



## **USDA-CSREES 2006 National Water Quality Conference**

### [Water Harvesting Potential in an Arid City: A Quantity Assessment for Tucson, Arizona](#)

Water harvesting in the desert not widely considered as practical because of low rainfall levels and long periods of dry weather. This study challenges that proposition in an investigation of the potential for rainwater harvesting in Tucson Arizona. Using a combination of GIS technology to assess high-resolution aerial photography and manual measures of randomly sampled Section of urbanized Tucson, Arizona we have found that on average that rainfall that fall on a Section (a square mile located as Township and Range) is equivalent to 74% of the water supplied to an average section by the local utility. Further, assuming significant a portion of this municipal supply is used outdoors for landscape irrigation we examined a set of strategies that could be used to harvest and manage rainfall to offset the municipal demand for the outdoor use portion. We found that rainfall harvested from the roof and used on site from the landscape could reduce residential water use by 30 to 40%. Other potential uses and methods of rainwater use are discussed.

Author: Martin Yoklic

Coauthor(s): James Riley David Confer James Robinson Brad Landcaster Ann Phillips Kendall Kroesen