not determined and not used in dominance test.

Sampling Point: W-IJ23

SOIL

Depth	ription: (Describe t Matrix	to the dept		ment the ind ox Features	dicator or	contirm	the absence	of indicate	ors.)	
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	Texture		Remarks	
0-2	10yr 4/2	70_	7.5yr 4/6	30	С	M/PL_	fine SL			
2-18	10yr 4/2	70	7.5yr 4/6	30	С	M/PL	SCL			
18-20	10yr 4/3	90	10yr 4/6	10	С	M	SL			
								-		
								-		
					 -					
								-		
	-									
		<u></u>								
Type: C=Co	oncentration, D=Depl	letion, RM=	Reduced Matrix, M	S=Masked S	Sand Grain	ns.	² Location: Pl	L=Pore Lini	ing, M=Matrix	
lydric Soil I		,	,			-				ydric Soils ³ :
Histosol	(A1)		Dark Surface	(S7)			2	cm Muck (A10) (MLRA	147)
	pipedon (A2)		Polyvalue Be				148) C		e Redox (A16))
Black His			Thin Dark Su			7, 148)	_	(MLRA 14		(E40)
	n Sulfide (A4)		Loamy Gleye Depleted Ma		2)		P		oodplain Soils	s (F19)
	d Layers (A5) ick (A10) (LRR N)		Redox Dark		١		\/	(MLRA 13	v Dark Surfac	o (TF12)
	d Below Dark Surface	e (A11)	Depleted Da	, ,					in in Remarks	
	ark Surface (A12)	- ()	Redox Depre					(-,
_ Sandy M	lucky Mineral (S1) (L	.RR N,	Iron-Mangan	ese Masses	(F12) (LF	RR N,				
	A 147, 148)		MLRA 13	•			2			
	Gleyed Matrix (S4)		Umbric Surfa						ydrophytic ve	
-	ledox (S5)		Piedmont Flo					-	logy must be	
	Matrix (S6) _ayer (if observed):		Red Parent N	viateriai (F21	I) (WLKA	127, 147) uni	ess disturb	ed or problen	natic.
Type:	.ayer (ii observeu).									
•• —	ches):						Hydric Soil	Present?	Yes_	No
Remarks:							,			
iomanio.										



Photograph Direction NE

Comments:		

Project/Site: MVP	City/County: Lewis	Sampling Date: 05/05/2016				
Applicant/Owner: MVP		State: WV Sampling Point: W-IJ23-UP				
Investigator(s): E. Foster, J. Niergarth, B. S						
Landform (hillslope, terrace, etc.): Floodplain	-					
		-80.572239 Datum: NAD 83				
Soil Map Unit Name: Lh: Lobdell-Holly Silt Loam		NWI classification: None				
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.				
Hadron butto Variation Branchia	N: •					
	No Is the Sampled Ar					
	within a Wetland?	Yes No				
Remarks: Cowardin Code: UPLAND		00:				
	riowi. water ry	pe.				
Pasture.						
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 (0	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)	oils (C6) Crayfish Burrows (C8)				
Drift Deposits (B3)	Thin Muck Surface (C7)	Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Stunted or Stressed Plants (D1)				
Iron Deposits (B5)		Geomorphic Position (D2)				
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)				
Water-Stained Leaves (B9)		Microtopographic Relief (D4)				
Aquatic Fauna (B13)		FAC-Neutral Test (D5)				
Field Observations:						
Surface Water Present? Yes No	Depth (inches):					
	Pepth (inches):					
	✓ Depth (inches): Wetlan	nd Hydrology Present? Yes No				
(includes capillary fringe) Describe Recorded Data (stream gauge, monitori	ing well, aerial photos, previous inspections), if	f available:				
Boomso Nooshada Bata (dilbam gaage, memeri	ing wan, danar priotoc, provided inopositorio,, ii	availabio.				
Remarks:						
Heavy rain past 24 hours						

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

Sampling Point: W-IJ23-UP

Tree Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:		
Tree otratum (Frot Size.	% Cover			Number of Dominant Species	0	
1				That Are OBL, FACW, or FAC:	2	(A)
2				Total Number of Dominant		
3				Species Across All Strata:	4	(B)
4						(-)
				Percent of Dominant Species	50	
5				That Are OBL, FACW, or FAC:	50	(A/B)
6				Prevalence Index worksheet:		
7					N.A. alatina la colla con	
		= Total Cov		Total % Cover of:		
50% of total cover:0	20% of	total cover	:0	OBL species x		
Sapling/Shrub Stratum (Plot size: 15')				FACW species x	2 =	_
1				FAC species x	3 =	_
				FACU species x	4 =	
2				UPL species x		
3						
4		-		Column Totals: (A	.)	_ (B)
5				Prevalence Index = B/A =		
6						_
7				Hydrophytic Vegetation Indica		
				1 - Rapid Test for Hydrophyt		
8		-		2 - Dominance Test is >50%)	
9	_			3 - Prevalence Index is ≤3.0	1	
0		= Total Cov		4 - Morphological Adaptation	ns¹ (Provide sup	porting
50% of total cover:0_	20% of	total cover	: 0	data in Remarks or on a		
Herb Stratum (Plot size: 5')				Problematic Hydrophytic Ve		in)
1. Taraxacum officinale	10		F <u>ACU</u>	Problematic Hydrophytic vet	getation (Expla	111)
2. Ranunculus acris	15	✓	FAC			
3. Anthoxanthum odoratum	20	V	FACU	¹ Indicators of hydric soil and wetl		nust
4. Potentilla simplex	5		FACU	be present, unless disturbed or p		
5. Viola sororia		-	FAC	Definitions of Four Vegetation	Strata:	
6. Trifolium repens	20		FACU	Tree – Woody plants, excluding	vines, 3 in. (7.6	cm) or
7. Eleocharis obtusa	15		OBL	more in diameter at breast heigh	t (DBH), regardl	ess of
• • •			OBL	height.		
8				Sapling/Shrub – Woody plants,	excluding vines	less
9				than 3 in. DBH and greater than		
10				m) tall.		
11.				Harb All barbassas (non was	du planta raga	rdlaga
	90	= Total Cov	/or	Herb – All herbaceous (non-woo of size, and woody plants less th		raiess
50% of total cover: 45		total cover				
Woody Vine Stratum (Plot size: 15')	2070 0.	10101 00101		Woody vine – All woody vines g	reater than 3.28	ft in
				height.		
1						
2						
3						
4				Usalranhistia		
5				Hydrophytic Vegetation		
	_	= Total Cov	/or	Present? Yes	No	
50% of total cover: 0		total cover	_			
Remarks: (Include photo numbers here or on a separate sl			•			
nemains. (include prioto numbers here of on a separate si	ieet.)					

Sampling Point: W-IJ23-UP

	cription: (Describe	to the depth				r or confirn	n the absence	of indicate	ors.)	
Depth (inches)	Matrix Color (moist)	%	Redo Color (moist)	x Feature:	s Type ¹	Loc ²	Texture		Remark	KS
0-2	7.5yr 3/3	100					SiLo			
2-11	7.5yr 4/3	100		-	-		SaCILo			
11-17	7.5yr 4/2	90	7.5yr4/6	10	С		SaCILo			
17-20	10yr 4/3	98	10yr 4/6	2	C		SaLo			
17-20	10yl 4/3	90	10y1 4/0		<u> </u>	IVI	Salu			
		· -								
¹Type: C=Co	oncentration, D=Depl	letion RM=I	Reduced Matrix MS	S=Masked	I Sand G	irains	² Location: F	PI =Pore I in	ing M=Matr	rix
Hydric Soil I		Cuon, ruvi–i	toddoca Widthx, Wic	J-Maskec	ouna c	raino.				Hydric Soils ³ :
Histosol			Dark Surface	(S7)				2 cm Muck (-
	pipedon (A2)		Polyvalue Be	low Surfa	ce (S8) (MLRA 147,		Coast Prairie		
Black His			Thin Dark Su			147, 148)		(MLRA 14		
	en Sulfide (A4)		Loamy Gleye	,	F2)		F	Piedmont Flo		ils (F19)
	d Layers (A5) ick (A10) (LRR N)		Depleted Mar		.e)		,	MLRA 13 ery Shallov		200 (TE12)
	d Below Dark Surface	e (A11)	Depleted Dark	•				other (Expla		. ,
	ark Surface (A12)	. (,)	Redox Depre					zo. (=/.p.o.		,
	lucky Mineral (S1) (L	.RR N,	Iron-Mangan			(LRR N,				
	A 147, 148)		MLRA 13	-			2			
	Gleyed Matrix (S4)		Umbric Surfa							vegetation and
	Redox (S5)		Piedmont Flo					etland hydro		
	Matrix (S6) Layer (if observed):		Red Parent N	nateriai (F	21) (IVIL	RA 127, 14	<i>t</i>) ur	nless disturb	ea or proble	ematic.
Type:	ayer (ii observeu).									
Depth (inc	ches).						Hydric Soi	I Present?	Yes	No_
Remarks:							11,410 001			
rtomanto.										

USACE FILE NO./Project Name:		Mountain Valley Pipeline			Lat.	39.130718	Lon.	-80.571966
STREAM/SITE ID AND SITE DESCR	IPTION:				V	/-IJ24, Temporary Access Road		
(% stream slope, watershed size {a	creage}, unaltered	l or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	8/10/2015 WEATHER CONDITIONS:				PRECIPITATION PAST 48 HRS:		
	PART I - Wet	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-IJ24	Emergent	0.0041	Emergent					
					ĺ	PART III - Advanced I	Mitigatio	on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0041						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0041			\$0.4C.00		
Total Scrub-Shrub			0	-	ļ	\$246.00		
Total Forested			0	_				
Total Open Water			0	1				

Project/Site: MVP	City/County: Lewis		Sampling Date: 05/05/2016			
Applicant/Owner: MVP		Sampling Point: W-IJ24				
Investigator(s): E. Foster, J. Niergarth, B. So	chrotenboer Section Township Rand		_			
Landform (hillslope, terrace, etc.): Floodplain			Slone (%): 1			
Subregion (LRR or MLRA): LRR N	-80.571966	0.0pc (76): Datum: NAD 83				
Soil Map Unit Name: Lh: Lobdell-Holly Silt Loam						
	_					
Are climatic / hydrologic conditions on the site typic						
Are Vegetation, Soil, or Hydrology _						
Are Vegetation, Soil, or Hydrology _	naturally problematic? (If need	ded, explain any answe	rs in Remarks.)			
SUMMARY OF FINDINGS – Attach site	e map showing sampling point lo	cations, transects	, important features, etc.			
Hydrophytic Vegetation Present? Yes						
Hydric Soil Present? Yes	No Is the Sampled A	,	No			
Wetland Hydrology Present? Yes	No within a Wetland	r res	NO			
Remarks: Cowardin Code: PEM	HGM: Slope Water Ty	ype: RPWWN				
Pasture. Impacted by grazing and	·	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Pasture. Impacted by grazing and	mowing.					
HADBOLOCA						
HYDROLOGY Wetland Hydrology Indicators:		Secondary Indica	ators (minimum of two required)			
Primary Indicators (minimum of one is required; cl	neck 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 Pa				
	Oxidized Rhizospheres on Living Roots					
	Presence of Reduced Iron (C4)		Water Table (C2)			
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C6					
Drift Deposits (B3)	Thin Muck Surface (C7)		isible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Other (Explain in Remarks)		Stunted or Stressed Plants (D1)			
Iron Deposits (B5)		✓ Geomorphic	• •			
Inundation Visible on Aerial Imagery (B7)		Shallow Aqu	itard (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): Wetla	and Hydrology Preser	nt? Yes 🗸 No			
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring)	ng well, aerial photos, previous inspections),	if available:				
Remarks: Heavy rains past 24 hours.						
Pleavy rains past 24 flours.						

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

Sampling Point: W-IJ24	
Test worksheet:	
ominant Species	

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:3 (A)
2				Total Number of Dominant
3				Species Across All Strata: 4 (B)
4				Demonstrat Demoiser of Conscient
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)
6				(702)
7				Prevalence Index worksheet:
	0	= Total Cov	/er	Total % Cover of: Multiply by:
50% of total cover: 0			_	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')			·	FACW species x 2 =
· · · · · · · · · · · · · · · · · · ·				FAC species x 3 =
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				1 - Rapid Test for Hydrophytic Vegetation
8		· <u></u>		✓ 2 - Dominance Test is >50%
9				
	0 ;	= Total Cov	/er	3 - Prevalence Index is ≤3.0 ¹
50% of total cover: 0				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')	<u> </u>			data in Remarks or on a separate sheet)
1. Eleocharis obtusa	30	/	OBL	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Carex Iurida	12		OBL	
3. Anthoxanthum odoratum	12	<u> </u>	FACU	¹ Indicators of hydric soil and wetland hydrology must
4. Scirpus atrovirens	5			be present, unless disturbed or problematic.
			OBL	Definitions of Four Vegetation Strata:
5. Juncus effusus	12		FACW_	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Carex sp.	5	. <u></u>	ND	more in diameter at breast height (DBH), regardless of
7. Lysimachia nummularia	10		FACW_	height.
8				Continue/Charles Mandy plants avaluating visco 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.				Harle All back and a constant of the state o
	86	= 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: 43		total cover		o. c.2c, and noce, planto loca than c.2c 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 V No No
50% of total cover:0	20% of	total cover	: 0	
Remarks: (Include photo numbers here or on a separate s	heet.)			1
Carex sp. is not identified to species level and	herefore	not inclu	ded in th	e dominance test.
carex opt to flot factimined to openies level and	110101010		aoa	

Sampling Point: W-IJ24

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)										
Depth Matrix Redox Features										
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	<u>Texture</u>		Remark	KS
0-2	10yr 4/2	70	7.5yr 4/6	30	С	M/PL	fine SL			_
2-8	10yr 4/2	70_	7.5yr 4/6	30_	С	M/PL	SCL			
8-18	10yr 4/2	70	10yr 4/6	30_	С	M	SC			
18-20	10yr 4/3	90	10yr 4/6	10	С	M	SL			_
			<u> </u>		-					
						- ——				
							·			
¹ Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	Sand Gr	ains.				
¹ Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils ³ :										
Histosol	(A1)		Dark Surface	(S7)			2	cm Muck (A10) (MLR	A 147)
Histic Ep	oipedon (A2)		Polyvalue Be				148) C		Redox (A1	16)
Black Hi			Thin Dark Su			147, 148)		(MLRA 14		
	en Sulfide (A4)		Loamy Gleye		F2)		Pi		oodplain So	oils (F19)
	d Layers (A5)		Depleted Mat		(0)			(MLRA 13		(TE40)
	ıck (A10) (LRR N) d Below Dark Surface	(//11)	Redox Dark S Depleted Dar	•					/ Dark Surfa in in Rema	
	ark Surface (A12)	(Д11)	Redox Depre				0	illei (Expia	III III IXEIIIA	iko)
	Mucky Mineral (S1) (L	RR N.	Iron-Mangan			LRR N.				
	A 147, 148)	,	MLRA 13			,,				
	Gleyed Matrix (S4)		Umbric Surfa		MLRA 13	36, 122)	³ Indi	cators of h	ydrophytic v	vegetation and
Sandy R	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	8) we	tland hydro	logy must b	pe present,
Stripped	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 147	') unl	ess disturb	ed or probl	ematic.
Restrictive I	Layer (if observed):									
Type:										
Depth (inc	ches):						Hydric Soil	Present?	Yes_	No
Remarks:										
Soils slight	ly disturbed, tram	pled by	cattle							



Photograph Direction SW

Comments:			

Project/Site: MVP	City/County: Le	wis	Sampling Date: 05/05/2016					
Applicant/Owner: MVP			Sampling Point: W-IJ24-UP					
Investigator(s): E. Foster, J. Niergarth, B. Schrotenboer Section, Township, Range: N/A								
Landform (hillslope, terrace, etc.): Floodplair		-	Slope (%): 1					
Subregion (LRR or MLRA): LRR N								
Soil Map Unit Name: Lh: Lobdell-Holly Silt Lo		NWI classifi						
Are climatic / hydrologic conditions on the site ty								
Are Vegetation, Soil, or Hydrolo								
Are Vegetation, Soil, or Hydrolo								
SUMMARY OF FINDINGS – Attach								
		<u> </u>	· · · · · · · · · · · · · · · · · · ·					
	No.	mpled Area						
	No within a l	Wetland? Yes	No					
Damania		eter Type:						
Cowardin Code. OPLAND	HGIVI: VV	ater Type:						
Pasture.								
HYDROLOGY								
Wetland Hydrology Indicators:		Secondary Indic	ators (minimum of two required)					
Primary Indicators (minimum of one is required	d; check all that apply)	Surface Soil Cracks (B6)						
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Ve	Sparsely Vegetated Concave Surface (B8)					
High Water Table (A2)	Hydrogen Sulfide Odor (C1)		atterns (B10)					
Saturation (A3)	Oxidized Rhizospheres on Living	Roots (C3) Moss Trim I	- · · · · · · · · · · · · · · · · · · ·					
Water Marks (B1)	Dry-Season	Dry-Season Water Table (C2)						
Sediment Deposits (B2)	ils (C6) Crayfish Burrows (C8)							
Drift Deposits (B3)	Saturation Visible 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 Imagery (B7)	Shallow Aquitard (D3)							
Water-Stained Leaves (B9)	Microtopographic Relief (D4) FAC-Neutral Test (D5)							
Aquatic Fauna (B13)		FAC-Neutra	il Test (D5)					
Field Observations:	V 5 4 (1 1)							
Surface Water Present? Yes No	Depth (inches):							
	Depth (inches):	l						
Saturation Present? Yes No (includes capillary fringe)	Depth (inches):	Wetland Hydrology Prese	nt? Yes No					
Describe Recorded Data (stream gauge, moni	toring well, aerial photos, previous inspe	ctions), if available:						
Remarks:								
Heavy rain past 24 hours								

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

Sampling Point: W-IJ24-UP	
worksheet:	

Tree Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:				
Tiec otratum (Flot size.	% Cover			Number of Dominant Species	2	(4)		
1				That Are OBL, FACW, or FAC:		(A)		
2				Total Number of Dominant	4	(D)		
3				Species Across All Strata:		(B)		
4				Percent of Dominant Species	50	(4 (5)		
5				That Are OBL, FACW, or FAC:		(A/B)		
6				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 =				
7				Hydrophytic Vegetation Indicate				
8				1 - Rapid Test for Hydrophytic	c Vegetation			
9.				2 - Dominance Test is >50%				
	_	= Total Cov	ver	3 - Prevalence Index is ≤3.0 ¹	4			
50% of total cover:0				4 - Morphological Adaptations				
Herb Stratum (Plot size: 5')	<u></u>			data in Remarks or on a s	•			
1. Taraxacum officinale	10		FACU	Problematic Hydrophytic Veg	etation¹ (Expla	iin)		
2. Ranunculus acris	15	~	FAC					
3. Anthoxanthum odoratum	20	~	FACU	¹ Indicators of hydric soil and wetla		must		
4. Potentilla simplex	5		FACU	be present, unless disturbed or pr				
5. Viola sororia	5		FAC	Definitions of Four Vegetation S	otrata:			
6. Trifolium repens	20	~	FACU	Tree – Woody plants, excluding v				
7. Eleocharis obtusa	15	~	OBL	 more in diameter at breast height (DBH), regardless of height. 				
8								
9				Sapling/Shrub – Woody plants, ethan 3 in. DBH and greater than o	excluding vines	s, less		
10				m) tall.	r equal to 3.20	511 (1		
11.				,				
	90	= Total Cov	ver	Herb – All herbaceous (non-wood of size, and woody plants less that		irdless		
50% of total cover: 45		total cover						
Woody Vine Stratum (Plot size: 15')	<u></u>			Woody vine – All woody vines graheight.	eater than 3.28	3 ft in		
1				neight.				
2								
3		,						
4		,						
5.				Hydrophytic Vegetation				
		= Total Cov	ver	Present? Yes	No 🗸			
50% of total cover:0		total cover	^					
Remarks: (Include photo numbers here or on a separate s	heet.)							

