

Action vs. Rhetoric: Resource Management at the Crossroads

By Jonathan B. Jarvis

At the 1992 Ranger Rendezvous in Spokane, WA, I conducted two workshops titled "Action vs. Rhetoric: NPS Resource Management at the Crossroads" for a total of about 40 people. The intent of the sessions was to discuss and capture the attendees' feelings about the relationship between research, resource management, and park management, and to record recommendations for improving that relationship. This is a report from those workshops. I began each session with a talk that is summarized below. Following the summary is the input from those attending the workshops.

Presentation Summary

Now we have the final Vail Agenda to add to our bookshelf of reports on the "state" of the National Park System and Service. The Vail Agenda certainly is not the first such report, nor will it be the last; however it makes many excellent observations and recommendations. But what will it take to turn this rhetoric into action? Out there in the parks, on the front lines of resource conservation, protection, management, and understanding—how will this and other reports be converted into something that will truly make a difference in our jobs and in the future of park resources?

Picture yourself here:

You are the Superintendent of Big Mountains National Park, located in the wild west. You've got a solid staff, vast natural resources, a couple of horses for those frequent forays out to scenic backcountry cabins, a quality concessionaire, and a steady flow of happy campers. The sunsets are great, the air clean, and other than a meager budget, some run-down Mission 66 housing and a few personnel problems, everything is just the way you want it.

Monday morning: By noon the show has hit the fan.

- A local county commissioner, objecting to your policy of protecting the natural flow of the Big River, has enlisted the Army Corps of Engineers to dredge and realign the river channel. They are to begin work on Friday.

- The State Fish and Game Department calls to let you know they are stocking all your naturally fish free lakes in direct opposition to your policy against exotic species. Stocking will commence Wednesday.

- The Senior Attorney for the Sierra Club Legal Defense Fund (SCLDF) calls to inform you they have filed a lawsuit in U.S. District

Count on the grounds that your General Management Plan did not contain adequate data to analyze the impact of the decisions and development proposals.

- A seasonal maintenance worker has reported a thick, oily film on a wetland near the concessionaire's lodge. The film covers much of the marsh and has a petroleum smell.

- A seasonal patrol ranger caught a visitor family loading their car with over 200 pounds of wild mushrooms collected in the park. They are edible and the visitors state they are for personal consumption, however there is a strong local gourmet market for wild mushrooms.

- The local paper is running an article about a visitor who reported a near miss with a cougar on a park trail yesterday. The adult lion jumped into the trail within feet of their 5-year-old son, and was repelled only by the presence of their dog. That particular trail is closed to dogs. The visitor states he is going to call his congresswoman.

You call in your staff and find out that:

- You have virtually no baseline information on the Big River and only a smattering of water quality data. The district ranger knows there are bald eagles nesting along the river, but the resource management specialist says there are no monitoring data on the success of the nests.

- The backcountry ranger says they have good information on backcountry use, but nothing on the number of anglers. The resource management specialist says we have baseline data on only a few of the park lakes and she has no knowledge of research on the effects of fish stocking to fish free lakes.

- Your resource management specialist tells you that what SCLDF alleges is most likely true—that the planning team and the park didn't even have good maps of the area for the General Management Plan, much less any quantitative data.

- The chief of maintenance reports that over 1000 gallons of fuel oil are missing from the underground storage tanks at the concessionaire's lodge. The tanks are on a hillside overlooking the marshy wetland. The wetland below the fuel tanks is identified by the Fish and Wildlife Service in their wetland inventory but it is not mapped properly and there is no baseline on the vegetation found

there. The chief of interpretation says several state-listed sensitive plants probably occur within the wetland.

- The chief ranger says this is the third incident this year with mushroom collecting for apparent commercial sale. The resource management specialist says the park has zero information on its fungi species.

- The chief ranger reports that mountain lion incidents have been on the increase in the park for the last three years and the past superintendent had been funding some cougar research out of park base, but you took the funding this year to build a new fee collection booth at the entrance.

Is this the time for Mylanta? Jose Cuervo? A look at the pink sheets? The only good news is that the rangers did not cite the visitor with the dog.

These are not made up; they are real life occurrences within NPS areas.

What are the connecting threads among these problems?

First: These are resource issues! Threatened river systems, alteration of naturally fish free lakes, impacts of development plans, wetlands and hazardous materials spills, resource exploitation, and wildlife encounters with visitors.

Second: They are crises with short and long term environmental consequences.

Third: There are no easy answers.

Fourth: Every one of them could go to court, or to the press, and likely will become very political.

Fifth: You have good **qualitative** information about the resources at risk, such as the local knowledge of the bald eagle nests, the sensitive plants, and the backcountry use; however, you have very little **quantitative** data on the resources at risk from these problems. While the qualitative information is valuable in recognizing a concern, it is the quantitative information you need in order to formulate a credible response to the situations in all their political, public relations, and legal implications.

Beyond all that, what is the best course of action for the resources themselves? How many mushrooms can be collected before there is an adverse impact on the fungi population; how do cougars respond to aversive conditioning and relocation, what resources have you lost in the wetland, and how will those lakes be affected when exotic fish are introduced?

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Superintendents are faced again and again with making decisions that may have long term detrimental consequences to resources, and we continue to make those decisions without reliable or adequate scientific information. We also are faced with protecting, conserving, and defending park resources that we cannot even quantify.

Our defense of those resources with only qualitative information, policies, gut feelings, apple pie and sunsets, is increasingly difficult in the legal arena, the court of public opinion, and the political process. And I am not sure it is the best we can do for the resources themselves.

We need actions to convert the excellent qualitative sense of the resource felt by those working in the field into a quantitative information base that is useable and scientifically credible upon which to make management decisions.

