

National Research Council, B. R. Scanlon, 2004: *Groundwater Fluxes Across Interfaces*. Washington, D.C.: The National Academy Press; 85 pp.

Abstract

Atmosphere, surface and subsurface portions of the hydrological system are three dynamically linked water reservoirs having distinctly different time and space scales. Many challenges remain in understanding and measuring the dynamic interchange among these reservoirs, especially for interchanges with the subsurface. Most subsurface storage of water is in the groundwater reservoir, with a small amount of water stored as soil moisture in the overlying unsaturated zone.

Fluxes to and from the groundwater zone are called, respectively, recharge and discharge. Natural groundwater recharge has several origins. The most important of these are the flux of water across the water table from precipitation that percolates through the unsaturated zone, and the influx of water from a bounding or overlying surface water body including rivers, lakes, wetlands and the ocean. Natural groundwater discharge is the efflux of water from the groundwater reservoir to surface water, or to the land surface itself where, for example, it may return to the atmosphere through evaporation and transpiration.