

Appendix M – Water Features by Alternative Alignment

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Loop 9, Segment A
Summary of Waters of the U.S. by Alternative Alignment

Feature Name	Wetlands		Open Waters		Streams		Totals	
	AC	LF	AC	LF	AC	LF	AC	LF
Alternative 1	2.16	N/A	0.78	N/A	3.07	15,250	6.01	15,250
Alternative 1 Mod A	2.04	N/A	1.59	N/A	3.01	14,760	6.64	14,760
Alternative 1 Mod B	2.78	N/A	1.40	N/A	3.02	14,881	7.20	14,881
Alternative 1 Mod C	2.16	N/A	0.78	N/A	3.58	15,521	6.52	15,521
Alternative 1 Mod A & C	2.04	N/A	1.59	N/A	3.52	15,031	7.15	15,031
Alternative 1 Mod B & C	2.78	N/A	1.40	N/A	3.53	15,152	7.71	15,152
Alternative 2	2.23	N/A	3.39	N/A	3.01	14,554	8.63	14,554
Alternative 2 Mod A	2.12	N/A	4.20	N/A	2.94	14,063	9.26	14,063
Alternative 2 Mod B	2.85	N/A	4.01	N/A	2.96	14,185	9.82	14,185
Alternative 2 Mod C	2.23	N/A	3.39	N/A	3.52	14,825	9.14	14,825
Alternative 2 Mod A & C	2.12	N/A	4.20	N/A	3.45	14,334	9.77	14,334
Alternative 2 Mod B & C	2.85	N/A	4.01	N/A	3.47	14,456	10.33	14,456
Alternative 3	3.14	N/A	2.48	N/A	3.10	14,435	8.73	14,435
Alternative 3 Mod A	3.03	N/A	3.29	N/A	3.04	13,944	9.36	13,944
Alternative 3 Mod B	3.76	N/A	3.10	N/A	3.05	14,066	9.91	14,066
Alternative 3 Mod C	3.14	N/A	2.48	N/A	3.61	14,706	9.24	14,706
Alternative 3 Mod D	3.75	N/A	2.49	N/A	3.11	14,385	9.35	14,385
Alternative 3 Mod A & C	3.03	N/A	3.29	N/A	3.55	14,215	9.87	14,215
Alternative 3 Mod A & D	3.63	N/A	3.31	N/A	3.04	13,895	9.98	13,895
Alternative 3 Mod A C & D	3.63	N/A	3.31	N/A	3.55	14,166	10.49	14,166
Alternative 3 Mod B & C	3.76	N/A	3.10	N/A	3.56	14,336	10.42	14,336
Alternative 3 Mod B & D	4.36	N/A	3.11	N/A	3.06	14,016	10.53	14,016
Alternative 3 Mod B C & D	4.36	N/A	3.11	N/A	3.57	14,287	11.04	14,287
Alternative 3 Mod C & D	3.75	N/A	2.49	N/A	3.62	14,656	9.86	14,656
Alternative 4	2.09	N/A	1.16	N/A	2.41	13,768	5.66	13,768
Alternative 4 Mod A	1.97	N/A	1.98	N/A	2.34	13,278	6.29	13,278
Alternative 4 Mod B	2.71	N/A	1.78	N/A	2.36	13,399	6.84	13,399
Alternative 4 Mod C	2.09	N/A	1.16	N/A	2.92	14,039	6.17	14,039
Alternative 4 Mod A & C	1.97	N/A	1.98	N/A	2.85	13,549	6.80	13,549
Alternative 4 Mod B & C	2.71	N/A	1.78	N/A	2.87	13,670	7.35	13,670

