

# APPENDIX B

## Glossary

## GLOSSARY

**Absorption.** The process of sucking up or taking up to make part of an existent whole.

**Adsorption.** To gather on a surface in a condensed layer.

**Aeolian.** See eolian.

**Alluvial.** Material deposited by a stream or running water.

**Alpha particle.** A positively charged particle consisting of two protons and two neutrons, emitted in radioactive decay or nuclear fission.

**Annulus.** The space between the casing in a well and the wall of the hole, or between two concentric strings of casing, or between casing and tubing.

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

**Asphaltenes.** Any of the solid, amorphous, black to dark brown dissolved or dispersed constituents of crude oils and other bitumens that are soluble in carbon disulfide but insoluble in paraffin naphthas.

**Bulkhead.** A stone, steel, wood, or concrete wall-like structure primarily designed to resist earth or water pressure.

**Cambrian.** The earliest period of the Paleozoic era, thought to have covered the span of time between 570 and 500 million years ago; also, the corresponding system of rocks.

**Confined aquifer.** An aquifer bounded by impermeable beds, or beds of distinctly lower permeability than that of the aquifer itself, confined groundwater is generally subject to pressure greater than atmospheric pressure.

**Connate water.** Water entrapped in the interstices of a sedimentary rock at the time of its deposition.

**Crystalline.** Pertaining to or having the nature of a crystal, or formed by crystallization; specifically having a crystal structure or a regular arrangement of atoms in a space lattice.

**Dewatering.** To lower the groundwater level to a determined depth through the use of water extraction wells.

**Dolomite.** A common rock-forming rhombohedral mineral:  $\text{CaMg}(\text{CO}_3)_2$ .

**Downdip.** A direction that is downwards and parallel to the dip of a structure or surface.

**Effective stress.** The average normal force per unit area transmitted directly from particle to particle of a soil or rock mass. It is the stress that is effective in mobilizing internal friction.

**Eolian.** Pertaining to the wind; especially said of such deposits as loess and dune sand, of sedimentary structures such as wind-formed ripple marks, or of erosion and deposition accomplished by the wind.

**Eutrophication.** The process by which waters become more eutrophic; esp. the artificial or natural enrichment of a lake by an influx of nutrients required for the growth of aquatic plants such as algae that are vital for fish and animal life.

**Evapotranspiration.** Loss of water from a land area through transpiration of plants and evaporation from the soil.

**Coliform.** Relating to, resembling, or being the colon bacillus (bacteria).

**Feldspathic.** Said of a rock or other mineral aggregate containing feldspar.

**Halogens.** One of the electronegative elements of Group VII A of the Periodic Table (fluorine, chlorine, bromine, iodine, and astatine).

**Hydraulic conductivity.** Rate of flow of water in gallons/day through a cross section of 1 ft.<sup>2</sup> under a unit hydraulic gradient at the prevailing temperature.

**Hydraulic gradient.** The rate of change in total head per unit of distance of flow in a given direction.

**Hydrogeology.** The science that deals with subsurface waters and with related geologic aspects of surface waters.

**Hydrostatic head.** The height of a vertical column of water whose weight, if of unit cross section, is equal to the hydrostatic pressure at a given point.

**Hydrothermal.** Of or pertaining to hot water, to the action of hot water, or to the products of this action, such as a mineral deposit precipitated from a hot aqueous solution.

**Igneous.** Said of a rock or mineral that solidified from molten or partly molten material.

**Injectivity.** The ability of a formation to accept fluids; can be measured as the change in injection rate divided by the corresponding change in injection pressure.

**In situ.** In the natural or original position.

**Karstic.** A type of topography that is formed on limestone, gypsum, etc. by dissolution, characterized by sinkholes and caves.

**Lacustrine.** Pertaining to, produced by, or formed in a lake, or lakes.

**Leachate.** A solution obtained by the separation, selective removal, or dissolving-out of soluble constituents from a rock or orebody by the natural action of percolating water.

**Lithology.** The physical character of a rock.

**Lixiviant.** See leachate.

**Louver.** A transverse wall plate in archaeocyathids, commonly developed between the edges of adjacent septa or longitudinal ribs and usually tilted with reference to the wall surface.

**Magma.** Naturally occurring mobile rock material, generated within the Earth and capable of intrusion and extrusion.

**Magmatic water.** Water contained in or expelled from magma.

**Metamorphic.** Pertaining to the process of metamorphism or to its results.

**Metamorphism.** The mineralogical, chemical, and structural adjustment of solid rocks to physical and chemical conditions which have generally been imposed at depth below the surface zones of weathering and cementation, and which differ from the conditions under which the rocks in question originated.

**Meteoric water.** Pertaining to water of recent atmospheric origin. Also: pertaining to, dependent on, derived from, or belonging to the Earth's atmosphere.

**Nitrate.** A salt or ester of nitric acid, or any compound containing the univalent group;  $\text{ONO}_2$  or  $\text{NO}_3$ .

**Nitrogen.** A colorless, odorless, gaseous element that constitutes about four fifths of the volume of the atmosphere and is present in combined form in animal and vegetable tissues, especially in proteins; used chiefly in the manufacture of ammonia, nitric acid, fertilizers, cyanide, explosives, etc.

