



APPENDIX A: MITIGATION SUMMARY TABLES

Table A-1a. Maryland Wetland Mitigation Summary (Alternatives 8 and 9)

Watershed	Wetland Impacts (AC)				POW Impacts (AC)	Off-Site Mitigation Requirement (AC)			Total Proposed Off-Site Mitigation	
	PEM	PFO	PSS	Total		PEM (1:1)	PSS/PFO (2:1)	Total	Sites	Credit (AC)
Middle Potomac-Anacostia-Occoquan	2.05	7.65	0.41	10.11	0.79*	2.41	16.12	18.53	4	50.70
Middle Potomac-Catoctin	0.90	0.68	0.01	1.59	0.00	0.90	1.38	2.28	4	20.17
Patuxent	0.92	3.05	0.67	4.64	0.69	1.61	7.44	9.05	1	9.18
Total	3.87	11.38	1.09	16.34	1.48	4.92	24.94	29.86	9	80.05

*0.43 acres of POW in the Middle Potomac-Anacostia-Occoquan watershed will remain following construction and are therefore not included in the PEM mitigation requirement.

Table A-2a. Maryland Stream Mitigation Summary (Alternatives 8 and 9)

Watershed	Total Stream Impacts (LF)	Impacts Not Requiring Mitigation (LF)			Total Mitigation Requirement (LF)	Proposed On-Site Stream Mitigation (LF)	Off-Site Mitigation Requirement (LF)	Total Proposed Off-Site Mitigation	
		Existing Bridges	Existing Culverts	Total				Sites	Credit (LF)
Middle Potomac-Anacostia-Occoquan									
Perennial	43,377	636	16,183	16,819	26,558	14,479	12,079		
Intermittent	45,623	32	14,604	14,636	30,987	24,243	6,744	7	42,321
Ephemeral	7,273	46	1,414	1,460	5,813	4,829	984		
Total	96,273	714	32,201	32,915	63,358	43,551	19,807		
Middle Potomac-Catoctin									
Perennial	23,371	381	6,175	6,556	16,815	4,165	12,650		
Intermittent	9,246	543	3,899	4,442	4,804	3,130	1,674	5	18,412
Ephemeral	950	0	34	34	916	506	410		
Total	33,567	924	10,108	11,032	22,535	7,801	14,734		
Patuxent									
Perennial	10,554	314	2,900	3,214	7,340	4,100	3,240		
Intermittent	9,606	31	5,431	5,462	4,144	2,578	1,566	2	18,713
Ephemeral	2,573	0	0	0	2,573	2,062	511		
Total	22,733	345	8,331	8,676	14,057	8,740	5,317		
Total	152,573	1,983	50,640	52,623	99,950	60,092	39,858	14	79,446

Table A-3a. Virginia Mitigation Summary (Alternatives 8 and 9)

Watershed	Resource Type	Impacts	Credit Requirement	Proposed Bank Credits
Middle Potomac-Catoctin	Wetlands (AC)	0.05	0.10	0.10
	Waterways (LF)	3,349	729	729

Table A-1b. Maryland Wetland Mitigation Summary (Alternative 9M)

Watershed	Wetland Impacts (AC)				POW Impacts (AC)	Off-Site Mitigation Requirement (AC)			Total Proposed Off-Site Mitigation	
	PEM	PFO	PSS	Total		PEM (1:1)	PSS/PFO (2:1)	Total	Sites	Credit (AC)
Middle Potomac-Anacostia-Occoquan	2.05	7.39	0.41	9.85	0.79*	2.41	15.60	18.01	4	50.70
Middle Potomac-Catoctin	0.90	0.68	0.01	1.59	0.00	0.90	1.38	2.28	4	20.17
Patuxent	0.92	3.05	0.67	4.64	0.69	1.61	7.44	9.05	1	9.18
Total	3.87	11.12	1.09	16.08	1.48	4.92	24.42	29.34	9	80.05

*0.43 acres of POW in the Middle Potomac-Anacostia-Occoquan watershed will remain following construction and are therefore not included in the PEM mitigation requirement.

Table A-2b. Maryland Stream Mitigation Summary (Alternative 9M)

Watershed	Total Stream Impacts (LF)	Impacts Not Requiring Mitigation (LF)			Total Mitigation Requirement (LF)	Proposed On-Site Stream Mitigation (LF)	Off-Site Mitigation Requirement (LF)	Total Proposed Off-Site Mitigation	
		Existing Bridges	Existing Culverts	Total				Sites	Credit (LF)
Middle Potomac-Anacostia-Occoquan									
Perennial	43,133	636	16,156	16,792	26,341	14,347	11,994		
Intermittent	45,299	32	14,432	14,464	30,835	24,092	6,743	7	42,321
Ephemeral	7,241	46	1,414	1,460	5,781	4,795	986		
Total	95,673	714	32,002	32,716	62,957	43,234	19,723		
Middle Potomac-Catoctin									
Perennial	23,328	381	6,175	6,556	16,772	4,163	12,609		
Intermittent	9,196	543	3,899	4,442	4,754	3,188	1,566	5	18,412
Ephemeral	950	0	34	34	916	512	404		
Total	33,474	924	10,108	11,032	22,442	7,863	14,579		
Patuxent									
Perennial	10,554	314	2,900	3,214	7,340	4,100	3,240		
Intermittent	9,606	31	5,431	5,462	4,144	2,578	1,566	2	18,713
Ephemeral	2,573	0	0	0	2,573	2,062	511		
Total	22,733	345	8,331	8,676	14,057	8,740	5,317		
Total	151,880	1,983	50,441	52,424	99,456	59,837	39,619	14	79,446

Table A-3b. Virginia Mitigation Summary (Alternative 9M)

Watershed	Resource Type	Impacts	Credit Requirement	Proposed Bank Credits
Middle Potomac-Catoctin	Wetlands (AC)	0.05	0.10	0.10
	Waterways (LF)	3,349	729	729

Table A-1c. Maryland Wetland Mitigation Summary (Alternative 10)