**Loop 9, Segment A
Summary of Waters of the U.S. - Alternative 1**

Feature Name	Alternative 1		Alternative 1 Mod A		Alternative 1 Mod B		Alternative 1 Mod C		Alternative 1 Mod A & C		Alternative 1 Mod B & C	
Stream 5#	-	-	-	-	-	-	-	-	-	-	-	-
Stream 6	0.211	1535	0.211	1535	0.211	1535	0.211	1535	0.211	1535	0.211	1535
Stream 7	0.080	576	0.080	576	0.080	576	0.080	576	0.080	576	0.080	576
Stream 8*	0.124	900	0.124	900	0.124	900	0.124	900	0.124	900	0.124	900
Stream 9*	0.075	541	0.075	541	0.075	541	0.075	541	0.075	541	0.075	541
Stream 10	0.051	372	0.051	372	0.051	372	0.051	372	0.051	372	0.051	372
Stream 11*	0.585	897	0.585	897	0.585	897	0.585	897	0.585	897	0.585	897
Stream 12*#	0.328	2448	0.328	2448	0.328	2448	0.328	2448	0.328	2448	0.328	2448
Stream 13*	0.059	425	0.059	425	0.059	425	0.059	425	0.059	425	0.059	425
Stream 14*	0.021	154	0.021	154	0.021	154	0.021	154	0.021	154	0.021	154
Stream 15	0.551	1235	0.551	1235	0.551	1235	0.644	1492	0.644	1492	0.644	1492
Stream 16	0.068	520	0.068	520	0.068	520	0.033	252	0.033	252	0.033	252
Stream 17	0.245	337	0.245	337	0.245	337	0.753	1028	0.753	1028	0.753	1028
Stream 18	0.093	700	0.093	700	0.093	700	0.061	468	0.061	468	0.061	468
Stream 19*	0.024	176	0.024	176	0.024	176	-	-	-	-	-	-
Stream 20*	0.061	446	0.061	446	0.061	446	0.061	446	0.061	446	0.061	446
Stream 21#	0.086	628	0.078	566	0.078	566	0.086	628	0.078	566	0.078	566
Stream 22	0.020	150	0.012	89	0.012	89	0.020	150	0.012	89	0.012	89
Stream 23	0.087	635	0.085	618	0.085	618	0.087	635	0.085	618	0.085	618
Stream 24*	0.093	684	0.093	685	0.094	686	0.093	684	0.093	685	0.094	686
Stream 25*#	0.093	680	0.045	327	0.062	448	0.093	680	0.045	327	0.062	448
Stream 26	-	-	-	-	-	-	-	-	-	-	-	-
Stream 27	-	-	-	-	-	-	-	-	-	-	-	-
Stream 28	-	-	-	-	-	-	-	-	-	-	-	-
Stream 29*	-	-	-	-	-	-	-	-	-	-	-	-
Stream 30	-	-	-	-	-	-	-	-	-	-	-	-
Total Wetland	2.16	N/A	2.04	N/A	2.78	N/A	2.16	N/A	2.04	N/A	2.78	N/A
Total Open Water	0.78	N/A	1.59	N/A	1.40	N/A	0.78	N/A	1.59	N/A	1.40	N/A
Total Stream	3.07	15250	3.01	14760	3.02	14881	3.58	15521	3.52	15031	3.53	15152

* Portions of the feature were desktop delineated based on lack of field access at the time of the site visit

Portions of the stream feature are partially culverted through the project area

**Loop 9, Segment A
Summary of Waters of the U.S. - Alternative 2**

Feature Name	Alternative 2		Alternative 2 Mod A		Alternative 2 Mod B		Alternative 2 Mod C		Alternative 2 Mod A & C		Alternative 2 Mod B & C	
Stream 7	-	-	-	-	-	-			-	-	-	-
Stream 8*	-	-	-	-	-	-			-	-	-	-
Stream 9*	0.055	401	0.055	401	0.055	401	0.055	401	0.055	401	0.055	401
Stream 10	0.041	302	0.041	302	0.041	302	0.041	302	0.041	302	0.041	302
Stream 11*	0.633	982	0.633	982	0.633	982	0.633	982	0.633	982	0.633	982
Stream 12*#	0.328	2448	0.328	2448	0.328	2448	0.328	2448	0.328	2448	0.328	2448
Stream 13*	0.059	425	0.059	425	0.059	425	0.059	425	0.059	425	0.059	425
Stream 14*	0.021	154	0.021	154	0.021	154	0.021	154	0.021	154	0.021	154
Stream 15	0.551	1235	0.551	1235	0.551	1235	0.644	1492	0.644	1492	0.644	1492
Stream 16	0.068	521	0.068	521	0.068	521	0.033	252	0.033	252	0.033	252
Stream 17	0.245	337	0.245	337	0.245	337	0.753	1028	0.753	1028	0.753	1028
Stream 18	0.093	701	0.093	701	0.093	701	0.061	468	0.061	468	0.061	468
Stream 19*	0.024	176	0.024	176	0.024	176	-	-	-	-	-	-
Stream 20*	0.061	446	0.061	446	0.061	446	0.061	446	0.061	446	0.061	446
Stream 21#	0.086	628	0.078	566	0.078	566	0.086	628	0.078	566	0.078	566
Stream 22	0.020	150	0.012	89	0.012	89	0.020	150	0.012	89	0.012	89
Stream 23	0.087	635	0.085	618	0.085	618	0.087	635	0.085	618	0.085	618
Stream 24*	0.093	684	0.093	685	0.094	686	0.093	684	0.093	685	0.094	686
Stream 25*#	0.093	680	0.045	327	0.062	448	0.093	680	0.045	327	0.062	448
Stream 26	-	-	-	-	-	-	-	-	-	-	-	-
Stream 27	-	-	-	-	-	-	-	-	-	-	-	-
Stream 28	-	-	-	-	-	-	-	-	-	-	-	-
Stream 29*	-	-	-	-	-	-	-	-	-	-	-	-
Stream 30	-	-	-	-	-	-	-	-	-	-	-	-
Total Wetland	2.23	N/A	2.12	N/A	2.85	N/A	2.23	N/A	2.12	N/A	2.85	N/A
Total Open Water	3.39	N/A	4.20	N/A	4.01	N/A	3.39	N/A	4.20	N/A	4.01	N/A
Total Stream	3.01	14554	2.94	14063	2.96	14185	3.52	14825	3.45	14334	3.47	14456

