

Organization of Data in this Appendix

Table	Description
N-1	WQv Calculation for terraced parking DSW Sizing Calculations; pretreatment, treatment QP for offline treatment diversion

Table N-1 Belleayre UMP/DEIS Stormwater Management System Calculations - Water Quality Volume and Q

Location: Proposed North Parking Area

Post-Development Conditions
Composite Curve Number and WQv Calcs

using P= in

rev: 2/26/2010
Location: PR North Parking

Subcatchments to Tiered DSWs and DDPs

Practice	Sub-Basin	Drainage Area (sf)	Drainage Area (sq. mi.)	Drainage Area (Acres)	Percent Cover			Area Cover			Weighted CN	WQv acre ft	WQv cf
					Grassed Area CN=74	Pavement/Gravel Parking/Roofs" " CN=98	Wooded CN=70	Grassed Area CN=74 (sf)	Parking/Roofs CN=98 (sf)	Wooded CN=70 (sf)			
DRYDET B													
	SCVSBW2	23013	0.000825	0.5	37	16	46	8597	3750	10666	75	0.011446625	499
	SBW1	51297	0.001840	1.2	36	31	33	18617	15835	16845	80	0.041822113	1822
		74,310	0.002665504					27,214	19,585	27,511			2,321
	SBE1	32261	0.001157	0.7	55	35	10	17748	11263	3250	82	0.029221524	1273
	SBE2	8669	0.000311	0.2	33	67	0	2892	5777	0	90	0.014008599	610
	SBW2	9218	0.000331	0.2	47	53	0	4296	4922	0	87	0.012163127	530
		50,148	0.001798812					24,936	21,962	3,250			2,413
DRYDETA													
	SCVBW4	5797	0.000208	0.1	71	29	0	4,124	1,673	0	81	0.004465517	195
	SCVSBW3	25440	0.000913	0.6	38	0	62	9784	0	15656	72	0.012653811	551
		31,237	0.001120473					13,908	1,673	15,656			746
	SAW1	56130	0.002013	1.3	60	37	3	33869	20718	1543	83	0.053352674	2324
													3,070
	SAE1	47838	0.001716	1.1	53	42	5	25364	20154	2320	84	0.051059171	2224
SWT1													
	S1STR1	12148	0.000436	0.3	65	0	35	7879	0	4269	73	0.006042394	263
	S2STR2	9932	0.000356	0.2	13	0	87	1288	0	8644	71	0.004940159	215

P:\Projects\03-2120\UMP SWPPP\2008 SWPPP Draft Documents\Tables and Figures\2009 SWPPP WQv and Cn Weighting.xls\PR North Tiers WQv

Table N-1 Belleayre UMP/DEIS Stormwater Management System Calculations - Water Quality Volume and Q

Location: Proposed North Parking Area

Post-Development Conditions
DSW Sizing

rev: 2/26/2010
Location: PR North Parking

		Parking Area Filter Strip Pretreatment (FSP)					DSW Pretreatment @10% volume				DSW Treatment (Selections are in Bold)			
Practice	Sub-Basin	Gross L, Parking (ft)	L, DSW along lot (ft)	L, DSW extension (ft)	A, Parking to FSP (sf)	WQv from parking (cf)	WQv from all but parking (cf)	V, DSW pretreat 10% WQv (cf)	L, reqd pretreat @7.5 cf/lf (ft)	L, avail for 100% WQv (ft)	L,reqd 5' floor treatment @7.5 cf/lf (ft)	L,reqd 6.5' floor treatment @8.83 cf/lf (ft)	L,reqd 8' floor treatment @10.125 cf/lf (ft)	
DRYDET B														
DS-B-W	SCVSBW2													
DS-B-W	SBW1	240	205	40	11970	1232	1089	108.9	15	230	n/a	n/a	229.2	
DS-B-E	SBE1													
DS-B-E	SBE2													
DS-B-E	SBW2	225	190	66	11190	1152	1261	126.1	17	239	n/a	n/a	238.3	
DRYDETA														
DS-A-W	SCVBW4													
DS-A-W	SCVSBW3													
DS-A-W	SAW1	355	320	7	17950	1847	1223	122.3	16	311	n/a	n/a	303.2	
DS-A-E	SAE1	340	305	0	17170	1767	457	45.7	6	299	296.5	251.9	219.7	
SWT1														
N/A	S1STR1													
N/A	S2STR2													

Table N-1 Belleayre UMP/DEIS Stormwater Management System Calculations - Water Quality Volume and Q

Location: Proposed North Parking Area

Post-Development Conditions
 Diversion Flow to Treatment Practices

rev: 2/26/2010
 Location: PR North Parking

Diversion to DSW Flow Calculations													
Practice	Sub-Basin	Qa=PxRv=WQv watershed in (in)	CN	Ia =(200/CN) -2 (in)	Ia/P	Tc (hours)	qu (csm/in)	Approx orifice(s) to divert WQv to SSF Forebay, Use HCAD and Q10 to size					Notes:
								Offline Diversion Qp (cfs)	Prelim Design H over orifice (ft)	c, orifice coefficient	A, orifice min needed (sf)	Diam, round vert orifice min needed (in)	
DRYDETB													
DS-B-W	SCVSBW2	0.26	83	0.41	0.315	0.24	640	0.137	0.5	0.6	0.04	2.7	Size orifice for 0.137 cfs CVSBW1
DS-B-W	SBW1	0.426170244	88	0.273	0.21	0.31	625	0.49	0.5	0.6	0.144	5.1	Non Diverted
DS-B-E	SBE1	0.473471839	89	0.247	0.19	0.13	900	0.493	0.5	0.6	0.145	5.2	Non Diverted
DS-B-E	SBE2	0.844685085	95	0.105	0.081	0.13	950	0.25	0.5	0.6	0.073	3.7	Non Diverted
DS-B-E	SBW2	0.689727707	93	0.151	0.116	0.1	1000	0.228	0.5	0.6	0.067	3.5	Size orifice for 0.228 cfs CVSBW3
DRYDETA													
DS-A-W	SCVBW4	0.402659134	87	0.299	0.23	0.32	620	0.052	0.5	0.6	0.015	1.7	Send all flow to top end of DSW
DS-A-W	SCVSBW3	0.26	83	0.41	0.315	0.32	550	0.13	0.5	0.6	0.038	2.6	Size orifice for 0.13 cfs CVSAW4
DS-A-W	SAW1	0.496855692	89	0.247	0.19	0.12	940	0.94	0.5	0.6	0.276	7.1	Non Diverted
DS-A-E	SAE1	0.557917346	91	0.198	0.152	0.19	800	0.766	0.5	0.6	0.225	6.4	Non Diverted