Watershed	Wetland Impacts (AC)				POW Impacts (AC)	Off-Site Mitigation Requirement (AC)			Total Proposed Off-Site Mitigation	
	PEM	PFO	PSS	Total		PEM (1:1)	PSS/PFO (2:1)	Total	Sites	Credit (AC)
Middle Potomac-Anacostia-Occoquan	2.05	7.65	0.41	10.11	1.19*	2.41	16.12	18.53	4	50.70
Middle Potomac-Catoctin	1.03	0.73	0.01	1.77	0.00	1.03	1.48	2.51	4	20.17
Patuxent	0.92	3.05	0.67	4.64	0.29	1.61	7.44	9.05	1	9.18
Total	4.00	11.43	1.09	16.52	1.48	5.05	25.04	30.09	9	80.05

*0.43 acres of POW in the Middle Potomac-Anacostia-Occoquan watershed will remain following construction and are therefore not included in the PEM mitigation requirement.

Table A-2c. Maryland Stream Mitigation Summary (Alternative 10)

Watershed	Total Stream Impacts (LF)	Impacts Not Requiring Mitigation (LF)			Total Mitigation Requirement (LF)	Proposed On-Site Stream Mitigation (LF)	Off-Site Mitigation Requirement (LF)	Total Proposed Off-Site Mitigation	
		Existing Bridges	Existing Culverts	Total				Sites	Credit (LF)
Middle Potomac-Anacostia-Occoquan									
Perennial	43,648	636	16,183	16,819	26,829	14,526	12,303		
Intermittent	45,633	32	14,604	14,636	30,997	24,239	6,758	7	42,321
Ephemeral	7,273	46	1,414	1,460	5,813	4,829	984		
Total	96,554	714	32,201	32,915	63,639	43,594	20,045		
Middle Potomac-Catoctin									
Perennial	23,904	381	6,205	6,586	17,318	4,394	12,924		
Intermittent	9,462	543	3,899	4,442	5,020	3,271	1,749	5	18,412
Ephemeral	982	0	34	34	948	487	461		
Total	34,348	924	10,138	11,062	23,286	8,152	15,134		
Patuxent									
Perennial	10,554	314	2,900	3,214	7,340	4,100	3,240		
Intermittent	9,606	31	5,431	5,462	4,144	2,578	1,566	2	18,713
Ephemeral	2,573	0	0	0	2,573	2,062	511		
Total	22,733	345	8,331	8,676	14,057	8,740	5,317		
Total	153,635	1,983	50,670	52,653	100,982	60,486	40,496	14	79,446

Table A-3c. Virginia Mitigation Summary (Alternative 10)

Watershed	Resource Type	Impacts	Credit Requirement	Proposed Bank Credits
Middle Potomac-Catoctin	Wetlands (AC)	0.05	0.10	0.10
	Waterways (LF)	3,349	729	729

Table A-1d. Maryland Wetland Mitigation Summary (Alternative 13B)

Watershed	Wetland Impacts (AC)				POW Impacts (AC)	Off-Site Mitigation Requirement (AC)			Total Proposed Off-Site Mitigation	
	PEM	PFO	PSS	Total		PEM (1:1)	PSS/PFO (2:1)	Total	Sites	Credit (AC)
Middle Potomac-Anacostia-Occoquan	2.05	7.65	0.41	10.11	0.79*	2.41	16.12	18.53	4	50.70
Middle Potomac-Catoctin	0.89	0.66	0.01	1.56	0.00	0.89	1.34	2.23	4	20.17
Patuxent	0.92	3.05	0.67	4.64	0.69	1.61	7.44	9.05	1	9.18
Total	3.86	11.36	1.09	16.31	1.48	4.91	24.90	29.81	9	80.05

*0.43 acres of POW in the Middle Potomac-Anacostia-Occoquan watershed will remain following construction and are therefore not included in the PEM mitigation requirement.

Table A-2d. Maryland Stream Mitigation Summary (Alternative 13B)

Watershed	Total Stream Impacts (LF)	Impacts Not Requiring Mitigation (LF)			Total Mitigation Requirement (LF)	Proposed On-Site Stream Mitigation (LF)	Off-Site Mitigation Requirement (LF)	Total Proposed Off-Site Mitigation	
		Existing Bridges	Existing Culverts	Total				Sites	Credit (LF)
Middle Potomac-Anacostia-Occoquan									
Perennial	43,364	636	16,183	16,819	26,545	14,479	12,066		
Intermittent	45,623	32	14,604	14,636	30,987	24,167	6,820	7	42,321
Ephemeral	7,273	46	1,414	1,460	5,813	4,829	984		
Total	96,260	714	32,201	32,915	63,345	43,475	19,870		
Middle Potomac-Catoctin									
Perennial	23,351	381	6,173	6,554	16,797	4,225	12,572		
Intermittent	9,179	543	3,899	4,442	4,737	3,137	1,600	5	18,412
Ephemeral	950	0	34	34	916	507	409		
Total	33,480	924	10,106	11,030	22,450	7,869	14,581		
Patuxent									
Perennial	10,554	314	2,900	3,214	7,340	4,100	3,240		
Intermittent	9,606	31	5,431	5,462	4,144	2,578	1,566	2	18,713
Ephemeral	2,573	0	0	0	2,573	2,062	511		
Total	22,733	345	8,331	8,676	14,057	8,740	5,317		
Total	152,473	1,983	50,638	52,621	99,852	60,084	39,768	14	79,446

Table A-3d. Virginia Mitigation Summary (Alternative 13B)

Watershed	Resource Type	Impacts	Credit Requirement	Proposed Bank Credits
Middle Potomac-Catoctin	Wetlands (AC)	0.05	0.10	0.10
	Waterways (LF)	3,349	729	729

Table A-1e. Maryland Wetland Mitigation Summary (Alternative 13C)

Watershed	Wetland Impacts (AC)				POW Impacts (AC)	Off-Site Mitigation Requirement (AC)			Total Proposed Off-Site Mitigation	
	PEM	PFO	PSS	Total		PEM (1:1)	PSS/PFO (2:1)	Total	Sites	Credit (AC)
Middle Potomac-Anacostia-Occoquan	2.05	7.65	0.41	10.11	0.79*	2.41	16.12	18.53	4	50.70
Middle Potomac-Catoctin	1.02	0.70	0.01	1.73	0.00	1.02	1.42	2.44	4	20.17
Patuxent	0.92	3.05	0.67	4.64	0.69	1.61	7.44	9.05	1	9.18
Total	3.99	11.40	1.09	16.48	1.48	5.04	24.98	30.02	9	80.05

*0.43 acres of POW in the Middle Potomac-Anacostia-Occoquan watershed will remain following construction and are therefore not included in the PEM mitigation requirement.