Sampling Point: W-IJ24-UP

SOIL

Depth	ription: (Describe	to tne dept		ent tne Feature		or contirn	n the absence	or indicate	ors.)		
(inches)	Color (moist)	%	Color (moist)	<u> </u>	Type ¹	Loc ²	Texture		Remar	ks	
0-2	7.5yr 3/3	100					SiL				_
2-13	7.5yr 4/3	100					SCL	-			
13-20	-	98	7 Evr.1/6			N/	SC				
13-20	7.5yr 4/2	96	7.5yr4/6	2	<u>C</u>	<u>M</u>	30	-			
	·										
		· •	_			,					
		· ——									
	oncentration, D=Dep	letion, RM=	Reduced Matrix, MS	=Masked	d Sand Gr	ains.	² Location: P				
Hydric Soil I	ndicators:							ators for Pi		-	oils³:
Histosol			Dark Surface					cm Muck (, .		
	pipedon (A2)		Polyvalue Bel				148) (Coast Prairie		16)	
Black Hi			Thin Dark Sur			47, 148)	-	(MLRA 14		ilo (E10)	
	n Sulfide (A4) I Layers (A5)		Loamy Gleyed Depleted Mate		(FZ)			Piedmont Flo MLRA 13))IIS (F 19)	
	ick (A10) (LRR N)		Redox Dark S		- 6)		\	ery Shallow		ace (TF12))
	Below Dark Surface	e (A11)	Depleted Darl	,	,			Other (Expla			
	ark Surface (A12)		Redox Depres								
	lucky Mineral (S1) (L	.RR N,	Iron-Mangane		es (F12) (LRR N,					
	147, 148)		MLRA 136	•	(BAL D.A. 40	0 400\	31	Partage of be	and the section of the		
	edox (S5)		Umbric Surface Piedmont Floo					licators of hyellotellicators		-	
	Matrix (S6)		Red Parent M					iless disturb			,
	_ayer (if observed):		rtou r drone in	iatoriai (i		, , , <u>, , , , , , , , , , , , , , , , </u>	-	iloco diotaro	ou o. p.oo.	ornatio.	
Type:	,										
Depth (inc	ches):						Hydric Soi	Present?	Yes	No _	~
Remarks:	,										

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	39.116053	Lon.	-80.589196		
STREAM/SITE ID AND SITE DESCRIPTION:				W-J20, Permanent Access Road						
(% stream slope, watershed size {acreage}, unaltered or impairments)										
FORM OF MITIGATION:										
DATE:	8/10	8/10/2015 WEATHER CONDITIONS:				PRECIPITATION PAST 48 HRS:				
	PART I - Wet	land Indicators								
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification							
W-J20	Emergent	0.0081	Emergent							
						PART III - Advanced	Mitigatio	on		
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Υ		
Total Impact		0.0081								
		Unit Scores				Estimated				
	lassification		Replacement Unit(s)			ILF Costs				
Total Emergent			0.0081			¢400.00				
Total Scrub-Shrub			0			\$486.00				
Total Forested			0							
Total Open Water			0	1						

Project/Site: MVP		City/County: Lewis Sampling Date: 05/19/20					
Applicant/Owner: MVP		State: WV Sampling Point: \					
Investigator(s): R. Meeker, S. Kelly, D Santillo Section, Township, Range: N/A							
_andform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 15-20							
Subregion (LRR or MLRA): LR					NAD 83		
Soil Map Unit Name: Gilpin-U							
Are climatic / hydrologic condition	ons on the site typical for	this time of year? Ye	es 🗸 No ((If no, explain in R	Remarks.)		
Are Vegetation, Soil	• •	•		•	present? Yes No		
Are Vegetation, Soil							
					s, important features, etc.		
			, 9 p		,		
Hydrophytic Vegetation Preser		No	Is the Sampled Area	4			
Hydric Soil Present?	Yes	No	within a Wetland?	Yes	No		
Wetland Hydrology Present?	Yes	No					
Remarks: Cowardin Code: PEM H	GM: Slope WT: NR	PWW					
Information listed on this of wetland hydrology, hyd Supplement delineation r	form represents the drophytic vegetation nethodology.	e data collected in a, and hydric soils	n 2015. The wetland s was confirmed usin	d was revisited ng the USACE	on 09/24/2019. Presence EMP Regional		
HYDROLOGY							
Wetland Hydrology Indicator	rs:			•	ators (minimum of two required)		
Primary Indicators (minimum o	of one is required; check	all that apply)		Surface Soil	Cracks (B6)		
Surface Water (A1)	<u> </u>	Γrue Aquatic Plants (Ε	314)	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)	<u> </u>	Hydrogen Sulfide Odd	or (C1)	Drainage Pa	tterns (B10)		
Saturation (A3)			es on Living Roots (C3)	Moss Trim L	ines (B16)		
Water Marks (B1)	F	Presence of Reduced	Iron (C4)	Dry-Season Water Table (C2)			
Sediment Deposits (B2)	F	Recent Iron Reduction	n in Tilled Soils (C6)	Crayfish Bur	rows (C8)		
Drift Deposits (B3)		Thin Muck Surface (C		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 Aeria			Shallow Aquitard (D3)				
Water-Stained Leaves (BS	∌)		Microtopographic Relief (D4)				
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)		
Field Observations:							
Surface Water Present?	Yes No						
Water Table Present?	Yes No		6				
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):	4 Wetland H	lydrology Preser	nt? Yes <u>/</u> No		
Describe Recorded Data (stream	am gauge, monitoring we	ell, aerial photos, prev	vious inspections), if ava	ilable:			
Remarks:							
Roadside ditch.							

VEGETATION (Four Strata) - Use scientific na

50% of total cover: 0

Tree Stratum (Plot size: 30')

Sapling/Shrub Stratum (Plot size: 15')

2. Eleagnus angustifolia

2. Juncus effusus 3. Mimulus ringens 4. Microstegium vimineum

Woody Vine Stratum (Plot size: 15')

1 Rosa multiflora

Herb Stratum (Plot size: 5' 1. Packera aurea

	Absolute	Dominant	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 Cov		Total % Cover of: Multiply by	<u>/:</u>
% of total cover: 0				OBL species x 1 =	
15'	2070 01	total oover.		FACW species x 2 =	
/	10	~	FAC	FAC species x 3 =	
	5		FACU	FACU species x 4 =	
			<u>racu</u>	UPL species x 5 =	
					(B)
				Prevalence Index = B/A =	
				Hydrophytic Vegetation Indicators:	
				1 - Rapid Test for Hydrophytic Vegetation	n
				2 - Dominance Test is >50%	
	15	= Total Cov		3 - Prevalence Index is ≤3.0 ¹	
0% of total cover: 7.5				4 - Morphological Adaptations ¹ (Provide	supporting
)	2070 01	total oover.		data in Remarks or on a separate she	eet)
/	35	/	FACW	Problematic Hydrophytic Vegetation ¹ (Ex	(plain)
	25	<u> </u>			
	20		F <u>ACW</u>	¹ Indicators of hydric soil and wetland hydrolog	gy must
	20		OBL	be present, unless disturbed or problematic.	
			F <u>AC</u>	Definitions of Four Vegetation Strata:	
				Tree – Woody plants, excluding vines, 3 in. (more in diameter at breast height (DBH), regineight.	
				Sapling/Shrub – Woody plants, excluding vi than 3 in. DBH and greater than or equal to 3 m) tall.	
50		= Total Cov		Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tal	
0% of total cover: <u>50</u> 15')	20% of	total cover:	20	Woody vine – All woody vines greater than 3 height.	3.28 ft in
				Hydrophytic Vegetation	
		= Total Cov	^	Present? Yes No	_
0% of total cover: 0	20% of	total cover:	0		

Remarks: (Include photo numbers here or on a separate sl

50% of total cover: 0

50% of total cover: 50

SOIL Sampling Point: W-J20

Profile Desc	ription: (Describe t	o the dep	th needed to docur	nent the	indicator	or confirm	the abs	ence of indicators.)
Depth	Matrix		Redo	x Feature	es			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Textu	
0-6	10YR 5/1	92	5YR 4/6	8	C	M/PL	SaC	<u> </u>
6-12	10YR 4/6	95	7.5YR 5/8	5	С	M	SaC	
					· ———			
							-	
				-				
	oncentration, D=Depl	etion, RM	=Reduced Matrix, MS	S=Maske	d Sand Gr	ains.		n: PL=Pore Lining, M=Matrix.
Hydric Soil				(0-1)				ndicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface		(CO) /	M D A 447	_	2 cm Muck (A10) (MLRA 147)
Black Hi	oipedon (A2)		Polyvalue Be Thin Dark Su				148)	Coast Prairie Redox (A16) (MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			147, 140)		Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma		(1 2)		-	(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark		F6)			Very Shallow Dark Surface (TF12)
·	d Below Dark Surface	(A11)	Depleted Dar				_	Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre	essions (F	⁻ 8)			
	lucky Mineral (S1) (L	RR N,	Iron-Mangan		ses (F12) (LRR N,		
	A 147, 148)		MLRA 13	•				2
	Gleyed Matrix (S4)		Umbric Surfa					³ Indicators of hydrophytic vegetation and
-	ledox (S5)		Piedmont Flo					wetland hydrology must be present,
	Matrix (S6) _ayer (if observed):		Red Parent N	viateriai (i	-21) (WLK	A 127, 147	<u>')</u>	unless disturbed or problematic.
Type:							Unidata	Soil Present? Yes V No
	ches):						пуапс	Soil Present? Yes No
Remarks:								

Wetland Photograph Page

Wetland ID W-J20 Cowardin Code PEM



Photograph Direction SW

Date: 05/19/2015

Comments: 2015 wetland delineation.



Photograph Direction West

Date: 09/24/2019

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP		City/County: Lewis		Sampling Date: 05/19/2015		
Applicant/Owner: MVP		· · _		Sampling Point: W-J20-UP1		
Investigator(s): R. Meeker, S. Kelly, D	Santillo	Section, Township, Range: N/		_ ,		
Landform (hillslope, terrace, etc.): Hillslop		Slope (%): 10-20				
Subregion (LRR or MLRA): LRRN				Datum: NAD 83		
Soil Map Unit Name: Gilpin-Upshur silt						
Are climatic / hydrologic conditions on the si						
Are Vegetation, Soil, or Hyd			Circumstances" p	oresent? Yes No		
Are Vegetation, Soil, or Hyd	rology naturally pr	roblematic? (If needed, e	explain any answe	rs in Remarks.)		
SUMMARY OF FINDINGS – Attac	ch site map showing	g sampling point locatio	ns, transects	, important features, etc.		
Hydrophytic Vegetation Present?	Yes No					
	Yes No	Is the Sampled Area	Yes	No. V		
	Yes No	within a Wetland?	1es	NO		
Remarks:		<u> </u>				
Upland						
HYDROLOGY						
Wetland Hydrology Indicators:			Secondary Indica	tors (minimum of two required)		
Primary Indicators (minimum of one is requ	uired; check all that apply)		Surface Soil	Cracks (B6)		
Surface Water (A1)	True Aquatic F	Plants (B14)	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)	Hydrogen Sulf	ide Odor (C1)	Drainage Patterns (B10)			
Saturation (A3)		ospheres on Living Roots (C3)	Moss Trim Li			
Water Marks (B1)	Presence of R		Dry-Season Water Table (C2)			
Sediment Deposits (B2)		eduction in Tilled Soils (C6)	Crayfish Burr			
Drift Deposits (B3)	Thin Muck Sur		Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)	Other (Explain	in Remarks)		tressed Plants (D1)		
Iron Deposits (B5)			Geomorphic			
Inundation Visible on Aerial Imagery (B7)		Shallow Aqui			
Water-Stained Leaves (B9)				aphic Relief (D4)		
Aquatic Fauna (B13)			FAC-Neutral	Test (D5)		
Field Observations: Surface Water Present? Yes	No Depth (inches	s).				
Water Table Present? Yes	No Depth (inches	o)				
				10 Van No V		
Saturation Present? Yes (includes capillary fringe)	No Popth (inches	S): wetiand r	lydrology Presen	t? Yes No		
Describe Recorded Data (stream gauge, n	nonitoring well, aerial phot	os, previous inspections), if ava	ilable:			
Domarko						
Remarks:						

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?		Number of Dominant Species
1. Acer saccharum	30	✓	FACU	That Are OBL, FACW, or FAC: 4 (A)
2				
			· ——	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: 66.6% (A/B)
6				Prevalence Index worksheet:
7				
	30	= Total Cov	er	Total % Cover of: Multiply by:
50% of total cover: 15	20% of	total cover	6	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Rosa multiflora	30	✓	FAC	FAC species x 3 =
2. Eleagnus angustifolia	10		FACU	FACU species x 4 =
			r <u>ACU</u>	UPL species x 5 =
3				
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				
7				Hydrophytic Vegetation Indicators:
8				1 - Rapid Test for Hydrophytic Vegetation
		-		✓ 2 - Dominance Test is >50%
9	40			3 - Prevalence Index is ≤3.0 ¹
60		= Total Cov	_	4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 20	20% of	total cover	8	data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5')				Problematic Hydrophytic Vegetation ¹ (Explain)
1. Packera aurea	20		FACW_	Problematic Hydrophytic Vegetation (Explain)
2. Dicanthelium clandestinum	20	✓	FAC	
3. Microstegium vimineum	60	V	FAC	¹ Indicators of hydric soil and wetland hydrology must
				be present, unless disturbed or problematic.
				Definitions of Four Vegetation Strata:
5				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				O and the original to the orig
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.
14				,
11	100			Herb – All herbaceous (non-woody) plants, regardless
T00/ (1.1.) FO		= 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.				
1				
4		-		Hydrophytic
5				Vegetation Present? Yes ✓ No
		= Total Cov	_	riesent: res_v 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-J20-UP1

Profile Description: (Describe to the dep	th needed to docur	nent the i	ndicator	or confirm	the absenc	e of indicators.)
Depth Matrix	Redo	x Features	3			
(inches) Color (moist) %	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6 10YR 5/6 98	7.5YR 5/6	2	С	M	SaC	
6+						Roadbed
			•			
¹ Type: C=Concentration, D=Depletion, RM=	Reduced Matrix, MS	S=Masked	Sand Gr	ains.		PL=Pore Lining, M=Matrix.
Hydric Soil Indicators:						cators for Problematic Hydric Soils ³ :
Histosol (A1)	Dark Surface					2 cm Muck (A10) (MLRA 147)
Histic Epipedon (A2)	Polyvalue Be				148)	Coast Prairie Redox (A16)
Black Histic (A3)	Thin Dark Su			147, 148)		(MLRA 147, 148)
Hydrogen Sulfide (A4)	Loamy Gleye		F2)			Piedmont Floodplain Soils (F19)
Stratified Layers (A5)	Depleted Ma	. ,				(MLRA 136, 147)
2 cm Muck (A10) (LRR N)	Redox Dark					Very Shallow Dark Surface (TF12)
Depleted Below Dark Surface (A11)	Depleted Dar					Other (Explain in Remarks)
Thick Dark Surface (A12)	Redox Depre					
Sandy Mucky Mineral (S1) (LRR N,	Iron-Mangan		es (F12) (LRR N,		
MLRA 147, 148)	MLRA 13	-	MI DA 46	0 400\	31	Parton of hadron by Carron at Carron d
Sandy Gleyed Matrix (S4)	Umbric Surfa					dicators of hydrophytic vegetation and
Sandy Redox (S5) Stripped Matrix (S6)	Piedmont Flo					retland hydrology must be present, nless disturbed or problematic.
Restrictive Layer (if observed):	Neu Faieill II	nateriai (i	ZI) (WILK	A 121, 141	, u	niess disturbed of problematic.
Type: Roadbed						
					l ₋	
Depth (inches): 6					Hydric So	il Present? Yes No
Remarks:						

Mountain Valley Pipeline			COORDINATES:	Lat.	39.114118	Lon.	-80.586522
				'	W-J23, Pipeline ROW		
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	0.013	Emergent					
				ſ	PART III - Advanced	Mitigatio	on
				•			
					Advanced Mitigation		Υ
					(Y or N)		
	0.013			г	Fatherstad		
	Jnit Scores	Davidson (III-)/()					
assincation					ILF Costs		
			_		¢790 00		
		-		ļ	\$780.00		
	PART I - Wett Impact Wetland Classification Emergent	IPTION: creage}, unaltered or impairments) 8/10/2015 PART I - Wetland Indicators Impact (acreage) Classification Emergent 0.013 0.013 PART II - Unit Scores	IPTION: creage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.013 Emergent 0.013 PART II - Unit Scores	IPTION: creage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.013 Emergent 0.013 Emergent 0.013 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 0.013 Emergent 0.013 Emergent 0.013 PART II - Unit Scores assification Replacement Unit(s) 0 0 0	PTION: creage), unaltered or impairments) ### RECIPITATION PAST 48 HRS: ### PART I - Wetland Indicators Impact	IPTION: creage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Impacts (acreage) Wetland Classification Emergent 0.013 Emergent Emergent 0.013 Emergent Sustainable Determination Made on Advanced Mitigation (Y or N) PART II - Unit Scores assification Replacement Unit(s) 0.013 Replacement Unit(s) 0.013 \$780.00

Project/Site: MVP	City/County: Lewis	Sampling Date: 05/20/2015					
Applicant/Owner: MVP		State: WV Sampling Point: W-J23					
Investigator(s): R. Meeker, S. Kelly, D Santillo Section, Township, Range: N/A							
	ex, none): concave Slope (%): 1-2						
Subregion (LRR or MLRA): LRRN		-80.586916 Datum: NAD 83					
Soil Map Unit Name: Gilpin-Upshur silt loams	s, 35 to 70 percent slopes, severely	eroded _{NWI classification:} None					
Are climatic / hydrologic conditions on the site typical	al for this time of year? Yes V	(If no, explain in Remarks.)					
		lormal Circumstances" present? Yes No					
Are Vegetation, Soil, or Hydrology _							
		cations, transects, important features, etc.					
	No. In the Sempled						
Hydrophytic Vegetation Present? Yes Hydric Soil Present? Yes	No.						
Wetland Hydrology Present?	No within a Wetland	d? Yes No No					
Remarks:							
Cowardin Code: PEM HGM: DEPRESS	SIONAL WT: NRPWW						
Information listed on this form represents	the data collected in 2015. The we	etland was revisited on 09/24/2019. Presence					
of wetland hydrology, hydrophytic vegeta							
Supplement delineation methodology.	, , ,	3, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,					
HYDROLOGY							
Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required; ch	neck all that apply)	Surface Soil Cracks (B6)					
Surface Water (A1)	True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)					
	✓ Hydrogen Sulfide Odor (C1)	Sparsely vegetated concave Surface (B8) Drainage Patterns (B10)					
1 - · · · ·	 Oxidized Rhizospheres on Living Roots 						
Water Marks (B1)	Presence of Reduced Iron (C4)	Dry-Season Water Table (C2)					
Sediment Deposits (B2)	Recent Iron Reduction in Tilled Soils (C						
Drift Deposits (B3)	Thin Muck Surface (C7)						
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation Visible on Aerial Imagery (C9)Stunted or Stressed Plants (D1)					
Iron Deposits (B5)		Geomorphic Position (D2)					
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)					
Water-Stained Leaves (B9)		Microtopographic Relief (D4)					
Aquatic Fauna (B13)		FAC-Neutral Test (D5)					
Field Observations:		· · · · · ·					
Surface Water Present? Yes No	Depth (inches):						
Water Table Present? Yes No	Depth (inches):						
Saturation Present? Yes No		land Hydrology Present? Yes No					
(includes capillary fringe)							
Describe Recorded Data (stream gauge, monitorin	ng well, aerial photos, previous inspections),	if available:					
Remarks:							
Remnant logging road.							

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

Sampling	Point:	W-ر	J23
----------	--------	-----	-----

Troo Stratum (Blot size: 30'	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tiee Stratum (Flot size)		Species?		Number of Dominant Species
1. Liriodendron tulipifera	20		<u>FACU</u>	That Are OBL, FACW, or FAC:3 (A)
2. Acer saccharum	10		FACU_	Total Number of Dominant
3				Species Across All Strata:5 (B)
4				Descrit of Descional Conscion
5				Percent of Dominant Species That Are OBL, FACW, or FAC: (A/B)
6				(42)
7				Prevalence Index worksheet:
	30	= Total Co	ver	Total % Cover of: Multiply by:
50% of total cover:15				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2.				FACU species x 4 =
				UPL species x 5 =
3				Column Totals: (A) (B)
4				()
5		·		Prevalence Index = B/A =
6				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')				Problematic Hydrophytic Vegetation¹ (Explain)
1. Carex stricta	25		OBL	Froblematic Hydrophytic vegetation (Explain)
2. Cyperus esculentus	40		FACW_	The directions of boundings of the original control of
3. Juncus effusus	20		FACW_	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Microstegium vimineus	10		F <u>AC</u>	Definitions of Four Vegetation Strata:
5. Onoclea sensibilis	5		FACW	Deminions of Four Vegetation offata.
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
				noight.
8 9.				Sapling/Shrub – Woody plants, excluding vines, less
				than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.
10				
11	100			Herb – All herbaceous (non-woody) plants, regardless
50% of total cover: 50		= 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 (1 lot size)				height.
1				
2		·		
3				
4				Hydrophytic
5				Vegetation
		= 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.)			
Wetland on a remnant logging road.				

SOIL Sampling Point: W-J23

Profile Desc	cription: (Describe t	o the deptl	n needed to docum	nent the i	indicator	or confirm	the abs	ence of indicators.)	
Depth	Matrix		Redo	x Feature	S				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Textu		Remarks
0-6	7.5yr4/3	95	7.5yr5/6	5	С	M/PL	SAC	L	
			·						
	-				-				
									_
	-								
									_
	-					· ——			
	oncentration, D=Depl	etion, RM=I	Reduced Matrix, MS	S=Masked	d Sand Gr	ains.		on: PL=Pore Lining,	
Hydric Soil									ematic Hydric Soils ³ :
Histosol	, ,		Dark Surface				-	2 cm Muck (A10)	,
	pipedon (A2)		Polyvalue Be				148)	Coast Prairie Re	
	istic (A3)		Thin Dark Su			147, 148)		(MLRA 147, 1	=
	en Sulfide (A4)		Loamy Gleye		(F2)		-	Piedmont Floodp	The state of the s
	d Layers (A5)		Depleted Mar					(MLRA 136, 1	
	uck (A10) (LRR N)	(/////	Redox Dark S				-		rk Surface (TF12)
	d Below Dark Surface	(ATT)	Depleted Dar				-	Other (Explain in	Remarks)
	ark Surface (A12) ⁄lucky Mineral (S1) (L	DD N	Redox Depre			IDDN			
	A 147, 148)	KK N,	MLRA 13		es (F12) (LINK IN,			
	Gleyed Matrix (S4)		Umbric Surfa		(MIRA 13	86 122\		³ Indicators of hydro	phytic vegetation and
-	Redox (S5)		Piedmont Flo				.8)	wetland hydrology	
-	Matrix (S6)		Red Parent N					unless disturbed of	•
	Layer (if observed):			(1	/ (,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Í		
Type: Re									
Depth (in	_						Hydrid	Soil Present? Ye	es V No
	ones)						. i yai i	7001111030110.	
Remarks:									

Wetland Photograph Page

Wetland ID W-J23 Cowardin Code PEM



Photograph Direction NNE

Date: 05/20/2015

Comments: 2015 wetland delineation.



