Appendix 1

Waters of the U.S.

Table C-1. Waterbodies Crossed by the Rover Pipeline Project in the Buffalo District (LRB-2014-00613)

Facility	Revised MP [1]	Previous MP [1]	State	Waterbody ID	Waterbody Name [2]	Subwatershed Name (HUC 8)	Longitude	Latitude	Flow	Crossing Method [3]	Length Within Construction Work Area (ft)	Crossing Width [4] (feet)	Duration of Impact	PCN Required
Mainlines A & B	116.40	116.13	OH	S7H-CR-158	Broken Sword Creek	Sandusky	-82.774184	40.899447	Intermittent	Open Cut	268.03	12.0	Temporary	No
Mainlines A & B	119.60	119.37	OH	S7H-CR-159	Honey Creek	Sandusky	-82.829546	40.915658	Intermittent	Open Cut	152.45	15.0	Temporary	No
Mainlines A & B	131.11	130.87	OH	S7H-SE-214	UT to Silver Creek	Sandusky	-83.017776	40.994414	Intermittent	Open Cut	283.25	8.5	Temporary	No
Mainlines A & B	135.66	135.46	OH	S7H-SE-222	Honey Creek	Sandusky	-83.095269	41.024566	Perennial	HDD	62.46	66.0	-	No
Mainlines A & B	136.11	135.88	OH	S8H-SE-110	UT to Honey Creek	Sandusky	-83.101006	41.028704	Ephemeral	Open Cut	98.06	2.0	Temporary	No
Mainline B	136.12	135.89	OH	S8H-SE-109	UT to Honey Creek	Sandusky	-83.101022	41.028867	Ephemeral	Open Cut	412.16	3.0	Temporary	No
Mainlines A & B	140.66	140.42	OH	S8H-SE-114	Honey Creek	Sandusky	-83.177695	41.055996	Perennial	HDD	61.52	60.0	-	No
Mainlines A & B	142.46	142.21	OH	S7H-SE-232	Sandusky River	Sandusky	-83.207585	41.068372	Perennial	HDD	61.25	170.0	-	Yes
Mainlines A & B	142.83	142.61	OH	S1M-SE-110	Bells Run	Sandusky	-83.214225	41.070493	Perennial	Open Cut	154.41	5.5	Temporary	No
Mainlines A & B	143.62	143.39	OH	S1M-SE-106	East Branch Wolf Creek	Sandusky	-83.228114	41.075139	Intermittent	Open Cut	171.01	8.0	Temporary	No
Mainlines A & B	144.92	144.69	OH	S8H-SE-162	UT to Middle Branch Wolf Creek	Sandusky	-83.248683	41.082338	Intermittent	Open Cut	135.83	4.0	Temporary	No
Mainlines A & B	145.02	144.79	OH	S8H-SE-163	Middle Branch Wolf Creek	Sandusky	-83.251453	41.082879	Perennial	Open Cut	168.29	15.0	Temporary	No
Mainlines A & B	146.66	146.43	OH	S1M-SE-125	UT to East Branch Wolf Creek	Sandusky	-83.279983	41.093003	Intermittent	Open Cut	285.54	7.0	Temporary	No
Mainlines A & B	147.49	147.26	OH	S1M-SE-118	UT to East Branch Wolf Creek	Sandusky	-83.294155	41.096972	Intermittent	Open Cut	179.72	3.0	Temporary	No
Mainlines A & B	148.05	147.81	OH	S8H-SE-167	UT to East Branch Wolf Creek	Sandusky	-83.303427	41.100079	Perennial	Open Cut	135.24	22.0	Temporary	No
Mainlines A & B	148.52	148.29	OH	S1M-SE-114	East Branch Wolf	Sandusky	-83.311838	41.103091	Perennial	Open Cut	141.41	21.0	Temporary	No
Mainlines A & B	149.43	149.2	OH	S8H-SE-169	UT to Plum Creek	Sandusky	-83.327663	41.108076	Intermittent	Open Cut	151.32	12.0	Temporary	No
Mainlines A & B	149.95	149.72	OH	S8H-SE-170	UT to Harrison Creek	Sandusky	-83.336871	41.111269	Intermittent	Open Cut	160.27	5.5	Temporary	No
Mainlines A & B	150.63	150.4	OH	S8H-SE-171	UT to Harrison Creek	Sandusky	-83.349002	41.114701	Perennial	Open Cut	163.78	4.8	Temporary	No
Mainlines A & B	151.73	151.5	OH	S1M-SE-129	Wolf Creek	Sandusky	-83.369699	41.115487	Perennial	Open Cut	218.24	12.0	Temporary	No
Mainlines A & B	152.62	152.39	OH	S8H-SE-137	UT to Wolf Creek	Sandusky	-83.387027	41.114508	Intermittent	Open Cut	218.27	4.0	Temporary	No
Mainlines A & B	152.95	152.76	OH	S8H-SE-138	UT to Wolf Creek	Sandusky	-83.393285	41.115292	Perennial	Open Cut	162.05	12.0	Temporary	No
Mainlines A & B	154.70	154.47	OH	S1M-HA-131	UT to Wolf Creek	Sandusky	-83.424832	41.119802	Ephemeral	Open Cut	150.32	8.5	Temporary	No
Mainlines A & B	155.39	155.15	OH	S8H-HA-140	East Branch Portage River	Cedar-Portage	-83.436423	41.124692	Perennial	Open Cut	8.56	17.0	Temporary	No
Mainlines A & B	159.12	158.89	OH	S8H-HA-119	UT to South Branch Portage River	Cedar-Portage	-83.486654	41.153692	Perennial	Open Cut	150.92	3.0	Temporary	No
Mainlines A & B	160.06	159.83	OH	S8H-HA-216	UT to South Branch Portage River	Cedar-Portage	-83.48978	41.166097	Intermittent	Open Cut	27.59	6.0	Temporary	No
Mainlines A & B	162.66	162.47	OH	S4H-WO-704	S Fork Portage River	Cedar-Portage	-83.523315	41.193871	Perennial	Open Cut	146.66	34.0	Temporary	No
Mainlines A & B	164.12	163.89	OH	S4H-WO-713	UT to South Branch Portage River	Cedar-Portage	-83.544705	41.205729	Perennial	Open Cut	170.36	5.0	Temporary	No
Mainlines A & B	166.88	166.66	OH	S4H-WO-616	Bull Creek	Cedar-Portage	-83.593187	41.219339	Perennial	Open Cut	169.10	10.0	Temporary	No
Mainlines A & B	167.82	167.59	OH	S4H-WO-415	UT to Bull Creek	Cedar-Portage	-83.609359	41.223968	Perennial	Open Cut	175.92	6.0	Temporary	No
Mainlines A & B	170.12	169.89	OH	S8H-WO-219	Rocky Ford Creek	Cedar-Portage	-83.650041	41.23701	Perennial	HDD	64.69	20.0	-	No
Mainlines A & B	171.57	171.34	OH	S4H-WO-711	UT to Middle Branch Portage River	Cedar-Portage	-83.674306	41.242571	Perennial	Open Cut	135.13	6.5	Temporary	No
Mainlines A & B	172.84	172.62	OH	S4H-WO-627	UT to Middle Branch Portage River	Cedar-Portage	-83.698541	41.24165	Perennial	Open Cut	153.86	10.0	Temporary	No
Mainlines A & B	174.80	174.57	OH	S4H-WO-412	Rader Creek	Cedar-Portage	-83.735988	41.242975	Perennial	Open Cut	159.45	12.0	Temporary	No
Mainlines A & B	175.45	175.22	OH	S4H-WO-619	Needles Creek	Cedar-Portage	-83.74808	41.244941	Perennial	Open Cut	152.26	12.0	Temporary	No
Mainlines A & B	177.79	177.56	OH	S4H-WO-624	North Branch Portage River	Cedar-Portage	-83.792151	41.251918	Perennial	Open Cut	245.38	10.0	Temporary	No
Mainlines A & B	180.08	179.85	OH	S4H-WO-408	Jackson Cutoff Ditch	Lower Maumee	-83.833775	41.25939	Perennial	Open Cut	138.73	27.0	Temporary	No
Mainlines A & B	183.42	183.2	OH	S8H-HE-155	Hammer Creek	Lower Maumee	-83.896252	41.268415	Perennial	Open Cut	145.12	25.0	Temporary	No
Mainlines A & B	184.14	183.9	OH	S1M-HE-102	Beaver Creek	Lower Maumee	-83.90928	41.271134	Perennial	Open Cut	145.97	30.0	Temporary	No
Mainlines A & B	185.28	185.05	OH	S8H-HE-158	UT to Big Creek	Lower Maumee	-83.930951	41.273735	Intermittent	Open Cut	153.10	4.0	Temporary	No