Table A-2e. Maryland Stream Mitigation Summary (Alternative 13C)

Watershed	Total Stream Impacts (LF)	Impacts Not Requiring Mitigation (LF)			Total Mitigation Requirement (LF)	Proposed On-Site Stream Mitigation (LF)	Off-Site Mitigation Requirement (LF)	Total Proposed Off-Site Mitigation	
		Existing Bridges	Existing Culverts	Total				Sites	Credit (LF)
Middle Potomac-Anacostia-Occoquan									
Perennial	43,453	636	16,183	16,819	26,634	14,544	12,090		
Intermittent	45,623	32	14,604	14,636	30,987	24,173	6,814	7	42,321
Ephemeral	7,273	46	1,414	1,460	5,813	4,829	984		
Total	96,349	714	32,201	32,915	63,434	43,546	19,888		
Middle Potomac-Catoctin									
Perennial	23,885	381	6,205	6,586	17,299	4,402	12,897		
Intermittent	9,337	543	3,899	4,442	4,895	3,202	1,693	5	18,412
Ephemeral	979	0	34	34	945	506	439		
Total	34,201	924	10,138	11,062	23,139	8,110	15,029		
Patuxent									
Perennial	10,554	314	2,900	3,214	7,340	4,100	3,240		
Intermittent	9,606	31	5,431	5,462	4,144	2,578	1,566	2	18,713
Ephemeral	2,573	0	0	0	2,573	2,062	511		
Total	22,733	345	8,331	8,676	14,057	8,740	5,317		
Total	153,283	1,983	50,670	52,653	100,630	60,396	40,234	14	79,446

Table A-3e. Virginia Mitigation Summary (Alternative 13C)

Watershed	Resource Type	Impacts	Credit Requirement	Proposed Bank Credits
Middle Potomac-Catoctin	Wetlands (AC)	0.05	0.10	0.10
	Waterways (LF)	3,349	729	729



APPENDIX B: EXISTING BRIDGE & CULVERT STREAM IMPACT TABLES



EXISTING BRIDGE STREAM IMPACTS

EXISTING BRIDGE IMPACTS

Table B-1. Existing Bridge Stream Impacts - Middle Potomac-Anacostia-Occoquan (Alternatives 8,9, 9M, 10,13B and 13C)

Feature ID	Station	Classification	Length (LF)
11L_B	1071+00 LT	Perennial	70
11L_B1	1071+00 RT	Perennial	72
11M_B	1068+50 RT	Intermittent	32
12H_B	924+00 RT to 925+00 RT	Perennial	90
12H_B1	933+00 RT to 933+50 RT	Perennial	37
12II_B3	938+00 Median	Perennial	46
13P_B	797+50	Perennial	126
16G_B	610+00 RT	Perennial	39
16J_B	610+00 RT	Ephemeral	46
19K_B2	588+00 to 588+50	Perennial	156
Total			714

Table B-2. Existing Bridge Stream Impacts - Middle Potomac-Catoctin (Alternatives 8,9, 9M, 10,13B and 13C)

Feature ID	Station	Classification	Length (LF)
22AA_B	200+00 LT to 201+00 LT	Perennial	42
22AA_B1	198+00 RT to 200+00 LT	Perennial	201
22MM_B	106+00	Perennial	138
22NN_B	109+00	Intermittent	166
22T_B	128+50	Intermittent	153
22T_B1	128+50 LT	Intermittent	28
22V_B	118+50	Intermittent	168
22V_B1	118+50 RT	Intermittent	28
Total			924

Table B-3. Existing Bridge Stream Impacts – Patuxent (Alternatives 8,9, 9M, 10,13B and 13C)

Feature ID	Station	Classification	Length (LF)
5S_B	1558+00	Perennial	200
6AAA_B	1526+50	Intermittent	31
6G_B	1497+50 LT to 1499+00 LT	Perennial	114
Total			345



EXISTING CULVERT STREAM IMPACTS

EXISTING CULVERT IMPACTS

Table B-4a. Existing Culvert Stream Impacts - Middle Potomac-Anacostia-Occoquan Alternatives 8,9,10,13B, and 13C