Photograph Direction West

Date: _____09/24/2019

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP	City/County: Lewis		Sampling Date: 05/20/2015			
Applicant/Owner: MVP			Sampling Point: W-J23 UP			
Investigator(s): R. Meeker, S. Kelly, D Santillo	Section, Township, Ra					
Landform (hillslope, terrace, etc.): hillslope						
Subregion (LRR or MLRA): LRRN La			NAD 83			
Soil Map Unit Name: Gilpin-Upshur silt loams,						
Are climatic / hydrologic conditions on the site typical	for this time of year? Yes V	(If no, explain in Re	emarks.)			
Are Vegetation, Soil, or Hydrology			_			
Are Vegetation, Soil, or Hydrology		eeded, explain any answer				
SUMMARY OF FINDINGS – Attach site r						
			, , , , , , , , , , , , , , , , , , ,			
Hydrophytic Vegetation Present? Yes	No lis the Sample					
Hydric Soil Present? Wetland Hydrology Present? Yes Yes	. Within a Wella	nd? Yes	No			
Remarks:						
HYDROLOGY						
Wetland Hydrology Indicators:		<u></u>	tors (minimum of two required)			
Primary Indicators (minimum of one is required; chec		Surface Soil Cracks (B6)				
	_ True Aquatic Plants (B14)	Sparsely Vegetated Concave Surface (B8)				
	_ Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)				
	 Oxidized Rhizospheres on Living Roo Presence of Reduced Iron (C4) 					
<u> </u>	Recent Iron Reduction in Tilled Soils (Dry-Season Water Table (C2)				
Occurrent Deposits (B2)	Thin Muck Surface (C7)	Soils (C6) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)	Other (Explain in Remarks)	Saturation visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)				
Iron Deposits (B5)		Geomorphic Position (D2)				
Inundation Visible on Aerial Imagery (B7)		Shallow Aquitard (D3)				
Water-Stained Leaves (B9)		Microtopographic Relief (D4)				
Aquatic Fauna (B13)		FAC-Neutral	Test (D5)			
Field Observations:						
	Depth (inches):					
	Depth (inches):					
Saturation Present? Yes No	Depth (inches): We	etland Hydrology Present	t? Yes No			
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspection	s), if available:				
Remarks: Remnant logging road.						

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

Sampling Point: W-J23 UP

201	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30')	% Cover			Number of Dominant Species	
1. Acer saccharum	10		FACU_	That Are OBL, FACW, or FAC:3	(A)
2			_	Total Number of Descinent	
3				Total Number of Dominant Species Across All Strata: 4	(B)
4				Species / Gross / III Girata.	(D)
				Percent of Dominant Species That Are OBL FACW or FAC: 75%	
5				That Are OBL, FACW, or FAC:	(A/B)
6				Prevalence Index worksheet:	
7					
	10	= Total Co	ver	Total % Cover of: Multiply by:	
50% of total cover: 5	20% of	total cover	:2	OBL species x 1 =	
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =	
1				FAC species x 3 =	
				FACU species x 4 =	
2				UPL species x 5 =	
3					
4				Column Totals: (A)	(B)
5				Prevalence Index = B/A =	
6					
7				Hydrophytic Vegetation Indicators:	
				1 - Rapid Test for Hydrophytic Vegetation	
8		-		✓ 2 - Dominance Test is >50%	
9	^			3 - Prevalence Index is ≤3.0 ¹	
_		= Total Co		4 - Morphological Adaptations ¹ (Provide s	unnorting
50% of total cover: 0	20% of	total cover	:0		
Herb Stratum (Plot size: 5')				data in Remarks or on a separate she	•
1. Packera aurea	20	/	FACW	Problematic Hydrophytic Vegetation ¹ (Exp	olain)
2. Melilotus indicus	10	-	FACU		
3. Cyperus esculentus	10			¹ Indicators of hydric soil and wetland hydrolog	y must
			FACW_	be present, unless disturbed or problematic.	
4. Dicanthelium clandestinum	20		F <u>AC</u>	Definitions of Four Vegetation Strata:	
5. Microstegium vimineum	40	✓	FAC		
6		-		Tree – Woody plants, excluding vines, 3 in. (7	.6 cm) or
6				more in diameter at breast height (DBH), rega	.6 cm) or rdless of
7				Tree – Woody plants, excluding vines, 3 in. (7 more in diameter at breast height (DBH), regarkeight.	.6 cm) or rdless of
7 8				more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir	rdless of es, less
7				more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3	rdless of es, less
7 8				more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir	rdless of es, less
7				more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall.	rdless of es, less 28 ft (1
7				more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3	es, less 28 ft (1
7	100		ver	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall	es, less 28 ft (1
7	100	= Total Co	ver	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall Woody vine – All woody vines greater than 3	es, less 28 ft (1
7		= Total Co	ver : 20	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall	es, less 28 ft (1
7	100 :20% of	= Total Co	ver 20	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall Woody vine – All woody vines greater than 3	es, less 28 ft (1
7		= Total Co	ver 20	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall Woody vine – All woody vines greater than 3	es, less 28 ft (1
7		= Total Co	ver 20	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall Woody vine – All woody vines greater than 3	es, less 28 ft (1
7		= Total Co total cover	ver 20	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall Woody vine – All woody vines greater than 3 height.	es, less 28 ft (1
7	100 _:20% of	= Total Co total cover	ver 20	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall Woody vine – All woody vines greater than 3 height. Hydrophytic Vegetation	es, less 28 ft (1
7		= Total Co total cover	ver : 20	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall Woody vine – All woody vines greater than 3 height. Hydrophytic	es, less 28 ft (1
7		= Total Co total cover	ver 20	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall Woody vine – All woody vines greater than 3 height. Hydrophytic Vegetation	es, less 28 ft (1
7		= Total Co total cover	ver 20	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall Woody vine – All woody vines greater than 3 height. Hydrophytic Vegetation	es, less 28 ft (1
7		= Total Co total cover	ver 20	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall Woody vine – All woody vines greater than 3 height. Hydrophytic Vegetation	es, less 28 ft (1
7		= Total Co total cover	ver 20	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall Woody vine – All woody vines greater than 3 height. Hydrophytic Vegetation	es, less 28 ft (1
7		= Total Co total cover	ver 20	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall Woody vine – All woody vines greater than 3 height. Hydrophytic Vegetation	es, less 28 ft (1
7		= Total Co total cover	ver 20	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall Woody vine – All woody vines greater than 3 height. Hydrophytic Vegetation	es, less 28 ft (1
7		= Total Co total cover	ver 20	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall Woody vine – All woody vines greater than 3 height. Hydrophytic Vegetation	es, less 28 ft (1
7		= Total Co total cover	ver 20	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall Woody vine – All woody vines greater than 3 height. Hydrophytic Vegetation	es, less 28 ft (1
7		= Total Co total cover	ver 20	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall Woody vine – All woody vines greater than 3 height. Hydrophytic Vegetation	es, less 28 ft (1
7		= Total Co total cover	ver 20	more in diameter at breast height (DBH), regar height. Sapling/Shrub – Woody plants, excluding vir than 3 in. DBH and greater than or equal to 3 m) tall. Herb – All herbaceous (non-woody) plants, re of size, and woody plants less than 3.28 ft tall Woody vine – All woody vines greater than 3 height. Hydrophytic Vegetation	es, less 28 ft (1 gardless

SOIL Sampling Point: W-J23 UP

Profile Desc	cription: (Describe t	o the depth	needed to docur	nent the i	ndicator	or confirm	n the abs	ence of indicators.)
Depth	Matrix		Redo	x Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Textu	
0-6	7.5yr5/4	95	7.5 yr 4/6	5	С	М	SAC	CL
		 -						
						<u> </u>		
			_					
			-				-	
						<u> </u>		
¹ Type: C=C	oncentration, D=Deple	etion, RM=R	educed Matrix, MS	S=Masked	d Sand Gr	ains.	² Locatio	on: PL=Pore Lining, M=Matrix.
Hydric Soil		,	,					Indicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(97)				2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		co (S9) (N	AI DA 147	1/0\	Coast Prairie Redox (A16)
			Thin Dark Su				140) _	
	istic (A3)					147, 140)		(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye		r2)		-	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma		- 0)			(MLRA 136, 147)
	uck (A10) (LRR N)	(111)	Redox Dark				=	Very Shallow Dark Surface (TF12)
	d Below Dark Surface	(ATT)	Depleted Date				=	Other (Explain in Remarks)
	ark Surface (A12)	DD N	Redox Depre			1 DD N		
	Mucky Mineral (S1) (L	RR N,	Iron-Mangan		es (F12) (LRK N,		
	A 147, 148)		MLRA 13	•				3
	Bleyed Matrix (S4)		Umbric Surfa					³ Indicators of hydrophytic vegetation and
-	Redox (S5)		Piedmont Flo					wetland hydrology must be present,
	l Matrix (S6)		Red Parent N	Material (F	21) (MLR	A 127, 147	7)	unless disturbed or problematic.
	Layer (if observed):							
Type: Ro	padbed		<u></u>					
Depth (in	ches): 6						Hvdrid	Soil Present? Yes V No No
Remarks:			_				1.,	
	c due to restrictiv	a lavar (ro	adhad)					
Tobleman	c due to restrictiv	c layer (ic	Jaabea).					

	Valley Pipeline	COORDINATES:	Lat.	39.080555	Lon.	-80.581362	
STREAM/SITE ID AND SITE DESCRIPTION:					Pipeline ROW/Temporary Access Roa	ad	
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	0.1135	Emergent					
							n
					Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
	0.1135						
	Jnit Scores						
assification					ILF Costs		
					¢c 040 00		
					\$6,610.00		
	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 0.1135 0.1135 PART II - Unit Scores	8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.1135 Emergent 0.1135 PART II - Unit Scores	IPTION: creage}, unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Wetland (acreage) Wetland Classification Emergent 0.1135 Emergent 0.1135 PART II - Unit Scores assification Replacement Unit(s) 0 0 0	IPTION: creage}, unaltered or impairments) Record Re	PTION: creage), unaltered or impairments) ### W-K31, Pipeline ROW/Temporary Access Rose ### PRECIPITATION PAST 48 HRS: ### PART II - Wetland Indicators ### Wetland Impacts	PTION: creage), unaltered or impairments) 8/10/2015 WEATHER CONDITIONS: PART I - Wetland Indicators Impact Metland (acreage) Wetland Classification Emergent 0.1135 Emergent Classification Emergent 0.1135 Emergent O.1135 Emergent O.1135 Emergent O.1135 Emergent O.1135 Estimated on Advanced Mitigation (Y or N) PART II - Unit Scores assification Replacement Unit(s) O.1135 O.1135 Separation Replacement Unit(s) O.1135 Separation Replace

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 05/20/2015	
Applicant/Owner: MVP		,			Sampling Point: W-K31	
Investigator(s): A.Bensted, V. Prilepin, J. Bittner Section, Township, Range: N/A						
Landform (hillslope, terrace, et					Slone (%)· 3	
Subregion (LRR or MLRA): L			Long: <u>-80.</u>		Datum: NAD 83	
Soil Map Unit Name: Janele		n steen	Long			
Are climatic / hydrologic condit		-				
Are Vegetation, Soil		-		Circumstances" p	oresent? Yes No	
Are Vegetation, Soil	, or Hydrology	naturally problema	atic? (If needed, ex	plain any answe	rs in Remarks.)	
SUMMARY OF FINDIN	GS – Attach site n	nap showing sam	npling point location	ns, transects	, important features, etc.	
Hydrophytic Vegetation Pres	ent? Yes	No				
Hydric Soil Present?	Yes Y	No	Is the Sampled Area			
Wetland Hydrology Present?		No	within a Wetland?	Yes	No	
Remarks:						
Cowardin Code: PEM HGM	•					
2015 notes: Wetland is alor		•	•			
Information listed on this for hydrophytic vegetation, and	m represents the data hydric soils was confir	collected in 2015. Th med using the USAC	e wetland was revisited on EE EMP Regional Supple	on 09/24/2019. I ment delineation	Presence of wetland hydrology, n methodology.	
HYDROLOGY						
Wetland Hydrology Indicat	ors:		<u> </u>	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)	<u> </u>	True Aquatic Plants (B14)	Sparsely Veg	getated Concave Surface (B8)	
✓ High Water Table (A2)		Hydrogen Sulfide Od	or (C1)	Drainage Pat	tterns (B10)	
Saturation (A3)	<u> </u>	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)	<u> </u>	Recent Iron Reduction	n in Tilled Soils (C6)	Crayfish Buri	rows (C8)	
Drift Deposits (B3)		Thin Muck Surface (C	C7)	Saturation Vi	sible on Aerial Imagery (C9)	
Algal Mat or Crust (B4)		Other (Explain in Rer	marks)	Stunted or St	tressed Plants (D1)	
✓ Iron Deposits (B5)			·	Geomorphic	Position (D2)	
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aqui	itard (D3)	
Water-Stained Leaves (E	39)			Microtopogra	phic Relief (D4)	
Aquatic Fauna (B13)	,			FAC-Neutral	. ,	
Field Observations:					· ,	
Surface Water Present?	Yes No	Depth (inches):				
Water Table Present?	Yes No No	Depth (inches):	12			
Saturation Present?	Yes No		12 Wetland Hy	drology Presen	t? Yes <u>/</u> No	
(includes capillary fringe)					100 110	
Describe Recorded Data (str	eam gauge, monitoring	well, aerial photos, pre	evious inspections), if avail	able:		
Remarks:						
Soil moist but not satura	ated. Low permeabl	e soil. Occasional	surface water in cen	ter of wetland	I. Wetland is concave/	
slightly depressed, drain						

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

30'

Sapling/Shrub Stratum (Plot size: 15')

3. Scirpus atrovirens

Woody Vine Stratum (Plot size: 15')

Tree Stratum (Plot size: __

1 Rosa multiflora

Herb Stratum (Plot size: _ 1. Typha angustifolia

2. Juncus effusus

4. Poa sylvestris

___)

50% of total cover: 2.5

5. Onoclea sensibilis 5 OBL

% Cover Species? Status

_ = Total Cover

5 = Total Cover

105 = Total Cover

0 = Total Cover

30

10

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

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

20% of total cover:_ 1

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

nts.	Sampling Point: W-K31									
minant Indicator	Dominance Test worksheet:									
oecies? Status	Number of Dominant Species That Are OBL, FACW, or FAC:3 (A)									
	Total Number of Dominant Species Across All Strata: 4 (B)									
	Percent of Dominant Species That Are OBL, FACW, or FAC:75% (A/B)									
	Prevalence Index worksheet:									
	Total % Cover of: Multiply by:									
otal Cover al cover:0	OBL species x 1 =									
ii cover	FACW species x 2 =									
✓ FACU	FAC species x 3 =									
1/100	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%									
otal Cover	3 - Prevalence Index is ≤3.0 ¹									
al cover: 1	4 - Morphological Adaptations ¹ (Provide supporting									
	data in Remarks or on a separate sheet)									
✓ OBL	Problematic Hydrophytic Vegetation ¹ (Explain)									
OBL OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.									
FACW_	Definitions of Four Vegetation Strata:									
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 vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.									
otal Cover	Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.									
ıl cover: 21	W									

Woody vine - All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Yes V No ____ Present?

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

Sampling Point: W-K31

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the	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	<u>Texture</u>	<u>Remarks</u>
0-4	10 YR 5/1	85	7.5YR 5/8	15	<u>C</u>	M	SC	Occasional gravels.
4-15	5YR 5/8	90	10YR 5/2	10	D	M	SCL	
15-18	2.5 YR 6/1	90	10YR 5/6	10	С	M	CL	
				-				
								-
				-	-	· ——	-	-
				-	-		-	
				-				
¹Type: C=Co	ncentration, D=Depl	etion RM-	Reduced Matrix MS	S-Masker	d Sand Gr	aine	² Location: I	PL=Pore Lining, M=Matrix.
Hydric Soil I		etion, ixivi	rteduced Matrix, Mc	J-IVIASKE	J Sand Gr	airis.	Indic	cators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
	ipedon (A2)		Polyvalue Be		ce (S8) (N	/ILRA 147,		Coast Prairie Redox (A16)
Black His			Thin Dark Su				, <u> </u>	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		(F2)			Piedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Ma					(MLRA 136, 147)
	ck (A10) (LRR N)	(044)	Redox Dark	•	•			Very Shallow Dark Surface (TF12)
	Below Dark Surface rk Surface (A12)	(ATT)	Depleted Dar Redox Depre					Other (Explain in Remarks)
	ucky Mineral (S1) (L	RR N.	Iron-Mangan			LRR N.		
	147, 148)	,	MLRA 13		(, (,		
	leyed Matrix (S4)		Umbric Surfa	ce (F13)	(MLRA 13	6, 122)	³ ln	dicators of hydrophytic vegetation and
-	edox (S5)		Piedmont Flo					retland hydrology must be present,
	Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 147	7) u	nless disturbed or problematic.
	.ayer (if observed):							
Type:								
	:hes):						Hydric So	il Present? Yes V No No
Remarks:								

Wetland Photograph Page

Wetland ID W-K31 Cowardin Code PEM



Photograph Direction ENE

Date: 05/20/2015

Comments: 2015 wetland delineation.



Photograph Direction NNE

Date: 09/24/2019

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP City/County: Lewis Sa	ampling Date: 05/20/2015					
Applicant/Owner: MVP State: WV	Sampling Point: W-K31-UP					
Investigator(s): A.Bensted, V. Prilepin, J. Bittner Section, Township, Range: N/A						
Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex	Slope (%): 15					
Subregion (LRR or MLRA): LRRN Lat: 39.080624 Long: -80.58181	Datum: NAD 83					
Soil Map Unit Name: Janelew channery silt loam, steep NWI classification						
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Rem						
Are Vegetation, Soil, or Hydrology significantly disturbed? Are "Normal Circumstances" pres						
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in						
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, in						
,						
Hydrophytic Vegetation Present? Yes No Hydric Soil Present? Yes No Yes No Yes No Within a Wetland? Yes Ves						
Hydric Soil Present? Yes No within a Wetland? Yes No	No					
Remarks:						
Upland plot located on hillslope above wetland. HYDROLOGY						
	s (minimum of two required)					
Primary Indicators (minimum of one is required; check all that apply) Surface Soil Cra	<u> </u>					
	ated Concave Surface (B8)					
High Water Table (A2) Hydrogen Sulfide Odor (C1) Drainage Patter						
Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines	s (B16)					
Water Marks (B1) Presence of Reduced Iron (C4) Dry-Season Wa	ter Table (C2)					
Sediment Deposits (B2) Recent Iron Reduction in Tilled Soils (C6) Crayfish Burrow						
	le on Aerial Imagery (C9)					
Algal Mat or Crust (B4) Other (Explain in Remarks) Stunted or Stres						
Iron Deposits (B5) Geomorphic Pos Inundation Visible on Aerial Imagery (B7) Shallow Aquitare						
	icrotopographic Relief (D4) AC-Neutral Test (D5)					
Field Observations:	()					
Surface Water Present? Yes No Depth (inches):						
Water Table Present? Yes No Depth (inches):						
Saturation Present? Yes No Depth (inches): Wetland Hydrology Present?	Yes No					
(includes capillary fringe) Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						
Describe Necorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available.						
Remarks:						

Sampling	Point: W-K31-UP1
----------	------------------

,	Absolute	Dominant	Indicator	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size:)		Species?		Number of Dominant Species
1. Robinia pseudoacacia	10	✓	FACU	That Are OBL, FACW, or FAC: (A)
2				
3				Total Number of Dominant Species Across All Strata: 4* (B)
				Openies 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:
1	10	T / 10		Total % Cover of: Multiply by:
50% of total cover: 5		= Total Co		OBL species x 1 =
	20% 01	lotal cover	· <u> </u>	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15') 1. Rubus allegheniensis	25	~	FACIL	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%
	25	= Total Co	ver	3 - Prevalence Index is ≤3.0¹
50% of total cover: <u>12.5</u>				4 - Morphological Adaptations ¹ (Provide supporting
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Poa sp.	50	~	ND	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Dactylis glomerata	15		FACU	
3. Coronilla varia	15		UPL	¹ Indicators of hydric soil and wetland hydrology must
4. Cirsium vulgare	10			be present, unless disturbed or problematic.
5. Galium aparine		-	F <u>ACU</u> FACU	Definitions of Four Vegetation Strata:
·			I ACC	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6				more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
		= Total Co		of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>47.5</u>	20% of	total cover	: 19	Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1. Rhamnus cathartica	15		<u>FACU</u>	
2. Parthenicissus quinquefolia	5		FACU	
3				
4				
5.				Hydrophytic Vegetation
<u> </u>	20	= Total Co	uor.	Present? Yes No
50% of total cover: 10		total cover		
Remarks: (Include photo numbers here or on a separate s		.5.0. 00 101	•	
ND - Not determined	1001.)			
	not incl	nqoq ;~ +	ha dami-	ance test
Vegetation Not ID'd down to the species level is	S HULHICI	uu c u III (ne aomin	ומווטט נטטנ

Poa sp. not identifiable to species, not used in dominance test.

