

Welcome to WERI

Shahram Khosrowpanah, Ph.D., P.E.

Water & Environmental Research Institute of the
Western Pacific, University of Guam





Water & Environmental Research Institute of the Western Pacific



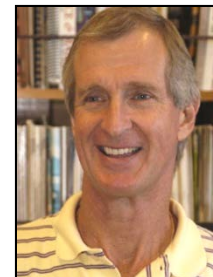
WERI

***Established at the University of Guam
in May 1975***



Faculty and Major Research Areas

- Mark Lander: Tropical Climatology
- Joe Rouse: Surface Water & Sanitation
- John Jenson: Groundwater Hydrogeology
- Sh. Khosrowpanah: Water Distribution
- Gary Denton: Water Quality
- Yuming Wen: GIS Specialist

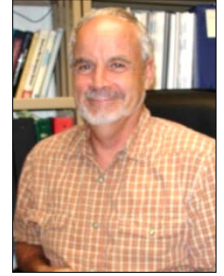


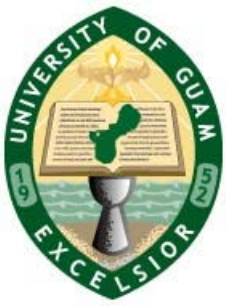
WERI



Faculty and Major Research Areas

- Nathan Habana: Groundwater Modeling
- Leroy Heitz : (professor emeritus) Hydrology





WERI Family

Mission Statement

To seek solutions through research, teaching and outreach programs, to issues and problems associated with the location, production, distribution and management of freshwater resources throughout the region