Feature ID	Station	Classification	Length (LF)
1A_C	1945+50 LT to 1949+00 RT	Intermittent	954
1D_C1	1988+00 LT to 1989+00 RT	Perennial	253
1H_C	1995+00	Intermittent	221
1Q_C	1928+00 LT to 1931+00 LT	Perennial	356
1R_C	1939+50 LT to 1940+50 LT	Perennial	121
1SS_C	1958+50 RT	Ephemeral	50
1U_C	1939+50 LT	Ephemeral	189
1VV_C	1973+00 RT to 1974+50 LT	Perennial	297
2F_C	1904+00 LT	Intermittent	82
2HH_C	1903+00 RT to 1904+00 LT	Intermittent	252
2I_C	1870+00	Intermittent	238
2J_C	1863+50 RT to 1864+50 LT	Perennial	249
2W_C	1911+50 RT to 1912+00 RT	Intermittent	57
2X_C	1916+50	Perennial	277
2Y_C	1925+50 LT to 1926+50 RT	Perennial	394
3A_C	1835+00 RT to 1836+00 LT	Perennial	232
3AA_C	1803+50 RT to 1804+00 LT	Perennial	302
3D_C	1821+00 RT to 1822+00 LT	Perennial	204
3JJ_C	1760+00 LT to 1761+00 LT	Intermittent	106
3JJ_C1	1758+00	Intermittent	305
3L_C	1792+50 LT to 1794+00 RT	Perennial	287
3LL_C	1755+00 RT to 1758+00 RT	Intermittent	317
3LL_C1	1761+50 RT to 1763+50 RT	Intermittent	195
3PP_C	1764+00 RT to 1764+50 RT	Ephemeral	112
4H_C	1754+00	Ephemeral	128
4H_C	1754+00	Ephemeral	205
7BB_C	1394+50 LT	Intermittent	38
7F_C	1422+00 RT to 1422+50 RT	Intermittent	30
7G_C	1431+00 RT to 1431+50 RT	Perennial	53
7G_C1	1426+00	Perennial	241
7JJ_C	1411+50 LT	Perennial	50
7JJ_C1	1411+00	Perennial	256
7N_C	1395+00 RT to 1395+50 RT	Perennial	28
7O_C	1394+00	Perennial	203
7PP_C	1334+00 RT to 1338+00 RT	Intermittent	429
7Q_C1	1350+00 RT to 1351+00 RT	Perennial	168
7Q_C2	1351+00	Perennial	341
7S_C	1341+00 to 1343+00 RT	Perennial	228
7T_C	1424+00 LT	Perennial	73
8E_C	1339+50 LT	Intermittent	295
8F_C	1333+50 LT to 1335+50 LT	Intermittent	221
8J_C	1331+50 LT to 1333+50 RT	Intermittent	505
8J_C1	1333+50 RT	Perennial	80

EXISTING CULVERT IMPACTS

Table B-4a. Existing Culvert Stream Impacts - Middle Potomac-Anacostia-Occoquan Alternatives 8,9,10,13B, and 13C

Feature ID	Station	Classification	Length (LF)
8R_C1	1282+00	Perennial	355
8S_C	1289+50 LT to 1291+00 LT	Ephemeral	77
8S_C	1289+50 LT to 1291+00 LT	Ephemeral	176
8W_C	1338+50 RT to 1339+00 RT	Intermittent	67
8Z_C2	1334+00	Perennial	199
9C_C	1289+00	Intermittent	278
9C_C1	1287+00 RT to 1288+50 RT	Intermittent	174
9CC_C	1228+50	Perennial	326
9G_C	1184+50	Perennial	278
9J_C	1202+00	Perennial	274
9T_C	1263+00 RT to 1264+00 LT	Intermittent	231
9Y_C	1240+00 RT to 1240+50 LT	Perennial	194
9Z_C	1240+50 RT	Intermittent	24
10AA_C	1115+00	Perennial	241
10B_C	1164+00 RT to 1164+50 RT	Intermittent	95
10BB_C	1114+50 LT	Perennial	116
10C_C	1163+50 RT to 1166+00 RT	Perennial	226
10F_C	1162+50 RT to 1164+00 RT	Intermittent	117
10F_C1	1163+50	Intermittent	122
10J_C	1157+00 to 1160+50 RT	Intermittent	445
10K_C	1161+00	Intermittent	213
10MM_C	1160+50 LT to 1162+50 LT	Intermittent	210
10N_C	1142+00 RT to 1143+00 LT	Intermittent	397
10PP_C	1159+50 LT to 1162+00 LT	Intermittent	272
10Q_C	1110+00 LT	Ephemeral	91
10S_C	1112+00 LT	Perennial	132
10TT_C1	1173+00 RT. SB on 295	Perennial	67
10Y_C	1120+00 LT to 1121+50 RT	Perennial	340
11C_C	1102+50 to 1103+50 LT	Intermittent	120
11E_C	1104+00 LT to 1106+00 LT. NB on 201	Perennial	12
11E_C1	1092+50 RT to 1093+50 LT	Perennial	223
11E_C2	1092+00 RT	Perennial	57
11R_C	1015+00 LT	Perennial	21
11T_C	1013+50	Perennial	288
12C_C	916+00 RT SB on 95	Perennial	69
12E_C	911+00 RT to 912+50 RT	Perennial	91
12E_C1	914+00 RT to 916+00 RT	Perennial	51
12EE_C	900+50	Intermittent	247
12F_C	918+00 RT to 921+50 RT	Perennial	317
12H_C	909+00 RT to 910+50 RT	Perennial	17
12H_C1	916+50 RT to 919+00 RT	Perennial	122
12H_C2	928+00 RT	Perennial	52
12II_C	928+50 LT to 930+50 LT	Perennial	174

EXISTING CULVERT IMPACTS

Table B-4a. Existing Culvert Stream Impacts - Middle Potomac-Anacostia-Occoquan Alternatives 8,9,10,13B, and 13C

