Table 6.4.2 -- Example spreadsheet calculations for sizing an evaporative pond at a site in the Spokane area

Project :	EXAMPLE SITE IN SPOKANE AREA		
Plat / BSP / Proj No:	###	**Engineer:**	initials
Date:	8/9/2004		
Pond Bottom Area:	112,000	sq. ft.	
Pond Bottom Perimeter:	1,339	ft	
Pond Side Slopes:	3	: 1	
Impervious Basin Size (Constant):	2.00	acres	
Impervious Basin Size (Pond Area):	2.57	acres	
Permeable Basin Size:	2.43	acres	
Off-Site Upstream Basin:	1.00	acres	
Total Basin Size:	8.00	8.00	acres
Mean Annual Prec. - Airport:	16.11	in	
Mean Annual Prec. - Site:	19.70	in	
Multiplier:	1.22		
100-Year, 24 Hour, Prec.:	2.70	in	

Evaporative Pond to Accommodate 100% of Post-Developed Runoff Volume

(no infiltration allowed)

CONDITION: FULL CONTAINMENT

	AMC II Apr-Oct	AMC III Nov&Mar	--- Dec-Feb
Impervious CN:	98	99	99
Permeable CN:	61	78	95
Off-Site CN:	58	76	95
Impervious S:	0.20	0.10	0.10
Permeable S:	6.39	2.82	0.53
Off-Site S:	7.24	3.16	0.53

RESULTS:		
Pond Volume:	246,080	cu ft
Pond Depth:	2.20	ft
Add 1' freeboard:	3.20	ft

						INFLOW				OUTFLOW		STORAGE	POND DATA	
Month	*Precip. (in)*	*Adjusted Precip. (in)*	*Impervious Runoff Depth (in)*	*Permeable Runoff Depth (in)*	*Off-Site Runoff Depth (in)*	*Impervious Runoff Volume (cu ft)*	*Permeable Runoff Volume (cu ft)*	*Off-Site Runoff Volume (cu ft)*	*NET Runoff Volume (cu ft)*	*Pan Evap. (in)*	*Evap. Vol. Out; 72% Adj. (cu ft)*	*Volume Stored in Pond (cu ft)*	*Pond Depth (ft)*	*Pond Capacity (%)*
												20,878	0.19	8
Oct.	1.22	1.49	1.27	0.01	0.00	21,109	61	1	21,171	2.58	17,453	24,595	0.22	10
Nov.	2.02	2.47	2.35	0.77	0.68	39,043	6,777	2,456	48,276	0.92	6,231	66,640	0.59	26
Dec.	2.22	2.71	2.60	2.17	2.17	43,095	19,145	7,882	70,123	0.51	3,500	133,263	1.19	52
Jan.	2.05	2.51	2.39	1.97	1.97	39,651	17,368	7,151	64,169	0.61	4,274	193,157	1.72	76
Feb.	1.57	1.92	1.80	1.41	1.41	29,930	12,402	5,106	47,438	1.11	7,920	232,675	2.08	91
Mar.	**1.38**	**1.69**	**1.57**	**0.32**	**0.26**	**26,086**	**2,821**	**961**	**29,868**	**2.28**	**16,463**	**246,080**	**2.20**	**96**
Apr.	1.11	1.36	1.14	0.00	0.00	18,914	8	0	18,922	4.45	32,260	232,742	2.08	91
May	1.37	1.68	1.45	0.02	0.01	24,111	204	25	24,340	6.69	48,307	208,776	1.86	82
June	1.27	1.55	1.33	0.01	0.00	22,109	100	5	22,214	8.14	58,357	172,633	1.54	67
July	0.50	0.61	0.42	0.00	0.00	6,974	0	0	6,974	10.70	75,878	103,728	0.93	41
Aug.	0.60	0.73	0.54	0.00	0.00	8,881	0	0	8,881	9.42	65,405	47,205	0.42	18
Sept.	0.80	0.98	0.77	0.00	0.00	12,775	0	0	12,775	5.90	40,247	19,733	0.18	8
Oct.	1.22	1.49	1.27	0.01	0.00	21,109	61	1	21,171	2.58	17,447	23,456	0.21	9
Nov.	2.02	2.47	2.35	0.77	0.68	39,043	6,777	2,456	48,276	0.92	6,229	65,503	0.58	26
Dec.	2.22	2.71	2.60	2.17	2.17	43,095	19,145	7,882	70,123	0.51	3,499	132,127	1.18	52
Jan.	2.05	2.51	2.39	1.97	1.97	39,651	17,368	7,151	64,169	0.61	4,273	192,023	1.71	75
Feb.	1.57	1.92	1.80	1.41	1.41	29,930	12,402	5,106	47,438	1.11	7,918	231,543	2.07	91
Mar.	**1.38**	**1.69**	**1.57**	**0.32**	**0.26**	**26,086**	**2,821**	**961**	**29,868**	**2.28**	**16,457**	**244,954**	**2.19**	**96**
Apr.	1.11	1.36	1.14	0.00	0.00	18,914	8	0	18,922	4.45	32,249	231,627	2.07	91
May	1.37	1.68	1.45	0.02	0.01	24,111	204	25	24,340	6.69	48,291	207,677	1.85	81
June	1.27	1.55	1.33	0.01	0.00	22,109	100	5	22,214	8.14	58,338	171,552	1.53	67
July	0.50	0.61	0.42	0.00	0.00	6,974	0	0	6,974	10.70	75,853	102,673	0.92	40
Aug.	0.60	0.73	0.54	0.00	0.00	8,881	0	0	8,881	9.42	65,383	46,171	0.41	18
Sept.	0.80	0.98	0.77	0.00	0.00	12,775	0	0	12,775	5.90	40,234	18,712	0.17	7