



Title: Levels of Exposure to Arsenic from Private Wells in Churchill County, Nevada

Name: Mark Walker

Email: mwalker@equinox.unr.edu

Organization: University of Nevada

State: NV **Region:** Southwest States and Pacific Islands **Year of Funding:** 2002

Theme: Drinking Water and Human Health

Situation: Residents of Churchill County, Nevada who depend upon private domestic water wells for home supply may be exposed to high concentrations of arsenic in well water. Because of worries about potential effects of chronic exposure, residents are seeking advice about how to treat home supplies.

Objectives: These include: a). characterize levels of exposure to arsenic through private domestic water supplies among residents of Churchill County, b). identify important socioeconomic characteristics of the population that might contribute to consumption, c). respond to needs with educational efforts, including an on-site expert, d). produce educational materials to answer commonly asked questions.

Methods: A tap water survey examined quality of samples taken from 351 households. A questionnaire sought information about availability and use of home treatment systems, water consumption habits and socioeconomic factors that could be related to the decision to consume water with high concentrations of arsenic.

Partnerships: The information obtained to date is of great interest to the USEPA Region IX office. A water supply specialist, hired with project funds, works closely with members of county government and with staff from other USDA agencies that are county-based. He also has close ties with industry and other federal agencies.

Research: The sampling survey provided information about a range of issues that must be addressed in an educational campaign. The summarized data have been used for two Master's theses to date and are a valuable resource for county government officials. The results helped to plan meetings and design educational products.

Resources: The water resources specialist position is partially supported by county government. Parts of the project are funded by Agricultural Experiment Station grants administered by the University of Nevada.

Results: Results of the completed survey are being summarized for publication in two journals. Three extension publications have been developed to address topics of concern that the survey identified. A volunteer group of retired seniors has gained prominence as a local resource for carrying out similar investigations on behalf of federal agencies.



The mission of CSREES is to advance knowledge for agriculture, the Environment, human health and well being, and communities.

