## INTRODUCTION

Purpose: Formation of a small study group to distinguish fact from fiction, to answer questions related to water rights, geology and hydrology of Emigration Canyon, and to educate ourselves and inform our neighbors.

## WHAT IS THE PROBLEM?

- Inability to maintain minimum streamflows during the summer months. Complete lack of stream flow for over three months this summer.
- Reports of decreased quality and quantity of water by over 40 owners of private wells along Emigration Creek. Reports of wells going dry.
- Concerns about effects of decreased streamflow on wildlife, flora and fauna.
- Increased risk of E.coli contamination of private wells due to lack of stream flow
- Potential depletion of groundwater reservoirs as a result of commercial wells operated by EID
- Effects of climate change on water resources

## **OVER-ALLOCATION OF WATER RIGHTS**

It has been know for a long time (over 50 years) and recognized by the Utah State Engineer that water rights in Emigration Canyon are over-allocated. There is more private land available than can ever be developed due to limits in water resources. Transfer of water rights now owned by EID from the mouth of the canyon up to Emigration Oaks exacerbated the problem.

## GEOLOGY AND HYDROLOGY OF EMIGRATION CANYON

Most aquifers are found in areas of fractured bedrock and fractured limestone within the Twin Creek Limestone layer of Emigration Canyon. No impenetrable layers, like granite, are found in the canyon. Hydrologist agree all catalogued surface and groundwater aquifers are part of an integrated hydrologic system. All present and future water diversions impact the canyon's water resources and impact streamflow, including commercial wells operated by EID.

There is no proof of EID's claim their water system has no influence on groundwater movement and related streamflow in the creek. Only scientific groundwater studies can confirm their assertion.

Groundwater and streamflow in Emigration Creek are closely related. In some areas flow is lost to groundwater (effluent) while in others groundwater adds water to the stream (influent). The average annual flow is 4340 acre-feet, but streamflow can vary greatly from year to year. Only sustainable water extraction can protect the canyon's fragile aquifers. The biggest threat to streamflow is depletion of groundwater reservoirs. Since commercial wells operated by EID have a huge impact on groundwater levels, they may very well impact streamflow in the canyon. Changes in weather patterns related to climate change put an additional strain on water resources.

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