

Why do Residents of Utah County, Utah, Dig Shallow Wells in their Backyards?

Janelle E. Gherasim, Sterling M. Roberts, Skyler K. Tulley, Anthony C. Bradford, Neal B. Christensen, Lawrence T. Kellum, Joshua S. McNeff, Colby Oliverson, Jarrett D. Nichols, Jake V. Sorensen, and Steven H. Emerman
Department of Earth Science, Utah Valley University

Abstract. It is common for urban residents of Utah County, Utah, to dig and maintain shallow (< 10 m) wells in their backyards, although the practice is illegal in Utah and unusual for urban residents outside of the developing world. Chemical analysis of 107 backyard wells thus far has shown that EPA Drinking Water Standards are not met for Mn, As, Cd, Fe, Cu and Pb in 18.7%, 15.9%, 6.5%, 6.5%, 0.9% and 0.9% of wells, respectively, which is consistent with the history of unregulated mining in the watershed of Utah Lake. Beginning in the summer of 2015, interviews have been carried out with backyard well owners regarding why they dig and maintain shallow wells, as well as their social, political and religious attitudes. According to a preliminary analysis of 20 interviews carried out thus far, backyard wells are dug and maintained for emergency planning and for watering lawns and livestock, but not for gardens. Backyard well owners are conservative in terms of their social, political and religious attitudes, but are not survivalists or adherents to conspiracy theories. In fact, owners of backyard wells are no different than the mainstream of Utah culture, which suggests that backyard wells may be very common throughout the state. These findings raise the possibility that a state water policy that is backed by the public ought to include the promotion and legalization of safe water supply at the household level. Further results and interpretation will be presented at the meeting.