**Packer.** A short expansible-retractible device deliberately set in a cased or uncased well bore to prevent upward or downward fluid movement; generally for temporary use.

**Perched water table.** The water table of perched ground water.

**Permeability.** The property or capacity of a porous rock, sediment, or soil for transmitting a fluid; it is a measure of the relative ease of fluid flow under unequal pressure.

**Phosphate.** A salt or ester of phosphoric acid, containing phosphorus.

**Phosphorous.** A solid, nonmetallic element existing in two allotropic forms, one that is yellow, poisonous, flammable and luminous in the dark, and another that is red, less poisonous, and less flammable.

**Piezometric surface.** An imaginary surface representing the total head of groundwater, and defined by the level to which water will rise in a well.

**Pneumatic.** Of, relating to, or using gas.

**Porosity.** The percentage of the bulk volume of a rock or soil that is occupied by interstices.

**Potentiometric surface.** An imaginary surface representing the total head of groundwater and defined by the level to which water will rise in a well.

**Radioactivity.** The phenomenon exhibited by certain elements spontaneously emitting radiation as a result of changes in nuclei of atoms of the element.

**Radium.** A highly radioactive metallic element that upon disintegration produces the element radon and alpha particles.

**Regolith.** A general term for the layer or mantle of fragmental and unconsolidated rock material, whether residual or transported and of highly varied character, that nearly everywhere forms the surface of the land and overlies or covers the bedrock.

**Resin.** Any of various hard, brittle, transparent or translucent substances formed esp. in plant secretions and obtained as exudates of recent or fossil origin by the condensation of fluids on the loss of volatile oils.

**Sedimentary.** Formed by the deposition of sediment, or pertaining to the process of sedimentation.

**Seepage stress.** The force that is transferred from water flowing through a permeable granular medium to the medium itself by means of viscous friction.

**Shear.** A deformation resulting from stresses that cause or tend to cause contiguous parts of a body to slide relatively to each other in a direction parallel to their plane of contact.

**Siltstone.** An indurated silt having the texture and composition of shale but lacking its fine lamination or fissility.

**Sluicing.** Concentrating heavy minerals by washing unconsolidated material through boxes (sluices) equipped with riffles that trap the heavier minerals on the floor of the box.

**Slurry.** A highly fluid mixture of water and finely divided material.

**Stratified.** Formed, arranged, or laid down in layers or strata; especially said of any layered sedimentary rock or deposit.

**Stratigraphy.** The science of rock strata. It is concerned not only with the original succession and age relations of rock strata but also with their form, distribution, lithologic composition, fossil content, geophysical and geochemical properties.

**Stratum.** A layer of sedimentary rock, visually separable from other layers above and below.

**Sump.** An excavation in which the drainage water of an area is collected for subsequent use in irrigation or wild-fowl conservation.

**Tectonic.** Said of, or pertaining to the forces involved in, structural or deformational features of the outer (crustal) part of the Earth.

**Topography.** The general configuration of a land surface or any part of the Earth's surface, including its relief and the position of its natural and man-made features.

**Transmissivity.** The rate at which water is transmitted through a unit width of an aquifer under a unit hydraulic gradient.

**Unconfined aquifer.** An aquifer which is not confined under pressure by relatively impermeable strata.

**Vadose zone.** A subsurface zone containing water under pressure less than that of the atmosphere, including water held by capillarity; and containing air or gases generally under atmospheric pressure. This zone is limited above by the land surface and below by the surface of the water table.

**Viscosity.** The property of a substance to offer internal resistance to flow.

**Water Balance.** An accounting of the inflow to, outflow from, and, storage in a hydrologic unit.

# APPENDIX C

## Acronyms and Abbreviations



## ACRONYMS AND ABBREVIATIONS

ADHS.	Arizona Department of Health Services.
AMD.	Acid mine drainage.
AOR.	Area of review.
BIA.	Bureau of Indian Affairs, U.S. Department of the Interior.
BLM.	Bureau of Land Management, U.S. Department of the Interior.
BOD.	Biological oxygen demand.
CDOG.	California Department of Conservation, Division of Oil and Gas.
CERCLA.	Comprehensive Environmental Response, Compensation and Liability Act.
CFR.	Code of Federal Regulations.
COD.	Chemical oxygen demand.
DI.	Direct implementation (state).
EA.	Environmental assessment.
FLGMS.	Florida Groundwater Management System.
FURS.	Federal Underground Injection Control Reporting System.
LQD.	Land Quality Division (Wyoming).
MIT.	Mechanical integrity test.
NURP.	Nationwide Urban Runoff Program.
NPDES.	National Pollution Discharge Elimination System.
pH.	The negative log of the concentration of hydrogen ions in a solution.
RCRA.	Resource Conservation and Recovery Act.
SBW.	Service Bay Water.
SCS.	Soil Conservation Service, United States Department of Agriculture.
SDWA.	Safe Drinking Water Act.

**SQG.** Small quantity generator.  
**TDS.** Total dissolved solids.  
**TOC.** Total organic carbon.  
**TRH.** Total recoverable hydrocarbons.  
**TTPI.** Trust, Territories of the Pacific Islands.  
**UIC.** Underground Injection Control.  
**USDW.** Underground Source of Drinking Water.  
**USEPA.** United States Environmental Protection Agency.  
**USGS.** United States Geological Survey.