124 Attachment 8

Township of Tobyhanna

Appendix H

Existing Vacant Lots in Recorded Subdivisions
Method of Storage Computation and Example Lot Layouts

Due to the second home nature of many subdivisions in the Brodhead/McMichaels Watershed, there are several large subdivisions with many vacant lots where they are not just yet sold, or were bought with a future building date in mind. An analysis was performed to see what impact a total build-out of these lots would have on storm water runoff. It was found that by building on the vacant lots in recorded subdivisions that flows could increase for particular watersheds. It is therefore advantageous to control the runoff from the undeveloped individual lots. The following methodology may be implemented or similar stormwater calculations presented to the Township demonstrating compliance with this Ordinance.

STEP 1.

Determine Impervious Surfaces

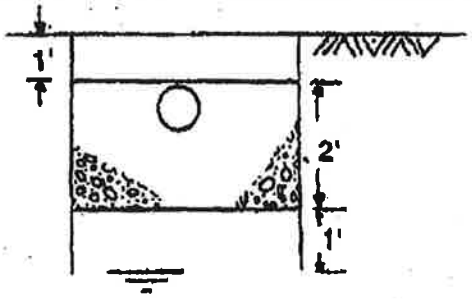
House Roof 1	12 X 48 =	576
House Roof 2	12 X 48 =	576
Deck***	12 X 18 =	216
Deck	4 X 24 =	96
Drive	12 X 50 =	600
Garage	12 X 12 =	144
		2,208 S.F.

STEP 2.

Required storage volume from Figure 1 = 505 cubic feet

STEP 3.

Refer to soil log for septic system. Indicates mottling at 48 inches. The percolation rate is 96 minutes/inches. Therefore, from Figure 2, choose seepage trenches for each rain gutter outlet.



STEP 4.

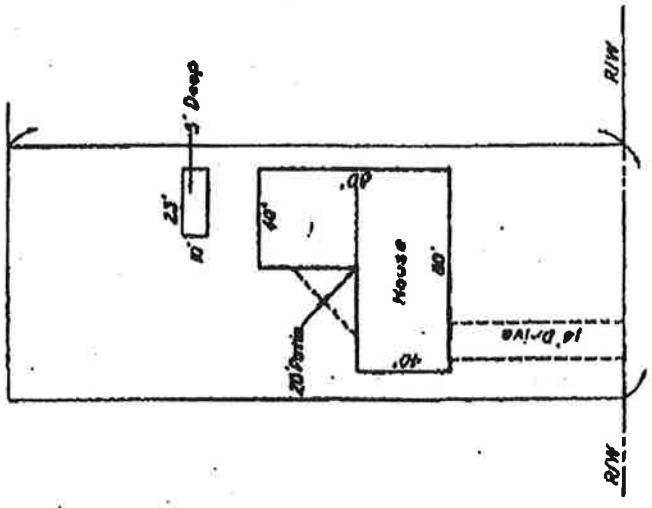
Determine length of trench required - use 6-inch perforated pipe.

GUTTER OUTLET	REQ'D VOL.(C.F.) FROM FIGURE 1	DEPTH OF AGGREGATE FT.	TRENCH WIDTH FT.
1	118	2	3
2	118	2	3
3	30	2	3

GUTTER OUTLET	VOLUME OF STORAGE* PER FT. OF TRENCH	VOLUME OF STORAGE** PER FT. OF PIPE	TOTAL	TOTAL LENGTH OF TRENCH REQ'D (FT.)
1	2.1	0.2	2.3	118/2.3 = 51
2	2.1	0.2	2.3	118/2.3 = 51
3	2.1	0.2	2.3	30/2.3 = 13

*
** From Table 5
*** From Table 6
Wood decks with spacing between boards are exempt from the calculations.