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Facility	Revised MP [1]	Previous MP [1]	State	Waterbody ID	Waterbody Name [2]	Subwatershed Name (HUC 8)	Longitude	Latitude	Flow	Crossing Method [3]	Length Within Construction Work Area (ft)	Crossing Width [4] (feet)	Duration of Impact	PCN Required
Mainlines A & B	186.84	186.61	OH	S8H-HE-152	UT to Beaver Creek	Lower Maumee	-83.960087	41.276733	Intermittent	Open Cut	150.09	4.0	Temporary	No
Mainlines A & B	187.91	187.68	OH	S8H-HE-150	UT to Beaver Creek	Lower Maumee	-83.979563	41.280252	Intermittent	Open Cut	171.00	8.0	Temporary	No
Mainlines A & B	189.00	188.77	OH	S8H-HE-149	UT to Little Turkeyfoot Creek	Lower Maumee	-83.998658	41.285336	Perennial	Open Cut	152.36	6.0	Temporary	No
Mainlines A & B	189.50	189.26	OH	S8H-HE-148	UT to Little Turkeyfoot Creek	Lower Maumee	-84.008135	41.286525	Perennial	Open Cut	152.46	5.0	Temporary	No
Mainlines A & B	190.01	189.77	OH	S8H-HE-147	UT to Little Turkeyfoot Creek	Lower Maumee	-84.017742	41.287798	Perennial	Open Cut	152.77	6.0	Temporary	No
Mainlines A & B	190.65	190.39	OH	S1M-HE-170	South Turkeyfoot Creek	Lower Maumee	-84.029757	41.288031	Perennial	HDD	60.12	24.0	-	No
Mainline B	191.02	190.78	OH	S4H-HE-406	UT to South Turkeyfoot Creek	Lower Maumee	-84.036768	41.288499	Perennial	HDD	86.04	5.0	-	No
Mainlines A & B	191.53	191.3	OH	S8H-HE-141	UT to South Turkeyfoot Creek	Lower Maumee	-84.046749	41.288208	Ephemeral	Open Cut	135.08	1.5	Temporary	No
Mainlines A & B	192.06	191.82	OH	S8H-HE-137	UT to Lost Creek	Lower Maumee	-84.056515	41.290063	Perennial	Open Cut	157.06	7.5	Temporary	No
Mainlines A & B	192.66	192.43	OH	S8H-HE-135	Lost Creek	Lower Maumee	-84.067776	41.292473	Perennial	Open Cut	150.69	30.0	Temporary	No
Mainlines A & B	193.10	192.87	OH	S8H-HE-136	UT to Lost Creek	Lower Maumee	-84.075864	41.294236	Intermittent	Open Cut	156.27	4.0	Temporary	No
Mainlines A & B	193.62	193.38	OH	S8H-HE-139	UT to Lost Creek	Lower Maumee	-84.085367	41.296253	Ephemeral	Open Cut	195.68	2.0	Temporary	No
Mainlines A & B	193.74	193.5	OH	S8H-HE-138	UT to Lost Creek	Lower Maumee	-84.086985	41.297412	Ephemeral	Open Cut	236.71	2.0	Temporary	No
Mainlines A & B	194.19	193.95	OH	S8H-HE-140	UT to Lost Creek	Lower Maumee	-84.095115	41.298788	Intermittent	Open Cut	150.09	5.5	Temporary	No
Mainlines A & B	194.78	194.54	OH	S8H-HE-134	UT to School Creek	Lower Maumee	-84.106824	41.300884	Intermittent	Open Cut	185.70	4.5	Temporary	No
Mainlines A & B	195.19	194.94	OH	S8H-HE-133	UT to School Creek	Lower Maumee	-84.113862	41.301446	Perennial	Open Cut	315.91	25.0	Temporary	No
Mainlines A & B	195.84	195.61	OH	S8H-HE-132	UT to School Creek	Lower Maumee	-84.126127	41.303532	Perennial	Open Cut	181.47	9.0	Temporary	No
Mainlines A & B	197.27	197.04	OH	S8H-HE-131	Wade Creek	Lower Maumee	-84.152705	41.30753	Perennial	Open Cut	180.05	30.0	Temporary	No
Mainlines A & B	198.08	198.83	OH	S1M-HE-123	UT to Maumee River	Lower Maumee	-84.186673	41.307911	Intermittent	Open Cut	201.56	4.5	Temporary	No
Mainlines A & B	200.56	200.31	OH	S8H-HE-127	UT to Maumee River	Lower Maumee	-84.21425	41.311115	Ephemeral	HDD	57.07	1.5	-	No
Mainlines A & B	200.56	200.32	OH	S8H-HE-128	UT to Maumee River	Lower Maumee	-84.214437	41.310968	Ephemeral	HDD	88.00	1.0	-	No
Mainlines A & B	200.64	200.36	OH	S8H-HE-124	Maumee River	Lower Maumee	-84.21549	41.311725	Perennial	HDD	60.25	400.0	-	Yes
Mainlines A & B	200.75	200.51	OH	S8H-HE-119	UT to Maumee River	Lower Maumee	-84.218053	41.312649	Intermittent	HDD	91.47	3.5	-	No
Mainlines A & B	200.78	200.54	OH	S8H-HE-118	UT to Maumee River	Lower Maumee	-84.218444	41.312682	Perennial	HDD	220.20	3.0	-	No
Mainlines A & B	201.48	201.21	OH	S8H-DE-114	UT to Maumee River	Lower Maumee	-84.230824	41.314924	Intermittent	Open Cut	209.75	2.0	Temporary	No
Mainlines A & B	201.95	201.68	OH	S8H-DE-106	UT to Brubaker Creek	Lower Maumee	-84.239222	41.317027	Perennial	Open Cut	158.18	6.5	Temporary	No
Mainline A	203.98	203.74	OH	S2H-DE-115	Brubaker Creek	Lower Maumee	-84.275443	41.327287	Ephemeral	Open Cut	224.84	9.0	Temporary	No
Mainline A	205.78	205.54	OH	S4H-DE-110	Brubaker Creek	Lower Maumee	-84.307715	41.330654	Intermittent	Open Cut	159.43	10.5	Temporary	No
Mainline A	206.61	206.36	OH	S4H-DE-405	UT to Tanby Ditch	Tiffin	-84.323867	41.332428	Intermittent	Open Cut	150.47	4.0	Temporary	No
Mainline A	207.24	206.89	OH	S8H-DE-105	UT to Webb Run	Tiffin	-84.332477	41.337094	Intermittent	Open Cut	225.56	6.0	Temporary	No
Mainline A	207.64	207.37	OH	S8H-DE-103	UT to Webb Run	Tiffin	-84.334949	41.342508	Intermittent	Open Cut	205.29	4.0	Temporary	No
Mainline A	208.39	208.14	OH	S4H-DE-113	UT to Webb Run	Tiffin	-84.34611	41.350296	Intermittent	Open Cut	217.25	9.5	Temporary	No
Market Segment	0.28	0.24	OH	S3H-DF-100	Mattock Ditch	Tiffin	-84.363696	41.361102	Perennial	Open Cut	167.97	5.6	Temporary	No
Market Segment	0.62	0.57	OH	S3H-DF-101	Mattock Ditch	Tiffin	-84.362869	41.365688	Perennial	Open Cut	196.93	15.0	Temporary	No
Market Segment	2.58	2.54	OH	S4H-DF-232	Doty Run	Tiffin	-84.344728	41.389932	Perennial	Open Cut	159.55	4.5	Temporary	No
Market Segment	6.48	6.44	OH	S4H-HN-100	Coon Creek	Tiffin	-84.308825	41.437408	Intermittent	Open Cut	196.28	4.0	Temporary	No
Market Segment	8.06	8.02	OH	S4H-HN-226	UT to Owl Creek	Tiffin	-84.289318	41.450908	Intermittent	Open Cut	178.24	2.0	Temporary	No
Market Segment	9.12	8.9	OH	S2H-HN-111	UT to Owl Creek	Tiffin	-84.295958	41.462595	Perennial	Open Cut	151.50	4.0	Temporary	No
Market Segment	9.50	9.26	OH	S4H-HN-101	UT to OwlCreek	Tiffin	-84.295989	41.468134	Intermittent	Open Cut	158.09	3.0	Temporary	No
Market Segment	9.83	9.59	OH	S3H-HN-133	Owl Creek	Tiffin	-84.29567	41.472931	Perennial	Open Cut	151.85	8.0	Temporary	No

