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Public Involvement in National Park Service Land Management Issues

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Abstract

This paper reviews the literature on public involvement in the context of public land management agencies with particular attention to public involvement activities in the National Park Service. A conceptual framework borrowed from small-group decision-making literature is presented to assist public land managers in determining the role and place of public involvement in the management process. A variety of public involvement techniques and data analysis methods is reviewed. A review of the literature suggests several recommendations for managers, including: clarify the goals of public involvement; focus on the public involvement process as well as the outcome; and use a variety of techniques to reach a diversity of stakeholders.

Introduction and Scope

The role of public involvement in public land management in the United States is usually complex, always challenging, and seldom clear. Some citizens believe it is their constitutional right to be directly involved in making decisions about public land management at all times, whereas some public land managers see public involvement as unjustified questioning of their scientific knowledge and professional competency.

There are many questions to ask when public land managers and social science researchers address public involvement. For example, Who are the relevant publics? What motivates them to become involved? In what ways do they want to be involved? What methods or techniques can public agencies use to encourage, facilitate, manage, and analyze the involvement? When should the public become involved? How will the public's involvement be evaluated and used by the decision-maker?

This paper is a review of current social science literature on the topic of public involvement in U.S. public land management agencies at the national and state levels during the last quarter-century. Its primary audience is National Park Service (NPS) managers and others involved in public involvement activities in the NPS. This review is not an exhaustive review of the public involvement literature. To the extent possible, we focus on the literature reporting empirical studies that test methodologies and/or report on specific public involvement activities in public land management agencies. We have not included opinion essays and papers that are a call for public involvement or that praise the goodness of public involvement. Also, the paper does not review the recent—and expanding—literature on conflict resolution or collaborative learning/management/planning. It includes a brief discussion of these activities and calls for a future social science research review addressing these approaches, given the legal environment which exists for federal public land management agencies, such as the NPS. Interested

readers may also wish to consult the recent literature on risk as it relates to public involvement in land management activities.

Following a brief discussion of definitions of public involvement, the next section of this paper presents the theoretical perspective on public involvement, especially as it relates to democracy in the United States. This is followed by a discussion of possible conceptual frameworks for planning a public involvement program in an agency such as the NPS. The next section reviews the literature on some commonly employed public involvement methods, followed by a variety of examples of public involvement experiences in public land management agencies. Next, we make some general recommendations that emerged from this review of the literature. A review of public involvement in the NPS, including recent examples of NPS activities, is then presented. The paper concludes with recommendations for research on public involvement within the NPS. Terms that may be unfamiliar to the reader or that have multiple meanings in the literature are highlighted in **boldface** and defined in a glossary at the end of the paper.

Definitions

In the literature the terms "public involvement," "public participation," "citizen involvement," and "citizen participation" are often used interchangeably. Throughout this paper we will use the term **public involvement**. Writers on public involvement often provide their own twist on a definition of the term they are using, but the differences are small. At the time that most public land management agencies, such as the NPS, were beginning legally-mandated public involvement activities, the U.S. Congress (1975) defined public involvement as:

> The opportunity for maximum feasible participation by citizens in rulemaking, decision making and land use planning, including public hearings, advisory mechanisms and such other procedures as may be necessary to provide public input in a particular instance.

Note that this definition sends a conflicting message to public land managers, suggesting both "maximum feasible participation by citizens in rulemaking, decision making and land use planning" and merely providing "public input." Many members of the public as well as a significant number of public involvement professionals do not view "maximum feasible participation" as synonymous with "providing input."

During the same period, the USDA Forest Service (1973) definition focused on "informing the public" and "considering the views of interested parties," as evident in the definition they provide:

> The use of appropriate procedures for informing the public, obtaining early and continuing public participation and considering the views of interested parties in planning and decision-making processes. The "public" referred to includes individuals, local, state, regional and national public service organizations and interest groups. It also includes state, local and other Federal agencies which have jurisdiction, special expertise or information to offer relevant to the total planning and implementation picture.

Twenty-five years later the *Dictionary of Forestry* selected the 1973 Forest Service definition as still the most appropriate definition for public involvement (Helms 1998). The Forest Service's regulations for National Forest System Land and Resource Management Planning recognize an expanded role for the public and require the Forest Service to "provide early and frequent opportunities for participation" and to "encourage interested individuals and organizations to work collaboratively with one another to improve understanding and develop cooperative landscape and other goals" (36 CFR 219.16).

With the passage of the National Environmental Policy Act (NEPA) of 1969 (PL 91-190), public involvement became a required activity when agencies are assessing the impacts of major federal actions affecting the environment. However, the term "public involvement" is not specifically defined in the Council of Environmental Quality (CEQ)

Table 1. Examples of Formal and Informal Public Involvement by Type of Agency Role

Agency Role	Public Involvement	
	Formal Involvement (based on established methods and documented accordingly)	***Informal Involvement***
Managed (the agency has control over a particular method)	public hearings, workshops, incoming comments (mail, phone, electronic), field trips, newsletters	lunch with community leaders, personal contacts, newspaper articles (including letters to the editor), key contacts/informants
Unmanaged (by the agency)	lawsuits, voting, lobbying	sabotage/ecotage, protests, riots, demonstrations, boycotts

SOURCE: Adapted from Williams (1985)

Regulations for NEPA (40 CFR 1503.1). The regulations state that the agency preparing draft and final Environmental Impact Statements "shall obtain comments from any federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved" in the proposed action (40 CFR 1503.1). In addition, the preparing agency must request comments from other agencies and groups, including the public. The regulations focus on ways in which the agency must inform the public of their actions. How public input is to be used in agency decision-making is not discussed.

In the National Park Service (NPS), the "Director's Order #2: Park Planning" provides the following definition of public involvement (Stanton 1998):

> Public participation in planning and decision making will ensure that the National Park Service fully understands and considers the publics' interests in the parks as part of their national heritage, cultural traditions, and community surroundings. To the maximum extent possible, the National Park Service will actively seek out and consult with existing and potential visitors, neighbors, people with traditional cultural ties to park lands, scientists and scholars, concessionaires, cooperating associations, other partners, and government agencies. The Park Service will work cooperatively with others to improve the condition of parks, to expand public service, and to integrate parks into sustainable ecological, cultural, and socioeconomic systems.

The focus of this definition is to understand and consider the publics' interests as well as to seek out and consult with a specific list of "publics" of interest to the NPS.

For the purposes of this article, we define public involvement as follows:

> Public involvement includes all activities used by public land management agencies to inform and educate the public about the agency's land management activities, and/or to gather information from the public, and/or to include the public in making decisions about public land management. The public is defined as individuals and organizations (both public and private) outside the agency.

Although public involvement may take many forms (including ones in the legislative and judicial branches of the government, which will be discussed later in this paper), we will concentrate on *formal, managed* public involvement taking place in government agencies (see Table 1).

Theoretical Perspectives on Public Involvement

The concept of public involvement and one's perceived rights as a citizen in a democratic society are often intertwined. A society is considered democratic when its citizens are making decisions directly or through elected representatives in an open process of discussion and decision. The debate regarding the role of citizens in the American democracy began with the birth of the country as the founding fathers negotiated between Thomas Jefferson's and James Madison's views on democracy. Cortner and Moote (1999, 3-4) summarize the debate as follows:

> Madison's primary concern was "the mischief of factions," and the ability of one group of citizens to control government (the "tyranny of the majority") with no protection for the interests of the minorities. ...in a direct democracy there would be no controls preventing individuals without virtue to usurp control. Instead, Madison believed, a large republic with a system of constitutional checks and balances would serve to diffuse power among many parts so that no one part dominated the whole. ...For Thomas Jefferson, ...the ultimate concern was that government be placed in the hands of the people: "...if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them, but to inform their discretion by education."...He believed democratic ideals could best be realized by public participation in government.

Public Involvement in Legislation

In public land management agencies today, public involvement can best be described as a blend of Madison's and Jefferson's views of democracy. United States citizens can become involved in public land management issues and decisions via the legislative branch of our government as Madison envisioned. Citizens lobby, vote for, and elect to Congress individuals who will pass legislation determining how to manage public lands. The public lands in this country were established by Congress with acts such as the 1864 Yosemite Act, the 1891 Creative Act establishing the national forests, and the 1916 National Park Service Act.

The National Historic Preservation Act of 1966 (PL 89-665) called for an advisory council which included citizens. Direct public involvement in public land management became a requirement for federal agencies when Congress passed the National Environmental Policy Act (NEPA) of 1969 (PL 91-190) and others since, such as the National Forest Management Act (NFMA) of 1976 (PL 94-588). The Alaska National Interest Lands Conservation Act (ANILCA) of 1980 (PL 96-487) requires conservation and management plans for each of the NPS units established as part of the act (see Title XIII Sec. 1301). ANILCA also requires in Title XIII Sec. 1301(d) that at least one public hearing be held in both the vicinity of the conservation unit and in an Alaskan metropolitan area. This section also lists four specific groups that "to the extent practicable" are to be permitted to participate in the development, preparation, and revision of the plans.

