

# Grasspave2 & Gravelpave2 Water Storage Calculations

1/3/01

## Storage Volumes - English Measurements - Clay Soils Below

Void Factor	Rainfall in/sf		Vol cuin/sf		Vol cf/sf		Vol gal/sf	
	0.25	0.35	0.25	0.35	0.25	0.35	0.25	0.35
Base Depth in	GP2	GV2	GP2	GV2	GP2	GV2	GP2	GV2
4	1.0	1.4	144	202	0.08	0.12	0.62	0.87
5	1.3	1.8	180	252	0.10	0.15	0.78	1.09
6	1.5	2.1	216	302	0.13	0.18	0.94	1.31
7	1.8	2.5	252	353	0.15	0.20	1.09	1.53
8	2.0	2.8	288	403	0.17	0.23	1.25	1.75
9	2.3	3.2	324	454	0.19	0.26	1.40	1.96
10	2.5	3.5	360	504	0.21	0.29	1.56	2.18
11	2.8	3.9	396	554	0.23	0.32	1.71	2.40
12	3.0	4.2	432	605	0.25	0.35	1.87	2.62
13	3.3	4.6	468	655	0.27	0.38	2.03	2.84
14	3.5	4.9	504	706	0.29	0.41	2.18	3.05
15	3.8	5.3	540	756	0.31	0.44	2.34	3.27
16	4.0	5.6	576	806	0.33	0.47	2.49	3.49

## Storage Volumes - Metric Measurements - Clay Soils Below

Void Factor	Rainfall cm/m2		Vol cm3/m2		Vol m3/m2		Vol liters/m2	
	0.25	0.35	0.25	0.35	0.25	0.35	0.25	0.35
Base Depth cm	GP2	GV2	GP2	GV2	GP2	GV2	GP2	GV2
10	0.2	0.3	219	307	0.002	0.003	0.22	0.31
12.5	0.3	0.4	274	384	0.003	0.004	0.27	0.38
15	0.4	0.5	329	461	0.004	0.005	0.33	0.46
17.5	0.4	0.6	384	537	0.004	0.006	0.38	0.54
20	0.5	0.7	439	614	0.005	0.007	0.44	0.61
22.5	0.5	0.7	494	691	0.005	0.007	0.49	0.69
25	0.6	0.8	548	768	0.006	0.008	0.55	0.77
27.5	0.6	0.9	603	844	0.006	0.009	0.60	0.84
30	0.7	1.0	658	921	0.007	0.010	0.66	0.92
32.5	0.8	1.1	713	998	0.008	0.011	0.71	1.00
35	0.8	1.2	768	1075	0.008	0.012	0.77	1.07
37.5	0.9	1.2	823	1152	0.009	0.012	0.82	1.15
40	0.9	1.3	877	1228	0.009	0.013	0.88	1.23

### Notes:

- Rainfall volume in/sf = same as "Design Rainfall Event", if only rainfall falling directly upon the surface is calculated.
- Clay Soil factor is used to determine "conservative" storage numbers with no allowances for exfiltration into subsoils below the pavement.
- Storage Volumes are based upon the same principals of water stored in the void spaces of gravel or stone chambers - approximately 40% in stone greater than 1/4" dia.
- Void Factor in Grasspave2 is lower than Gravelpave2 due to "constant" water needed for turf health and root system volumes.