Water Quality Volume

The Objective is to capture 90% of annual storm events & to remove 80% of total suspended solids (TSS) & 40% of total phosphorus.

$$WQ_v \text{ (acre-feet)} = \frac{(P)\ (Rv)\ (A)}{12}$$

P = 90% rainfall event (0.9” across VT)

R_v = runoff coefficient (0.05 + 0.009*I)

I = % of impervious cover area

A = site area

Dufresne-Henry

Channel Protection Volume

Objective is to protect stream channels from degradation due to increased rates of runoff.

$$\text{Discharge Rate} = \frac{\text{Peak runoff volume from 1 year storm}}{\text{12 hrs (cold water fisheries)}}$$

$$\frac{}{\text{24 hrs (warm water fisheries)}}$$

Dufresne-Henry