The Courts and Public Involvement

The judicial branch provides a second avenue for public involvement in the United States. Citizens have increasingly filed lawsuits challenging public land management agency decisions in the last quarter century. Court decisions, beginning with the 1965 *Scenic Hudson Preservation Conference v. Federal Power Commission* case, have significantly expanded citizens' "standing to sue" beyond situations where an economic loss or personal loss can be proven. Today, many public land managers have found themselves in this adversarial form of public involvement (the formal, unmanaged category in Table 1). Some public interest groups have frequently used this avenue of public involvement, especially in certain courts where past judicial decisions have been favorable to their interests. Such court decisions do provide clear opportunities to achieve certain public land decisions desired by some members of the public.

Public Involvement in the Executive Branch

Most of what is usually called "public involvement" takes place in the third branch of government, the executive branch. Until the mid-20th century, few citizens tried to influence public land management policy and decisions via direct intervention with agency personnel. When public administration became a professional field at the beginning of the twentieth century, the early theorists "took a distinctly hostile view of public involvement in the managerial process" (Thomas 1995, 16). Woodrow Wilson's (1887) classic essay on public administration sought to insulate public administrators from the political influence of patronage party politics, which were very prevalent at the time. The early theorists viewed politics, through voting and lobbying, as the place for public involvement; public administrators were responsible for implementing the policies (Thomas 1995).

This view of public administration dominated until the 1960s when the Civil Rights Movement and President Lyndon Johnson's War on Poverty led to urban renewal legislation and programs that were to include the maximum feasible participation of the local residents (Thomas 1995). In contrast to public involvement via the legislative branch, this new public involvement focused "squarely on policy implementation, on involving the public in deciding how policies, once adopted, would be put into operation" (Thomas 1995, 3). There was also a change in who "the public" was: it was no longer the elite, such as "blue ribbon" advisory committees, but rather a broad range of publics and citizen groups (Thomas 1995).

Gifford Pinchot (1947), the "father of professional forestry" in the U.S., in describing the philosophies and practices that guided the establishment of the national forests and forest management on public lands, said "To start with I had to know something about the people, the country, and the trees. And of the three the first was the most important." This advice from Pinchot may have encouraged foresters to learn more about the local people in the areas where national forests were established, but it did not prepare the agency for the public involvement requirements that would come in the last quarter of the century. As Fairfax (1975, 657) points out, "Most government bureaucracies, including the Forest Service, have always conducted their business in close association with a large number of private groups and individuals." However, during the first 75 years of the Forest Service or any other public land management agency, there is little evidence of what today would be called "public involvement." The mandate for some consideration of direct public involvement with the public land management agencies is clear in the National Environmental Policy Act (NEPA). The USDA Forest Service and the USDI Bureau of Land Management were given additional mandates when the National Forest Management Act (NFMA) and the Federal Land Policy and Management Act of 1976 (PL 94-579) were passed.

Although legislative mandates require public involvement by public land management agencies, the public involvement field as a topic of scholarly inquiry has been largely atheoretical. Wengert (1976) discussed the lack of theory to guide public land managers in making public participation choices. This criticism was also noted by Goldenberg and Frideres (1986) and by the Office of Technology Assessment (1992). Recent theoretical developments are considered in the next section.

Despite a lack of theory, the concept of public involvement has taken on many faces during the first 225 years of the U.S. democracy. Today it is present, as Jefferson desired, throughout the government. Democracy in its many forms may be a necessary condition for public involvement, but it is not sufficient. Today, many public land managers, like other public administrators, recognize the imperative of public involvement, but are struggling with how to determine when, how, how often, with whom, and to what extent to involve the public (Thomas 1995). We will now examine some conceptual frameworks for making these choices when designing a public involvement program.

Conceptual Frameworks for Public Involvement

Several conceptual frameworks for public involvement have been proposed over the last thirty years. No one framework has emerged as the single or widely accepted framework for all public involvement activities in public land management agencies.

One of the earliest efforts to produce a conceptual framework for the public involvement movement that began in the 1960s was Arnstein's (1969) "Ladder of Citizen Participation." The bottom rung of the ladder—labeled *manipulation* and considered nonparticipation by Arnstein—represents those cases where citizens are essentially being fooled into believing they are participating in some way. In reality, they have been manipulated into accepting the decisions and ideas of the power holders/agency managers. The middle rungs of the ladder, which Arnstein calls "degrees of tokenism," include informing the public of activities, consulting to get their opinions, and placation—possibly making slight changes in the agency's intended action. The top of the ladder, representing progressively greater degrees of citizen power, includes partnerships between citizens and the agency, some delegation of power to citizens, and, finally, citizen control.

A similar typology of participation is presented by Pimbert and Pretty (1994) and ranges from "passive participation," in which people are told what is going to happen or has already happened, through gathering information from participants, followed by increasing levels of participation. At the higher levels, joint analysis leads to action plans and groups taking control over local decisions. The final stage is self-mobilization, in which people participate by taking initiatives independent of the agency.

Force and McLaughlin (1982) present a conceptual framework describing a continuum for social learning. Their framework includes four levels of public activity: (1) no formal public input, (2) information exchange between the public and the agency, (3) knowledge gain by both the public and the agency personnel, and (4) total involvement in which agency authority is shared with the public. As public activities move through these levels, three processes are also evolving. First, the public experiences an *awareness* or recognition that some issue or problem is being discussed or an action proposed. During this process there may be no formal public input (level one); however, the agency may begin providing information about the issue and some exchange may begin (level two). Next, as more information becomes available and knowledge is gained, the *comprehension* process begins to take place (level three). Comprehension is characterized by organized groups or individuals developing preferences and forming coalitions. The final process is *guidance,* or the directing of a course of action toward a desired state by those people directly affected. It is based on comprehension of available knowledge and assumes equal access to that knowledge by everyone involved. It includes opportunities for sharing decision-making authority (level four).

A more recent approach to developing a public involvement theory is presented by Thomas (1995). He has developed the Effective Decision Model of Public Involvement based on a theory borrowed from the literature on small group decision-making (Vroom and Jago 1978; 1988; Vroom and Yetton 1973) and empirically tested for issues of public involvement. The theory attempts to provide a clear understanding of the place of public involvement in the management process. It attempts to combine "a balanced perspective on what can realistically be expected from public involvement and a contingent perspective on how those expectations should vary according to the situation" (Thomas 1995, 30). The hope is that such a theory has practical value for public managers.

The Thomas (1995) model is presented in detail here because it provides public land managers, such as NPS professionals, with a relatively straightforward and practical set of questions to be addressed as an agency or an individual progresses through the decision-making process. The model does not assume public involvement is necessary, appropriate, or legally required for every public land management decision-making situation.

A Decision-Making Model

Early decisions to be made in developing a public involvement program include determining: (1) who to involve, (2) what specific forms or techniques to use, and (3) when and how often to involve the public. Before these choices can be made, however, the public manager must decide how much influence and information will be shared with the public. Thomas (1995, 11) describes the dilemma:

> Typically, information was shared, but influence was not. The ostensible intent of the new public involvement is to increase the influence, but by how much is often unclear. At one extreme, the public might be permitted to make decisions, with the manager serving in only an advisory capacity. At the other extreme, the public might be given a limited advisory capacity, with a possibility but no guarantee of influence, with the ultimate decision-making authority remaining with the public manager. As an intermediate option, influence in decision-making might be shared by the manager and the public, although the question would remain of how much influence each would get.