Feature ID	Station	Classification	Length (LF)
12II_C1	938+50 LT	Perennial	79
12II_C2	938+00 RT	Perennial	90
12II_C3	926+00 LT to 927+50 LT	Perennial	159
12JJJ_C	907+00 RT to 908+50 RT	Perennial	172
12K_C	911+50 LT to 912+50 RT	Perennial	196
12KKK_C	907+00 LT to 907+50 RT	Intermittent	221
12OO_C	974+50	Perennial	221
12QQQ_C	939+50 LT to 940+00 LT	Intermittent	83
12RRR_C	945+50 RT to 946+00 LT	Perennial	216
12S_C	925+00	Intermittent	151
12WW_C	934+50 LT	Perennial	128
12WW_C1	932+50 LT to 933+50 LT	Perennial	186
12WWW_C	936+50 LT	Intermittent	146
12XX_C	923+50 LT to 925+50 LT	Perennial	252
12Y_C	932+00 LT to 934+00 LT	Intermittent	89
12YYY_C	933+50 LT to 935+00 LT	Perennial	175
12YYY_C1	932+00 LT	Perennial	107
12Z_C	918+50	Intermittent	56
12Z_C	918+50	Intermittent	143
13B_C	861+50 RT to 862+50 RT	Intermittent	54
13B_C	861+50 RT to 862+50 RT	Intermittent	91
13C_C	864+50 RT to 867+50 RT	Intermittent	126
13C_C1	873+00 LT to 874+00 RT	Intermittent	348
13J_C	768+50 LT to 769+00 LT	Intermittent	53
13J_C1	771+50 LT to 773+00 LT	Intermittent	159
13M_C	829+50 RT to 830+50 LT	Perennial	260
13Q_C	865+50 LT to 867+50 RT	Intermittent	343
13R_C	848+50	Intermittent	235
13S_C	844+00 LT to 845+50 LT	Intermittent	148
13T_C	847+00	Intermittent	286
14A_C	757+00	Intermittent	172
14E_C	744+50 LT to 745+00 LT	Perennial	57
14E_C1	745+00	Perennial	201
14G_C	707+50	Intermittent	185
15A_C	667+00 LT to 670+00 RT	Intermittent	551
15D_C	684+00 RT to 685+50 LT	Perennial	267
16A_C	610+00 LT to 612+00 LT	Perennial	131
16A_C1	603+00 RT to 604+00 LT	Perennial	265
16A_C2	589+50 RT to 590+50 RT	Perennial	110
16D_C	599+50	Intermittent	260
16E_C	630+00 RT to 637+00 RT	Intermittent	55
16G_C	626+50 RT to 630+00 RT	Perennial	191
16G_C1	620+00 RT to 625+50 RT	Perennial	592

EXISTING CULVERT IMPACTS

Table B-4a. Existing Culvert Stream Impacts - Middle Potomac-Anacostia-Occoquan Alternatives 8,9,10,13B, and 13C

Feature ID	Station	Classification	Length (LF)
17BB_C	568+00 RT to 569+50 LT	Intermittent	295
17DD_C	565+50 RT to 569+00 Median	Intermittent	401
18B_C	526+50 RT to 527+00 LT	Ephemeral	386
18C_C	517+50	Perennial	253
18G_C	536+50 LT to 538+00 RT	Intermittent	1,274
19A_C	458+00	Intermittent	1,308
19B_C	436+00 LT to 436+50 median	Intermittent	114
19C_C	432+00 LT Outer loop	Perennial	130
19F_C	437+00 Median to 438+00 RT	Perennial	162
19F_C1	440+00 RT	Perennial	49
19F_C2	454+00 RT to 464+50 LT	Perennial	1,308
19J_C	407+50 RT to 408+00 RT	Perennial	22
19J_C1	408+50 RT to 410+00 LT	Perennial	274
19T_C	467+50	Perennial	227
19V_C	490+00 RT to 491+50 LT	Perennial	331
23G_C	4805+00	Perennial	187
23Q_C	4782+00 RT to 4783+00 LT	Perennial	250
Total			32,201

EXISTING CULVERT IMPACTS

Table B-4b. Existing Culvert Stream Impacts - Middle Potomac-Anacostia-Occoquan
Alternative 9M

Feature ID	Station	Classification	Length (LF)
1A_C	1945+50 LT to 1949+00 RT	Intermittent	954
1D_C1	1988+00 LT to 1989+00 RT	Perennial	253
1H_C	1995+00	Intermittent	221
1Q_C	1928+00 LT to 1931+00 LT	Perennial	356
1R_C	1939+50 LT to 1940+50 LT	Perennial	121
1SS_C	1958+50 RT	Ephemeral	50
1U_C	1939+50 LT	Ephemeral	189
1VV_C	1973+00 RT to 1974+50 LT	Perennial	297
2F_C	1904+00 LT	Intermittent	82
2HH_C	1903+00 RT to 1904+00 LT	Intermittent	252
2I_C	1870+00	Intermittent	238
2J_C	1863+50 RT to 1864+50 LT	Perennial	249
2W_C	1911+50 RT to 1912+00 RT	Intermittent	57
2X_C	1916+50	Perennial	277
2Y_C	1925+50 LT to 1926+50 RT	Perennial	394
3A_C	1835+00 RT to 1836+00 LT	Perennial	232
3AA_C	1803+50 RT to 1804+00 LT	Perennial	302
3D_C	1821+00 RT to 1822+00 LT	Perennial	204
3JJ_C	1760+00 LT to 1761+00 LT	Intermittent	106
3JJ_C1	1758+00	Intermittent	305
3L_C	1792+50 LT to 1794+00 RT	Perennial	287
3LL_C	1755+00 RT to 1758+00 RT	Intermittent	317
3LL_C1	1761+50 RT to 1763+50 RT	Intermittent	195
3PP_C	1764+00 RT to 1764+50 RT	Ephemeral	112
4H_C	1754+00	Ephemeral	128
4H_C	1754+00	Ephemeral	205
7BB_C	1394+50 LT	Intermittent	38
7F_C	1422+00 RT to 1422+50 RT	Intermittent	30
7G_C	1431+00 RT to 1431+50 RT	Perennial	53
7G_C1	1426+00	Perennial	241
7JJ_C	1411+50 LT	Perennial	50
7JJ_C1	1411+00	Perennial	256
7N_C	1395+00 RT to 1395+50 RT	Perennial	28
7O_C	1394+00	Perennial	203
7PP_C	1334+00 RT to 1338+00 RT.	Intermittent	429
7Q_C1	1350+00 RT to 1351+00 RT	Perennial	168
7Q_C2	1351+00	Perennial	341
7S_C	1341+00 to 1343+00 RT	Perennial	228
7T_C	1424+00 LT	Perennial	73
8E_C	1339+50 LT	Intermittent	295
8F_C	1333+50 LT to 1335+50 LT	Intermittent	221
8J_C	1331+50 LT to 1333+50 RT	Intermittent	505
8J_C1	1333+50 RT	Perennial	80

EXISTING CULVERT IMPACTS

Table B-4b. Existing Culvert Stream Impacts - Middle Potomac-Anacostia-Occoquan
Alternative 9M

