

ACRES DRAINED BY PIPE OF VARIOUS DIAMETERS

BASED ON TALBOT'S EQUATION:

$$A = C^*(M^3)^{1/4}$$

where A = waterway area, ft²

M = drainage area, acres

C = coefficient based on observation of peak discharges, ranging from 1.0 for mountainous areas to 0.20 for flat areas, ft/sec

Pipe		Acres Drained				
Diameter (in)	Waterway Area, A (ft ²)	Very Hilly C = 0.6	Hilly C = 0.5	Rolling to Hilly C = 0.4	Rolling C = 0.3	Flat C = 0.2
12	0.79	1.4	1.8	2.5	3.6	6.2
15	1.23	2.6	3.3	4.5	6.5	11.2
18	1.77	4.2	5.4	7.2	10.6	18.3
24	3.14	9.1	11.6	15.6	22.9	39.3
30	4.91	16.5	21.0	28.3	41.5	71.3
36	7.07	26.8	34.2	46.0	67.5	116.0
42	9.62	40.4	51.6	69.4	101.9	175.0
48	12.57	57.7	73.6	99.1	145.5	249.8
54	15.90	79.0	100.8	135.7	199.2	342.0
60	19.63	104.7	133.5	179.7	263.8	452.9
66	23.76	135.0	172.1	231.7	340.1	584.0
72	28.27	170.2	217.1	292.3	428.9	736.5
84	38.48	256.8	327.4	440.9	647.0	1110.9