SOIL Sampling Point: W-K31-UP1

Profile Descrip	ption: (Describe to	the depth i	needed to docum	nent the ir	dicator o	r confirm	the abs	sence of indica	ators.)	
Depth _	Matrix			k Features						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Text	ure	Remark	S
0-6	10YR 4/4	100					SL	_ V	Vith gravels	: 10-15%
							-			
							-			
						,				
										
										_
	_									_
							-			
	centration, D=Deple	etion, RM=Re	duced Matrix, MS	S=Masked	Sand Grai	ns.		on: PL=Pore L		
Hydric Soil Inc	dicators:					_		Indicators for	Problematic	Hydric Soils³:
Histosol (A	\1)		Dark Surface	(S7)				2 cm Muck	(A10) (MLR A	147)
Histic Epip		•	Polyvalue Be		e (S8) (ML	RA 147.	148)		rie Redox (A1	
Black Histi		-	Thin Dark Su				,		147, 148)	,
	Sulfide (A4)	-	Loamy Gleye			,,		•	Floodplain Soi	ls (F19)
Stratified L	, ,	-	Depleted Mat		,				136, 147)	· -/
	(A10) (LRR N)		Redox Dark S		3)				ow Dark Surfa	ce (TF12)
	Below Dark Surface	(A11)	Depleted Dar						lain in Remar	
	Surface (A12)		Redox Depre							,
	cky Mineral (S1) (Li	RR N.	Iron-Mangan			RR N.				
	147, 148)	,	MLRA 13		o (i 12) (2	,				
	yed Matrix (S4)		Umbric Surfa	•	MI RA 136	122\		3Indicators of	hydrophytic y	egetation and
Sandy Red		-	Piedmont Flo				8/		rology must b	
Stripped M		-	Red Parent N					-	rbed or proble	-
	yer (if observed):		Neu Faleili N	iateriai (i z	(IVILIXA	127, 147	,	uriless distu	ibed of proble	malic.
Type: Roc	_		=							•
Depth (inche	es): <u>6</u>		=				Hydri	c Soil Present	? Yes	No
Remarks:										
Dry soil. Roc	k refusal below	6".								

USACE FILE NO./Project Name:		Valley Pipeline	COORDINATES:	Lat.	39.079947	Lon.	-80.583108	
STREAM/SITE ID AND SITE DESCR	RIPTION:					W-ST14, Anode Bed		
(% 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-ST14	Emergent	0.0394	Emergent					
						PART III - Advanced		on
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0394			,			
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent Total Scrub-Shrub			0.0394			¢0.264.00		
Total Forested			0		ļ	\$2,364.00		
			0					
Total Open Water			U	1				

Project/Site: MVP	City/County: Lewis	Sampling Date: 07/19/2016					
Applicant/Owner: MVP							
Investigator(s): J. McGuirk, S. Therkildson, C. Sorden Section, Township, Range: N/A							
	Local relief (concave, convex, no						
Subregion (LRR or MLRA): LRR N		0.583239 Datum: NAD 83					
• ,	25 percent slopes, reclaimed						
Are climatic / hydrologic conditions on the site ty	pical for this time of year? Yes No	(If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrolog	gysignificantly disturbed? Are "Norma	I Circumstances" present? Yes No					
	gy naturally problematic? (If needed,						
	site map showing sampling point location						
Hydrophytic Vegetation Present? Yes	V No Is the Sampled Area						
	Is the Sampled Area within a Wetland?	Yes ✔ No					
	No Within a Welland?	162					
	HGM: Slope Water Type:	RPWWD					
Soils disturbed							
soils con't: Gilpin-Upshur silt loams, 25	5 to 35 percent slopes						
LIVEROL COV							
HYDROLOGY							
Wetland Hydrology Indicators:	la ala alla di di ada anni A	Secondary Indicators (minimum of two required)					
Primary Indicators (minimum of one is required		✓ Surface Soil Cracks (B6)					
Surface Water (A1)	True Aquatic Plants (B14) Hydrogen Sulfide Odor (C1)	✓ Sparsely Vegetated Concave Surface (B8)✓ Drainage Patterns (B10)					
High Water Table (A2)Saturation (A3)	Oxidized Rhizospheres on Living Roots (C3)	Moss Trim Lines (B16)					
Water Marks (B1)	Presence of Reduced Iron (C4)	Moss min Lines (B10) 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):						
	Depth (inches): Wetland I	Hydrology Present? Yes <u>✓</u> No					
(includes capillary fringe) Describe Recorded Data (stream gauge, monit	l toring well, aerial photos, previous inspections), if ava	ailable:					
Remarks: Modified drainage for water flow							
water now							

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

Sampling Point: W-ST14	
st worksheet:	_

201	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC:3 (A)
2				Total Number of Descinent
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				(B)
		-		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 =
				UPL species x 5 =
3		-		Column Totals: (A) (B)
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% ✓ 2 - Dominance Test is >50%
J	0	= Total Cov		3 - Prevalence Index is ≤3.0¹
50% of total cover: 0				4 - Morphological Adaptations ¹ (Provide supporting
E!	20% 01	total cover		data in Remarks or on a separate sheet)
TIEID Stratum (Flot Size)	40			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Juncus effusus	40		F <u>ACW</u>	· rosiomano rijaroprijno rogotanom (zipiami)
2. Juncus tenuis	25		F <u>AC</u>	All and the second of the seco
3. Carex vulpinoidea	20		OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Agrostis gigantea	5		FACW	
5. Lamium purpureum	5		FACU	Definitions of Four Vegetation Strata:
6. Scirpus atrovirens	5		OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
···			OBL	more in diameter at breast height (DBH), regardless of
7				height.
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11.				Herb – All herbaceous (non-woody) plants, regardless
	100	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50		total cover		
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in
				height.
1	-			
2				
		-		
3				
3				Hydrophytic
4				Hydrophytic Vegetation
				Hydrophytic Vegetation Present? Yes No
4	0	= Total Cov	_	Vegetation
4	0 20% of		_	Vegetation
4	0 20% of	= Total Cov	_	Vegetation
4	0 20% of	= Total Cov	_	Vegetation
4	0 20% of	= Total Cov	_	Vegetation
4	0 20% of	= Total Cov	_	Vegetation
4	0 20% of	= Total Cov	_	Vegetation
4	0 20% of	= Total Cov	_	Vegetation
4	0 20% of	= Total Cov	_	Vegetation
4	0 20% of	= Total Cov	_	Vegetation

Sampling Point: W-ST14

SOIL

Profile Desc	ription: (Describe t	o the depth	n needed to docun	nent the i	ndicator	or confirm	the absence	of indicators	s.)	
Depth	Matrix		Redox	K Features	3					
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>		Remarks	
0-10	10YR 5/3	30	7.5YR 5/8	10	<u>C</u>	<u>M</u>	GRCL		Disturbed	<u> </u>
	5Y 5/6	30	7.5YR 4/6	10_			GRCL		Disturbed	d
	10YR 5/1	20					GRCL		Disturbed	d
			-							-
-										
	·									
	oncentration, D=Deple	etion, RM=F	Reduced Matrix, MS	S=Masked	Sand Gra	ains.		_=Pore Lining		2
Hydric Soil I	ndicators:						Indica	itors for Prob	olematic Hyd	ric Soils ³ :
Histosol			Dark Surface					cm Muck (A1		7)
	pipedon (A2)		Polyvalue Be		. , .		148) C	oast Prairie R		
Black Hi	, ,		Thin Dark Su	, ,	•	47, 148)	_	(MLRA 147,		
	n Sulfide (A4)		Loamy Gleye		-2)		Pi	iedmont Flood		-19)
	Layers (A5)		Depleted Mat		٥)		.,	(MLRA 136,		TE (0)
	ck (A10) (LRR N) Below Dark Surface	. (Redox Dark S Depleted Dar					ery Shallow D ther (Explain i		IF12)
	rk Surface (A12)	(A11)	Redox Depre		. ,		<u>-</u> 0	tilei (Explaii)	iii Keiliaiks)	
	lucky Mineral (S1) (L l	RR N.	Iron-Mangane			I RR N				
	147, 148)	,	MLRA 136)5 (1 12) (
	leyed Matrix (S4)		Umbric Surfa	-	MLRA 13	6. 122)	³ Indi	cators of hydr	rophytic vege	tation and
	edox (S5)		Piedmont Flo					tland hydrolog		
	Matrix (S6)		Red Parent M					ess disturbed		
	ayer (if observed):				, (<u> </u>	Ì		<u>'</u>	
туре: <u>С</u> с	ourse fragments									
Depth (inc	ches): 10		<u> </u>				Hydric Soil	Present?	Yes 🗸	No
Remarks:										
Problemati	c disturbed soils	still hydrid	C.							
		•								



Photograph Direction West

Comments:	

Project/Site: MVP	City/C	ounty: Lewis		Sampling Date: 07/19/2016
Applicant/Owner: MVP	,			Sampling Point: W-ST15
Investigator(s): J. McGuirk, S. Therkilds	son, C. Sorden Section	on, Township, Range: N/		_
Landform (hillslope, terrace, etc.): Flat				Slone (%): 0/3
Subregion (LRR or MLRA): LRR N				Datum: NAD 83
Soil Map Unit Name: Fairpoint silt loam, 8 t		_		
Are climatic / hydrologic conditions on the site	**		•	,
Are Vegetation, Soil, or Hydro			Circumstances" p	present? Yes No
Are Vegetation, Soil, or Hydro	ology naturally problema	atic? (If needed, e	explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attack	n site map showing sam	pling point location	ns, transects	, important features, etc.
Hydrophytic Vegetation Present? You	es <u>/</u> No			
, , , ,	es V No	Is the Sampled Area within a Wetland?	Yes 🗸	No
	es No	within a wetiand?	res	NO
Remarks: Cowardin Code: PEM	HGM: Slope	Water Type:	RPWWN	
soils con't: Gilpin-Upshur silt	·			
Solis corrt. Olipiri-oparidi siit	ioanis, 25 to 55 percent s	siopes		
HYDROLOGY				
Wetland Hydrology Indicators:	and the strain of A			ators (minimum of two required)
Primary Indicators (minimum of one is requi		D4.4)	Surface Soil	
Surface Water (A1)	✓ True Aquatic Plants (I			getated Concave Surface (B8)
High Water Table (A2) Saturation (A3)	Hydrogen Sulfide OddOxidized Rhizosphere		✓ Drainage Pa	
Water Marks (B1)	Presence of Reduced		Moss Trim Li	Water Table (C2)
Sediment Deposits (B2)	Recent Iron Reductio		Crayfish Bur	
Orift Deposits (B3)	Thin Muck Surface (C			isible on Aerial Imagery (C9)
Algal Mat or Crust (B4)	Other (Explain in Ren			tressed Plants (D1)
Iron Deposits (B5)	<u> </u>		Geomorphic	
Inundation Visible on Aerial Imagery (B	7)		Shallow Aqui	` '
Water-Stained Leaves (B9)	,			aphic Relief (D4)
Aquatic Fauna (B13)			FAC-Neutral	
Field Observations:				
Surface Water Present? Yes	No Depth (inches):	2		
Water Table Present? Yes	No Depth (inches):	2		
		0 Wetland F	lydrology Preser	nt? Yes 🗸 No
(includes capillary fringe) Describe Recorded Data (stream gauge, mo	onitoring well porial photos pro	vious inspections) if avo	ilabla	
Describe Recorded Data (stream gauge, mo	oriiitoriing weii, aeriai priotos, pre	vious irispections), ii ava	liable.	
Remarks:				

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

Sampling Point: W-ST15

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:3 (A)
2			_	Total Niverbay of Dansinger
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				Openies / toross / tir etrata.
				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	: <u> </u>	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 =
				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, 1
8				1 - Rapid Test for Hydrophytic Vegetation
				✓ 2 - Dominance Test is >50%
9	_	T / 10		3 - Prevalence Index is ≤3.0 ¹
50% of total		= Total Co		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 2.5	20% of	total cover	: <u> </u>	data in Remarks or on a separate sheet)
Tiero Stratum (Fiot Size)	0.5			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Typha latifolia	35		OBL	1 Toblematic Trydrophytic Vegetation (Explain)
2. Juncus effusus	25		FACW_	1
3. Scirpus atrovirens	10		OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Juncus tenuis	10		FAC	
5. Lemna minor	10	-	OBL	Definitions of Four Vegetation Strata:
6. Carex vulpiniodea	10			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
· · · · · · · · · · · · · · · · · · ·			<u>OBL</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.				
	100	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50		total cover		of size, and woody plants less than 3.20 it tall.
4.51	20% 01	lotal cover		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15)				height.
1				
2				
3				
4				
5				Hydrophytic
J	0	Tatal Car		Vegetation Present? Yes ✔ No
500/ aftertal access 0		= Total Co	_	
50% of total cover:0		total cover	:	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Sampling Point: W-ST15

SOIL

Profile Desc	ription: (Describe t	o the dept	th needed to docum	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redox	c Features	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10YR5/2	60	7.5YR 5/6	10	С	M/PL	GRCL	Disturbed
	10YR 3/1	30					GRCL	Disturbed
6-12	10YR 5/4	60_	7.YR 5/6	5	С	M/PL	GRCL	Disturbed
	5Y 6/4	35						Disturbed
¹ Type: C=Co	oncentration, D=Depl	etion, RM=	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					cm Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Bel		. , .		148) C	oast Prairie Redox (A16)
Black Hi	, ,		Thin Dark Su			147, 148)		(MLRA 147, 148)
	n 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	(A11)	Depleted Dar				0	ther (Explain in Remarks)
	ark Surface (A12)	DD N	Redox Depre Iron-Mangane			LDDN		
	lucky Mineral (S1) (L l \ 147, 148)	KK N,	iron-wangane		es (F12) (LKK N,		
	Gleyed Matrix (S4)		Umbric Surfa		MI DA 13	e 122\	³ Indi	icators of hydrophytic vegetation and
	ledox (S5)		Piedmont Flo					tland hydrology must be present,
	Matrix (S6)		Red Parent M					ess disturbed or problematic.
	_ayer (if observed):				_ · / (,, , <u>_</u> ,, , ,,	,	aletailed of problematic.
Type:	,							
Depth (inc	ches):						Hydric Soil	Present? Yes V No No
Remarks:	, -							
Soils distur	bed							



Photograph Direction West

Comments:			

Project/Site: MVP			City/	County: Lewis			Sampling Date: 0	7/19/2016
Applicant/Owner: MVP								_{t:} W-ST14,15 UPL
Investigator(s): J. McGuirk	, S. Therkildso	n, C. Soi	rden _{Seci}	tion. Township. Rand			_ , ,	
Landform (hillslope, terrace, e					· —	Linear	Slop	e (%): 0-3
Subregion (LRR or MLRA): _L				Long:			Datum	
Soil Map Unit Name: Fairpoir				_				•
•						_ NWI classific		
Are climatic / hydrologic condi			-					
Are Vegetation, Soil _	, or Hydrolo	ду	significantly distu	urbed? Are "N	Normal Ci	rcumstances" p	resent? Yes	No
Are Vegetation, Soil _	, or Hydrolo	ду	naturally problen	natic? (If nee	eded, exp	lain any answe	rs in Remarks.)	
SUMMARY OF FINDIN	GS – Attach	site map	showing sa	mpling point lo	cations	s, transects	, important fea	atures, etc.
Lhudranhutia Vagatatian Drag		,	Va V					
Hydrophytic Vegetation Pres Hydric Soil Present?	ent: Tes	1 1	NO	Is the Sampled A				
Wetland Hydrology Present?	Yes	·	No	within a Wetland	d?	Yes	No	
Remarks: Cowardin C			<u></u> ЭМ:	\\/otor T\	ivno:			
	ode.	п	الااد.	Water Ty	ype.			
Upland								
HYDROLOGY								
Wetland Hydrology Indicat	ors:				Se	econdary Indica	tors (minimum of t	wo required)
Primary Indicators (minimum	of one is require	d; check all	that apply)			Surface Soil	Cracks (B6)	
Surface Water (A1)		Tru	ie Aquatic Plants	(B14)	_	_ Sparsely Veg	etated Concave S	surface (B8)
High Water Table (A2)		Hy	drogen Sulfide O	dor (C1)	_	_ Drainage Pat	terns (B10)	
Saturation (A3)		Ox	idized Rhizosphe	eres on Living Roots	(C3)	_ Moss Trim Li	nes (B16)	
Water Marks (B1)		Pre	esence of Reduce	ed Iron (C4)		_ Dry-Season \	Water Table (C2)	
Sediment Deposits (B2)		Re	cent Iron Reducti	ion in Tilled Soils (C6	6)	_ Crayfish Burr	ows (C8)	
Drift Deposits (B3)			n Muck Surface		_		sible on Aerial Ima	
Algal Mat or Crust (B4)		Oth	ner (Explain in Re	emarks)			ressed Plants (D1)
Iron Deposits (B5)	(5-7)					_ Geomorphic		
Inundation Visible on Ae					_	_ Shallow Aqui		
Water-Stained Leaves (Aquatic Fauna (B13)	39)					_ Microtopogra _ FAC-Neutral	phic Relief (D4)	
Field Observations:						_ FAC-Neutiai	Test (D3)	
Surface Water Present?	Ves N	V D	epth (inches):					
Water Table Present?			epth (inches): epth (inches):					
Saturation Present?			epth (inches): epth (inches):		land Hyd	Irology Proson	t? Yes	No 🗸
(includes capillary fringe)	1651) <u> </u>	eptii (iiiches)		ianu nyu	irology Fresen	t: 165	NO
Describe Recorded Data (str	eam gauge, mon	toring well,	aerial photos, pr	revious inspections),	, if availal	ole:		
Remarks:								
Remarks.								

Sampling Point: W-ST14,15 UP	ling Point W-ST14	1,15 UP
------------------------------	-------------------	---------

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:0 (A)
2				T. 111 1 15 15 15
3				Total Number of Dominant Species Across All Strata: 8 (B)
4				Openies / toross / tir etrata.
_		ī		Percent of Dominant Species
		-		That Are OBL, FACW, or FAC:0 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
50% ()		= Total Cov		OBL species x 1 =
50% of total cover: 0	20% of	total cover	:0	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')				
1,				FAC species x 3 =
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
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
F!	20 /6 01	total cover		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5) 1. Daucus carota	15	~	LIDI	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Achillea millefolium	10	<u> </u>	UPL	
			FACU_	¹ Indicators of hydric soil and wetland hydrology must
3. Linaria vulgaris	10		<u>UPL</u>	be present, unless disturbed or problematic.
4. Trifolium pratense	15		F <u>ACU</u>	Definitions of Four Vegetation Strata:
5. Phleum pratense	10		F <u>ACU</u>	Trans. Was dead and a supled to review 2 (7.0 cm) and
6. Plantago lanceolata	10		FACU_	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7. Lamium purpureum	10		FACU_	height.
8. Securigera varia	15	✓	UPL	
g. Asclepias syriaca	5		FACU	Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11		-		
···	100	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50		total cover		or size, and woody plants less than 5.20 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	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.)			

