

# The Alluvial Aquifer

Out of Sight..... Not Out of Mind

## What Is the Elbow River Alluvial Aquifer?

The Elbow River alluvial aquifer is the water-saturated bed of loose sand, gravel, and cobbles that is next to the Elbow River. The aquifer is an important source of groundwater, providing well water to many rural residents and contributing water to the Elbow River.

## How Was the Elbow River Alluvial Aquifer Created?

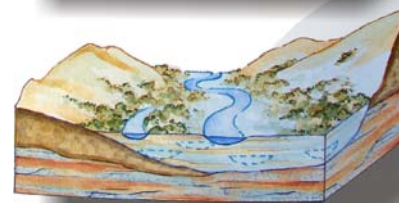
After glaciation, the Elbow River carried meltwater and eroded material downstream over a bed of glacial till and lake silt.



As the river changed course, meandering over the valley bottom, the fine sand, silt, and clay were washed out of the till, leaving behind an eroded bed of coarse sand, gravel, and cobbles. This bed, called alluvium, created the broad, flat area next to the Elbow River. Water filled the abundant spaces between the sand, gravel, and cobbles, creating an aquifer.



Over time, soil and vegetation developed and the alluvium was hidden from view. Plants flourished over the aquifer because of easy access to groundwater and critical habitat for birds and wildlife was created.



Alluvial groundwater comes to the surface in an abandoned Elbow River channel.



The alluvial deposit of sand, gravel, and cobbles is exposed along the Elbow River channel.

## Can You See the Elbow River Alluvial Aquifer?

On the surface, the alluvial aquifer can be identified as the broad, flat, vegetated area next to the Elbow River. This area is commonly referred to as the green zone, the floodplain, or the riparian area.