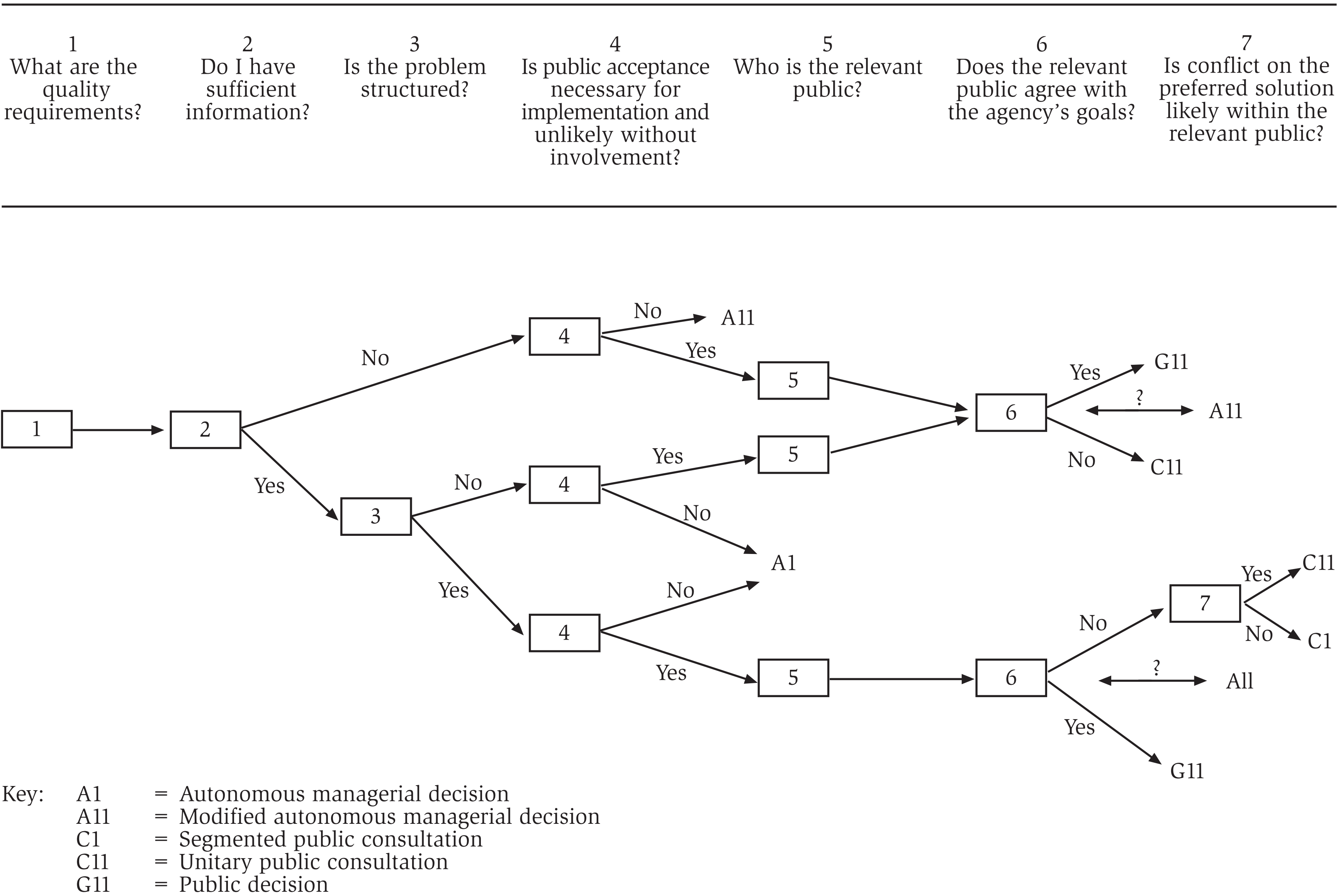
The Effective Decision Model (Figure 1) is a binomial decision tree structure. The model "inputs" are the manager's answers to seven questions about the characteristics of the issue at hand. The outcome of the model is five different decision-making approaches (see Table 2).

In this model, the manager asks the first four questions. Following the top three "branches" of the decision tree, the result is that the manager should decide alone and that public involvement is not necessary (A11). In the other cases, the manager should proceed with the remaining three questions and design a public involvement process, leading in most cases to sharing some influence in making the decision. Thomas (1993) tested the model on 30 cases in which public involvement was considered in a government decision-making situation, including several cases in environmental planning. He concluded that the greater the departure from the recommended level of involvement, the less effective the decision. For example, if the manager determines that the relevant public(s) does (do) not share the agency goals for solving the problem after going through the first six questions in the model, the recommended level of involvement is to pursue either segmented or unitary consultation with the public. Thomas also found that the greater the need for public legitimacy of the decision, the more involvement is needed. Conversely, when the need for managerial efficiency and technical competence is great, less public involvement is recommended, using the Thomas model.

Daniels et. al (1996) use the questions in the Vroom-Yetton/Thomas approach to recommend public involvement strategies for ecosystem-based management on mixed land ownerships. They examine two possible outcomes, depending on whether or not there is an opportunity for alternative redefinition. Where there is such an opportunity, a public decision process is recommended. When it is not possible to develop new alternatives, the model suggests a segmented public consultation process. They also point out the assumption in the model of a unitary decision-maker. Because of the legislated authority that public land managers have (such as those in the NPS), the unitary decision-making assumption in the model may be justified. However, in the case of ecosystem management on mixed ownerships, this assumption is questionable. Today there is increasing awareness that many large ecosystems necessitate more partnership approaches to management and decision-making than in the past.

Although Thomas's model is simple, clear, and appears to be efficient from the manager's perspective, it is not without significant challenges if used by public land management decision-makers. For example, although public land managers are expected to be aware of the quality requirements (technical/scientific, legal, and budgetary constraints), and frequently believe they have sufficient information to make a decision, there are incidents of managers assuming they have public acceptance for implementation and thus proceeding with autonomous managerial decisions. Because of general public mistrust of public land managers and the entrenched and conflicting interest groups associated with many decisions, even relatively simple decisions may become controversial when implemented. Thus

Figure 1. The Effective Decision Model of Public Involvement



Key: A1 = Autonomous managerial decision
A11 = Modified autonomous managerial decision
C1 = Segmented public consultation
C11 = Unitary public consultation
G11 = Public decision

SOURCE: Thomas (1995)

Table 2. The Inputs and Outputs of the Effective Decision Model

INPUTS: ***Characteristics of the issue at hand***	***Explanation***
1. What are the quality requirements that must be incorporated in any decision?	Refers to the policy or managerial constraints on the nature of the decision: (1) technical/scientific constraints which limit solutions, (2) regulatory or legal constraints that must be included in any solution, and (3) budgetary constraints on how much money can be spent on the solution.
2. Do I have sufficient information to make a high-quality decision?	Includes information on: (1) how well a decision will work in the field, (2) public preferences (what kinds of solutions potential consumers of the program prefer), and (3) the technical aspects of the problem or possible solutions.
3. Is the problem structured such that alternative solutions are not open to redefinition?	As much as possible, managers should begin public involvement before the problem becomes structured with limited alternative solutions.
4. Is public acceptance of the decision critical to effective implementation? If so, is that acceptance reasonably certain if the manager decides alone?	If implementation hinges on acceptance, involvement increases the likelihood of acceptance and nurtures citizen "ownership" of the decision.
5. Who is the relevant public? And does that public consist of an organized group, more than one organized group, an unorganized public, or some combination of these?	The relevant public includes individuals and all organized and unorganized groups of citizens who could provide information useful in resolving the issue or making the decision or who could affect the ability to implement the decision either positively or negatively.
6. Does the relevant public share the agency goals to be obtained in solving the problem?	The answer to this question affects how much decision-making authority will be shared with the public.
7. Is there likely to be conflict within the public on the preferred solution?	Conflict within the public and/or between the public and agency may call for more involvement in order to place some of the responsibility for resolving conflict on the public, rather than just on the manager.
OUTCOMES: ***Decision-making approaches***	***Explanation***
1. Autonomous managerial decision	The manager solves the problem and/or makes the decision without public involvement.
2. Modified autonomous managerial decision	The manager seeks information from some segments of the public, but makes the decision in a manner that may or may not reflect group influence.
3. Segmented public consultation	The manager shares the problem separately with segments of the public, getting ideas and suggestions, then makes the decision reflecting group influence.
4. Unitary public consultation	The manager shares the problem and gets ideas and suggestions with the public as a single assembled group, then makes a decision reflecting group influence.
5. Public decision	The manager shares the problem with the assembled public, and together the manager and the public attempt to reach agreement on a solution.

SOURCE: Adapted from Thomas (1995)

public land managers need to very carefully address questions five, six, and seven in the model before concluding that they can make an autonomous or modified autonomous managerial decision.

One of the biggest criticisms of all theories, conceptual frameworks, models, and designs for public involvement is that decision-making with public involvement takes too much time and thus costs too much (Thomas 1995). Learning—by both the public and the manager—takes time; negotiating with multiple parties takes time; building trust and relationships between the public and managers and among the publics takes time; and planning and executing an effective public involvement process takes time. What is often overlooked is that the additional time spent during the public involvement process, including the decision-making process, may save far greater amounts of time during the implementation of the project or plan. If administrative appeals and lawsuits, which often take several years, or other forms of informal, unmanaged public involvement such as protests are avoided (see Table 1), both the time and the dollar costs may be significantly reduced by spending several months or even a year, depending on the issue, on a comprehensive and sincere public involvement process. Clearly, additional research is needed on this important issue.

Regardless of the decision model, when public land managers have determined that a public involvement program is needed, they must then determine what public involvement techniques to use. This is not an easy task. In the next section we will look at some of the methods commonly used by land managers in public involvement programs.

