

Ensuring acceptable risk for Mojave National Preserve springs

by Chuck Pettee



Unnamed spring, Providence Mountains, Mojave National Preserve, California.

After months of negotiation, an agreement was reached in 2002 between the U.S. Department of the Interior and Metropolitan Water District of Southern California to protect spring flows at Mojave National Preserve. At issue was the water district's proposed Cadiz Ground Water Storage and Dry Year Supply Project for a desert basin near Mojave National Preserve.

The project would divert surplus Colorado River water and store it underground. During dry years both the stored water and groundwater would be withdrawn and sent to users in southern California. Groundwater withdrawal introduces the potential of altering flows at the preserve's springs. The Department of the Interior's approval of a right-of-way permit for the project hinged in part on preventing such impacts.

After months of data analysis, the technical experts could not resolve differing opinions about the potential for impact. The stalemate was broken when the water district accepted the risk associated with the technical uncertainty and committed to operate the project to prevent interference with spring flows. The water district would get less water than planned if its assumptions were wrong. A Ground Water Monitoring and Management Plan was developed to ensure that protecting spring flow was undertaken in a cost-effective and technically adequate manner. The plan requires that pumping be monitored by a network of wells and that the monitoring system be managed to adapt to changing data needs. The intent is to develop models for forecasting the effects of pumping so that mitigation

occurs early enough to prevent future changes in spring flows. This is necessary because spring flow changes may not occur for decades after pumping, when it is too late for mitigation. ■

chuck_pettee@nps.gov
Chief, Water Resources Division, Fort Collins,
Colorado