



Fig. 5.10 reprinted from Smith (2011). Groundwater response duration (as a portion of the total duration of response in the period) at the hillslope sites. Each period was intended to represent a distinct phase of water input (related to variability in meteorological conditions) and resulting runoff response (Fig. 2 in manuscript): (1) a fall transition period when the catchment experienced limited soil water recharge following the previous summer drought, (2) a winter low flow period when the catchment experienced minimal water input, (3) an early-melt transition period when the catchment began experiencing active snowmelt input that generated a small streamflow response, (4) a rising limb period when snowmelt in the catchment generated a rapid rise in the

streamflow response, (5) a peak flow period when the streamflow response reached its maximum, (6) a falling limb period when the streamflow decreased quickly and the last of the remaining snow covered areas within the catchment were melting rapidly, (7) a post-melt transition period when no snow remained in the catchment and streamflow continued decreasing at a moderate rate, and (8) a summer low flow period when streamflow responded to occasional intense rainstorm events.