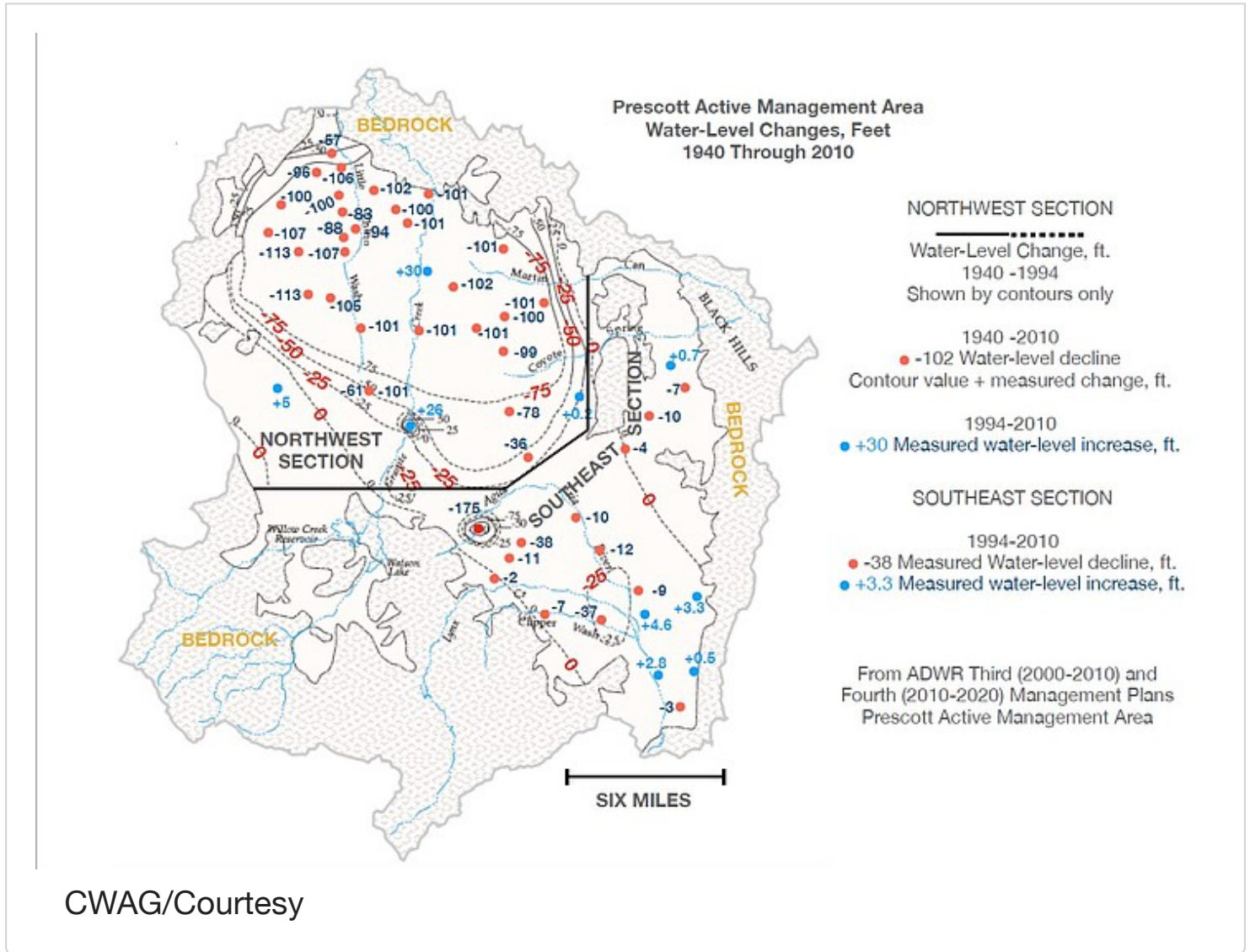




Talk of the Town: Will we have enough water for our citizens in the future?



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Central Yavapai County has both a vigorously expanding population, currently estimated at about 111,000, and a decreasing water supply in the Prescott Active Management Area (PrAMA). Some wells are failing; others are completely dry. Evidence is growing ever clearer that climate change is here. Yet we are building and planning dwellings by the thousands. Will we have an ample supply of water for our citizens in the future?

The area of the PrAMA is about 485 square miles, and the area of the aquifer from which we draw 100% of our potable water is about half of that. Our aquifer underlies the valleys of Little Chino Creek, Granite Creek and Lonesome Valley, as well as the uppermost Agua Fria valley. The PrAMA groundwater flows slowly, perhaps a foot per day, exiting northward underground to the groundwater of the Big Chino Valley and southward to the Agua Fria River south of Dewey-Humboldt.

Calculations by the Arizona Department of Water Resources indicate that we have been losing groundwater from the PrAMA aquifer system at an alarming rate in the past quarter century. This is due to population growth and climate change marked by drought and elevated temperature.

Because we pump more groundwater than is recharged, the water table is declining. Monitored groundwater levels in the northwestern part of the PrAMA document an average decline of the water table of about 95 feet over the 70 years from 1940 through 2010, averaging about 1.4 feet per year. More recently, 1994 through 2010, the rate of decline is greater, about 1.5 feet per year and slightly greater, approaching 1.6 acre-feet per year, in the area overlying the Agua Fria drainage.

Increasing depth to groundwater causes wells to fail, initially on the edges of the aquifer, and can cause water-quality problems. Declining groundwater levels also reduce the flow of the Verde and Agua Fria Rivers.

Until 1985, agriculture dominated the demand for groundwater. From 1985 through 2010 groundwater use for agriculture in the PrAMA declined from 68 to 11 percent of the total groundwater pumped. About half of the irrigation water was estimated to seep back to the aquifer. Municipal water consumption has now replaced agricultural groundwater consumption. Unfortunately, municipal use produces essentially no significant aquifer recharge because the recharged wastewater is used to support growing numbers of new homes, not to benefit the aquifer. The result is that municipal groundwater pumping has increased stress on the aquifer and reduced

groundwater levels. And every new home adds to the problem.

Evidence is growing ever clearer that climate change is now reducing our water security. We are in a long-term, possibly permanent, drought. The past quarter century has been as dry as any since the 16th century. Additionally, the average temperature in this recent quarter century has been 2 degrees higher than the average for the entire preceding century.

Accelerating depletion of our groundwater causes failing wells, water impurities and degraded rivers.

There is no magical source of new water to rescue us. Regional water conservation planning and management of growth and population are imperative if our grandchildren are going to thrive in the Prescott Active Management Area.

Learn more at a free Citizens Water Advocacy Group (CWAG) Zoom Webinar, “The Future of Water for the Quad Cities,” Sept. 18, 10 a.m. to noon. Register at www.cwagaz.org .

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