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Facility	Revised MP [1]	Previous MP [1]	State	Waterbody ID	Waterbody Name [2]	Subwatershed Name (HUC 8)	Longitude	Latitude	Flow	Crossing Method [3]	Length Within Construction Work Area (ft)	Crossing Width [4] (feet)	Duration of Impact	PCN Required
Market Segment	11.09	-	OH	S04H-FU-211	UT to Brush Creek	Tiffin	-84.290584	41.490058	Intermittent	Open Cut	170.18	2.5	Temporary	No
Market Segment	12.52	12.28	OH	S4H-FU-108	UT to Brush Creek	Tiffin	-84.278707	41.507602	Intermittent	Open Cut	150.10	5.0	Temporary	No
Market Segment	12.84	12.59	OH	S4H-FU-213	UT to Brush Creek	Tiffin	-84.278787	41.512275	Intermittent	Open Cut	150.96	5.0	Temporary	No
Market Segment	13.55	13.28	OH	S4H-FU-224	Brush Creek	Tiffin	-84.275598	41.521976	Perennial	Open Cut	249.45	21.0	Temporary	No
Market Segment	14.06	13.8	OH	S4H-FU-105	Brush Creek	Tiffin	-84.273071	41.529725	Perennial	N/A	57.27	25.0	Temporary	No
Market Segment	20.70	20.38	OH	S4H-FU-215	UT to Old Bean Creek	Tiffin	-84.239174	41.616125	Perennial	Open Cut	167.85	5.0	Temporary	No
Market Segment	21.77	21.36	OH	S4H-FU-217	UT to Old Bean Creek	Tiffin	-84.234459	41.630658	Perennial	Open Cut	184.68	8.0	Temporary	No
Market Segment	22.19	21.77	OH	S4H-FU-218	Old Bean Creek	Tiffin	-84.230219	41.635733	Perennial	Open Cut	188.30	14.0	Temporary	No
Market Segment	23.12	22.71	OH	S4H-FU-219	UT to Old Bean Creek	Tiffin	-84.223268	41.647523	Intermittent	Open Cut	179.41	7.0	Temporary	No

[1] Approximate enter milepost (MP). Revised MPs are current based on length; Previous MPs correspond to previous submittal.
[2] UT - Unnamed tributary.
[3] HDD - horizontal directional drill; N/A - Stream is within the construction work area, but is not crossed by the pipeline.
[4] Width at Ordinary High Water Mark.

Sub-Total Perennial	48	Sub-Total Open Cut	77
Sub-Total Intermittent	32	Sub-Total HDD	11
Sub-Total Ephemeral	9	N/A	1
Total Number	89	Total Number	89

Table C-2. Wetlands Crossed by the Rover Pipeline Project in the Buffalo District (LRB-2014-00613)

