

Specifications of water vapor:

Name	Symbol	Definition	Conserved/Not conserved*
Water vapor number fraction	N_v	$\frac{\#kmoles_of_vapor}{\#kmoles_of_moist_air}$	Conserved
Vapor pressure	e	<i>The partial pressure of water vapor</i>	Not conserved
Mixing ratio	w	$\frac{mass_of_water_vapor}{mass_of_dry_air}$	Conserved
Specific humidity	q (or F_v)	$\frac{mass_of_water_vapor}{mass_of_moist_air}$	Conserved
Vapor concentration or vapor density	ρ_v	$\frac{mass_of_water_vapor}{volume_of_air_parcel}$	Not conserved

*A conservative quantity is one that does not change as an air parcel is moved to different pressures or cooled, as long as no mass enters or leaves the parcel.