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Abstract. Heavy storm events may increase the amount of organic matter in runoff from forested watersheds as well as the relation of dissolved to particulate organic matter. Little is known about the behaviour of dissolved and particulate organic N and its relations to C. This study evaluated reports on the effects of monsoon large variability associated with intense storm events on the runoff fluxes and on the quality composition of dissolved ($< 0.45 \mu\text{m}$) and particulate ($0.7 \mu\text{m}$ to 1mm) organic carbon and nitrogen (DOC, DON, POC, PON) in a mixed coniferous/deciduous (mixed watershed) and a deciduous forested watershed (deciduous watershed) in South Korea. During storm events, DOC concentrations in runoff increased with water discharge, while in contrast to more or less uniform concentration observed for DON, concentrations were stable. DOC, DON and $\text{NO}_3\text{-N}$ runoff fluxes in runoff increased linearly with discharge pointing to changing flow paths from deeper to upper soil layers at high discharge conditions; whereas nonlinear responses was observed for of POC and PON fluxes were observed likely due to suggesting the origin of particulate matter from the erosion of mineral soils along the stream branches benches. [Check: Is it branches or benches?] The cumulative C and N fluxes in runoff were in the followed the order as: $\text{DOC} > \text{POC}$ and $\text{NO}_3\text{-N} > \text{DON} > \text{PON}$. The cumulative DOC fluxes in runoff during the 2 months of study period of two months were much larger higher at the deciduous watershed (16 kg C ha^{-1}) than at the mixed watershed (7 kg C ha^{-1}), while the cumulative $\text{NO}_3\text{-N}$ fluxes were higher at the mixed watershed (5.2 kg N ha^{-1}) than at the deciduous watershed (2.9 kg N ha^{-1}). The latter observation suggests a larger significantly large N uptake by deciduous trees. Cumulative fluxes of POC and PON were similar at both watersheds. Quality parameters Composition of organic matter in soils and runoff indicate that the contribution of near surface flow to runoff was larger higher at the deciduous than at the mixed watershed. Our results demonstrate different responses of on particulate and dissolved C and N in fluxes to during storm events as a arising from combination of factors combined effect of related to composition of tree species composition and watershed specific flow paths.