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**Loop 9, Segment A
Summary of Waters of the U.S. - Alternative 3**

Feature Name	Alternative 3		Alternative 3 Mod A		Alternative 3 Mod B		Alternative 3 Mod C		Alternative 3 Mod D		Alternative 3 Mod A & C		Alternative 3 Mod A & D		Alternative 3 Mod A, C & D		Alternative 3 Mod B & C		Alternative 3 Mod B & D		Alternative 3 Mod B, C, & D		Alternative 3 Mod C & D			
Stream 28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Stream 29*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Stream 30	0.101	731	0.101	731	0.101	731	0.101	731	0.121	875	0.101	731	0.121	875	0.121	875	0.101	731	0.121	875	0.121	875	0.121	875	0.121	875
Total Wetland	3.14	N/A	3.03	N/A	3.76	N/A	3.14	N/A	3.75	N/A	3.03	N/A	3.63	N/A	3.63	N/A	3.76	N/A	4.36	N/A	4.36	N/A	3.75	N/A	3.75	N/A
Total Open Water	2.48	N/A	3.29	N/A	3.10	N/A	2.48	N/A	2.49	N/A	3.29	N/A	3.31	N/A	3.31	N/A	3.10	N/A	3.11	N/A	3.11	N/A	2.49	N/A	2.49	N/A
Total Stream	3.10	14435	3.04	13944	3.05	14066	3.61	14706	3.11	14385	3.55	14215	3.04	13895	3.55	14166	3.56	14336	3.06	14016	3.57	14287	3.62	14656	3.62	14656

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**Loop 9, Segment A
Summary of Waters of the U.S. - Alternative 4**

Feature Name	Alternative 4		Alternative 4 Mod A		Alternative 4 Mod B		Alternative 4 Mod C		Alternative 4 Mod A & C		Alternative 4 Mod B & C	
Stream 7	-	-	-	-	-	-	-	-	-	-	-	-
Stream 8*	-	-	-	-	-	-	-	-	-	-	-	-
Stream 9*	-	-	-	-	-	-	-	-	-	-	-	-
Stream 10	-	-	-	-	-	-	-	-	-	-	-	-
Stream 11*	-	-	-	-	-	-	-	-	-	-	-	-
Stream 12*#	0.352	2626	0.352	2626	0.352	2626	0.352	2626	0.352	2626	0.352	2626
Stream 13*	0.059	425	0.059	425	0.059	425	0.059	425	0.059	425	0.059	425
Stream 14*	0.021	154	0.021	154	0.021	154	0.021	154	0.021	154	0.021	154
Stream 15	0.551	1235	0.551	1235	0.551	1235	0.644	1492	0.644	1492	0.644	1492
Stream 16	0.068	521	0.068	521	0.068	521	0.033	252	0.033	252	0.033	252
Stream 17	0.245	337	0.245	337	0.245	337	0.753	1028	0.753	1028	0.753	1028
Stream 18	0.093	701	0.093	701	0.093	701	0.061	468	0.061	468	0.061	468
Stream 19*	0.024	176	0.024	176	0.024	176	-	-	-	-	-	-
Stream 20*	0.061	446	0.061	446	0.061	446	0.061	446	0.061	446	0.061	446
Stream 21#	0.086	628	0.078	566	0.078	566	0.086	628	0.078	566	0.078	566
Stream 22	0.020	150	0.012	89	0.012	89	0.020	150	0.012	89	0.012	89
Stream 23	0.087	635	0.085	618	0.085	618	0.087	635	0.085	618	0.085	618
Stream 24*	0.093	684	0.093	685	0.094	686	0.093	684	0.093	685	0.094	686
Stream 25*#	0.093	680	0.045	327	0.062	448	0.093	680	0.045	327	0.062	448
Stream 26	0.129	947	0.129	947	0.129	947	0.129	947	0.129	947	0.129	947
Stream 27	0.093	675	0.093	675	0.093	675	0.093	675	0.093	675	0.093	675
Stream 28	0.130	947	0.130	947	0.130	947	0.130	947	0.130	947	0.130	947
Stream 29*	0.082	593	0.082	593	0.082	593	0.082	593	0.082	593	0.082	593
Stream 30	-	-	-	-	-	-	-	-	-	-	-	-
Total Wetland	2.09	N/A	1.97	N/A	2.71	N/A	2.09	N/A	1.97	N/A	2.71	N/A
Total Open Water	1.16	N/A	1.98	N/A	1.78	N/A	1.16	N/A	1.98	N/A	1.78	N/A
Total Stream	2.41	13768	2.34	13278	2.36	13399	2.92	14039	2.85	13549	2.87	13670

* Portions of the feature were desktop delineated based on lack of field access at the time of the site visit

Portions of the stream feature are partially culverted through the project area