Profile Desc	ription: (Describe t	o the depth	needed to docun	nent the in	dicator o	or confirm	the abser	nce of indicate	ors.)	
Depth	Matrix		Redo	x Features	_ 1		_			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-8	10YR 4/3	60					GRSII	<u>-</u>	Disturbe	ed
	10YR 5/6	40								
			_							
							-			
								<u> </u>		
										_
							•			
										_
	oncentration, D=Depl	etion, RM=Re	educed Matrix, MS	S=Masked	Sand Gra	ins.		: PL=Pore Lini		
Hydric Soil	Indicators:						Inc	dicators for P	roblematic Hy	ydric Soils³:
Histosol	, ,		Dark Surface					- '	A10) (MLRA 1	•
	oipedon (A2)		Polyvalue Be		. , .		148)	_	Redox (A16)	
Black Hi			Thin Dark Su	. ,	•	47, 148)		(MLRA 14		(540)
	en Sulfide (A4)		Loamy Gleye		·2)				oodplain Soils	(F19)
	d Layers (A5) uck (A10) (LRR N)		Depleted Material Redox Dark \$ 100.		3)			(MLRA 13	v Dark Surface	(TF12)
	d Below Dark Surface	(A11)	Depleted Dar				_		in in Remarks	, ,
	ark Surface (A12)	()	Redox Depre					(,
Sandy M	Mucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Masse	s (F12) (L	.RR N,				
	A 147, 148)		MLRA 13							
	Sleyed Matrix (S4)		Umbric Surfa					Indicators of h		
	Redox (S5)		Piedmont Flo					wetland hydro		
	Matrix (S6)		Red Parent N	1aterial (F2	(MLR)	127, 147	")	unless disturb	ed or problem	atic.
	Layer (if observed):									
	ourse fragments		_							
Depth (inc	ches): O						Hydric S	Soil Present?	Yes	No
Remarks:										

USACE FILE NO./Project Name:		Mountain Valley Pipeline		COORDINATES:	Lat.	39.079855	Lon.	-80.582499
STREAM/SITE ID AND SITE DESCRIPTION:						W-ST15, Anode Bed		
(% stream slope, watershed size {acreage}, unaltered or impairments)								
FORM OF MITIGATION:								
DATE:	8/10/2015		WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
				•				
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-ST15	Emergent	0.0711	Emergent					
						PART III - Advanced	Mitigatio	on
						Sustainable Determination Made on Advanced Mitigation (Y or N)	1	Υ
Total Impact		0.0711						
PART II - Unit Scores						Estimated		
Wetland Classification			Replacement Unit(s)			ILF Costs		
Total Emergent			0.0711			¢4.2cc.00		
Total Scrub-Shrub Total Forested			0			\$4,266.00		
Total Open Water			0					
rotal Open water			U	1				

Project/Site: MVP	City/C	City/County: Lewis										
Applicant/Owner: MVP	·	,		VV Sampling Point: W-ST15								
Investigator(s): J. McGuirk, S. Therkildson, C. Sorden Section, Township, Range: N/A												
Landform (hillslope, terrace, etc.): Flat		· · · · · · · · · · · · · · · · · · ·		Slone (%): 0/3								
Subregion (LRR or MLRA): LRR N				Datum: NAD 83								
		-										
Soil Map Unit Name: Fairpoint silt loam, 8 to 25 percent slopes, reclaimed 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 No	Is the Sampled Area within a Wetland?	Yes 🗸	No								
Wetland Hydrology Present? Yes		within a wetland?	res	NO								
Remarks: Cowardin Code: PEM	HGM: Slope	Water Type:	RPWWN									
soils con't: Gilpin-Upshur silt loams, 25 to 35 percent slopes												
Solis cont. Gilpin-opshul siit loams, 25 to 55 percent slopes												
HYDROLOGY												
Wetland Hydrology Indicators:	and a branch all that are a branch		Secondary Indicators (minimum of two required)									
Primary Indicators (minimum of one is require	244)	Surface Soil Cracks (B6)										
Surface Water (A1)	✓ True Aquatic Plants (E		Sparsely Vegetated Concave Surface (B8)✓ Drainage Patterns (B10)									
High Water Table (A2) Saturation (A3)	Hydrogen Sulfide OddOxidized Rhizosphere											
Water Marks (B1)	Presence of Reduced		Moss Triff Lines (B16) Dry-Season Water Table (C2)									
Sediment Deposits (B2)	Recent Iron Reduction		Dry-Season Water Table (C2) Crayfish Burrows (C8)									
Orift Deposits (B2)	Thin Muck Surface (C		Saturation Visible on Aerial Imagery (C9)									
✓ Algal Mat or Crust (B4)	Other (Explain in Rem		Stunted or Stressed Plants (D1)									
Iron Deposits (B5)		.a.r.o)	Geomorphic Position (D2)									
Inundation Visible on Aerial Imagery (B7)			hallow Aquitard (D3)								
Water-Stained Leaves (B9)	,			Microtopographic Relief (D4)								
Aquatic Fauna (B13)			FAC-Neutral Test (D5)									
Field Observations:				· ·								
Surface Water Present? Yes N	lo Depth (inches):	2										
		2										
		0 Wetland H	Hydrology Present? Yes <u>✓</u> No									
(includes capillary fringe) Describe Recorded Data (stream gauge, more	pitaring wall parial photos prov	vious inspections) if ave	ilabla									
Describe Recorded Data (Stream gauge, mor	illoring well, aerial priotos, pre-	nous inspections), ii ava	liable.									
Remarks:												

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

Sampling Point: W-ST15

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:3 (A)
2			_	Total Niverbay of Dansinger
3				Total Number of Dominant Species Across All Strata: 3 (B)
4				Openies / toross / tir etrata.
				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	: <u> </u>	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 =
				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, 1
8				1 - Rapid Test for Hydrophytic Vegetation
				✓ 2 - Dominance Test is >50%
9	_	T / 10		3 - Prevalence Index is ≤3.0 ¹
50% of total		= Total Co		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 2.5	20% of	total cover	: <u> </u>	data in Remarks or on a separate sheet)
Tiero Stratum (Fiot Size)	0.5			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Typha latifolia	35		OBL	1 Toblematic Trydrophytic Vegetation (Explain)
2. Juncus effusus	25		FACW_	1
3. Scirpus atrovirens	10		OBL	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Juncus tenuis	10		FAC	
5. Lemna minor	10	-	OBL	Definitions of Four Vegetation Strata:
6. Carex vulpiniodea	10			Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
· · · · · · · · · · · · · · · · · · ·			<u>OBL</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.				
	100	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50		total cover		of size, and woody plants less than 3.20 it tall.
4.51	20% 01	iolai covei		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	Tatal Car		Vegetation Present? Yes ✔ No
500/ aftertal access 0		= Total Co	_	
50% of total cover:0		total cover	:	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Sampling Point: W-ST15

SOIL

Profile Desc	ription: (Describe t	o the dept	th needed to docum	nent the i	ndicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redox	c Features	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-6	10YR5/2	60	7.5YR 5/6	10	С	M/PL	GRCL	Disturbed
	10YR 3/1	30					GRCL	Disturbed
6-12	10YR 5/4	60_	7.YR 5/6	5	С	M/PL	GRCL	Disturbed
	5Y 6/4	35						Disturbed
¹ Type: C=Co	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	=Masked	I Sand Gr	ains.		L=Pore Lining, M=Matrix.
Hydric Soil	Indicators:						Indica	ators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface					cm Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Bel		. , .		148) C	oast Prairie Redox (A16)
Black Hi	, ,		Thin Dark Su			147, 148)		(MLRA 147, 148)
	n 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	(A11)	Depleted Dar				0	ther (Explain in Remarks)
	ark Surface (A12)	DD N	Redox Depre Iron-Mangane			LDDN		
	lucky Mineral (S1) (L l \ 147, 148)	KK N,	iron-wangane		es (F12) (LKK N,		
	Gleyed Matrix (S4)		Umbric Surfa		MI DA 13	e 122\	³ Indi	icators of hydrophytic vegetation and
	ledox (S5)		Piedmont Flo					tland hydrology must be present,
	Matrix (S6)		Red Parent M					ess disturbed or problematic.
	_ayer (if observed):				_ · / (,, , <u>_</u> ,, , ,,	,	aletailed of problematic.
Type:	,							
Depth (inc	ches):						Hydric Soil	Present? Yes V No No
Remarks:	, -							
Soils distur	bed							



Photograph Direction West

Comments:			

Project/Site: MVP			City/	County: Lewis			Sampling Date: 0	7/19/2016	
Applicant/Owner: MVP								_{t:} W-ST14,15 UPL	
Investigator(s): J. McGuirk	, S. Therkildso	n, C. Soi	rden _{Seci}	tion. Township. Rand			_ , ,		
Landform (hillslope, terrace, e					· —	Linear	Slop	e (%): 0-3	
Subregion (LRR or MLRA): _L				Long:			Datum		
Soil Map Unit Name: Fairpoir				_				•	
•						_ NWI classific			
Are climatic / hydrologic condi			-						
Are Vegetation, Soil _	, or Hydrolo	ду	significantly distu	urbed? Are "N	Normal Ci	rcumstances" p	resent? Yes	No	
Are Vegetation, Soil _	, or Hydrolo	ду	naturally problen	natic? (If nee	eded, exp	lain any answe	rs in Remarks.)		
SUMMARY OF FINDIN	GS – Attach	site map	showing sa	mpling point lo	cations	s, transects	, important fea	atures, etc.	
Hydrophytic Vegetation Present? Yes No Is the Sampled Area									
Hydrophytic Vegetation Pres Hydric Soil Present?	ent: Tes	' '	NO	Is the Sampled A					
Wetland Hydrology Present?	Yes	·	No	within a Wetland	d?	Yes	No		
Remarks: Cowardin C			<u></u> ЭМ:	\\/otor T\	ivno:				
	ode.	П	الااد.	Water Ty	ype.				
Upland									
HYDROLOGY									
Wetland Hydrology Indicat	ors:				Se	econdary Indica	tors (minimum of t	wo required)	
Primary Indicators (minimum	of one is require	d; check all	that apply)			Surface Soil	Cracks (B6)		
Surface Water (A1)		Tru	ie Aquatic Plants	(B14)	_	_ Sparsely Veg	etated Concave S	surface (B8)	
High Water Table (A2)		Hy	drogen Sulfide O	dor (C1)	_	Drainage Patterns (B10) Moss Trim Lines (B16)			
Saturation (A3)		Ox	idized Rhizosphe	eres on Living Roots	(C3)				
Water Marks (B1)		Pre	esence of Reduce	ed Iron (C4)		Dry-Season Water Table (C2)			
Sediment Deposits (B2)		Re	cent Iron Reducti	ion in Tilled Soils (C6	6)	Crayfish Burrows (C8)			
Drift Deposits (B3)			n Muck Surface		_	Saturation Visible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)		Oth	ner (Explain in Re	emarks)		Stunted or Stressed Plants (D1)			
Iron Deposits (B5)	(5-7)					Geomorphic Position (D2) Shallow Aquitard (D3)			
Inundation Visible on Ae					_				
Water-Stained Leaves (Aquatic Fauna (B13)	39)					Microtopographic Relief (D4) FAC-Neutral Test (D5)			
Field Observations:						_ FAC-Neutiai	Test (D3)		
Surface Water Present?	Ves N	V D	epth (inches):						
Water Table Present?			epth (inches): epth (inches):						
Saturation Present?			epth (inches): epth (inches):		land Hyd	Irology Proson	t? Yes	No 🗸	
(includes capillary fringe)	1651) <u> </u>	eptii (iiiciies)		ianu nyu	irology Fresen	t: 165	NO	
Describe Recorded Data (str	eam gauge, mon	toring well,	aerial photos, pr	revious inspections),	, if availal	ole:			
Remarks:									
Remarks.									

Sampling Point: W-ST14,15 UP	ling Point W-ST14	1,15 UP
------------------------------	-------------------	---------

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:0 (A)
2				T. 111 1 15 15 15
3				Total Number of Dominant Species Across All Strata: 8 (B)
4				Operico / toroso / tir otrata.
_		ī		Percent of Dominant Species
		-		That Are OBL, FACW, or FAC:0 (A/B)
6				Prevalence Index worksheet:
7				Total % Cover of: Multiply by:
50% ()		= Total Cov		OBL species x 1 =
50% of total cover: 0	20% of	total cover	:0	FACW species x 2 =
Sapling/Shrub Stratum (Plot size: 15')				
1,				FAC species x 3 =
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
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
F!	20 /6 01	total cover		data in Remarks or on a separate sheet)
Herb Stratum (Plot size: 5) 1. Daucus carota	15	~	LIDI	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Achillea millefolium	10	<u> </u>	UPL	
			FACU_	¹ Indicators of hydric soil and wetland hydrology must
3. Linaria vulgaris	10		<u>UPL</u>	be present, unless disturbed or problematic.
4. Trifolium pratense	15		F <u>ACU</u>	Definitions of Four Vegetation Strata:
5. Phleum pratense	10		F <u>ACU</u>	Total Washington and all and a control of
6. Plantago lanceolata	10		FACU_	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7. Lamium purpureum	10		FACU_	height.
8. Securigera varia	15	✓	UPL	
g. Asclepias syriaca	5		FACU	Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft (1
10.				m) tall.
11		-		
···	100	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 50		total cover		or size, and woody plants less than 5.20 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	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.)			

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)											
Depth	Matrix		Redo	x Features	_ 1		_				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks		
0-8	10YR 4/3	60					GRSII	<u>-</u>	Disturbe	ed	
	10YR 5/6	40									
			_								
							-				
								<u> </u>			
								<u> </u>		_	
							•				
										_	
	oncentration, D=Depl	etion, RM=Re	educed Matrix, MS	S=Masked	Sand Gra	ins.		: PL=Pore Lini			
Hydric Soil	Indicators:						Inc	dicators for P	roblematic Hy	ydric Soils³:	
Histosol	, ,		Dark Surface					- '	A10) (MLRA 1	•	
	oipedon (A2)		Polyvalue Be		. , .		148)	_	Redox (A16)		
Black Hi			Thin Dark Su	. ,	•	47, 148)		(MLRA 14		(540)	
	en Sulfide (A4)		Loamy Gleye		·2)				oodplain Soils	(F19)	
	d Layers (A5) uck (A10) (LRR N)		Depleted Material Redox Dark \$ 100.		3)			(MLRA 13	v Dark Surface	(TF12)	
	d Below Dark Surface	(A11)	Depleted Dar				_		in in Remarks	, ,	
	ark Surface (A12)	()	Redox Depre					(,	
Sandy M	Mucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Masse	s (F12) (L	.RR N,					
	A 147, 148)		MLRA 13								
	Sleyed Matrix (S4)		Umbric Surfa					Indicators of h			
	Redox (S5)		Piedmont Flo					wetland hydro			
	Matrix (S6)		Red Parent N	1aterial (F2	(MLR)	127, 147)	unless disturb	ed or problem	atic.	
	Layer (if observed):										
	ourse fragments		_								
Depth (inc	ches): O						Hydric S	Soil Present?	Yes	No	
Remarks:											

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	39.079854	Lon.	-80.581439
STREAM/SITE ID AND SITE DESCR	RIPTION:			V	V-B46, 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	land Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-B46	Emergent	0.1255	Emergent					
						PART III - Advanced		n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.1255				F-tht		
Motland C		Unit Scores	Devilence of Helife			Estimated		
Total Emergent	lassification		Replacement Unit(s) 0.1255			ILF Costs		
Total Scrub-Shrub			0.1255			\$7,530.00		
Total Forested			0			Ψ1,030.00		
Total Open Water			0					

Project/Site: MVP	City/Cou	_{nty:} Lewis		Sampling Date: 05/27/2015						
		•		Sampling Point: W-B46						
Investigator(s): R.Sparhawk, M.Brice, S.Yarbrough, M. Whitten, W. Shattenberg Section, Township, Range: N/A										
Landform (hillslope, terrace, etc.): Valley Bottom	Local relief	(concave, convex, non	e): Concave	Slope (%): 2						
Subregion (LRR or MLRA): LRRN La										
Soil Map Unit Name: Janelew channery silt loa	ım, steep (JaE)		NWI classific	ation: None						
Are climatic / hydrologic conditions on the site typical	for this time of year? Yes	No (If no, explain in R	emarks.)						
Are Vegetation, Soil, or Hydrology	significantly disturbed	d? Are "Normal	Circumstances" p	resent? Yes No						
Are Vegetation, Soil, or Hydrology	naturally problematic	:? (If needed, e	xplain any answe	rs in Remarks.)						
SUMMARY OF FINDINGS – Attach site										
Hydrophytic Vegetation Present? Yes	No Is									
Hydric Soil Present? Yes	— No	the Sampled Area	Vos V	No						
Wetland Hydrology Present? Yes	No	numi a wenamu:	165	NO						
Remarks: Cowardin Code: PEM HGM: Riverine W	/T: RPWWD									
Information listed on this form represents the data collected in 2015. The wetland was revisited on 09/24/2019. Presence of wetland hydrology, hydrophytic vegetation, and hydric soils was confirmed using the USACE EMP Regional Supplement delineation methodology.										
HYDROLOGY										
Wetland Hydrology Indicators:			Secondary Indica	tors (minimum of two required)						
Primary Indicators (minimum of one is required; che	ck all that apply)		Surface Soil	Cracks (B6)						
Surface Water (A1)	True Aquatic Plants (B1	4)		etated Concave Surface (B8)						
1 	_ Hydrogen Sulfide Odor (• •	Drainage Pat	terns (B10)						
	_ Oxidized Rhizospheres	- · · · · · · · · · · · · · · · · · · ·	Moss Trim Li	, ,						
	_ Presence of Reduced Iro	, ,	Dry-Season Water Table (C2)							
1 7	_ Recent Iron Reduction in	` '	;							
Drift Deposits (B3)	_ Thin Muck Surface (C7)		Saturation Visible on Aerial Imagery (C9)							
Algal Mat or Crust (B4)	_ Other (Explain in Remar	rks)	Stunted or Stressed Plants (D1)							
Iron Deposits (B5)			Geomorphic Position (D2)							
Inundation Visible on Aerial Imagery (B7)			Shallow Aquitard (D3)							
Water-Stained Leaves (B9) Aquatic Fauna (B13)			Microtopographic Relief (D4) FAC-Neutral Test (D5)							
Field Observations:			FAC-Neutral	Test (D5)						
	, Depth (inches):									
Water Table Present? Yes No	Depth (inches):									
	Depth (inches):		vdrology Presen	t? Yes 🗸 No						
(includes capillary fringe)			-	10 103						
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previo	ous inspections), if avai	lable:							
Remarks:										
Surrounding areas have evidence of distu	rbance from road cuts	s/fill.								

EGETATION (Four Strata) – Use scientific r	ames of	plants.		Sampling Point: W-B46	
30'	Absolute	Dominant		Dominance Test worksheet:	
Tree Stratum (Plot size:30') 1	% Cover	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC: 3	(A)
2				Total Nevel on of Developer	
3				Total Number of Dominant Species Across All Strata: 4	(B)
4					(-)
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 75%	(A/B)
6				That Ale OBL, FACW, OF FAC.	(A/D)
				Prevalence Index worksheet:	
r	0	= Total Cov	or	Total % Cover of: Multiply by:	
50% of total cover:0				OBL species x 1 =	_
Sapling/Shrub Stratum (Plot size: 15')	20,00.	total covor.	·	FACW species x 2 =	
1				FAC species x 3 =	
2				FACU species x 4 =	
2				UPL species x 5 =	
3				Column Totals: (A)	
4				(, ,	_ (-)
5		· 		Prevalence Index = B/A =	_
6				Hydrophytic Vegetation Indicators:	
7				1 - Rapid Test for Hydrophytic Vegetation	
8		-		✓ 2 - Dominance Test is >50%	
9				3 - Prevalence Index is ≤3.0 ¹	
		= Total Cov		4 - Morphological Adaptations ¹ (Provide supp	oorting
50% of total cover: 0	20% of	total cover		data in Remarks or on a separate sheet)	•
Tierb diratum (Fiot Size)	20			Problematic Hydrophytic Vegetation ¹ (Explain	n)
1. Carex Iurida	20		OBL	<u> </u>	-,
2. Dipsacus sylvestris	5	·	ND	¹ Indicators of hydric soil and wetland hydrology m	ามรา
3. Carex vulpinoidea	10		OBL	be present, unless disturbed or problematic.	iuot
4. Phalaris anrundunaciae	40		F <u>ACW</u>	Definitions of Four Vegetation Strata:	
_{5.} Solidago sp	5		ND	- W	,
_{6.} Galium mollugo	15		F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 c more in diameter at breast height (DBH), regardle	
7. Eupatorium perfoliatum	5		FACW_	height.	
_{8.} Typha angustafolia	10		OBL	Sapling/Shrub – Woody plants, excluding vines,	logo
{9.} Poa trivialis	15		FACW	than 3 in. DBH and greater than or equal to 3.28	
10				m) tall.	,
11				Herb – All herbaceous (non-woody) plants, regard	dlace
	125	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.	aiooo
50% of total cover: 62.	5 20% of	f total cover:	25	Woody vine – All woody vines greater than 3.28	ft in
Woody Vine Stratum (Plot size: 15')				height.	11 111
1					
2					
3					
4				Hudranhudia	
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	sheet.)			. L	
ND - Not Determined.	,				

SOIL Sampling Point: W-B46

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the	indicator	or confirm	the absence	e of indicators.)		
Depth	Matrix		Redo	x Feature	s					
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	<u>Texture</u>	Remarks		
0-2	10YR 3/4	100					L			
2-8	10YR 4/2	90	10YR 5/6	10	С	M/PL	L			
8-15	10YR 4/2	70	10YR 5/6	30	С	M/PL	L			
						<u> </u>				
1							2			
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gr	ains.		PL=Pore Lining, M=Matrix.		
Hydric Soil			5 10 ((07)				cators for Problematic Hydric Soils ³ :		
Histosol			Dark Surface	. ,	(CO) (I	AL DA 447		2 cm Muck (A10) (MLRA 147)		
	pipedon (A2)		Polyvalue Be Thin Dark Su		. , .		148)	Coast Prairie Redox (A16) (MLRA 147, 148)		
Black Hi	en Sulfide (A4)		Loamy Gleye			141, 140)		Piedmont Floodplain Soils (F19)		
	d Layers (A5)		Depleted Ma		· <i>-)</i>		_	(MLRA 136, 147)		
	ick (A10) (LRR N)			, ,	- 6)			Very Shallow Dark Surface (TF12)		
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)										
	ark Surface (A12)	` '	Redox Depre					,		
Sandy M	lucky Mineral (S1) (L	RR N,	Iron-Mangan	ese Mass	es (F12)	(LRR N,				
	\ 147, 148)		MLRA 13							
	Sleyed Matrix (S4)		Umbric Surfa					ndicators of hydrophytic vegetation and		
	ledox (S5)		Piedmont Flo					vetland hydrology must be present,		
	Matrix (S6)		Red Parent N	/laterial (F	21) (ML R	RA 127, 147	') u	ınless disturbed or problematic.		
	_ayer (if observed):									
Type:								.,		
Depth (inc	ches):						Hydric Sc	oil Present? Yes No		
Remarks:										



Photograph Direction WSW

Date: 05/27/2015

Comments: 2015 wetland delineation.



