

APPENDIX V – Definitions and Key Terms

Acre-foot (AF): The volume of water needed to cover one acre of land, one foot deep; one acre-foot is 325,851 gallons or approximately enough water to provide for approximately two families of four living in a single-family home for one-year.

Active Management Area: A geographic area that has been designated pursuant to A.R.S. § 45-411 as requiring active management of groundwater or, in the case of the Santa Cruz AMA, active management of any water, other than stored water, withdrawn from a well.

Agricultural water use: Water applied to two or more acres of land to produce plants or parts of plants for sale for human consumption or for use as feed for livestock, range livestock or poultry.

Alluvium: A deposit of earth, sand, and other transported matter left by water flowing over land not permanently submerged; chiefly applied to the deposits formed in river valleys and deltas.

Artificial recharge: Water recharged to the aquifer through recharge projects, which may be recovered annually or in the future based on accrued recharge credits.

Aqueduct: An artificial channel for conveying water.

Aquifer: A geologic formation that contains sufficient saturated materials to be capable of storing water and transmitting water in usable quantities to a well.

Augmentation: To supplement existing water supplies.

Baseflow: The part of a stream discharge that is not attributable to direct runoff from precipitation or melting snow. It is sustained by groundwater discharge and may be considered as normal day-to-day flow during most of the year.

Brackish Groundwater: Brackish water supplies are more highly saline than fresh water, but have lower salinity than seawater. Brackish groundwater is defined as having a total dissolved solids (TDS) concentration between 1,000 and 10,000 milligrams per liter (mg/L).

Colorado River Basin States (Basin States): In accordance with the Colorado River Compact of 1922, the Colorado River Basin is comprised of parts of Arizona, California, Colorado, Nevada, New Mexico, Utah, and Wyoming, within and from which waters drain naturally into the Colorado River. These seven states are referred to as the Basin States.

Community Water System: A public water system, as defined in A.R.S. § 49-352(B), that serves at least fifteen service connections used by year-round residents of the area served by the system or that regularly serves at least twenty-five year-round residents of the area served by the system.

Desalination: The process of removing dissolved salts from water, thus producing fresh water from seawater or brackish water.

Drought: A sustained natural reduction in precipitation that results in negative impacts to the environment and human activity.

Earth fissure: Fractures or cracks that form in alluvial basins due to substantial groundwater overdrafts that produce local subsidence.

Evapotranspiration: Term describing the transport of water into the atmosphere from surfaces, including soil (soil evaporation), and from vegetation (transpiration).

Exempt well: Within an AMA, a well having a pump with a maximum pumping capacity of 35 gallons per minute or less, which is used to withdraw groundwater for non-irrigation purposes. This term is also used to describe any well outside an AMA having a pump with a maximum pumping capacity of 35 gallons per minute or less.

General Stream Adjudication: A judicial proceeding to determine or establish the extent and priority of water rights in the Gila and Little Colorado River Systems.

Groundwater: Water under the surface of the earth regardless of the geologic structure in which it is standing or moving. Groundwater does not include water flowing in underground streams with ascertainable beds and banks.

Groundwater Basin: An area which may be designated so as to enclose a relatively hydrologically distinct body or related bodies of groundwater, which shall be described horizontally by surface description.

Groundwater Savings Facility: A facility that meets the requirements of *A.R.S. §45-812.01* in an active management area or an irrigation non-expansion area at which groundwater withdrawals are eliminated or reduced by recipients who use in lieu water on a gallon-for-gallon substitute basis for groundwater that otherwise would have been pumped from within that active management area or irrigation non-expansion area.

Hydroelectricity: Electric current produced from water power.

Hydroelectric power: Electrical capacity produced by falling water.

Hydrograph: A graphic representation of the changes in the flow of water or the elevation of water levels over time.

Industrial water use: A non-irrigation use of water not supplied by a city, town or private water company, including animal industry use and expanded animal industry use.

Irrigation Non-Expansion Area (INA): A geographic area that has been designated pursuant to *A.R.S. § 45-431 or 45-432* as having insufficient groundwater to provide a reasonably safe supply for the irrigation of cultivated lands at the current rate of withdrawal. Within INA's, new agricultural use

occurring on land that was not irrigated in the five years preceding the designation of the INA is prohibited with a few exceptions for substitution or transfer of acres under specified circumstances.

Importation: To bring new water supplies from outside of Arizona.

Land subsidence: Land subsidence is the lowering of the elevation of the ground surface usually caused by the over-extraction of groundwater, oil, gas, or other material.

Lower Colorado River Basin States (Lower Basin): The states of Arizona, California, and Nevada make up the Lower Colorado River Basin.

Mainstem: The main course of a river or stream.

Municipal water use: All non-irrigation uses of water supplied by a city, town, private water company or irrigation district, except for uses of water, other than Colorado River water, released for beneficial use from storage, diversion or distribution facilities to avoid spilling that would otherwise occur due to uncontrolled surface water inflows that exceed facility capacity.

Overdraft: Occurs when more groundwater is being pumped than the amount of water naturally or artificial recharged to the aquifer.

Present Perfected Rights: A water right recognized by the U.S. Supreme Court Decree of 1964 in Arizona v. California which existed prior to June 15, 1929 (the effective date of the Boulder Canyon Project Act). The 1979 Supplemental Decree of the U.S. Supreme Court in Arizona v. California lists and quantifies these Present Perfected Rights.

Prior Appropriation: The surface water right doctrine applicable in those portions of Arizona not receiving Colorado River water. This doctrine is based on the tenet of "first in time, first in right" which means that the person who first puts the water to a beneficial use acquires a right that is superior to later appropriators of the water.

Rainwater harvesting: The collection of rainwater for future uses.

Reasonable and Beneficial Use: A legal doctrine that describes the limit and extent of water use.

Recharge: Water added to the aquifer through seepage and infiltration.

Reclaimed water: Water that has been collected in a sanitary sewer for subsequent treatment in a facility that is regulated as a sewage system, disposal plant or wastewater treatment facility. Such water remains effluent until it acquires the characteristics of groundwater or surface water.

Reservoir: An artificially created lake where water is collected and stored for future use.

Runoff: Water from rain or snow that flows over the surface of the ground into streams.

Safe-yield: A groundwater management goal which attempts to achieve and thereafter maintain a long-term balance between the annual amount of groundwater withdrawn in an active management area and the annual amount of natural and artificial recharge in the active management area.

Surface water: The waters of all sources, flowing in streams, canyons, ravines or other natural channels, or in definite underground channels, whether perennial or intermittent, floodwater, wastewater or surplus water, and of lakes, ponds and springs on the surface.

Transportation: The movement of groundwater from the point of withdrawal to the point of use.

Underground Storage Facility: means a constructed underground storage facility or a managed underground storage facility. "Constructed underground storage facility" means a facility that meets the requirements of section A.R.S. § 45-811.01 and that is designed and constructed to store water underground pursuant to permits. "Managed underground storage facility" means a facility that meets the requirements of section A.R.S. § 45-811.01 and that is designed and managed to utilize the natural channel of a stream to store water underground pursuant to permits through artificial and controlled releases of water other than surface water naturally present in the stream. Surface water flowing in its natural channel is not a managed underground storage facility.

Tributary: A river or stream flowing into a larger river or lake.

Upper Colorado River Basin States: The states of Colorado, New Mexico, Utah and Wyoming make up the Upper Colorado River Basin.

Water Storage: Adding water to an aquifer or saving water in an aquifer.

Weather modification: The application of scientific technology that can enhance a cloud's ability to produce precipitation.