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Appendix 1 - Water Balance Calculations

	Existing	g Catchment	Develop	Permanent Water Body Surface	
	Urban Area	Rural/Forested Area	Urban Area	Rural/Forested Area	Area
	ha	ha	ha	ha	ha
Village 1 Lake	0	31	20.5	10.5	0.85
Basin 5	0	213	192	21	2.6
Adopted Runoff Coefficients		Rural/Forested Area	0.15		
		Urban Area	0.	5	

Village 1 Lake - Water Balance Calculations

Month	Average Monthly Rainfall Depths	Average Monthly Evaporation	Average Monthly Runoff		Evaporation Loss	Net Average Monthly Runoff		Increase in Average Runoff	
			Existing	Developed		Existing	Developed		
	(mm/month)	(mm/month)	ML/month	ML/month	ML/month	ML/month	ML/month	ML/month	(%)
January	77.8	180	3.6	9.4	1.5	3.6	7.9	4.2	117%
February	77.9	175	3.6	9.4	1.5	3.6	7.9	4.3	119%
March	79.2	125	3.7	9.6	1.1	3.7	8.5	4.8	131%
April	59.1	100	2.7	7.1	0.9	2.7	6.3	3.5	129%
May	52.2	90	2.4	6.3	0.8	2.4	5.5	3.1	128%
June	62.9	80	2.9	7.6	0.7	2.9	6.9	4.0	136%
July	51.4	75	2.4	6.2	0.6	2.4	5.6	3.2	133%
August	42.8	90	2.0	5.2	0.8	2.0	4.4	2.4	121%
September	46.4	120	2.2	5.6	1.0	2.2	4.6	2.4	112%
October	51.7	140	2.4	6.2	1.2	2.4	5.1	2.6	110%
November	53.8	180	2.5	6.5	1.5	2.5	5.0	2.5	99%
December	73.9	200	3.4	8.9	1.7	3.4	7.2	3.8	110%
Annual Average	729.1	1555	33.9	88.0	13.2	33.9	74.8	40.9	121%

Basin 5 - Water Balance Calculations

Month	Average Monthly Rainfall Depths	Average Monthly Evaporation	Average Monthly Runoff		Evaporation Loss	Net Average Monthly Runoff		Increase in Average Runoff	
	•	•	Existing	Developed	-	Existing	Developed		
	(mm/month)	(mm/month)	ML/month	ML/month	ML/month	ML/month	ML/month	ML/month	(%)
January	77.8	180	24.9	77.1	4.7	24.9	72.4	47.5	191%
February	77.9	175	24.9	77.2	4.6	24.9	72.6	47.7	192%
March	79.2	125	25.3	78.5	3.3	25.3	75.2	49.9	197%
April	59.1	100	18.9	58.6	2.6	18.9	56.0	37.1	196%
May	52.2	90	16.7	51.7	2.3	16.7	49.4	32.7	196%
June	62.9	80	20.1	62.3	2.1	20.1	60.2	40.1	200%
July	51.4	75	16.4	50.9	2.0	16.4	49.0	32.6	198%
August	42.8	90	13.7	42.4	2.3	13.7	40.1	26.4	193%
September	46.4	120	14.8	46.0	3.1	14.8	42.9	28.0	189%
October	51.7	140	16.5	51.2	3.6	16.5	47.6	31.1	188%
November	53.8	180	17.2	53.3	4.7	17.2	48.6	31.4	183%
December	73.9	200	23.6	73.2	5.2	23.6	68.0	44.4	188%
Annual Average	729.1	1555	232.9	722.4	40.4	232.9	681.9	449.0	193%

Note: Refer to Section 4 for derivation of the above parameters