Photograph Direction SW

Date: 09/24/2019

Comments: 2019 wetland delineation confirmation.

Project/Site: MVP		City/	County: Lewis		Sampling Date: 05/28/2015			
Applicant/Owner: MVP		,	•		Sampling Point: W-B46-47-UP1			
Investigator(s): R.Sparhawk, M.Brice, S.Ya	rbrough, M. Whitten,	W. Shattenberg Sect	ion, Township, Range: N					
Landform (hillslope, terrace, etc.): Ter					Slope (%): 5-10			
Subregion (LRR or MLRA): LRRN			Long: <u>-80</u>		Datum: NAD 83			
Soil Map Unit Name: Janelew char				NWI classific				
Are climatic / hydrologic conditions on		-						
Are Vegetation, Soil, o		-		ıl Circumstances" p	present? Yes No			
Are Vegetation, Soil, o	r Hydrology	naturally problem	natic? (If needed,	explain any answe	ers in Remarks.)			
SUMMARY OF FINDINGS - A	Attach site m	ap showing sai	mpling point location	ons, transects	s, important features, etc.			
Lludranhutia Vagatatian Dragant?	phytic Vegetation Present? Yes No							
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes		Is the Sampled Area					
Wetland Hydrology Present?	Yes		within a Wetland?	Yes	No			
Remarks:								
Upland								
HYDROLOGY								
Wetland Hydrology Indicators:				Secondary Indica	ators (minimum of two required)			
Primary Indicators (minimum of one i	s required; check	call that apply)		Surface Soil Cracks (B6)				
Surface Water (A1)		True Aquatic Plants	(B14)	Sparsely Vegetated Concave Surface (B8)				
High Water Table (A2)		Hydrogen Sulfide O		Drainage Patterns (B10)				
Saturation (A3)		Oxidized Rhizosphe	res on Living Roots (C3)					
Water Marks (B1)		Presence of Reduce	ed Iron (C4)	Dry-Season Water Table (C2)				
Sediment Deposits (B2)		Recent Iron Reducti	on 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 Re	emarks)	Stunted or S	Stressed Plants (D1)			
Iron Deposits (B5)					Position (D2)			
Inundation Visible on Aerial Imag	jery (B7)			Shallow Aqu				
Water-Stained Leaves (B9)					aphic Relief (D4)			
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)			
Field Observations:	No. 🗸	Depth (inches):						
Surface Water Present? Yes _	No	Depth (inches):						
					.a. v.			
Saturation Present? Yes _ (includes capillary fringe)	No	Depth (inches):	Wetland I	Hydrology Preser	nt? Yes No			
Describe Recorded Data (stream gau	uge, monitoring w	vell, aerial photos, pr	evious inspections), if ava	ailable:				
Barreta								
Remarks: Surrounding areas have evide	nce of disturb	ance from road	cute/fill					
Surrounding areas nave evide	rice of disturb	ance nom road	Cuts/IIII.					

,	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC:0 (A)
2				Tetal New horse (Description
3				Total Number of Dominant 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, 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')	2070 01	total cover		FACW species x 2 =
1				FAC species x 3 =
				FACU species x 4 =
2				UPL species x 5 =
3				Column Totals: (A) (B)
4	-			(7)
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 Vegetation ¹ (Explain)
1. Bromus inermus	40		<u>UPL</u>	1 Toblematic Hydrophytic Vegetation (Explain)
2. Poa pratensis	15		F <u>ACU</u>	The disease of building oil and well and building to the
3. Mentha spicata	15		FACW_	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Apocynum androsaemifolium	5		F <u>ACU</u>	Definitions of Four Vegetation Strata:
5. Asclepius syriaca	5		FACU	
6. Gallium mollugo	30	/	F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7. Oxalis sp	5		ND	more in diameter at breast height (DBH), regardless of height.
8. Dactylis glomerata	5		FACU	
g Securigera varia	5		UPL	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.				, '
···-	125	= Total Cov		Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.
50% of total cover: 62.5				or size, and woody plants less than 5.20 it tall.
Woody Vine Stratum (Plot size: 15')	2070 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 _ ✓
50% ()		= Total Cov	_	riesent: res No
50% of total cover: 0		total cover	0	
Remarks: (Include photo numbers here or on a separate s	heet.)			

Sampling Point: W-B46-47-UP1

SOIL

Profile Desc	ription: (Describe	to the dept	h needed to docur	nent the i	ndicator	or confirm	the absence	of indicators.)	
Depth	Matrix		Redo	x Feature	s				
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remar	ks
0-5	10YR 3/2	100					L		_
5-13	10YR 4/3	90	10YR 5/4	10	С	M/PL	L		
13-20	10YR 4/4	70	7.5YR 5/8	30	С	M	L		
					<u> </u>				
					-			-	
		· 			-	·			
¹ Type: C=Ce	oncentration, D=Depl	letion, RM=	Reduced Matrix, MS	S=Masked	Sand Gr	ains.	² Location: Pl	L=Pore Lining, M=Mat	rix.
Hydric Soil	Indicators:						Indica	ators for Problemation	: Hydric Soils³:
Histosol	(A1)		Dark Surface					cm Muck (A10) (MLR	
	oipedon (A2)		Polyvalue Be				148) C	oast Prairie Redox (A	16)
	stic (A3)		Thin Dark Su			147, 148)		(MLRA 147, 148)	
	en Sulfide (A4)		Loamy Gleye		F2)		Pi	iedmont Floodplain So	oils (F19)
	d Layers (A5)		Depleted Mar		-0\			(MLRA 136, 147)	(TE40)
	ick (A10) (LRR N) d Below Dark Surface	a (Δ11)	Redox Dark S Depleted Dar					ery Shallow Dark Surf ther (Explain in Rema	
	ark Surface (A12)	= (A11)	Redox Depre				0	illei (Explaiii ili Neilla	irvə)
	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 Indi	icators of hydrophytic	vegetation and
Sandy R	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 14	8) we	tland hydrology must	be present,
Stripped	l Matrix (S6)		Red Parent N	/laterial (F	21) (MLR	A 127, 147) unl	ess disturbed or probl	ematic.
Restrictive I	Layer (if observed):								
Type:			<u>—</u>						
Depth (in	ches):						Hydric Soil	Present? Yes	No <u> </u>
Remarks:							l		

USACE FILE NO./Project Name:		Mountain Valley Pipeline			Lat.	39.079451	Lon.	-80.581349
STREAM/SITE ID AND SITE DESCR	RIPTION:				,	W-B47, Timber Mat Crossing		
(% 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-B47	Emergent	0.0682	Emergent					
						PART III - Advanced Sustainable Determination Made on		on
						Advanced Mitigation (Y or N)		Y
Total Impact		0.0682						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0682			# 4.000.00		
Total Scrub-Shrub			0			\$4,092.00		
Total Forested			0					
Total Open Water			0]				

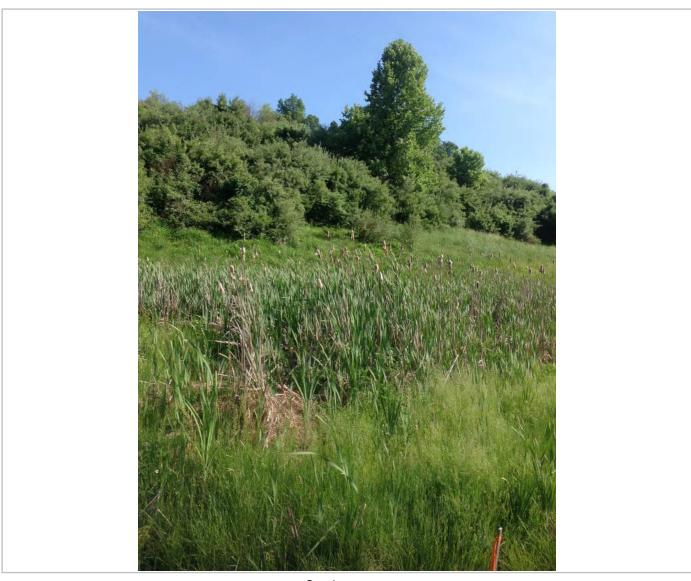
Project/Site: MVP			Citv/C	county: Lewis		Sampling Date: 05/27/2015
Applicant/Owner: MVP						Sampling Point: W-B47
Investigator(s): C.Ansari, M	1.Whitten, M.	Brice	Section	on, Township, Range: N		
Landform (hillslope, terrace, e						Slone (%): 3
Subregion (LRR or MLRA): L	RRN	1 -4-	39 079374			olope (70) Datum: NAD 83
Subregion (LRR or MLRA):	int cilt loom	Lat:	norcent clance re			
Soil Map Unit Name: Fairpo				á .		
Are climatic / hydrologic condi-	tions on the site	typical fo	or this time of year? Y	res No	(If no, explain in R	emarks.)
Are Vegetation, Soil	, or Hydrol	ogy	significantly distur	bed? Are "Normal	Circumstances" p	resent? Yes No
Are Vegetation, Soil	, or Hydrol	ogy	naturally problema	atic? (If needed, e	explain any answe	rs in Remarks.)
SUMMARY OF FINDIN	GS – Attach	site m	ap showing sam	npling point location	ons, transects	, important features, etc.
Hydrophytic Vegetation Pres	ent? Ye		No			
Hydric Soil Present?	Ye		 No	Is the Sampled Area	🗸	
Wetland Hydrology Present?			 No	within a Wetland?	Yes	No
Remarks:						
Cowardin Code:PEM						
HGM:slope wetland						
WT: RPWWD						
HYDROLOGY						
Wetland Hydrology Indicat	ors:				Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum	of one is require	ed; checl	k all that apply)		Surface Soil	Cracks (B6)
Surface Water (A1)	-		True Aquatic Plants (B14)		jetated 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	• , ,		Water Table (C2)
Sediment Deposits (B2)			Recent Iron Reductio	n in Tilled Soils (C6)	Crayfish Burr	1 1
Drift Deposits (B3)			Thin Muck Surface (C	27)	Saturation Vi	sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)			Other (Explain in Ren	narks)	Stunted or St	ressed Plants (D1)
Iron Deposits (B5)					Geomorphic	Position (D2)
Inundation Visible on Ae	rial Imagery (B7)			Shallow Aqui	tard (D3)
Water-Stained Leaves (I	39)					phic Relief (D4)
Aquatic Fauna (B13)					FAC-Neutral	Test (D5)
Field Observations:						
Surface Water Present?			Depth (inches):	1		
Water Table Present?			Dopur (mones).	9		
Saturation Present?	Yes N	lo	Depth (inches):	3 Wetland H	lydrology Presen	t? Yes <u> </u>
(includes capillary fringe) Describe Recorded Data (str	eam dalide mo	nitoring v	vell aerial photos pre	vious inspections) if ava	ilahla:	
Dooniso Noosiada Bala (dii	oam gaago, mo	moning v	von, donar priotos, pro	wiede inopediane, ii dva	masio.	
Remarks:						
						with ground and surface
water discharge. On eith						
terrace between the stre	∍am feature a	and the	hillslope. The ter	race is marked by a	small depress	ion with a stand of
cattails.						

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

/EGETATION (Four Strata) – Use scientific r	names of	plants.		Sampling Point: W-B47
201	Absolute			Dominance Test worksheet:
Tree Stratum (Plot size:30') 1)		Species?		Number of Dominant Species That Are OBL, FACW, or FAC:2 (A)
2				(//
3				Total Number of Dominant Species Across All Strata: 2 (B)
				Species Across Air Strata (B)
4 5				Percent of Dominant Species That Are OBL FACW or FAC: 100 (A/B)
				That Are OBL, FACW, or FAC:(A/B)
6	-			Prevalence Index worksheet:
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 /0 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		· <u></u>	· ——	(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
500, 4, , ,		= 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') 1. Scirpus cyperianus	20		E40)4/	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Juncus effusus	10	-	FACW_	
	30		FACW_	¹ Indicators of hydric soil and wetland hydrology must
3. Carex Iurida			OBL	be present, unless disturbed or problematic.
4. Eleocharis sp	10			Definitions of Four Vegetation Strata:
5. Typha angustafolia	10		OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Poa trivialis	30		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			· ——	Herb - All herbaceous (non-woody) plants, regardless
		= Total Cov		of size, and woody plants less than 3.28 ft tall.
50% of total cover:55	20% of	total cover		Woody vine – All woody vines greater than 3.28 ft in
Woody Vine Stratum (Plot size: 15')				height.
1		-		
2				
3				
4				Hydrophytic
5		-		Vegetation
0		= Total Cov	_	Present? Yes V No No
50% of total cover:0		total cover	:0	
Remarks: (Include photo numbers here or on a separate	sheet.)			

SOIL Sampling Point: W-B47

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the	indicator	or confirm	the absence	of indicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-3	10YR 3/1	90	10YR 4/6	10	С	M/PL	L	
3-15	10YR 5/2	80	10YR 4/6	20	С	M/PL		
					<u> </u>	<u> 171/1 L</u>		
				-	· -			
					· ·			
	-							
	-				· -			
								
	oncentration, D=Depl	etion, RM=	Reduced Matrix, MS	S=Masked	d Sand Gr	ains.		L=Pore Lining, M=Matrix.
Hydric Soil I	ndicators:						Indic	ators for Problematic Hydric Soils ³ :
Histosol			Dark Surface					cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be				148) C	Coast Prairie Redox (A16)
Black His			Thin Dark Su			147, 148)		(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye		(F2)		P	riedmont Floodplain Soils (F19)
	I Layers (A5)		Depleted Ma					(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark					ery Shallow Dark Surface (TF12)
	Below Dark Surface	(A11)	Depleted Dar		. ,			Other (Explain in Remarks)
	ark Surface (A12)	DD N	✓ Redox Depre			U DD N		
	lucky Mineral (S1) (L \ 147, 148)	KK N,	Iron-Mangan		es (F12) (LKK N,		
	leyed Matrix (S4)		Umbric Surfa	•	/MI D A 14	26 122\	³ Ind	licators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo					etland hydrology must be present,
	Matrix (S6)		Red Parent N					less disturbed or problematic.
	ayer (if observed):		Red r drene n	natoriai (i	21) (IIILI	121, 141	, un	less distarbed of problematic.
Type:	-uyo: (oboo. vou).							
	-h\-						Unadaia Cail	Present? Yes V No
	ches):						Hydric Soil	Present? Yes No No
Remarks:								



Photograph Direction South

Comments:

Project/Site: MVP		City	_{/County:} Lewis		Sampling Date: 05/27/2015
Applicant/Owner: MVP					Sampling Point: W-B46-47 Up
Investigator(s): MB, RS, SY, WS,	MW	Sec	tion, Township, Range: N		•
Landform (hillslope, terrace, etc.): Ter			elief (concave, convex, no		Slope (%): 5-10
	Lat		Long: -80		Datum: NAD 83
Soil Map Unit Name: Fairpoint silt				NWI classific	
Are climatic / hydrologic conditions on					
		-			
Are Vegetation, Soil, o		-			resent? Yes No
Are Vegetation, Soil, o			•	explain any answe	,
SUMMARY OF FINDINGS – A	Attach site m	nap showing sa	mpling point location	ons, transects	, important features, etc.
Hydrophytic Vegetation Present?	Yes	No 🗸			
Hydric Soil Present?	Yes		Is the Sampled Area within a Wetland?	Yes	No.
Wetland Hydrology Present?	Yes		within a wetland:	163	
Remarks:					
Upland					
LIVERGLOOV					
HYDROLOGY				Cocondon India	tors (minimum of two required)
Wetland Hydrology Indicators: Primary Indicators (minimum of one i	is required; abox	lk all that apply)		·	tors (minimum of two required)
	s required, chec		(D14)	Surface Soil	getated Concave Surface (B8)
Surface Water (A1) High Water Table (A2)	_	True Aquatic Plants Hydrogen Sulfide C		Sparsely veg	
Saturation (A3)			eres on Living Roots (C3)	Moss Trim Li	
Water Marks (B1)		Presence of Reduc	-		Water Table (C2)
Sediment Deposits (B2)			ion in Tilled Soils (C6)	Crayfish Burr	
Drift Deposits (B3)	_	Thin Muck Surface			sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Re			ressed Plants (D1)
Iron Deposits (B5)	_		,	Geomorphic	` '
Inundation Visible on Aerial Imag	gery (B7)			Shallow Aqui	tard (D3)
Water-Stained Leaves (B9)				Microtopogra	phic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations:					
		Depth (inches):			
		_ Depth (inches):			
	No	Depth (inches):	Wetland I	Hydrology Presen	t? Yes No
(includes capillary fringe) Describe Recorded Data (stream gau	uge, monitoring	well, aerial photos, p	revious inspections), if ava	ailable:	
3	3-, 3	, ,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Remarks:					
Surrounding areas have evide	nce of disturb	pance from road	cuts/fill.		

Sampling F	Point: W-B46-47 Up	
------------	--------------------	--

Troo Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30°) 1. None	% Cover	Species?	<u>Status</u>	Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)
2.				
3				Total Number of Dominant Species Across All Strata: (B)
4				Opedies Across Air Otrata.
5				Percent of Dominant Species That Are ORL FACW or FAC: 0 (A/R)
				That Are OBL, FACW, or FAC: (A/B)
6				Prevalence Index worksheet:
7	0	= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 0		total cover:	•	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')	2070 01	total oover.		FACW species x 2 =
4 None				FAC species x 3 =
				FACU species x 4 =
2				UPL species x 5 =
3				Column Totals: (A) (B)
4				(-)
5				Prevalence Index = B/A =
6				Hydrophytic Vegetation Indicators:
7				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
50% -(1-1-1		= 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) 1. Bromus inermus	40	~	LIDI	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Poa pratensis	15		UPL	
	15		F <u>ACU</u>	¹ Indicators of hydric soil and wetland hydrology must
3. Veronica arvensis	5		<u>UPL</u>	be present, unless disturbed or problematic.
4. Apocynum androsaemifolium		· 	F <u>ACU</u>	Definitions of Four Vegetation Strata:
5. Asclepius syriaca	5		F <u>ACU</u>	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
6. Gallium mollugo	30		F <u>ACU</u>	more in diameter at breast height (DBH), regardless of
7. Oxalis stricta	5		F <u>ACU</u>	height.
8. Dactylis glomerata	5		F <u>ACU</u>	Sapling/Shrub – Woody plants, excluding vines, less
9. Vicia sativa	5		F <u>ACU</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
	125	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>62.</u>	5_ 20% of	total cover:	25	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	sheet.)			
				.

SOIL Sampling Point: W-B46-47 Up

Profile Desc	ription: (Describe t	o the dept	h needed to docun	nent the	indicator	or confirm	the absence	e of indicators.)
Depth	Matrix		Redox	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-5	10YR 3/2	100					L	
5-13	10YR 4/3	90	10YR 5/4	10	С	M/PL	L	
13-20	10YR 4/4	70	7.5YR 5/8	30	С	M	L	
					-		-	
								·
	-							·
							-	
¹ Type: C=Co	oncentration, D=Depl	etion RM=	Reduced Matrix, MS	= S=Masked	d Sand Gr	ains.	² Location: F	PL=Pore Lining, M=Matrix.
Hydric Soil I		ouon, run=	rtoddodd Watiix, We)—IVIGORO	a Garra Gr	unio.		cators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		ce (S8) (I	MLRA 147,		Coast Prairie Redox (A16)
Black Hi			Thin Dark Su				,	(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	d Matrix	(F2)		F	Piedmont Floodplain Soils (F19)
Stratified	Layers (A5)		Depleted Mat	rix (F3)				(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark S					Very Shallow Dark Surface (TF12)
	Below Dark Surface	e (A11)	Depleted Dar				_ (Other (Explain in Remarks)
	rk Surface (A12)	DD 11	Redox Depre			(I DD N		
	lucky Mineral (S1) (L	KK N,	Iron-Mangane		es (F12) (LRR N,		
	147, 148) sleyed Matrix (S4)		MLRA 130 Umbric Surfa		(MI D A 1	RE 122\	3Inc	dicators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo					etland hydrology must be present,
	Matrix (S6)		Red Parent M					nless disturbed or problematic.
	ayer (if observed):			(-	, (,	,	P
Type:	,							
	ches):		<u></u>				Hydric Soi	il Present? Yes No
Remarks:			<u> </u>				,	
rtomanto.								

