FALL 2007 GRADUATE SEMINAR SERIES

Friday, September 14, 2007

4:00 – 4:50 p.m. MB 0.224

Guest Speaker: DAVID C. GOODRICH

USDA

David C. Goodrich is a Lead Scientist (Research Hydraulic Engineer) with the USDA-Agricultural Research Service in Tucson, AZ (since 1988). Before moving to Tucson for graduate studies he was employed as a consulting scientist with Autometric, Inc. in Falls Church, VA doing remotely sensed image analysis and positioning with satellite imagery. Prior to his Autometric position he was employed by the Water Resources Division of the U.S. Geological Survey in Alaska and Wisconsin. Current research efforts are directed to scaling issues in rainfall-runoff modeling, identification of dominant hydrologic processes over a range of basin scales, climatic change impacts on semiarid hydrologic response, incorporation of remotely sensed data into hydrologic models, and the functioning of semiarid riparian systems. He Co-led the interdisciplinary multi-agency Semi-Arid Land-Surface-Atmosphere (SALSA) Research Program and is an Associate Adjunct Professor in the Dept. of Hydrology and Water Resources of the University of Arizona. He is also an Executive Member of the NSF SAHRA (Sustainability of semi-Arid Hydrology and Riparian Areas) Science and Technology Center in charge of river systems research and has worked closely with policy and decision-makers within the Upper San Pedro Partnership.

Integration of Science and Decision Making for Watershed Management in the San Pedro Basin

Decision-makers and natural resource managers increasingly require much more sophisticated levels of expert findings and scientific results to make informed decisions. No single scientific discipline is typically capable of providing integrated solution for decision-makers and managers. Significant effort beyond the traditional scientific method is required conduct interdisciplinary science across the physical and ecological sciences. Even greater effort is required to effectively integrate this research with policy and decision makers for effective and sustainable management of natural resources. This presentation will provide an overview of the evolution of natural resources research in the San Pedro Basin into a mature integrated science and decision making program, as embodied in the Congressionally recognized Upper San Pedro Partnership. The “Partnership” must bring the basin into hydrologic balance by 2011 as directed by Congress and meet it own goal of sufficient water for current and future residents and to maintain the globally important San Pedro National Riparian Conservation Area (SPRNCA). A key challenge in meeting this demand, from a hydrologic perspective, is quantification of water balance components at the basin scale. The presentation will discuss the process of integrating research with decision-making and discuss approaches to estimating rainfall, runoff, ephemeral channel recharge and riparian evapotranspiration at the basin scale. Lessons learned from this experience will be reviewed with the intent providing guidance to ensure that hydrologic and watershed research is socially and scientifically relevant and will directly address the needs of policy makers and resource managers.