

Hydrometeorology



Hydrometeorology is a branch of meteorology that deals with problems involving the hydrologic cycle, the water budget, and the rainfall statistics of storms.

The boundaries of hydrometeorology are not clear-cut, and the problems of the hydrometeorologist overlap with those of the climatologist, the hydrologist, the cloud physicist, and the weather forecaster. It involves the measurement, analysis and modelling of atmospheric and land surface processes tied to the hydrologic cycle.

These analyses often serve as the bases for the design of flood-control and water-usage structures, primarily dams and reservoirs. Other concerns of hydrometeorologists include the determination of rainfall probabilities, the space and time distribution of rainfall and evaporation, the recurrence interval of major storms, snow melt and runoff, and probable wind tides and waves in reservoirs.

The whole field of water quality and supply is of growing importance in hydrometeorology, as is flooding.