

MEMORANDUM

TO: Regional Water Study Oversight Committee

RE: Neighborhood Concerns

FROM: Neighborhood Infill Coalition

DATE: July 9th, 2008

At the June 25th, 2008 meeting of the City/County Water Committee, the presenters made it abundantly clear that, where water is concerned, Tucson is balancing on the razor's edge. We live over an enormous amount of underground water, yet much of it is unusable. This water acts like our city's foundation, holding up our vast sprawl of infrastructure. Removing too much groundwater can have the same effect as chipping away portions of the cement slab upon which our homes are built – remove too much and the house will collapse. This point was emphasized when the presenters, in response to a question raised by a Chamber of Commerce representative, informed the audience that mining too much of this water would make our valley unlivable.

Our aquifer is shaped somewhat like a large washbasin, with Tucson sitting over the deepest portion and the surrounding communities of Marana, Oro Valley, Sahuarita and Vail sitting over the shallow ends. Like the Santa Cruz River and our sewer system, the aquifer “flows” northwest. While Tucson has used CAP water to reduce its groundwater pumping and slow its subsidence, the surrounding communities have not been able to do so.

It is now becoming clear why the region's other water providers have been clamoring for a seat on this water committee and are attempting to control these discussions. The communities they serve are located over the shallow portions of the aquifer where they have no direct access to their CAP allotments, so they are vulnerable to higher levels of subsidence. Regionalization of water is the ultimate prize for them, as it would allow them to tap into Tucson's deep aquifer and CAP allotment so they could continue the irresponsible growth patterns that got them in trouble in the first place.

We are also troubled by other aspects of Arizona water law that make Tucson's water situation even more precarious. These include:

Central Arizona Groundwater Replenishment District (CAGR)

This mechanism was designed to protect the property interests of the development community by creating the myth of “paper water”. It treats the aquifer as if it were a giant swimming pool – turn the hose on in Marana and the water table rises in Rita Ranch. We all know, however, that water doesn't naturally flow uphill and the aquifer is much more complex than a swimming pool.

CAGRDR works something like this. If a developer finds that his proposed subdivision in Vail is located miles away from Tucson's water infrastructure – no problem. He simply purchases a recharge contract from CAGRDR. They in turn, recharge CAP water at their facilities near Marana, where that water will never reach Vail, and the developer then pumps groundwater to supply his subdivision. On paper, it appears that the developer has met the Assured Water Supply requirements by supplying the homeowners in his subdivision with the required blend of 8% groundwater and 92% “renewable” water. In reality, he is supplying his homeowners with 100% groundwater – the same groundwater that is helping to keep the land beneath their homes stable.

Assured Water Supply Designation

Under the Assured Water Supply rules, a developer's hydrologist is required to certify that over a 100-year period, the development will not draw the water table down lower than 1000 feet or drain the aquifer dry, whichever comes first. The developer may drill his well deeper than 1000 feet to accommodate the fluctuations that naturally occur in groundwater levels throughout the year. Some of our valley's deepest wells are located in the shallow portions of the aquifer, and these deep wells raise concerns about the actual amount and quality of the water that is being accessed and the long-term reliability of the Assured Water Supply designations.

Conclusion

Our aquifer is a complex system, a deep, rock-lined valley that, over millions of years, has filled with a kind of rubble mixture of sand, gravel, clay and water. Rocky ledges protrude upward throughout this rubble mixture, forming isolated sub-basins. We've built our sprawling city infrastructure on top of this and have been extracting the water, causing uneven settling that leads to damaged infrastructure and cracked foundations.

In response to this, we've treated our aquifer like a giant sponge that we can just wring out and have assumed that it would return to its original shape once we started recharging CAP water. But our aquifer is more like a battery. We can draw down the water level and recharge it, but only for so long. Just like a battery that loses its ability to hold a charge, our aquifer gradually loses its ability to store water as subsidence compacts the soil mixture.

Our community is at a water crossroads and is facing some difficult decisions. We need accurate information and a better understanding of the complexity of our aquifer. When other water providers demand a seat at the table but hide behind the flimsy smoke screen of “Homeland Security” to avoid sharing vital information, they do a great disservice to this community.

We ask that this committee continue, as it has, to set the highest standards of openness and honest dialogue, and to expect nothing less from the other water providers.

