

## Hydrology

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Hydrology is the science that studies the distribution of water on and under the surface of the Earth, the mechanical and chemical properties of water, and the organization of rivers into networks. Hydrology also looks at how water circulates from ocean to atmosphere and back to the ocean.

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Commonly studied properties of rivers include flow velocity, discharge (the volume of water that passes a given point in one second), competence (which is the capacity of a river to transport materials), stream bed characteristics and the circulation of currents.

Hydrology also examines how water acts on other materials. Water erodes mechanically by wearing away the banks and bottoms of rivers, and chemically by dissolving the rock it comes in contact with. Flowing water carries solid particles either in suspension or by pushing or rolling them along; it also carries materials in solution. When water no longer has the capacity to transport materials, the suspended load is deposited in alluvial fans and deltas, while the dissolved load precipitates, leaving solid residues and concretions. Erosion, transport and deposition by water are processes that play an important role in the evolution of rivers, resulting in stream bed changes and the formation of meanders and terraces.