



State Ground Water Program

Program Update - February 1999 - Utah Department of Agriculture and Food

Introduction

The State Ground Water Program, administered by the Utah Department of Agriculture and Food (UDAF), was implemented by the State Legislature in 1996 to assist private well owners in determining the quality of their drinking, irrigation, and livestock water. The program receives assistance from local Soil and Water Conservation Districts in the selection of wells to sample. UDAF also works with the Division of Water Rights to study the water quality and quantity of Pahvant Valley and Curlew Valley yearly. The program is non-regulatory, designed to assist private well owners while studying and protecting Utah's ground water resources

The program has two areas of emphasis: inorganic water quality, such as salinity and nitrate; and pesticides. The inorganic water quality portion of the program is funded solely by the State of Utah, and includes a chemist and an environmental specialist. The pesticide portion of the program is funded by a cooperative agreement

between the State of Utah and the U.S. Environmental Protection Agency.

Program Results to Date

Since its inception, the State Ground Water Program has taken 583 ground water samples from private drinking wells, irrigation wells, springs used for drinking or irrigation, and irrigation canals. A report explaining the results of each analysis was sent to each landowner. If a problem is detected in a private water supply, such as high levels of nitrate, an explanation of the problem is given to the landowner with recommendations on how to improve their water quality.

Fiscal Year	Samples Taken	Budget
1996	268	\$133,000
1997	187	\$133,000
1998*	128	\$67,000*
Total	583	\$333,000

*1998 accounts for only first half of year.

In the areas sampled by UDAF, the overall quality of the ground water is good. The largest problem observed is salinity (dissolved salts). Of the wells, springs, and The water quality problems that have been detected in various parts of the state are usually associated with poor well construction and/or maintenance. This is especially the case with bacterial contamination of wells. There are several areas of the state with widespread bacterial contamination of wells. In such cases, it is recommended to the landowner to contact their local health department to do further testing and receive information on how to properly disinfect a well. UDAF can also provide information and assistance to well owners to improve their wells. UDAF is seeking approval for low interest loans (Agriculture Resource Development Loans) to be available to landowners to rehabilitate wells with poor water quality.

Pesticides in Ground Water

It is generally believed that with Utah's arid climate and current farming practices, that pesticide contamination of ground water from agricultural practices would be unlikely. The Utah Department of Agriculture and Food has been taking ground water samples to test for pesticide contamination of ground water since 1994. Since that time, there have been only 16 pesticide detections in the state above the analytical detection limit. However, none of the detections were above the EPA drinking water standards. UDAF is continuing to investigate new sampling and laboratory methods to insure the quality and accuracy of sampling pesticides in ground water.

canals sampled, 60% exceeded the irrigation water quality standard for salinity, and 24% of the samples had sodium levels above the irrigation standard.

Calender Year	Number of Samples	Number of Detections
1994	18	0
1995	102	10
1996	268	0
1997	187	6
1998	128	0

A 1998 U.S. Geological Survey study took 55 ground water samples from private wells in the Salt Lake Basin (Box Elder, Cache, Davis, and Salt Lake counties). Pesticide residues were found in 36% of the samples (20 wells). All the detections were less than EPA drinking water standards. Utah Department of Agriculture and Food is planning to sample these wells again in the spring of 1999 to verify the USGS's findings.

Other Functions

The UDAF State Ground Water Program currently has three employees: two environmental specialists and a chemist. The environmental specialists serve on various committees and organizations around the state, such as the Beaver River Technical Advisory Committee, Sevier River Technical Advisory Committee, and the

State Pesticide and Ground Water
Committee.

Plans for 1999

In 1999 the State Ground Water Program plans to conduct a vigorous ground water study of the Uinta Basin. The Uinta and Duchesne Soil Conservation Districts are working with the UDAF to locate wells and plan a study that will characterize a large portion of the ground water associated with agriculture in the basin.

The program also plans to sample Pahvant and Curlew Valleys with the Division of Water Rights, the region surrounding the towns of Panquitch and Hatch, and the region surrounding the towns of Enterprise and Beryl.