Feature ID	Station	Classification	Length (LF)
8R_C1	1282+00	Perennial	355
8S_C	1289+50 LT to 1291+00 LT	Ephemeral	77
8S_C	1289+50 LT to 1291+00 LT	Ephemeral	176
8W_C	1338+50 RT to 1339+00 RT	Intermittent	67
8Z_C2	1334+00	Perennial	199
9C_C	1289+00	Intermittent	278
9C_C1	1287+00 RT to 1288+50 RT	Intermittent	174
9CC_C	1228+50	Perennial	326
9G_C	1184+50	Perennial	278
9J_C	1202+00	Perennial	274
9T_C	1263+00 RT to 1264+00 LT	Intermittent	231
9Y_C	1240+00 RT to 1240+50 LT	Perennial	194
9Z_C	1240+50 RT	Intermittent	24
10AA_C	1115+00	Perennial	241
10B_C	1164+00 RT to 1164+50 RT	Intermittent	95
10BB_C	1114+50 LT	Perennial	116
10C_C	1163+50 RT to 1166+00 RT	Perennial	226
10F_C	1162+50 RT to 1164+00 RT	Intermittent	117
10F_C1	1163+50	Intermittent	122
10J_C	1157+00 to 1160+50 RT	Intermittent	445
10K_C	1161+00	Intermittent	213
10MM_C	1160+50 LT to 1162+50 LT	Intermittent	210
10N_C	1142+00 RT to 1143+00 LT	Intermittent	397
10PP_C	1159+50 LT to 1162+00 LT	Intermittent	272
10Q_C	1110+00 LT	Ephemeral	91
10S_C	1112+00 LT	Perennial	132
10TT_C1	1173+00 RT. SB on 295	Perennial	67
10Y_C	1120+00 LT to 1121+50 RT	Perennial	340
11C_C	1102+50 to 1103+50 LT	Intermittent	120
11E_C	1104+00 LT to 1106+00 LT. NB on 201	Perennial	12
11E_C1	1092+50 RT to 1093+50 LT	Perennial	223
11E_C2	1092+00 RT	Perennial	57
11R_C	1015+00 LT	Perennial	21
11T_C	1013+50	Perennial	288
12C_C	916+00 RT SB on 95	Perennial	69
12E_C	911+00 RT to 912+50 RT	Perennial	91
12E_C1	914+00 RT to 916+00 RT	Perennial	51
12EE_C	900+50	Intermittent	247
12F_C	918+00 RT to 921+50 RT	Perennial	317
12H_C	909+00 RT to 910+50 RT	Perennial	17
12H_C1	916+50 RT to 919+00 RT	Perennial	122
12H_C2	928+00 RT	Perennial	52
12II_C	928+50 LT to 930+50 LT	Perennial	174

EXISTING CULVERT IMPACTS

Table B-4b. Existing Culvert Stream Impacts - Middle Potomac-Anacostia-Occoquan
Alternative 9M

Feature ID	Station	Classification	Length (LF)
12II_C1	938+50 LT	Perennial	79
12II_C2	938+00 RT	Perennial	90
12II_C3	926+00 LT to 927+50 LT	Perennial	159
12JJJ_C	907+00 RT to 908+50 RT	Perennial	172
12K_C	911+50 LT to 912+50 RT	Perennial	196
12KKK_C	907+00 LT to 907+50 RT	Intermittent	221
12OO_C	974+50	Perennial	221
12QQQ_C	939+50 LT to 940+00 LT	Intermittent	83
12RRR_C	945+50 RT to 946+00 LT	Perennial	216
12S_C	925+00	Intermittent	151
12WW_C	934+50 LT	Perennial	128
12WW_C1	932+50 LT to 933+50 LT	Perennial	186
12WWW_C	936+50 LT	Intermittent	146
12XX_C	923+50 LT to 925+50 LT	Perennial	252
12Y_C	932+00 LT to 934+00 LT	Intermittent	89
12YYY_C	933+50 LT to 935+00 LT	Perennial	175
12YYY_C1	932+00 LT	Perennial	107
12Z_C	918+50	Intermittent	56
12Z_C	918+50	Intermittent	143
13B_C	861+50 RT to 862+50 RT	Intermittent	54
13B_C	861+50 RT to 862+50 RT	Intermittent	91
13C_C	864+50 RT to 867+50 RT	Intermittent	126
13C_C1	873+00 LT to 874+00 RT	Intermittent	348
13J_C	768+50 LT to 769+00 LT	Intermittent	53
13J_C1	771+50 LT to 773+00 LT	Intermittent	159
13M_C	829+50 RT to 830+50 LT	Perennial	260
13Q_C	865+50 LT to 867+50 RT	Intermittent	343
13R_C	848+50	Intermittent	235
13S_C	844+00 LT to 845+50 LT	Intermittent	148
13T_C	847+00	Intermittent	286
14A_C	757+00	Intermittent	172
14E_C	744+50 LT to 745+00 LT	Perennial	42
14E_C1	745+00	Perennial	201
14G_C	707+50	Intermittent	185
15A_C	667+00 LT to 670+00 RT	Intermittent	429
15D_C	684+00 RT to 685+50 LT	Perennial	267
16A_C	610+00 LT to 612+00 LT	Perennial	131
16A_C1	603+00 RT to 604+00 LT	Perennial	265
16A_C2	589+50 RT to 590+50 RT	Perennial	110
16D_C	599+50	Intermittent	260
16E_C	630+00 RT to 637+00 RT	Intermittent	5
16G_C	626+50 RT to 630+00 RT	Perennial	191
16G_C1	620+00 RT to 625+50 RT	Perennial	592

EXISTING CULVERT IMPACTS

Table B-4b. Existing Culvert Stream Impacts - Middle Potomac-Anacostia-Occoquan
Alternative 9M

