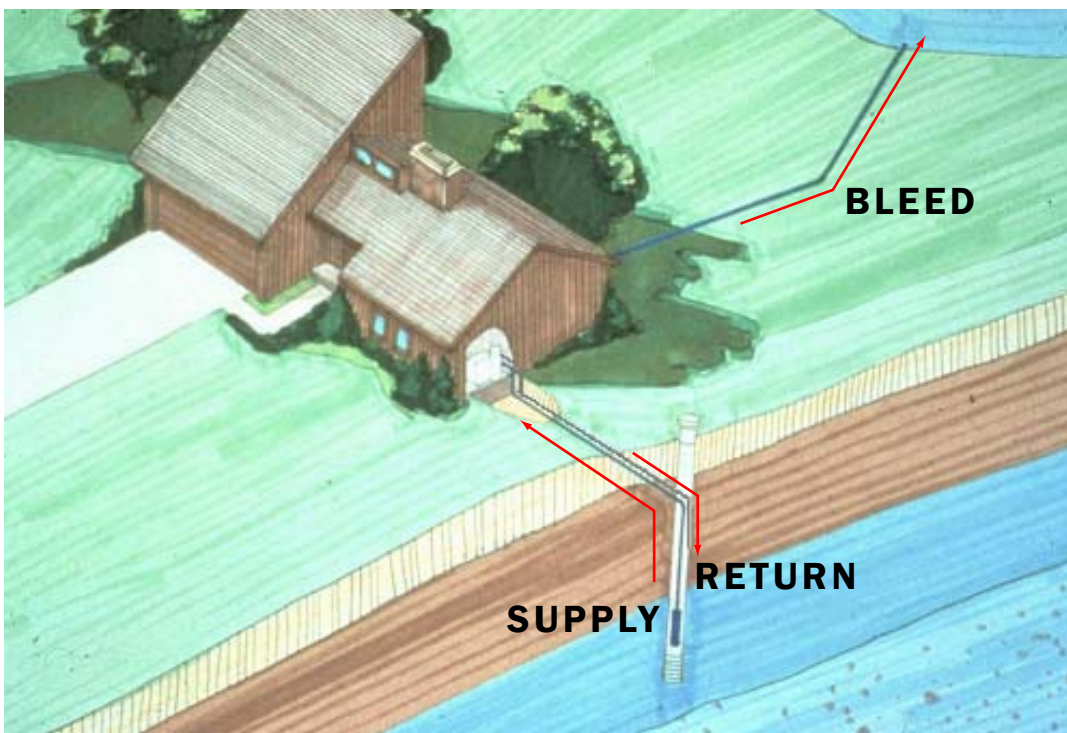
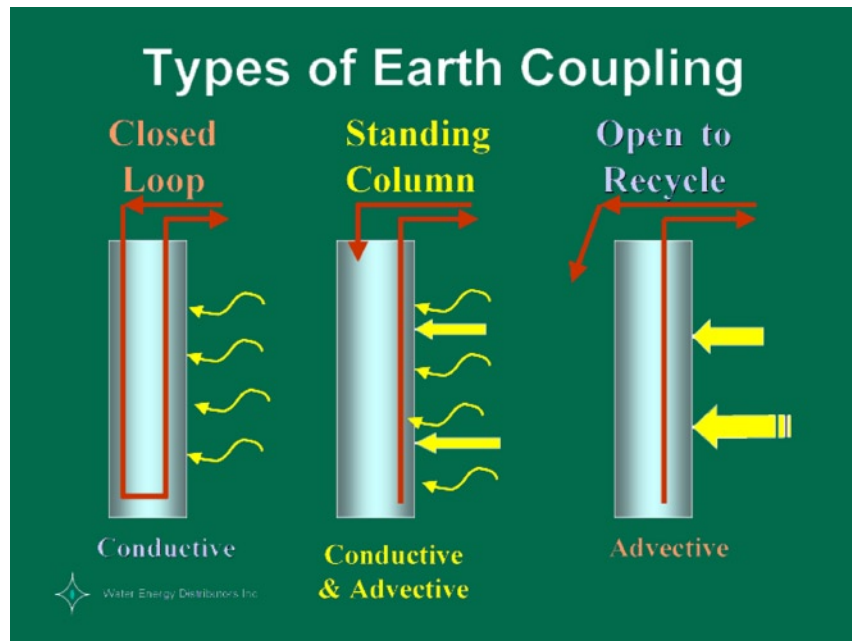


## STANDING COLUMN WELL

The **Standing Column Well (SCW)** is the most efficient and effective earth coupling method available for most geothermal applications. With a SCW, water from a standard water well is pumped through the heat exchanger of a geothermal heat pump, where about 6 degrees of heat are removed, and then the water is returned to the well for reheating. This heat is then upgraded to 100 to 120 degrees through a refrigeration process to make it usable for heating the building.

The SCW maintains a high entering water temperature (EWT) of 47 to 50 degrees to the heat pump through both conduction and advection. Closed loop systems, using conduction only, degrade during the heating season so their EWT declines to 28 to 32 degrees!



A 5 TON water to air geothermal heat pump is rated at 58,800 Btus/hour output with Coefficient of Performance (COP) of 4.3 (**430% efficient**) using a SCW. This 5 TON unit must be down rated to 45,700 Btus/hour when using a closed loop system. Its COP also drops to 3.6 (**360% efficient**)!