

CWAG POSITION: SAFE YIELD WITH RIVER FLOW



The State of Arizona has established a goal of safe yield for the Prescott Active Management Area (PrAMA). In January of 1999, the state declared the PrAMA to be out-of-safe yield and specified that safe yield was to be achieved by 2025.

Safe yield is defined in Arizona statute as a long-term balance between the “withdrawal” of groundwater and both the natural and artificial recharge of water to the aquifer. In subsequent statements, the state has specified that “withdrawals” includes both human-induced (pumping) and natural outflows. However, the state has not specified any specific amount of outflow that must be maintained.

CWAG’s mission and vision statements include a sustainable water future and maintaining flows in springs and streams. Importantly, public officials have widely called for protection of river flows particularly for the Verde River. Therefore, CWAG advocates that a specific natural outflow from the PrAMA should be established as part of the safe yield goal.

Although a natural outflow ranging from pre-development conditions of nearly 10,000 acre-feet per year all the way to zero could be selected, CWAG believes it is reasonable to use recent natural outflows for a “safe yield with river flow” goal.

In 2013 ADWR revised the PrAMA groundwater flow model and estimated natural outflow in recent years to be about 5,000 acre-feet per year to the Verde and Agua Fria rivers. It, therefore, is CWAG’s policy that outflows of 5,000 acre-feet per year should be maintained.

The practical effect of this policy of maintaining 5,000 acre-feet per year of natural outflow concerns the calculation of the amount of groundwater that can be pumped while maintaining safe yield plus river flow, a so-called safe yield groundwater value. To achieve safe yield, the PrAMA would need alternative water to meet demand in excess of this value.

The safe yield groundwater value is obtained by subtracting the selected natural outflow value of 5,000 acre-feet per year from a projected long-term average natural recharge. Although an historical average long-term natural recharge has been estimated by ADWR to be about 10,000 acre-feet per year, the effects of climate change and other factors that can affect recharge should be considered in a plan to achieve safe yield.

The PrAMA water users with the encouragement and assistance of ADWR need to develop a plan to achieve safe yield by 2025 while maintaining 5,000 acre-feet per year of natural outflow.

Revised BD 1/13/14