

## REGION 9



Applying knowledge to improve water quality

# Southwest States & Pacific Islands Regional Water Program

A Partnership of USDA CSREES  
& Land Grant Colleges and Universities



## Selected Regional Impacts

### “Piggery Bliss”

A successful collaboration between Northern Marianas College and the University of Hawaii resulted in the introduction of two affordable effluent management systems to pig farmers of the Northern Mariana Islands in 2003-04.

In the summer of 2005, USEPA's Pacific Island Office asked the project team to evaluate the possibility of establishing a demonstration site and conducting waste management workshops in American Samoa. The issue is particularly relevant in American Samoa where discharge of piggery effluent into local streams is common and has created a significant exposure route for Leptospirosis, a bacterial disease that affects animals and humans.

A recent immunohistological study conducted by the Center for Disease Control indicated that 17 percent of the study population had antibodies for the *Leptospira* bacteria, indicating recent infection. At least two fatalities were attributed to the disease in 2004. In addition to the potential workshops in American Samoa, the Region 9 Water Quality Coordination Project is committing resources to expand the scope of this project to include Micronesia and Palau.



## Additional Highlights

- **Nitrogen Hazard Index** - Growers in the Southwest can now assess the potential hazard of groundwater contamination by nitrate based on their soil type, crop, and irrigation method thanks to the development of a new hazard index (HI) by a team from the University of California Center for Water Resources. The Hazard Index can be found at [www.waterresources.ucr.edu](http://www.waterresources.ucr.edu).
- EPA grant allows University of Nevada researcher to begin development of a **field detection method for *Leptospira* spp.** Should this research be successful it will have implications both across the Pacific and worldwide.
- Palau publishes a **rainwater catchment manual** and conducts outreach education workshops. Approximately two-thirds of Palauans receive their drinking water from rainwater catchments. Despite widespread use of catchments in Palau, it is estimated that the majority are not properly maintained. The Region 9 Water Quality Coordination Project is committing resources to expand the scope of this project to include the Northern Marianas, Marshall Islands, Guam, and Micronesia.
- The University of Nevada Water Quality Coordinator looked at the **potential impact of a companion animal recreation area** on Lake Tahoe drinking water sources. Other efforts in the Lake Tahoe area included the publication of landscaping BMPs for both the landscape contractor and the homeowner.
- A **completed graywater study** at the University of Arizona finds that the pathenogenic potential of turf irrigated with graywater may not be significantly different from that of turf irrigated by conventional sources.

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