Feature ID	Station	Classification	Length (LF)
17BB_C	568+00 RT to 569+50 LT	Intermittent	295
17DD_C	565+50 RT to 569+00 Median	Intermittent	401
18B_C	526+50 RT to 527+00 LT	Ephemeral	386
18C_C	517+50	Perennial	241
18G_C	536+50 LT to 538+00 RT	Intermittent	1,274
19A_C	458+00	Intermittent	1,308
19B_C	436+00 LT to 436+50 median	Intermittent	114
19C_C	432+00 LT Outer loop	Perennial	130
19F_C	437+00 Median to 438+00 RT	Perennial	162
19F_C1	440+00 RT	Perennial	49
19F_C2	454+00 RT to 464+50 LT	Perennial	1,308
19J_C	407+50 RT to 408+00 RT	Perennial	22
19J_C1	408+50 RT to 410+00 LT	Perennial	274
19T_C	467+50	Perennial	227
19V_C	490+00 RT to 491+50 LT	Perennial	331
23G_C	4805+00	Perennial	187
23Q_C	4782+00 RT to 4783+00 LT	Perennial	250
Total			32,002

EXISTING CULVERT IMPACTS

Table B-5a. Existing Culvert Stream Impacts - Middle Potomac-Catoctin
 Alternatives 8, 9, and 9M

Feature ID	Station	Classification	Length (LF)
20D_C	322 RT to 324+00 RT	Perennial	180
21B_C	297+00 LT to 298+00 RT	Perennial	261
21C_C	261+00 RT to 262+50 LT	Perennial	252
21C_C1	237+00 LT to 269+00 RT	Perennial	321
21C_C2	224+00 LT to 227+00 LT	Perennial	328
21D_C	225+00 RT to 226+00 LT	Intermittent	316
21D_C1	228+00 LT to 229+00 LT	Intermittent	119
21F_C	245+50	Intermittent	258
21L_C	277+50 LT to 278+50 RT	Perennial	270
22A_C	219+50 LT to 221+00 LT	Intermittent	152
22C_C	218+50 LT to 219+00 LT	Intermittent	91
22CC_C	195+00 LT to 196+50 LT	Ephemeral	34
22H_C	197+50 RT to 198+50 RT	Intermittent	95
22HH_C	130+00 LT to 131+00 LT	Intermittent	113
22M_C	116+00	Perennial	65
22Q_C	125+00 RT	Perennial	277
22Z_C	198+00 RT on Cabin John Pkwy	Perennial	99
23A_C	3741+00 LT to 3742+00 LT	Perennial	216
23A_C1	3744+00 RT to 3748+00 LT	Perennial	407
23A_C2	3750+00 RT to 2752+50 RT	Perennial	236
23AA_C	3749+50 LT to 3750+50 LT	Perennial	101
23AA_C1	3753+00	Perennial	220
23D_C	3759+00 LT to 3760+50 RT	Intermittent	255
23K_C	3683+00 RT to 3684+50 RT	Perennial	178
23K_C1	3690+50 RT to 3692+50 RT	Perennial	53
23N_C	4725+00 LT to 4729+50 RT	Intermittent	583
23V_C	3720+00	Intermittent	777
24A_C	3683+00	Perennial	320
24F_C1	3615+00 LT to 3618+00 LT	Perennial	197
24F_C2	3627+00	Perennial	390
25H_C	3560+00 RT to 3562+00 LT	Perennial	420
26B_C	3509+00 LT to 3510+00 RT	Intermittent	306
26B_C1	3509+50 to 3510+00 RT	Intermittent	47
26C_C	3522+50 RT to 3524+00 LT	Intermittent	360
26C_C1	3523+50	Intermittent	22
27A_C	3478+50 LT to 3480+00 RT	Perennial	325
27A_C1	3483+00 RT to 3484+00 RT	Perennial	152
27L_C	3405+50	Intermittent	405
29A_C2	3335+50 RT to 3340+00 RT	Perennial	464
29B_C	3328+50	Perennial	443
Total			10,108

EXISTING CULVERT IMPACTS

Table B-5b. Existing Culvert Stream Impacts - Middle Potomac-Catoctin Alternatives 10 and 13C

Feature ID	Station	Classification	Length (LF)
20D_C	322 RT to 324+00 RT	Perennial	180
21B_C	297+00 LT to 298+00 RT	Perennial	261
21C_C	261+00 RT to 262+50 LT	Perennial	252
21C_C1	237+00 LT to 269+00 RT	Perennial	321
21C_C2	224+00 LT to 227+00 LT	Perennial	328
21D_C	225+00 RT to 226+00 LT	Intermittent	316
21D_C1	228+00 LT to 229+00 LT	Intermittent	119
21F_C	245+50	Intermittent	258
21L_C	277+50 LT to 278+50 RT	Perennial	270
22A_C	219+50 LT to 221+00 LT	Intermittent	152
22C_C	218+50 LT to 219+00 LT	Intermittent	91
22CC_C	195+00 LT to 196+50 LT	Ephemeral	34
22H_C	197+50 RT to 198+50 RT	Intermittent	95
22HH_C	130+00 LT to 131+00 LT	Intermittent	113
22M_C	116+00	Perennial	65
22Q_C	125+00 RT	Perennial	277
22Z_C	198+00 RT on Cabin John Pkwy	Perennial	99
23A_C	3741+00 LT to 3742+00 LT	Perennial	216
23A_C1	3744+00 RT to 3748+00 LT	Perennial	407
23A_C2	3750+00 RT to 2752+50 RT	Perennial	236
23AA_C	3749+50 LT to 3750+50 LT	Perennial	101
23AA_C1	3753+00	Perennial	220
23D_C	3759+00 LT to 3760+50 RT	Intermittent	255
23K_C	3683+00 RT to 3684+50 RT	Perennial	178
23K_C1	3690+50 RT to 3692+50 RT	Perennial	83
23N_C	4725+00 LT to 4729+50 RT	Intermittent	583
23V_C	3720+00	Intermittent	777
24A_C	3683+00	Perennial	320
24F_C1	3615+00 LT to 3618+00 LT	Perennial	197
24F_C2	3627+00	Perennial	390
25H_C	3560+00 RT to 3562+00 LT	Perennial	420
26B_C	3509+00 LT to 3510+00 RT	Intermittent	306
26B_C1	3509+50 to 3510+00 RT	Intermittent	47
26C_C	3522+50 RT to 3524+00 LT	Intermittent	360
26C_C1	3523+50	Intermittent	22
27A_C	3478+50 LT to 3480+00 RT	Perennial	325
27A_C1	3483+00 RT to 3484+00 RT	Perennial	152
27L_C	3405+50	Intermittent	405
29A_C2	3335+50 RT to 3340+00 RT	Perennial	464
29B_C	3328+50	Perennial	443
Total			10,138

