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Talk of the Town

Column: Where will we find more water?

By KEN JANECEK

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We live in a beautiful place with a great climate and spectacular scenery.

Our region receives only about 14 inches of precipitation a year, and we have high evaporative losses. As a result, only 2 or 3 percent of our precipitation soaks in to recharge our aquifers.

The Little Chino Aquifer that underlies much of the tri-cities area took thousands of years to fill. We are now mining groundwater so intensely that the water level drops about two feet per year. Some private wells at the edges of the aquifer are already dry, a problem that will accelerate as we grow.

When the first white settlers arrived from the East in 1863, they settled at the headwaters of the Verde River - Del Rio Springs - in Chino Valley and established the first territorial capitol of Arizona. Today, as we celebrate the sesquicentennial of the settlers' arrival at the springs, the flow is only 10 percent of the pre-development flow, and by 2025 the springs are predicted to be dry, another casualty of excessive pumping.

We've known we've been overdrafting groundwater in our area for many years. The Arizona Department of Water Resources (ADWR) made it official in 1999 when they declared the tri-cities area out of "Safe Yield" (the long-term balance between the annual amount of groundwater withdrawn in the AMA and the annual amount of natural and artificial recharge) which triggered new restrictions on groundwater use for new development. Sadly, developers heard about the 1999 declaration before it became official and submitted plats for 32,000 more lots, which were then exempted from the new regulations.

The Yavapai County Water Advisory Committee (WAC) knows groundwater mining can't go on forever, especially with the projected population growth of our area. In 2007, the WAC initiated the Central Yavapai Highlands Water Resources Management Study (CYHWRMS), a collaborative effort by ADWR, the WAC and the U.S. Bureau of Reclamation (USBR) to define projected water needs for the Upper and Middle Verde basins and identify possible alternatives to meet those needs. This Appraisal Study is now finished and shows we will have a huge unmet demand by 2050, but there are at least six practical alternatives to meet some or all of the projected shortfall. WAC, ADWR, and USBR officials are beginning to meet with the 102 private and public water providers in the study area to learn what each provider will do to meet their part of the shortfall. Providers will look at cost, legal, environmental, and sociopolitical issues for each alternative.

The most likely result of this dialog with the providers will be to define how much of the expected shortfall



Joanna Dodder/Courier

Prescott College Natural History Professor Walt Anderson talks about Del Rio Springs while standing at the springs during a public tour in November.

can be met by conservation, rainwater harvesting, and recycling, the "low hanging fruit" alternatives that cost the least to implement. Judging from the size of the shortfall, there will probably be several large municipal providers who will still have unmet demand. One of few feasible regional alternatives is importing renewable surface water, perhaps from the Colorado River. If that is their choice, the infrastructure will be expensive, but will be decades in the future.

The cost estimates used to compare the CYHWRMS alternatives were general and not site specific. Now the WAC water providers need to decide which alternatives they will use to meet the shortfall and whether they will proceed to the next step, a Feasibility Study in a 50/50 cost share partnership with the USBR, which would be a site-specific engineering study for piping, pumping, and storing imported water to supply each water provider. The Feasibility Study would have to be approved by Congress, which could take years.

Coconino County did an Appraisal Study with the USBR, chose alternatives to evaluate and is now in the third year of a Feasibility Study to establish more accurately the cost of piping Colorado River water to Flagstaff. One possibility for the WAC would be to partner with Coconino County on a Feasibility Study to extend the pipeline from Flagstaff to all the WAC communities and share the cost of the project.

The Citizens Water Advocacy Group (CWAG) encourages the WAC cities to fund a Feasibility Study on strategies to meet future water demand, safe yield for the Prescott Active Management Area, and maintain Verde River flows.

As individuals, we can increase our efforts to conserve, harvest rainwater and reuse what we can to help extend our dwindling groundwater reserves until a dependable, environmentally sound, importation system can serve our region.

Please submit questions and comments to info@cwagaz.org.

Ken Janecek is vice president of CWAG and a retired chemical engineer. He has attended most meetings of the CYHWRMS stakeholders since the study's inception.

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