

# Surveying Health Risks Associated with Arsenic in the Gallinas Watershed

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## PURPOSE OF STUDY

During periods of elevated flow in the Gallinas Watershed, the concentrations of arsenic in the water exceed EPA drinking water standards. Researchers wish to test the hypothesis that geology and high arsenic concentrations correlate. The researchers will sample groundwater from wells throughout the watershed to determine whether arsenic and heavy metals loading pose a health risk to domestic well users.

## STUDY UNDERWAY

- Researchers will collect groundwater samples from 20 wells located throughout the Gallinas Watershed. Researchers will also collect a number of surface water samples from the Gallinas River and Storrie Lake reservoir. Samples will be collected multiple times over the 2005-2006 water year and analyzed for a variety of environmental parameters and elements including arsenic.
- A GIS database and map of the Gallinas Watershed will be created to analyze data.

## BENEFITS

- The Gallinas Water Manager and well users will be informed if arsenic and heavy metals are a health concern.
- Any correlation between subsurface geology and heavy metal loading will be available to use in development decisions to minimize exposure.



*Storrie Lake is one of Las Vegas' secondary water sources.*

*Gallinas Creek flows through central Las Vegas.*



*Justin Johns-Kaysing is working on his B.S. in environmental geology.*

*GIS Model showing partial watershed with arsenic bearing Madera Formation (blue) and well databases used to select sampling locations.*