Pipeline Segment	Revised MP [1]	Previous MP [1]	State	Watershed (HUC8)	Wetland Resource ID	Longitude	Latitude	Cowardin Classification [2]	Crossing Method [3]	Acres Affected During Construction (Temporary) 4	Acres Affected During Operation [5]	ORAM Score	ORAM Category
Defiance Compressor Station [6]	0.00	0.00	OH	04100006, Tiffin	W3H-DF-201	-82.098506	40.787266	PEM	Open Cut	0.277	0.138	20	1
Defiance Compressor Station [6]	0.00	0.00	OH	04100006, Tiffin	W3H-DF-203	-82.098506	40.787266	PEM	Open Cut	0.016	0.008	19	1
Defiance Compressor Station [6]	0.00	0.00	OH	04100006, Tiffin	W3H-DF-204	-82.098506	40.787266	PEM	Open Cut	0.008	0.004	19	1
Defiance Compressor Station [6]	0.00	0.00	OH	04100006, Tiffin	W3H-DF-205	-82.098506	40.787266	PEM	Open Cut	0.03	0.015	19	1
Mainlines A and B	115.84	115.62	OH	04100011, Sandusky	W4H-CR-159	-82.764849	40.895169	PEM	Open Cut	0.915	0.196	48	2
Mainlines A and B	118.90	118.66	OH	04100011, Sandusky	W4H-CR-245	-82.81878	40.910037	PFO	Open Cut	0.51	0.288	54.5	2
Mainlines A and B	121.38	121.16	OH	04100011, Sandusky	USB-CR-1000	-82.857694	40.929249	PEM	Open Cut	0.47	0.168	-	1
Mainlines A and B	121.77	121.54	OH	04100011, Sandusky	W7H-CR-160	-82.864574	40.931458	PEM	Open Cut	0.169	0.059	16	1
Mainlines A and B	122.26	122.04	OH	04100011, Sandusky	W6H-CR-114	-82.872922	40.934481	PEM	Open Cut	0.023	0.008	19	1
Mainlines A and B	123.40	123.18	OH	04100011, Sandusky	USB-CR-1001	-82.892428	40.940989	PEM	Open Cut	0.37	0.016	-	1
Mainlines A and B	123.54	123.33	OH	04100011, Sandusky	USB-CR-1002	-82.895273	40.941486	PEM	Open Cut	0.358	0.111	-	1
Mainlines A and B	123.76	123.53	OH	04100011, Sandusky	USB-CR-1003	-82.898619	40.942742	PEM	Open Cut	0.155	0.039	-	1
Mainlines A and B	124.28	123.81	OH	04100011, Sandusky	W4H-CR-248	-82.904778	40.945126	PEM	Open Cut	0.106	0.031	24	1
Mainlines A and B	125.79	125.56	OH	04100011, Sandusky	W4H-CR-165	-82.930475	40.957564	PEM	Open Cut	0.014	0.012	23	1
Mainlines A and B	127.90	127.66	OH	04100011, Sandusky	W3H-CR-107	-82.963779	40.973447	PEM	Open Cut	0.065	0.052	26	1
Mainlines A and B	131.93	131.70	OH	04100011, Sandusky	W8H-SE-156	-83.032265	41.000019	PFO	Open Cut	0.355	0.232	48	2
Mainlines A and B	131.93	131.71	OH	04100011, Sandusky	W8H-SE-158	-83.032773	40.999746	PEM	N/A	0.075	0	48	2
Mainlines A and B	133.59	133.37	OH	04100011, Sandusky	W3H-SE-108	-83.059817	41.01162	PSS	Open Cut	0.51	0.141	27	1
Mainlines A and B	134.97	134.74	OH	04100011, Sandusky	W7H-SE-217	-83.082576	41.021199	PEM	N/A	0.096	0.002	22	1
Mainlines A and B	135.37	135.20	OH	04100011, Sandusky	W7H-SE-219	-83.090782	41.023019	PEM	Open Cut	0.113	0.086	19	1
Mainlines A and B	135.66	135.44	OH	04100011, Sandusky	W7H-SE-220	-83.094816	41.02452	PFO	HDD-Access Path	0.048	0	52	2
Mainlines A and B	138.21	137.98	OH	04100011, Sandusky	W2H-SE-234	-83.135027	41.042589	PFO	Open Cut	0.029	0.029	35	2
Mainlines A and B	138.69	138.47	OH	04100011, Sandusky	W7H-SE-224	-83.142941	41.046179	PEM	Open Cut	0.208	0.114	14	1
Mainlines A and B	139.64	139.39	OH	04100011, Sandusky	W7H-SE-225	-83.159235	41.052206	PFO	Open Cut	0.106	0.053	34	2
Mainlines A and B	140.47	140.24	OH	04100011, Sandusky	W3H-SE-112	-83.174383	41.054733	PEM	N/A	0.016	0	37.5	2
Mainlines A and B	140.72	140.50	OH	04100011, Sandusky	W3H-SE-116	-83.17871	41.056624	PFO	HDD-Access Path	0.023	0	30	2
Mainlines A and B	141.83	141.60	OH	04100011, Sandusky	W7H-SE-229	-83.196543	41.064707	PEM	Open Cut	0.028	0.004	19	1
Mainlines A and B	144.18	143.96	OH	04100011, Sandusky	W1M-SE-104	-83.238143	41.077125	PFO	N/A	0.054	0	34	2
Mainlines A and B	146.85	146.64	OH	04100011, Sandusky	W1M-SE-107	-83.28277	41.094724	PFO	Open Cut	0.081	0.036	29	1
Mainlines A and B	147.05	146.90	OH	04100011, Sandusky	W1M-SE-119	-83.287732	41.095637	PFO	Open Cut	0.484	0.212	55	2
Mainlines A and B	148.36	148.16	OH	04100011, Sandusky	W1M-SE-115	-83.309078	41.102082	PFO	Open Cut	0.152	0.099	46	2
Mainlines A and B	151.34	151.05	OH	04100011, Sandusky	W8H-SE-172	-83.361624	41.115443	PFO	Open Cut	0.129	0.07	47	2
Mainlines A and B	158.12	158.89	OH	04100010, Cedar-Portage	W3H-HA-118	-83.486655	41.153688	PEM	Open Cut	0.033	0.011	19	1
Mainlines A and B	159.24	159.01	OH	04100010, Cedar-Portage	W3H-HA-117	-83.486802	41.155415	PEM	Open Cut	0.018	0.006	13	1
Mainlines A and B	159.72	159.48	OH	04100010, Cedar-Portage	W8H-HA-218	-83.486986	41.162289	PSS	Open Cut	0.3	0.126	39	2
Mainlines A and B	191.47	191.24	OH	04100009, Lower Maumee	W8H-HE-143	-84.045765	41.288048	PFO	Open Cut	0.398	0.232	48	2
Mainlines A and B	197.25	197.01	OH	04100009, Lower Maumee	W4H-HE-630	-84.15185	41.308021	PFO	N/A	0.009	0	46	2
Mainlines A and B	200.59	200.34	OH	04100009, Lower Maumee	W8H-HE-128	-84.214717	41.311271	PFO	HDD-Access Path	0.01	0	57	2
Mainlines A and B	200.76	200.51	OH	04100009, Lower Maumee	W8H-HE-117	-84.217896	41.312331	PFO	HDD-Access Path	0.055	0	66	3
Mainline A	208.00	207.75	OH	04100006, Tiffin	W8H-DE-101	-84.340895	41.345822	PFO	Open Cut	1.304	0.507	53	2
Mainline A	209.68	209.40	OH	04100006, Tiffin	W3H-DF-202	-84.364741	41.35752	PEM	Open Cut	0.13	0.039	20	1

Table C-2. Wetlands Crossed by the Rover Pipeline Project in the Buffalo District (LRB-2014-00613)

Pipeline Segment	Revised MP [1]	Previous MP [1]	State	Watershed (HUC8)	Wetland Resource ID	Longitude	Latitude	Cowardin Classification [2]	Crossing Method [3]	Acres Affected During Construction (Temporary) [4]	Acres Affected During Operation [5]	ORAM Score	ORAM Category
Market Segment	1.34	1.31	OH	04100006, Tiffin	W3H-DF-102	-84.355173	41.373935	PFO	Open Cut	0.575	0.226	36	2
Market Segment	1.75	1.72	OH	04100006, Tiffin	W1H-DF-118	-84.351706	41.379252	PFO	Open Cut	0.736	0.298	38	2
Market Segment	2.32	2.29	OH	04100006, Tiffin	W1H-DF-117	-84.346772	41.386474	PEM	Open Cut	0.043	0.008	20	1
Market Segment	2.98	2.98	OH	04100006, Tiffin	W4H-DF-229	-84.341079	41.394329	PFO	Open Cut	0.861	0.241	40	2
Market Segment	3.56	3.52	OH	04100006, Tiffin	W3H-DF-103	-84.337009	41.402274	PEM	Open Cut	0.035	0.007	23.5	1
Market Segment	3.86	3.83	OH	04100006, Tiffin	W3H-DF-104	-84.334907	41.406619	PFO	Open Cut	0.149	0.068	37	2
Market Segment	3.90	3.87	OH	04100006, Tiffin	W1H-DF-122	-84.334185	41.4068	PEM	Open Cut	0.242	0.101	25	1
Market Segment	3.94	3.90	OH	04100006, Tiffin	W1H-DF-121	-84.333553	41.406991	PFO	Open Cut	0.46	0.182	53	2
Market Segment	4.18	4.14	OH	04100006, Tiffin	W1H-DF-120	-84.331084	41.410077	PEM	Open Cut	0.03	0.006	19	1
Market Segment	6.10	6.06	OH	04100006, Tiffin	W3H-HN-130	-84.314113	41.433395	PFO	Open Cut	1.206	0.484	35.5	2
Market Segment	7.42	7.38	OH	04100006, Tiffin	W4H-HN-228	-84.297165	41.445244	PFO	Open Cut	1.082	0.432	40	2
Market Segment	10.46	10.23	OH	04100006, Tiffin	W1H-HE-123	-84.295258	41.482093	PEM	Open Cut	0.02	0.004	11	1
Market Segment	12.54	12.30	OH	04100006, Tiffin	USB-FU-1000	-84.278747	41.50787	PEM	Open Cut	0.112	0.047	NA	1
Market Segment	16.78	16.50	OH	04100006, Tiffin	W3H-FU-237	-84.258366	41.564478	PFO	Open Cut	0.023	0	38	2
Market Segment	17.28	17.02	OH	04100006, Tiffin	W4H-FU-221	-84.254192	41.571428	PEM	Open Cut	0.041	0.008	19	1
Market Segment	18.40	18.15	OH	04100006, Tiffin	W2H-FU-112	-84.251651	41.587157	PEM	Open Cut	0.048	0.009	29	1
Market Segment	21.08	20.72	OH	04100006, Tiffin	W4H-FU-216	-84.238954	41.621467	PEM	Open Cut	0.035	0.007	14	1

[1] Approximate enter milepost (MP). Revised MPs are current based on length; Previous MPs correspond to previous submittal.

