

A

Aquifer: Rock or sediment in a formation, group of formations, or part of a formation which is saturated and sufficiently permeable to transmit economic quantities of water to wells and springs.

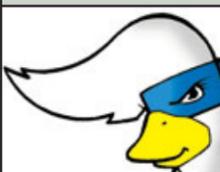
Anaerobic: Literally - without air. Generally means without oxygen.

Aquifer Defense Force Team



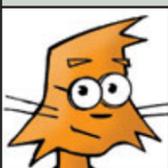
Aqua Duck: Commander
Height : 6'2" Weight : 250 lbs.
Favorite Movie: "The Mighty Ducks"
Hobbies: Baseball, Kung Fu & Chess

Defending the Aquifer is a full-time job, and Aqua Duck adeptly commands his team through countless thrilling adventures. He faces numerous daunting challenges with a most talented team.



Mallory: Lt. Commander
Height : 5'6" Weight : 113 lbs.
Favorite Movie: "The Big Blue"
Hobbies: Martial Arts, Interior Design & 80's Music

Mallory is second in command. Her swift decision making and adept problem solving skills make her a strong leader. In the arena of combat she is seldom matched.



Otto: Chief Science Officer
Height : 4'10" Weight : 110 lbs.
Fav. Movie: "A River Runs Through It"
Hobbies: Chess, Gourmet Cuisine & Billiards

Otto's duties include hydrological research, advanced water purification technology and developing new hardware. With a vast intellect and mechanical skills, he is a valuable team member.



Buck: Chief Systems Operator
Height : 4'6" Weight : 112 lbs.
Favorite Movie: "Waterworld"
Hobbies: Hockey, Karaoke & Pinball

The fun loving Buck is responsible for the vast Aquifer Hydro-Distribution Waterway System. His hard working spirit is an inspiration to the entire team.

For more information about Aqua Duck and his team visit www.spokaneaquifer.org

B

Basalt: A fine-grained and usually dark-colored mafic igneous rock that originates as surface flow of lava.

C

Chlorination: The addition of chlorine to water for the purpose of disinfection.

Cobbles: Rocks that are larger than pebbles and smaller than boulders, usually rounded while being carried by water, wind, or glaciers.

Coliform Bacteria: A type of bacteria that live in the digestive tracts of animals and humans but are also found in soils and water. The presence of coliform bacteria in certain quantities in water is used as an indicator of pollution.

Confined Aquifer: An aquifer that is overlain by a confining bed. The confining bed has a significantly lower hydraulic conductivity than the aquifer.

Consumptive Use (of water): The water used for any purpose that does not return to its source, such as irrigation water lost to the atmosphere by evapotranspiration.

Coulee: A steep-sided gulch or water channel.

Cubic Feet Per Second (cfs): A unit of measurement for expressing the flow rate (discharge) of a moving body of water. One cubic foot per second is equal to a stream one foot deep, one foot wide and flowing at a velocity of one foot per second. One cubic foot of water is equal to 7.48 U.S. gallons.

D

Discharge: The volume of water that passes through a given cross section of a stream, pipe, or even an entire drainage basin.

Domestic Consumption (use): The quantity of water used for household use including drinking, washing, bathing and cooking.

Drainfield: Perforated pipes buried in trenches filled with gravel that allows water from the septic tank to be absorbed into the ground.

E

Effluent: Something that flows out, such as a liquid discharged as a waste; for example, the liquid waste that comes out of a sewage treatment plant.

Evaporation: The process by which water is changed from a liquid to a vapor. In hydrology, evaporation is vaporization that occurs at a temperature below the boiling point.

Evapotranspiration: Evaporation plus transpiration.

F

Fluvial: Of or pertaining to rivers; produced by a river's action, such as a fluvial plain.

G

Gaining Reach: A portion of a stream that receives all or part of its water from groundwater.

Gallons Per Minute (GPM): A unit for expressing the rate of discharge, typically for the discharge of a well.

Glacier: A mass of ice that is moving on land in a definite direction, originating from accumulated snow.

Glacial Outwash: Layers of clay, sand, and gravel deposited by glacial meltwater streams.

Grassy Swale: An area covered with grass or other vegetation used to catch and treat stormwater runoff by allowing the water to slowly percolate through the grass and soils.

Groundwater: Subsurface water found in the zone of saturation.

Groundwater Level: Usually found by measuring the level of water in non-pumping or non-flowing wells – also known as the static water level.

H

Hardness: A measure of the amount of calcium, magnesium, and iron dissolved in the water.

HDPE: High-density polyethylene plastic.

Hydraulic Conductivity: A measurement of permeability.

Hydrogeology: The science of the interaction between geologic materials and water, especially groundwater.

Hydrologic Cycle: The endless interchange of water between sea, air, and land: includes evaporation from oceans, movement of water vapor, condensation, precipitation, surface runoff, and groundwater flow.

Hydrology: The science of the behavior of water in the atmosphere, on the earth's surface, and underground.

Hydrothermal Vein Deposits: A mineral deposit formed in cracks in rocks by the injection and cooling of hot liquid containing dissolved minerals.

I

Ice Age: A geological period of widespread glacial activity when ice sheets covered large parts of the continents.

Ice Dam: A blockage of a river by ice.

Igneous Rock: A rock formed by the cooling of molten magma; for example, granite or basalt. Light colored igneous rocks tend to be felsic and dark tend to be mafic.

