STOCHASTIC ROOTING ZONE STORAGE MODEL

WET SEASON

DRY SEASON

T_{wet}

$365 - T_{wet}$

RAINFALL

Modeled as a marked Poisson process, with mean depth, α, and frequency, λ.

Rainfall beyond max storage, S_{max}, goes to runoff

$p(ET_{dry})$

ET_{dry}

S_0

$p(S_0)$

Storage (S) [mm]

Time

Wet season ET depletes storage proportionally to potential evapotranspiration and storage.

End of wet season storage, S_0, supplies evapotranspiration, ET_{dry}, during the dry season.