[2] PEM = Palustrine emergent; PSS = Palustrine scrub-shrub; PFO = Palustrine forest

[3] HDD - horizontal directional drill; N/A - Wetland is within the construction work area, but is not crossed by the pipeline.

[4] Total acres affected by construction.

[5] Total acres affected by maintenance of a 30-foot-wide operational easement for a single pipeline and 50 feet for dual pipelines, except at Defiance Compressor Station (see footnote 6).

[6] A total of 0.165 acres of PEM will be permanently lost at the station.

Total Number	58	Total Acres	13.936	5.222
Sub-Total PEM	32	Sub-Total PEM acres	4.28	1.27
Sub-Total PFO	24	Sub-Total PFO acres	8.83	3.69
Sub-Total PSS	2	Sub-Total PSS acres	0.81	0.27

Appendix 2

Mitgation Plan

ITEM 7

Proposed Mitigation Plan

7.0 PROPOSED MITIGATION PLAN

7.1 MITIGATION OVERVIEW

This mitigation plan identifies the amount and type of mitigation that is proposed to offset the on-site temporary and permanent impacts to wetlands and streams as a result of construction and operation of Rover Pipeline LLC's (Rover) Rover Pipeline Project (Project).

Mitigation will be accomplished by restoring the construction work areas at streams and wetlands to preconstruction conditions. Where there are unavoidable permanent impacts, mitigation will be accomplished by purchasing mitigation credits from an approved mitigation bank or by making payments to approved In-Lieu Fee (ILF) Programs that service the eight digit Hydraulic Unit Codes (HUC) zones/watersheds where the impacts will occur.

On-site restoration of wetlands and streams crossed by the Project will be achieved by returning the construction work areas to preconstruction contours and conditions at a restoration ratio of 1:1. There will be no loss of stream or wetland functions within those areas that are permanently maintained for operation of the pipeline within the permanent right-of-way. This includes a 30-foot-wide corridor (15 feet on either side of the pipeline centerline) in wetlands that will be maintained clear of trees throughout the operation of the pipeline, and palustrine forested wetlands (PFO) within this 30-foot-wide corridor will be converted and maintained as palustrine emergent wetlands (PEM) during operation of the Project. The unavoidable impact associated with this 30-foot-wide corridor will be mitigated for through the purchase of compensatory mitigation credits from an approved mitigation bank or by making payments into an approved ILF Program at the ratios presented in Table 1.

Table 1. Proposed Mitigation Ratios

Water Resource	Mitigation Ratio	On-Site Mitigation [1]	Off-Site Mitigation [2]
Streams	1.0:1	1.0:1	0
Category 1 wetlands	1.5:1	1.0:1	0.5:1
Category 2 wetlands	2.5:1	1.0:1	1.5:1
Category 3 wetlands	3.0:1	1.0:1	3.0:1

[1] On-site mitigation for all streams and wetlands.
[2] Off-site mitigation for conversion of PFO and PSS wetlands to PEM wetlands.

In Ohio, the Project is located in the Huntington, Pittsburgh, and Buffalo Districts of the U.S. Army Corps of Engineers (USACE) and will cross eleven 8-digit HUCs including the Tiffin, Lower Maumee, Cedar-Portage, Sandusky, Upper Ohio, Upper Ohio-Wheeling, Little Muskingum-Middle Island, Tuscawaras, Mohican, Walhonding, and Wills watersheds. The Stream+Wetlands Foundation (formerly known as the Ohio Wetlands Foundation) operates ILF programs or mitigation banks with primary or secondary service areas in ten of the HUCs crossed by the Project. The Nature Conservancy (TNC) has an ILF program in all eleven watersheds. The North Coast Regional Council of Park Districts (NCRCPD) operates an ILF program in the Tuscarawas watershed. Rover proposes to mitigate for unavoidable permanent impacts through the ILF programs operated by Stream+Wetlands Foundation, TNC, and NCRCPD, and Pearson Mitigation Bank, as listed in Table 2.

Table 2. Hydrologic Unit Codes and Mitigation Options by USACE District

USACE District	HUC 8-digit Code	Watershed Name	Stream+Wetlands Foundation	Service Area
Buffalo	04100006	Tiffin	TNC ILF Program	Within service area
	04100009	Lower Maumee	TNC ILF Program	Within service area
	04100010	Cedar-Portage	Stream + Wetlands Foundation Pearson Metropark Mitigation Bank	Within service area
	04100011	Sandusky	TNC ILF Program	Within Service Area
Pittsburgh	05030101	Upper Ohio	Stream + Wetlands Foundation ILF Program	Within Service Area
	05030106	Upper Ohio-Wheeling	Stream + Wetlands Foundation ILF Program	Within Service Area
Huntington	05030201	Little Muskingum-Middle Island	Stream + Wetlands Foundation ILF Program	Within Service Area
	05040001	Tuscarawas	NCRCPD Tuscarawas ILF Program	Within Service Area
	05040002	Mohican	Stream + Wetlands Foundation ILF Program	Within Service Area
	05040003	Walhonding	Stream + Wetlands Foundation ILF Program	Within Service Area
	05040005	Wills	Stream + Wetlands Foundation ILF Program	Within Service Area

7.2 ONSITE PERMITTEE-RESPONSIBLE MITIGATION

To the extent feasible, Rover has reduced its construction footprint across streams and wetlands to the minimum required to safely and efficiently install the pipelines. Minimization measures include the reduction of the construction right-of-way across forested wetlands, the placement of additional temporary workspace 50 feet from the edge of wetlands and streams, except where constrained by topographic or other features, and use of horizontal directional drilling (HDD) techniques to install the pipelines under sensitive streams and wetlands. Following construction, the construction work areas will be returned as closely as possible to pre-construction contours, construction debris will be removed, and the work areas seeded and allowed to revegetate. Permanent erosion controls will be installed and maintained until revegetation is complete.

7.2.1 Wetlands

A total of 88.89 acres of wetlands will be affected by construction, comprising 352 wetlands. Except for the permanent fill of four small wetlands totaling 0.165 acre for the Defiance Compressor Station facilities, all impacts on wetlands will be temporary and wetland functions will not be lost. Restoration measures that will be implemented following construction in wetlands include the following:

- Pre-construction wetland contours will be restored to maintain the original wetland hydrology.

- A trench breaker will be installed at the base of slopes near the boundary between the wetland and adjacent upland areas and a permanent slope breaker will be installed across the construction right-of-way at the base of slopes greater than 5 percent where the base of the slope is less than 50 feet from the wetland, or as needed to prevent sediment transport into the wetland. Sediment barriers or an earthen berm (if suitable) will also be installed along the wetland edges.
- Wetlands will be seeded with annual ryegrass at a rate of 40 pounds per acre unless standing water is present (natural revegetation) or with wetland mix. Fertilizer, lime, or mulch will not be used in wetlands unless required.

