Significant Sand and Gravel Aquifers

WHAT IS AN AQUIFER?

A groundwater body is a naturally occurring underground formation from which water can be obtained at a useful rate. Groundwater is the water that is found in the pores and spaces between rocks and sediments that underlie land surfaces. Groundwater occurs in two forms: confined and unconfined. Confined aquifers are sandwiched between impermeable layers of rock or sediment. Unconfined aquifers are not confined by impermeable layers and are therefore more vulnerable to contamination.

GROUNDFLOW-WATER CONFINEMENT AND CONTAMINATION

Groundwater flows slowly through the pores and spaces in rocks and sediments. It is replenished by precipitation that seeps into the ground. Groundwater can be contaminated by human activities such as industrial and agricultural practices, as well as by natural processes such as erosion and weathering.

HOW ARE AQUIFERS MAPPED?

Groundwater resources are mapped by the United States Geological Survey (USGS) and other organizations. These maps show the location and extent of groundwater bodies, as well as information about their characteristics such as depth, flow rate, and quality. The maps are used by scientists, engineers, and policymakers to identify potential sources of water pollution and to develop strategies for protecting groundwater resources.