Review of Public Involvement Techniques

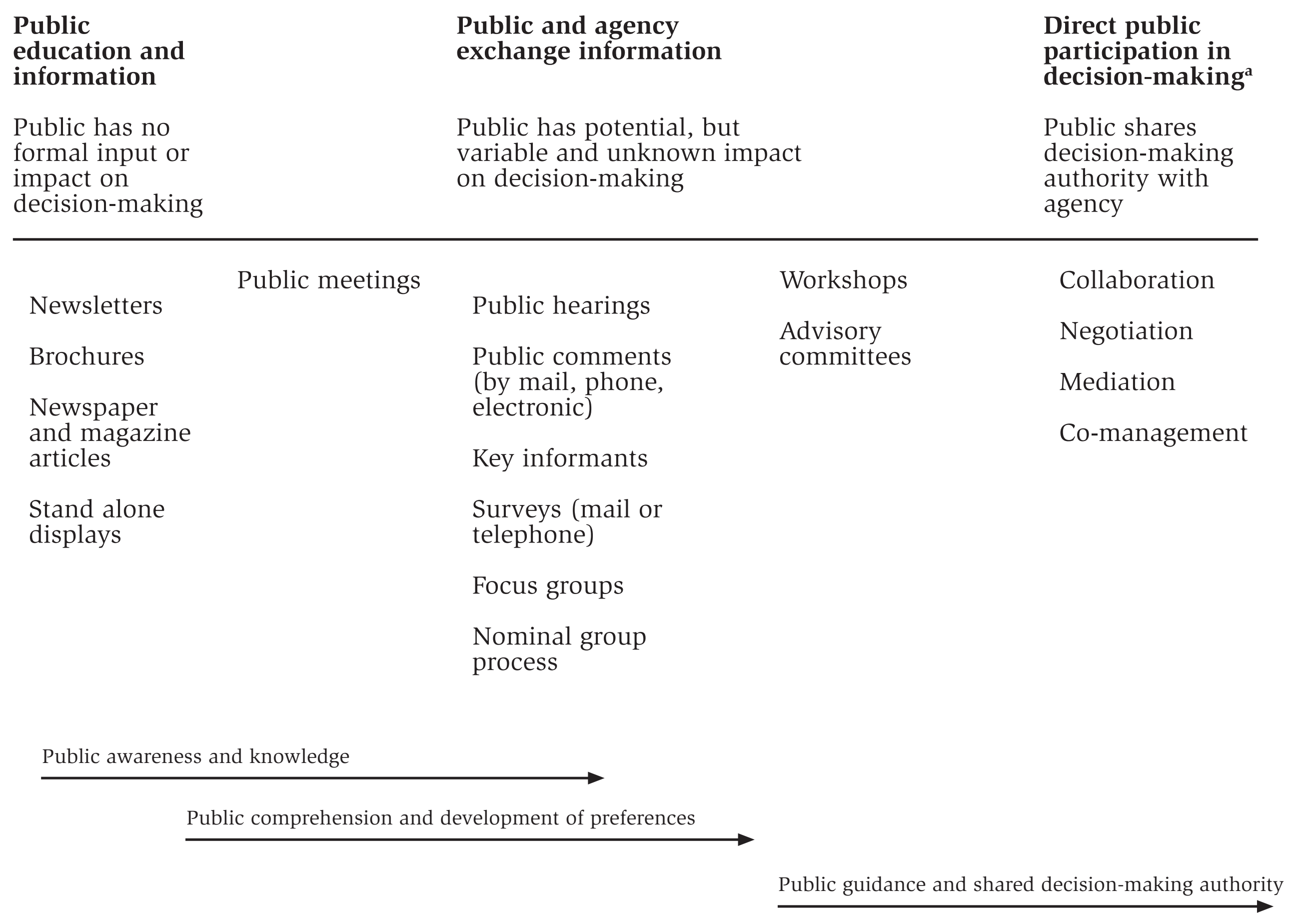
A wide variety of methods or techniques are used by public land management agencies to provide opportunities for public involvement (see Glossary to review the definition used in this paper). These methods span a continuum from providing information to the public, through soliciting information from the public, to shared decision-making (see Figure 2). Heberlein (1976) identified four specific functions of public involvement: (1) one-way or two-way *information flows* between the agency and the public, (2) working together to solve a problem (an *interactive* function), (3) *assuring* the public that the agency is considering their views, and (4) a *ritualistic* function necessary to fulfill legal requirements. Few public involvement methods satisfy all four of Heberlein's functions. The methods to be used in a particular situation depend largely on the goals of the public involvement process. In most instances multiple public involvement methods, allowing for a diversity of participants, are needed. How an agency actually conducts the public involvement process and interacts with participants impacts the success of the process (Chess and Purcell 1999). Several of the more widely used methods are explained here. Most are managed, formal methods controlled by the agency (see Table 1).

Public education/information methods include using such things as newsletters, brochures, newspaper and magazine articles, stand-alone displays in various public venues, TV and radio announcements, and the Internet. These methods may be designed to garner support for agency actions or simply to provide news and data on issues of importance. They do not allow for public feedback and are largely distributed at the discretion of the agency.

Contact with ***key informants*** is a managed, informal method of public involvement. It involves agency personnel talking informally with key individuals in the community (Heberlein 1976). Through these discussions land managers can gain a sense of the range of issues or opinions on a topic. This method allows for a two-way flow of information between the agency and the informants. Some managers keep careful notes of these conversations; others do not.

Public comments on agency actions and/or plans may be made by writing letters, making telephone calls, and increasingly through electronic means (e-mail and web sites). Soliciting public comments is a statutory procedure that provides for a one-way flow of information from the public to the agency (Beierle 1999). Solicited and unsolicited comments are a major source of agency data on public opinions. Public comments do not allow for discussion

Figure 2. Public Involvement Methods and Potential Public Impact on Decision-Making



[a]The methods that involve shared decision-making authority with federal agencies are not the focus of this paper.

among participants or between participants and agency personnel. It is often unclear to participants how their comments may be integrated into planning efforts, and how the numbers of comments are reconciled with the sources of those comments (e.g., a concerned individual as opposed to a group letter-writing campaign [Steelman and Ascher 1997]). In one instance, a land manager noted that it was difficult to ignore the frequency of comments with a particular viewpoint while acknowledging that frequency was not related to merit (Steelman and Ascher 1997). Analysis of public comments will be discussed in a later section.

Mail or telephone ***surveys*** are a method for soliciting a representative view of opinions from the public on a particular issue. Surveys can be used to help decide policy issues (Beierle 1999). Their usefulness is affected by the degree of knowledge respondents have on an issue (Lauber and Knuth 1998; McComas and Scherer 1999). Depending on their design, surveys can be used to both supply and solicit information.

Public meetings are forums in which agency personnel can present information to the interested public. Speakers may present different facets of proposed plans or activities (Fazio and Gilbert 1981). Many public meetings are designed to encourage discussion and feedback, though they rarely lead to a consensus among those participating (Chess and Purcell 1999).

Public hearings are one of the most common methods used to solicit public input on agency actions. Hearings provide all or selected participants the opportunity to present their opinions on the issue under discussion in a formal manner in an allotted

period of time (often 3-5 minutes each). This information is recorded and becomes part of the public record. Public hearings may be mandated by laws or agency regulations. Criticisms of public hearings include that they serve to legitimize decisions already made by the agency (Chess and Purcell 1999) and that they do not provide an opportunity for discussion and feedback among participants and between participants and agency representatives, thus limiting "meaningful" participation (Beierle 1999). Public hearings may attract proportionally more people opposed to a proposed course of action than are present in the general population (Chess and Purcell 1999; Green et al. 1997). The utility of public hearings may be undermined by poor outreach and education, poor procedures, or poor timing, such as holding hearings late in the decision-making process (Chess and Purcell 1999).

Focus groups are another method for collecting public opinions on an issue (Morgan 1998). They are facilitated discussions focusing on specific topics. Participants are often invited because they are believed to represent certain viewpoints. Discussions are guided by a set of predetermined questions. There is limited opportunity for feedback between the agency and participants, but substantial opportunity for discussion among participants.

Nominal group process is a technique for meeting facilitation (Delbecq et al. 1975). It involves asking small groups of participants (usually 7-10) to brainstorm on a specific question. Responses are then discussed and ranked. Through a series of groups or meetings facilitated in this way, agency personnel can identify the issues of greatest importance to the public (Williams and Matejko 1985). The nominal group process allows for some feedback between the agency and participants and allows the agency to respond immediately in some form to individual concerns (Williams and Matejko 1985). It also provides for considerable discussion among participants.

Workshops provide an opportunity for discussion and feedback. They can be used to identify and discuss important issues and help participants arrive at an agreement. They are generally of longer duration than other meeting types, lasting from a half-day to several days. One important criterion for workshop success is having appropriate participants that represent various stakeholders. In one study it was found that having an intermediary between the agency and stakeholder groups increased participation of people with diverse viewpoints (Chess and Purcell 1999). The perceived success of workshop outcomes is related to participants' goals, how well consensus was reached, and whether or not participants felt that the workshop had contributed to decision-making (Chess and Purcell 1999). In some instances it may be necessary to employ facilitators from outside the agency to promote consensus building (Twight and Carroll 1983).

Advisory committees are used to provide mid- to long-term public input into agency planning and management. Advisory committees can range from informal citizen groups established without agency involvement, to more formal groups that provide information and insight to an agency, to groups established by federal law (Beierle 1999). In recent years the Federal Advisory Committee Act of 1972 (FACA) (PL 92-463) has become a major factor in the appointment of committees responsible to federal land management agencies. The law establishes requirements regarding "balanced membership, transparency, and government involvement" (Beierle 1999, 93). Because of FACA requirements, formal advisory committees are seldom appointed for specific land management activities. In some instances federal land management agencies may convene representatives of different interest groups in an advisory committee type forum which may contribute to decision-making, though not necessarily in the formal manner required under FACA[1] (e.g., see Steelman and Ascher 1997).