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	39.078107	Lon.	-80.581235
STREAM/SITE ID AND SITE DESCR	RIPTION:					W-B51, Timber Mat Crossing		
(% 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-B51	Emergent	0.0035	Emergent					
						PART III - Advanced	Mitigatio	n
						Sustainable Determination Made on Advanced Mitigation (Y or N)		Y
Total Impact		0.0035						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0035	-		¢040.00		
Total Scrub-Shrub Total Forested			0	-		\$210.00		
Total Open Water			0	-				
rotal Open water			U	1				

Project/Site: MVP		City/C	ounty: Lewis		Sampling Date: 05/29/2015	
Applicant/Owner: MVP			,		Sampling Point: W-B51	
Investigator(s): C. Ansari, M	I. Whitten, M. E	Brice Section	n Township Range N	<u> </u>	_	
Landform (hillslope, terrace, etc					Slone (%): 1	
Subregion (LRR or MLRA): LF					Datum: NAD 83	
Soil Map Unit Name: Janelev						
				NWI classific		
Are climatic / hydrologic conditi		•				
Are Vegetation, Soil	, or Hydrology	significantly disturb	ped? Are "Normal	Circumstances" p	oresent? Yes Vo No	
Are Vegetation, Soil	, or Hydrology	naturally problema	itic? (If needed, e	explain any answe	rs in Remarks.)	
SUMMARY OF FINDING	3S – Attach si	te map showing sam	pling point location	ns, transects	, important features, etc.	
		v				
Hydrophytic Vegetation Present?	ent? Yes Yes		Is the Sampled Area			
Wetland Hydrology Present?	Yes		within a Wetland?	Yes	No	
Remarks:	165_	NO				
Cowardin Code: PEM						
HGM: SLOPE WETLAN	D					
WT: NRPWW						
HYDROLOGY						
Wetland Hydrology Indicato	ors:			Secondary Indica	tors (minimum of two required)	
Primary Indicators (minimum	of one is required;	check all that apply)		Surface Soil	Cracks (B6)	
✓ Surface Water (A1)		True Aquatic Plants (I	B14)	Sparsely Veg	getated Concave Surface (B8)	
High Water Table (A2) Hydrogen Sulfide Odor (C1) V Drainage Patterns (B10)						
Saturation (A3) Oxidized Rhizospheres on Living Roots (C3) Moss Trim Lines (B16)						
Water Marks (B1)	Water Table (C2)					
Sediment Deposits (B2)		Recent Iron Reduction	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 Ren	narks)		tressed Plants (D1)	
Iron Deposits (B5)				Geomorphic	` '	
Inundation Visible on Aer				Shallow Aqui	, ,	
Water-Stained Leaves (B	9)			· -	phic Relief (D4)	
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)	
Field Observations:		D 4 (1)	1			
Surface Water Present?	Yes No _	Depth (inches): Depth (inches):	<u> </u>			
Water Table Present?		_				
Saturation Present? (includes capillary fringe)	Yes No _	Depth (inches):	Wetland H	lydrology Presen	t? Yes No	
Describe Recorded Data (stre	am gauge, monito	ring well, aerial photos, pre-	vious inspections), if ava	ilable:		
Remarks:						
Wetland located at the to	ne slone. Wetla	nd forms an ephemer	al drainage to the w	est		
This area is a reclaimed		•	ar aramago to the n	001.		
	J					

Cover Special Specia	ies? Status T T S Cover over: 0 F Cover	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: 3 Total Number of Dominant Species Species That Are OBL, FACW, or FAC: 100 Prevalence Index worksheet: Total % Cover of: Multiply b OBL species x 1 = FACW species x 2 = FAC species x 3 = FACU species x 4 = UPL species x 5 = Column Totals: (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: ✓ 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide data in Remarks or on a separate sh	(B)
1	Cover	That Are OBL, FACW, or FAC: 3 Total Number of Dominant Species Across All Strata: 3 Percent of Dominant Species That Are OBL, FACW, or FAC: 100 Prevalence Index worksheet: Multiply botal Multiply b	(B) (A/B
O	Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: Total % Cover of: Multiply b OBL species FACW species FAC species FACU species FACU species Y 4 = UPL species Column Totals: (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Y 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide)	(A/B
	Cover Cover Cover Cover Cover Cover Cover	Percent of Dominant Species That Are OBL, FACW, or FAC: Total % Cover of: Multiply b OBL species FACW species FAC species FACU species Y 4 = UPL species Column Totals: (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation Y 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide)	(A/B
	Cover O F F C C C C C C C C C C C C C C C C C	That Are OBL, FACW, or FAC:	oy: (B) on
50% of total cover:	Cover O F F U COVER COVE	Total % Cover of: Multiply b OBL species x 1 = FACW species x 2 = FAC species x 3 = FACU species x 4 = UPL species x 5 = Column Totals: (A) Prevalence Index = B/A = Hydrophytic Vegetation Indicators: ✓ 1 - Rapid Test for Hydrophytic Vegetation ✓ 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide)	(B)
0	over: 0	OBL species	(B)
50% of total cover:	over: 0	OBL species	(B)
Sapling/Shrub Stratum (Plot size: 15')	F F U C C C C C C C C C C C C C C C C C	FACW species $x 2 = $ FAC species $x 3 = $ FACU species $x 4 = $ UPL species $x 5 = $ Column Totals: $x 5 = $ Whydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation $x 5 = $ 2 - Dominance Test is >50% 3 - Prevalence Index is $x 5 = $ 4 - Morphological Adaptations (Provided)	(B)
Solve of total cover: 0 20% of total covering the stratum (Plot size: 5')	F F C C C C C C C C C C C C C C C C C C	FAC species	(B)
	Cover	FACU species x 4 =	(B)
5	Cover	UPL species x 5 =	(B)
5	Cover	Column Totals: (A)	on (B)
5	Cover	Prevalence Index = B/A =	on e supportin
5	Cover	Hydrophytic Vegetation Indicators: ✓ 1 - Rapid Test for Hydrophytic Vegetatio ✓ 2 - Dominance Test is >50% _ 3 - Prevalence Index is ≤3.0¹ _ 4 - Morphological Adaptations¹ (Provide	on e supportin
5	Cover	Hydrophytic Vegetation Indicators: ✓ 1 - Rapid Test for Hydrophytic Vegetatio ✓ 2 - Dominance Test is >50% _ 3 - Prevalence Index is ≤3.0¹ _ 4 - Morphological Adaptations¹ (Provide	on e supportin
5	Cover	 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provided) 	e supportin
5		 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide 	e supportin
0	Cover	3 - Prevalence Index is ≤3.0¹ 4 - Morphological Adaptations¹ (Provide	
$\frac{0}{50\% \text{ of total cover:}} = \frac{0}{20\% \text{ of total cover}}$ Herb Stratum (Plot size: $\frac{5'}{}$)	_	4 - Morphological Adaptations ¹ (Provide	
50% of total cover: 0 20% of total college Stratum (Plot size: 5')	_		
Herb Stratum (Plot size: 5'		data in Remarks or on a senarate sh	neet)
		data in remarke or on a coparate on	,
_{1.} Juncus effusus 45	FACW -	Problematic Hydrophytic Vegetation ¹ (E	xplain)
Agrostis stoloniferia 20	171011		
Scirpus cyperianus 20	- TAOW 1	¹ Indicators of hydric soil and wetland hydrological	
Carex vulopnoidea 10	b	be present, unless disturbed or problematic.	
		Definitions of Four Vegetation Strata:	
5. Juncus bufonius	FACW	Tree – Woody plants, excluding vines, 3 in.	(7.6 cm) o
S		more in diameter at breast height (DBH), reg	
7	h	height.	
3		Sapling/Shrub – Woody plants, excluding v	inas lass
)		than 3 in. DBH and greater than or equal to	
0	n	m) tall.	
l1		Herb – All herbaceous (non-woody) plants,	ranardlass
100 = Total		of size, and woody plants less than 3.28 ft to	
50% of total cover: 50 20% of total co	over: 20		0.00 (; ;
Noody Vine Stratum (Plot size: 15')		Woody vine – All woody vines greater than height.	3.28 ft in
		neight.	
2			
3			
			
· · · · · · · · · · · · · · · · · · ·		Hydrophytic	
5		Vegetation Present? Yes ✓ No	
	Cover	103 <u>.</u> 103	
50% of total cover:0 20% of total c	over: 0		
Remarks: (Include photo numbers here or on a separate sheet.)			

SOIL Sampling Point: W-B51

Profile Desc	ription: (Describe	to the dep	th needed to docum	nent the	indicator	or confirm	the abse	ence of indicators.)
Depth	Matrix			x Feature				
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type'	Loc ²	<u>Textur</u>	re Remarks
0-2	10yr 3/2	100					L	
2-12	10yr 5/1	80	10yr 4/6	20	С	M/PL	С	
						· ——		
						· ——	-	
						· ——		
					· 			
¹Type: C=Ce	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	(S7)				2 cm Muck (A10) (MLRA 147)
Histic Ep	pipedon (A2)		Polyvalue Be		ice (S8) (I	/ILRA 147,	148)	Coast Prairie Redox (A16)
Black Hi	stic (A3)		Thin Dark Su	rface (S9) (MLRA	147, 148)		(MLRA 147, 148)
Hydroge	en Sulfide (A4)		Loamy Gleye	d Matrix	(F2)		_	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma					(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark		,		_	Very Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Dar		, ,		-	Other (Explain in Remarks)
	ark Surface (A12)	DD N	Redox Depre			I DD M		
	lucky Mineral (S1) (L \ 147, 148)	.KK N,	Iron-Mangan		es (F12) (LKK N,		
	Gleyed Matrix (S4)		Umbric Surfa	•	/MI DA 13	RE 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):				_ · / (,	aooo a.eta.zea e. p.ez.ea.e.
	avel/rock							
	ches): 12						Hydric	Soil Present? Yes 🗸 No
							Hydric	100 11 103 110 110 110 110 110 110 110 1
Remarks:	ravel within the s	oil profile	3					
Coai and y	iavei witiiiii tile s	on prome	.					



Photograph Direction SE

Comments:		

Project/Site: MVP		City/C	ounty: Lewis		Sampling Date: 05/29/2015			
Applicant/Owner: MVP			,		Sampling Point: W-B51-UP			
Investigator(s): C. Ansari, M. Whit	ten, M. Brice	Section	on, Township, Range: N/		_ ,			
Landform (hillslope, terrace, etc.): Ter					Slope (%): 1			
Subregion (LRR or MLRA): LRRN					Datum: NAD 83			
Soil Map Unit Name: Janelew char								
Are climatic / hydrologic conditions on								
Are Vegetation, Soil, or								
Are Vegetation, Soil, oil				explain any answe				
SUMMARY OF FINDINGS – A								
		·	.p9 po	,	, p			
Hydrophytic Vegetation Present?	Yes	No	Is the Sampled Area					
Hydric Soil Present? Wetland Hydrology Present?	Yes		within a Wetland?	Yes	No			
Remarks:								
Upland								
HYDROLOGY				Casandam, Indiaa	to an (animina and the analysis of			
Wetland Hydrology Indicators:		all that analys			tors (minimum of two required)			
Primary Indicators (minimum of one is	-			Surface Soil				
Surface Water (A1)		Frue Aquatic Plants (I		Sparsely Vegetated Concave Surface (B8) Drainage Patterns (B10)				
High Water Table (A2) Saturation (A3)		Hydrogen Sulfide Odd	or (C1) es on Living Roots (C3)	=				
Water Marks (B1)		Presence of Reduced	= : :	(C3) Moss Trim Lines (B16) Dry-Season Water Table (C2)				
Sediment Deposits (B2)	·	Recent Iron Reduction	` '					
Drift Deposits (B3)		Thin Muck Surface (C		Craylish Burrows (Co) Saturation Visible on Aerial Imagery (C9)				
Algal Mat or Crust (B4)		Other (Explain in Ren			tressed Plants (D1)			
Iron Deposits (B5)	·		,	Geomorphic				
Inundation Visible on Aerial Imag	jery (B7)			Shallow Aquitard (D3)				
Water-Stained Leaves (B9)					phic Relief (D4)			
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)			
Field Observations:								
		Depth (inches):						
Water Table Present? Yes _	No	Depth (inches):						
Saturation Present? Yes _ (includes capillary fringe)	No	Depth (inches):	Wetland H	lydrology Presen	t? Yes No			
Describe Recorded Data (stream gau	ige, monitoring we	ell, aerial photos, pre	vious inspections), if ava	ilable:				
Remarks:								
Upland plot								

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

Sampling Point: W-B51-UP1

Tree Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:		
inee ottatum (i lot size)	% Cover	-		Number of Dominant Species	0	(4)
1				That Are OBL, FACW, or FAC:		(A)
3				Total Number of Dominant Species Across All Strata:	3	(B)
4						(D)
5				Percent of Dominant Species That Are OBL, FACW, or FAC:	0	(A/B)
6				That Are OBL, I ACW, OF I AC.		(A/D)
7				Prevalence Index worksheet:		
	0 .	= Total Cov	ver		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	ors:	
7				1 - Rapid Test for Hydrophytic	c Vegetation	
8		-		2 - Dominance Test is >50%		
9	^	= Total Cov		3 - Prevalence Index is ≤3.0¹		
50% of total cover: 0				4 - Morphological Adaptations	s ¹ (Provide sup	porting
Herb Stratum (Plot size: 5')			-	data in Remarks or on a se		
1. Poa pratensis	25	✓	FACU	Problematic Hydrophytic Vege	etation ¹ (Expla	in)
2. Bromus inermus	25	V	FACU	4		
3. Trifolium repens	20	~	FACU	¹ Indicators of hydric soil and wetla be present, unless disturbed or pre-		must
4. Melilotus officinale	15		F <u>ACU</u>	Definitions of Four Vegetation S		
5. Carex vulponoidea	10		FACW_			,
6				Tree – Woody plants, excluding vi more in diameter at breast height		
7				height.	(22.1), 10ga.a.	
8				Sapling/Shrub – Woody plants, e	excluding vines	. less
9				than 3 in. DBH and greater than o		
10				m) tall.		
11				Herb – All herbaceous (non-wood		rdless
50% of total cover: _ 47.5		= Total Cov		of size, and woody plants less tha	n 3.28 ft tall.	
Woody Vine Stratum (Plot size: 15')	20 / 01	total cover		Woody vine – All woody vines gre	eater than 3.28	3 ft in
1				height.		
2.						
3						
4.				Hadran bada		
5.				Hydrophytic Vegetation		
	0	= Total Cov	ver	Present? Yes	No <u>/</u>	
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-B51-UP1

Profile Desc	ription: (Describe t	o the dep	th needed to docun	nent the i	indicator	or confirm	the absen	ce of indicators.)
Depth	Matrix		Redo	x Feature	S			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	10yr 4/3	100					L	
2-6	10yr 4/2	90	10yr 5/6	10	С	M/PL	CL	
						11		
¹Type: C=Co	oncentration, D=Depl	etion RM-	-Reduced Matrix MS	S-Masker	d Sand Gr	ains	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil		Cuon, ruivi-	-reduced Matrix, Me	J-Masket	J Garia Gri	ли ю.	Ind	licators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)				2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be		ce (S8) (N	ILRA 147.	148)	Coast Prairie Redox (A16)
	stic (A3)		Thin Dark Su				-,	(MLRA 147, 148)
	en Sulfide (A4)		Loamy Gleye					Piedmont Floodplain Soils (F19)
Stratified	d Layers (A5)		Depleted Mat	trix (F3)				(MLRA 136, 147)
	ıck (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 130		/MIDA 12	6 122\	3	Indicators of hydrophytic vegetation and
	Redox (S5)		Piedmont Flo					wetland hydrology must be present,
-	Matrix (S6)		Red Parent N					unless disturbed or problematic.
	Layer (if observed):		110011 0101111	natoriai (i			<u>,</u>	arricos distarbos en problemane.
Type: Ro								
Depth (inc							Hydric S	oil Present? Yes 🗸 No
	Cries). <u>-</u>						Tiyunc 3	on resent: res No
Remarks:								

USACE FILE NO./Project Name:		Mountain	Valley Pipeline	COORDINATES:	Lat.	39.073907	Lon.	-80.581491
STREAM/SITE ID AND SITE DESCR		-1	W-B54, Timber Mat Crossing					
(% 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-B54	Emergent	0.0101	Emergent					
						PART III - Advanced Sustainable Determination Made on		on
						Advanced Mitigation (Y or N)		Υ
Total Impact		0.0101						
		Unit Scores				Estimated		
	assification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0101			¢coc oo		
Total Scrub-Shrub Total Forested			0			\$606.00		
			0					
Total Open Water			U	I				

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 05/29/2015				
Applicant/Owner: MVP				Sampling Point: W-B54					
Investigator(s): C. Ansari, M. W	Investigator(s): C. Ansari, M. Whitten, M. Brice Section, Township, Range: N/A								
Landform (hillslope, terrace, etc.): <u></u>	lillslope	Local reli	ef (concave, convex, no	_{ne):} Concave	Slope (%): 5				
Subregion (LRR or MLRA): LRRN		Datum: NAD 83							
Soil Map Unit Name: Gilpin-Upshur									
Are climatic / hydrologic conditions of	on the site typical fo	or this time of year? Y	es No	(If no, explain in R	Remarks.)				
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							
Hydric Soil Present?	Yes 🗸		Is the Sampled Area within a Wetland?	Yes 🗸	No				
Wetland Hydrology Present?	Yes 🗸	No	within a wettand:	163					
Remarks: Cowardin Code:PEM HGM: SLOPE WT: NRPWW	HGM: SLOPE								
HYDROLOGY									
Wetland Hydrology Indicators:				Secondary Indica	ators (minimum of two required)				
Primary Indicators (minimum of on	e is required; checl	k all that apply)		Surface Soil					
Surface Water (A1)		True Aquatic Plants (getated Concave Surface (B8)				
High Water Table (A2)									
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							
Drift Deposits (B3) Algal Mat or Crust (B4)		Thin Muck Surface (C Other (Explain in Ren		Saturation Visible on Aerial Imagery (C9) Stunted or Stressed Plants (D1)					
Iron Deposits (B5)		Other (Explain in Itel	narko)	Geomorphic Position (D2)					
Inundation Visible on Aerial Im	agery (B7)			Shallow Aquitard (D3)					
Water-Stained Leaves (B9)				Microtopographic Relief (D4)					
Aquatic Fauna (B13)				FAC-Neutral					
Field Observations:									
Surface Water Present? Yes	s_ / _No	Depth (inches):	1						
Water Table Present? Yes	s No 🖊	Depth (inches):							
Saturation Present? Yes	s No 🖊	Depth (inches):	Wetland H	Hydrology Preser	nt? Yes 🗸 No				
(includes capillary fringe) Describe Recorded Data (stream of	nauge monitoring v	vell aerial photos pre	vious inspections) if ava	ailahle:					
Describe Recorded Data (stream g	jauge, monitoring v	veii, aeriai priotos, pre	vious irispections), ii ave	mable.					
Remarks:									
Wetland located at the toe sl	ope and forms	along a road.							

Sampling	Point:	W-B54
Sambilliu	r Oll It.	**

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:2 (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Descrit of Descional Consis
5				Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)
6				
7				Prevalence Index worksheet:
	0	= Total Cov	/er	Total % Cover of: Multiply by:
50% of total cover:0				OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1				FAC species x 3 =
2.				FACU species x 4 =
		-	-	UPL species x 5 =
3		-		Column Totals: (A) (B)
4				()
5				Prevalence Index = B/A =
6		-		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')	0.5			Problematic Hydrophytic Vegetation ¹ (Explain)
1. Poa trivialis	35		F <u>ACW</u>	1 Toblematic Hydrophytic Vegetation (Explain)
2. Carex vulpinoidea	30		OBL	1 Indicators of budging call and watland budgelons, must
3. Carex sp	10		ND	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. Glyceria striata	15	-	<u>OBL</u>	Definitions of Four Vegetation Strata:
{5.} Impatiens capensis	10		FACW	
6. Persacaria sagittaria	20		OBL	Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
8			<u> </u>	
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.				
· · · · · · · · · · · · · · · · · · ·	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	20% of	total cover	ver : 24	or size, and woody plants less than 3.20 it tall.
Woody Vine Stratum (Plot size: 15')	2070 01	total cover	· <u>-</u> -	Woody vine – All woody vines greater than 3.28 ft in
				height.
1				
2		-		
3				
4		-		Hydrophytic
5				Vegetation
•		= Total Cov	_	Present? Yes 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-B54

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the	indicator	or confirm	m the absend	ce of indicators.)
Depth	Matrix		Redo	x Feature	s			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-2	10yr 3/2	90	10yr 4/6	10	С	PL	CL	
2-12	7.5yr 4/3	85	7.5yr 5/6	15	С	PL	С	
						· 		
						- ——	· <u></u>	_
							·	
				-				_
1- 0.0							2,	
	oncentration, D=Depl	etion, RM=	Reduced Matrix, M	S=Masked	d Sand Gr	ains.		PL=Pore Lining, M=Matrix. icators for Problematic Hydric Soils ³ :
Hydric Soil			5 . 6 .	(0-)			ina	· ·
Histosol			Dark Surface		(CO) (I	AL DA 447		2 cm Muck (A10) (MLRA 147)
	oipedon (A2)		Polyvalue Be Thin Dark Su				, 148)	Coast Prairie Redox (A16) (MLRA 147, 148)
Black Hi	en Sulfide (A4)		Loamy Gleye			147, 140)		Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma		(Г2)			(MLRA 136, 147)
	ick (A10) (LRR N)		Redox Dark		- 6)			Very Shallow Dark Surface (TF12)
	d Below Dark Surface	(A11)	Depleted Da				_	Other (Explain in Remarks)
	ark Surface (A12)	, (, , , , ,	Redox Depre					Curer (Explain in resmand)
	lucky Mineral (S1) (L	RR N.	Iron-Mangan			LRR N.		
	A 147, 148)	,	MLRA 13		() ,	,		
	Bleyed Matrix (S4)		Umbric Surfa		(MLRA 1	36, 122)	³ lı	ndicators of hydrophytic vegetation and
Sandy R	Redox (S5)		Piedmont Flo	odplain S	oils (F19)	(MLRA 1	48)	wetland hydrology must be present,
Stripped	Matrix (S6)		Red Parent I	Material (F	21) (MLR	A 127, 14	(7)	unless disturbed or problematic.
Restrictive I	Layer (if observed):							
Type:								
Depth (in	ches):						Hydric So	oil Present? Yes <u> </u>
Remarks:								



