

runoff water cycle meaning

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Runoff - NASA Earthdata

Runoff is the measurement of the flow of water into a lake, stream or other waterbody, usually expressed in cubic feet per second. The flow is produced by rainfall from storms, precipitation accumulation or transpiration, melting ice or snow, seepage, evaporation, and percolation.

Global Hydrologic Soil Groups (HYSOGs250m) for Curve Number-Based ...

This dataset - HYSOGs250m - represents a globally consistent, gridded dataset of hydrologic soil groups (HSGs) with a geographical resolution of 1/480 decimal degrees, corresponding to a projected resolution of approximately 250-m. These data were developed to support USDA-based curve-number runoff modeling at regional and continental scales. Classification of HSGs was derived from soil ...

Cattle, Crops, and Coral: Flood Plumes and the Great Barrier Reef

Land runoff may affect all of these measurements, but is especially likely to change light and nutrient levels by adding nutrients that spur algal growth, and increasing turbidity. Dekker said, "A fear is that the resilience of the corals on the Great Barrier Reef decreases with increasing nutrients and suspended sediment.

Glacier Runoff - NASA Earthdata

Glacier runoff is the water that comes from rain falling on or the melting of a glacier. Runoff water flows into rivers, lakes, and oceans changing their shape, depth, span, flow rates, chemistry, environment, and more. Runoff matters for many reasons. For example, many animal and human communities depend on runoff to reliably fill rivers, lakes, and reservoirs for drinking water. If there's ...

Snow Melt - NASA Earthdata

Water runoff from melting snowpack and glaciers, when combined with rainfall, can affect the timing and magnitude of river flows and significantly impact the risk of flooding events. However, snow melt also has some beneficial effects — billions of people worldwide rely on seasonal water runoff from snowpack and glaciers for irrigation and drinking water. The Indus Basin in Asia, for example ...

Salt of the Sea - NASA Earthdata

But freshwater dumps, either from a change in rain patterns, glacial melt, or increased river runoff, would make the cold water less salty, thus less dense. This, in turn, could rattle the salinity component of thermohaline circulation, slowing down the sinking of dense water and the associated thermohaline circulation.

Agriculture Production - NASA Earthdata

NASA's Earth data repositories include datasets that measure land surface reflectance, land temperature, vegetation greenness, and crop extent. These measurements are used in models to calculate other agriculture-related factors that cannot be observed directly from a satellite, such as evaporation patterns and water runoff.

Floods | NASA Earthdata

NASA's floods data provide key measurements for predicting their occurrence, calculating their extent, and making plans to respond to the disasters.

Terrestrial Hydrosphere | NASA Earthdata

Data collected by NASA's Earth-observing instruments provide information on the terrestrial hydrosphere including watershed extent, water quality, changes in surface and groundwater, and water surface elevation. In addition, NASA hydrospheric model data provide information on runoff and evapotranspiration.

Floods Near Real-Time Data - NASA Earthdata

Near real-time data provided by NASA's Land, Atmosphere Near real-time Capability for Earth observation (LANCE) can be used to identify, track, and map floodwater extent for active floods.