## Talk of the Town: Upper Verde region — it's not too late yet

EDWARD W. WOLFE, Special to the Courier Originally Published: October 3, 2022 5:11 p.m.

Legislative District 1 (LD1), essentially Yavapai County, has major water issues facing individual well owners and municipal water systems. They reflect a combination of our dependence on groundwater, a declining water table, drying streams and rivers, an ever-growing population and increasing numbers of homes.

In the past quarter century the effects of warming climate, a diminishing Verde River, and depletion of groundwater threaten the long-term viability of our communities. How will our legislators support the long-term water availability for our communities?

The Citizens Water Advocacy Group (CWAG) will host an online water policy forum via Zoom from 10 a.m. to noon Saturday, Oct. 8, with all six candidates running to represent LD1 in the upcoming election. You can find the forum questions, background information and Zoom registration link at cwagaz.org.

More than 100,000 citizens of Prescott, Prescott Valley, Chino Valley, and Dewey-Humboldt depend on groundwater of the Prescott Active Management Area (PrAMA). The depth to groundwater is increasing at an average rate of about a foot and a half per year as consequence of groundwater pumping over much of the PrAMA. Many family wells have gone dry.

Groundwater pumping began to expand in the northwestern PrAMA in the 1940s. By the 1970s, ever-increasing pumping of groundwater had eliminated year-round flow of 6 miles of perennial uppermost Verde River that originated at Del Rio Springs. Excessive groundwater pumping in the northwestern PrAMA has now reduced the once magnificent Del Rio Springs to about 4% or less of its predevelopment output.

Over the past quarter century — a period of drought, increased groundwater pumping, and increased temperature — the lowest annual flows of the upper Verde River decreased at the USGS Paulden streamgage, at river mile 10, from about 17,400 acre-feet per year (afy) to 10,800 afy. The lowest average annual flow of seven consecutive days, representing groundwater, is now at 60% of its rate in 1995 – 27 years ago. If that rate of decrease continues, we should expect the river's uppermost 25 miles to be dry for a part of the year in about 40 years.

Nearly 20 years ago, Prescott and Prescott Valley formed a partnership to build a pipeline to transport up to 12,000 afy (nearly 4 billion gallons per year) of

groundwater from Big Chino Valley to their communities to support growth. Litigation forced them to agree to cease importation if it caused a decrease in streamflow measured at the USGS Paulden streamgage.

In the meantime, the lowest annual flows at the streamgage, which consist of groundwater, have declined by about 60%. Further, in 2021, there were 42 of 60 consecutive days from late May through late July in which extraction at an attempted rate of 12,000 afy would have dried the river. The harm to upper Verde River wildlife would have been irreparable.

Depth to groundwater has increased to well more than 100 feet in much of the PrAMA. There seems to be no currently effective legal remedy to slow or stop depletion of our groundwater. Safe yield as a suggestion instead of a requirement is not working. We need regional cooperation plus help from the legislature in turning safe yield or an effective alternative into a requirement.

Help from the Arizona legislature and regional cooperation will be essential to shaping a healthy, long-lived water future for the PrAMA, Verde Valley, and Big Chino Valley communities.

Edward W. Wolfe, Ph.D., is a member of the CWAG board, a former chair of the Verde River Basin Partnership, and a retired USGS geologist.