

Talk of the Town: Upper Verde River threatened by pumping, pipeline

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Citizens Water Advocacy Group/Courtesy

By EDWARD W. WOLFE, PH.D. Special to the Courier

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Groundwater pumping and the proposed importation of Big Chino groundwater threaten our Prescott-region groundwater supply and the perennial flow of the upper Verde River.

Essentially our entire water supply is pumped from the relatively small groundwater basin underlying our communities. Groundwater demand substantially exceeds the resupply; and rapid development of new housing intensifies the demand.

Pumping for irrigation in the Chino Valley area increased dramatically in the 1930s. In 1948, the City of Prescott began to import water from a well field about 5 miles south of Del Rio Springs within the future town of Chino Valley. That remains Prescott's municipal water source, as well as the water source for part of Chino Valley.

Pumping has exacted a huge price. Flow from the once-magnificent Del Rio Springs declined from an estimated 4,400 acre-feet per year in 1935 to approximately 400 acre-feet per year in 2019 – a 92% loss. Del Rio Springs was the historical headwaters of the Verde River, but now nearly 6 miles of formerly perennial Verde River is dry; its riparian habitat is gone.

The history of Del Rio Springs illustrates a critical lesson: Groundwater exiting from springs or through streambeds maintains our perennial streams. Extraction of groundwater, whether for agriculture or thousands of homes, reduces and eventually eliminates the supply of groundwater that supports year-round river flow. This principle applies critically to the Verde River.

A U.S. Geological Survey study published in 2005 concluded that groundwater from the Prescott area flows north into the Big Chino Valley groundwater system and provided about 14% of the surface water measured at the Paulden “streamgauge” on the upper Verde River. The northerly flow is likely less now and will decline further as the groundwater in the Prescott area continues to be diminished.

Arizona water laws authorize Prescott to pump and transport groundwater from the Big Chino Valley to the Prescott area to support development. Prescott and Prescott Valley have developed a preliminary plan to construct a pipeline to export water from the Big Chino Water Ranch.

In a 2010 settlement with the Salt River Project, Prescott and Prescott Valley agreed to mitigate any negative impact from their pumping on upper Verde River streamflow. However, no mitigation plan exists.

Importing Big Chino groundwater could provide water for thousands of new houses but it will neither reduce the large and growing annual overdraft nor our accumulated groundwater debt – about one-third of a million acre-feet since 1995. The proposed extraction and exportation of Big Chino groundwater, if not successfully mitigated, threatens eventual loss of year-round streamflow in the first 25 miles of the upper Verde River, plus equivalent reduction of streamflow farther downstream in the Verde Valley.

Unless a binding and effective mitigation plan is proven, the proposed transfer of Big Chino groundwater to Prescott and Prescott Valley must be abandoned.

I will explain how rising temperatures, the demands of new development, and the impact of the proposed Big Chino pipeline endanger the upper Verde River and why it matters in a Zoom webinar hosted by the Citizens Water Advocacy Group (CWAG) on Saturday, March 13. Details at www.cwagaz.org.

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.

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