Exhibit 4 – The Curve Number Equation for Determining Runoff Depth from Rainfall Depth
(as described by Rosemont DEQ8953-DEQ 8954)

The Curve Number equation for runoff (Q)

\[ Q = \frac{(P - 0.2S)^2}{(P + 0.8S)} \]

The most Common Form of the Curve Number Equation

\[ S = \frac{1000}{CN} - 10 \]

\[ I_a = 0.2S \]

Where (Definitions from DEQ 8953-DEQ8954):

- P = Storm Event Precipitation Depth (inch)
- Q = Total Runoff Depth (inches)
- S = Storage Capacity of the Soil (inches)
- CN = SCS Curve Number (unitless)
- Ia = Initial abstraction (inches)

Note: CN increases with runoff on a scale from 0 to 100.