Wetland revegetation will be considered successful if all of the following criteria are satisfied: 1) the affected wetland satisfies the current federal definition for a wetland (i.e., soils, hydrology, and vegetation); 2) vegetation is at least 80 percent of either the cover documented for the wetland prior to construction, or 3) at least 80 percent of the cover in adjacent wetland areas that were not disturbed by construction; 4) if natural rather than active revegetation was used, the plant species composition is consistent with early successional wetland plant communities in the affected ecoregion; and invasive species and noxious weeds are absent, unless they are abundant in adjacent areas that were not disturbed by construction.

Wetlands will be monitored annually until wetland revegetation is successful. For any wetland where revegetation is not successful at the end of 3 years after construction, Rover will develop and implement (in consultation with a professional wetland ecologist) a remedial revegetation plan to actively revegetate wetlands. Revegetation efforts will continue annually until wetland revegetation is successful.

Temporary sediment barriers located at the boundary between wetland and adjacent upland areas will be removed after revegetation and stabilization of adjacent upland areas are judged to be successful. Routine vegetation mowing or clearing over the full width of the permanent right-of-way in wetlands will not be conducted. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees within 15 feet of the pipeline with roots that could compromise the integrity of pipeline coating may be selectively cut and removed from the permanent right-of-way. Except for the 20-foot-wide access path at selected streams (see Table 1 in Item 2), no mowing or routine vegetation maintenance will be conducted between HDD entry and exit points.

7.2.2 Streams

A total of 691 streams and ponds with a total crossing length of 3,949 feet will be temporarily affected by construction of the Project. All impacts on streams within the Project area will be temporary. Upon completion of the construction, the stream banks will be restored as nearly as possible to pre-construction contours and seeded. Restoration measures include the following:

- For open-cut crossings, stream banks will be stabilized and temporary sediment barriers will be installed within 24 hours of completing instream construction activities. Where a dry-ditch crossing is used, streambed and bank stabilization will be completed before returning flow to the waterbody channel.
- All stream banks will be returned to preconstruction contours or to a stable angle of repose as approved by the Environmental Inspector.
- Erosion control fabric or a functional equivalent will be installed on waterbody banks at the time of final bank recontouring. Synthetic monofilament mesh/netted erosion control materials will not be used in areas designated as sensitive wildlife habitat unless the product is specifically designed

to minimize harm to wildlife. Erosion control fabric will be anchored with staples or other appropriate devices.

- Unless otherwise specified by federal or state permits, use of riprap will be limited to areas where flow conditions preclude effective vegetative stabilization techniques such as seeding and erosion control fabric.
- Disturbed riparian areas will be revegetated with native species of conservation grasses, legumes, and woody species, similar in density to adjacent undisturbed lands.
- A permanent slope breaker will be installed across the construction right-of-way at the base of slopes greater than 5 percent that are less than 50 feet from the waterbody, or as needed to prevent sediment transport into the waterbody. Sediment barriers or an earthen berm (if suitable) will also be installed along the stream banks.

Streams will be monitored annually until revegetation is successful. Temporary sediment barriers will be removed after bank revegetation and stabilization of adjacent upland areas are judged to be successful. Routine vegetation mowing or clearing adjacent to waterbodies will be limited to allow a riparian strip at least 25 feet wide, as measured from the waterbody's mean high water mark, to permanently revegetate with native plant species across the entire construction right-of-way. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees that are located within 15 feet of the pipeline that have roots that could compromise the integrity of the pipeline coating may be cut and removed from the permanent right-of-way.

7.3 OFF-SITE MITIGATION

Temporary impacts on wetlands will be mitigated onsite at a 1.0:1 ratio. Permanent impacts associated with operation of the pipeline within the 30-foot-wide corridor (single pipeline) and a 50-foot-wide corridor (dual pipelines), and the fill of four small wetlands at the Defiance Compressor Station will be mitigated through off-site mitigation as summarized in Table 3.

Table 3. Proposed Off-Site Mitigation Sources by HUC and USACE District

HUC 8	Wetland Type / Category	Acres Impacted During Operation	Ratio	Credits Needed	Proposed Mitigation Source	Mitigation Credits Available From Mitigation Source [1]
USACE Buffalo District						
04100006, Tiffin						
	PEM [2]					
	1	0.165	1.5	0.25	TNC ILF Program	
	PFO					
	2	2.438	1.5	3.66	TNC ILF Program	
	Sub-Total	*2.603*		*3.91*		*20*
04100009, Lower Maumee						
	PFO					
	2	0.232	1.5	0.35	TNC ILF Program	
	Sub-Total	*0.232*		*0.35*		*20*

Table 3. Proposed Off-Site Mitigation Sources by HUC and USACE District

HUC 8	Wetland Type / Category	Acres Impacted During Operation	Ratio	Credits Needed	Proposed Mitigation Source	Mitigation Credits Available From Mitigation Source [1]
04100010, Cedar-Portage						
	PSS					
	2	0.126	1.5	0.19	Stream+Wetlands Pearson Mitigation Bank	
	Sub-Total	*0.126*		*0.19*		*20.7*
04100011, Sandusky						
	PFO					
	1	0.036	0.5	0.02	TNC ILF Program	
	2	0.983	1.5	1.47	TNC ILF Program	
	PSS					
	1	0.141	0.5	0.07	TNC ILF Program	
	Sub-Total	*1.160*		*1.56*		*16.8*
	Sub-Total – Buffalo	**4.121**		**6.01**		
				USACE Huntington District		
05030201, Little Muskingum-Middle Island						
	PFO					
	2	0.097	1.5	0.15	TNC ILF Program	
	3	0.053	3	0.16	TNC ILF Program	
	PSS					
	2	0.098	1.5	0.15	TNC ILF Program	
	Sub-Total	*0.248*		*0.46*		19.3
05040001 - Tuscarawas						
	PFO					
	1	0.201	0.5	0.1	NCRCPD Tuscarawas ILF Program	
	2	4.779	1.5	7.17	NCRCPD Tuscarawas ILF Program	
	3	0.119	3	0.36	NCRCPD Tuscarawas ILF Program	
	PSS					
	1	0.072	0.5	0.04	NCRCPD Tuscarawas ILF Program	
	2	1.588	1.5	2.38	NCRCPD Tuscarawas ILF Program	
	3	0.119	3	0.36	NCRCPD Tuscarawas ILF Program	
	Sub-Total	*6.878*		*10.41*		69.4

Table 3. Proposed Off-Site Mitigation Sources by HUC and USACE District

HUC 8	Wetland Type / Category	Acres Impacted During Operation	Ratio	Credits Needed	Proposed Mitigation Source	Mitigation Credits Available From Mitigation Source [1]
05040002 - Mohican						
	PFO					
	1	0.03	0.5	0.02	Stream + Wetlands ILF Program	
	2	1.837	1.5	2.76	Stream + Wetlands ILF Program	
	3	0.249	3	0.75	Stream + Wetlands ILF Program	
	PSS					
	2	0.039	1.5	0.06	Stream + Wetlands ILF Program	
	3	0.034	3	0.1	Stream + Wetlands ILF Program	
	Sub-Total	*2.189*		*3.69*		*56*
05040003 - Walhonding						
	PFO					
	2	0.92	1.5	1.38	Stream + Wetlands ILF Program	
	PSS					
	1	0.001	0.5	0	Stream + Wetlands ILF Program	
	Sub-Total	*0.921*		*1.38*		*56*
05040005 - Wills						
	PSS					
	1	0.003	0.5	0	Stream + Wetlands ILF Program	
	Sub-Total	*0.003*		*0*		
	Sub-Total – Huntington	**10.239**		**15.94**		56
USACE Pittsburgh District						
05030101 - Upper Ohio						
	PEM					
	3	0.041	3	0.12	Stream + Wetlands ILF Program	
	PFO					
	2	0.04	1.5	0.06	Stream + Wetlands ILF Program	
	PSS					
	2	0.133	1.5	0.2	Stream + Wetlands ILF Program	
	3	0.338	3	1.01	Stream + Wetlands ILF Program	
	Sub-Total	*0.552*		*1.39*		*22.3*

