

Chemical and Biological Water Quality

The chemical quality of the water from Emigration Creek, Emigration Tunnel Springs, and all but two of the wells sampled is very similar. The waters from the two wells that are the exception are of two distinctly different types and can be accounted for by isolated geologic conditions. Except for these two wells, the water is all a calcium bicarbonate type. The chemical quality of the ground water and surface water does not change appreciably in chemical type from high in the canyon to its mouth. The water also does not pick up a significant amount of total dissolved solids as it moves down the canyon.

The water quality suggests that the surface waters and the ground waters are from the same source. This interrelationship between the surface and ground waters is further emphasized by the fact that the ground water does not take on a significantly greater amount of dissolved solids as it moves through the earth material in Emigration Canyon. In most areas of Utah, the ground water contains significantly more dissolved solids than the surface water. This is because the water moving through the earth comes in contact with the earth materials for long periods of time and is able to dissolve some of the material and take it into solution. The slower the water movement or the longer it is in the ground, the more total dissolved solids the water is able to take in solution. The fact that the ground water in the canyon has not taken on additional dissolved solids is an indication that the ground water is not in contact with the earth material for a long period of time.