

BRIEFING STATEMENT

Date: September 12, 2002

Title: DMG Water Technical Group Update

Issue: Problems and progress towards a standardized inventory of springs and wetland features.

Background:

Springs and wetland features are of concern to the DMG. Goal 12 of the 2002 5-year work plan is to inventory, monitor, and protect these features. The ad hoc water group is tasked with implementing standardized protocols for spring inventories.

Current Status:

A task from the February 2001 workshop was to develop a spring sampling protocol. The result combined the USGS and BLM PFC protocols for springs, and the FWS classification for vegetation. Several difficulties were encountered with this protocol.

- USGS protocol doesn't have a good biologic component.
- BLM PFC protocol questions don't relate well to desert springs and are designed to answer the question, "Is this spring in trouble, and will it fix itself?" While this is an important question, different agencies have other questions to answer, and need to answer them in the most efficient manner possible.
- None of these protocols, nor their combinations, answer the question "How well is this desert spring functioning, and why" which is important to the NPS.

While the hope was to find a core list of parameters to which each agency could supplement with added data collection, the technical committee failed to reach agreement on one set of parameters that meet criteria for all agencies involved in DMG.

The technical group was not able to complete this task prior to beginning NPS field season so Kearns (NPS) used the original combined protocol (from Feb 2001) and supplemented and revised it somewhat to increase the biological representation.

During the spring FY02 field season, Kearns and biotech surveyed 54 springs and other water features in the Mojave NP. Mark Hessing, Ft. Irwin botanist, went along on one of the field trips. Currently, Kearns is collecting water samples for lab analysis.

USGS BRD staff made a presentation at the monitoring workshop on the Pendragon PDA system and its abilities for field data collection. Many members of the group planned to purchase that type of system. Kearns had already ordered and purchased the Trimble GeoExplorer 3 GPS unit before the PDAs were available. The Trimble was, and still is, an accurate and precise GPS device. It's data handling system is cumbersome and frustrating to use, making data collection and much more difficult than with the PDA system.

Proposed Actions:

NPS has contracted with DRI (Don Sada and Karl Pohlmann) to develop “protocols for field and database methods to determine biological and hydrogeological characteristics of springs within the Mojave inventory and monitoring network.” This project will

1. Develop a methodology to inventory springs that uses a principal components approach to focus on those parameters that are most critical to characterizing hydrogeologic and biologic viability of spring systems in the Mojave I&M Network.
2. Develop a straightforward and standardized field protocol that can be used to rapidly describe springs using critical parameters.
3. Develop a standardized database to capture this information.

This \$25,000 to \$40,000 project will be implemented in three tiers according to complexity and detail of the survey.

Level 1 Broad environmental characteristics that describe general conditions and indicate the relative resource value of each spring. Will include at least 40 parameters such as location (e.g., township, range, county, state, elevation, etc.) and a number of quickly accumulated data that describes/characterizes each spring.

Level 2 Detailed information that will describe functional characteristics of biotic communities and groundwater flow systems.

Level 3 Detailed hydrogeologic and biological information to determine specific relationships between environmental parameters, macroinvertebrate community structure, and external stress factors (e.g. human and/or environmental). This sampling will provide information that may be used to resolve particular issues that may occur at sites with high resource values and conflicting uses. Level 3 will also include elements appropriate for ongoing, long-term hydrologic and biologic monitoring.

Products will be delivered March 1, 2003. These protocols will be useful to all DMG participants.

NPS has submitted another proposal to implement “Level 1 spring inventory within the Mojave inventory and monitoring network.” This project would begin in April 2003 at Death Valley NP and Mojave NP and end in spring of 2005 at Joshua Tree NP.

BLM has submitted a \$25,000 grant application to the “Green Sticker” OHV program to implement the Level-1 spring inventory on BLM land.

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