ON-SITE STORM WATER MANAGEMENT
ALTERNATE NO. 4
UNDERGROUND TANK STORAGE



ON-SITE STORM WATER MANAGEMENT
ALTERNATE NO.3
POND STORAGE

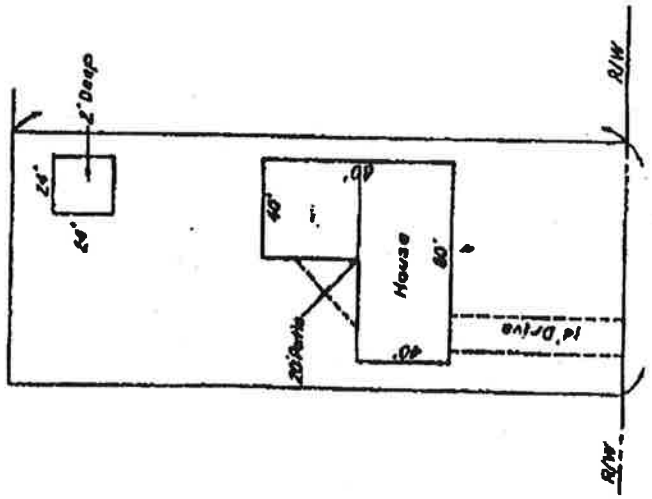


TABLE 6

STORAGE VOLUME (CUBIC FEET) PER LINEAL FOOT OF STORAGE TRENCH WITH #3A AGGREGATE OR #4 AGGREGATE

DEPTH OF. TRENCH FT	TRENCH WIDTH (FT.) 2	3	4	5
1	0.7	1.1	1.4	1.8
2	1.4	2.1	2.8	3.5
3	2.1	3.2	4.2	5.3
4	2.8	4.2	5.6	7.0
5	3.5	5.3	7.0	8.8
6	4.2	6.3	8.4	10.5
7	4.9	7.4	9.8	12.2

