FLOODED AREAS

Many golf courses have had flooded areas from the heavy rains we have experienced this year and plans are now in process to provide drainage systems for some of those flooded areas, but before an adequate system of drainage can be designed the amount of water to be removed plus the removal time in hours must be determined.

The following formula for arriving at the amount of water to be removed may be used in the Chicago area.

$$Q = \frac{A.\ I.\ R.}{T. + t.} \times 450$$

in which Q equals the runoff in gallons per minute.
A equals the area in acres which is being drained.
I equals the impervious factor or runoff which is 0.30%.
R equals the rainfall in inches per hour.
T equals the duration of the rainfall in hours.
t equals the time in hours for removal of the storm water.

EXAMPLE

Assume we had 100 acres of land to drain on which one-inch of rain had fallen in one hour's time and which we decided to remove in a period of six hours the above formula may be used as follows:
(Q) Gallons per minute =

$$\frac{(A)\ 100 \times (I)\ 0.30 \times (R)\ 1}{(T)\ 1 + (t)\ 6} \times 450$$

= 1936 gallons per minute.

C. E. (Scotty) Stewart