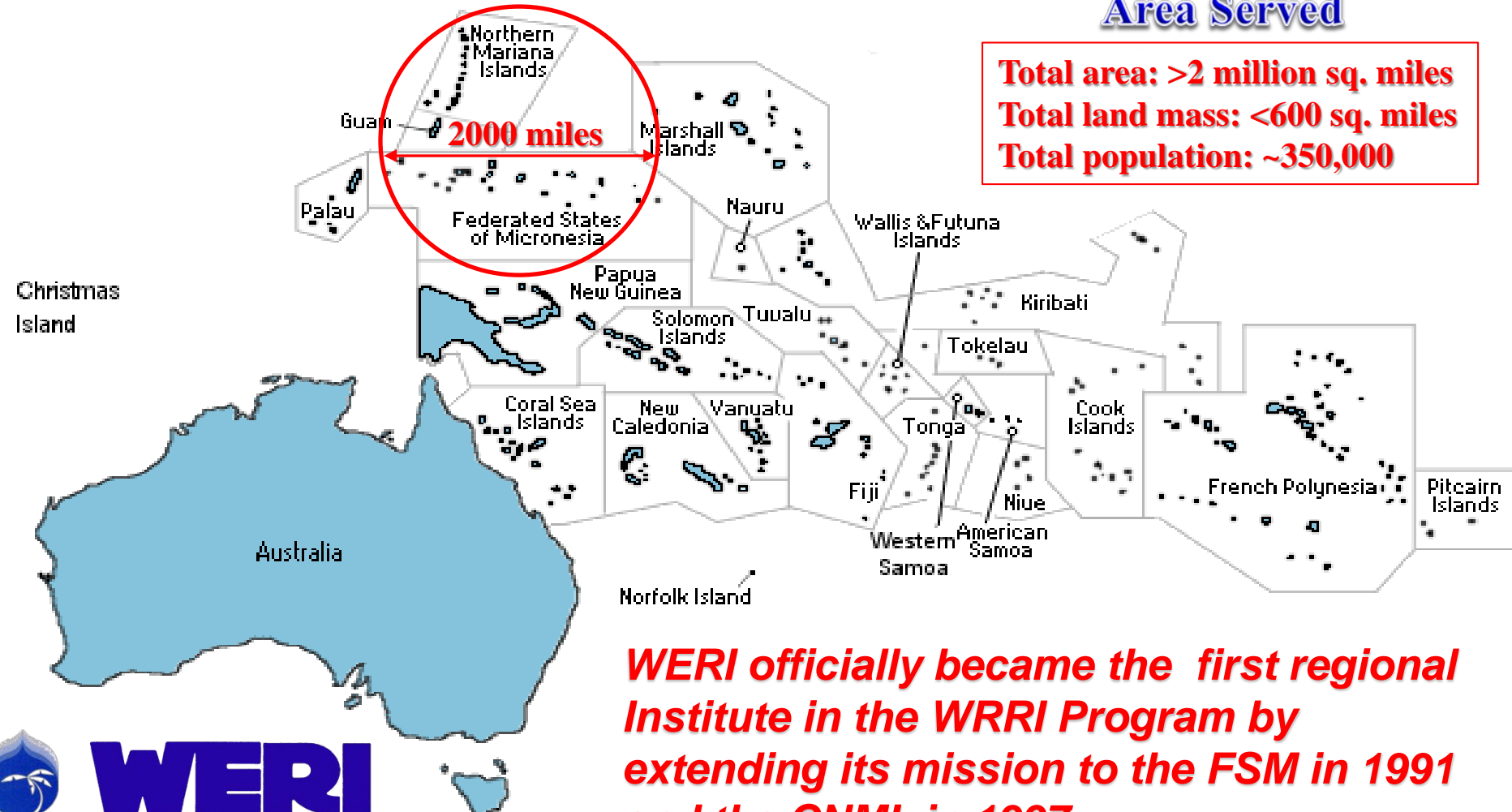
WERI



WERI

Area Served

Total area: >2 million sq. miles
Total land mass: <600 sq. miles
Total population: ~350,000



WERI officially became the first regional Institute in the WRRP Program by extending its mission to the FSM in 1991 and the CNMI in 1997



WERI

- Water Resources Research Act, Water Institute Program 104B
- Public Law 24-247 – Guam Hydrological Survey (GHS)
- **Public Law 24-161 – Guam Comprehensive Monitoring (GCM)**
- Pacific ENSO Application Climate Center (PEAC)

WERI is tasked with several federal and local mandates, and also teaching and student advisement for UOG' EV and Engineering programs



Guam, CNMI, and FSM Advisory Councils



Research education and training priorities determined by Advisory Councils that meet annually to discuss local water resources issues and problems



Research, Training, & Information Dissemination

- **Ground, Surface, and Coastal Water Quality**
- **Water Quantity**
- **Watershed Baseline and Management**
- **Education and Professional Training**
- **Information Dissemination to the Public**



Active Projects - Guam

- **Exploring the natural limits of the Northern Guam Lens Aquifer: Phase 2, model implementation**
(collaborative with USGS)
- **Workshop Series on Guam Groundwater Resources**
- **Watershed study in Southern Guam**
- **This Hawaii Workshop**



WERI



Active Projects - Guam

- **West Pacific Climate Cycles:** In collaboration with the University of Texas-Austin and the USGS Pacific Islands Climate Science Center (PICSC)
- **Hydrological Database for Northern Guam**
- **Pacific ENSO Application Center**
- **The influence of Seawater on Biological Wastewater Treatment on Guam**





Active Projects - CNMI

- **Near-Shore Heavy metal contamination**
- **Review of Hydraulic Analysis Methods and Advanced Modeling Techniques**



WERI



Active Projects - FSM

- **Sustainable Groundwater and Rain Catchment on Atolls – Yap**
- **Sewage treatment pilot study - Yap**
- **Leak detection training – Yap**
- **Watershed conservation and protection in Pohnpei**



WERI

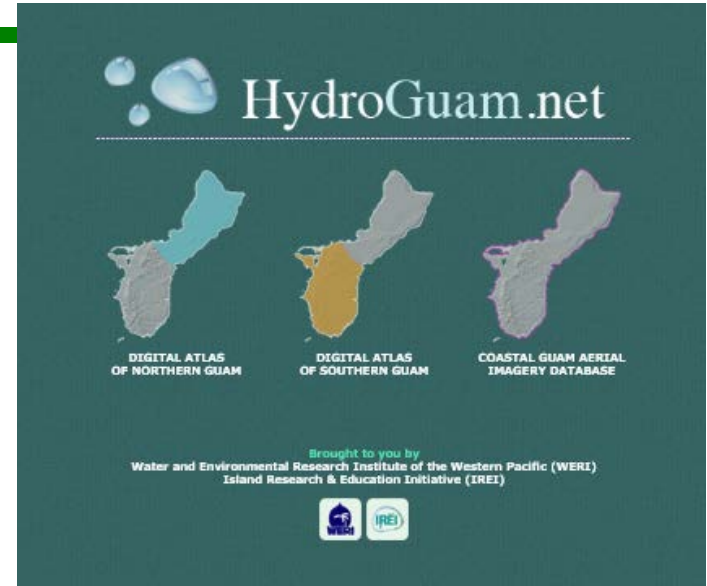


Anticipated Future Collaboration with USGS

- **Exploring the natural limits of the Northern Guam Lens Aquifer: Phase 3, model application**



INFORMATION DISSEMINATION



*Technical Reports & Journal Articles & News
Guam Natural Resources Atlas*



WERI



Funding Sources 2015

- 104-B Base Grants for Guam, CNMI and FSM - \$277,000

Other Federal Research Funding:

- Grants and Contracts - \$721,131

Local Research Funding:

- Special Appropriations - \$941,883
- Guam Hydrological Survey - \$182,694
- Guam Comprehensive Monitoring - \$155,626
- Other Grants and Contacts - \$100,000 - \$200,000



WERI

104-B funds leverage ~ 1:4.5



...there's gotta
be an easier way
to do this..!!

Thank you!