

aquifer is too small to plot in Figure A-3, and the drawdown in the confined aquifer is about 10 feet. Furthermore, a measurable drawdown still occurs in the confined aquifer at a distance of 500,000 feet (about 95 miles) from the pumping well. Considering this information in a spatial sense, the cone of depression (Figure A-4) associated with the

pumping well in the confined aquifer is deeper and much more areally extensive compared to the cone of depression in the unconfined aquifer. In fact, the total volume of the cone of depression in the confined aquifer is about 2,000 times larger than the total volume of the cone of depression in the unconfined aquifer for this example of a hypothetical infinite aquifer.

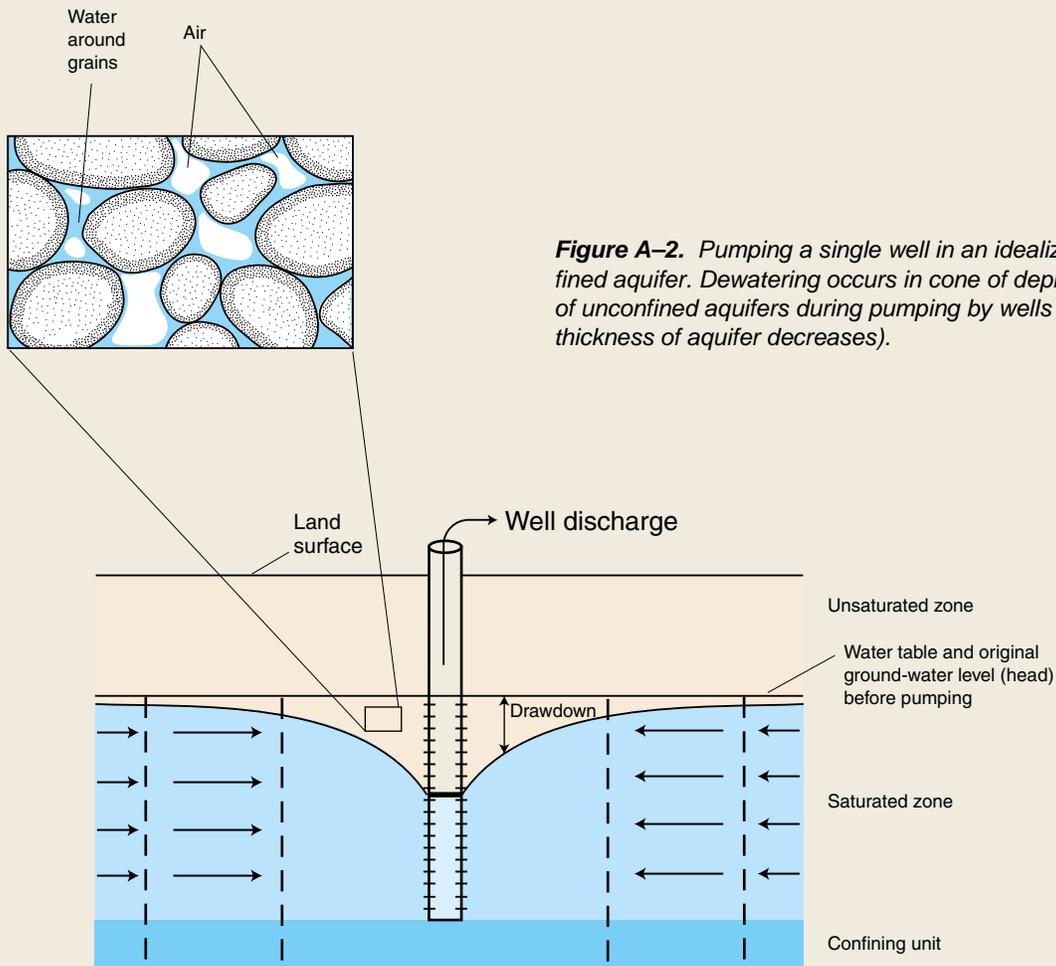


Figure A-2. Pumping a single well in an idealized unconfined aquifer. Dewatering occurs in cone of depression of unconfined aquifers during pumping by wells (saturated thickness of aquifer decreases).

Table A-1. Numerical values of parameters used to calculate drawdowns in ground-water levels in response to pumping in two idealized aquifers, one confined and one unconfined

Parameter	Confined aquifer	Unconfined aquifer
Hydraulic conductivity, K	100 feet per day	100 feet per day
Aquifer thickness, b	100 feet	100 feet
Transmissivity, T	10,000 feet squared per day	10,000 feet squared per day
Storage coefficient, S	0.0001	0.2
Duration of pumping, t	365 days	365 days
Rate of pumping, Q	192,500 cubic feet per day (1,000 gallons per minute)	192,500 cubic feet per day (1,000 gallons per minute)