

MEMO

TO: Mayor Steve Cox, Boulder Planning Commission; Michala Alldredge, Zoning Administrator; Peg Smith and other interested parties

FROM: Lee Nellis, FAICP

DATE: September 16, 2021

RE: Hydrologic Study

Here are a few thoughts that may be helpful in securing funding for and contracting for a hydrologic study.

1. The most important thing about a hydrologic study for Boulder is that it must be sufficiently definitive to use as a basis for the general plan and land use regulations.
2. A hydrologic study for Boulder must cover both surface and ground water sources, and the interaction of those sources. If development means there is less irrigated land, does that mean the water table drops? It could. How much will the water table be affected by diminished stream flows?
3. This study should be forward-looking not just in assessing the impacts of several hundred additional wells (which is what will happen if the existing water system cannot be greatly expanded) and on-site wastewater systems, but also in looking at the impacts climate and land use change.
4. Hydrologic studies inevitably incorporate assumptions, but aquifer pumping (draw down) tests that help establish the capacity of the aquifer (or aquifers) are basic to the defensibility of this study.
5. The data from pumping tests and well logs will also support the analysis of the risks of contamination from a growing number of on-site wastewater disposal systems. It is important to understand that building those systems to state standards (which tend to be set by politics more than science) does NOT guarantee that aquifers will not be polluted.
6. The study should be peer reviewed. If it is contracted to a private firm, the logical source of a review is the Utah Geological Survey.

Please let me know if you have questions.