Table 3. Proposed Off-Site Mitigation Sources by HUC and USACE District

HUC 8	Wetland Type / Category	Acres Impacted During Operation	Ratio	Credits Needed	Proposed Mitigation Source	Mitigation Credits Available From Mitigation Source [1]
05030106 - Upper Ohio-Wheeling						
	PFO					
	1	0.031	0.5	0.02	Stream + Wetlands ILF Program	
	2	0.089	1.5	0.13	Stream + Wetlands ILF Program	
	PSS					
	2	0.011	1.5	0.02	Stream + Wetlands ILF Program	
	Sub-Total	*0.131*		*0.17*		*22.3*
	Sub-Total – Pittsburgh	**0.683**		**1.56**		
TOTAL - Ohio		**15.043**		**23.51**		

[1] Credit availability confirmed on September 20, 2016 with V. Messerly (Stream and Wetlands Foundation) and V. Derr (NCRCPD, Edison Woods), and on September 22, 2016 with D. Schenk (TNC).
[2] Permanent impact associated with fill of four small wetlands within the Defiance Compressor Station.

All stream impacts will be mitigated onsite as described in Section 7.2.1 at a mitigation ratio of 1.0:1.

7.4 PROTECTION IN PERPETUITY

All off-site mitigation provided by the Stream+Wetlands Foundation, NCRCPD, and TNC will be responsible to protect their mitigation sites in perpetuity. All on-site mitigation will be located on privately held lands which are not owned by Rover. Rover does not have legal standing to place lands which it does not own under any type of protective agreement, therefore on-site mitigation will not be protected in perpetuity.

7.5 MITIGATION AND IN-LIEU FEE CREDIT AVAILABILITY DOCUMENTATION

The Stream+Wetlands Foundation, NCRCPD, and TNC have provided documentation of availability of sufficient credits to mitigate for unavoidable permanent Project impacts.

Table C-2b. Mitigation Breakdown for Wetlands that Require Off-site Mitigation for the Rover Pipeline Project in the Buffalo District (LRB-2014-00613)

Watershed (HUC8)	Wetland ID	County	Wetland Type [1]	Total Wetland Acres [2]	Wetland Category Based on ORAM Score	Impact Type	Temp. Impact Acres within Construction Limits [3]	Perm. Impact Acres within Operational Limits [4]	On-Site Mitigation Ratio (xx:1)	Total On-Site Mitigation (acres)	Off-Site Mitigation Ratio (xx:1)	Total Off-Site Mitigation (acres)	Mitigation Source
04100006, Tiffin	W3H-DF-201	Defiance	PEM	0.138	1	Grading/ Earthen fill	0	0.138	1	0	1.5	0.207	TNC ILF Tiffin
04100006, Tiffin	W3H-DF-203	Defiance	PEM	0.016	1	Grading/ Earthen fill	0	0.016	1	0	1.5	0.024	TNC ILF Tiffin
04100006, Tiffin	W3H-DF-204	Defiance	PEM	0.008	1	Grading/ Earthen fill	0	0.008	1	0	1.5	0.012	TNC ILF Tiffin
04100006, Tiffin	W3H-DF-205	Defiance	PEM	0.003	1	Grading/ Earthen fill	0	0.003	1	0	1.5	0.005	TNC ILF Tiffin
04100011, Sandusky	W4H-CR-245	Crawford	PFO	0.51	2	Permanent Conversion PFO to PEM	0.222	0.288	1	0.51	1.5	0.432	TNC ILF Sandusky
04100011, Sandusky	W8H-SE-156	Seneca	PFO	0.355	2	Permanent Conversion PFO to PEM	0.123	0.232	1	0.355	1.5	0.348	TNC ILF Sandusky
04100011, Sandusky	W3H-SE-108	Seneca	PSS	0.51	1	Permanent conversion PSS to PEM	0.369	0.141	1	0.51	0.5	0.071	TNC ILF Sandusky
04100011, Sandusky	W7H-SE-220	Seneca	PFO	0.043	2	Permanent Conversion PFO to PEM	0.043	0	1	0.043	1.5	0	TNC ILF Sandusky
04100011, Sandusky	W2H-SE-234	Seneca	PFO	0.029	2	Permanent Conversion PFO to PEM	0	0.029	1	0.029	1.5	0.044	TNC ILF Sandusky
04100011, Sandusky	W7H-SE-225	Seneca	PFO	0.106	2	Permanent Conversion PFO to PEM	0.053	0.053	1	0.106	1.5	0.08	TNC ILF Sansusky
04100011, Sandusky	W3H-SE-116	Seneca	PFO	0.023	2	Permanent Conversion PFO to PEM	0.023	0	1	0.023	1.5	0	TNC ILF Sandusky
04100011, Sandusky	W1M-SE-104	Seneca	PFO	0.054	2	Permanent Conversion PFO to PEM	0.054	0	1	0.054	1.5	0	TNC ILF Sandusky
04100011, Sandusky	W1M-SE-127	Seneca	PFO	0.081	1	Permanent Conversion PFO to PEM	0.045	0.036	1	0.081	0.5	0.018	TNC ILF Sandusky
04100011, Sandusky	W1M-SE-119	Seneca	PFO	0.484	2	Permanent Conversion PFO to PEM	0.272	0.212	1	0.484	1.5	0.318	TNC ILF Sandusky
04100011, Sandusky	W1M-SE-115	Seneca	PFO	0.152	2	Permanent Conversion PFO to PEM	0.053	0.099	1	0.152	1.5	0.149	TNC ILF Sandusky
04100011, Sandusky	W8H-SE-172	Seneca	PFO	0.129	2	Permanent Conversion PFO to PEM	0.059	0.07	1	0.129	1.5	0.105	TNC ILF Sandusky
04100010, Cedar-Portage	W8H-HA-218	Hancock	PSS	0.3	2	Permanent conversion PSS to PEM	0.174	0.126	1	0.3	1.5	0.189	Pearson Wetland Mitigation Bank

Table C-2b. Mitigation Breakdown for Wetlands that Require Off-site Mitigation for the Rover Pipeline Project in the Buffalo District (LRB-2014-00613)

