



A Glossary of Common Water Supply Terms used by the CBRFC

The National Oceanic Atmospheric Administration’s (NOAA) Colorado Basin River Forecast Center (CBRFC) works to provide forecasts of water supply and streamflow throughout the Colorado River Basin. Many of the water supply forecasts developed by the CBRFC are “unregulated,” and have been adjusted to account for regulatory activities on the river such as diversions and/or reservoir operations. Below are definitions of terms commonly used by the CBRFC to describe water supply and regulatory activities within the CBRFC’s area of responsibility. It is important to note that other agencies and partners within the CBRFC’s area may not define these terms identically.



CBRFC Terms and Definitions¹

Diversion (D): Measured water that is taken from the river. Observations are available to the CBRFC in a routine and timely manner such that the observations can be included in *unregulated flow* calculations.

Export (E): Measured transbasin/transmountain diversion from a basin with zero return flow. Prior to August 2015, exported water was referred to as a *diversion*. Observations are available to the CBRFC in a routine and timely manner such that the observations can be included in *unregulated flow* calculations.

Import (I): Measured transbasin/transmountain diversion into a basin with zero return flow. Prior to August 2015, imported water was referred to as a *diversion*. Observations are available to the CBRFC in a routine and timely manner such that the observations can be included in *unregulated flow* calculations.

Unmeasured Depletion (D_U): Water taken from the river, but is unmeasured (or, data is not available to the CBRFC in a routine and timely manner). This water is not accounted for in the derivation of *unregulated flow*. This water was previously described as *consumptive use*. This value is derived by the CBRFC using a model that is a function of irrigated acreage and temperature.

Unmeasured Return Flow (R_U): Water that is returned to the river, but is unmeasured (or, data is not available to the CBRFC in a routine and timely manner). This water is not accounted for in the derivation of *unregulated flow*. This water was previously described as an import.

Natural Flow (Q_N): Flow (or volumetric water supply) in which all anthropogenic regulations, use, and impacts are accounted for. Ideally, this is what the CBRFC would be able to forecast with available and timely data.¹

$$Q_N = Q_O + D + E - I + D_U - R_U \pm \Delta S$$

Unregulated Flow (Q_U): Flow (or volumetric water supply) where known, measured *diversions*, *imports*, and reservoir regulation are accounted for to approximate *natural flow* conditions of the river. However, *unmeasured depletions* and *unmeasured return flow* are not accounted for.¹

$$Q_U = Q_O + D + E - I \pm \Delta S$$

¹ Note that Q_O denotes “Observed Flow,” or flow that is physically measured at a point. ΔS denotes the change in storage at a reservoir.