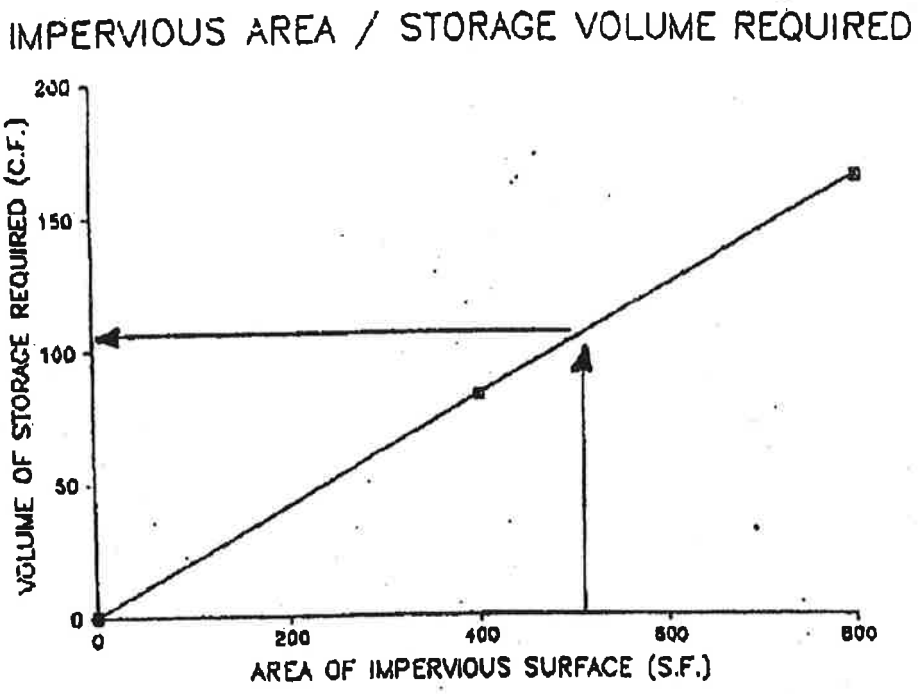
TABLE 7

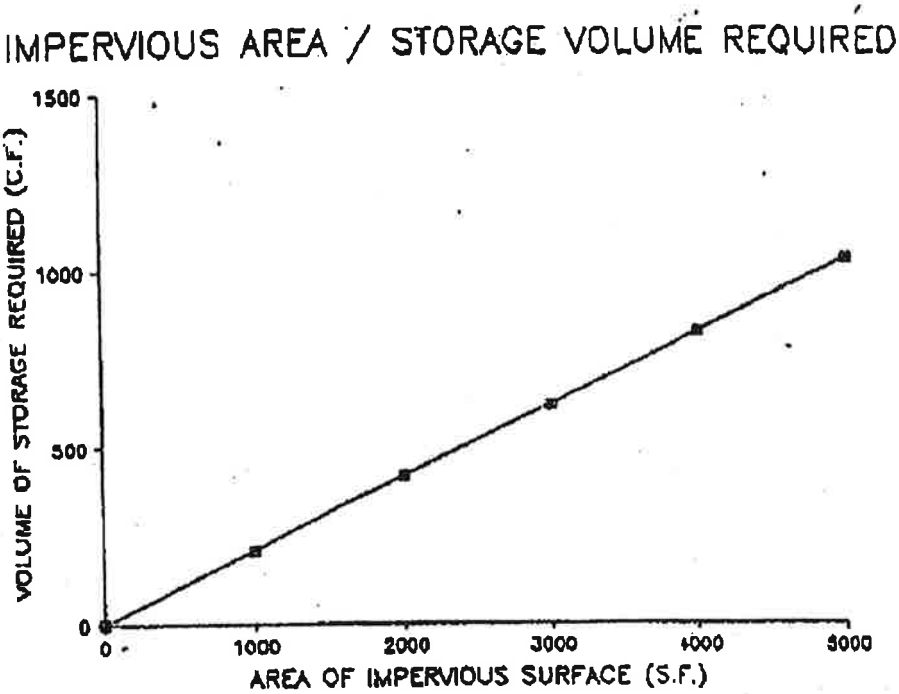
STORAGE VOLUME (CUBIC FEET) PER LINEAL FOOT OF PERFORATED PIPE

PIPE DIAMETER (IN.)	VOLUME IN CF/FT. OF PIPE
4	0.1
6	0.2
8	0.35
10	0.5
12	0.8
15	1.2
18	1.8
24	3.1

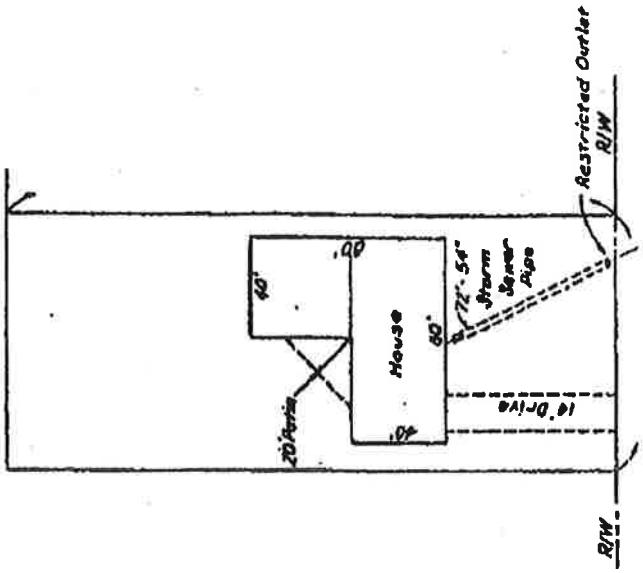
FIGURE 1

STORAGE VOLUME REQUIRED FOR INDIVIDUAL LOTS IN RECORDED SUBDIVISIONS WERE VACANT AT THE TIME OF PLAN ADOPTION





ON-SITE STORM WATER MANAGEMENT
ALTERNATE NO. 2
OVERSIZED STORM SEWER PIPE



ON-SITE STORM WATER MANAGEMENT
ALTERNATE NO. 1
SURFACE STORAGE