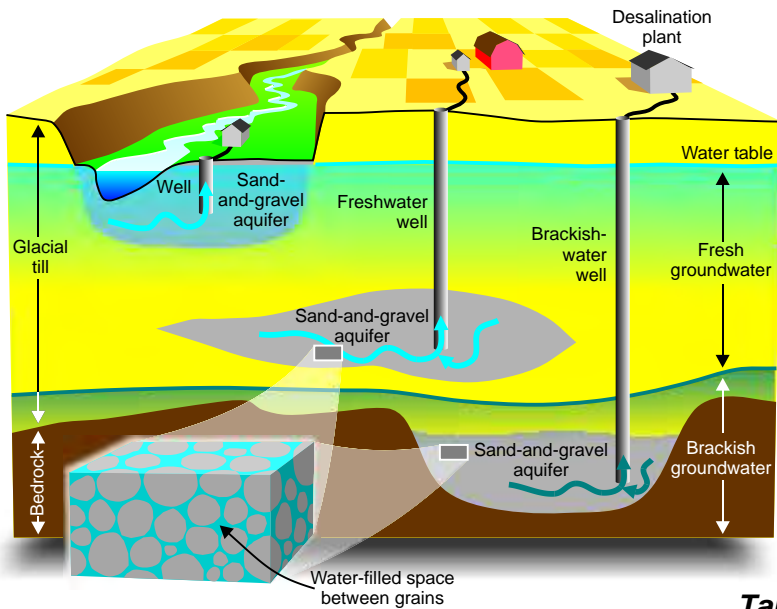
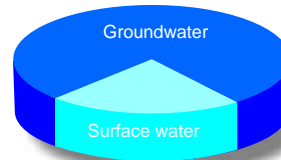


# GROUNDWATER: VITAL BUT VULNERABLE



**Where Saskatchewan communities get their water**



R. Turner (GSC 2003-504A)

Windmill pumps groundwater into stock tank.

## Tapping subterranean water

Groundwater meets the needs of about 75% of all communities and most of the farms and ranches in southern Saskatchewan. Much of this groundwater comes from aquifers composed of sand and gravel deposits that lie tens to hundreds of metres below the surface. The freshest (lowest salinity) groundwater tends to be at shallow depths. Deeper groundwater is generally more saline and therefore less useful, although some towns, such as Melville, Rosetown, and Wawota, desalinate groundwater to make it potable. If not properly managed, the amount of available water stored underground can be reduced by withdrawal of groundwater at rates that exceed the rate of natural recharge. Such depletion lowers the water table, increases the pumping cost, and ultimately can exhaust water supplies.

## Waste storage: trouble underground?

Groundwater can be contaminated by industrial, agricultural, and household activities. Rainwater naturally infiltrates porous sand and gravel and can carry contaminants with it. Thick clays form natural barriers to contaminant flow and are the best materials above which to site waste-storage areas. The risk of contamination is much greater where aquifers extend to the surface and have no natural protection. Once contaminated, it can take years to clean up an aquifer.