Two primary types of formal, managed advisory committees can be identified. Citizen Advisory Committees involve citizens who are called together to represent the views of the wider public. Their input is intended to be included in the decision-making process (Beierle 1999). Citizen task forces would be included in this type of advisory committee. Expert or Technical Advisory Committees include experts from outside the organization who bring technical perspectives (e.g.,

economics, science) to the decision-making process and may guide agency actions (Beierle 1999; Frentz et al. 1997).

Advisory committees provide an important opportunity for a two-way flow of information between the public and agency personnel. They provide a forum for meaningful interaction between participants and the agency. Their effectiveness, however, may be compromised by excessive agency control (Chess and Purcell 1999). Attention to the composition of the advisory committee can contribute to its usefulness to the agency and its ability to represent a wider public. Important considerations include: who the stakeholders are, how their representatives are chosen, who should facilitate, what technical skills are needed, how participants will be educated, and whether the role of the committee will be to provide input or determine strategy (Curtis and Hauber 1997).

Co-management involving some combination of local-level and government-level management of resources is also being considered in some situations, especially in Alaska where subsistence resource use[2] is important (see, e.g., Berkes et al. 1991; Case 1991). The USDA Forest Service has developed a new program using a collaborative paradigm for rural development and community-based forest planning and management (Frentz et al. 1999). Other recent efforts involving collaborations or partnerships between citizens and public land management agencies have met with varying degrees of success, such as the Applegate Partnership in southwestern Oregon and the Quincy Library Group in northern California (Cortner and Moote 1999). The Quincy Library Group, a coalition of local community representatives, gained Congressional authority to conduct a pilot project on federal lands in northern California as a result of a rider on the 1999 Appropriations Act.

Recent developments expanding the concepts of public involvement since NEPA focus on collaboration models and activities (other terms used in this literature include participatory planning and collaborative learning/planning/management). There is debate among managers and social scientists regarding the degree of "collaborative" decision-making in public land management agencies that can be considered legal. That literature is beyond the scope of this paper. However, interested readers can consult Daniels and Walker (1996) for a discussion of learning-centered public participation in ecosystem management.

Since the mid-1980s, another dimension to public involvement, usually referred to as ***conflict resolution*** and/or *conflict management*, has entered discussions on working with the public in public land management decisions. Within the legal field, some of these techniques are called "alternative dispute resolution" or "ADR." Slaikeu (1989) provides a continuum of conflict resolution activities starting with avoidance, through negotiation and mediation, to arbitration and litigation and, finally, to unilateral power plays. There is a large and growing literature on this topic that is beyond the scope of this paper. Readers interested in this literature can start with Bingham (1986), Goldberg et al. (1985), Whiteman (1993), and Wondolleck (1988).

These and other techniques are used by land management agencies to educate the public and involve them to varying degrees in decision-making (see Figure 2). Each technique can help fill specific information needs and involvement goals and provide forums for different types of communication. For example, focus groups, public hearings, and several other techniques can help managers gain a better understanding of the diversity of public opinion. Other public involvement methods such as the nominal group technique or mail or telephone surveys can help identify and prioritize issues and alternatives. Workshops and advisory committees can help the participating public reach agreement about land management decisions—or conversely, help the manager discover areas where there is wide disagreement. One study examining the success of public involvement in terms of process and outcome found that the type of activity used did not determine success. More important was *the way in which such activities were conducted* (Chess and Purcell 1999).

Stankey and Clark (N.D.) identified the need to find effective mechanisms and processes to translate public involvement activities into public decision-making as important for successful public

involvement activities. In a study of individuals participating in USDA Forest Service public involvement activities, participants preferred methods that involved "two-way communication and shared decision-making" (Force and Williams 1989; see also Duram and Brown 1999). In order to make the best decisions, agencies need to understand what citizens believe government should do as opposed to what citizens want (Lauber and Knuth 1998). This implies that the educational role of public involvement is necessary to develop an informed citizenry capable of participating in decision-making, followed by opportunities for them to participate.

Evaluating the Effectiveness of Public Involvement

A literature is beginning to develop that addresses concerns about how to evaluate the effectiveness of public participation activities (see, e.g., Renn et. al 1995; Rowe and Frewer 2000). Renn et. al (1995) conducted a three-day workshop with 22 analysts and practitioners of public participation in the United States and Europe to develop a framework for evaluating different models of public participation in the environmental policy arena. The group focused on eight models of participation (citizen advisory committees, citizen panels/planning cells, citizens' juries, citizen initiatives, negotiated rule-making, mediation, compensation and benefit sharing, and Dutch study groups). They state that they deliberately excluded the most common traditional methods. The framework used to evaluate these eight models was based on the metacriteria of fairness and competence and the work of critical theorist Jürgen Habermas.

Rowe and Frewer (2000) built their framework around sets of acceptance and process criteria. They provide high, moderate, or low assessments "largely based on our own opinions" of eight public participation methods (referenda, public hearings, public opinion surveys, negotiated rule-making, consensus conferences, citizens' juries/panels, citizen advisory committees, and focus groups). Using their criteria, public hearings score relatively low on both acceptance and process criteria; referenda, public opinion surveys, and focus groups score well on acceptance criteria but not on process criteria; negotiated rule-making does well on process criteria, but poorly on most acceptance criteria; and consensus conferences, citizens' juries/panels, and citizen advisory committees score reasonably well on both acceptance and process criteria. More work including empirical data is needed in the area of defining and evaluating effectiveness of various public involvement methods.

Analyzing Public Input

The literature on public involvement focuses primarily on methods of conducting public involvement activities as discussed above. Although seldom discussed in the literature, another significant challenge facing public land managers and public involvement specialists in land management agencies is that of analyzing the public input that is obtained using various methods.

Most data collected during public involvement activities (such as at public meetings and public hearings, from letters or open-ended questions on surveys, or from transcripts from focus groups or workshops) are qualitative data, where ***content analysis*** is the primary tool available. If only a few comments are made or received through the public involvement data collection process, they are simply examined by concerned agency staff. If an issue prompts numerous comments—one hundred to several thousand—they often undergo content analysis (for more information see, e.g., Krippendorff 1980). They are then organized by topic. The agency may predetermine what categories to use in such content analyses or build the category list as the process progresses. Depending on the number of comments, content analyzers may need training to assure uniform categorizing. Comments may simply be aggregated by topic or planners may enter them into computerized databases that allow for easy retrieval of original comments based on the issues addressed. Frequency counts can be provided for categories of comments. Quotes of participants can be used to illustrate opinions that are held by various groups. Some techniques, such as the nominal group technique, allow for ranking of choices.

Content analysis can help planners gain a better understanding of the range and diversity of opinions related to planning efforts. The frequency of like comments mentioned by the public may also give decision-makers an indication of the importance of that issue to the public. Caution is warranted, however, as content analysis is often used to summarize public input data that were obtained under non-random sampling; thus no statistical analysis can be done and inferences cannot be made to a larger population. Another limitation to the use of content analysis is that it may lead to summaries in which the comments are separated from their context, thus limiting their usefulness (Cortner and Shannon 1993). The intensity of the writer's or speaker's concern is also often lost when doing content analysis.

Quantitative statistical analyses are seldom possible in public involvement activities because random sampling is not often used. Most public involvement activities involve self-selected participants, thus providing a non-random sample of public input. Federal laws requiring public involvement do not allow restricting involvement to a randomly selected sample of the public. Some agencies have conducted mail and/or telephone surveys of the general public to obtain public input on management decisions. However, such surveys are usually limited to specific segments of the public, such as those represented in local or regional phone books. More frequently, random surveys are done of specific populations, such as a random sample of those people already on the public involvement contact lists of an agency (see Force and Williams 1989; Marten 1992).

When a randomly selected sample is chosen to obtain public input, close-ended questions on mail or telephone surveys may be analyzed using standard statistical techniques, including a wide variety of parametric and non-parametric statistical tests. For example, multiple regression and correlation analyses can be used to examine the relationship between independent and dependent variables. Multivariate and factor analyses can help identify and characterize groups of the public with similar values, interests, and opinions. Chi-square tests will help determine how representative the sample is of the population. Care must be taken that the results of such studies are generalized only to the population from which the sample was obtained and that the data were collected using appropriately applied, well-constructed instruments.

Public Involvement Experiences of Public Agencies

The experiences of state and federal land and resource management agencies in implementing public involvement activities or programs can help to illustrate the usefulness of specific methods discussed in the previous section. For example, in a study of different approaches for including public opinion in deer management decisions, Stout et al. (1996) found that the method used (unsolicited comments, a survey, or an advisory committee) did not lead to different results. However, the advisory committee members learned more about the issue and had an improved opinion of the agency. While the decision and management implications were the same regardless of the technique used, the overall benefit to the agency was greater with the advisory committee. The payoff from this investment may carry over to future agency activities.

