

Professionalism in Resource Management

Editor's Note: The following is a synthesis of a workshop session at a national meeting of Regional Resource Management Specialists on July 23-25, 1991, and represents the general consensus reached, as it appeared to the author. Since the whole concept of natural resource management, as a profession, is still forming, and given the seemingly active state of evolutionary ferment within the National Park Service, this paper is presented for reflection and comment by our readers. As readers who are (or should be) vitally interested in this subject and all its implications, you are invited to respond, either in article or letter form, to the editor.

By Kathy Jope

To discuss professionalism in resource management, it is necessary first to define resource management, which has evolved as a profession only within the last 10 to 20 years. Given such a short history, it is not surprising that some confusion and disagreement still surround just what it is that a resource manager is supposed to do.

In 1980, Ro Wauer conceptually defined the resource manager as one who "not only works to solve today's problems but identifies and prevents those of tomorrow" (Wauer, 1980). He stated that a resource manager is a *catalyst* who talks to managers, scientists, planners, interpreters, and work crews, relates to the big picture, is responsible for implementation and monitoring, and has the time and staff to do it correctly.

A resource manager is not a researcher. However, resource management is closely linked to research. Gary Davis drew an analogy between NPS natural resource programs and the medical profession (Davis 1988). While medicine requires medical research to provide information, research alone doesn't keep the patient well. There must also be a doctor, who applies the results of that research. Similarly, the NPS requires research on park ecosystems, but research alone doesn't protect park resources. It is the role of the resource manager to apply the results of research and to serve as the "doctor" for the parks' natural resources.

This could be interpreted to imply that the resource manager is a technician, who unquestioningly follows the instructions of researchers and implements research recommendations. However, a professional resource manager goes beyond the research results. S/he is aware of alternative approaches, critically evaluates them, and selects the one most appropriate to a given situation.

Detecting a problem often requires in-depth knowledge of the resource and how it functions and interacts with others, resulting in sensitivity and ability to recognize situations in which something is not quite right. Defining a problem and developing an approach to resolve it requires skill in problem solving. To do this, a resource manager identifies information needs, determines what information is available from the published literature or other existing sources, and indicates what will require new research.

A foundation in science and critical thinking ability are essential in determining the relevance of particular studies to a given issue. These qualifications probably can best be obtained through a Master's degree in a natural resource discipline. (The needed qualifications exceed what is obtained through a Bachelor's degree. While a Ph.D. gives a better understanding of research design and scientific methods, its usually narrow focus

contributes little to the range of capabilities needed in an effective resource manager.)

When research is needed to provide information not available in the published literature, in most parks the resource manager serves as research coordinator. In this role, s/he: (1) obtains needed funding by preparing funding requests, requests for proposals (RFPs), and other needed documentation; (2) works with the researcher in clearly defining research objectives and developing methods compatible with NPS mandates; (3) monitors progress of the research, and (4) reviews the research report for management implications.

It is not appropriate for the researcher to make management recommendations. Since management decisions are based on many other considerations of which the researcher may not be fully aware, the researcher should instead discuss management implications of the research findings, such as the likely consequences if the park selects a certain alternative action.

When scientific information is incorporated within a park's resource related programs, the differences between a resource manager and a researcher become clear. The resource manager is responsible for integrating scientific information, as appropriate, with other considerations to achieve the park's objectives for resource protection. Management decisions are not based solely on biological information, but on additional considerations that lie beyond the scope of the research - other information relevant to the issue, park management objectives, NPS management policies and regulations, effects on other park programs, and strategic judgment concerning the long-term benefits of alternative actions.

Achieving a resource protection objective may involve making use of management tools and procedures such as special use permits, concession contracts and commercial use licenses, cooperative agreements, and land use regulations and rights of ownership. The socio-political environment can create new opportunities for alternative approaches or make certain approaches unfeasible. The more knowledgeable a resource manager is in all these areas, the more effective s/he will be.

A resource manager can accomplish only a limited

amount alone. Instead, the resource manager must work through others, such as work crews, maintenance, law enforcement, interpretation, public information, and concessions management. The resource manager serves as the focus of natural resource-related activities, helping the various programs work together toward coordinated resource protection rather than at cross purposes. To be effective, the resource manager needs a knowledge of the other park programs, their work requirements and procedures.

In managing a program, resource managers need to be skilled in managing staff and funding. They must be knowledgeable about administrative procedures and regulations and able to develop good working relationships with budget officers, procurement officers, classification specialists, and contracting officers.

They work not only with park employees, but also with personnel from other agencies, adjacent landowners, and interest groups. Thus, they need to be skilled in communication and interpersonal relationships, in negotiation and persuasion. They must be able to communicate effectively the technical information about the resources, threats to their integrity, research findings, potential solutions to problems, and the pros and cons of alternative approaches. This information must be presented in ways that speak to people representing diverse value systems and explain why it is in their interest to care about the well-being of park resources.

Resource managers are primary sources of information about park resources. Increasingly, they need ability in database management. This ensures that resource information is available when needed, that there is continuity over time, and that research results will not be forgotten when the manager transfers.

Resource managers must stay up to date with the most current scientific knowledge. We should think of resource managers as *scientific* resource managers. Unfortunately, because our staffing levels are so spartan, it has been necessary for a single resource manager to be responsible for an extremely broad spectrum of resources.

The GS-401 Biologist classification does not begin to reflect the range of responsibilities. These often include management of air quality, watersheds (including surface and subsurface hydrology, soils, geology, and climatic processes), fish and other aquatic biota, wildlife (including birds, mammals, insects, and other organisms), vegetation, fire, caves, grazing, mining and minerals, hazardous materials and toxic wastes, threatened and endangered species, non-native species, pests, backcountry and frontcountry visitor impacts, and impacts of park facilities.

In developing resource programs and assessing environmental effects of proposed facilities or management actions, it is imperative that resources be dealt with as systems of interrelated dynamic components. The challenge for resource managers is to maintain a professional level of expertise as well as knowledge of changing laws and policies over this wide range of subjects. In addition, they should stay abreast of new concepts and emerging fields such as conservation biology, restoration ecology, and behavior of pollutants in the environment. It is clear that we need to develop better ways to meet the need for expertise at the field level.

After we have hired well educated people and given them experience and training to broaden their knowl-

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Professionalism

Other aspects of professionalism that time limitations did not allow the workshop to address adequately included:

Intake routes: Most intake positions are in fields other than resource management and do not necessarily select for qualifications needed in higher level positions. We need an established intake route and a mobility ladder, to insure bringing in qualified people.

Lack of applicants for GS-12s and above: High level resource management positions, particularly in central offices and remote locations, have had difficulty attracting well-qualified applicants. This may be due to the still small number of resource managers Servicewide or because of personal career preferences. There has been little opportunity for RMs in low- to mid-graded NPS RM positions to gain critical experience and training in supervision and program management.

edge beyond their education specialty, we need to maintain their professional expertise at the highest level possible. Resource managers should be encouraged to participate in activities such as short courses, scientific conferences, and graduate level continuing education opportunities. The NPS should regularly sponsor workshops specifically targeted toward resource managers, focusing on state of the art themes.

Natural and cultural resources, which form the foundation on which the National Park System is built, are facing threats as never before. Natural resource programs, including research and resource management, made up only 6 percent of the NPS budget in FY 1991. Whether or not the NPS considers its own resource managers to be professionals is projected to others by how the NPS is organized. Resource management must surface as a keystone responsibility, considered a part of "line management," with sufficient personnel and support to deal with the issues faced by the parks in today's world.

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Literature Cited

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