



CEE691 Seminars in Civil and Environmental Engineering

USGS Water Programs in Hawai'i and the Pacific

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Location: Bilger Hall 335, Date: Wednesday, February 17, 2016, Time: 1:30 – 2:20 pm

Speaker: Steve Anthony received a BS in Geoscience from Hobart College in 1983 and a MS in Hydrogeology from the Department of Geology and Geophysics at the University of Hawai'i at Mānoa in 1987. His career with USGS began in 1985 conducting groundwater-resource appraisals on atoll islands in the Republic of the Marshall Islands and the Federated States of Micronesia. Between 1996 and 1999 he served as Project Chief for the USGS National Water Quality Assessment of the Island of O'ahu. He has authored numerous publications on atoll hydrogeology and water quality. He has been the Director of the USGS Pacific Islands Water Science Center since 2009.

Abstract

The mission of the USGS Pacific Islands Water Science Center is to: (1) collect, analyze, and disseminate the impartial hydrologic data and information needed to wisely manage water resources for the people of the United States, the State of Hawai'i, and U.S. affiliated Pacific Islands; (2) collect quality-assured data that define natural and human-induced hydrologic conditions; (3) analyze hydrologic processes through investigations and research to increase understanding of important water-resources issues and to promote informed decision-making; (4) maintain real-time and historical databases and publish peer-reviewed interpretive and data products to disseminate unbiased hydrologic information; and (5) form partnerships and cooperate with local, State, and Federal agencies; and other public organizations to assure that our work is relevant and useful.

The USGS water programs in Hawai'i and the Pacific reflect the region's diverse geography, demographics, land management, and economy. Most islands contain water resources of significant economic and ecological importance. In many areas, groundwater provides essentially all municipal and domestic water for expanding populations, while streams provide water supply for agriculture and important riparian and instream habitats for many threatened and endangered species. Hydrologic variability associated with climatic changes complicates the understanding and management of water resources. In addition, the physical, chemical, and aesthetic quality of receiving waters, such as estuaries, bays, and nearshore waters are important to both the ecology and the tourism-based economies of Hawai'i and other Pacific islands. As island populations continue to grow, water resources are becoming more intensively developed, and in many areas the competition for resources is fierce. Consequently water-resource development has become an increasingly important component of political, economic, cultural, and environmental decision-making. Important water-related issues in Hawai'i and the Pacific include: (1) climate variability and change, (2) groundwater availability, (3) quantity and variability of streamflow, and (4) water quality related to land use. Today's presentation will focus on current and future USGS water programs to address these issues.