The New York Department of Environmental Conservation (DEC) solicited public opinion about a moose restocking program before deciding whether or not to proceed with the program (Lauber and Knuth 1998, 1999). Three public involvement methods were used: (1) public meetings were held to discuss the proposal; (2) comments on the Environmental Impact Statement (EIS) were solicited; and (3) randomly selected residents were asked their opinions in a telephone survey. In an effort to appear neutral, the DEC gave telephone respondents little information on the program, its rationale and goals, and potential consequences. Based on the results of the three public involvement activities, the restocking program was not implemented. An evaluation of the public involvement process found that public meeting and EIS comment participants had a better knowledge about the issues and were therefore able to make more informed decisions than randomly

selected telephone survey respondents (Lauber and Knuth 1998). In another study, researchers found that providing information on the issues of concern in a mail survey led to more "deliberative responses" (McComas and Scherer 1999). These efforts suggest that providing public involvement participants with information and education will encourage informed opinions and support Yankelovich's (1991) call for public judgment.[3]

Public comments on a forest management plan in West Virginia's Monongahela National Forest highlighted the controversial nature of the plan. Rather than redraft the plan in isolation of interested parties, the forest office decided to conduct a series of "working meetings" with representatives of different stakeholder groups to come to some acceptable level of agreement on the plans. This was essentially an ad hoc citizen advisory committee. Participation was open to all; however, those attending had to register beforehand and review materials necessary to make informed decisions. This technique resulted in a consensual plan that was accepted by all participating stakeholders (Steelman and Ascher 1997). This highlights the utility of going beyond what is mandated by law to design a plan acceptable to all, and using additional public involvement activities if the desired level of public participation is not achieved.

The Montana Fish, Wildlife & Parks Department adjusted the timing of public involvement in the development of regulations to improve citizen input (McMullin and Nielsen 1991). In the first instance, individuals responded positively through questionnaires and phone calls to a proposed policy change, though they later indicated that they thought all policy options had not been adequately considered. To avoid this circumstance in another policy development situation, the department began providing education about the issue at public meetings and inviting the public to determine management goals. Using those goals, the agency developed a draft plan that presented extensive background information and proposed actions. This was mailed to interested parties, discussed at public meetings, and reviewed in newspaper articles. A survey attached to the plan was used to elicit feedback. Likert scales provided descriptive, qualitative, non-statistical data that were used to gauge public reaction to various management proposals. Based on the public opinions expressed, slight changes were made to the plan and it was approved (McMullin and Nielsen 1991). Thus the value of soliciting public involvement from the outset and providing education on the issue is highlighted.

In an attempt to formulate plans to deal with deer in an urban area, the results of random surveys were used by a citizen task force to develop a management plan (Green et al. 1997). In order to gain public input into proposed hunting legislation, the Montana governor formed a citizen advisory council with statewide representation of hunters, outfitters, and landowners. Local groups were also established to provide input to representatives on the statewide council. This process yielded successful, innovative proposals (Guynn and Landry 1997).

The Quachita National Forest in Arkansas and Oklahoma created an expert advisory committee made up of experts in diverse fields who were familiar with forest issues to guide ecosystem management activities in the forest (Frentz et al. 1997). The committee holds public meetings about three times per year, during which issues are presented and discussed. The public can participate in these meetings. The committee appears to have played at least a minor role in reducing conflict on the forest. Forest Service employees, committee members, and the general public all feel that the committee provides a useful forum for discussion. The composition of the committee contributes to its perceived usefulness (Frentz et al. 1997). The impact of the committee on land management decisions or specific ways committee input is used or analyzed is not discussed by the authors.

Developing extensive public involvement plans can help to guide public involvement activities and insure that interested stakeholders have an opportunity to participate in decision-making. For example, Congress established the Northern Forests Land Council (NFLC) in 1990 to develop policy recommen-

dations regarding forests in northern New England and the Adirondack region of New York. In order to fulfill their mission, the NFLC developed a public involvement plan. Public involvement methods included the establishment of two levels of citizen advisory committees, public meetings and other forums, and outreach activities. The rationale for extensive public involvement was that it would help to develop "ownership, partnerships, understanding, and commitment" necessary to carry out the NFLC's recommendations (Tuler and Webler 1999).

In Alaska, the Department of Transportation and Public Facilities used public involvement to develop a Public Involvement Procedure (PIP) for developing its statewide "Vision: 2020" plan. The department began with a campaign to alert citizens to its interest in developing the PIP. They used newspapers, radio, posters, brochures, newsletters, and a television show with a call-in line to inform the public and solicit their input into how such a procedure should be developed. Based on the responses, the department developed a draft PIP. At the request of citizens, it included traditional methods such as public meetings, newspapers, and posters, as well as newer forums such as a web site and a toll-free phone line. A central part of the proposal was the establishment of two citizen advisory groups. The Public Review Group included all citizens who wanted to receive information and comment on it. The Policy Advisory Committee was made up of twenty-four appointed stakeholder representatives. Once approved, this PIP was used to develop the plan. The various committees provided input into identifying issues and concerns. Then, through an iterative education and information feedback process, they assisted in developing the plan (Dilley and Gallagher 1998).

These cases illustrate the usefulness of combining different public involvement techniques to increase participation. Tiered advisory groups, surveys informing a task force, and public participation in expert advisory committee meetings increased the information available to the advisory committees and potentially their legitimacy in the eyes of concerned citizens. This may increase the effectiveness and utility of the advisory committees to the concerned agency. However, there is a paucity of information on whether and to what extent advisory committees have actually influenced decision-making in federal agencies.

General Recommendations from the Public Involvement Literature

Several recommendations for effective public involvement emerge in the literature.

1. *The goals of public involvement should be clear* (Chess and Purcell 1999; Thomas 1995). For example, is the purpose to provide the public with information about an agency decision, to gain input from the public, or to share in decision-making? The methods to be used and the expectations of the agency and the public will vary depending on the goals. The goals need to be explicit from the outset and understood by both the agency and the public.

2. *The public involvement process as well as the outcome is important* (Tuler and Webler 1999). The public should be involved early and continuously in the planning process (Dilley and Gallagher 1998; McMullin and Nielsen 1991). Including the public from the time the scope of the issue is defined and throughout the entire planning process can increase a sense of participation and ownership in the outcome and make implementation of the plan possible.

3. *In order to be most effective, public involvement must include a two-way flow of information* (Dilley and Gallagher 1998). While simple education efforts may be appropriate in limited circumstances, maximum benefit can be obtained from sharing of information and solicitation of input. Public involvement must "build a bridge" between the agency and the public so that they may share expertise and concerns to develop better plans (Dilley and Gallagher 1998).

4. *Using a variety of public involvement methods will help to reach a diversity of stakeholders and solicit different types of input* (McMullin and Nielsen 1991). Public involvement practitioners have found that people get their information from different sources and are willing to participate in different forums. In order to fully understand and consider public opinions, a variety of methods are necessary. Some factors to consider

when determining which methods to use include the topic, the number and type of stakeholders, the amount of controversy associated with the issue, citizen understanding of the issue, available resources, and agency credibility (Curtis and Hauber 1997).

Public Involvement in the National Park Service

Almost all analyses about the history and recent challenges of the USDA Forest Service—another large public land agency—discuss the role of public involvement in the agency's activities. Phrases using any combination of the words, "public," "citizen," "involvement," "participation," or "interest groups" are usually absent in the table of contents or index of similar books about the NPS, its leaders, or its role among federal land management agencies (see Clarke and McCool 1985; Everhart 1972; Foresta 1984; Freemuth 1991; Runte 1979; Wirth 1980). The Secretary of Interior, according to the obligations imposed by the 1916 act establishing the NPS, is to "hold park resources in trust for the public and therefore has the duties and obligations of a trustee to protect the trust property on behalf of the beneficiaries" (Freemuth 1991, 32). This is referred to as the Public Trust Doctrine, which has usually been interpreted to mean protecting the parks from external threats and has not included any form of involving the public to assist in protecting the parks or making decisions about the parks. Similarly, the original purpose of the NPS as stated in the 1916 act was to conserve the scenery, wildlife, and historical and natural features for the enjoyment of present and future generations (Wirth 1980) with little mention of the public or their expectations/desires for the parks.

Indications of the importance of providing for the people's desires in park management are evident in Interior Secretary Franklin Lane's 1918 letter to the first NPS director, Stephen T. Mather, which reads in part, "Every opportunity should be afforded to the public, wherever possible, to enjoy the national parks in the manner that best satisfies individual tastes" (Lane 1918). NPS public support was primarily sought through personal friendships with elites, such as the Rockefellers (Wirth 1980), and through working with nature conservation and other public interest groups such as the National Audubon Society and the National Parks Association[4] (Foresta 1984). Both of these types of constituencies have also been effective in lobbying Congress for legislation to establish new parks and, at various times in the history of the NPS, for budget increases from Congress.

Clarke and McCool (1985) discuss the power differentials among seven federal natural resource management agencies. They categorize the NPS as one of three "agencies that muddle through." They conclude that part of the NPS problems can "be traced to public attitudes and to the lack of an organized constituency to support its recreation program. ...the Service does not appear to have cultivated the active support of its visitor constituency" (Clarke and McCool 1985, 55). The lack of a proactive public involvement program as an agency priority appears to have hurt the NPS, especially since the passage of the National Environmental Policy Act of 1969 when public involvement became a required activity in project plans.