To manage and protect the parks in today's arena, we need reliable, credible, understandable, relevant, and retrievable information about all the resources entrusted to us. The key to solid resource management is to convert the qualitative to quantitative through a solid research and monitoring program that is systematically interpreted for use by the park staff in educating the public, in decision making, in protection priorities, in planning and development, and in just plain understanding.

Fifteen years ago, in 1977, A. Starker Leopold and Durward Allen reviewed the NPS science program and made the following statement—still relevant today:

The National Park Service has reached a time in its history, and in the history of the nation, when science and research should be given a much greater and clearly recognized responsibility in policy making, planning, and operations. Seat of the pants guesses in resource preservation and management are open to challenge and do not stand up well in court or in the forum of public opinion.

At least 12 reports since 1963 have dealt with NPS management of resources and the relationship between science and management. One of the first and most often quoted was the Leopold report, *Wildlife Management in the National Parks*, named for its chairman, A. Starker Leopold. The report recommended that modern scientifically based management techniques be applied



and that park research programs be expanded. Since then, a succession of similar reports have come up with similar findings.

Also in 1963, the National Research Council made specific recommendations that the NPS strengthen research and have greater consultation between management and research units.

In 1979, the National Parks and Conservation Association Report, *No Park is an Island*, indicated that parks were indeed threatened, and this galvanized Congress into directing the NPS to survey itself. The result was the 1980 *State of the Parks Report*, one of the first self admissions of our lack of knowledge of the resources we were supposed to be protecting. The report stated that 75 percent of the reported threats were inadequately documented and that the natural science research personnel represented only 1.1 percent of the total NPS staff. The report recommended specifics for improving the NPS research and resource management program.

In 1987, the General Accounting Office (GAO) reviewed the NPS implementation of the recommendations from the *State of the Parks Report* and concluded: "The Park Service's strategy for better managing park resources has yet to be fully implemented."

In 1988, NPCA produced its magnum opus, the *National Park System Plan, Volume 2 on Research in the Parks: An Assessment of Needs*. It too made specific recommendations on increasing the role of science in park management.

In 1989, the Commission on Research and Resource Management Policy in the National Park System produced the so-called Gordon Report, *From Vignettes to a Global*

View. This report, funded by the Mellon Foundation, recommended the NPS adopt a new vision, based on ecosystem management and sound research.

And now we have two more reports:

The Vail Agenda identified a variety of actions for NPS to take to revitalize the agency. Four Working Groups made some insightful and at times critical observations: "The NPS must engage in a sustained and integrated program of natural, cultural, and social science resource management and research aimed at acquiring and using the information needed to manage and protect park resources."

The most recent report, produced by the National Research Council of the National Academy of Sciences and titled *Science and the National Parks*, does an excellent job of recounting the numerous times the NPS has been told to get its research act together:

"The recommendations of many serious reviews over nearly three decades reveal both a unanimity of opinion about the need for research to support resource management in the national parks and an abysmal lack of response by the NPS."

On page 9 of its report, the National Research Council observes: "However, the committee soon determined that the crucial problems in the NPS research program are not at the level of individual projects. Instead they are more fundamental, rooted in the culture of the NPS and in the structure and support it gives to research."

The fact that essentially the same set of recommendations has been made at least 12 times over the past 29 years with little concrete response lends credence to the allegation

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tion that there is something about the NPS **culture** that is holding back the use of research in park management.

The NPS culture is exceptionally strong. The Association of National Park Rangers is evidence of that, as was the response by the NPS "family" to the tragedies of Hurricane Andrew at the Everglades. Our legacy of the committed, knowledgeable, field skilled, helpful ranger is as strong as ever. Our resistance to change and interference from hostile administrations is legendary. All of this is part of our culture and our strength. But we must look closely at our culture to determine if it also is part of a **problem** when one considers our slow response to the need for research and sound scientific data in making management decisions. As with the alcoholic, recognition that you have a problem puts you half way to recovery. My suggestion is that there are **cultural** barriers within the NPS that prevent research and resource information from playing a significant role in management decision making. Therefore, in order to make meaningful change, we should recognize those barriers and act positively to overcome them.

Workshop Responses

After the above presentation, I posed two questions to the group: "**What are the cultural barriers to the improvement of our understanding, conservation and protection of resources at the park level?**" and "**What are the actions needed to correct or overcome these barriers?**"

The response by participants was open and candid and offers insight into the question of organizational culture. The full response is available upon request, however the following is a summary. Concerning cultural barriers, some of the comments were:

- frequent transfers and lack of continuity
- lack of superintendents' understanding of research
- old school, scenery management
- crisis management
- rivalry and turf battles between resource management and rangers.
- rewards to superintendents for politics and facility development rather than research and resource management
- organization of resource management within the ranger division
- frequently changing "thrusts" in funding priorities

Based on the active participation by workshop attendees and their open and at times excited discussion, there are some strong

ideas and feelings about "cultural" barriers that could be changed within the NPS to improve the relationship between management and science. Common threads I have identified from the above are:

- There is a need for training in resource management, monitoring, and research methods for everyone, but particularly for Superintendents.
- There is a need for accountability, again for all staff but particularly for Superintendents.
- There is a need for team building and reduction of rivalry between divisions through recognition that research and resource management enhance all jobs rather than competing with them.
- There is a strong need for funding continuity and the avoidance of seasonally changing "thrusts."
- There is the need to maintain continuity of research and resource management programs through staff changes, particularly at the Division Chief and Superintendent levels.
- There is a need to provide organizational consistency, with resource management as a division function in line authority to the Superintendent.

Many of the items above are within our individual control at the park or regional level. I believe, by recognizing the "cultural barriers" and taking actions to correct or alter them, we will make significant strides toward the long term protection, scientific understanding, and informed management of park resources.

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