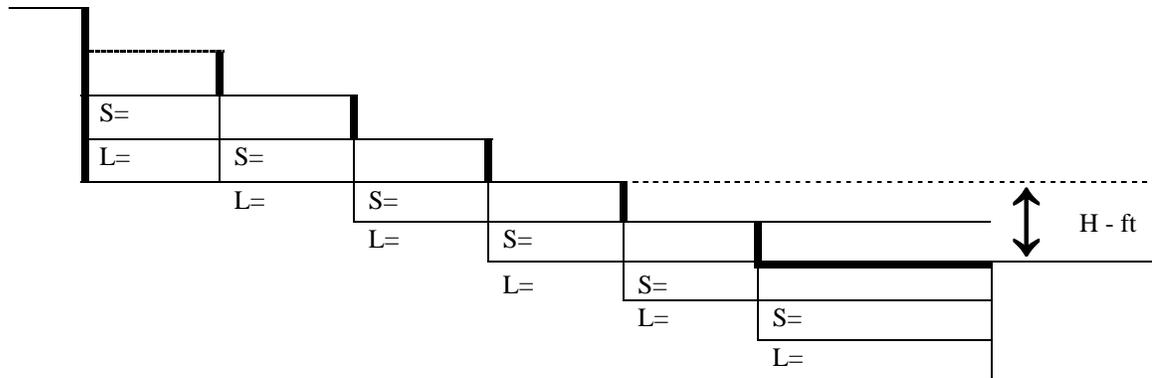


DESIGN SHEET FOR UNDERGROUND OUTLET
 Hydrology and Hydraulics

Landowner: _____ By: _____ Date: _____ Check: _____ Date: _____

1	Inlet Number					
2	Drainage Area Ac.					
3	10 yr. 24 hr. Rainfall In.					
4	Complex Number					
5	10 yr. 24 hr. Runoff In.					
6	*Required Runoff Storage In.					
7	Required Sediment Storage In.					
8	Required Total Storage In.					
9	Req. Total Storage Ac. In. or Cu. Ft.					
10	Based on removal time of	Hr.	Hr.	Hr.	Hr.	Hr.

11



12	Required Release Rate c.f.s.					
13	Average Orifice Head Ft.					
14	Maximum Orifice Head Ft.					
15	Orifice Diameter In.					
16	Orifice Capacity c.f.s. (Maximum)					
17	Minimum Riser Size & Perforations					
18	Accumulated Conduit c.f.s.					
19	Conduit Diameter In.					
20	Maximum Conduit Capacity c.f.s.					

Use of Design Sheet for Underground Outlet Hydrology and Hydraulics

- (1) From terrace number system and underground number system
- (2) Drainage above or between the terraces
- (3) From EFM, page NB 2-30.1
- (4) From EFM, page NB 2-30
- (5) From EFM, page NB 2-51-a
- (6) (5) x factor from Tech Guide 620-2
- (7) Conversion factor 0.34 in/ac = 5 ton/ac for 10 years

Note: It will be necessary to determine what part of the total sediment will reach the storage area.

- (8) (6) + (7)
- (9) Multiply (8) by (2) to get acre-inch or multiply (8) by (2) by 3630 to get cu. ft.
- (10) Based on factors used in Tech Guide 620-2
At this time, it should be determined what the maximum depth of water will be at each riser. This will require that the storage portion of the terrace will be designed.
- (11) Slope of the conduit between the riser (cross out the risers on the left that aren't needed)
- (12) (2) x (5) x factor from Tech Guide 620-2
- (13) Height above the orifice plate below the ground + 70% of the remaining height to the maximum storage elevation
- (14) Height between maximum storage elevation and the orifice plate
- (15) With the head determined in (13) select an orifice size from page 8-102 EFM which equals or exceeds (12)
- (16) Using the orifice selected in (15) and the maximum head from (14) determine the maximum orifice capacity
- (17) Select the riser and perforations that have the capacities which exceed the capacity in (16). Use tables NB-8-107-109
- (18) (16) + the preceding (18)
- (19) Select a pipe diameter that will obtain a flow that exceeds (18). Use Exhibit 8-4 EFM for smooth pipe and Exhibit 8-6 EFM for corrugated plastic.
- (20) Use Exhibit 8-4 and 8-6 EFM