At the National Park Service's 75th Anniversary Symposium held in Vail, Colorado, an agenda for the 21st century was developed (NPS 1992). Six basic issues were identified that were considered to be critical to protecting resources in the National Park System. One of these was "public support for resource stewardship programs" (NPS 1992, 124). The recommendations focus on outreach, including public affairs training for NPS staff and education programs for the public; strengthening the constituency for resource stewardship, including partnerships with a wide variety of organizations; and expanding the concept of park citizen advisory groups. The recommendations go on to say, "The Service should greatly expand the role of the public in resource stewardship activities and eliminate the barriers to public participation" (NPS 1992, 140).

It appears that the NPS recognizes that, as a federal agency, it has a responsibility for a more meaningful public involvement in agency policies and

activities. The literature reviewed in this paper provides examples of what has been tried in other agencies and some assessments of what has and has not worked. In the next section, we briefly review a sampling of recent public involvement activities in national parks.

Examples of Recent NPS Public Involvement Activities

Public involvement is one element in the NPS decision-making process. It is a legislatively- mandated activity under NEPA whenever the NPS develops land use and/or land management plans. In addition to NEPA activities, public involvement occurs—whether managed or unmanaged, formal or informal—whenever a management activity is controversial or has the potential to be controversial. The NPS must also take into consideration laws, policies, cultural and natural resources, visitors, and other factors when developing plans (NPS 1999). NEPA requires that public involvement be solicited to determine the range of issues to include in a plan ("scoping") and to solicit public comment on the draft Environmental Assessments (EA) or Environmental Impact Statements (EIS) prepared for general management and other plans. Public involvement is also sought on draft EA or EIS documents developed for proposed agency rules and regulations. Agencies must respond to public comments received on draft documents. There may also be opportunities for involvement in other aspects of the planning process depending on the nature of the plan and the level of controversy.

Public comments, through letters, public hearings, public meetings, in response to newsletter questionnaires, or by telephone or the Internet, are solicited during the scoping phase of the NEPA process. This information, as well as comments from interested federal and state agencies and government bodies, is categorized by the NPS. Five categories are used to classify comments related to the general management plans prepared by the NPS to direct park management and guide resource preservation and visitor use decisions (NPS 1999, 4-2 – 4-3):

1. Things that can't be done. This includes actions that are inconsistent with law or policy or are beyond the scope of the plan.

2. Things that must be done. This includes actions that are mandated by law or policy.

3. Things that might be done. This includes actions and issues that are most appropriately addressed at the general management planning level.

4. Things that might be done in other plans. This includes actions that are better addressed by implementation plans.

5. Things that are not a planning issue. This includes issues that are beyond the scope of the NPS or the planning process.

The appropriate lists can then be used to determine the questions the plan needs to answer (the major decision points) and the resources and values that may be affected by the plan (NPS 1999).

The NPS has found newsletters to be an effective method of informing the public about planning activities and soliciting comments (J. Harris, personal communication, February 23, 2000). The New Orleans Jazz National Historical Park is an example of a fairly typical public involvement process (J. Harris, personal communication, February 16, 2000). It included a series of five newsletters[5] and public meetings to involve the public in developing the park's first general management plan (New Orleans Jazz National Historical Park N.D.). The first two newsletters were used to inform the scoping process, while the third and fourth newsletters provided updates on the planning process and information about the jazz-related events (New Orleans Jazz National Historical Park N.D.). The public was informed in the fifth newsletter where the draft plan was available for review and that a set of three public meetings would be held to present the plan, answer questions, and listen to comments (New Orleans Jazz National Historical Park 1998). The newsletter states that "[f]ollowing your review of these draft alternatives, comments will be addressed, modifications will be made, and a Final General Management Plan/

Environmental Impact Statement for New Orleans Jazz National Historical Park or an abbreviated final plan will be prepared" (1998, 5).

Newsletters are a primary public involvement method being used to develop a new general management plan for Sequoia and Kings Canyon National Parks (J. Harris, personal communication, February 23, 2000). In this case, the first newsletter was used to inform the public of the planning process and to solicit comments on the park mission and significance. Respondents were asked to identify their top five priority issues (a list of seventeen issues was included in the newsletter, though others could be added). Optional questions concerning park use were also included on the postage-paid response form. The comments received in response to the newsletter and through public meetings were summarized in the second newsletter. This constituted the scoping phase of the planning process.

The Sequoia and Kings Canyon National Parks' planning process then sought to involve the public in developing the alternatives to be presented in the draft EIS. The third newsletter provided the results of studies conducted in the park that would also contribute information for planning. The fourth newsletter was a "planning workbook." It included background information about the park relevant to the planning process and asked respondents to respond to thirty-two multiple-choice questions concerning different aspects of park management. Trade-offs associated with each of the choices were detailed. Dates and locations of public workshops to discuss the plan were also included. At the public involvement workshops participants were asked to work in teams to develop specific visions for the parks, taking into account the information included in the fourth newsletter (S. Spain, personal communication, February 28, 2000).

The planning staff then consolidated the results of public input through the workshops and newsletter responses to generate alternatives representing the range of visions expressed (S. Spain, personal communication, February 28, 2000). The fifth newsletter contains details of the four management alternatives that were developed and makes a commitment to keep the public informed as those alternatives are evaluated.

The NPS has recently been using an **open house** format for public meetings in some areas. These types of public meetings are intended to solicit a greater range of comments and opinions from the public by providing a variety of opportunities for participation. Open house public meetings were used for the scoping phase of a recent Dry Tortugas National Park Plan (L. Dahl, personal communication, February 1, 2000). During the open houses, participants had an opportunity to listen to presentations about the plan and talk with the park superintendent. The following five different methods for making comments were available: (1) NPS employees answered questions and facilitated discussions at stations representing different aspects of the plan, and comments were recorded on flip charts; (2) comment response forms were provided at a central table; (3) tape recorders were provided for people who did not want to write their comments; (4) computers were available for those who wished to respond through the park planning web site; and (5) a "graffiti wall" was created where participants could write their comments (L. Dahl, personal communication, February 1, 2000). In addition to the open houses, comments were solicited through newsletter response forms and the park planning web site.

The NPS also invites public involvement on regulatory issues. In Alaska, public involvement has been an important process in the phase-out of commercial fishing in Glacier Bay National Park. In 1998 the NPS invited comments and announced open houses to solicit public opinions on an environmental assessment of proposed regulations for phasing out commercial fishing in the park (Quinley 1998). During the comment period, the Congress passed legislation that directed how the phase-out should proceed (Anonymous 1999). The legislation did not specifically indicate how all of the money allocated for compensation of those negatively affected by the legislation would be distributed. Thus the park has begun a public involvement process that includes information disseminated through newsletters and press

releases, coupled with open house meetings to develop the specifics of the compensation plan (Anonymous 1999). The park has hired a private firm to facilitate this process and collect additional information. Their reasons for doing so were threefold: (1) the park does not have a regular staff trained to deal with issues of social economics; (2) there is a perception that there would be better public acceptance of the final product if it were developed through a disinterested third party; and (3) the park is working closely with the state of Alaska to develop these regulations and the state had previous experience with this firm (J. Quinley, personal communication, March 1, 2000). The process is expected to take two or more years.

There appears to be little evaluation of the NPS public involvement process from within the organization or by outside researchers. Two NPS planning professionals (L. Dahl; J. Harris, personal communications, February 1 and February 23, 2000) state that the public involvement methods in use help to adequately define the range of issues to be addressed in park plans and ensure that a variety of different viewpoints can be expressed. Beyond generating a list of scoping issues, it is not explicit how public involvement is used in developing the plans, choosing among alternatives, addressing conflict in public opinions, or in making final decisions.

Recommendations for Public Involvement Research in the National Park Service

There appears to be an almost total absence of any public involvement research in the NPS, especially as reported in the peer-reviewed literature or discussed during phone calls to NPS staff. Thus almost any well-designed research that would build on the literature and research of the past thirty years in this area would be a step in the right direction. Numerous public involvement activities have taken place and more are being planned and will occur in the near future. Some documentation of past activities is available. A more organized "research approach" could be used to maximize the agency's learning in future public involvement activities. We recommend the following research be strongly considered:

1. Qualitative case study research should be undertaken to evaluate what public involvement processes were used, how they were implemented, who the public was that participated, what information was provided by the NPS, what information was obtained from the public, and how public input was analyzed by the agency. The decision-makers involved in the cases should assist in understanding how the public involvement was used in reaching a final decision. Thomas' (1995) Effective Decision Model of Public Involvement could be used to guide such research.

2. As the NPS begins new public involvement activities, either around a management controversy or a planning process, experiments could be designed to empirically test various public involvement techniques on a variety of public groups.

3. Experiments should be designed to develop and evaluate different analysis techniques. Which techniques produce the most "usable" information for decision-makers? Are the results from the public involvement activities different if different analysis techniques are used? How do different content analysis techniques or practitioners impact the analyses?

4. Criteria for evaluating the effectiveness of various public involvement techniques used by the NPS should be developed. These criteria should reflect the goals, objectives, and constraints (e.g., legal, personnel available, budgets, etc.) of the NPS in their public involvement programs.