Photograph Direction West

Comments:		

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 05/29/2015
Applicant/Owner: MVP					Sampling Point: W-B54-UP
Investigator(s): C. Ansari, N	Л. Whitten, M. B	rice Section	on, Township, Range: N/		_
Landform (hillslope, terrace, et					Slope (%): 5
Subregion (LRR or MLRA): L					Datum: NAD 83
Soil Map Unit Name: Gilpin-U					
•					
Are climatic / hydrologic condit					_
Are Vegetation, Soil				Circumstances" p	present? Yes No
Are Vegetation, Soil	, or Hydrology	naturally problemate	atic? (If needed, e	explain any answe	rs in Remarks.)
SUMMARY OF FINDIN	GS – Attach sit	e map showing san	npling point location	ns, transects	, important features, etc.
Hydrophytic Vegetation Pres	ent? Yes	No_ 🗸			
Hydric Soil Present?		No	Is the Sampled Area	W	🗸
Wetland Hydrology Present?	Yes _	No_ ✓	within a Wetland?	Yes	No
Remarks:					
Upland					
HYDROLOGY					
Wetland Hydrology Indicat	ors:			Secondary Indica	tors (minimum of two required)
Primary Indicators (minimum	of one is required;	check all that apply)		Surface Soil	Cracks (B6)
Surface Water (A1)		True Aquatic Plants (B14)	Sparsely Veg	getated Concave Surface (B8)
High Water Table (A2)		Hydrogen Sulfide Od	or (C1)	Drainage Par	tterns (B10)
Saturation (A3)			es on Living Roots (C3)	Moss Trim Li	ines (B16)
Water Marks (B1)		Presence of Reduced	d Iron (C4)	Dry-Season	Water Table (C2)
Sediment Deposits (B2)		Recent Iron Reduction		Crayfish Buri	
Drift Deposits (B3)		Thin Muck Surface (0			sible on Aerial Imagery (C9)
Algal Mat or Crust (B4)		Other (Explain in Rer	marks)		tressed Plants (D1)
Iron Deposits (B5)	(D=)				Position (D2)
Inundation Visible on Ae	• • • •			Shallow Aqui	
Water-Stained Leaves (F	39)				aphic Relief (D4)
Aquatic Fauna (B13)				FAC-Neutral	Test (D5)
Field Observations: Surface Water Present?	Vaa No	Depth (inches):			
Water Table Present?	Yes No	Depth (inches):			
				- Jackson Drocon	No Van
Saturation Present? (includes capillary fringe)	Yes NU _	Depth (inches):	Wetianu n	lyarology Fresen	nt? Yes No
Describe Recorded Data (str	eam gauge, monitor	ring well, aerial photos, pre	vious inspections), if ava	ilable:	
Remarks:					
Upland plot					

Sampling Point: W-B54-UP1	· W-B54-UP1
---------------------------	-------------

30,	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?	Status	Number of Dominant Species
_{1.} Juglans nigra	40		<u>FACU</u>	That Are OBL, FACW, or FAC:1 (A)
2. Liriodendron tulipifera	30		<u>FACU</u>	Total Number of Deminerat
3				Total Number of Dominant Species Across All Strata: 5 (B)
4				Openies / toross / tir etrata.
		-	· ——	Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 20% (A/B)
6		-		Prevalence Index worksheet:
7				
		= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 35	20% of	total cover	<u>: 14 </u>	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1 Rosa multiflora	20	~	FACU	FAC species x 3 =
2.		-		FACU species x 4 =
				UPL species x 5 =
3			· ——	
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6				
7				Hydrophytic Vegetation Indicators:
		î	·	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:10	20% of	total cover	: <u> 4 </u>	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Arthraxon hispidus	50	✓	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2. Poa pratensis	10		FACU	
3. Toxicodendron radicans	5			¹ Indicators of hydric soil and wetland hydrology must
3. Toxicoderiatori radicaris			F <u>AC</u>	be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or
7				more in diameter at breast height (DBH), regardless of height.
				g
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
	65	= Total Cov	/er	of size, and woody plants less than 3.28 ft tall.
50% of total cover: <u>32.5</u>	20% of	total cover	<u>: 13 </u>	
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
1 Lonicera sempervirens	5	~	FACU	neight.
			1 700	
2				
3				
4				Hydrophytic
5				Vegetation
	5	= Total Cov	/er	Present? Yes No
50% of total cover: <u>2.5</u>		total cover		
Remarks: (Include photo numbers here or on a separate s			·	
Remarks. (include prioto numbers here of on a separate s	neet.)			

SOIL Sampling Point: W-B54-UP1

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator	or confirm	n the abso	ence of indicators.)
Depth	Matrix			x Features	3			
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type ¹	Loc ²	Textu	re Remarks
0-3	10yr 3/3	100					L	
3-14	10yr 4/4	100					CL	
							-	
-							-	
¹Type: C=Co	oncentration, D=Depl	etion RM=	Reduced Matrix MS	S=Masked	Sand Gra	ins	² Locatio	n: PL=Pore Lining, M=Matrix.
Hydric Soil		Cuon, min	reduced Matrix, Me	J-IVIASKCA	Odrid Ore		Locatio	ndicators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(S7)			-	2 cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be	. ,	ce (S8) (M	LRA 147.	148)	Coast Prairie Redox (A16)
Black Hi			Thin Dark Su				_	(MLRA 147, 148)
	n Sulfide (A4)		Loamy Gleye			, -,	_	Piedmont Floodplain Soils (F19)
	d Layers (A5)		Depleted Ma		ŕ			(MLRA 136, 147)
2 cm Mu	ick (A10) (LRR N)		Redox Dark	Surface (F	6)		_	Very Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Dar				_	Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre					
	Mucky Mineral (S1) (L	RR N,	Iron-Mangan		es (F12) (I	_RR N,		
	147, 148)		MLRA 13		MI DA 42	6 400\		3Indicators of hydrophytic vagatation and
	Bleyed Matrix (S4) Ledox (S5)		Umbric Surfa Piedmont Flo				10)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present,
	Matrix (S6)		Red Parent N					unless disturbed or problematic.
	_ayer (if observed):		Red r arent n	naterial (i	Z I) (IVILIX	7 127, 177	', 	diffess disturbed of problematic.
Type:	-ayor (oboo. voa).							
• • •	ches):						Lludria	Soil Present? Yes No 🗸
	Jiles)						пушто	Soli Flesent! Tes No
Remarks:								

USACE FILE NO./Project Name:	Mountain Valley Pipeline			COORDINATES:	Lat.	39.06648	Lon.	-80.581624
STREAM/SITE ID AND SITE DESCR			W-H112, Pipeline Row					
(% stream slope, watershed size {a	creage}, unaltered	l or impairments)						
FORM OF MITIGATION:								
DATE:	8/10	/2015	WEATHER CONDITIONS:			PRECIPITATION PAST 48 HRS:		
	PART I - Wet	and Indicators						
Impact Wetland ID:	Impact Wetland Classification	Impacts (acreage)	Mitigation Wetland Classification					
W-H112	Emergent	0.0231	Emergent					
						PART III - Advanced Sustainable Determination Made on		on
						Advanced Mitigation (Y or N)		Y
Total Impact		0.0231						
		Unit Scores				Estimated		
	lassification		Replacement Unit(s)			ILF Costs		
Total Emergent			0.0231			£4 20C 00		
Total Scrub-Shrub			0			\$1,386.00		
Total Forested			0					
Total Open Water			0	1				

Project/Site: MVP		City/C	county: Lewis		Sampling Date: 05/20/2015			
Applicant/Owner: MVP					Sampling Point: W-H112			
Investigator(s): A.Stott, A.Grech, D. McCullough Section, Township, Range: N/A								
Landform (hillslope, terrace, etc.):	e): Concave	Slope (%): 0-3%						
Subregion (LRR or MLRA): LRRN Lat: 39.066436 Long: -80.58166 Datum: NA								
Soil Map Unit Name: Gilpin-Up			_					
Are climatic / hydrologic condition	s on the site typic	cal for this time of year? Y	res No (If no, explain in R	emarks.)			
Are Vegetation, Soil	, or Hydrology	significantly distur	bed? Are "Normal	Circumstances" p	present? Yes V No			
Are Vegetation, Soil								
_					, important features, etc.			
Hydrophytic Vegetation Present	? Yes	V No.						
Hydric Soil Present?	Yes		Is the Sampled Area	V V	NI.			
Wetland Hydrology Present?			within a Wetland?	Yes	No			
Remarks:								
Cowardin Code: PEM								
HGM: slope								
WT: NRPWW								
HYDROLOGY								
Wetland Hydrology Indicators	:			Secondary Indica	ators (minimum of two required)			
Primary Indicators (minimum of		heck all that apply)		Surface Soil				
Surface Water (A1)		True Aquatic Plants (getated Concave Surface (B8)			
High Water Table (A2)		Hydrogen Sulfide Od		Drainage Pa				
Saturation (A3)		✓ Oxidized Rhizospher		Moss Trim Lines (B16)				
Water Marks (B1)		Presence of Reduced		Dry-Season Water Table (C2)				
Sediment Deposits (B2)		Recent Iron Reduction	n in Tilled Soils (C6)					
Drift Deposits (B3)		Thin Muck Surface (C	27)	Saturation V	sible on Aerial Imagery (C9)			
Algal Mat or Crust (B4)		Other (Explain in Rer	narks)	Stunted or S	tressed Plants (D1)			
Iron Deposits (B5)					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:	Voc. No.	✓ Donth (inches):						
	res No _ res _ -/ No _	Depth (inches): Depth (inches):	0"					
			0"					
Saturation Present? (includes capillary fringe)	Yes No	Depth (inches):	Wetland H	ydrology Preser	t? Yes No			
Describe Recorded Data (stream	n gauge, monitori	ng well, aerial photos, pre	vious inspections), if avai	lable:				
Remarks:								
Remarks.								

Tree Stratum (Plot size: 30'	Absolute	Dominant		Dominance Test worksheet:		
Tiec otratum (Flot size.	% Cover			Number of Dominant Species	2	(
1				That Are OBL, FACW, or FAC: _		(A)
3				Total Number of Dominant Species Across All Strata:	3	(B)
4.				_		(2)
5				Percent of Dominant Species That Are OBL, FACW, or FAC:	100	(A/B)
6						. (" -)
7				Prevalence Index worksheet: Total % Cover of:	Multiply by:	
•		= Total Cov	_	OBL species x 1	Multiply by:	
50% of total cover: 0	20% of	total cover	:0	FACW species x 2		
Sapling/Shrub Stratum (Plot size: 15') 1 Rosa multiflora	10	/	FACIL	FAC species x 3		
· ''-			FACU_	FACU species x 4		
2				UPL species x 5		
3				Column Totals: (A)		
4				()	•	_ (-)
5				Prevalence Index = B/A = _		_
6				Hydrophytic Vegetation Indicate		
7				1 - Rapid Test for Hydrophytic	: Vegetation	
8				2 - Dominance Test is >50%		
<u> </u>	40	= Total Cov	/er	3 - Prevalence Index is ≤3.0 ¹	1	
50% of total cover:5				4 - Morphological Adaptations		
Herb Stratum (Plot size: 5')				data in Remarks or on a se	. ,	
1. Leersia virginica	30		F <u>ACW</u>	Problematic Hydrophytic Vege	etation' (Expla	iin)
2. Microstegium vimineum	30		FAC	11. diseases of booking and an almost	and broaden be according	
3. Juncus effusus	10		F <u>ACW</u>	¹ Indicators of hydric soil and wetla be present, unless disturbed or pro		must
4. Carex gigantea	10		<u>OBL</u>	Definitions of Four Vegetation S		
5. Verbesina alternifolia	5		F <u>AC</u>			,
6. Packera aurea	5		F <u>ACW</u>	Tree – Woody plants, excluding vi more in diameter at breast height		
7				height.	(), -3	
8				Sapling/Shrub – Woody plants, e	xcludina vines	s. less
9				than 3 in. DBH and greater than or	r equal to 3.28	3 ft (1
10				m) tall.		
11				Herb – All herbaceous (non-wood		ardless
50% of total cover: <u>45</u>		= Total Cover		of size, and woody plants less that	n 3.28 ft tall.	
Woody Vine Stratum (Plot size: 15')	20% 01	total cover		Woody vine – All woody vines gre	eater than 3.28	3 ft in
1				height.		
2						
3						
4						
5.				Hydrophytic Vegetation		
	^	= 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.)					

Sampling Point: W-H112

Profile Desc	ription: (Describe	to the dep	th needed to docur	nent the	indicator	or confirm	n the absence	of indicators.)
Depth	Matrix		Redo	x Feature	es	-		
(inches)	Color (moist)	%	Color (moist)	<u>%</u>	Type ¹	Loc ²	<u>Texture</u>	Remarks
0-6"	5yr 4/2	95	7.5yr 4/6	5	<u>C</u>	<u>PL</u>	C	
6-20"	5yr 5/2	95	7.5yr 4/6	5	С	PL	GrC	
		· ——						
	-	· ——						
		· ——		-				-
		· ——						-
¹Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, M	S=Maske	d Sand Gi	ains.	² Location: P	L=Pore Lining, M=Matrix.
Hydric Soil I		,	,					ators for Problematic Hydric Soils ³ :
Histosol	(A1)		Dark Surface	e (S7)			2	cm Muck (A10) (MLRA 147)
	pipedon (A2)		Polyvalue Be	. ,	ace (S8) (I	VILRA 147		Coast Prairie Redox (A16)
Black Hi			Thin Dark Su					(MLRA 147, 148)
Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matrix	(F2)		P	riedmont Floodplain Soils (F19)
	Layers (A5)		Depleted Ma					(MLRA 136, 147)
	ck (A10) (LRR N)		Redox Dark	,	,			ery Shallow Dark Surface (TF12)
	Below Dark Surfac	e (A11)	Depleted Da				C	Other (Explain in Remarks)
	ork Surface (A12)	DD 11	Redox Depre			(I DD N		
	lucky Mineral (S1) (L	LRR N,	Iron-Mangan		ses (F12)	(LRK N,		
	147, 148) leyed Matrix (S4)		MLRA 13 Umbric Surfa	•	/MI D A 1	26 122\	³ Ind	licators of hydrophytic vegetation and
	edox (S5)		Piedmont Flo					etland hydrology must be present,
	Matrix (S6)		Red Parent N					less disturbed or problematic.
	ayer (if observed):	<u> </u>		viatoriai (i	21) (IIIL)	121, 14	1) un	icos distarbed of problematic.
Type:								
Depth (inc	shoc):						Hydric Soil	Present? Yes No
							Hydric 30ii	Fresent: TesNO
Remarks:								



Photograph Direction West

Comments:		

Project/Site: MVP			City/C	County: Lewis		Sampling Date: 05/20/2015		
Applicant/Owner: MVP						Sampling Point: W-H112-UP1		
Investigator(s): A.Stott, A.Grech,	D. McCulloug	jh	Secti					
Landform (hillslope, terrace, etc.): Si				·		Slope (%): 0-4%		
Subregion (LRR or MLRA): LRRN						Datum: NAD 83		
Soil Map Unit Name: Gilpin-Upshur s								
Are climatic / hydrologic conditions on								
Are Vegetation, Soil, o								
Are Vegetation, Soil, Coll, Soil, Coll, Coll					l, explain any answe			
SUMMARY OF FINDINGS –								
			<u> </u>		<u> </u>			
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes Yes		<u>~</u>	Is the Sampled Area				
Wetland Hydrology Present?	Yes		<u> </u>	within a Wetland?	Yes	No		
Remarks: Upland								
HYDROLOGY								
Wetland Hydrology Indicators:					Secondary Indic	ators (minimum of two required)		
Primary Indicators (minimum of one	is required; chec	k all that a	pply)		Surface Soil	Cracks (B6)		
Surface Water (A1)	_	True Aqu	atic Plants ((B14)	Sparsely Vegetated Concave Surface (B8)			
High Water Table (A2)			n Sulfide Od		Drainage Patterns (B10)			
Saturation (A3)	_			es on Living Roots (C3				
Water Marks (B1)			of Reduce			Water Table (C2)		
Sediment Deposits (B2)	_			on in Tilled Soils (C6)	Crayfish Bu			
Drift Deposits (B3)			k Surface ((risible on Aerial Imagery (C9)		
Algal Mat or Crust (B4)		Other (Ex	cplain in Rei	marks)		Stressed Plants (D1)		
Iron Deposits (B5) Inundation Visible on Aerial Ima	igen/ (B7)				Shallow Aqu	Position (D2)		
Water-Stained Leaves (B9)	gory (Br)					aphic Relief (D4)		
Aquatic Fauna (B13)					FAC-Neutra			
Field Observations:						, ,		
Surface Water Present? Yes	No	Depth (ii	nches):					
	No							
	No				d Hydrology Prese	nt? Yes No		
(includes capillary fringe) Describe Recorded Data (stream ga	uge monitoring v	vell aerial	nhotos pre	evious inspections) if a	vailable:			
Describe Necorded Data (stream ga	uge, monitoring v	well, aeriai	priotos, pro	vious inspections), ii a	valiable.			
Remarks:								
1								

Sampling	Point: W	V-H112-	UP1
----------	----------	---------	-----

30,	Absolute	Dominant		Dominance Test worksheet:
Tree Stratum (Plot size: 30')		Species?		Number of Dominant Species
1. Carya ovata	20		<u>FACU</u>	That Are OBL, FACW, or FAC:1 (A)
2. Juglans nigra	10		FACU_	Total Number of Deminent
3				Total Number of Dominant Species Across All Strata: 4 (B)
4				Openies / toress / till etrata.
				Percent of Dominant Species
5				That Are OBL, FACW, or FAC: 25% (A/B)
6				Prevalence Index worksheet:
7				
		= Total Cov		Total % Cover of: Multiply by:
50% of total cover: 15	20% of	total cover:	6	OBL species x 1 =
Sapling/Shrub Stratum (Plot size: 15')				FACW species x 2 =
1. Elaeagnus umbellata	80	~	UPL	FAC species x 3 =
				FACU species x 4 =
2				UPL species x 5 =
3		· 		
4				Column Totals: (A) (B)
5				Prevalence Index = B/A =
6			_	
7				Hydrophytic Vegetation Indicators:
				1 - Rapid Test for Hydrophytic Vegetation
8				2 - Dominance Test is >50%
9				3 - Prevalence Index is ≤3.0 ¹
-		= Total Cov		4 - Morphological Adaptations ¹ (Provide supporting
50% of total cover: 40	20% of	total cover:	16	
Herb Stratum (Plot size: 5')				data in Remarks or on a separate sheet)
1. Microstegium vimineum	30	✓	FAC	Problematic Hydrophytic Vegetation ¹ (Explain)
2				
2				¹ Indicators of hydric soil and wetland hydrology must
3				be present, unless disturbed or problematic.
4				Definitions of Four Vegetation Strata:
5				
6				Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of
7				height.
				no.g.m
8				Sapling/Shrub – Woody plants, excluding vines, less
9				than 3 in. DBH and greater than or equal to 3.28 ft (1
10				m) tall.
11				Herb – All herbaceous (non-woody) plants, regardless
	30	= Total Cov	er	of size, and woody plants less than 3.28 ft tall.
50% of total cover:15	20% of	total cover:	6	
Woody Vine Stratum (Plot size: 15')				Woody vine – All woody vines greater than 3.28 ft in height.
<u> </u>	10			Height.
1		· ·		
2				
3				
4				Hydrophytic
5				Vegetation
	10	= Total Cov	er	Present? Yes No
50% of total cover: 5		total cover	_	
Remarks: (Include photo numbers here or on a separate s				
Remarks. (include photo numbers here or on a separate s	neet.)			

SOIL Sampling Point: W-H112-UP1

Profile Desc	ription: (Describe	to the depth	needed to docun	nent the i	ndicator	or confirm	the absen	ce of indicators.)
Depth	Matrix		Redo	x Features	3			
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
0-4"	7.5yr 3/2	100					SiL	_
4-20"	7.5yr 4/3	100					CL	
	-							
								_
	-							
1Type: C=C	oncentration, D=Depl	etion PM-F	Peduced Matrix MS		Sand Gr	nine	² Location:	PL=Pore Lining, M=Matrix.
Hydric Soil		elion, Rivi=r	reduced Matrix, Mc	=iviaskeu	Sanu Gra	aii i 5.		licators for Problematic Hydric Soils ³ :
Histosol			Dark Surface	(\$7)			u	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 Mat		,			(MLRA 136, 147)
2 cm Mu	ick (A10) (LRR N)		Redox Dark S		6)			Very Shallow Dark Surface (TF12)
	d Below Dark Surface	e (A11)	Depleted Dar					Other (Explain in Remarks)
	ark Surface (A12)		Redox Depre					
	lucky Mineral (S1) (L	.RR N,	Iron-Mangan		es (F12) (I	LRR N,		
	A 147, 148)		MLRA 13			0 400)	3,	
	Gleyed Matrix (S4)		Umbric Surfa					Indicators of hydrophytic vegetation and
	Redox (S5) Matrix (S6)		Piedmont Flo					wetland hydrology must be present, unless disturbed or problematic.
	Layer (if observed):		Neu Faieiii ii	iateriai (F	ZI) (IVILIX	H 127, 147	1	unless disturbed of problematic.
Type:	Layer (ii observea).							
	-h \.						Hardela C	all Brancout 2 Van Na V
	ches):						nyaric Sc	oil Present? Yes No
Remarks:								