

American Water Resources Association
2009 SUMMER SPECIALTY CONFERENCE
Adaptive Management of Water Resources II
June 29 – July 1, 2009
Snowbird, UT

Wednesday, July 1

10:30 AM – 12:00 Noon

SESSION 35: Trends in Adaptive Management - Multiple Case Study Evaluations

1. Operational Framework for Adaptive Management at Federal Facilities - John Scott Thomas,
Desert Research Institute, Reno, NV

The U.S. Department of Defense (DoD) manages extensive land holdings with more threatened and endangered species than any other federal agency. The Services have adopted the adaptive management approach as a key aspect of their ecosystem management programs for promoting the long-term sustainability of both the military mission and natural resources. A survey of natural resource managers at 74 military bases nation-wide revealed performance rates for elements of adaptive management. Certain cultural and institutional attributes influence adaptive management performance at the bases, and the frequent turnover of personnel in military organizations (resulting in a dearth of institutional memory) obliges installations to formalize the adaptive management process, explicitly addressing it within a planning framework. Based upon the survey findings, this paper presents an operational framework developed to guide adaptive management at military bases. This framework can be applied to Federal facilities in general.

2. Adaptive Capacity and Adaptive Management in Community Water Systems - Nathan L. Engle,
University of Michigan, School of Natural Resources and Environment, Ann Arbor, MI

The potential for systems to plan, prevent and respond to climate variability and change, or their adaptive capacity, is greatly influenced by management decisions, institutions, and governance. Adaptive management and adaptive governance have been illustrated as mechanisms for increasing adaptive capacity, for they are better poised to deal with the uncertainty of climate change as well balance the amplifying tradeoffs between competing interests. The majority of the success stories are told through sound empirical case studies, but fewer studies have attempted to systematically test the influence of adaptive management on adaptive capacity. I will present preliminary results from my dissertation research, which surveys several hundred community water systems (both private and public water providers) in Arizona and Georgia. The survey, administered in March, 2009, measures adaptive capacity from past extreme drought events and subsequent adaptations, and gauges the extent to which the community water systems have implemented an adaptive management framework. I will show the management and institutional mechanisms that tend to increase adaptive capacity to extreme drought events, which serve as proxies for future climate change conditions in both regions. The results of this study will be helpful for researchers and practitioners wanting to understand the potential opportunities and barriers for building adaptive capacity through adaptive community water system management.

3. Lessons from Adaptive Management Practice - Catherine Allan, Charles Stuart University, Albury, NSW, Australia (co-author: George H Stankey)

Adaptive management embodies the deceptively simple idea of learning from doing. A current academic critique suggests that the rhetoric of adaptive management is more robust than its reality, and that little adaptive management is actually occurring. One common constraint identified in moving from conventional to adaptive management is a dearth of documented guides and examples for would be adaptive managers. To address this we invited practitioners and managers of waterways, forests, protected areas, farmland, rangelands, biodiversity and pest species to share, through a combination of workshops and writing, their experiences in attempting to manage adaptively. These reflections, documented in a recently published book, indicate some key areas for consideration by anyone attempting adaptive management of natural resources. Notwithstanding the variety of disciplinary areas, physical conditions, resources and institutional arrangements discussed, some clear patterns emerge

when the stories are viewed as a whole. A consistent theme across the case studies is that proponents of an adaptive project should be aware of, and sensitive to, context. This observation reinforces the importance of participatory practice, as it is difficult to have a comprehensive grasp of the scope and detail of context without inclusive structures and processes. With outcomes so dependent on context, simple prescriptions of adaptive practice have only limited value. Instead, practitioners must truly understand the nature and practice of adaptive management. There are numerous ways in which adaptive approaches can proceed, but all useful ones appear to share three qualities; they are purposeful and deliberate, they employ careful documentation processes and they are designed to promote learning that informs subsequent action. Supporting the "right" people also appears critical—effective adaptive enterprises typically reveal people who have taken on strong leadership or championing roles, and are open to, and supportive of, change. Many of the cases presented in the book are "works in progress", and most articulate numerous challenges to putting the ideal of learning from doing into practice. However, the principal lesson emerging from the reported experiences is that these challenges are not insurmountable, given institutional commitment and will.