

WRDC Environmental Workgroup; 3/4/2011 (revised)  
Terms and Definitions

Baseflow = The part of stream flow originating from groundwater discharge and that sustains year-round flow. Several studies are available in the scientific literature that estimate base flow for a subset of Arizona's rivers. Those studies estimated base flow values very close to median annual flow. **Baseflow measurements reflect the effect of upstream water diversions or pumpage to meet cultural water demands.**

Effluent: 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.

Effluent dependent water: Surface waters that would generally be ephemeral, except for the discharge of treated effluent.

Environmental Allocation = amount of water allocated for an environmental purpose through a settlement, agreement, permit, decree, or other legal or administrative process.

**Federal Reserved Water Rights = to ensure that federal lands, including Indian reservations, have sufficient water to fulfill the purposes for which they were established, the federal government is permitted to use and control, for public purposes, water appurtenant to federal lands. The basis for reserved water rights is established under the "Winters Doctrine". These rights are defined by the documents that set the land aside and are recognized within individual states by negotiation or litigation.**

Floodflow = stream discharge during a relatively high flow measured by either gage height or discharge quantity

Groundwater basin = An area which may be designated to enclose a relatively hydrologically distinct body or related bodies of groundwater, and described horizontally by surface description.

Groundwater underflow = Subsurface water that flows out of a basin into the next down-gradient basin, including both shallow groundwater in the Holocene alluvium and water contained in Tertiary basin fill. Groundwater underflow estimates are available **for some** groundwater basins but not all, and will not be included in estimates of annual flow for rivers described in the WRDC's work.

Instream flow right: A non-diversionary surface water right for recreation and wildlife purposes, including fish.

Maximum storage capacity: Total storage space in a reservoir below the maximum attainable water surface elevation, including any surcharge (flood control) storage.

Perennial stream: A stream or part of a stream with surface flow throughout the year, drying only during periods of drought.

Reservoir Storage = the maximum storage capacity in a reservoir in acre-feet or for those reservoirs without a volumetric capacity, the maximum surface area of the reservoir.

Large Reservoir = water bodies with a maximum storage capacity of 500 acre-feet or greater or a maximum surface area of 50 acres or greater

Small Reservoir = water bodies with a capacity of greater than 15 but less than 500 acre-feet or a maximum surface area of between 5 and 50 acres

Riparian evapotranspiration = Riparian evapotranspiration (ET) refers to the combined amount of water evaporated from riparian soil or open water surfaces, or transpired by riparian vegetation.

Spring and Effluent Discharge = flow discharge from springs and wastewater discharge to a watercourse. Spring flow is from the Arizona Water Atlas and is generally the most recent discharge measurement identified at a spring site.

Major Spring = a spring with a discharge rate of 10 gallons per minute (gpm) or greater

Minor Spring = a spring with a discharge rate between 1 and 10 gpm.

Stockpond = an impoundment with a capacity of less than 15 acre-feet that stores appropriate water and that is for the sole purpose of watering livestock and wildlife.

SWAP (Statewide Wildlife Action Plan) = a comprehensive plan developed by the Arizona Game and Fish Department that outlines the steps that are needed to conserve wildlife and habitat.

Total quantifiable flow supporting current water-dependent natural resources = the sum of total annual base flow, groundwater underflow (where available), and riparian ET. Note that estimation of underflow is typically done through use of a basin-wide

groundwater model, so quantification is not available for most of the basins in the state. Floodflow is also an important component of total flow but cannot be readily quantified.

Wildlife catchment = a developed/constructed water source used as an important habitat enhancement technique to increase water availability in arid areas for numerous wildlife species. Catchments are also constructed to mitigate loss of natural water sources for wildlife.