Watershed (HUC8)	Wetland ID	County	Wetland Type [1]	Total Wetland Acres [2]	Wetland Category Based on ORAM Score	Impact Type	Temp. Impact Acres within Construction Limits [3]	Perm. Impact Acres within Operational Limits [4]	On-Site Mitigation Ratio (xx:1)	Total On-Site Mitigation (acres)	Off-Site Mitigation Ratio (xx:1)	Total Off-Site Mitigation (acres)	Mitigation Source
04100009, Lower Maumee	W8H-HE-143	Henry	PFO	0.398	2	Permanent Conversion PFO to PEM	0.166	0.232	1	0.398	1.5	0.348	TNC ILF
04100009, Lower Maumee	W4H-HE-630	Henry	PFO	0.009	2	Permanent Conversion PFO to PEM	0.009	0	1	0.009	1.5	0	TNC ILF Maumee
04100009, Lower Maumee	W8H-HE-123	Henry	PFO	0.01	2	Permanent Conversion PFO to PEM	0.01	0	1	0.01	1.5	0	TNC ILF Maumee
04100009, Lower Maumee	W8H-HE-117	Henry	PFO	0.055	3	Permanent Conversion PFO to PEM	0.055	0	1	0.055	3.0	0	TNC ILF Maumee
04100006, Tiffin	W8H-DE-101	Defiance	PFO	1.304	2	Permanent Conversion PFO to PEM	0.797	0.507	1	1.304	1.5	0.761	TNC ILF Tiffin
04100006, Tiffin	W3H-DF-102	Defiance	PFO	0.575	2	Permanent Conversion PFO to PEM	0.349	0.226	1	0.575	1.5	0.339	TNC ILF Tiffin
04100006, Tiffin	W1H-DF-118	Defiance	PFO	0.736	2	Permanent Conversion PFO to PEM	0.438	0.298	1	0.736	1.5	0.447	TNC ILF Tiffin
04100006, Tiffin	W4H-DF-229	Defiance	PFO	0.861	2	Permanent Conversion PFO to PEM	0.62	0.241	1	0.861	1.5	0.362	TNC ILF Tiffin
04100006, Tiffin	W3H-DF-104	Defiance	PFO	0.149	2	Permanent Conversion PFO to PEM	0.081	0.068	1	0.149	1.5	0.102	TNC ILF Tiffin
04100006, Tiffin	W1H-DF-121	Defiance	PFO	0.46	2	Permanent Conversion PFO to PEM	0.278	0.182	1	0.46	1.5	0.273	TNC ILF Tiffin
04100006, Tiffin	W3H-HN-130	Henry	PFO	1.206	2	Permanent Conversion PFO to PEM	0.722	0.484	1	1.206	1.5	0.726	TNC ILF Tiffin
04100006, Tiffin	W4H-HN-228	Henry	PFO	1.082	2	Permanent Conversion PFO to PEM	0.65	0.432	1	1.082	1.5	0.648	TNC ILF Tiffin
04100006, Tiffin	W3H-FU-237	Fulton	PFO	0.023	2	Permanent Conversion PFO to PEM	0.023	0	1	0.023	1.5	0	TNC ILF Tiffin
			TOTALS	2.641	-	-	1.316	1.325	-	2.476	-	6.02	

[1] PEM = Palustrine emergent; PSS = Palustrine scrub-shrub; PFO = Palustrine forest

[2] Total acres affected by construction.

[3] Total acres within the temporary workspace.

[4] Total acres converted to PEM for maintenance of the operational easement consisting of 30 feet for a single pipeline and 50 feet for two pipelines.

Table C2b. Mitigation Breakdown for Wetlands Crossed by the Rover Pipeline Project in the Buffalo District (LRB-2014-00613)

Watershed (HUC8)	Wetland ID	County	Wetland Type [1]	Total Wetland Acres [2]	Wetland Category Based on ORAM Score	Impact Type	Temp. Impact Acres within Construction Limits [3]	Perm. Impact Acres within Operational Limits [4]	On-Site Mitigation Ratio (xx:1)	Total On-Site Mitigation (acres)	Off-Site Mitigation Ratio (xx:1)	Total Off-Site Mitigation (acres)	Mitigation Source
04100006, Tiffin	W3H-DF-104	Defiance	PFO	0.149	2	Permanent Conversion PFO to PEM	0.081	0.068	1	0.149	1.5	0.102	TNC
04100006, Tiffin	W1H-DF-121	Defiance	PFO	0.46	2	Permanent Conversion PFO to PEM	0.278	0.182	1	0.46	1.5	0.273	TNC
04100006, Tiffin	W3H-HN-130	Henry	PFO	1.206	2	Permanent Conversion PFO to PEM	0.722	0.484	1	1.206	1.5	0.726	TNC
04100006, Tiffin	W4H-HN-228	Henry	PFO	1.082	2	Permanent Conversion PFO to PEM	0.65	0.432	1	1.082	1.5	0.648	TNC
04100006, Tiffin	W3H-FU-237	Fulton	PFO	0.023	2	Permanent Conversion PFO to PEM	0.023	0	1	0.023	1.5	0	TNC
			TOTALS	9.823	-	-	5.702	4.121	-	9.823	-	6.01	

[1] PEM = Palustrine emergent; PSS = Palustrine scrub-shrub; PFO = Palustrine forest
[2] Total acres affected by construction.
[3] Total acres within the temporary workspace.
[4] Total acres converted to PEM for maintenance of the operational easement consisting of 30 feet for a single pipeline and 50 feet for two pipelines.

Table C-2C Restored PEM Wetlands to be Restored On-Site

Watershed (HUC8)	Wetland ID	County	*Crossing Method*	Acres Affected During Construction {Temporary) 1	Acres Affected (During Operation) 2	Total Restored PEM On-Site
04100011, Sandusky	W4H-CR-159	Crawford	Open Cut	0.719	0.196	0.915
04100011, Sandusky	USB-CR-1000	Crawford	Open Cut	0.302	0.168	0.47
04100011, Sandusky	W7H-CR-160	Crawford	Open Cut	0.11	0.059	0.169
04100011, Sandusky	W6H-CR-1 14	Crawford	Open Cut	0.015	0.008	0.023
04100011, Sandusky	U5B-CR-1001	Crawford	Open Cut	0.354	0.016	0.37
04100011, Sandusky	USB-CR-1002	Crawford	Open Cut	0.247	0.111	0.358
04100011, Sandusky	U5B-CR-1003	Crawford	Open Cut	0.116	0.039	0.155
04100011, Sandusky	W4H-CR-243	Crawford	Open Cut	0.075	0.031	0.106
04100011, Sandusky	W4H-CR-165	Crawford	Open Cut	0.002	0.012	0.014
04100011, Sandusky	W3H-CR-107	Crawford	Open Cut	0.013	0.052	0.065
04100011, Sandusky	W8H-SE-158	Seneca	N/A	0.075	0	0.075
04100011, Sandusky	W7H-SE-217	Seneca	N/A	0.094	0.002	0.096
04100011, Sandusky	W7H-SE-219	Seneca	Open Cut	0.077	0.036	0.113
04100011, Sandusky	W7H-SE-224	Seneca	Open Cut	0.094	0.114	0.208
04100011, Sandusky	W3H-SE-112	Seneca	N/A	0.016	0	0.016
04100011, Sandusky	W7H-SE-229	Seneca	Open Cut	0.019	0.004	0.023
04100010, Cedar-Portage	W3H-HA-118	Hancock	Open Cut	0.022	0.011	0.033
04100010, Cedar-Portage	W3H-HA-117	Hancock	Open Cut	0.012	0.006	0.018
04100006, Tiffin	W3H-DF-202	Definace	Open Cut	0.091	0.039	0.13
04100006, Tiffin	W1H-DF-117	Definace	Open Cut	0.035	0.008	0.043
04100006, Tiffin	W3H-DF-103	Definace	Open Cut	0.028	0.007	0.035
04100006, Tiffin	W1H-DF-122	Definace	Open Cut	0.141	0.101	0.242
04100006, Tiffin	W1H-DF-120	Definace	Open Cut	0.024	0.006	0.03
04100006, Tiffin	W1H-HE-123	Henry	Open Cut	0.016	0.004	0.02
04100006, Tiffin	USB-FU-1000	Fulton	Open Cut	0.065	0.047	0.112
04100006, Tiffin	W4H-FU-221	Fulton	Open Cut	0.033	0.008	0.041
04100006, Tiffin	W2H-FU-112	Fulton	Open Cut	0.039	0.009	0.048
04100006, Tiffin	W4H-FU-216	Fulton	Open Cut	0.028	0.007	0.035
			Totals	2.862	1.101	3.963

1- Total Acres within the Temporary Work Space

2-Total Acres in the Operational Work Space