SUBSURFACE DRAIN DATA SHEET

Cooperator: _____ Location: _____

Conservation District: _____ Field Office: _____

Identification No.: _____ Field No.: _____ Item No. _____

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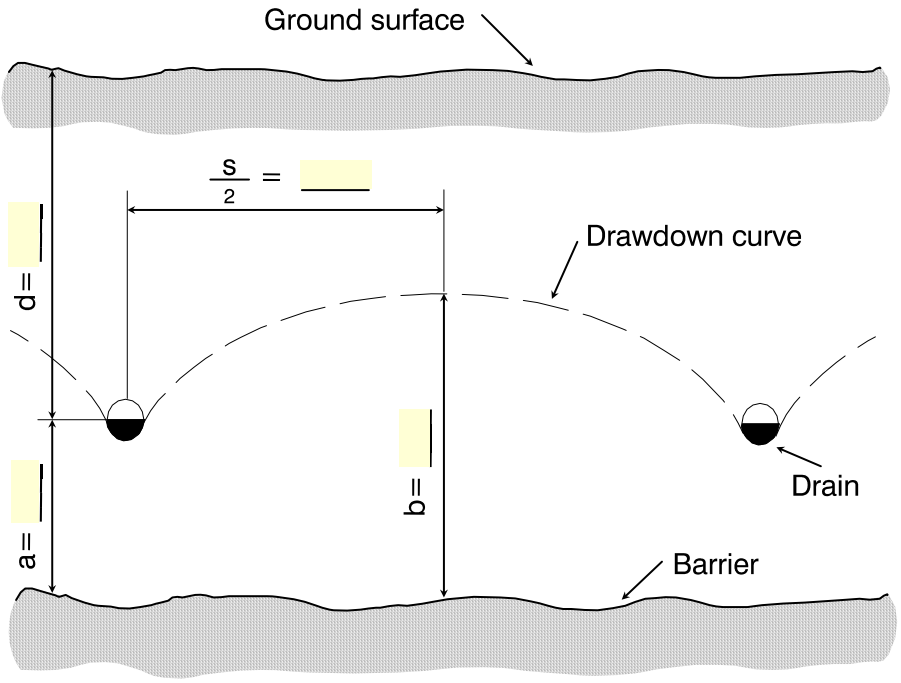
1. Design area: _____ acres
2. Required removal rate (Q_d): _____ in/hr
3. Design soil series: _____
4. Hydraulic conductivity (P): _____ in/hr
5. Depth to barrier: _____ ft
6. Depth of drain (d): _____ ft
7. Depth of outlet: _____ ft



Sketch and nomenclature used in ellipse equation

Where: a = depth from drain to barrier (ft)
b = depth from drawdown curve to barrier (ft)
d = depth of drain (ft)
S = drain spacing (ft)

S = _____ ft. from Exhibit 14-10 National Engineering Field Handbook (NEFH) or solve the following equation:

$$S = \sqrt{\frac{4P\,(b^2 - a^2)}{Q_d}} = \sqrt{\frac{4\,(\quad)\,(\quad - \quad)}{\quad}} = \_\_\_\_\_ \text{ ft}$$

Where: P = hydraulic conductivity, in./hr
Q_d = removal rate in./hr
a and b = See sketch.

TABULATION OF DATA - EACH DRAIN

Drain Line No.	Station No.	Elev. Natural Ground	Elev. Drain Invert	Ft. of Fall	Length[1/] (ft)	Grade[1/] (ft/ft)	Drainage Area (acres)	Drainage Coef. [1/] (in/24 hr)	Q Req'd (cfs)	Pipe Size[2/] (in)

[1/] See NRCS conservation practice standard Subsurface Drain, Code 606.

[2/] From Exhibit 14-13 NEFH or compute from equation: $d_i^{8/3} = \frac{(Q)\,(n)}{(0.000614)\,s^{1/2}}$

Designed by: _____ Date: _____
Checked by: _____ Date: _____
Approved by: _____ Date: _____

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