EXISTING CULVERT IMPACTS

Table B-5c. Existing Culvert Stream Impacts - Middle Potomac-Catoctin Alternative 13B

Feature ID	Station	Classification	Length (LF)
20D_C	322 RT to 324+00 RT	Perennial	180
21B_C	297+00 LT to 298+00 RT	Perennial	261
21C_C	261+00 RT to 262+50 LT	Perennial	252
21C_C1	237+00 LT to 269+00 RT	Perennial	321
21C_C2	224+00 LT to 227+00 LT	Perennial	328
21D_C	225+00 RT to 226+00 LT	Intermittent	316
21D_C1	228+00 LT to 229+00 LT	Intermittent	119
21F_C	245+50	Intermittent	258
21L_C	277+50 LT to 278+50 RT	Perennial	270
22A_C	219+50 LT to 221+00 LT	Intermittent	152
22C_C	218+50 LT to 219+00 LT	Intermittent	91
22CC_C	195+00 LT to 196+50 LT	Ephemeral	34
22H_C	197+50 RT to 198+50 RT	Intermittent	95
22HH_C	130+00 LT to 131+00 LT	Intermittent	113
22M_C	116+00	Perennial	65
22Q_C	125+00 RT	Perennial	277
22Z_C	198+00 RT on Cabin John Pkwy	Perennial	99
23A_C	3741+00 LT to 3742+00 LT	Perennial	216
23A_C1	3744+00 RT to 3748+00 LT	Perennial	407
23A_C2	3750+00 RT to 2752+50 RT	Perennial	236
23AA_C	3749+50 LT to 3750+50 LT	Perennial	101
23AA_C1	3753+00	Perennial	220
23D_C	3759+00 LT to 3760+50 RT	Intermittent	255
23K_C	3683+00 RT to 3684+50 RT	Perennial	178
23K_C1	3690+50 RT to 3692+50 RT	Perennial	53
23N_C	4725+00 LT to 4729+50 RT	Intermittent	583
23V_C	3720+00	Intermittent	777
24A_C	3683+00	Perennial	320
24F_C1	3615+00 LT to 3618+00 LT	Perennial	197
24F_C2	3627+00	Perennial	390
25H_C	3560+00 RT to 3562+00 LT	Perennial	418
26B_C	3509+00 LT to 3510+00 RT	Intermittent	306
26B_C1	3509+50 to 3510+00 RT	Intermittent	47
26C_C	3522+50 RT to 3524+00 LT	Intermittent	360
26C_C1	3523+50	Intermittent	22
27A_C	3478+50 LT to 3480+00 RT	Perennial	325
27A_C1	3483+00 RT to 3484+00 RT	Perennial	152
27L_C	3405+50	Intermittent	405
29A_C2	3335+50 RT to 3340+00 RT	Perennial	464
29B_C	3328+50	Perennial	443
Total			10,106

EXISTING CULVERT IMPACTS

Table B-6a. Existing Culvert Stream Impacts - Patuxent Alternatives 8,9,9M,10,13B, and 13C

Feature ID	Station	Classification	Length (LF)
4B_C	1687+50	Intermittent	257
4BBB_C	1673+00 RT	Perennial	24
4E_C	1693+00 RT to 1694+00 LT	Intermittent	245
4GG_C	1743+00 RT to 1744+50 LT	Intermittent	326
4HHH_C	1672+00 RT	Intermittent	23
4M_C	1716+00 RT to 1717+50 LT	Perennial	270
4Q_C	1714+00 to 1714+50	Perennial	231
4T_C	1673+50 RT to 1675+00 LT	Intermittent	290
4TTTT_C2	1630+50 LT	Perennial	33
4W_C	1665+00 LT to 1665+50 RT	Perennial	271
4W_C1	1665+50 RT	Perennial	27
4Z_C	1636+50	Perennial	21
4Z_C1	1630+50 LT to 1631+00 LT	Perennial	103
4Z_C2	1624+00 LT to 1625+50 LT	Perennial	80
5F_C1	1620+00	Perennial	496
5FF_C	1593+50	Intermittent	244
5QQ_C	1551+00 LT to 1551+50 LT	Intermittent	80
6AAA_C	1527+00 RT	Intermittent	43
6AAA_C1	1526+00	Intermittent	236
6BB_C	1491+00 LT to 1492+50 LT	Intermittent	118
6BBBB_C	1469+00	Intermittent	257
6DDD_C	1460+00 LT to 1461+50 LT	Intermittent	129
6FFFF_C1	1526+50 RT	Intermittent	24
6G_C	1451+00 LT to 1456+00 LT	Perennial	526
6G_C1	1486+50 LT to 1491+00 LT	Perennial	328
6GGG_C	1544+50 RT to 1546+00 RT	Intermittent	134
6GGG_C1	1549+00 RT to 1549+50 RT	Intermittent	70
6III_C	1508+50 LT to 1509+50 RT	Intermittent	267
6JJ_C	1512+50 RT to 1513+00 LT	Perennial	251
6MMM_C	1496+00	Perennial	239
6NNN_C	1496+50 RT	Intermittent	26
6RRR_C	1461+00 RT to 1462+50 LT	Intermittent	370
6SS_C	1484+00	Intermittent	66
6TTT_C	1480+00 RT to 1480+50 LT	Intermittent	314
6UU_C	1465+00	Intermittent	252
6WW_C	1456+50 LT to 1457+50 LT	Intermittent	95
7A_C	1431+00 to 1443+00	Intermittent	1,485
8HH_C	1353+00 LT	Intermittent	80
Total			8,331