5. Because many NPS controversies are both national and local in scope, comparative research studies should be designed to evaluate the public involvement processes used with the national versus local publics.

6. With the adoption of electronic means of providing and receiving information (web sites and e-mail), research needs to be done to determine the representativeness of such information, the effectiveness of gathering information this way, and the usefulness of such information in the overall public involvement process.

7. Other research studies should be done to determine the public involvement techniques that are

effective in the NPS general management planning process as well as ones that are effective when controversial management decisions are being made (such as the fishing regulations example from Glacier Bay).

8. Detailed public involvement plans and process documents should be developed following research and experiments to test various techniques.

9. Testing of available frameworks for public involvement activities and/or developing new theoretical frameworks would be valuable research for social scientists both within and outside of the NPS.

10. When NPS managers and researchers have the resources, and the decision-making situation allows random sampling of the public (or sub-sets of the national public), survey research based on appropriate statistical analysis techniques should be used.

11. A review of the literature on conflict resolution and collaboration theories and methods should be conducted to guide NPS social science researchers and managers, especially if the agency is legally allowed to share more decision-making authority and/or becomes involved in ecosystem-based management involving other land managers and owners outside of the NPS.

12. A review of the literature and methods used when doing a Social Impact Assessment (SIA) and preparing an Environmental Impact Statement (EIS) should be done with particular emphasis on assisting public land professionals in understanding the conceptual, philosophical, and legal differences between public involvement activities and those activities associated with SIA and EIS.

13. A review of the literature on public involvement in other policy arenas (such as health care and hazardous wastes) that focuses on risk assessment and analysis should be undertaken to better understand how the public understands and incorporates risk-taking into public land management decisions.

14. Any research that is undertaken by the NPS should be communicated in both the peer-reviewed scientific literature and to the NPS constituents. At this time people who do become involved in the NPS planning process are not able to find out how their input was used in the decision-making process. A more transparent process, as well as information on the processes being used, would not only increase public trust of the agency, but would also provide future NPS personnel with guidelines for designing effective public involvement processes.

Conclusion

Public involvement is here to stay. It is an activity that all public land managers will be expected to engage in as long as the United States remains a democracy. The public expectations of increased involvement, especially in decision-making, have steadily increased in recent decades. At this point there is no reason to assume that those expectations will decline. Thus public land managers must be prepared to develop effective, timely, and efficient public involvement programs and to successfully carry out those programs.

Unfortunately, we found that the public involvement literature has made surprisingly little progress over the last 20 years (see, e.g., Chess and Purcell 1999; Daniels et al. 1996; Fiorino 1989). This is true whether one is looking for theory development or empirical research on: (1) the effectiveness of specific forms of public involvement, (2) the methods used to analyze public input from various public involvement techniques, or (3) how public involvement activities were actually used (or not used) in the decision-making process.

Many public land managers and public involvement professionals ask, "How do you know when there has been 'enough' public involvement?" or "How can national parks (or forests) balance local and national interests?" These questions do not have answers in the literature. If one consults the laws passed by Congress and the regulations written by the agencies and approved by Congress, "enough" public involvement—legally—may be to provide information to the public and allow the public to comment on agency proposals. And, in some situations, this is "enough." However, experience has shown that in many controversial decision-making situations, more public involvement is needed to gain the public support necessary to implement the decisions.

In federal land management agencies, the balance between local and national interests is a value

judgment—and has been debated since the establishment of the federal land management agencies. National interest groups state that as national resources, national parks should favor national interests. However, people living near the national parks are usually the ones most impacted by decisions made regarding the park and, thus, they believe they should have the most influence on decisions. There is no "right" answer.

In the arena of public involvement, the opportunities are boundless, the challenges great, and the need significant. The contradiction in the U.S. Congress's definition (1975) of public involvement a quarter a century ago between "[t]he opportunity for maximum feasible participation by citizens" and providing "public input" still exists in the public involvement activities of our public land management agencies today. Congress is unlikely to resolve it.

Researchers and practitioners in the National Park Service as well as in other public land management agencies, universities, and other research organizations must develop theories, test hypotheses, conduct experiments, and make recommendations that will lead to more effective and satisfying public involvement activities in public agencies. Such research is important to both the public land managers and the citizens who are concerned about and use the public lands.

Notes

[1]Section 9 of FACA clearly states that "...advisory committees shall be utilized solely for advisory functions. Determinations of action to be taken and policy to be expressed with respect to matters upon which an advisory committee reports or makes recommendations shall be made solely by the President or an officer of the federal government."

[2]The Alaska National Interest Lands Conservation Act of 1980 (ANILCA) defines "subsistence uses" as the customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of non-edible byproducts of fish and wildlife resources taken for personal or family consumption; for barter, or sharing for personal or family consumption; and for customary trade.

[3]Yankelovich uses the term "public judgment" to mean a particular form of public opinion that exhibits (1) more thoughtfulness, more weighing of alternatives, more genuine engagement with the issues, more taking into account a wide variety of factors than ordinary public opinion as measured in opinion polls, and (2) more emphasis on the normative, valuing, ethical side of questions than on the factual, informational side (1991, 5).

[4]Freemuth (1991) reports that the National Parks Association later became the National Parks and Conservation Association. Wirth (1980) refers to the National Recreation and Park Association.

[5]Anyone who has ever attended a public meeting, sent in comments, or has requested to receive information about the park is put on that particular park's mailing list for newsletters and any other information that is distributed by the park.

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Glossary

advisory committee: A group of people assembled to discuss an issue and advise the agency; it may include agency representatives. Meetings typically take place over an extended period of time. Advisory committees may be formally appointed under federal legislation or informally assembled.

co-management: Consensus-based strategies for resource management developed by local communities and government agencies. Responsibility and influence are shared between the participating parties.

conflict resolution: A term for a variety of techniques used to solve conflicts. Often it refers to voluntary efforts by individuals or groups with different opinions to arrive at mutually satisfactory solutions without litigation. Conflict resolution techniques include mediation, negotiation, arbitration, collaborative problem-solving, negotiated rule-making, conflict assessment, and consensus building.

content analysis: A method for analyzing public comments in which comments are placed in categories

based on the issues raised or opinions expressed. Depending on the number and complexity of comments, analysis may consist of written notes or large databases that allow for cross-referencing.

focus group: A group interview in which the moderator uses a series of questions to guide the participant discussion. Focus groups can be used to gauge the range of opinions and ideas about issues and/or how to address them.

key informant: An individual who provides the agency with his or her views concerning agency actions; an informant may represent the views of one segment of the public.

nominal group process: A meeting facilitation technique in which participants are asked to brainstorm, discuss, and prioritize issues and concerns.

open house: A NPS non-traditional public meeting in which information is made available to the public through varying means (e.g., presentations, posters), park service employees are available to discuss issues of concern, and multiple methods for comment are made available to the public.

public comment: Any fact or opinion shared with the agency. Public comments may be made at public hearings and meetings, by responding to questionnaires, or through letters, phone calls, and electronic means.

public hearings: Formal meetings where participants are allotted a certain amount of time to present opinions on issues under discussion. All comments are recorded in the public record; some comments may be written rather than orally presented.

public involvement: All activities used by public land management agencies to inform and educate the public about the agency's land management activities, and/or to gather information from the public, and/or to include the public in making decisions about public land management. The public is defined as individuals and organizations (both public and private) outside the agency.

public meetings: Forums where the agency can present information and discuss issues with the public and receive comments. Typically, public meetings are less formal than public hearings but more formal than open houses.

survey: A series of questions asked of a representative sample of the population in order to estimate knowledge and opinions of the issues and actions being considered. Surveys are analyzed using statistical techniques that assist in understanding how accurate the information is. Surveys may be administered by mail, phone, or in person. (Responses to NPS questionnaires included with newsletters would not be surveys as respondents are self-selected as opposed to selected as part of a representative sample.)

workshops: Special meetings where participants discuss issues and develop methods or options to address the issues. Workshops usually last from half a day to several days; if the number of participants is large, they are divided into smaller working groups.

Additional Resources

International Association for Public Participation
P.O. Box 10146
Alexandria, VA 22310
Phone: 703-971-0090
800-644-4273
Fax: 703-971-0006
E-mail: iap2hq@iap2.org
Web site: www.iap2.org

This member organization was established in 1990 to promote and improve the practice of public participation and to serve as a focal point for networking about public involvement activities and techniques. Their web site provides information on public involvement tools and other resources and links useful in public involvement. Members receive a newsletter.

International Association of Facilitators
7630 West 145th Street, Suite 202
St. Paul, MN 55124
Phone: 612-891-3541
Fax: 612-891-1800
E-mail: office@iaf-world.org
Web site: www.iaf-world.org

The mission of this member organization is to promote, support, and advance the art and practice of professional facilitation. They produce a newsletter as well as the journal *Group Facilitation: A Research and Application Journal*. They provide certification for professional facilitators. Information and resources on facilitation are available through their web site.

Books

Machlis, G. E., and D. R. Field. 2000. *National parks and rural development: Practice and policy in the United States*. Washington, DC: Island Press.

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