

GLOSSARY OF TERMS

Alluvium – Clay, silt, sand, gravel or similar material deposited by stream water in a valley or floodplain.

Anticlinal Geologic Structure – A geologic structure in which the rock layers have been folded, generally convex upward, and whose core contains the chronologically older rocks.

Area of Influence – The area within which the water surface of an aquifer is lowered by withdrawal of water through a well or other structure designed for the purpose.

Aquifer Terms –

Aquifer – A body of rock that is sufficiently permeable to conduct groundwater and to yield economically significant quantities of water to wells and springs.

Aquifer Dewatering – The process of removing groundwater from aquifer storage.

Aquifer Recharge – The process by which water migrates from the ground surface to the zone of saturation within an aquifer.

Critical Aquifer Recharge Areas (CARAs) – Land surface areas that are responsible for a large fraction of the recharge to a well capture area and/or are exceptionally efficient producers of recharge.

Karst Aquifer – An aquifer with groundwater storage and flow properties that are largely determined by an abundance of interconnected voids and caves formed by the action acidic groundwater on naturally soluble rocks such as limestone, dolomite, and gypsum.

Fractured Bedrock Aquifer – An aquifer with groundwater storage and flow properties that are largely determined by an abundance of interconnected fractures, joints, and faults in hardened or cemented rock formations such as granite, shale, limestone, and schist.

Stratified Drift Aquifer – An aquifer characterized by layers of clay, silt, sand, gravel, and boulders deposited by meltwater from glaciers.

Base Flow – The portion of streamflow contributed by the discharge of groundwater as springs and seeps in a streambed. Between precipitation and meltwater events, most of the water in a stream is base flow.

Capture Area – The land surface overlying that portion of the aquifer contributing water to a well. The area of an aquifer from which water is captured by a well.

Colluvium – Loose, mixture of soil and rock fragments deposited at the base of steep slopes and formed by the downslope movement of a slurry of saturated weathered material from mountainsides. Examples include mud flows and landslide debris.

Consumptive Use – Water that is used and not returned to the watershed or groundwater basin from which it was withdrawn. Examples of consumptive use include evaporation from evaporative cooling units, irrigation, and incorporation into products such as concrete and bottled water.

Drawdown – A lowering of the water level in an aquifer caused by the withdrawal of groundwater from a well.

Diabase – A dark gray to black massive, crystalline rock formed by the gradual cooling and solidification of molten rock that migrated upward from deep within the earth's crust.

Ephemeral Reaches – Sections of streams or waterways that are at all times above the water table, and have flow only for short periods in response to surface runoff resulting from precipitation or the melting of snow.

Geomorphic – Of or relating to the form of the land surface. Geomorphology is the study of the processes by which the land surface is formed and history of their development.

Groundwater – All subsurface water, as distinct from surface water, that is in the zone of saturation and supplies wells and springs.

Groundwater Mining – The process of extracting groundwater from a source at a rate so in excess of the recharge that the groundwater level declines persistently, threatening exhaustion of the supply or at least a decline of pumping levels to uneconomic depths.

Grandfathered Use – Water use that is exempted from regulations put into effect after the use was begun. As an example, consumptive water use in the Susquehanna River Basin begun before 1971 is exempt from Commission regulations.

Head – The difference in elevation between two points in a body of water.

Hydrogeology – The science that deals with subsurface waters and with related geologic aspects of surface water. Also used in the more restricted sense of groundwater geology only.

Intermittent Reaches – Sections of streams or waterways that are above the water table for a part of the year and at or slightly above the water table for the remainder of the year. When the channel is above the water table, as during dry periods, they flow for short periods in response to stormwater or meltwater runoff. When the channel is at or below the water table, the flow is continuous and sustained by groundwater discharge to the channel. Intermittent reaches are located between ephemeral reaches in the upstream direction, and perennial reaches in the downstream direction.

Isovolumetric – Equal in volume. Said of a weathering process that changes the chemical composition of a rock, but leaves the size or volume unaltered.

Landscape Ecology – The study of the relationships and interactions between living organisms and the landscape they inhabit.

Landscape Hydrology – The study of the relationships and interactions between the landscape and the science that deals with water, its properties, circulation, and distribution, on and under the earth's surface as affected by the association of landforms, especially as modified by geologic forces.

NPDES – National Pollutant Discharge Elimination System

Perennial Flow – Water flow that is continuous and present year-round and whose upper surface generally stands lower than the water table in the region adjoining the stream.

Saprolite – A soft, earthy, typically clay-rich, thoroughly decomposed rock, formed in place by chemical weathering of igneous, sedimentary, and metamorphic rocks.

Siliciclastics – Rocks which are primarily composed of silicate minerals, and that are only very slightly soluble in naturally occurring precipitation, surface water, and groundwater.

SPDES – State Pollutant Discharge Elimination System

Storativity – The characteristic of an aquifer relating to its ability to store groundwater.

Water Budget Analyses – An accounting or bookkeeping approach to the evaluation of the quantity of water resources available. Quantifies and compares the water income (recharge), expenses (water withdrawals), and savings (groundwater and surface water storage).

Water Level Monitoring – The measuring and recording of water levels in an aquifer to determine long-term trends in the levels.

Well Interference – The condition occurring when the area of influence of a well overlaps that of a neighboring well, as when two wells are pumping from the same aquifer and are located near each other.

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