

Fiscal Highlights

Groundwater Monitoring at Snake Valley Area Continues - Ivan D. Djambov

In March 2007, the Legislature requested the Utah Geological Survey (UGS) establish a long-term (over 50 years) groundwater-monitoring network in Snake Valley and adjacent areas. This was in response to concerns over potential drawdown of the water table and capture of groundwater discharge to springs and wetlands that could be impacted from proposed large-scale groundwater development projects in east-central Nevada and west-central Utah.

The UGS groundwater-monitoring network was completed in 2009, and includes wells and spring gauges in Snake Valley, and wells in Tule Valley and Fish Springs Flat (67 piezometers in new wells, 11 existing wells, 11 spring flow gauges at 6 springs). The principal objectives of the network are:

- to establish baseline spatial and temporal trends in groundwater levels and chemistry;
- to evaluate the response of the groundwater system to climatic trends; and
- to assess impacts of future groundwater development.

The division reported that the following was accomplished:

1. Quarterly downloading of water-level data from and maintenance of pressure transducers in piezometers.
2. Bimonthly data collection and maintenance of spring-flow gauges.
3. Database management and maintenance of a UGS web-based groundwater-monitoring data portal.
4. Annual collection, analyses, and interpretation of new water samples.
5. Attendance and presentations at meetings concerning potential water development in and adjacent to Snake Valley.
6. Production of an annual scientific report updating groundwater trends.

The data have allowed changes in baseline water level and water quality to be tracked, and provided the ability for scientific interpretation of the causes of these changes. The data and interpretations were published in Utah Geological Survey Bulletin 135, "[Hydrogeologic studies and groundwater monitoring in Snake Valley and adjacent hydrographic areas, west-central Utah and east-central Nevada.](#)" These interpretations can now be used to make scientifically sound decisions regarding Utah's water resources, and can be used in interstate negotiations and legal hearings.