Impervious: Incapable of being penetrated by water.

Infiltration: In hydrology it is the movement of water into soil or porous rock.

Influent Stream: A stream contributing water to the zone of saturation thereby sustaining or increasing the water table; also called a "losing stream".

J-K

No Entries.

L

Lava: Molten rock erupted on the surface of the earth by volcanic processes.

Losing Reach: A portion of a stream contributing water to groundwater.

M

Metamorphic Rock: Rock derived from pre-existing sedimentary or igneous rock that has been transformed by heat and/or pressure.

Monitoring Site or Well: A surface water site or a well used to monitor water quality and/or changes in water levels.

N

Nonpoint Source Pollution: Pollution discharged over a wide area of land, not from one specific location.

O

No Entries.

P

Parts Per Million (ppm): The number of “parts” of a substance by weight per million parts. A commonly used unit used to express a pollutant’s concentration in water. Equivalent to milligrams per liter (mg/L).

Percolation: The downward movement of water through the pores or spaces of a rock or soil.

Permeability: The ability of rock or sediment to permit water to pass through it. It is dependent on the volume of the pores and openings and their interconnectedness.

Point Source Pollution: Pollution discharged from a single source or point such as a pipe, ditch or sewers.

Porosity: In rock or soil, it is the ratio of the volume of openings in the material to the total volume of the material. In hydrology it is used to express the capacity of rock or soil to contain water and is expressed as a percentage.

Precipitation: In hydrology, any form of water that falls to the ground from the atmosphere, including rain, snow, ice, hail, drizzle, etc.

Proterozoic: Geological time unit before the first abundant complex life on Earth.

Purveyor: Someone who supplies provisions, in this case water.

Q

No Entries.

R

Recharge, Groundwater: In hydrology, the addition of water to the zone of saturation. Precipitation and its movement to the water table is an example.

Recharge Area: An area in which an aquifer receives water by the force of gravity moving water down from the surface.

Runoff: That portion of precipitation or irrigation water that drains from an area as surface flow.

S

Sewer: A system of pipes that carries domestic waste water and/or stormwater.

Saturated: In hydrology, the condition in which all the pore spaces in a rock or soil layer are filled with water.

Saturated Zone: A subsurface zone below which all rock pore space is filled with water (also known as the zone of saturation). The top of the saturated zone is the water table.

Sediment: 1) Any material carried in suspension by flowing water that ultimately will settle to the bottom of a body of water; 2) waterborne material deposited or accumulated on the bottom of waterways.

Sedimentary Rock: A layered rock resulting from the consolidation of sediments.

Seepage: Water that passes slowly through porous material.

Seismic Energy: Energy similar in character to that produced by an earthquake.

Septic Tank: Underground tanks that receive household wastewater. Anaerobic bacterial action breaks down the organic matter in the tank. The effluent then flows out of the tank into the ground through drains.

Septic System: The complete wastewater treatment system that includes a septic tank and a drainfield.

Seven Day Low Flow: The lowest average flow of seven consecutive days in the year.

Sewage: The total of organic waste and wastewater generated by residential and commercial establishments.

Sewer System: A system of pipes that carries wastewater and/or stormwater to a treatment facility. When the pipes carry both wastewater and stormwater it is called a Combined Sewer.

Sole Source Aquifer: An aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health. Requires designation by EPA.

Storm Drain (Storm Sewer): A drain (sewer) that carries storm waters and drainage, but excludes domestic and industrial wastewater.

Stormwater: Runoff water from urban areas that originates during precipitation events.

Surface Water: All water on the land surface exposed to the atmosphere, includes oceans, lakes, streams, glaciers and snow.

T

Transmissivity (groundwater): The capacity of an aquifer to transmit water through its entire saturated thickness.

Transpiration: The process by which water from a plant is evaporated to the atmosphere, usually through the leaf surface.

U

Unconfined Aquifer: An aquifer in which there are no confining beds between the zone of saturation and the surface. There will be a water table in an unconfined aquifer.

Underground Storage Tanks: Tanks used to store fuels and other liquids underground. There are usually two or more such tanks at every gas station.

V

No Entries.

W

Wastewater: Water discarded after use by human activities so that it must be treated before being returned to the environment.

Water Budget: A numeric evaluation of all sources of supply to and discharge from an aquifer or a drainage basin.

Water Cycle: Water’s journey through various phases including evaporation from surface water, movement through the atmosphere as clouds, and falling back to earth as precipitation. On earth the water may be used by plants or animals, become frozen, or flow as groundwater, subsurface flow or surface water, until repeating the cycle as evaporation.

Water Pollution: The addition of sewage, industrial waste, or other harmful or objectionable material to water in concentrations or in sufficient quantities to result in measurable decline of water quality.

Water Quality: A term used to describe the characteristics of water with respect to its suitability for certain uses. This can include chemical, biological, and physical characteristics.

Watershed: An area of land from which water drains to a single point; in a natural basin, the area contributing flow to a given point on a stream.

Water Table: The upper limit of the part of soil or underlying rock material that is completely saturated with water; the top of the zone of saturation.

Water Year: The 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1992, is called the “1992 water year.”

Well: A connection to an underground source of water made accessible by drilling or digging to below the water table.

X-Y

No Entries.

Z

Zone of Saturation: A subsurface zone in which all pore spaces are filled with ground water; below the groundwater table.