

5-PHELANCSD-27

Opinions of Thomas Harder as they relate to Phase V of the Antelope Valley Adjudication Case:

1. The southeastern boundary of the Antelope Valley Groundwater Basin (AVGWB), as defined in California Department of Water Resources Bulletin 118, is on the eastern side of the Los Angeles/San Bernardino County line and is a groundwater flow divide so that groundwater west of this divide flows in a north/northwest direction toward the Antelope Valley Adjudication Area (AVAA).
2. The AVGWB aquifer extends on either side of the County line such that groundwater can flow across the County line toward the AVAA.
3. As a portion of the Phelan-Pinon Hills Community Services District (PPHCSD) lies over the southeast part of the AVGWB east of the County line, native groundwater return flow from use of AVGWB water in this part of the service area recharges the southeastern part of the AVGWB.
4. Native groundwater return flow that occurs in the PPHCSD service area that lies over the AVGWB flows toward the AVAA.
5. PPHCSD's Well 14, which is located within the AVAA, is hydrologically downgradient of the portion of PPHCSD's service area that lies over the AVGWB.
6. PPHCSD's Well 14 produces groundwater that has been recharged, in part, by native return flow that originates in the portion of PPHCSD's service area that lies over the AVGWB.
7. Native groundwater return flow in PPHCSD's service area originates from municipal water use and water distribution system losses.
8. Annual native return flow in the portion of PPHCSD's service area that lies over the AVGWB ranges from approximately 387 acre-ft/yr to 458 acre-ft/yr for calendar years 2009 through 2013.